



**GOVERNMENT OF BIHAR  
RURAL WORKS DEPARTMENT**

**COMBINED MODEL BIDDING DOCUMENT (CMBD)**

**FOR**

**RURAL ROAD STRENGTHENING AND MANAGEMENT PROGRAM**

**UNDER**

**MUKHYA MANTRI GRAMIN SADAK UNNAYAN YOJANA  
(MMGSUY)**

**January - 2025**

**GOVERNMENT OF BIHAR****RURALWORKS DEPARTMENT****COMBINED MODEL BIDDING DOCUMENT****FOR****RURAL ROAD STRENGTHENING AND MANAGEMENT PROGRAM****UNDER****MUKHYA MANTRI GRAMIN SADAK UNNAYAN YOJANA****(MMGSUY)**

**Name of work:** Initial Rectification, Minor improvement, Surface renewal, Construction of bridge/drainage /protection and Operation & Management (O&M) for Rural Road under Mukhya Mantri Gramin Sadak Unnayan Yojana (MMGSUY) of Works division.....

District:.....

Block:.....

Sl. No.	Name of Road	Length(km)	Estimated Cost (Rs. in Lakhs)
1	.....	.....	.....

Package No. :-....., Name of division:- .....

## **Notice Inviting Tender (NIT)**

**GOVERNMENT OF BIHAR  
RURAL WORKS DEPARTMENT**

Office of the Engineer-in-chief-cum-Additional Commissioner-cum-Special Secretary/Engineer-in-Chief,  
Rural Works Department, Bihar  
5<sup>th</sup> floor, Visvesvaraya Bhawan, Nehru Path, Patna-800015

DETAILED NOTICE INVITING TENDER (through e-procurement mode only <http://pmgsytendersbih.gov.in>) for Initial Rectification, Minor improvement, Surface renewal, Construction of bridge/drainage /protection work including Operation & Management for Rural Road Strengthening and Management Program under component of Mukhya Mantri Gramin Sadak Unnayan Yojana (MMGSUY).

NIT No.....

1. Designation and Address of the Advertiser : Engineer-in-chief-cum-Additional Commissioner-cum-Special Secretary/Engineer-in-chief, Rural Works Department, Govt. of Bihar
2. Date of Notice Inviting Tender :
3. Period for download of Tender Document : From ..... to .....up to.....hrs
4. Date, Time & Place of Pre-Bid meeting : Date ..... at.....hrs.....
5. Last Date & Time for uploading tender documents by bidder : Date .....till.....time.....on <http://pmgsytendersbih.gov.in>
6. Date and time of opening of Technical Bid : Date.....Time.....hrs.
7. (i) Bid Security (EMD) and cost of BOQ shall be submitted Online. No other forms of Earnest Money (Bid Security) and cost of BOQ will be accepted. The Earnest Money deposited by the non-responsive bidder will be automatically refunded. In case the bid of non-responsive bidder is reconsidered whose EMD has been refunded automatically, will be collected and refunded manually in the shape of Fixed Deposit Receipt.  
(ii) Bidders are required to upload an Affidavit regarding correctness of Information furnished with bid document. Original Affidavit regarding correctness of Information furnished with Bid document shall be submitted at the time of signing of agreement.
8. **The Engineer-in-chief-cum-Additional Commissioner-cum-Special Secretary / Engineer-in-chief, Rural Works Department** on behalf of Governor of Bihar invites bids for the works detailed below.

**Project Scope & Duration:**

- I. To undertake, Initial Rectification, Minor improvement, Surface renewal, Construction of bridge/drainage /protection on road alignment and Operation & Management including Second time Surface renewal for a period of 72 months after completion of Initial Rectification, Minor improvement, Surface renewal, Construction of bridge/drainage /protection for “**Rural Road Strengthening and Management Program**” (**Gramin Sadak Sudrdheekaran and Prabhandhan Karyakram**) under component of Mukhya Mantri Gramin Sadak Unnayan Yojana (MMGSUY) on selected roads as described in para 9.
- II. **Initial Rectification, Minor improvement, Surface renewal, Construction of bridge/drainage /protection may include road safety measures, tree plantation at the end of slope of road within Right of Way, as per contract document.** The time of completion for **Initial Rectification, Minor improvement, Surface renewal, Construction of bridge/drainage /protection, road safety measures, tree plantation** shall be of total **12 months** and for **Operation & Management including Second time Surface renewal** shall be of total **72 months**. The total time to be given to the contractor for completing Initial Rectification, Minor improvement, Surface renewal, Construction of bridge/drainage /protection, **road safety measures, tree plantation** and **Operation & Management Services including Second time Surface renewal** will be 84 months from the date of agreement.
- III. During **Operation & Management** Services period, the roads/bridges will be kept as per prescribed service level, to maintain road for traffic worthy. The **Operation & Management** will also include cross drainage works, minor works on bridges and roads.
- IV. The **Operation & Management** Services will be carried out under output and performance based for which the payment will be done quarterly.
- V. For Rapid Response of Operation and Management each bidder must have a **Rapid Road Repair Vehicle**.
- VI. **Initial Rectification, Minor improvement, Surface renewal, Construction of bridge/drainage /protection road safety measures, tree plantation and Second time Surface renewal** on road alignment will be paid on measured quantity to the value of contract.

- VII. There is a requirement for specialized equipment and the contract obligation is for continuous input over the contract period.
- VIII. **Bidders are strongly encouraged to download the bidding documents prior to the pre-bid meeting in order for bidders to have a good understanding of the scope of work under this contract for discussion and clarification at the pre-bid meeting. Bidders are also advised to visit each road, be acquainted with the physical condition of road, satisfy themselves and then participate in the bid.**

### 9. Details of Works and Services:

1	2	3	4	5	6	7	8	9	10	11	12
Sl. No.	Package No.	District	Works Division	Block	Name of Road/ Bridge	Length (km/m)	Construction cost (Initial Rectification, Minor improvement, Surface renewal, Construction of bridge/drainage /protection) (in lakh)	Cost of Operation & Management Services for 72 Months Period (in lakh)	Total Estimated cost value (ECV) (in lakh)	Cost of BOQ (in Rs)	Earnest Money/Bid Security (in lakh)

10. Bid Validity: **180 days**.
11. The amount of Earnest money to be deposited are as follows: -
- (i) For Works Costing up to 10 crore- 2% of Total estimated cost. (Multiple of Rs .100/-)
- (ii) For Works Costing more than 10 Crore – Rs. 20 lakhs plus 1% of the excess cost of the total Estimate Cost over and above 10 Crore. (Multiple of Rs. 1000/-)
12. Any Contractor registered with the Central Government / any State Government or any PSU or an agency of national repute may participate in the tender but registration with the Rural Works Department, Bihar will be essential before executing the agreement.
13. Detailed NIT can be seen on website <http://pmgsytendersbih.gov.in>
14. For participating in the above E-tendering process, the contractors shall have to get themselves registered with the service provider so that user ID, password and digital signature are issued to them. This will enable them to access the website <http://pmgsytendersbih.gov.in> and download /participate in E -tender.
15. Bidders/Contractors can access tender documents on the website and must fill them and submit the completed tender documents in electronic form on the website itself. Bidders / Contractors shall attach scanned copies of all required papers, including affidavits and certificates as required in the eligibility criteria. The scanned copies should be of the **original** papers and certificates only.
16. Corrigendum / Addendum, if any, will be published on the website itself.
17. Bidders will have to declare by affidavit (uploaded along with tender documents) that they have not been declared defaulter, suspended, or blacklisted by any State Government/ Central Government/ Public Undertaking. If such affidavit is subsequently found to be false, their tender shall not be considered and further legal action shall be initiated.
18. The bidder must upload an affidavit stating that the near Relations (defined as first blood relations, and their spouses, of the bidder or the bidder's spouse) of the following departmental officers of the RWD/RCD are not in his/her employment:  
JE/AE/EE/SE/CE /Engineer-in-chief & Divisional Accountant.

19. The bidder must produce an affidavit stating that there is no such persons in his employment who have retired as gazetted officer within the last two years from RWD/RCD with following ranks:  
JE/AE/EE/SE/CE /Engineer-in-chief&Divisional Accountant.
20. All bidders shall upload Reports on the financial standing of the Bidder, such as profit and loss statements and auditor's reports for the past five years. Audit Reports without UDIN (Unique Document Identification Number) will not be considered.
21. Before uploading tenders, bidders are advised to go through the General Conditions, Particular Conditions, and the other conditions of the CMBD uploaded with the tender document.
22. In compliance of the order passed by Hon'ble Patna High Court, Patna on 06.07.2023 in CWJC No. – 9941/2022, the departmental letter no. 292(WE) dated 17-01-2020 will be applicable i.e. the threshold limit (up to below 10%) has been abolished.
23. Contractor will have to deposit additional performance guarantee for seriously unbalanced rate quoted by bidder at the time of agreement as per RCD Notification No. 447(s)-cum-Memo no. 448 (s), dated 16.01.2020 and RWD letter no. 292 (we), dated 17.01.2020.
24. Bids from joint ventures (joint venture allowed for the total tender value more than Rs. 20 crore) are allowed as per the eligibility criteria.
25. In the unlikely event of the server for <http://pmgsytendersbih.gov.in> being down for more than two consecutive hours (in the period from midnight to closing time for receipt of tenders) on the last date of receiving of bid, the last date of the same shall automatically be extended to next working day till the last receiving time stipulated in the original NIT.
26. The bidders are requested to check their file size of uploaded documents at the time of submission & they should ensure that work file is uploaded. If they feel that the complete file is not uploaded then they should click on cancel & update the same before submission. The bidders should satisfy themselves of Download ability / visibility of the scanned & uploaded file by them.
27. The bidders are directed to zip their files using WinZip or WinRAR software only. Other formats of zipping will not be accepted and will be rejected.
28. File size should be less than 5MB and should be MS Word, MS Excel, PDF and JPEG Formats.
29. No claim shall be entertained on account of disruption of internet service being used by bidders. Bidders are advised to upload their bids well in advance to avoid last minute technical snags.
30. Bidders are advised to note the minimum qualification criteria specified in Clause 4, Section I of the Instructions to Bidders and Section III Evaluation and Qualification Criteria to qualify for the award of the contract.
31. Bidders should have valid registration with employees provident fund organization under EPF and miscellaneous act, 1952.
32. The result of evaluation of Part-I (Technical Bid) shall be made public on e-procurement following which there will be a period of 5 Working days from the date of uploading the result of Technical Bid Evaluation during which bidders, who participated in the bid, may submit complaint which may be considered for resolution before opening of part-II (Financial bid) of the bid. Any complaint received from bidders beyond 5 working days from the date of **uploading of result** of Technical Bid shall not be entertained.

**In case the decision is changed after redressal of complaint of all issues raised by bidders during the 5 working days already allotted, then further 3 working days from the date of uploading of Re-technical result will be allotted. During this period, representation /complaint regarding only about the change in the decision of the committee in the Re-technical Evaluation shall be entertained. No fresh complaint on other bidders / issues shall be considered.**

**In case if there is no change in the result after re-technical evaluation then the process of opening of financial bid / retender shall be done as per direction in the minutes of meeting of the re-technical evaluation.**

**Complaint shall be entertained only on the items, necessary to make a bid substantially responsive, that is on the items mentioned in ITB 24.2 Any complaint/Representation as above shall be on Affidavit supported with evidence.**

**Any Complaint without evidence & affidavit shall not be entertained.**

33. The Engineer in Chief-cum-Additional Commissioner-cum- Special Secretary/ Engineer in Chief reserves the right to accept or reject any bid and to cancel bidding process and reject all bids, at any time prior to the award of the contract without assigning any reason thereof.
34. All Documents uploaded online by the bidders including affidavits shall be considered in technical bid evaluation but after award all the documents may be duly verified.
35. Successful bidder must submit **Character Certificate** and **GST Clearance Certificate** before agreement.
36. Evaluation of Part-I (Technical Bid) of bids with respect to Bid Security and qualification information furnished in Part-I of the bid shall be taken up and completed **as far as possible** within five working days of the date of bid opening, and a list will be drawn up of the qualified bidders whose Part-II of bids are eligible for opening.
37. Under “Rural Road Strengthening and Management Program” component of Mukhya Mantri Gramin Sadak Unnayan Yojana (MMGSUY), maximum number of packages awarded in one financial year is limited to 05 (Five) even though the bidder has the available bid capacity as per ITB clause-4.6. In case a substantially responsive bidder is lowest in more than 05 (Five) packages, then 05 (Five) packages shall be awarded as per ascending order of quoted rate [for example if rate quoted are (-)02%, (-)05%, (-)07%, (-)12%, equal to BOQ rate & (+)1%, then first of all that package shall be awarded to the bidder in which he has quoted (-)12%,(-)07%, (-)05%, then(-)02% and so on].
38. It shall be the responsibility of the bidder to comply with all statutory requirements of Central and State Government.
39. Other details can be seen in bidding document.

Engineer -in–chief-cum- Additional  
Commissioner- cum-Special Secretary/  
Engineer -in–chief  
Rural Works Department, Govt. of Bihar

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## **PART 1 – BIDDING PROCEDURES**

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## Section I. Instructions to Bidders

### A. General

#### Scope of Bid

- 1.1 The Employer as defined in the **Bid Data Sheet (BDS)**, invites bids for the procurement of Works and **Operation & Management Services for Roads/Bridges (identification number of the works is provided in)** detailed in the table given in the **Notice Inviting Tender** as listed below:
- (a) Initial Rectification, Minor improvement, Surface renewal, Construction of bridge/drainage /protection, safety measures tree plantation, Operation & Management **including Second time Surface renewal** as per contract document.
  - (b) **Operation & Management** Services or “Services” consisting of all interventions on the Roads which are to be carried out by the contractor in order to achieve and keep the Road performance standards defined by the Service Level included in the Specifications of these Bidding Documents, and all activities related to the management and evaluation of the road network under contract.
  - (c) **Emergent repairs**/construction of affected roads or structures due to natural calamities such as flood, cyclone, earthquake etc.
  - (d) **Contingent work** such as removal of obstruction (As. Fallen Tree/Electric pole, landslide, road cutting after completion etc.), Urgent work on road due to VIP movement.
- 1.2 Throughout these Bidding Documents:
- (a) the term “in writing” means communicated in written form and delivered against receipt; except where the context requires otherwise, words indicating the singular also include the plural and words indicating the plural also include the singular; and
  - (b) “day” means calendar day.
  - (c) Package may consist of one or more road work including cross drainage, bridges and other structures.

#### Source of Funds

- 2.1 The expenditure under this contract shall be made from budget of Rural Works Department, Govt. of Bihar and loans/grants from any other sources.

#### Eligible Bidders

- 3.1 A Bidder may be a natural person, private or public entity,— subject to ITB 3.4 or any combination of such entities supported by a letter of intent to enter into an agreement or under an existing agreement in the form of a joint venture or association (JVA) for packages size exceeding Rs. **20.00 crore**. In the case of a joint venture or association:
- (a) unless otherwise **specified in the BDS**, all partners shall be jointly and severally liable, and
  - (b) the JVA shall nominate a Representative who shall have the authority to conduct all business for and on behalf of any and all the partners of the JVA during the bidding process and, in the event the JVA is awarded the Contract, during contract execution and
  - (c) bids submitted by a joint venture (JV) of two or more firms as partners shall comply with the following requirements:

- (i) the bid shall include all the information listed in bidders' qualification forms for all the partners;
  - (ii) the joint venture agreement should indicate precisely the role of all members of JV in respect of planning, design, construction equipment, key personal, work execution and financing of the project. All the members of JV should have active participation in execution. **This should not be varied/modified subsequently without prior approval of the E/I.**
- 3.2 JV shall be allowed only for the Estimated Cost Value (ECV) more than **Rs. 20.00 crore**.
- 3.3 A Bidder shall not have a conflict of interest. All Bidders found to have a conflict of interest shall be disqualified. A Bidder may be considered to have a conflict of interest with one or more parties in this bidding process, if:
- (a) they have controlling partners in common;or
  - (b) they receive or have received any direct or indirect subsidy from any of them;or
  - (c) they have the same legal representative for purposes of this bid; or
  - (d) they have a relationship with each other, directly or through common third parties, that puts them in a position to have access to information about or influence on the bid of another Bidder, or influence the decisions of the Purchaser regarding this bidding process; or
  - (e) Each bidder shall submit only one bid for any one package. Any bidder who submits more than one Bid for the same package will be summarily rejected.
  - (f) consultants have prepared DPR or part of DPR of the roads listed in package.
  - (g) Bidder was affiliated with a firm or entity that has been hired (or is proposed to be hired) by the Government as Engineer for thecontract.
- 3.4 Bidders shall not be under a declaration of ineligibility for corrupt and fraudulent practices by the Central Government, the State Government or any public undertaking, autonomous body, authority by whatever name called under theCentral or the State Government.
- 3.5 The bidding is open only to Bidders as **stated in the BDS**.

#### **Qualification Criteria**

- 4.1 All bidders shall provide Qualification information in Section 3.
- 4.2 All bidders shall include the following information and documents with their bids as stated in Section 3 - Qualification Information, unless otherwise stated in the Bid DataSheet:
- (a) copies of original documents defining the constitution or legal status, place of registration, and principal place ofbusiness; written power of attorney of the signatory of the Bidto commit theBidder;

- 
- (b) total monetary values of Turn over and civil construction works performed for each of the last five years;
  - (c) Work performed as prime Contractor (in the same name and style) or sub-contractor on construction works of a similar nature and value over the last five years with certificates from the concerned officer not below the rank of Executive Engineer or equivalent. The cutoff date for experience certificate (similar work) is the last date of the month before the last date of receipt of tender.
  - (d) An affidavit regarding key equipments & Lab equipments as mentioned in Bid Data Sheet.
  - (e) An affidavit regarding technical personnel as mentioned in Bid Data Sheet.
  - (f) Reports on the financial standing of the Bidder, such as profit and loss statements and auditor's reports for the past five years. Audit Reports without UDIN (Unique Document Identification Number) will not be considered.
  - (g) evidence of access to line(s) of credit and availability of other financial resources/ facilities certified by banker up to the percentage (defined in the Bid Data Sheet) of the contract price of works, during the implementation of the works;
  - (h) Deleted
  - (i) information regarding any contract litigation or arbitration during the last five years in which the Bidder is involved, the parties concerned, the disputed amount, and the matter;
  - (j) Proposals for subcontracting the components of the works for Initial Rectification, Minor improvement, Surface renewal, Construction of bridge/drainage /protection, aggregating to not more than **25 percent** of the Contract Price; and subcontracting of part/full **Operation & Management** of roads after completion of construction work.
  - (k) Deleted
  - (l) Joint Venture Applicants shall provide a certified copy of the Joint Venture Agreement in demonstration of the partners undertaking joint and several liabilities for the performance of any contract entered into before award of work.
  - (m) Existing commitments and ongoing construction work being undertaken by the bidder shall be submitted in prescribed format as described in qualification criteria.
  - (n) Bidder must submit details of bid already submitted in prescribed format as described in qualification criteria.

**4.3 Joint Ventures:**

Bids submitted by a Joint Venture (JV), which shall consist of not more than three firms as partners including the lead partner, shall comply with the following requirements:

- (a) There shall be a Joint Venture Agreement (Refer Annexure I to ITB) or a Letter of Intent to form a Joint Venture, specific for these contract packages between the constituent firms, indicating clearly, amongst other things, the proposed distribution of responsibilities both financial as well as technical for execution of the work amongst them. For the purpose of this clause, the most experienced lead partner will be the one defined. A copy of the Joint Venture agreement in accordance with requirements mentioned in Annexure-I shall be submitted with the bid.
- (b) The bid, and in the case of the successful bidder, the Form of Agreement, etc., shall be signed and / or executed in such a manner as may be required for making it legally binding on all partners. On award of contract, the Form of Agreement and Contract Documents shall be signed by all partners of the Joint Venture to conclude Contract Agreement.
- (c) Lead partner shall be nominated as being partner-in-charge; and this authorization shall be evidenced by submitting a power of attorney signed by the legally authorized signatories of all the partners.
- (d) The partner-in-charge shall be authorized to incur liabilities and to receive instructions for and on behalf of the partners of the Joint Venture, whether jointly or severally, and entire execution of the Contract (including payment) shall be carried out exclusively through the partner-in-charge. A copy of the said authorization shall be furnished in this Bid.
- (e) All partners of the Joint Venture shall be liable jointly and severally for the execution of the Contract in accordance with the Contract terms, and a relevant statement to this effect shall be included in the authorization mentioned under sub clause (c) above as well as in the Form of Bid and the Form of Agreement (in case of a successful bidder).
- (f) The bid submitted shall include all the relevant information as required under the provisions of Sub-Clause 4.4 of ITB and furnished separately for each partner.
- (g) The Joint Venture Agreement shall be registered to be legally valid and binding on all partners.
- (h) In the event of default by any partner, in the execution of his part of Contract, the Employer shall be so notified within 30 days by the partner-in-charge, or in the case of the partner-in-charge being the defaulter, by the partner nominated as partner-in-charge of the remaining Joint Venture. The partner-in-charge shall, within 60 days of the said notice, assign the work of the defaulting partner to any other equally competent party acceptable to the Employer to ensure the execution of that part of the Contract, as envisaged at the time of bid. Failure to comply with the above provisions will make the Contractor liable for action by the Employer under the Conditions of Contract. If the Most Experienced i.e. Lead Partner defined as such in the Communication approving the qualification defaults, it shall be construed as default of the Contractor and Employer will take action under the Conditions of Contract.
- (i) Notwithstanding the permission to assigning the responsibilities of the defaulting partner to any other equally competent party acceptable to the Employer as mentioned in sub clause (f) above, all the partners of

the Joint Venture will retain the full and undivided responsibility for the performance of their obligations under the Contract and/ or for satisfactory completion of the Works.

**4.4A** To qualify for award of the Contract, each bidder should have in the last five years:

(a) Achieved in any one year a minimum annual financial turnover 50 % of amount put to bid (as certified by chartered accountant, and at least 50% of which is from civil engineering construction works).

e.g. If bid is invited in financial year 2024-25 up to 30<sup>th</sup> September 2024, then 5 years immediately preceding the year are 2018-19, 2019-20, 2020-21, 2021-22 & 2022-23 and If bid is invited in financial year 2024-25 after 30<sup>th</sup> September 2024, then 5 years immediately preceding the year are 2019-20, 2020-21, 2021-22, 2022-23 & 2023-24.

**Audit Reports (issued after 30-06-2019) uploaded by bidders must have UDIN (Unique Document Identification Number) otherwise it will not be considered.**

**Note: Required annual turnover / civil engineering work achieved even in one year shall be considered.**

(b) Turnover will be indexed at the rate of 8% per year updated to the price level of the preceding financial year in which bids are invited.

e.g. If bid is invited in financial year 2024-25 up to 30<sup>th</sup> September 2024 then 5 years immediately preceding the year are 2018-19, 2019-20, 2020-21, 2021-22 & 2022-23. In this case Turnover will be indexed at the rate of 8% per year updated to 2022-23.

i.e. If bid is invited in financial year 2024-25 after 30<sup>th</sup> September 2024, then 5 years immediately preceding the year are 2019-20, 2020-21, 2021-22, 2022-23 & 2023-24. In this case Turnover will be indexed at the rate of 8% per year updated to 2023-24.

(c) Satisfactorily completed, as prime contractor or sub-contractor at least one similar work of value not less than 25% amount put to bid. The cut-off date for experience certificate (similar work) is the last date of the month before the last date of receipt of tender.

e.g.- If tender is received in the month of August 2024, then experience certificate (similar work) shall be considered for the period starting from 1<sup>st</sup> of August 2019 up to 31<sup>st</sup> of July 2024.

**4.4 B(a) Each bidder must produce:**

(i) A copy of PAN issued by Income Tax Authorities in the same name and style of the bidder. However, incase of Single proprietorship firm PAN maybe in the name of individual.

(ii) An affidavit that the information furnished with the bid document is correct in all respects; and

(iii) Such other certificates as defined in the Bid Data Sheet. Failure to produce the certificates on demand shall make the bid non-responsive.

**(b) Each bidder must upload:**

(i) An affidavit regarding Key equipment & Lab equipments as per format in the Bid Data Sheet;

(ii) An affidavit regarding Key technical personnel as per format in the Bid Data Sheet;

(iii) undertaking to invest money from own resources of bidder not less than the amount specified in the Bid Data Sheet;

**(c) Each bidder must upload:**

- (i) An Affidavit stating that the near Relations (defined as first blood relations, and their spouses, of the bidder or the bidder's spouse) of the following departmental officers of the RWD/RCD are not in his/her employment :  
JE/AE/EE/SE/CE /Engineer-in-chief & Divisional Accountant.
- (ii) An affidavit stating that there is no such persons in his employment who have retired as gazetted officer within the last two years from RWD/RCD with following ranks:  
JE/AE/EE/SE/CE /Engineer-in-chief & Divisional Accountant.
- (iii) An affidavit to declare that they have not been declared defaulter, suspended, or blacklisted by any State Government/ Central Government/ Public Undertaking. If such affidavit is subsequently found to be false, their tender shall not be considered and further legal action shall be initiated.

**4.4 C** To qualify for a package of contracts made up of this and other contracts for which bids are invited in the NIT, the bidder must demonstrate having experience and resources sufficient to meet the aggregate of the qualifying criteria for the individual contracts.

**4.4 D** Joint Venture firm (having partners limited to three including lead partner) shall be jointly and severally responsible for completion of the project. Joint Venture must fulfill the following minimum qualification requirements.

- (i) The lead partner shall meet not less than 50% of qualification criteria given in sub-clause 4.4 A (a) & 4.4 A(c) of ITB above.
- (ii) Each of the remaining partners shall meet not less than 25% of all the qualifying criteria given in sub-clause 4.4 A (a) & 4.4 A(c) of ITB above.
- (iii) The Joint Venture must also collectively satisfy the requirements of the criteria of Clause 4.4 B and 4.4 C of ITB; for this purpose the relevant figures for each of the partners shall be added together to arrive at the Joint Venture total capacity which shall be 100% or more.
- (iv) In the event that the E/I has caused the bidder to disqualify under Clause 4.7 of ITB below, all of the Joint Venture partners will be disqualified.
- (v) The available bid capacity of the JV as required under Clause 4.6 of ITB below will be applied for each partner to the extent of his proposed participation in the execution of the work. The total bid capacity available shall be more than estimated contract value.

~~**4.5** The Sub Contractors' experience and resources shall not be taken into account in determining the bidder's compliance with the qualifying criteria except to the extent stated in clause 4.4A above.~~

**4.6** Bidders who meet the minimum qualification criteria will be qualified only if their available bid capacity is more than the total bid value. The available bid capacity will be calculated as under :

$$\text{Assessed Available Bid capacity} = (A * N * M - B)$$

Where

A = Maximum value of civil engineering works executed in



any one year during the last five financial years {updated @8% per year to the price level of the preceding financial year in which bids are invited as specified in NIT} taking into account the completed as well as works in progress.e.g.- If bid is invited in financial year 2024-25 up to 30<sup>th</sup> September 2024 then 5 years immediately preceding the year are 2018-19, 2019-20, 2020-21, 2021-22 & 2022-23 and indexing will be done up to FY 2022-23.

If bid is invited in financial year 2024-25 after 30<sup>th</sup> September 2024, then 5 years immediately preceding the year are 2019-20, 2020-21, 2021-22, 2022-23 & 2023-24) and indexing will be done up to FY 2023-24.

N = Number of years prescribed for completion of Initial Rectification, Minor improvement, Surface renewal, Construction of bridge/drainage /protection for which bids are invited (period up to 6 months to be taken as half-year and more than 6 months as one year).

M =3

B = Value, at the current price level, of existing commitments and on- going works to be completed during the period of completion of Initial Rectification, Minor improvement, Surface renewal, Construction of bridge/drainage /protection for which bids are invited.

- 4.7 Even though the bidders meet the above qualifying criteria, they are subject to be disqualified if they have:
- (i) made misleading or false representations in the forms, statements, affidavits and attachments submitted in proof of the qualification requirements; and/or
  - (ii) evidence of confirmed record of poor performance such as abandoning the works, not properly completing the contract, inordinate delays in completion, or financial failures.
  - (iii) participated in the previous bidding for the same work and had quoted unreasonably high or low bid prices and could not furnish rational justification for it to the E/I.

## B. Contents of Bidding Document

### Sections of Bidding Document

- 5.1 The Bidding Documents consist of Parts 1, 2, and 3, which include all the Sections indicated below, and should be read in conjunction with any addenda issued in accordance with ITB7.
- PART1 Bidding Procedures
- Section I. Instructions to Bidders (ITB)
  - Section II. Bid Data Sheet (BDS)
  - Section III. Qualification Information
  - SectionIV. Bidding Forms (Work Schedules)
- PART2 Specifications for Works and Services
- Section V. Specifications for Works and Services, Drawings if any.
- PART 3 Conditions of Contract and Contract Forms
- Section VI. General Conditions (GC)
  - Section VII. Particular Conditions (PC)
  - Section VIII. Annexure to the Particular Conditions - Contract Forms

- 5.2 The Invitation for Bids/ issued by the Engineer -in-chief-cum-Additional Commissioner- cum-Special Secretary / Engineer -in-chief is a part of the Bidding Document.
- 5.3 The Engineer -in-chief-cum- Additional Commissioner- cum-Special Secretary/ Engineer -in-chief is not responsible for the completeness of the Bidding Documents and their addenda, if they were not obtained directly from the source stated by the Engineer-in-chief-cum- Additional Commissioner- cum-Special Secretary / Engineer-in-chief in the Invitation for Bids.
- 5.4 The Bidder is expected to examine all instructions, forms, terms, and specifications in the Bidding Document. Failure to furnish all information or documentation required by the Bidding Documents may result in the rejection of the bid.
- Clarification of Bidding Document, Site Visit, Pre-Bid Meeting**
- 6.1 A prospective Bidder requiring any clarification of the Bidding Document shall contact the Engineer -in-chief-cum- Additional Commissioner- cum-Special Secretary/ Engineer-in-chief in writing at the Engineer-in-chief's address **indicated in the BDS** or raise his enquiries during the pre- bid meeting if provided for in accordance with ITB 6.4.  
The Engineer -in-chief-cum- Additional Commissioner- cum-Special Secretary / Engineer-in-chief will respond to all requests for clarification in pre bid meeting, provided that such request is received no later than the date of pre-bid meeting. The Engineer-in-chief shall upload its response on departmental website. If the Engineer -in-chief-cum- Additional Commissioner- cum-Special Secretary/ Engineer-in-chief deems it necessary to amend the Bidding Document as a result of a request for clarification, it shall do so following the procedure under ITB 7 and ITB 19.2.
- 6.2 The Bidder is required to visit and examine the Site of the Roads and its surroundings and obtain for itself and on its own responsibility all information that may be necessary for preparing the bid and entering into a contract. The costs of visiting the Site shall be at the Bidder's own expense.
- 6.3 The Bidder and any of its personnel or agents will be granted permission by the E/I to visit the Roads and surrounding lands for the purpose of such visit, but only upon the express condition that the Bidder, its personnel, and agents will release and indemnify the E/I and its personnel and agents from and against all liability in respect thereof, and will be responsible for death or personal injury, loss of or damage to property, and any other loss, damage, costs, and expenses incurred as a result of the inspection.
- 6.4 The Bidder's designated representative is required to attend a pre - bid meeting, **if provided for in the BDS**. The purpose of the meeting will be to clarify issues and to answer questions on any matter that may be raised at that stage.
- 6.5 The Bidder is requested, as far as possible, to submit any questions in writing, to reach the Engineer -in-chief-cum- Additional Commissioner- cum-Special Secretary/ Engineer-in-chief **not later than one week** before pre-bid meeting.
- 6.6 Minutes of the pre-bid meeting, including the text of the questions raised, without identifying the source, and the responses given, together with any responses prepared after the meeting, will be transmitted promptly through the departmental website. Any modification to the Bidding Documents that may become necessary as a result of the pre-bid meeting shall be made by the Engineer -in-chief-cum- Additional Commissioner- cum-Special Secretary/ Engineer-in-chief exclusively through the issue of an Addendum pursuant to ITB 7 and not through the minutes of the pre-bid meeting.

- Amendment of Bidding Document**
- 6.7 Nonattendance at the pre-bid meeting will not be a cause for disqualification of a Bidder.
- 7.1 At any time prior to the deadline for submission of bids, the Engineer -in-chief-cum- Additional Commissioner- cum-Special Secretary/ Engineer-in-chief may amend the Bidding Documents by issuing addenda.
- 7.2 Any addendum issued shall be part of the Bidding Documents and shall be posted on tenderwebsite.
- 7.3 To give prospective Bidders reasonable time in which to take an addendum into account in preparing their bids, the Engineer -in-chief-cum- Additional Commissioner- cum-Special Secretary/ Engineer-in-chief may, at its discretion, extend the deadline for the submission of bids, pursuant to ITB19.2

### C Preparation of Bids

- Cost of Bidding** 8.1 The Bidder shall bear all costs associated with the preparation and submission of its Bid, and the Engineer -in-chief-cum- Additional Commissioner- cum-Special Secretary/ Engineer-in-chiefs shall not be responsible or liable for those costs, regardless of the conduct or outcome of the bidding process.
- Language of Bid** 9.1 The Bid, as well as all correspondence and documents relating to the bid exchanged by the Bidder and the Engineer -in-chief-cum- Additional Commissioner- cum-Special Secretary/ Engineer-in-chief, shall be written in the language **specified in the BDS**. Supporting documents and printed literature that are part of the Bid may be in Hindi.
- Documents Comprising the Bid** 10.1 The Bid shall comprise the following:
- (a) Deleted
  - (b) completed schedules as required, including priced Bills of Quantities, in accordance with ITB 11 and 13;
  - (c) Bid Security, in accordance with ITB17;
  - (d) alternative bids, if permissible, in accordance with ITB12;
  - (e) written confirmation authorizing the signatory of the Bid to commit the Bidder, in accordance with ITB16.2;
  - (f) documentary evidence in accordance with ITB 15 establishing the Bidder's qualifications to perform the contract if its Bid is accepted;
  - (g) Technical Proposal in accordance with ITB 14; and
  - (h) any other document **required in the BDS**.
- 10.2 In addition to the requirements under ITB 10.1, bids submitted by a JVA shall include a copy of the Joint Venture Agreement entered into by all partners. Alternatively, a Letter of Intent to execute a Joint Venture Agreement in the event of a successful bid shall be signed by all partners and submitted with the bid, together with a copy of the proposed agreement.
- Schedules** 11.1 The Schedules, including the Bills of Quantities, shall be prepared using the relevant forms furnished in Section IV, Bidding Forms. The forms must be completed without any alterations to the text, and no substitutes shall be accepted. All blank spaces shall be filled in with the information requested.

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|--|--|
| <b>Alternative Bids</b>  | 12.1 <b>Unless otherwise indicated in the BDS</b> , alternative bids shall not be considered.<br>12.2 Deleted<br>12.3 Deleted  |
| <b>Bid Prices and Discounts</b>                                | 13.1 The prices quoted by the Bidder in the Bills of Quantities shall conform to the requirements specified.<br>13.2 Deleted<br>13.3 Deleted<br>13.4 Deleted<br>13.5 Unless otherwise provided in the BDS and the Contract, the rates and prices quoted by the Bidder are subject to adjustment during the performance of the Contract in accordance with the provisions of the Conditions of Contract.<br><br>13.6 All duties, taxes, and other levies payable by the Contractor under the Contract, or for any other cause, as of the date 28 days prior to the deadline for submission of bids, shall be included in the rates and prices and the total Bid Price submitted by the Bidder.  |
| <b>Documents Comprising the Technical Proposal</b>             | 14.1 The Bidder shall furnish information as stipulated in ITB 4 and Section III (Qualification Information).  |
| <b>Documents Establishing the Qualifications of the Bidder</b> | 15.1 To establish its qualifications to perform the Contract the Bidder shall provide the information requested in accordance with ITB 4, Section III (Qualification Information) and Section IV (Bidding Forms).  |
| <b>Period of Validity of Bids</b>                              | 16.1 Bids shall remain valid for the period <b>specified in the BDS</b> after the bid submission deadline date prescribed by the Engineer -in-chief-cum- Additional Commissioner- cum-Special Secretary/ Engineer-in-chief. A bid valid for a shorter period shall be rejected by the Engineer -in-chief-cum- Additional Commissioner- cum-Special Secretary/ Engineer-in-chiefas non-responsive.<br>16.2 In exceptional circumstances, prior to the expiration of the bid validity period, the Engineer -in-chief-cum- Additional Commissioner- cum-Special Secretary/ Engineer-in-chiefmay request Bidders to extend the period of validity of their bids. The request and the responses shall be made in writing. If a bid security is requested in accordance with ITB 17, it shall also be extended for forty-five (45)days beyond the deadline of the extended validity period. A Bidder may refuse the request without forfeiting its bid security. |

**Bid Security**17.1

Bid Security shall be submitted Online. No other forms of Earnest Money (Bid Security) will be accepted. The Earnest Money deposited by the non-responsive bidder will be automatically refunded. In case the bid of non-responsive bidder is reconsidered whose EMD has been refunded automatically, will be collected and refunded manually in the shape of Fixed Deposit Receipt.

17.2 Deleted

17.3 Any bid not accompanied by an enforceable and compliant bid security, if one is required in accordance with ITB 17.1, shall be rejected by the Engineer -in-chief-cum- Additional Commissioner-cum-Special Secretary/ Engineer-in-chief as non-responsive.

17.4 The bid security of unsuccessful Bidders shall be returned as promptly as possible upon the successful Bidder's furnishing of the performance security pursuant to ITB34.2

17.5 The bid security of the successful Bidder shall be returned as promptly as possible once the successful Bidder has signed the Contract and furnished the required performance security.

17.6 The bid security will be forfeited:

a) if a Bidder withdraws its bid during the period of bid validity specified by the Bidder ~~on the Letter of Bid Form~~, except as provided in ITB 16.2 or

b) if the successful Bidder fails to:

(i) sign the Contract in accordance with ITB 33; or

(ii) furnish a performance security in accordance with ITB 34.

17.7 The bid security of a JVA shall be in the name of the JVA that submits the bid.

**Format and Signing of Bid**

18.1 Any inter-lineation, erasures, or overwriting shall be valid only if they are signed or initialed by the person signing the bid.

**D. Submission and Opening of Bids****Deadline for Submission of Bids**

- 19.1 The bids must be uploaded by the bidder not later than the date and time as indicated in BDS.
- 19.2 The Engineer -in-chief-cum- Additional Commissioner- cum-Special Secretary/Engineer -in-chief may, at its discretion, extend the deadline for the submission of bids by amending the Bidding Document in accordance with ITB 7, in which case all rights and obligations of the Engineer -in-chief-cum- Additional Commissioner- cum-Special Secretary/ Engineer -in-chief and Bidders previously subject to the deadline shall thereafter be subject to the deadline as extended.

**Bid Opening**

- 20.1 **The technical bid shall be opened electronically at the date and time as specified in detailed NIT through e-tendering website <http://pmgsytendersbih.gov.in>**

**E. Evaluation and Comparison of Bids****Confidentiality**

- 21.1 Information relating to the evaluation of bids and recommendation of contract award shall not be disclosed to Bidders or any other persons not officially concerned with such process until information on Contract award is communicated to all Bidders.
- 21.2 Any attempt by a Bidder to influence Engineer -in-chief-cum- Additional Commissioner- cum-Special Secretary/ Engineer -in-chief in the evaluation of the bids or Contract award decisions may result in the rejection of its bid.
- 21.3 Notwithstanding ITB 21.2, from the time of bid opening to the time of Contract award, if any Bidder wishes to contact the Engineer -in-chief-cum- Additional Commissioner- cum-Special Secretary/ Engineer -in-chief on any matter related to the bidding process, it may do so in writing.

**Clarification of Bids**

- 22.1 To assist in the examination, evaluation, and comparison of the bids, and qualification of the Bidders, the Engineer -in-chief-cum- Additional Commissioner- cum-Special Secretary/ Engineer -in-chief may, at its discretion, ask any Bidder for a clarification of its bid. Any clarification submitted by a Bidder that is not in response to a request by the Engineer -in-chief-cum- Additional Commissioner- cum-Special Secretary/ Engineer -in-chief shall not be considered. The Engineer -in-chief-cum- Additional Commissioner- cum-Special Secretary/ Engineer -in-chief request for clarification and the response shall be in writing. No change in the prices or substance of the bid shall be sought, offered, or permitted, except to confirm the correction of arithmetic errors discovered by the Engineer-in-chief-cum- Additional Commissioner- cum-Special Secretary/ Engineer-in-chief in the evaluation of the bids, in accordance with ITB 26.
- 22.2 If a Bidder does not provide clarifications of its bid by the date and time set in the Contracting Agency's request for clarification, its bid may be rejected.

**Deviations,  
Reservations, and  
Omissions**

- 23.1 During the evaluation of bids, the following definitions apply:
- (a) “Deviation” is a departure from the requirements specified in the Bidding Document;
  - (b) “Reservation” is the setting of limiting conditions or withholding from complete acceptance of the requirements specified in the Bidding Document; and
  - (c) “Omission” is the failure to submit part or all of the information or documentation required in the Bidding Document.

**Determination of  
Responsiveness**

- 24.1 The Engineer -in-chief-cum- Additional Commissioner- cum-Special Secretary/ Engineer -in-chief’s determination of a bid’s responsiveness is to be based on the contents of the bid itself, as defined in ITB10.
- 24.2 A substantially responsive bid is one that meets the requirements of the Bidding Document without material deviation, reservation, or omission. The mandatory requirements for a substantially responsive bid is mentioned in Bid Data Sheet. A material deviation, reservation, or omission is one that,
- (a) if accepted, would
    - (i) Affect in any substantial way the scope, quality, or performance of the Works specified in the Contract; or
    - (ii) Limit in any substantial way, inconsistent with the Bidding Document, the Engineer -in-chief-cum- Additional Commissioner-cum-Special Secretary/ Engineer -in-chief’s rights or the Bidder’s obligations under the proposed Contract; or
  - (b) If rectified, would unfairly affect the competitive position of other Bidders presenting substantially responsive bids.
- 24.3 The Engineer-in-chief-cum-Additional Commissioner-cum-Special Secretary / Engineer -in-chief’s shall examine the technical aspects of the bid submitted in accordance with ITB 14.
- 24.4 If a bid is not substantially responsive to the requirements of the Bidding Document, it shall be rejected by the Engineer-in-chief-cum- Additional Commissioner-cum-Special Secretary / Engineer -in-chief’s and may not subsequently be made responsive by correction of the material deviation, reservation, or omission.

**Nonmaterial  
Nonconformities**

- 25.1 Provided that a bid is substantially responsive, the Engineer-in-chief may request that the Bidder submit the necessary information or documentation, within a reasonable period of time, to rectify nonmaterial nonconformities in the bid related to documentation requirements. Requesting information or documentation on such nonconformities shall not be related to any aspect of the price of the bid. Failure of the Bidder to comply with the request may result in the rejection of its bid.

**Correction of  
Arithmetical Errors**

- 26.1 Provided that the bid is substantially responsive, the Engineer -in-chief-cum- Additional Commissioner- cum-Special Secretary / Engineer -in-chief shall correct arithmetical errors on the following basis:
- (a) if there is a discrepancy between the unit price and the total price that is obtained by multiplying the unit price and quantity, the unit price shall prevail and the total price shall be corrected, unless in the opinion of the Engineer -in-chief-cum-Additional Commissioner- cum-Special Secretary / Engineer -in-chief's there is an obvious misplacement of the decimal point in the unit price, in which case the total price as quoted shall govern and the unit price shall be corrected;
  - (b) if there is an error in a total corresponding to the addition or subtraction of subtotals, the subtotals shall prevail and the total shall be corrected; and
  - (c) if there is a discrepancy between words and figures, the amount in words shall prevail, unless the amount expressed in words is related to an arithmetic error, in which case the amount in figures shall prevail subject to (a) and (b) above.
- 26.2 If the Bidder that submitted the lowest evaluated bid does not accept the correction of errors, its bid shall be disqualified.



**Evaluation of Bids**

- 27.1 The Engineer-in-chief-cum- Additional Commissioner-cum-Special Secretary/ Engineer -in-chief shall use the criteria and methodologies listed in this Clause. No other evaluation criteria or methodologies shall be permitted.
- 27.2 To evaluate a bid, the Engineer-in-chief-cum- Additional Commissioner-cum-Special Secretary / Engineer -in-chief shall consider the following:
- (a) the bid price, excluding Provisional Sums;
  - (b) price adjustment for correction of arithmetic errors in accordance with ITB26.1;
  - (c) price adjustment due to discounts offered in accordance with ITB13.4;
  - (d) the evaluation factors indicated in ITB 4
- 27.3 The estimated effect of the price adjustment provisions of the Conditions of Contract applied over the period of execution of the Contract shall not be taken into account in bid evaluation.
- 27.4 If the bid, which results in the lowest Evaluated Bid Price, is unbalanced or front loaded in the opinion of the Engineer-in-chief-cum- Additional Commissioner-cum-Special Secretary/ Engineer -in-chief, the Engineer-in-chief-cum- Additional Commissioner-cum-Special Secretary/Engineer-in-chief may require the Bidder to produce detailed price analysis for any or all items of the Schedule of Prices, to demonstrate the internal consistency of those prices with the construction methods and schedule proposed. After evaluation of the price analysis, taking into consideration the schedule of estimated Contract payments, the Engineer-in-chief-cum- Additional Commissioner-cum-Special Secretary/ Engineer -in-chief may require that the amount of the performance security be increased as per the RCD Notification No. 447(s)-cum-Memo No.-448(s), dated 16.01.2020 and RWD Letter No. 292 (WE) Dated 17.01.2020 at the expense of the Bidder to a level sufficient to protect the Engineer-in-chief-cum- Additional Commissioner-cum-Special Secretary/ Engineer -in-chief against financial loss in the event of default of the successful Bidder under the Contract.
- 27.5 Deleted.

**Comparison of Bids**

- 28.1 The Engineer-in-chief-cum- Additional Commissioner-cum-Special Secretary/ Engineer -in-chief shall compare all substantially responsive bids to determine the lowest evaluated bid, in accordance with ITB 27.2.
- 28.2 After application of the criteria established in Sub-Clauses 27.1 to 27.4, the Evaluated Bid Price for comparison of bids will be:
- (a) The price offered by the Bidder for the Initial Rectification, Minor improvement, Surface renewal, Construction of bridge/drainage /protection, road safety measures, tree plantation work including Second time Surface renewal plus.
  - (b) The price offered by the Bidder for the O&M Services.

- Qualification of the Bidder**
- 29.1 The Engineer-in-chief-cum- Additional Commissioner-cum-Special Secretary / Engineer -in-chief shall determine to its satisfaction whether the Bidder that is selected as having submitted the lowest evaluated and substantially responsive bid meets the qualifying criteria specified in ITB4.
- 29.2 The determination shall be based upon an examination of the documentary evidence of the Bidder’s qualifications submitted by the Bidder, pursuant to ITB15.1.
- 29.3 An affirmative determination shall be a prerequisite for award of the Contract to the Bidder. A negative determination shall result in disqualification of the bid.
- Right to Accept Any Bid, and to Reject Any or All Bids**
- 30.1 The Engineer-in-chief-cum- Additional Commissioner-cum-Special Secretary / Engineer -in-chief reserves the right to accept or reject any bid, and to annul the bidding process and reject all bids at any time prior to contract award, without thereby incurring any liability to Bidders. In case of annulment, all bids submitted and specifically, bid securities, shall be promptly returned to the Bidders.

#### **F. Award of Contract**

- Award Criteria**
- 31.1 The Engineer-in-chief-cum- Additional Commissioner-cum-Special Secretary/ Engineer -in-chief shall award the Contract to the Bidder whose offer has been determined to be the lowest evaluated bid and is substantially responsive to the Bidding Document, provided further that the Bidder is determined to be qualified to perform the contract satisfactorily.
- Notification of Award**
- 32.1 Prior to the expiration of the period of bid validity, the Engineer-in-chief-cum- Additional Commissioner-cum-Special Secretary/ Engineer -in-chief shall notify the successful Bidder, in writing, that its bid has been accepted. The notification letter (hereinafter and in the Conditions of Contract and Contract Forms called the “Letter of Acceptance”) shall specify the sum that the E/I will pay the Contractor in consideration of the execution and completion of the Works (hereinafter and in the Conditions of Contract and Contract Forms called “the Contract Price”) and the requirement for the Contractor to remedy any defects therein as prescribed by the Contract.
- 32.2 Until a formal contract is prepared and executed, the notification of award shall constitute a binding Contract.

- Signing of Contract** 33.1 Promptly after notification, the E/I shall prepare the Contract Agreement.
- 33.2 Within fifteen(15)days of receipt of the LOA, the successful Bidder shall sign the contract agreement after submission of performance security as per 34.1.
- Performance Security** 34.1 Within fifteen (15) days of the receipt of notification of award from the E/I, the successful Bidder shall furnish the performance security in the form of **e-BG (Electronic Bank Guarantee) only** and valid up to 28 days from the date of expiry of the contract period.
- 34.2 Failure of the successful Bidder to submit the above-mentioned Performance Security of sign the Contract shall constitute sufficient grounds for the annulment of the award and forfeiture of the bid security.
- Advances** 35.1 The E/I will provide Mobilization Advanceand Advance against the security of equipment as provided in General Conditions of Contract.
- Dispute Review System** 36.1Any dispute arising out of contract shall be redressed as per provision in general condition of contract.
- Corrupt Practices** 37.1It is the State Govt. 's Policy that bidders, Contractors, Suppliers and their subcontractors observe the highest standard of ethics during the procurement and execution of such contracts.In this context, any action taken by a bidder, supplier, contractor, or a sub-contractor to influence the procurement process or contract execution for undue advantage is improper.
- (a) For the purposes of above provision, the terms set forth below are as follows:
- (i) "Corrupt practice" is the offering, giving, receiving, or soliciting directly or indirectly, of anything of value to influence improperly the action of another party. "Another party" refers to a public official acting in relation to the procurement process or contract execution.
- (ii) "Fraudulent practice" is any act or omission, including a misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain a financial or other benefit or to avoid an obligation. "A "party" refers to a public official; the terms "benefit" and "obligation" relate to the procurement process or contract execution; and the "act or omission" is intended to influence the procurement process or contract execution.;
- (iii) "Collusive practice" is an arrangement between two or more parties, designed to achieve an improper purpose including to influence improperly the actions of another party. "parties" refersto participants in the procurement process (including public officials) attempting to establish bid prices at artificial, noncompetitive levels.;and

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- (iv) “Coercive practice” is impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of the party to influence improperly the actions of a party. A “party” refers to a participant in the procurement process or contract execution;
  - (v) "Obstructive practice" is
    - (va) deliberately destroying, falsifying, altering or concealing of evidence material to the investigation or making false statements to investigators in order to materially impede a investigation into allegations of a corrupt, fraudulent, coercive or collusive practice; and/or threatening, harassing or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation; or
    - (vb) act intended to materially impede the exercise of the inspection and audit rights.
  - (b) **Engineer-in-chief-cum- Additional Commissioner-cum-Special Secretary/Engineer-in-chief will reject a proposal for award** if it determines that the Bidder recommended for award has, directly or through an agent, engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract in question;
  - (c) Engineer-in-chief-cum- Additional Commissioner-cum-Special Secretary/ Engineer-in-chief will sanction a firm or individual, including declaring them ineligible, either indefinitely or for a stated period of time, to be awarded a government-financed contract if at any time determines that they have, directly or through an agent, engaged in corrupt, fraudulent, collusive or coercive practices in competing for, or in executing a contract.

**Section-II**

**Bid Data Sheet**

**Bid Data Sheet**

ITB Clause Reference	Bid Data
<b>A. Introduction</b>	
ITB 1.1	The Employer is: Engineer-in-chief-cum- Additional Commissioner-cum-Special Secretary/ Engineer-in-chief,Rural Works Department, Bihar,Patna
ITB 1.1	The name of the work is: <b>Initial Rectification, Minor improvement, Surface renewal, Construction of bridge/drainage /protection including Operation &amp; Managementfor package no. .... under Works Division.....</b>
ITB 1.1	Identification No.(Package No.) of the Works is:
ITB 1.1	The Roads included in the Bid areas per NIT
ITB 1.1 (a)	Initial Rectification, Minor improvement, Surface renewal, Construction of bridge/drainage /protection on road alignment are required.
ITB 1.1 (b)	<b>Operation &amp; Management</b> are required as detailed in Section V- Part D of the Technical Specifications.
ITB 2.1	The expenditure under this contract shall be made from budget of Rural Works Department, Govt. of Bihar and loans/grants from any other sources.
ITB 3.5	Bidders have not been declared defaulter or blacklisted by any State Government/ Central Government/ Public Undertaking.
ITB 4.2 (g)	The percentage is 20%.
ITB 4.4 B (a) (iii)	Other certificates required with the bid are: (i) Employees Provident Fund (EPF) (ii) Registration Certificate (iii) GST registration certificate.

<b>ITB 4.4 B</b> <b>(b) (i)</b>	<b>Affidavit</b>		
	<p>(1)I, the undersigned, do hereby certify that if the contract for the work namely,.....is awarded then I shall provide necessary document in support of ownership/ lease/ hire for the following key equipment (machinery) before agreement:</p>		
<p><b><u>(i) For Road Works</u></b></p>			
	<p><b>No.      EquipmentTypeand Characteristics</b></p>	<p><b>Minimum Number Required</b></p>	
	1. 10 ton Tipper truck	2	
	2. Hot mix plant	1	
	3. Hydrostatic Paver finisher	1	
	4. Loader / back hoe	1	
	5. Water Tanker	1	
	6. Excavator	1	
	7. Bitumen pressure distributor	1	
	8. Wet mix plant (Pug Mill, if required)	1	
	9. Vibratory roller	1	
	10. Smooth wheeled roller 8 to10Tonnes	2	
	11. Tandem Roller 8 to10 Tonnes	1	
	12. Plate Vibrator (Compaction for patch work)	2	
	13. Emulsion pressure distributor	1	
	14. Tractor/ Rubber Tyred Dozer with adjustable Back Blade/ Grader	3	
	15. Mechanical Hydraulic broom	1	
	16. Air Compressor	1	
	17. Generator	1	
	18. Concrete mixer	2	
	19. Concrete Batch Mixer	1	
	20. Transit mixer	1	
	21. Needle Vibrator	2	
	22. Concrete Cutting Machine	1	
	23. <b>Lab equipments-</b> I.S Sieve sets for coarse and fine aggregates, Weighing Balance, Thermometers, Core cutter and sand replacement equipment, Rapid Moisture meter, Bitumen Extraction Test Apparatus, LL&PL testing apparatus, Standard Procter density test apparatus, Camber board, Straight edge, Oven, Others as required for works.		
<p><b><u>(ii) For Bridge Works (Length more than 15 meter)</u></b></p>			
	<p><b>No.      EquipmentTypeand Characteristics</b></p>	<p><b>Minimum No. required</b></p>	
	1. RMC Plant / Batch Mix Plant	1	
	2. Transit mixer	1	
	3. Concrete Pump	1	
	4. Needle Vibrator	2	
	5. Plate Vibrator	2	
	6. Loader	1	
	7. Hydra	1	
	8. Excavator	1	
	9. JCB	1	
	10. Drilling Rig Machine (For Pilling, if required)	1	
	11. Water Tanker	1	
	12. Total Station	1	
	13. Welding Machine	1	

	<p>14. Gas Cutter 1                  15. Steel Bending Machine 1                  16. Steel Cutter 1                  17. Hywa 1                  18. De Watering Pump 1                  19. Strip level machine 1</p> <p>(2) The undersigned understands and agree that in case of failure to do so the bid security shall be forfeited and award shall be cancelled.</p> <p>(3) The undersigned understands and agree that all necessary items and number of equipment (machinery), plant and materials in order to carry out the prescribed works within the required timeframes and specifications shall be provided in addition to the key equipment listed in para (1) above.</p> <p>(Signature of the bidder/authorized representative)                  Name .....                  Date.....</p>																				
<p><b>ITB 4.4 B (b)</b> <b>(ii)</b></p>	<p style="text-align: center;"><b>Affidavit</b></p> <p>(1) I, the undersigned, do hereby certify that if the contract for the work namely,.....is awarded then I shall deploy and provide necessary document in support of Key personnel to meet the following requirement before agreement:</p> <table border="1" data-bbox="483 1062 1401 1524"> <thead> <tr> <th>Position</th> <th>No.</th> <th>Educational Qualification</th> <th>Total Work Experience in Road/Bridge Works (years)</th> </tr> </thead> <tbody> <tr> <td>Road Manager</td> <td>1</td> <td>Graduate in Civil Engg.</td> <td>2</td> </tr> <tr> <td>Bridge Engineer (If length of Bridge is more than 15m)</td> <td>1</td> <td>Graduate in Civil Engg.</td> <td>5</td> </tr> <tr> <td>Maintenance Engineer</td> <td>3</td> <td>Diplomain Civil Engg</td> <td>3</td> </tr> <tr> <td>Works Supervisor</td> <td>5</td> <td>Matric or equivalent</td> <td>3</td> </tr> </tbody> </table> <p>(Signature of the bidder/authorized representative)                  Name.....                  Date.....</p>	Position	No.	Educational Qualification	Total Work Experience in Road/Bridge Works (years)	Road Manager	1	Graduate in Civil Engg.	2	Bridge Engineer (If length of Bridge is more than 15m)	1	Graduate in Civil Engg.	5	Maintenance Engineer	3	Diplomain Civil Engg	3	Works Supervisor	5	Matric or equivalent	3
Position	No.	Educational Qualification	Total Work Experience in Road/Bridge Works (years)																		
Road Manager	1	Graduate in Civil Engg.	2																		
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Maintenance Engineer	3	Diplomain Civil Engg	3																		
Works Supervisor	5	Matric or equivalent	3																		
<p><b>ITB 4.4 B (b)</b> <b>(iii)</b></p>	<p>undertaking to invest money from own resources of the bidder shall be no less than 25% of contract value.</p>																				
<p><b>ITB 4.6</b></p>	<p><b>M= 3</b></p>																				
<p><b>ITB 5.1</b></p>	<p><b>The nominated representative shall be from the lead partner of the JVA</b></p>																				



<b>ITB 6.1</b>	A Pre-Bid meeting will take place at the following date, time and place: <b>Date:</b> <b>Time:</b> <b>Place:</b>
<b>ITB 6.1</b>	For <b><u>clarification purposes</u></b> only, the Engineer -in-chief-cum- Additional Commissioner- cum-Special Secretary/ Engineer -in-chief address is: <b>Office of the Engineer -in-chief-cum- Additional Commissioner- cum-Special Secretary/ Engineer -in-chief, Rural Works Department, Patna, Bihar</b> Address: 5 <sup>th</sup> floor, Vishweshwaraiya Bhawan City: Patna PinCode: 800015 Mobile #: 8986915003/8986915009 Electronic mail address :encrwdbihar@gmail.com/ Engineerinchief2rwd@gmail.com

<b>ITB 6.2</b>	The Bidder is required to visit and examine the Site of the Roads and its surroundings and obtain all information including O&M requirements that may be necessary for preparing the bid and entering into Contract. A site visit is required particularly to survey the existing road condition in order to estimate the costs for Initial Rectification, Minor improvement, Surface renewal, Construction of bridge/drainage /protection and Operation & Management (O&M). The costs of visiting the Site shall be at the Bidder's own expense.			
<b>ITB 6.4</b>	The Bidder's designated representative is invited to attend a pre-bid meeting. The purpose of the meeting will be to clarify issues and to answer questions on any matter that may be raised at that stage.			
<b>C. Preparation of Bids</b>				
<b>ITB 9.1</b>	The language of the bid is: <b>English.</b>			
<b>ITB 12.1</b>	Alternative bids <b>shall not be permitted.</b>			
<b>ITB 13.5</b>	The contract is subject to Price adjustment from the commencement of the Contract in accordance with Clause 48 of the General Conditions/PC.			
<b>ITB 16.1</b>	The bid validity period shall be <b>180 days after</b> the bid submission deadline date.			
<b>ITB 17.1</b>	Bid Security shall be submitted online.			
<b>D. Submission and Opening of Bids</b>				
<b>ITB 19.1</b>	As mentioned in NIT.			
<b>E. Evaluation and Comparison of Bids</b>				
<b>ITB 24.2</b>	A substantially responsive bid is one that fulfills the following mandatory requirements of the Bidding Document: -			
	Sl. No.	<b>Mandatory requirements of the Bidding Document</b>	<b>ITB Clause</b>	Reference of Format
	1	ATO	Clause-4.4A(a)	
	2	Similar Work Experience Certificate	Clause-4.4A(c)	
	3	Existing Commitment and On-going Works	Clause-4.2 (m)	Section-III Qualification Information Clause- <b>1.3.2(A)</b>
	4	Information Regarding Works for which bids already submitted	Clause-4.2 (n)	Section-III Qualification Information Clause- <b>1.3.2(B)</b>
	5	Bid Validity	Clause-16.1	Section-IV
	6	Evidence of access to line(s) of credit and availability of other financial resources/ facilities certified by banker	Clause-4.2 (g)	Section-IV
	7	Undertaking to invest money from own resources	Clause-4.4 B (b) (iii)	Section-IV
	8	Conditions relating to Joint Venture, where applicable	Clause-4.3&4.4D	

	9	Required Affidavits:-	(i) An affidavit that the information furnished with the bid document are true and correct in all respects	Clause-4.4B (a) (ii)	Section-IV
			(ii)Affidavit regarding information that near Relations (defined as first blood relations, and their spouses, of the bidder or the bidder's spouse) of the following departmental officers of the RWD/RCD are not in our firm employment: JE/AE/EE/SE/CE /Engineer-in-chief& Divisional Accountant.	Clause-4.4B (c) (i)	Section-IV
			(iii)Affidavit regarding that there is no such persons in his employment who have retired as gazetted officer within the last two years from RWD/RCD with following ranks: JE/AE/EE/SE/CE /Engineer-in-chief & Divisional Accountant.	Clause-4.4B (c) (ii)	Section-IV
			(iv)Affidavit Regarding information that Firm has not been declared defaulter, suspended, or blacklisted by any State Government/ Central Government/ Public Undertaking.	Clause-4.4B(c) (iii)	Section-IV
			(v) An affidavit regarding Key equipment & Lab equipment	Clause-4.4B (b) (i)	Bid Data Sheet of <b>ITB</b> Clause-4.4B (b) (i)
			(vi)An affidavit regarding Key technical personnel	Clause-4.4B (b) (ii)	Bid Data Sheet of <b>ITB</b> Clause-4.4B (b) (ii)
<b>ITB 26.2</b>	If the Bidder that submitted the lowest evaluated bid does not accept the Correction of errors, its bid shall be disqualified and the Bid security shall be forfeited in accordance with ITB 17.6.				
<b>ITB 27.5</b>	Deleted				

**Annexure I to ITB****Provisions Required to be Included in the Joint Venture Agreement**

1. If the application is made by a joint venture of two or more firms, the evidence of clear mandate (i.e. in the form of respective Board Resolution duly authenticated by competent authority) by such two or more firms willing to form Joint Venture among themselves for the specified projects should accompany duly recognizing their respective authorized signatories signing for and on behalf of the respective Firms for the purpose of forming the Joint Venture.
2. In the event of default by any partner, in the execution of his part of the Contract, the E/I shall be so notified within 30 days by the partner-in-charge, or in the case of the partner-in-charge being the defaulter, by the partner nominated as partner-in-charge of the remaining Joint Venture. The partner-in-charge shall, within 60 days of the said notice, assign the work of the defaulting partner to any other equally competent party acceptable to the E/I to ensure the execution of that part of the Contract, as envisaged at the time of bid. Failure to comply with the above provisions will make the Contractor liable for action by the E/I under the Conditions of Contract. If the Most Experienced i.e. Lead Partner defined as such in the Communication approving the qualification defaults, it shall be construed as default of the Contractor; and the E/I will take action under the Conditions of Contract.
3. Notwithstanding the permission to assigning the responsibilities of the defaulting partner to any other equally competent party acceptable to the E/I as mentioned in Clause 4.3 (e) of ITB all the partners of the Joint Venture will retain the full and undivided responsibility for the performance of their obligations under the Contract and/ or for satisfactory completion of the Works.
4. A certified copy of the power of attorney in favour of the authorized representatives, signed by legally authorized signatories of all the firms of the joint venture shall accompany the application. The JV Agreement shall be signed by the authorized representative of the joint venture. The JV Agreement shall need to be submitted consisting but not limited to the following provisions:
  - a. Name, style and Project(s) specific JV with Head Office address
  - b. Extent (or Equity) of participation of each party in the JV
  - c. Commitment of each party to furnish the Bond money (i.e. Bid Security, Performance Security and security for Mobilization advance) to the extent of his participation in the JV
  - d. Responsibility of each Partner of JV (in terms of Physical and Financial involvement)
  - e. Working Capital arrangement of JV
  - f. Operation of separate Bank account in the name of JV to be operated by at least one foreign partner and one local partner in case of JV where foreign partners are involved. In case of JV among local partners, both the partners are required to operate.
  - g. Provision for cure in case of non-performance of responsibility by any party of the JV.
  - h. Provision that NEITHER party of the JV shall be allowed to sign, pledge, sell or otherwise dispose all or part of its respective interests in JV to any party including existing partner(s) of the JV.
  - i. Management Structure of JV with details.
  - j. Lead Partner to be identified who shall be empowered by the JV to incur liabilities on behalf of JV
  - k. Parties/firms committing themselves to the E/I for jointly and severally responsible for the intended works.
  - l. The Power of Attorney shall be duly notarized.
  - m. Any other relevant details

**Section-III**

**Qualification Information**

### **Section III. Qualification Information**

This Section contains all the criteria that the Engineer -in-chief-cum- Additional Commissioner- cum- Special Secretary / Engineer -in-chief shall use to evaluate bids and qualify Bidders. In accordance with ITB 27 and ITB 29, no other factors, methods or criteria shall be used. The Bidder shall provide all the information requested in the forms included in Section IV, Bidding Forms.

#### **Notes on Form of Qualification Information**

The information to be filled in by bidders in the following pages will be used for purposes of post-qualification as provided for in Clause 4 of the Instructions to Bidders. Attach additional pages as necessary.

#### **1. Individual Bidders**

<b>1.1</b> Constitution or legal status of Bidder  Place of registration:  Principal place of business:  Power of attorney of signatory of Bid	<i>[attach copy]</i>  _____  _____  <i>[attach]</i>							
<b>1.2</b> Total annual volume of civil engineering construction work executed and payments received in the last five years preceding the year in which bids are invited.	<b>(Rs. In lakhs)</b> Year- Year- Year- Year- Year-							
<b>1.3.1</b> Work performed as prime Contractor (in the same name and style) or sub-contractor on construction works of a similar nature and volume over the last five years. Attach certificate from the Engineer-in-charge								
Project Name	Name of E/I	Description of work	Value of contract	Contract No.	Date of Issue of Work Order	Stipulated Date of Completion	Actual Date of Completion	Remarks explaining reasons for Delay, if any

**1.3.2** Information on Bid Capacity (works for which bids have been submitted and works which are yet to be completed) as on the date of this bid.

**(A) Existing Commitments and ongoing construction work:**

Description of Work	Place & State	Contract No & Date	Name & Address of E/I	Value of Contract (Rs. In lakhs)	Stipulated period of completion	Value of works remaining to be completed (Rs. in Lakhs)	Anticipated Date of completion
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)

**(B) Works for which bids already submitted:**

Description of Work	Place & State	Name & Address of E/I	Estimated Value of Works (Rs. Lakhs)	Stipulated period of completion	Date when decision is expected	Remarks, if any
(1)	(2)	(3)	(4)	(5)	(6)	(7)

**1.4** Refer to Clause 4.2(d) and Clause 4.4 B (b)(i) and (ii) of the Instructions to Bidders. Upload affidavits regarding key equipment, and Lab equipment and key personnels as mentioned in Bid Data Sheet.

**1.5** Qualifications of technical personnel proposed for the Contract. Upload an affidavit regarding technical personnel as mentioned in Bid Data Sheet.

**1.6** Proposed sub-contractors and firms involved in construction. Refer to Clause 12 of General Conditions of Contract.

Sections of the Works	Value of Subcontract	Sub-contractor (name and address)	Experience in similar work

Note: The capability of the sub-Contractor will also be assessed (on the same lines as for the main Contractor) before according approval to him.

**1.7** Financial reports for the last five years: balance sheets, profit and loss statements, auditors' reports, etc. List below and attach copies.

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**1.8** Evidence of access to financial resources to meet the qualification requirements: cash in hand, lines of credit, etc. List below and attach copies of support documents. (Sample format attached).

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**1.9** Information on current litigation in which the Bidder is involved.

Name of Other party(s)	Matter of dispute	Litigation where (Court/arbitration)	Amount involved

**2. Joint Ventures****3. Additional Requirements**

## Section IV. Bidding Forms

1. **Format for** Evidence of access to or Availability of Credit Facilities
2. **Format for** Undertaking to invest money from own resources
3. **Format for** Undertaking to abide by this bid for Bid Validity period.
4. **Format for** Affidavit: -
  - (i) Regarding information furnished with the bid document are true and correct.
  - (ii) Regarding information that his firm has not been declared defaulter, suspended, or blacklisted by any State Government/ Central Government/ Public Undertaking.
  - (iii) Regarding information that near Relations (defined as first blood relations, and their spouses, of the bidder or the bidder's spouse) of the following departmental officers of the RWD/RCD are not in our firm employment:  
JE/AE/EE/SE/CE /Engineer-in-chief & Divisional Accountant.
  - (iv) Regarding that there are no such persons in his employment who have retired as gazetted officer within the last two years from RWD/RCD with following ranks:  
JE/AE/EE/SE/CE/Engineer-in-chief & Divisional Accountant.
5. **Work Schedules**

**FORMAT FOR EVIDENCE OF  
ACCESS TO OR AVAILABILITY OF CREDIT  
FACILITIES BANK CERTIFICATE\***

This is to certify that M/S ----- is a reputed company with a good financial standing.

If the contract for the work, namely, \_\_\_ is awarded to the above firm, we shall be able to provide overdraft/credit facilities to the extent of Rs. \_\_\_ to meet their working capital requirements for executing the above contract, **as per terms and conditions of the Bank.**

Signature of Senior Bank Manager \_\_\_\_\_  
Name of the Senior Bank Manager \_\_\_\_\_  
Address of the Bank-----

**Stamp of the Bank**

**Note:** Certificate should be on the letter head of the bank.

**\* Change the text as follows for Jointventure:**

*This is to certify that M/s. .... who has formed a JV with M/s. .... and M/s. .... for participating in this bid, is a reputed company with a good financial standing.*

*If the contract for the work, namely ..... is awarded to the above Joint Venture, we shall be able to provide overdraft/credit facilities to the extent of Rs. .... to M/s. .... to meet the working capital requirements for executing the above contract, **as per terms and conditions of the Bank.***

***[This should be given by each of the JV members in proportion to their financial participation.]***

## Undertaking

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I, the undersigned do hereby undertake that M/S ....., shall invest minimum cash up to 25% of the Bid value from own resources during implementation of the Package No.-..... of NIT No.-.....  
.....

(Signature of the bidder/authorized representative)

Name.....

Date.....

## Undertaking

---

I, the undersigned do hereby undertake that M/S....., bid for the Package No.-..... of NIT No.-.....shall be valid for a period of **180 days** from the date fixed for the bid submission deadline in accordance with the Bidding Document, and it shall remain binding upon us and may be accepted at any time before the expiration of that period.

(Signature of the bidder/authorized representative)

Name.....

Date.....

## Affidavit

1. I, the undersigned do hereby Certify that all the statements made in the required attachments are true and correct.
2. The undersigned also hereby certifies that our firm M/S.....  
.....has not been declared defaulter, suspended, or blacklisted by any State Government/ Central Government/ Public Undertaking.
3. The undersigned also hereby certifies that near Relations (defined as first blood relations, and their spouses, of the bidder or the bidder’s spouse) of the following departmental officers of the RWD/RCD are not in our firm employment:  
JE/AE/EE/SE/CE /Engineer-in-chief & Divisional Accountant.
4. The undersigned also hereby certifies that there is no such persons in his employment who have retired as gazetted officer within the last two years from RWD/RCD with following ranks:  
JE/AE/EE/SE/CE /Engineer-in-chief & Divisional Accountant.

(Signature of the bidder/authorized representative)

Name.....

Date.....

## WORKS SCHEDULE

### Preamble

**The following Schedules are included in this Contract:**

#### **Bid Summary Schedule**

This totals the bids in Schedules 1 and 2 below: -

#### **Schedule 1– Initial Rectification, Minor improvement, Surface renewal, Construction of bridge/drainage /protection, road safety measures, tree plantation on the road alignment**

Schedule includes Initial Rectification, Minor improvement, Surface renewal, Construction of bridge/drainage /protection, road safety measures, tree plantation on the road alignment to be completed in **12 months** to bring the road at prescribed specification and service level.

#### **Works and Payments:**

Initial Rectification, Minor improvement, Surface renewal, Construction of bridge/drainage /protection on the road alignment will be measured and paid on the actual work inputs.

In addition to other parameters, payment will be done strictly on the basis of following mandatory parameters

- 1) Prescribed service level
- 2) International Roughness Index (IRI)- as per relevant IRC Specifications (IRC:SP:16-2019)

The roughness data should also indicate the chainages in which data capturing has been ignored and reason thereof. In remarks column details of speed breakers/large undulations and its location should be clearly mentioned.

- 3) (i) **For BT roads-** Percentage Bitumen content  
(ii) **For Cement concrete roads** - Target Strength achieved after 28 days
- 4) Thickness of bituminous layer/ Cement concrete pavement

#### **Schedule 2 –Operation & Management (O&M)**

The Operation & Management (O&M) works will be carried out under output and performance based for which the payment will be done quarterly after completion of the Initial Rectification, Minor improvement, Surface renewal, Construction of bridge/drainage /protection on the road alignment.

#### **Works and Payments**

1. Works Schedules shall be read in conjunction with the General Conditions, Particular Conditions Sheet, Technical Specifications, Contract Quality Plan and Drawings.
2. The Operation & Management (O&M) works shall be paid quarterly on the basis of the tendered price divided by 24 quarters. The Initial Rectification, Minor improvement, Surface renewal, Construction of bridge/drainage /protection on the road alignment shall be tendered as contract amount, while indicating the quantities of measurable inputs to be executed in order that the road achieves the performance standards specified in the bidding documents. **Payments will be made in accordance with the progress in the execution of those measured inputs/outputs.**
3. The rates and prices tendered in the Works Schedule shall allow for and include all plant, labour, supervision, testing, materials, mobilization, demobilization, maintenance, insurance, profit, taxes, levies and duties, together with all general risks, liabilities and obligations etc. set out or implied in the Contract.

- 
4. General directions and descriptions of work and materials are not necessarily repeated nor summarized in the Works Schedule. References to the relevant sections of the contract documentation shall be made before entering prices against each item in the priced Works Schedule.
  5. All works completed under the Contract shall be measured according to the metric system for all items, unless otherwise provided herein or in the Special provisions.
  6. All measurements for area or volume will be made horizontally along and perpendicular to the centre line of the road, and no deductions will be made for individual fixtures in the pavement having an area of one square meter or less.
  7. Note the following:
    - a) Items for which no rate or price has been entered in will not be paid for by the E/I when executed and shall be deemed covered by the other rates and prices in the Works Schedule
    - b) Unit rates and prices shall be quoted by the bidder in Indian Rupees.
    - c) Where there is a discrepancy between the rate in figures and words, the rates in words will govern. [ITB Clause26.1]
    - d) Where there is a discrepancy between the unit rate and the amount, the unit rate quoted shall govern [ITB Clause26.1].

## Work Schedules

Name of work: Initial Rectification, Minor improvement, Surface renewal, Construction of bridge/drainage /protection and Operation & Management (O&M)work under Works division.....

## Bid Summary Schedule

## Percentage BoQ

Tender Inviting Authority: Engg-in Chief RWD Patna						
Name of Work:						
Contract No: Civil Works						
Name of the Bidder/ Bidding Firm / Company :						
PRICE SCHEDULE						
(This BOQ template must not be modified/replaced by the bidder and the same should be uploaded after filling the relevant columns, else the bidder is liable to be rejected for this tender. Bidders are allowed to enter the Bidder Name and Values only )						
NUMBER #	TEXT #	NUMBER #	TEXT #	NUMBER	NUMBER #	TEXT #
Sl. No.	Item Description	Quantity	Units	Estimated Rate	TOTAL AMOUNT With Taxes	TOTAL AMOUNT In Words
1	Construction Part Sulindabad to Baluaha					
2	Clearing and Grubbing Road Land (By manual means) including uprooting wild vegetation, grass, bushes, shrubs, saplings and trees of girth upto 300mm, removals of stumps of such trees cut earlier & disposal of unserviceable materials & stacking of serviceable materials to be used or auctioned upto a lead of 1000 m including removal and disposal of top organic soil not exceeding 150mm in thickness as per technical specification clause 201.1 and direction of E/I	0.42	Ha	62032.43	26053.62	INR Twenty Six Thousand & Fifty Three and Paise Sixty Two Only
3	Construction of subgrade and earthen shoulders with approved material obtained from borrow pits with all lifts and leads, transporting to site, spreading, grading to required slope and compacted to meet requirement of Table 300.2 with lead upto 1000 m as per Technical Specification Clause 303.1.	1315.95	Cum	260.21	342423.35	INR Three Lakh Forty Two Thousand Four Hundred & Twenty Three and Paise Thirty Five Only
4	Granular Sub-base with Well Graded Material(Grade 2) : Construction of granular sub-base by providing well graded material, spreading in uniform layers with motor grader on prepared surface, mixing by mix in place method with rotavator at OMC, and compacting with smooth wheel roller to achieve the desired density, complete as per Technical Specification Clause 401.	47.92	Cum	2367.89	113469.29	INR One Lakh Thirteen Thousand Four Hundred & Sixty Nine and Paise Twenty Nine Only
5	Water Bound Macadam with Stone Screening Gr-II : Providing, laying, spreading and compacting stone aggregates of specific sizes to water bound macadam specification including spreading in uniform thickness, hand packing, rolling with three wheel 80-100 kN static roller in stages to proper grade and camber, applying and brooming, crushable screening to fill-up the interstices of coarse aggregate, watering and compacting to the required density Grading 2 as per Technical Specification Clause 405.	43.55	Cum	4581.07	199505.60	INR One Lakh Ninety Nine Thousand Five Hundred & Five and Paise Sixty Only
6	Water Bound Macadam Gr III : Providing, laying, spreading and compacting stone aggregates of specific sizes to water bound macadam specification including spreading in uniform thickness, hand packing, rolling with smooth wheel roller 80-100 kN in stages to proper grade and camber, applying and brooming, stone screening to fill-up the interstices of coarse aggregate, watering and compacting to the required density Grading 3 as per Technical Specification Clause 405.	70.84	Cum	4443.77	314796.67	INR Three Lakh Fourteen Thousand Seven Hundred & Ninety Six and Paise Sixty Seven Only
7	Providing and applying primer coat with Bitumen emulsion (SS-1) on prepared surface of granular base including cleaning of road surface and spraying primer at the rate of 0.70-1.0 kg/sqm using mechanical means as per Technical Specification Clause 502.	944.58	Sqm	56.34	53217.64	INR Fifty Three Thousand Two Hundred & Seventeen and Paise Sixty Four Only
8	Providing, laying and rolling of close-graded premix surfacing material of 20 mm thickness composed of 11.2 mm to 0.9 mm (Type-A) or 13.2 mm to 0.9 mm (Type-B) aggregates using penetration grade bitumen to required line, grade and level to serve as wearing course on a previously prepared base, including mixing in a suitable plant, laying and rolling with a three wheel 8-10 kN static roller and finishing to required level and grades as per Technical Specification Clause 509.	944.58	Sqm	230.09	217338.41	INR Two Lakh Seventeen Thousand Three Hundred & Thirty Eight and Paise Forty One Only

Sample Copy



NUMBER #	TEXT #	NUMBER #	TEXT #	NUMBER	NUMBER #	TEXT #
Sl. No.	Item Description	Quantity	Units	Estimated Rate	TOTAL AMOUNT With Taxes	TOTAL AMOUNT In Words
9	Providing and applying tack coat with bitumen emulsion using emulsion pressure distributor at the rate of 0.25 to 0.30 kg per sqm on the prepared granular surface treated with Primer and cleaned with hydriloc broom as per technical specification clause 503.	6038.77	Sqm	19.08	115219.73	INR One Lakh Fifteen Thousand Two Hundred & Nineteen and Paise Seventy Three Only
10	Providing and laying semi dense bituminous concrete with 100-120 TPH batch type HMP producing an average output of 75 tonnes per hour using crushed aggregates of specified grading, premixed with bituminous binder @ 4.5 to 5 per cent of mix and filler, transporting the hot mix to work site, laying with a hydrostatic paver finisher with sensor control to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MoRTH specification clause No. 508 complete in all respects.	127.35	Cum	12828.73	1633738.77	INR Sixteen Lakh Thirty Three Thousand Seven Hundred & Thirty Eight and Paise Seventy Seven Only
11	Construction of dry lean cement concrete Sub-base over a prepared sub-grade with coarse and fine aggregates conforming to IS:383, the size of coarse aggregate not exceeding 25mm, aggregate cement ratio not to exceed 15:1 aggregate gradation after blending to be as per table 600-1 cement content not to be less than 150kg/cum optimum moisture content to be determined during trial length construction, concrete strength not be less than 10 Mpa at 7 days, mixed in a batching plant, transported to site, laid with paver with electronic sensor, compacting with 8-10 tonnes vibratory roller, finishing and curing.	10.62	cum	5170.54	24912.20	INR Fifty Four Thousand Nine Hundred & Twelve and Paise Twenty Only
12	Construction of Panel concrete ,plain cement concrete pavement, thickness as per design, over a prepared sub base with 43 grade cement or any other type as per Caluse 1501.22 M 30(Grade) coarse and fine aggregates conforming to IS:383, maximum size of coarse aggregate not exceeding 25mm, mixed in a concrete mixer of not less than 0.2 cum capacity and appropriate weigh batcher using approved mix design ,laid in approved fixed side formwork (steel channel,laying and fixing of 125 micron thick polythene film,wedges, steel plates including levelling the formwork as per drawing), spreading the concrete with shovels, rakes, compacted using needle, screed and plate vibrators and finished in continous operation including provision of contraction and expansion ,construction joints, applying debonding strips ,primer ,sealant ,dowel bars, near approaches to bridge/ culvert and construction joints, admixture as approved ,curing of concrete slabs for 14 days. Curing compound (where specified) and water finishing to lines and grade as per drawing and Technical specification Clause 1501. PCC Grade M-30 EachPanel (0.50X0.50) thickness 100 mm	295.96	cum	8508.38	2433056.34	INR Twenty Four Lakh Thirty Three Thousand & Fifty Six and Paise Thirty Four Only
13	Reinforced cement concrete M15 grade kilometre local stone of standard design as per IRC:8 fixing in position including painting and printing , etc as per drawing and technical specification clause 1703.					
14	Km stone	2.00	No.	2704.35	5408.70	INR Five Thousand Four Hundred & Eight and Paise Seventy Only
15	200 m stone	9.00	No.	763.36	6870.24	INR Six Thousand Eight Hundred & Seventy and Paise Twenty Four Only
16	Retro-reflectorised Traffic SignsProviding and erecting direction and place identification retro-reflectorised sign as per IRC:67 made of encapsulated lens type reflective sheeting vide Clause 1701.2.3, fixed over aluminium sheeting, 2 mm thick with area exceeding 0.9 sqm supported on mild steel angle iron posts 75 mm x 75 mm x 6 mm, 2 Nos. firmly fixed to the ground by means of properly designed foundation with M-15 grade cement concrete 450 mm x 450 mm x 600 mm, 600 mm below ground level as per approved drawing and Technical Specification Clause 1701.	5.76	Sqm	14748.50	84951.36	INR Eighty Four Thousand Nine Hundred & Fifty One and Paise Thirty Six Only

NUMBER #	TEXT #	NUMBER #	TEXT #	NUMBER	NUMBER #	TEXT #
Sl. No.	Item Description	Quantity	Units	Estimated Rate	TOTAL AMOUNT With Taxes	TOTAL AMOUNT In Words
17	Providing and fixing of retro-reflectorised cautionary, mandatory and informatory sign as per IRC:67 made of encapsulated lens type reflective sheeting vide Clause 1701.2.3 fixed over aluminium sheeting, 1.5 mm thick supported on a mild steel angle iron post 75 mm x 75 mm x 6 mm firmly fixed to the ground by means of properly designed foundation with M15 grade cement concrete 450 mm x 450 mm x 600 mm, 600 mm below ground level as per drawings and Technical Specification Clause 801					
18	600 mm equilateral & triangle	26.00	Nos	4288.45	111499.70	INR One Lakh Eleven Thousand Four Hundred & Ninety Nine and Paise Seventy Only
19	600 mm circular	8.00	Nos	4224.39	33795.12	INR Thirty Three Thousand Seven Hundred & Ninety Five and Paise Twelve Only
20	600 mm x 450 mm rectangular	12.00	Nos	4080.66	48967.92	INR Forty Eight Thousand Nine Hundred & Sixty Seven and Paise Ninety Two Only
21	900 mm side octagon	2.00	Nos	8525.39	17050.78	INR Seventeen Thousand & Fifty and Paise Seventy Eight Only
22	Reinforced cement concrete M15 grade boundary pillars/local stone of standard design as per IRC:25, fixed in position including finishing and lettering but excluding painting as per drawing and Technical Specification Clause 1704	60.00	Nos	696.41	41784.60	INR Forty One Thousand Seven Hundred & Eighty Four and Paise Sixty Only
23	Printing new letter and figures of any shade with synthetic enamel paint black or any other approved colour to give an even shade as per drawings and Technical Specification Clause 1701	176.00	per cm height per letter	0.63	110.88	INR One Hundred & Ten and Paise Eighty Eight Only
24	Planting of trees by the road side (Avenue trees) in 0.60 m dia holes, 1 m deep dug in the ground, mixing the soil with decayed farm yard/sludge manure, planting the saplings, backfilling the trench, watering, fixing the tree guard and maintaining the plants for one year	67.00	Each	1117.02	74840.34	INR Seventy Four Thousand Eight Hundred & Forty and Paise Thirty Four Only
25	Providing and laying of hot applied thermoplastic compound 2.5 mm thick including reflectorising glass beads @ 250 gms per sqm area, thickness of 2.5 mm is exclusive of surface applied glass beads as per IRC:35. The finished surface to be level, uniform and free from streaks and holes.					
26	At Edge for BT Portion	269.00	Sqm	782.79	210570.51	INR Two Lakh Ten Thousand Five Hundred & Seventy and Paise Fifty One Only
27	Pedestrian Crossing(2 m in length and providing at 90 cm apart)	24.00	Sqm	782.79	18786.96	INR Eighteen Thousand Seven Hundred & Eighty Six and Paise Ninety Six Only
28	At Edge for CC Portion	151.00	Sqm	879.03	132733.53	INR One Lakh Thirty Two Thousand Seven Hundred & Thirty Three and Paise Fifty Three Only
29	Providing and fixing of typical MMGSY informatory sign board with Logo as per MORD specifications and drawing. Three MS Plates of 1.6 mm thick, top and middle plate duly welded with MS flat iron 25mm x 5m size on back on edges. The lower plate will be welded with MS angle iron frame of 25mm x 25mm x 5mm. The angle iron frame of the lower most plate and flat iron frame of middle plate will be welded to 2 nos. 75mm x 75 mm of 12 SWG sheet tubes posts duly embedded in cement concrete M-15 grade blocks of 450mm x 450mm x 600mm, 600mm below ground level. The top most diamond plate will be welded to middle plate by 47mm x 47mm of 12 SWG steel plate tube. All M.S. will be stove enameled on both sides. Lettering and printing arrows, border etc. will be painted with ready mixed synthetic enamel paint of superior quality in required shade and colour. All sections of framed posts and steel tube will be painted with primer and two coats of epoxy paint as per drawing Clause 1701 and Annexure 1700.1	4.00	No.	10792.76	43171.04	INR Forty Three Thousand One Hundred & Seventy One and Paise Four Only

NUMBER #	TEXT #	NUMBER #	TEXT #	NUMBER	NUMBER #	TEXT #
Sl. No.	Item Description	Quantity	Units	Estimated Rate	TOTAL AMOUNT With Taxes	TOTAL AMOUNT In Words
30	Cross Drainage Works/Protection/Repair					
31	Earth work in excavation for foundation of structures upto 3.0 m depth as per drawing and technical specification clause 1104	118.88	Cum	326.71	38839.28	INR Thirty Eight Thousand Eight Hundred & Thirty Nine and Paise Twenty Eight Only
32	Providing concrete for plain/reinforced concrete in open foundations complete as per drawings and technical specifications Clause 802, 803, 1202 & 1203 PCC M-15 Grade	10.74	Cum	6481.20	69608.09	INR Sixty Nine Thousand Six Hundred & Eight and Paise Nine Only
33	Providing concrete for plain/reinforced concrete in open foundations complete as per drawings and technical specifications Clause 802, 803, 1202 & 1203 PCC M-20 Grade	54.40	Cum	7467.14	406212.42	INR Four Lakh Six Thousand Two Hundred & Twelve and Paise Forty Two Only
34	Supplying, fitting and placing HYSD bar reinforcement in foundation complete as per drawings and technical specifications Clauses 1000 and 1202	0.16	MT	79185.61	12669.70	INR Twelve Thousand Six Hundred & Sixty Nine and Paise Seventy Only
35	Plain/reinforced cement concrete in substructure complete as per drawings and technical specification Clauses 802, 804, 805, 806, 807, 1202 and 1204 PCC M-20 Grade	11.13	Cum	7467.14	83109.27	INR Eighty Three Thousand One Hundred & Nine and Paise Twenty Seven Only
36	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 100 mm dia AC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing and technical specification Clauses 614, 709, 1204.3.7	36.00	Nos	261.30	9406.80	INR Nine Thousand Four Hundred & Six and Paise Eighty Only
37	Plain/reinforced cement concrete in substructure complete as per drawings and technical specification Clauses 802, 804, 805, 806, 807, 1202 and 1204 RCC M-25 Grade	10.02	Cum	7443.20	74580.86	INR Seventy Four Thousand Five Hundred & Eighty and Paise Eighty Six Only
38	Supplying, fitting and placing HYSD bar reinforcement (Fe 415) in substructure complete as per drawings and technical specification Clauses 1002, 1005, 1010 & 1202	0.85	MT	79359.27	67455.38	INR Sixty Seven Thousand Four Hundred & Fifty Five and Paise Thirty Eight Only
39	Backfilling behind abutment, wing wall and return wall complete as per drawings & technical specification Clause 1204.3.8 (With Sandy Materials )	21.19	Cum	3320.22	70255.45	INR Seventy Thousand Three Hundred & Fifty Five and Paise Forty Six Only
40	Providing and laying filter media with granular crushed aggregates as per specification to a thickness of not less than 600 mm with smaller size towards the soil and bigger size towards the wall and providing over the entire surface behind abutment, wing wall, return wall to the full height, compacted to firm condition complete as per drawing and technical specification Clause 1204.3.8	15.69	Cum	3356.01	52655.80	INR Fifty Two Thousand Six Hundred & Fifty Five and Paise Eighty Only
41	Providing and laying reinforced cement concrete in superstructure as per drawing and technical specifications Clauses 800, 1205.4 and 1205.5 RCC M-30 Grade	4.38	Cum	8671.52	37981.26	INR Thirty Seven Thousand Nine Hundred & Eighty One and Paise Twenty Six Only
42	Supplying, fitting, and placing HYSD bar reinforcement in superstructure complete as per drawing and technical specifications Clauses 1002, 1010 and 1202	0.37	MT	80698.42	29858.42	INR Twenty Nine Thousand Eight Hundred & Fifty Eight and Paise Forty Two Only
43	Parapet Construction Plain/reinforced cement concrete in substructure complete as per drawings and technical specification Clauses 802, 804, 805, 806, 807, 1202 and 1204 ( M20 )	3.12	Cum	7467.14	23297.48	INR Twenty Three Thousand Two Hundred & Ninety Seven and Paise Forty Eight Only
44	Painting on Parapet Wall (Black & White Strips) Painting two coats including primer coat after filling the surface with synthetic enamel paint in all shades on new, plastered / concrete surfaces as per drawing and Technical Specification Clause 1701	186.32	Sqm	115.90	21594.49	INR Twenty One Thousand Five Hundred & Ninety Four and Paise Forty Nine Only
45	Drainage spouts complete as per drawing and technical specifications Clause 1209	4.00	Nos	993.26	3973.04	INR Three Thousand Nine Hundred & Seventy Three and Paise Four Only
46	Providing and laying RCC pipe NP-3 for culverts on first class bedding of PCC M10 material in single row including fixing collar with cement mortar 1:2 but excluding excavation, protection works, backfilling concrete and masonry works in head walls and parapets as per clause 1106	7.50	no	6899.69	51747.68	INR Fifty One Thousand Seven Hundred & Forty Seven and Paise Sixty Eight Only
47	Plastering with cement mortar (1:4) on brick work in sub-structure as per Technical Specifications	51.04	sqm	201.59	10289.15	INR Ten Thousand Two Hundred & Eighty Nine and Paise Fifteen Only

Sample Copy

NUMBER #	TEXT #	NUMBER #	TEXT #	NUMBER	NUMBER #	TEXT #
Sl. No.	Item Description	Quantity	Units	Estimated Rate	TOTAL AMOUNT With Taxes	TOTAL AMOUNT In Words
48	Brick masonry work in cement mortar 1:3 in parapet excluding pointing and plastering as per drawing and technical specifications Clauses 600, 900 and 1208.4	4.42	cum	6371.09	28160.22	INR Twenty Eight Thousand One Hundred & Sixty and Paise Twenty Two Only
49	Dismantling of existing structures like culverts, bridges, retaining walls and other structure comprising of masonry, cement concrete, wood work, steel work, including T&P and scaffolding wherever necessary, sorting the dismantled material, disposal of unserviceable material and stacking the serviceable material with all lifts and lead of 1000 m as per Technical Specification Clause 202.					
50	Cement Concrete	1.77	Cum	494.09	874.54	INR Eight Hundred & Seventy Four and Paise Fifty Four Only
51	Dismantling of existing structures like culverts, bridges, retaining walls and other structures comprising of brick masonry, including disposal of unserviceable material and stacking the serviceable material with all lift and lead of 1000 m as per Technical Specification Clause 202.					
52	Cement mortar	39.60	Cum	281.73	11156.51	INR Eleven Thousand One Hundred & Fifty Six and Paise Fifty One Only
53	Removing all types of Hume pipes and stacking including Earthwork and Dismantling of Masonry Works as per Technical Specification Clause 202.					
54	Above 600 mm to 900 mm dia Hume pipe	10.00	RM	286.70	2867.00	INR Two Thousand Eight Hundred & Sixty Seven Only
55	Patuaha NH To Rupnagra Bherdhari					
56	Clearing and Grubbing Road Land (By manual means) including uprooting wild vegetation, grass, bushes, shrubs, saplings and trees of girth upto 300mm, removal of stumps of such trees cut earlier & disposal of unserviceable materials & stacking of serviceable materials to be used or auctioned upto a lead of 1000 m including removal and disposal of top organic soil not exceeding 150mm in thickness as per technical specification clause 201.1 and direction of E.T.	0.48	Ha	62032.43	29775.57	INR Twenty Nine Thousand Seven Hundred & Seventy Five and Paise Fifty Seven Only
57	Excavation for roadway in soil using manual means for carrying of cut earth to embankment site with a lift upto 1.5 m and lead upto 50 m as per Technical Specification Clause 302.3	82.69	cum	99.78	8250.81	INR Eight Thousand Two Hundred & Fifty and Paise Eighty One Only
58	Construction of subgrade and earthen shoulders with approved material obtained from borrow pits with all lifts and leads, transporting to site, spreading, grading to required slope and compacted to meet requirement of Table 300.2 with lead upto 1000 m as per Technical Specification Clause 303.1.	1300.35	Cum	260.21	338364.07	INR Three Lakh Thirty Eight Thousand Three Hundred & Sixty Four and Paise Seven Only
59	Granular Sub-base with Well Graded Material(Grade 2) : Construction of granular sub-base by providing well graded material, spreading in uniform layers with motor grader on prepared surface, mixing by mix in place method with rotavator at OMC, and compacting with smooth wheel roller to achieve the desired density, complete as per Technical Specification Clause 401.	92.79	Cum	2339.07	217042.31	INR Two Lakh Seventeen Thousand & Forty Two and Paise Thirty One Only
60	Water Bound Macadam with Stone Screening Gr-II : Providing, laying, spreading and compacting stone aggregates of specific sizes to water bound macadam specification including spreading in uniform thickness, hand packing, rolling with three wheel 80-100 kN static roller in stages to proper grade and camber, applying and brooming, crushable screening to fill-up the interstices of coarse aggregate, watering and compacting to the required density Grading 2 as per Technical Specification Clause 405.	33.84	Cum	4519.22	152930.40	INR One Lakh Fifty Two Thousand Nine Hundred & Thirty and Paise Forty Only
61	Water Bound Macadam Gr III : Providing, laying, spreading and compacting stone aggregates of specific sizes to water bound macadam specification including spreading in uniform thickness, hand packing, rolling with smooth wheel roller 80-100 kN in stages to proper grade and camber, applying and brooming, stone screening to fill-up the interstices of coarse aggregate, watering and compacting to the required density Grading 3 as per Technical Specification Clause 405.	94.85	Cum	4389.36	416330.80	INR Four Lakh Sixteen Thousand Three Hundred & Thirty and Paise Eighty Only

Sample Copy

NUMBER #	TEXT #	NUMBER #	TEXT #	NUMBER	NUMBER #	TEXT #
Sl. No.	Item Description	Quantity	Units	Estimated Rate	TOTAL AMOUNT With Taxes	TOTAL AMOUNT In Words
62	Providing and applying primer coat with Bitumen emulsion (SS-1) on prepared surface of granular base including cleaning of road surface and spraying primer at the rate of 0.70-1.0 kg/sqm using mechanical means as per Technical Specification Clause 502.	897.21	Sqm	56.37	50575.73	INR Fifty Thousand Five Hundred & Seventy Five and Paise Seventy Three Only
63	Providing, laying and rolling of close-graded premix surfacing material of 20 mm thickness composed of 11.2 mm to 0.9 mm (Type-A) or 13.2 mm to 0.9 mm (Type-B) aggregates using penetration grade bitumen to required line, grade and level to serve as wearing course on a previously prepared base, including mixing in a suitable plant, laying and rolling with a three wheel 8-10 kN static roller and finishing to required level and grades as per Technical Specification Clause 509.	897.21	Sqm	236.90	212549.05	INR Two Lakh Twelve Thousand Five Hundred & Forty Nine and Paise Five Only
64	Providing and applying tack coat with bitumen emulsion using emulsion pressure distributor at the rate of 0.25 to 0.30 kg per sqm on the prepared granular surface treated with Primer and cleaned with hydriloc broom as per technical specification clause 503.	5726.27	Sqm	19.09	109314.49	INR One Lakh Nine Thousand Three Hundred & Fourteen and Paise Forty Nine Only
65	Providing and laying semi dense bituminous concrete with 100-120 TPH batch type HMP producing an average output of 75 tonnes per hour using crushed aggregates of specified grading, premixed with bituminous binder @ 4.5 to 5 per cent of mix and filler, transporting the hot mix to work site, laying with a hydrostatic paver finisher with sensor control to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MoRTH specification clause No. 508 complete in all respects.	120.73	Cum	12778.65	1542766.41	INR Fifteen Lakh Forty Two Thousand Seven Hundred & Sixty Six and Paise Forty One Only
66	Construction of dry lean cement concrete Sub-base over a prepared sub-grade with coarse and fine aggregates conforming to IS:383, the size of coarse aggregate not exceeding 25mm, aggregate cement ratio not to exceed 15:1 aggregate gradation after blending to be as per table 600-1 cement content not to be less than 150kg/cum optimum moisture content to be determined during trial length construction, concrete strength not be less than 10 Mpa at 7 days, mixed in a batching plant, transported to site, laid with a paver with electronic sensor, compacting with 8-10 tonnes vibratory roller, finishing and curing.	16.51	cum	5151.67	85054.07	INR Eighty Five Thousand & Fifty Four and Paise Seven Only
67	Construction of Panel concrete plain cement concrete pavement, thickness as per design, over a prepared sub base, with 43 grade cement or any other type as per Caluse 1501.2.2 M 30(Grade) coarse and fine aggregates conforming to IS:383, maximum size of coarse aggregate not exceeding 25mm, mixed in a concrete mixer of not less than 0.2 cum capacity and appropriate weigh batcher using approved mix design, laid in approved fixed side formwork (steel channel, laying and fixing of 125 micron thick polythene film, wedges, steel plates including levelling the formwork as per drawing, spreading the concrete with shovels, rakes, compacted using needle, screed and plate vibrators and finished in continuous operation, including provision of contraction and expansion construction joints, applying debonding strips, primer, sealant, dowel bars, near approaches to bridge/ culvert and construction joints, admixture as approved, curing of concrete slabs for 14 days. Curing compound (where specified) and water finishing to lines and grade as per drawing and Technical specification Clause 1501. PCC Grade M-30 Each Panel (0.50X0.50) thickness 100 mm	422.31	cum	746.10	3583764.89	INR Thirty Five Lakh Eighty Three Thousand Seven Hundred & Sixty Four and Paise Eighty Nine Only
68	Reinforced cement concrete M15 grade kilometre local stone of standard design as per IRC:8 fixing in position including painting and printing, etc as per drawing and technical specification clause 1703.					
69	Km stone	2.00	No.	2699.99	5399.98	INR Five Thousand Three Hundred & Ninety Nine and Paise Ninety Eight Only
70	200 m stone	10.00	No.	762.55	7625.50	INR Seven Thousand Six Hundred & Twenty Five and Paise Fifty Only

Sample Copy

NUMBER #	TEXT #	NUMBER #	TEXT #	NUMBER	NUMBER #	TEXT #
Sl. No.	Item Description	Quantity	Units	Estimated Rate	TOTAL AMOUNT With Taxes	TOTAL AMOUNT In Words
71	Retro-reflectorised Traffic Signs Providing and erecting direction and place identification retro-reflectorised sign as per IRC:67 made of encapsulated lens type reflective sheeting vide Clause 1701.2.3, fixed over aluminium sheeting, 2 mm thick with area exceeding 0.9 sqm supported on mild steel angle iron posts 75 mm x 75 mm x 6 mm, 2 Nos. firmly fixed to the ground by means of properly designed foundation with M-15 grade cement concrete 450 mm x 450 mm x 600 mm, 600 mm below ground level as per approved drawing and Technical Specification Clause 1701.	3.84	Sqm	14745.80	56623.87	INR Fifty Six Thousand Six Hundred & Twenty Three and Paise Eighty Seven Only
72	Providing and fixing of retro-reflectorised cautionary, mandatory and informatory sign as per IRC:67 made of encapsulated lens type reflective sheeting vide Clause 1701.2.3 fixed over aluminium sheeting, 1.5 mm thick supported on a mild steel angle iron post 75 mm x 75 mm x 6 mm firmly fixed to the ground by means of properly designed foundation with M15 grade cement concrete 450 mm x 450 mm x 600 mm below ground level as per drawings and Technical Specification Clause 801					
73	600 mm equilateral & triangle	24.00	Nos	4286.43	102874.32	INR One Lakh Two Thousand Eight Hundred & Seventy Four and Paise Thirty Two Only
74	600 mm circular	8.00	Nos	4222.37	33778.96	INR Thirty Three Thousand Seven Hundred & Seventy Eight and Paise Ninety Six Only
75	600 mm x 450 mm rectangular	12.00	Nos	4078.64	48943.68	INR Forty Eight Thousand Nine Hundred & Forty Three and Paise Sixty Eight Only
76	900 mm side octagon	2.00	Nos	8523.37	17046.74	INR Seventeen Thousand & Forty Six and Paise Seventy Four Only
77	Reinforced cement concrete M15 grade boundary pillars/local stone of standard design as per IRC:25, fixed in position including finishing and lettering but excluding painting as per drawing and Technical Specification Clause 1704	48.00	Nos	696.03	33409.45	INR Thirty Three Thousand Four Hundred & Nine and Paise Forty Four Only
78	Printing new letter and figures of any shade with synthetic enamel paint black or any other approved colour to give an even shade as per drawings and Technical Specification Clause 1701	132.00	per m. height per letter	0.63	83.16	INR Eighty Three and Paise Sixteen Only
79	Planting of trees by the road side (Avenue trees) in 0.60 m dia holes, 1 m deep dug in the ground, mixing the soil with decayed farm yard/sludge manure, planting the saplings, backfilling the trench, watering, fixing the tree guard and maintaining the plants for one year	64.00	Each	1117.02	71489.28	INR Seventy One Thousand Four Hundred & Eighty Nine and Paise Twenty Eight Only
80	Providing and laying of hot applied thermoplastic compound 2.5 mm thick including reflectorising glass beads @ 250 gms per sqm area, thickness of 2.5 mm is exclusive of surface applied glass beads as per IRC:35. The finished surface to be level, uniform and free from streaks and holes.					
81	At Edge for BT Portion	255.00	Sqm	782.79	199611.45	INR One Lakh Ninety Nine Thousand Six Hundred & Eleven and Paise Forty Five Only
82	Pedestrian Crossing(2 m in length and providing at 50 cm apart)	24.00	Sqm	782.79	18786.96	INR Eighteen Thousand Seven Hundred & Eighty Six and Paise Ninety Six Only
83	At Edge for CC Portion	223.00	Sqm	879.03	196023.69	INR One Lakh Ninety Six Thousand & Twenty Three and Paise Sixty Nine Only
84	Providing and fixing of typical MMGSY informatory sign board with Logo as per MORD specifications and drawing. Three MS Plates of 1.6 mm thick, top and middle plate duly welded with MS flat iron 25mm x 5m size on back on edges. The lower plate will be welded with MS angle iron frame of 25mm x 25mm x 5mm. The angle iron frame of the lower most plate and flat iron frame of middle plate will be welded to 2 nos. 75mm x 75 mm of 12 SWG sheet tubes posts duly embedded in cement concrete M-15 grade blocks of 450mm x 450mm x 600mm, 600mm below ground level. The top most diamond plate will be welded to middle plate by 47mm x 47mm of 12 SWG steel plate tube. All M.S. will be stove enameled on both sides. Lettering and printing arrows, border etc. will be painted with ready mixed synthetic enamel paint of superior quality in required shade and colour. All sections of framed posts and steel tube will be painted with primer and two coats of epoxy paint as per drawing Clause 1701 and Annexure 1700.1	2.00	No.	10788.71	21577.42	INR Twenty One Thousand Five Hundred & Seventy Seven and Paise Forty Two Only

NUMBER #	TEXT #	NUMBER #	TEXT #	NUMBER	NUMBER #	TEXT #
Sl. No.	Item Description	Quantity	Units	Estimated Rate	TOTAL AMOUNT With Taxes	TOTAL AMOUNT In Words
85	Cross Drainage Works/Protection/Repair					
86	Earth work in excavation for foundation of structures upto 3.0 m depth as per drawing and technical specification clause 1104	178.16	Cum	326.71	58206.65	INR Fifty Eight Thousand Two Hundred & Six and Paise Sixty Five Only
87	Providing concrete for plain/reinforced concrete in open foundations complete as per drawings and technical specifications Clause 802, 803, 1202 & 1203 PCC M-15 Grade	12.28	Cum	6465.15	79392.04	INR Seventy Nine Thousand Three Hundred & Ninety Two and Paise Four Only
88	Providing concrete for plain/reinforced concrete in open foundations complete as per drawings and technical specifications Clause 802, 803, 1202 & 1203 PCC M-20 Grade	47.22	Cum	7445.32	351568.01	INR Three Lakh Fifty One Thousand Five Hundred & Sixty Eight and Paise One Only
89	Supplying, fitting and placing HYSD bar reinforcement in foundation complete as per drawings and technical specifications Clauses 1000 and 1202	0.32	MT	79168.93	25334.06	INR Twenty Five Thousand Three Hundred & Thirty Four and Paise Six Only
90	Plain/reinforced cement concrete in substructure complete as per drawings and technical specification Clauses 802, 804, 805, 806, 807, 1202 ans 1204 PCC M-20 Grade	22.25	Cum	7445.32	165658.37	INR One Lakh Sixty Five Thousand Six Hundred & Fifty Eight and Paise Thirty Seven Only
91	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 100 mm dia AC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing and technical specification Clauses 614, 709, 1204.3.7	72.00	Nos	261.30	18813.60	INR Eighteen Thousand Eight Hundred & Thirteen and Paise Sixty Only
92	Plain/reinforced cement concrete in substructure complete as per drawings and technical specification Clauses 802, 804, 805, 806, 807, 1202 ans 1204 RCC M-25 Grade	20.04	Cum	7420.21	148701.01	INR One Lakh Forty Eight Thousand Seven Hundred & One and Paise One Only
93	Supplying, fitting and placing HYSD bar reinforcement (Fe 415) in substructure complete as per drawings and technical specification Clauses 1002, 1005, 1010 & 1202	1.70	MT	79342.51	134882.27	INR One Lakh Thirty Four Thousand Eight Hundred & Eighty Two and Paise Twenty Seven Only
94	Backfilling behind abutment, wing wall and return wall complete as per drawings & technical specification Clause 1204.3.8 (With Sandy Materials )	42.38	Cum	3370.63	142847.30	INR One Lakh Forty Two Thousand Eight Hundred & Forty Seven and Paise Thirty Only
95	Providing and laying filter media with granular crushed aggregates as per specification to a thickness of not less than 600 mm with smaller size towards the soil and bigger size towards the wall and providing over the entire surface behind abutment, wing wall, return wall to the full height, compacted to firm condition complete as per drawing and technical specification Clause 1204.3.8	31.37	Cum	3310.99	103865.76	INR One Lakh Three Thousand Eight Hundred & Sixty Five and Paise Seventy Six Only
96	Providing and laying reinforced cement concrete in superstructure as per drawing and technical specifications Clauses 800, 1205.4 and 1205.5 RCC M-30 Grade	8.75	Cum	8648.11	75670.96	INR Seventy Five Thousand Six Hundred & Seventy and Paise Ninety Six Only
97	Supplying, fitting, and placing HYSD bar reinforcement in superstructure complete as per drawing and technical specifications Clauses 1002, 1010 and 1202	0.74	MT	80681.62	59704.40	INR Fifty Nine Thousand Seven Hundred & Four and Paise Forty Only
98	Parapet Construction Plain/reinforced cement concrete in substructure complete as per drawings and technical specification Clauses 802, 804, 805, 806, 807, 1202 ans 1204 ( M20 )	6.24	Cum	7445.32	46458.80	INR Forty Six Thousand Four Hundred & Fifty Eight and Paise Eighty Only
99	Painting on Parapet Wall (Black & White Strips) Painting two coats including primer coat after filling the surface with synthetic enamel paint in all shades on new, plastered / concrete surfaces as per drawing and Technical Specification Clause 1701	99.68	Sqm	115.90	11552.91	INR Eleven Thousand Five Hundred & Fifty Two and Paise Ninety One Only
100	Drainage spouts complete as per drawing and technical specifications Clause 1209	8.00	Nos	993.26	7946.08	INR Seven Thousand Nine Hundred & Forty Six and Paise Eight Only
101	Plastering with cement mortar (1:4 ) on brick work in sub-structure as per Technical Specifications	19.20	sqm	202.41	3886.27	INR Three Thousand Eight Hundred & Eighty Six and Paise Twenty Seven Only
102	Brick masonry work in cement mortar 1:3 in parapet excluding pointing and plastering as per drawing and technical specifications Clauses 600, 900 and 1208.4	2.74	cum	6371.09	17456.79	INR Seventeen Thousand Four Hundred & Fifty Six and Paise Seventy Nine Only
103	Dismantling of existing structures like culverts, bridges, retaining walls and other structure comprising of masonry, cement concrete, wood work, steel work, including T&P and scaffolding wherever necessary, sorting the dismantled material, disposal of unserviceable material and stacking the serviceable material with all lifts and lead of 1000 m as per Technical Specification Clause 202.					

Sample Copy

NUMBER #	TEXT #	NUMBER #	TEXT #	NUMBER	NUMBER #	TEXT #
Sl. No.	Item Description	Quantity	Units	Estimated Rate	TOTAL AMOUNT With Taxes	TOTAL AMOUNT In Words
104	Cement Concrete	1.62	Cum	494.09	800.43	INR Eight Hundred and Paise Forty Three Only
105	Dismantling of existing structures like culverts, bridges, retaining walls and other structures comprising of brick masonry, including disposal of unserviceable material and stacking the serviceable material with all lift and lead of 1000 m as per Technical Specification Clause 202.					
106	Cement mortar	46.54	Cum	281.73	13111.71	INR Thirteen Thousand One Hundred & Eleven and Paise Seventy One Only
107	Removing all types of Hume pipes and stacking including Earthwork and Dismantling of Masonry Works as per Technical Specification Clause 202.					
108	Upto 600 mm dia Hume pipe	20.00	RM	212.03	4240.60	INR Four Thousand Two Hundred & Forty and Paise Sixty Only
109	18 % GST	1.00	RS	2964790.29	2964790.29	INR Twenty Nine Lakh Sixty Four Thousand Seven Hundred & Ninety and Paise Twenty Nine Only
110	1% LABOUR CESS	1.00	RS	164710.57	164710.57	INR One Lakh Sixty Four Thousand Seven Hundred & Ten and Paise Fifty Seven Only
111	Seigniorage Fee @ 10%	1.00	RS	172049.09	172049.09	INR One Lakh Seventy Two Thousand & Forty Nine and Paise Nine Only
112	<b>Maintenance Part</b>					
113	Sulindabad to Baluaha	20.00	Quarterly	106323.80	2126476.00	INR Twenty One Lakh Twenty Six Thousand Four Hundred & Seventy Six Only
114	Patuaha NH To Rupnagra Bherdhai	20.00	Quarterly	111857.20	2237144.00	INR Twenty Two Lakh Thirty Seven Thousand One Hundred & Forty Four Only
115	18 % GST	1.00	RS	785451.60	785451.60	INR Seven Lakh Eighty Five Thousand Four Hundred & Fifty One and Paise Sixty Only
116	1% LABOUR CESS	1.00	RS	43636.20	43636.20	INR Forty Three Thousand Six Hundred & Thirty Six and Paise Twenty Only
117	Seigniorage Fee @ 10%	1.00	RS	10090.83	10090.83	INR Ten Thousand & Ninety and Paise Eighty Three Only
Total in Figures					24975405.80	Two Crore Forty Nine Lakh Seventy Five Thousand Four Hundred & Five and Paise Eighty Only
Quoted Rate in Figures			Select		0.00	INR Zero Only
Quoted Rate in Words		INR Zero Only				

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**PART 2**

**TECHNICAL SPECIFICATIONS**

**&**

**PERFORMANCE INDICATORS**

**SECTION -V**

**Technical Specifications**

- **Part A – Management Requirements**
- **Part B – General Specifications**
- **PartC– Initial Rectification, Minor improvement, Surface renewal,  
Construction of bridge/drainage /protection on the road alignment.**
- **Part D –Operation & Management (O&M)**

**Section V. Part A****Management Requirements**

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  - A2** General
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### A1. Output & Performance-Based road assets Contracts Concept

1. Output- and Performance-based contracting for roads is designed to increase the efficiency and effectiveness of road asset management. It should ensure that the physical condition of the roads under contract is adequate for the need and comfort of road users, over the entire period of the contract. This type of contract significantly expands the role of the private sector, from the simple execution of works to the management and conservation of road assets.
2. In traditional road construction and asset management contracts, the Contractor is responsible for the execution of works which are normally defined by the E/I, and the Contractor is paid on the basis of unit prices for different work items, i.e. a contract based on “inputs” to the works. The results of traditional road contracts are in many cases less-than-optimal. The problem is that the Contractor has the wrong perception to carry out work as per item wise quantity without considering the service level criteria. Even if the work is carried out according to plan and much money is spent, the overall service quality for the road users depends on the quality of the design given to the Contractor who is not accountable for it.
3. The OPRMC addresses above issues. **During the bidding process, contractors compete among each other by qualifying criteria for bringing the road to a certain service level and then operating and managing it at that level for a relatively long period.** It is important to understand that contractors are not paid directly for “inputs” or physical works (which they will undoubtedly have to carry out), but for achieving specified Service Levels. Operation & Management (O&M) services will be carried out under output and performance based for which the payment will be done quarterly.  
The Initial Rectification, Minor improvement, Surface renewal, Construction of bridge/drainage /protection which have been explicitly specified by the Engineer-in-chief in the contract are quoted on the basis of measurable output quantities and paid as performed by following mandatory service criteria viz a) Maximum permissible value roughness for other district roads as per table 3.2 of IRC:SP:16-2019 and for villages road as per table 3.3 of IRC:SP:16-2019. b) Thickness of Bituminous layer as prescribed c) Minimum required percentage of Bitumen content as per specification apart from other service criteria.
4. In order to be entitled to the quarterly payment for Operation & Management (O&M) services, the Contractor must ensure that the roads under contract comply with the Service Levels which have been specified in the bidding document. It is possible that during some quarters he will have to carry out a rather large amount of physical works in order to comply with the required Service Levels and very little work during other quarters. However, his quarterly payment remains the same as long as the required Service Levels are complied with. The Initial Rectification, Minor improvement, Surface renewal, Construction of bridge/drainage /protection are also paid on the basis of measurable output quantities and paid as performed. Whenever Emergency/Day works are executed through specific work orders, the same are paid based on measured inputs.

5. Under the OPRMC, the Contractor has a strong financial incentive to be both efficient and effective whenever he undertakes work. In order to maximize profits, he must reduce his activities to the smallest possible volume of intelligently designed interventions, which nevertheless ensure that pre-defined indicators of Service Level are achieved and maintained over time. This type of contract makes it necessary for the Contractor to have a good management capacity. Here, “management” means the capability to define, optimize and carry out on a timely basis the physical interventions which are needed in the short, medium and long term, in order to guarantee that the roads remain above the agreed Service Levels. In other words, within the contract limitations and those required to comply with local legislation, technical and performance specifications and environmental regulations, the Contractor is entitled to independently define: (i) what to do, (ii) where to do it, (iii) how to do it, and (iv) when to do it. **The role of the Road Administration and of the E/I is to enforce the contract by verifying compliance with the agreed Service Levels and with all applicable legislation and regulations.**
6. **Operation & Management (O&M)** consists of many different tasks frequently necessary to upkeep the function of the road (such as pothole repairs, cleaning of drainage, cutting of vegetation, etc.). Surface layer/course consists of predictable and more costly measures of a less frequent nature designed to avoid road degradation (such as resurfacing, bituminous concrete overlays, etc.). Intelligent management, the timeliness of interventions and the adequacy of technical solutions are critical.
7. Minimum road conditions and Service Levels are defined through output and performance measures, and these are used under the OPRMC to define and measure the desired performance of the Contractor. In the OPRMC the defined performance measures are thus the accepted minimum intervention levels for the quality levels of the roads for which the Contractor is responsible.
8. The performance criteria should ideally cover all aspects of the contract and take account of the fact that different sub-areas within the contract area might require different Service Levels. Criteria can be defined at three levels:
  - (a) **Road User Service and Comfort** measures are expressed in terms of:
    - Rutting
    - Depressions
    - Skid resistance
    - Visibility of road signs and markings
    - Response times to rectify defects that compromise the safety of road users
    - Drainage off the pavement (standing water is dangerous for road users)
    - Vegetation control
    - Slope Stabilization
    - The extent of repairs permissible before a more extensive Surface renewal treatment is required
    - Degree of sedimentation in drainage facilities
  - (b) **Road Usability** measures, are expressed in terms of
    - Road Roughness

(c) **Management Performance Measures**, which define the information the E/I requires both to govern the asset during the term of the contract. Requirements should include:

- Delivery of regular **progress reports** to the Road Controlling Authority
- Inventory updates and other data sharing requirements

To avoid ambiguity, all performance measures are clearly defined and objectively measurable.

9. Under the terms of the contract, the Contractor will also be responsible for the continuous monitoring and control of road conditions and Service Levels for all roads included in the contract. This will not only be necessary to fulfill the contract requirements, but it is an activity which will provide him with the information needed to be able (i) to know the degree of his own compliance with Service Level requirements, and (ii) to define and plan, in a timely fashion, all physical interventions required to ensure that service quality indicators never fall below the indicated thresholds. Under the OPRMC modality, the Contractor will not receive instructions from the E/I concerning the type and volume of road maintenance works to be carried out. Instead, all initiative rests with the Contractor who must do whatever is necessary and efficient to achieve the quality levels required. This concept is expected to lead not only to significant efficiency gains, as mentioned earlier, but also to technological innovation.
10. It is expected that in order to comply with the contract, the Contractor will have to carry out different types of works.
11. Bidders will present their financial offer for:
  - The **Initial Rectification, Minor improvement, Surface renewal, Construction of bridge/drainage / protection , road safety measures and tree plantation at the end of slope of road on the road alignment**, in the form of a contract amount, while indicating the quantities of measurable inputs to be executed in order that the road achieves the performance standards specified in the bidding documents;
  - The **Operation & Management (O&M)** in the form of the contract amount while indicating the quantities of measurable outputs to be executed in order that the road achieves the performance standards specified in the bidding documents;
12. The agreed quarterly payment for **Operation & Management (O&M)** services will be made to the Contractor if he has complied, during the particular quarter year for which the payment is to be made, with the agreed Service Levels on the road network under contract. **Together with his quarterly invoice, the Contractor will report the result of his own evaluation of compliance with the required Service Levels, based on his own monitoring system which is mandatory. His statement will then be verified by the E/I or his representative through inspections. If the Service Levels are not met, payments are reduced, based on a schedule given in the contract. Payments may even be suspended, and the contract cancelled, if the contractor fails during an extended period to achieve certain minimum thresholds values of Service Levels. The contract describes the formulas used to calculate payment reduction and potential contract suspensions.**

**A2 General**

The Contractor shall implement an appropriate O&M strategy, incorporating regular inspections, programming and work activities to:

- i) Maintain public safety
- ii) Maintain the roadway assets to the required performance Criteria
- iii) Keep the road open to traffic

**A3 Definitions**

The following definitions shall apply:

**(a) Bridge**

Any structure, being a bridge or culvert with a span or headwall length greater than 6 metres

**(b) Culvert**

Any pipe, box (RCC) or slab having a diameter, span or headwall length less than 6 metres.

**(c) Critical Location**

A location where the road alignment and/or pavement width and/or geometry are identified by additional markings or furniture to guide the travelling public (cars, trucks, motorcycles, bicycles, and pedestrians).

**(d) Defect**

The visible or measurable evidence of failure or other undesirable condition.

**(e) Emergency Works**

**Emergency Works** is a set of necessary and sufficient activities to reinstate the Road and reconstruct its structure or right of way strip damaged as a result of natural calamities such as flood, cyclone, earthquake etc. The need for execution of Emergency Works is jointly identified by the E/I and the Contractor and for starting of execution of Emergency Works the E/I shall issue a Work Order.

**(e) Hazard**

An event, condition or substance which has the potential to cause harm to the health and safety of persons, including the travelling public.

**(f) Initial Rectification, Minor improvement, Strengthening, Surface renewal.**

Additional works required in the initial stage of the Contract to allow the Contractor to bring the road up to the required Service Level Criteria.

**(h) Intervention Criteria**

The condition level at which a defect is **recorded and rectified** within a given Response Time.

- (i) **Memorandum**  
A written instruction from the E/I or his representative confirming approval to do any work outside those activities included in the payment (i.e. Emergency /Dayworks, etc.) or for issuing notice of defects not rectified in the Response Time.
- (j) **Road Obstructions**  
Any cardboard, paper, garbage, rubbish, wood, glass, metal, rubber, dirt, waste matter, fallen tree or anything of a like nature, within the traffic lanes or shoulders, that is likely to cause damage to vehicles or otherwise be a hazard or visual detriment to the public.
- (k) **Operation & Management (O&M)**  
The regular program of activities including inspections, repairs, works and associated reports designed to address public safety, limit the deterioration of infrastructure and sustain functional and environmental values.
- (l) **Strengthening Works**  
Works are specific and clearly defined civil works the Contractor is required to carry out under the conditions of the Contract, as defined in the BOQ/Specifications.
- (m) **Response Time**  
The maximum time to repair a defect, based on consideration of the defect type, risk and severity.
- (n) **Road/Package Number**  
The identification number of the road as provided by the E/I.
- (o) **Roadside**  
Any non-pavement area within the road reserve.
- (p) **Rural Area**  
All areas outside of urban areas.
- (q) **Safety Sign**  
A road sign that provides the driver with advice about the safe use of a road.
- (r) **Standard Job**  
Description of work to restore and/or repair a damaged item to a defect-free condition. The list of Standard Jobs is detailed in Tables D3.1.1 –D3.5.1
- (s) **Structure**  
A bridge, culvert or sign gantry or other designated structure. The structure may have been assigned an asset structure number.
- (t) **Unit of Work**  
Base unit of measurement of a standard job (e.g. metre, square metre).
- (u) **Urban Area**  
Those sections of road that are contained within the defined limits of Towns or Villages, or as otherwise specified.
- (v) **Pavement**  
An artificial surface laid over ground to facilitate travel.



## A4 Scope of Services

### A4.1 Scope of Services to be provided

Notwithstanding the provisions of Clause 7 of the General Conditions, the services to be provided by the Contractor include all activities, physical or others, which the Contractor needs to carry out, in order to comply with the Service Levels and other output and performance criteria indicated under the contract, or with any other requirements of the contract. In particular, they include management tasks and physical works associated with the following road-related assets and items:

- Paved Roads (Carriageway)
- Shoulder and Embankments
- Drainage including Culverts and Major/Minor Bridge
- Signage and road Safety
- Vegetation

The Limits of the Contractor's work zone for each road within the Contract shall encompass the road reserve from property boundary to property boundary.

### A4.2 Scope of Works to be provided

The objective of the project is to undertake Initial Rectification, Minor improvement, Surface renewal, Construction of bridge/drainage /protection, **road safety measures and tree plantation at the end of slope of road on the road alignment** on the road alignment and their Operation & Management (O&M). The Operation & Management (O&M) will also include cross drainage works, minor and major work on bridges and road side maintenance within the select road limits. The Operation & Management (O&M) works will be carried out under output & performance-based contract. Initial Rectification, Minor improvement, Surface renewal, Construction of bridge/drainage /protection, **road safety measures and tree plantation at the end of slope of road within Right of Way on the road alignment** will be paid on measured quantity to the value of the Contract. There is a requirement for specialized equipment and the contract obligation is for continuous input over the contract period.

The project involves Initial Rectification, Minor improvement, Surface renewal, Construction of bridge/drainage /protection, and Operation & Management (O&M) of the roads as mentioned in NIT.

The Contractor has to take up the following Components for the project for the periods specified.

1. Initial Rectification, Minor improvement, Surface renewal, Construction of bridge/drainage /protection **road safety measures and tree plantation at the end of slope of road within Right of Way** on the road alignment-12 Months
2. Operation & Management (O&M) -72 months

#### **Initial Rectification, Minor improvement, Surface renewal, Construction of bridge/drainage /protection on the road alignment:**

This Component is to achieve the entire project to below intervention standards including resurfacing activities are to be taken to meet the service level as per BOQ/specification specified in **section V of Part C** i.e., to the desired level within the specified period of 12 Months. **The Initial Rectification, Minor improvement, Surface renewal, Construction of bridge/drainage /protection on the road alignment work, road safety measures and tree plantation at the end of slope of road within Right of Way as per contract document.**

#### **Operation & Management (O&M):**

The Contractor has to take up O&M for a period 72 months as per the NIT, BOQ & specification specified in **section V of Part D**.

### **A5 Reference Information**

As a general reference, the information shown below is provided to the Bidder. The E/I provides this information to the best of his knowledge, but does not guarantee its correctness, and the Contractor may not make any claim based on potential errors or omissions in the information provided.

Details for each road covers the data listed below and as included in detail in **Appendix B** of this Contract.

- Technical information of each road, such as inventory, as available
- Bridges and culverts
- Other information as available.

### **A6 Description of the project area**

The project roads are under Works division as mentioned in NIT.

### **A7 Description of the Roads included in Contract**

Contract packages are based on fixed areas within the specified Works division. Contract packages will include only those roads as mentioned in NIT. The Contractor must be aware of his commitments and all roads under his control and those specifically requiring his attention. It will therefore be necessary for the E/I to provide a list of total roads within the fixed area.

### **A8 Self-Control Unit of Contractor**

In conformity with sub-clause 25.2 of the GC, the Contractor is obliged to establish, within his own organizational structure, a specific Unit staffed with qualified personnel, whose task is to verify continuously the degree of compliance by the Contractor with the required Service Levels. **The Self-Control Unit is also responsible for undertaking the quality control testing required for Initial Rectification, Minor improvement, Surface renewal, Construction of bridge/drainage /protection.**

The Unit is responsible for the generation and presentation of the information needed by the Contractor for the documentation required for the **Monthly and Quarterly Statement**. In general terms, the Unit will be responsible to maintain at all times a detailed and complete knowledge of the condition of the roads or road sections included in the contract and to provide to the management of the Contractor all the information needed in order to efficiently manage and maintain the roads included in the contract. *The Self-Control Unit is also obliged to carry out, in close collaboration with the Engineer in charge, the formal and scheduled inspections of Service Levels which will take place regularly.*

The compliance (non-compliance) of the Contractor with service level requirements will be reported by the Self-Control Unit to the E/I in the form of tables as **specified in A13.1**.

### **A9 Specification of Service Level Criteria**

The service level applicable is indicated relevant to activities in the tables.

**A10 Functions of Key Personnel**

This Contract has a requirement that a high level of engineering management is employed to oversee the programming, inspection and execution of works. The Contractor shall engage qualified personnel with required experience as specified in the Instructions to Bidders to undertake such tasks. The minimum key positions to be provided within contractor's staff and their functions.

Key Positions	Function
1. Road Manager	Head the <b>Self-Control Unit</b> and control <b>compliance activities and reporting activities.</b>
2. Bridge Engineer (If length of Bridge is more than 15m)	Construction of Bridge and their O&M work.
3. Maintenance Engineer	Head the <b>overall control and supervision of the day-to-day site activities</b>
4. Works Supervisor	One required managing and controlling works like <b>Initial Rectification, Minor improvement, Surface renewal, Construction of bridge/drainage /protection</b> and Operation & Management work etc.

**A11 Methods of Inspection of Service Levels****A11.1 Formal Inspections of Service Levels**

The Engineer-in-charge or his representative must inform the Contractor of his intention to carry out a formal inspection at least 48 hours in advance, indicating the exact date, hour and location where the formal inspection is to begin. The Contractor is obliged to be present at the date, hour and location specified by the Engineer-in-charge, providing the physical tools and instruments needed for the inspection. The following minimum formal inspections should be undertaken by the Contractor in the presence of the Engineer-in-charge of all the roads covered by the Contract as part of his responsibility to public safety and to enable him to schedule a monthly works Program.

**A11.1.1 Formal Inspection**

Sl. no.	Type of inspection	Frequency	Objective
1	Routine	<b>Monthly</b>	I. To issue non-compliance report in case defects are visible during inspection by Engineer-in-Charge. II. Action taken reports/compliance report by contractor and its verification thereof by Engineer-in-Charge. III. After post rectification, payment to the contractor only after joint inspection of Engineer-in-Charge and the contractor/contractor's representative
2	<b>Road Signages</b> Night inspection for	<b>Quarterly</b>	
3	<b>Culverts and Bridges</b>	<b>Half Yearly/</b> Immediately after Natural Calamity/ manmade Calamity	
4	Emergent inspection	<b>Immediately</b> after receiving information	

The main purpose of the Ordinary or Routine Inspection is a Conformance Inspection to enable the E/I to verify the information presented in the **Contractor's monthly and quarterly statement and to issue the interim payment**. Routine Inspections will normally, but not necessarily, be scheduled to begin within less than five (5) days after the presentation by the Contractor of the monthly and quarterly Statement to the E/I and they should normally be completed within three (3) working days. The Routine Inspections allow comparison of the information on compliance provided by the Contractor in the standard tables which are part of his Monthly/Quarterly Statement, with actual measurements taken in locations to be determined by the E/I. During the formal inspections, the E/I will prepare a brief Memorandum describing (i) the general circumstances of the site visit, including date, road sections visited, persons present, etc.,(ii)any non-compliance which may have been detected, and (iii) the time granted by the E/I to the Contractor to remedy the detected defects. *Based on the outcome of the formal inspection, the E/I will immediately correct any possible errors or misrepresentations in the Contractor's Monthly Statement, countersign it and present it for payment, and to the Contractor for information.*

Formal inspections will also be scheduled for the follow-up site visits, whose purpose is to verify if the Contractor has remedied the causes of earlier non-compliance, within the time frame granted by the E/I and specified in the Memorandum.

#### **Ordinary /Routine Inspection (R)**

<b>defects to be identified</b>	<b>Inspection Requirements</b>
O&M100 Sealed pavement O&M200 Shoulder O&M300 Drainage including Culverts and Major/Minor Bridge O&M400 Vegetation O&M500 Signage and road Safety	<p>Routine Inspections are undertaken by the Contractor on a monthly basis, jointly with the E/I or its representative. It involves detailed survey to note:</p> <p>a) all defects that have reached Intervention Criteria b) Programmed work not completed in Response Time</p> <p>Where necessary, inspections shall be carried out on foot. Where there is dispute on any defect, every attempt should be made to find resolution on-site.</p> <p>The information collected shall be submitted in Form <b>O&amp;M-01 and O&amp;M01Q</b></p>

#### **A11.2 General Inspections of Service Levels**

The E/I may carry out general inspections of Service Levels as part of his duty. He may do so on his own initiative, at anytime and anywhere on the roads included in the contract. He must use his own means for those inspections. If he detects any road sections where the Service Level criteria are not met, he is obliged to inform the Contractor within 24 hours in writing, in order to enable the Contractor to take remedial action as soon as possible. The results of informal inspections may not be used by the E/I for purposes of correcting the Contractor's monthly statements or applying penalties or liquidated damages, except for cases in which the road has been completely interrupted and the criteria of Road Usability has not been met.

**A11.3 Mode of Inspection**

Routine Inspections undertaken by the Contractor on a monthly basis, jointly with the E/I or its representative shall be visual as well mechanical.

**A12 Contractor Supplied Equipment A12.1****Communications Equipment**

In accordance with sub-clause 5.3 of the GC, the Contractor is obliged to provide and maintain permanently operated communications equipment as listed below:

- cellular phones to his representatives
- Email address
- WhatsApp

**A13 Specification for the Provision of Road Management Information**

The following criteria will be applied to all the deliverables required for the ongoing management of the contract and the road network.

**A13.1 Monthly Site Meeting and Monthly Report**

E/I and Contractor shall formally **meet on a monthly basis to discuss work progress, claims, and general business**. Minutes will be taken at these meetings, and any noted actions held accountable at subsequent meetings.

The Regional Monsoon occurs during the period 1<sup>st</sup> June to 30<sup>th</sup> September of each year. The formal meetings shall be held on a fortnightly basis during this period. In the event of excessive rain, the formal meeting shall be held at shorter interval on the notice of E/I.

Prior to the meeting the Contractor will submit a report consisting of the following elements

**A13.1.1 Monthly Statement**

The Monthly Statement to be submitted in accordance with sub-clause **49.1 of the General Conditions** shall have the formats as shown in the following pages[(**Table A13.1.1(Monthly)** /**Table A13.1.1(Quarterly)**].

The compliance (or non-compliance) of the Contractor will be reported by the Self-control Unit to the E/I in the form of tables for which a mandatory standard format is adopted. There is one table for each road or road section. The tables are part of the **Contractor's monthly statement**, and they may be complemented by comments for which a specific format is not required. The format of the mandatory standard table is as shown on the pages after the Monthly Statement formats.

**A13.1.2 Monthly Works Program**

The Contractor shall prepare a Monthly Works Program in **Form O&M 02** for the following month incorporating:

- a) Items identified during Ordinary/Other Inspections
- b) Items identified during Inspections carried out under the Contract Quality Plan
- c) Initial Rectification, Minor improvement, Surface renewal, Construction of bridge/drainage /protection on the road alignment work Items (Schedules 1) as approved by the E/I any items not completed from the previous month's program.

Where asset items are not repaired within the Response Time period, the E/I may deduct payment for those items as per Clauses D4.

**A13.1.3 Monthly Progress**

The Contractor shall collect and record information regarding the quantity and the approximate cost of completed work under the headings of the Tables in Part D of the Technical Specification. Sample 'Monthly Progress Report (Form O&M03)' details the information required.

**A13.1.4 Previous Monthly Minutes**

The Contractor is to include the previous monthly minutes detailing actions that have been carried out since the conduct of the meeting.

**Standard Format for Roads monthly statements (SCORING MATRIX)**  
**[ for Operation & Management (O&M)]**  
**TableA13.1.1(Monthly)**

NAME OF MONTH.....		NAME OF YEAR.....		
1	Name of the Road	FROM	TO	
2	Package No.			
3	Total length of Road (in km)			
4	Length of road to meet required service level (in km) (1)			
5	Monthly Payment: for Operation & Management Cost as per as per contract (in Rs.) (2)			
Compliance Criteria	Standard Job Description	Non - Compliance		Reduction Payment [ 6 ]= {(3)/(1)} x (2) x (4)
		Length non-compliant (3)	Weighted Value for Payment Reduction (%) (4)	
I	PAVED ROADS (CARRIAGEWAY)		60%	
II	SHOULDERS AND EMBANKMENTS		10%	
III	CROSS DRAINAGE INCLUDING CULVERTS AND BRIDGES		15%	
IV	SIGNAGE AND ROAD SAFETY		10%	
V	VEGETATION		5%	
<b>TOTAL PAYMENT REDUCTION FOR THE MONTH (5)</b>				<b>0.00</b>
<b>TO BE PAID FOR THE MONTH (6)</b>				<b>0.00</b>

**Date of inspection** by E/I or his Agent  
**Prepared by Contractor's Self-Control Unit**

[Signature] Date

Signature of person inspecting road  
 Name and Designation of person inspecting road

Certified by E/I [Signature] Date

## Standard Format for Roads quarterly statements (SCORING MATRIX)

**Table A13.1.1(Quarterly)**

NAME OF 3 CONSECUTIVE MONTHS.....

NAME OF YEAR.....

<b>1</b>	Name of the Road	<b>FROM</b>	<b>TO</b>
<b>2</b>	Package No.		
<b>3</b>	Total length of Road (in km)		
<b>4</b>	Length of road to meet required service level (in km) <b>(1)</b>		
<b>5</b>	No. of Total Quarter (i.e. 3 months as a unit) in 72 months	<b>24</b>	
<b>6</b>	Quarterly Payment : 1/24 of Operation & Management Cost as per Agreement (in Rs.) <b>(2)</b>		
<b>Compliance Criteria</b>	<b>Standard Job Description</b>	<b>Non - Compliance</b>	
		<b>Length non-compliant (3)</b>	<b>Weighted Value for Payment Reduction (%) (4)</b>
<b>I</b>	PAVED ROADS (CARRIAGEWAY)		<b>60%</b>
<b>II</b>	SHOULDERS AND EMBANKMENTS		<b>10%</b>
<b>III</b>	CROSS DRAINAGE INCLUDING CULVERTS AND BRIDGES		<b>15%</b>
<b>IV</b>	SIGNAGE AND ROAD SAFETY		<b>10%</b>
<b>V</b>	VEGETATION		<b>5%</b>
<b>TOTAL PAYMENT REDUCTION FOR 3 Consecutive Months</b> 5 ]= [ 6 ]- (2)			
<b>TO BE PAID FOR 3 Consecutive Months</b> [ 6 ]			

Date of inspection by E/I or his Agent  
Prepared by Contractor's Self-Control Unit

[Signature]Date  
Signature of person inspecting road  
Name and Designation of person inspecting road

Certified by E/I [Signature] Date

### Standard Format for Roads monthly statements

[ for Initial Rectification, Minor improvement, Surface renewal, Construction of bridge/drainage /protection, road safety measures and tree plantation at the end of slope of road within Right of Way]

Item No.	Description of Item (Sections as detailed in BOQ)	Quantity	Unit	Rate (Rs)	Amount (Rs)

Date of inspection by E/I or his Agent  
Prepared by Contractor's Self-Control Unit

[Signature]Date  
Signature of person inspecting road  
Name and Designation of person inspecting road

Certified by E/I [Signature] Date

### Standard Format for Roads monthly statements [ for Second time Surface Renewal]

Item No.	Description of Item (Sections as detailed in BOQ)	Quantity	Unit	Rate (Rs)	Amount (Rs)

Date of inspection by E/I or his Agent  
Prepared by Contractor's Self-Control Unit

[Signature]Date  
Signature of person inspecting road  
Name and Designation of person inspecting road

Certified by E/I [Signature] Date



## A13.2 Milestone Reporting Requirements

### A13.2.1 Initial Road Condition Report

Within 30 days of signing the Contract, the Contractor's Road Manager shall submit the 'Initial Road Condition Report' to the Engineer-in-charge. The Report shall consist of the following components:

- Initial Condition Survey
- Video graphic Survey
- Roughness Results

The Initial Condition Survey is to establish a **visual baseline** of road condition at the time of commencement of the works.

The Contractor's Road Manager and the E/I or their Nominated Representative's shall carry out a joint 'Initial Condition Survey' of the roads and bridges, and shall submit it to the E/I. Details of the Initial Condition Survey shall be recorded on Form **O&M 06** as provided at Appendix C.

The Video graphic Survey of all the roads within the Contract is to be completed in accordance with the Terms of Reference for the video graphic Survey as provided in Appendix D. The video survey will be taken during daylight hours from the passenger's seat of slow-moving vehicle with the camera aligned towards the centre of the road. Video shall also be taken of all bridges and major culverts to show the aspects of each structure from all angles. The contractor will complete and formally transmit to the E/I, 2 copies of the video within *15 days after the date of agreement*.

The Roughness data is required to establish the **actual roughness** position of each paved road at the time of commencement of the works. Roughness will be measured using the methodologies as covered in Clause C3. The contractor will complete and formally transmit to the E/I the results of the surveys within 21 days, after startdate.

The E/I will confirm Initial Condition Survey within *21 days after the date of agreement*. The E/I's ruling on the condition of any item feature will be final.

### A13.2.2 Milestone 1 Report

**Within 30 days** of meeting the Contract **Initial Rectification, Minor improvement, Surface renewal, Construction of bridge/drainage /protection, road safety measures and tree plantation, Operation & Management Services** the Contractor's Road Manager shall submit the 'Milestone 1 Road Condition Report' to the E/I. The Report shall consist of the following components:

- Condition Survey
- Video graphic Survey
- Roughness Results

The E/I's ruling on the condition of any item feature will be final.

### **A13.2.3 Milestone 2 (Handover) Report**

Prior to 6 months of the Completion of the Contract, the Road Manager and E/I shall conduct a **Contract Completion Condition Survey** of the whole site and the Contractor shall prepare a **Handover Report**. The purpose of the Handover Report is to provide a smooth transition to the next contract and ensure that the next contractor is aware of any outstanding issues. The Report will:

- (a) Summarize any unresolved issues;
- (b) Include the most recent complete set of data on the roads covered by the contract, the reports will encompass all five components i.e. paved roads (carriageway), shoulder and embankment, drainage including culverts and major/minor bridges, road signage and vegetation.
- (c) Provide the following details;
  - (i) A schedule of outstanding defects and liabilities,
  - (ii) Any unresolved issues, especially those that may impact on the next Contractor,
  - (iii) Details of any sensitive issues,
  - (iv) Any ongoing special monitoring/maintenance needs.
  - (v) The exit criteria should be maximum for other district roads as per table 3.2 and for villages road as per table 3.3 of IRC:SP:16-2019.. The contractor should do test for IRI by bump indicator and provide complete report that will be road wise and kilometer wise and the point/stretch of road where IRI has been omitted.
  - (vi) He should provide complete condition report for culvert, bridges and any defect related to railing/parapet, crash barriers, road signage like chevrons, delineators, parapet painting, hazard marker should be addressed completely as outlaid in agreement.

Where Standard Job activities are identified outside the specified Intervention Criteria, the E/I may:

- (i) Direct the Contractor to bring the deficient items to within the specified intervention standard within a designated, or
- (ii) Arrange for the rectification of those features by others and in this event a deduction will be made to the Contract Sum payments due for the full cost of such works.

The E/I will provide a written record of the Contract Completion Condition Survey to the Contractor within 14 days of the completion of the survey. The E/I's ruling on the condition of any item will be final.

### **A14 Program of Performance (Contract Plan)**

In accordance with clause 17.2 of the General Conditions (GC), the Contractor shall submit a Program of Performance within **twenty-eight (28) days after the signing the contract agreement**. The program shall include, but not be limited, to the following items:

#### **A14.1 Contractor's Quality Assurance Plan**

The purpose of the Contractor's Quality Assurance Plan is to integrate the requirements of the contract and the Contractor's quality assurance systems to deliver the Services.

The Contractor's Quality Assurance Plan describes the methods and procedures which the Contractor will apply for the execution of the Contract, including how the contractor will:

- (a) identify the quality requirements specific to the contract,
- (b) plan and execute the work to satisfy those requirements
- (c) inspect and/or test the work to ensure compliance with the quality requirements
- (d) ensure strict document control and structured filing of contract administration documents
- (e) record and monitor the results as evidence of compliance

- (f) monitor the material supply and delivery processes;
- (g) ensure the ability to trace materials incorporated in the works;
- (h) undertake testing and measurement requirements;
- (i) Testing for road signage for retro-reflectivity
- (j) provide evidence of testing apparatus being recently calibrated;
- (k) undertake internal audits;
- (l) provide staff training;
- (m) demonstrate manufacturer's specification confirming compliance of materials;
- (n) record of required testing, measurement, and design sheets;
- (o) document all non-conformances; and
- (p) ensure that prompt action is taken to correct non-compliance.

The Contractor's Quality Assurance Plan must clearly describe the systems, procedures and methods that will be used to deliver and monitor compliance of the Services.

The Contractor shall carry out all works in accordance with the approved Contract Quality Plan. This Quality Control plan shall comply with the requirements of **MORD Specifications** with respect to testing frequencies and specified tolerances where applicable. The practices and performances of the Contractor will be observed and audited against the agreed Plan.

The Contractor shall establish a qualified engineer within his own organizational structure whose task is to verify continuously the degree of compliance by the Contractor with the required Response Codes. That contractor's engineer will also be responsible for the generation and presentation of the information needed by the Contractor for **the Operation & Management Program Compliance Sheet (O&M04 in Appendix C)**. It will require a system that is able to document a detailed and complete knowledge of the condition of the network and to program the **Operation & Management** requirements. The Contractor's Maintenance Engineer is also obliged to carry out, in close collaboration with the E/I or his representative, the regular quality inspections of the contracted network.

The E/I shall instruct the Contractor to revise and or resubmit this Quality Plan if amendments are required for the Quality Plan to be deemed suitable for the Contract. The Contractor shall give every assistance to the E/I in carrying out any document and/or field audits that the E/I may require.

The compliance (or non-compliance) of the Contractor in achieving the Response Time for Operation & Management will be reported monthly by the Contractor to the E/I in the form of the Operation & Management **Program Compliance Sheet**. The sheets form part of the Contractor's quarterly invoice, and shall be submitted with the **Monthly Works Program (O&M02)**. Where there is a noted non-compliance, the **Non-Conformance Report (O&M05)** should be similarly submitted stating reasons. As non-compliance may result in a payment penalty, so it would be in the Contractor's best interests to fully explain the reason for not achieving the 'Response Time'. These sheets form the basis of any dispute and will be periodically audited by the E/I against the Contractor's monthly program.

**Section V. Part B**  
**General Specifications**

**Part B General Specifications**

1. General
2. Reference to MORD Specification
3. Testing of Material & Works

**B1. GENERAL**

Notwithstanding the provisions of Clause 24 and 30 of the General Conditions, the works and the materials used by the Contractor shall comply with or exceed the requirements relevant sections of the Ministry of Rural Development (MORD) Specifications for Rural Roads (published by IRC) and these General Technical Specifications shall form part of the Contract.

**B2. REFERENCE TO MORD SPECIFICATION**

All relevant clauses of MORD in this document shall apply to this contract.

**B3. Testing of Materials and Work**

The Contractor is informed that no known borrowing pits are located in the contract area and that it will be the responsibility of the Contractor to locate his own resources required for this contract.

Prior to the extraction of materials for use on the roads included in the contract, the contractor is obliged; (i) to carry out the laboratory tests necessary to determine the quality of the materials,

(ii) he has satisfied himself as to the sufficiency of the technical characteristics and the quality of the materials he intends to use for the intended purposes,

(iii) the extraction is in conformity with the legislation and

(iv) he has informed the E/I of his intention to utilize the material. Under no circumstances may the Contractor make any claims based on the insufficient quality of any of the materials he has used

Further to Clause 20 of the General Conditions, the Contractor is to ensure the following.

**a) Responsibility**

The Contractor shall be responsible for the carrying out of all tests of materials and work required under the Contract. The Contractor shall establish or have full access to a fully equipped laboratory to carry out all required tests and quality control work. The Contractor shall permit full access to the laboratory for E/I staff to undertake any testing required by them.

**b) Testing Costs**

The Contractor shall bear the full expense of all establishments, management, and incidental costs in carrying out the required tests for all works. All such costs shall be deemed to be included in BOQ under the Contract.

**c) Sampling**

All sampling whether carried out by the E/I or the Contractor shall be carried out in the presence of an authorized representative of the Contractor and the E/I. At least 24 hours' notice is required for both parties to attend any sampling for testing purposes. Where the Contractor's representative fails to attend the results of such sampling will be notified to the Contractor and

will be deemed authentic.

**d) Testing Frequency**

In the event that the frequency of testing is not detailed in the Specifications for any specific item of material or works, it shall be as instructed by the E/I.

**e) Test Results**

The Contractor shall furnish all test results to the E/I as a monthly summary or at a frequency directed by the E/I. The E/I may withhold payment for those works where test results have not been verified.

### Section V, Part C

#### **Specifications for Initial Rectification, Minor improvement, Surface renewal, Construction of bridge/drainage /protection**

**PartC Specifications for Initial Rectification, Minor improvement, Surface renewal, Construction of bridge/drainage /protection, road safety measures and tree plantation at the end of slope of road within Right of Way on the road alignment& Second Surface renewal.**

1. Initial Rectification, Minor improvement, Surface renewal, Construction of bridge/drainage /protection, **road safety measures and tree plantation Works & Second time Surface renewal** to be carried out by the Contractor.
2. **Second time Surface renewal** time Schedule.
3. Performance Criteria and Service Level
4. Procedure for Inspection and Payment
5. Payment Reduction and Liquidated Damages

**C1 Initial Rectification, Minor improvement, Surface renewal, Construction of bridge/drainage /protection, road safety measures and tree plantation Works & Second time Surface renewal.**

Initial Rectification, Minor improvement, Surface renewal, Construction of bridge/drainage /protection Works are those activities mentioned in BOQ/Specifications to bring the road to conform following mandatory intervention standard.

- 1) Prescribed service level
- 2) International Roughness Index (IRI)- Maximum permissible value roughness for other district roads as per table 3.2 of IRC: SP:16-2019 and for villages road as per table 3.3 of IRC: SP:16-2019.

The roughness data should also indicate the chainages in which data capturing has been ignored and reason thereof. In remarks column details of speed breakers/large undulations and its location should be clearly mentioned.

- 3) Percentage Bitumen content for BT roads/ target strength achieved after 28 days based on the core taken from the pavement as per MoRD Specification for Cement Concrete roads.
- 4) Thickness of bituminous layer/Thickness of PCC Pavements.

Mandatory road safety standards/provisions shall be ensured in the estimate and the contract document. Plantation of new trees shall be done as per contract document. Payment for plantation will be made at the rate of 30% per tree of the rate mentioned in the contract document and after maintenance of tree for Defects Liability Period, the remaining amount will be payable, in which the amount of dead trees will be reduced by 100%.

**C2 Contractor shall execute Second time Surface renewal as per item mentioned in BOQ for which time schedule is given under Clause 39.1 of the Particular Conditions of Contract.**

**C3 Performance Criteria and Service Level**

The Initial Rectification, Minor improvement, Surface renewal, Construction of bridge/drainage /protection, road safety measures and tree plantation & Second time Surface renewal Works is for the purpose of assisting the Contractor to bring the road up to the required intervention standard.

**The performance criteria and service level requirement for the O&M as specified in part D shall be applicable to Initial Rectification, Minor improvement, Surface renewal, Construction of bridge/drainage /protection, road safety measures and tree plantation Works & Second time Surface renewal.**

The performance Criteria for Surface layer/course is Roughness. Roughness Service Levels compliance is to be assessed using a Bump Integrator or similar equipment.

The Contractor is responsible for ensuring that the road roughness, thickness of bituminous layer and percentage of bitumen in bituminous layer is below the threshold values given in the table below:

Item	Service Level	Measurement/Detection	Time allowed for repairs or tolerance permitted
Maximum IRI for any length of a pavement upon receiving Surface layer/course	Average value for any one-km road section must be less than the threshold value given below (in IRI average)- For other district roads as per table 3.2 and for villages road as per table 3.3 of IRC:SP:16-2019.	Measured with calibrated equipment (Bump Integrator).	No tolerance allowed.
Maximum IRI for any one-km section of existing pavement Completion report (exit criteria)	Average value for any one-km road section must be less than the threshold value given below (in IRI average)- For other district roads as per table 3.2 and for villages road as per table 3.3 of IRC:SP:16-2019.	Measured with calibrated equipment (Bump Integrator).	No tolerance allowed.
<b>Thickness of bituminous layer/Thickness of Cement Concrete Pavement Layer</b>	As specified in contract document.	At three cross-sections approximately equally spaced in one km or parts thereof. In one cross section measurement of thickness at three places viz at centre of carriageway, 250 mm from left edge and 250 mm right edge.	No deviation allowed.
<b>Percentage of bitumen content in bituminous layer</b>	As specified in contract document.	With the help of bitumen extractor from the samples taken for measurement of thickness as mentioned above.	No deviation allowed.
<b>Strength of Cement Concrete Pavement</b>	As specified in contract document.	Target strength achieved after 28 days based on the core taken from the pavement as per MoRD Specification for Cement Concrete roads.	No deviation allowed.
<b>Road Signages</b>	As specified in contract document.	Five years warranty and test certificate for angle of retro reflectivity and durability from manufacturers must be attached as per IRC 67-2012.	No tolerance allowed.

#### C4 Procedures for Payment and Inspection

Contractors will be paid as follows:

- I. **Initial Rectification, Minor improvement, Surface renewal, Construction of bridge/drainage /protection, road safety measures and tree plantation at the end of slope of road within Right of Way on the road alignment** done as per measured quantity indicated in the bills/MB. Payment for Items shall be in accordance to compliance with Part B of the Technical Specifications and the relevant clauses of MoRTH including service criteria as per table specified in **part D**.

The performance Criteria for Surface layer/course is Roughness. Roughness Service Levels compliance is to be assessed using a Bump Integrator or similar equipment. If the measurement reveals that the road roughness is above the Service Level, the E/I will establish a time frame for the Contractor to take the measures necessary to correct the non-conformance. Upon completion of the non-conforming section the relevant section roughness shall be measured again to confirm compliance. **Liquidated Damages shall apply after the granted date until the non-conformance has been corrected.**

Roughness Service Levels compliance is to be assessed on the basis of IRI inspected after completion of Initial Rectification, Minor improvement, Surface renewal as per following threshold limits: -

- (i) For other district roads as per table 3.2 of IRC:SP:16-2019
- (ii) For villages road as per table 3.3 of IRC:SP:16-2019.

The contractor will be required to correct any non-conformances and remeasure prior to the Completion of the Contract. If the any section of the road does not meet the Service Level prior to the end of the Contract, liquidated damaged shall apply in accordance to **Clause 40.3 for the General Conditions**.

#### C5 Payment Reduction and Liquidated Damages

**Deduction in payment for Operation & Management not done for prescribed service level for maintenance of road in specified response time.**

**For failure to complete the work in the specified time period in accordance Clause 39 the Liquidated Damages shall be imposed in accordance to Clause 39.3 of the Particular Conditions.**

**For non-compliance with the Performance Requirement on road roughness and other service criteria specified in accordance to Clause 40 of the General Conditions**, the contractor can correct the non-compliance at his own cost for retesting within the timeframe agreed with the E/I or pay Liquidated Damages as detailed in Clause 40.3 of the Particular Conditions.



**Section V, Part D****Operation and Management (O&M) Specifications**

- Part D Specifications for O&M Works**
1. General
  2. Specification of Service Level Criteria
  3. Specification for Road User Services and Comfort Measures
    - 3.1 Paved Roads (Carriageway)**
      - 3.1.1 Service Level
      - 3.1.2 Variation & Gradual Appliance
      - 3.1.3 Procedure for Inspection
    - 3.2 Signage & Road Safety**
      - 3.2.1 Service Level
      - 3.2.2 Variation & Gradual Appliance
      - 3.2.3 Procedure for Inspection
    - 3.3 Drainage Including culvert and Major/Minor Bridges**
      - 3.3.1 Service Level
      - 3.3.2 Variation & Gradual Appliance
      - 3.3.3 Procedure for Inspection
    - 3.4 Vegetation**
      - 3.4.1 Service Level
      - 3.4.2 Variation & Gradual Appliance
      - 3.4.3 Procedure for Inspection
    - 3.5 Shoulders & Embankment**
      - 3.5.1 Service Level
      - 3.5.2 Variation & Gradual Appliance
      - 3.5.3 Procedure for Inspection
  4. Payment Reduction and Liquidated Damages

**D1 General**

The Contractor shall maintain each asset item to the specified Intervention Criteria and service level for the following components.

- Paved Roads (Carriageway)
- Shoulder and Embankment
- Drainage including culvert and Major/Minor Bridges
- Signage and Road Safety
- Vegetation

The Contractor is deemed to have carried out preliminary surveys of the relevant Roads prior to bidding in order to evaluate all Operation & Management (O&M) related obligations and to assess the cost of Operation & Management (O&M).

The Operation & Management (O&M) shall be carried out on all Roads covered by the Contract to the specified service quality levels for a period of 6 years, including:

- The provision of management services as required for the duration of the Contract,
- Undertaking regular condition surveys, including regular monitoring and reporting of the condition of all Roads under the Contract,
- Undertaking inspections at the frequencies required (as a minimum) and identifying defects and carrying out O&M works,
- Establishing programs for Operation & Management (O&M) based on meeting required intervention standards,
- Scheduling activities to meet the required O&M standards.
- Maintaining records of all work undertaken,
- Provide a Quality Plan for the E/I's approval within 8 weeks of the Start Date and implement all quality management requirements.

**D2 Specification of Service Level Criteria**

This section specifies the Service Levels to be complied with in the case of paved roads.

**D3 Specification of Road User Service and Comfort Measures****D3.1 Paved Roads (Table D3.1.1 –O&M100)**

The following notes requirements are to be read in conjunction with the Specifications as stated in Section V part D and Table D3.1.1

Further to Table D3.1.1, the following requirements are to be addressed by the Contractor:

- (i). Potholes (O&M101):

No pothole is to be left untreated on any section of the road. Potholes causing a threat to public safety area >0.02 sqm will be repaired within 1 day, others shall be repaired within the Response Time. Potholes will be detected by visual inspection.

- (ii). Surface Depressions (O&M 102):

No depression greater than 70mm depth when measured under a 1.2 metre straight edge

are permitted. Repairs are to be responded within 2 days of detection.

Rutting and other surface roughness greater than 30mm under a 1.2 metre straight edge in isolated areas  $>10\text{m}^2$  is to be completed in the Response Time.

(iii). Crack Sealing (O&M103)

Cracking greater than 5mm wide is to be sealed within the Response Time as outlined in clause 501.2.3.2 of MoRD. Cracking is detected by visual inspection. It is of particular importance that crack sealing is completed prior to the end of the work season each year or the date predicted for the onset of the wet season and before the commencement of the Surface layer/course. Where the cracking is of “crocodile” nature, treatment may be by Surface Treatment as outlined in item (iv) below.

(iv). Surface Treatment (O&M104)

A light surface seal ( $> 5\text{m}^2$  at any one location) will be placed over solid pavement areas which are moderately distressed with fine surface cracking. The Contractor shall thoroughly sweep and clean the area to be treated, and seal any cracks  $> 5\text{mm}$  or ‘crocodile’ cracks with bitumen emulsion. Any pavement weaknesses should be brought to the attention of the Project Manager before work commences.

Seal the surface as per Clause 501.2.3.2 of MoRD the surface shall be protected from traffic until the seal has properly set. All loose material shall be swept and removed from the site prior to full trafficking.

The bitumen emulsion shall be Cationic Rapid Setting, conforming to the requirements of IS: 8887.

(v) Edge Repair (O&M105)

The edge of the road surface should be free of excessive fretting or beaks of the surfaced width and erosion that will encourage water ingress into the pavement and result in unsafe ride quality for vehicles forced to use the shoulder of the carriageway. All breaks  $>100\text{mm}$  shall be repaired in the Response Time.

(vi) Digout Repair (O&M106)

Identify the cause of failure and appropriate treatment. Ensure the cause is removed either prior to or as part of the repair. Repair shall be undertaken in accordance with Section V of this specification. Digouts  $< 5\text{m}^2$  will be considered for repair.

(vii) Repair of Concrete Pavement (O&M107)

The repairs to broken concrete or bituminous joint material, to preserve underlying pavement material and restore the riding surface to a smooth condition. Identify the extent of damage and appropriate treatment. Work shall include preparing and cleaning the existing concrete and removing any loose, spalling material. Exposed reinforcing shall be repaired/replaced and new M35 concrete placed, vibrated, finished and cured. Repair  $>0.25\text{ sqm}$  will be considered for repair.

### D3.1.1 Service Level

The service level criteria for road user service and comfort on paved roads are defined as follows:

**Table D3.1.1 Standard Jobs, Intervention Criteria and Response Times for Paved Roads**

	Standard Job Description	Intervention Criteria	Method of Measurement	Response Time	
				Hazardous (H)	Routine (R)
O&M101 O&M 105 O&M 106	<b>POTHOLE PATCHING (O&amp;M101)</b>				
	Treatment of isolated failed pavement areas in traffic lanes using appropriate materials to repair the defect and restore the riding surface to a smooth condition	Potholes in traffic lane of a sealed pavement > 0.02 Sqm	As per MoRD Specification- Clause:1904	3 Days	7 Days
	<b>EDGE REPAIR (O&amp;M 105)</b>				
	Repair of broken edges of seal, to line and level to maintain nominal sealed width.	When edge break exceeds 100 mm. laterally over at least a 1 m length from the nominal seal line- Any Extent			
	<b>DIG OUT REPAIR (O&amp;M 106)</b>	All failed areas			
O&M 102 O&M 103 O&M 104 O&M 107	<b>SURFACE DEPRESSION and RUT PATCHING (O&amp;M 102)</b>				
	Application of a levelling course of bituminous materials to depressed or rutted areas of pavement	Deformations greater than 70mm under a 1.2 m straight edge-Surface Depression	As per MoRD Specification- Clause:1906	3 Days	14 Days
		Deformations greater than 70mm under a 1.2 m straight edge-Rutting.	As per MoRD Specification- Clause:1906		
	<b>CRACK SEALING (O&amp;M 103)</b>				
Filling of cracks including " Crocodile Crack" cracking, using liquid bituminous sealants in accordance with monthly works program.	All cracks > 5 mm. width	As per MoRTH Specifications, Clause-3004.3			

	SURFACE TREATMENT (O&M 104)				
	(a) loss of aggregate (surface ravelled)	(a) stripping/ravelled > 30% loss of aggregate for an area >5 Sqm	As per MoRD Specification- Clause:1905		
	(b) bleeding and flushing; or	(b) bleeding/flushing for an area >5 Sqm	As per MoRD Specification- Clause:1904		
	(c) laminated asphalt surface.	(c) delaminated surface >0.25Sqm	As per MoRD Specification- Clause:1904		
	REPAIR OF CONCRETE PAVEMENT (O&M 107)				
	Repair isolated areas of damaged concrete pavement < 0.25 Sqm	All damaged areas	As per MoRTH Specifications, Clause-3005		

### **D3.1.2 Variations and gradual compliance with Service Levels for Paved Roads**

In order to respect the Contractor's initial mobilization period, compliance with any of the service level criteria is not expected during the period of Initial Rectification, Minor improvement, Surface renewal, Strengthening works.

### **D3.1.3 Procedures for Inspection of Paved Roads**

For the formal inspections of compliance with Service Levels, the Contractor's Self-control Unit will work in close collaboration with, and under supervision of the E/I. The physical means needed for the inspections will be provided by the Contractor; they are the same which are normally used by the Self-control Unit for the continuous self-evaluation of the Contractor's compliance.

### **D3.2 Signage and Road Safety (Table D3.2.1 –O&M 500)**

The following notes requirements are to be read in conjunction with the Specifications as stated in Section V part D and Table D3.2.1

Further to Table D3.2.1, the following requirements are to be addressed by the Contractor:

#### **(i) Signs**

Signs consist of all ground (post-mounted) signs located along the roadway and include the following types of signs:

- Regulatory Signs
- Warning Signs
- Direction Signs
- Information and Traffic Instruction Signs
- Route Markers and Kilometer Markers
- Village Name Signs
- Hazard Markers
- Service and Tourist Signs, except privately funded signs identified by the E/I.

The Contractor shall ensure that the signs are maintained in good condition at all times and shall wash and clean sign faces, straighten posts, level sign boards, remove posters, tighten bolts and undertake minor repairs.

Night inspection of signages shall be done.

*Quality levels and tolerance criteria:*

#### **(a) Meet reflectivity standards:**

All signs must meet the requirements stated in IRC 67-2012. All signs must be clearly visible and reflective to passing motorist under both daytime and night time conditions. The daytime inspection should be performed initially, followed by the night time survey.

#### **(b) 100 percent clear of obstruction:**

All signs, when viewed from the carriageway must be completely free of brush, trees, vegetation, and other obstructions that prevent passing motorist from adequately viewing the sign. Sign obstructions can be detected by visual inspection.

#### **(c) Present and surface free of damage:**

Signs have to be present, upright in a vertical position, and at least 95 percent of the total surface area of signs must be free of damage, i.e., holes, large dents, and missing reflective material or covered in advertising. The presence and condition of the signs can be checked by visual inspection.

**(d) No encroachments/trespasses, illegal signs or structures:**

No tolerance. Structures or signs that were not erected or authorized by the E/I should not exist within the right-of-way. Any transgressions can be detected by visual inspection and have to be reported in writing to the E/I within 24 hours after being detected, and all assistance provided to the Contractor in the eviction process.

**(ii) Pavement marking**

Retro Reflective hot applied thermoplastic paint as road markings include lines and markings used to delineate pavement edges. Pavement markings should comply IRC 35.

The Contractor will be responsible to reinstate by machinery, all pavement markings damaged or destroyed by his work with hot applied thermoplastic compound as approved by the E/I. The Contractor shall keep clean pavement markings. The re- application of thermoplastic markings will be done as a Dayworks approximately every 2 years. However, any damage to new re-applications shall be repaired by the Contractor under O&M responsibilities.

**(iii) Guard Stones/Boundary Stones/Guardrail**

The Contractor shall ensure that established guard stones, boundary stones and guardrail are kept in good repair and shall regularly check posts to ensure that all are in place and functional. Painting and replacement of defective posts shall be paid as part of the O&M. Where more than 10 posts are missing at any single location, the Contractor should immediately notify the E/I. Supply only of replacement posts above 10 No. at a single location will be done in Dayworks.

All guard stones and guardrails shall be painted/repainted on a cycle of every 12 months as a part of O&M responsibilities, including the painting/repainting of any new guard stones, boundary stones and guardrails which are installed. The works shall be scheduled evenly over 12 months and shall be shown in the Program including timeframes for completing various road sections. At least two painting cycles shall be carried out during the period of the Contract. Works shall be carried out in accordance with MORD 1911. 12 months where white washing and colour banding is involved and 30 months where synthetic enamel painting is involved.

**(iv) Distance Markers (Kilometerposts)**

The work shall consist of refixing of tilted stones, repairing with cement mortar, cleaning with damp clothes, repainting and lettering on 200 m, kilometre and 5<sup>th</sup> kilometre stones. The 200 meter and kilometre stones shall be maintained in proper position and kept clean and legible of all times. Damaged as well as tilted stones shall be refixed / replaced immediately. 12 months where white washing and colour banding is involved and 30 months where synthetic enamel painting is involved.

All distance markers shall be painted/repainted as a part of O&M responsibilities, including the painting/repainting of any new distance markers which are installed. The works shall be scheduled evenly and shall be shown in the Program including time frames for completing various road sections. At least two painting cycles shall be carried out during the period of the Contract. Works shall be carried out in accordance with MORD 1912.

**(v) Guideposts, delineators and hazard markers (painted trees)**

The Contractor shall ensure that all guide posts and delineators are clean and replaced if damaged or non-reflective.

Guideposts and hazard markers that have been painted for delineation shall be repainted as a part of O&M responsibilities, including the repainting of any new guideposts, delineators and hazard markers which are installed. The works shall be scheduled evenly and shall be shown in the Program including timeframes for completing various road sections. At least two painting cycles shall be carried out during the period of the Contract. Works shall be carried out in accordance with MORD1913. 12 months where white washing and color banding is involved and 30 months where synthetic enamel painting is involved.

**D3.2.1 Service Levels Measures for Signage and Road Safety**

The Contractor is responsible for ensuring that all signage, as well as guardrails and other road safety devices fully comply with Acceptable Standard within Initial Rectification, Minor improvement, Surface renewal, Construction of bridge/drainage /protection work period.

The Service Level requirements for signage and road safety devices are as shown in the following Table:

**Table D3.2.1 Standard Jobs, Intervention Criteria and Response Times for Signage and Road Safety**

	Standard Job Description	Intervention Criteria	Method of Measurement	Response Time		
				Hazardous (H)	Routine (R)	
O&M 501 O&M 502 O&M 503 O&M 504	<b>SIGN MAINTENANCE (O&amp;M 501)</b>					
	Sign repair, re-erection, support replacement and/or maintenance cleaning	Straighten sign posts when more than 5 degrees off vertical	As per MoRD Specification- Clause:1910	14 Days		
		Clean sign and delineator faces when reflectivity is reduced due to accumulation of dirt.	As per MoRD Specification- Clause:1910			
		Repair damage	As per MoRD Specification- Clause:1910			
	<b>GUARDSTONES/BOUNDARY STONES/GUARDRAILS (O&amp;M 502)</b>					
	Repair, and reinstall damaged/missing guard stones and guardrails barriers	Fallen or damaged at a critical location making them substantially ineffective	As per MoRD Specification- Clause:1910			
Painting Guard stones, Boundary stones and guardrail	All guard tones, boundary tones and guardrails painted at least twice every 12 months	As per MoRD Specification- Clause:1910				



	<b>200M AND KILOMETRE STONES (O&amp;M 503)</b>				
	Cleaning and/or replacement of damaged and missing guideposts, distance marker posts, hazard markers and delineators. Straightening of crooked or bent guideposts	Tilted or damaged at a critical location	As per MoRD Specification- Clause:1910		
	Painting of distance markers, guideposts and hazard markers, including lettering	As per agreed Program Repainting once in a year	As per MoRD Specification- Clause:1910		
	<b>ROADMARKING (O&amp;M 504)</b>				
	Repair of defective or faded thermoplastic markings and cleaning of all markings (Re-applications will be under Provisional Item).	Thermoplastic marking faded or damaged and functional requirements not met	As per MoRD Specification- Clause:1913		

### D3.2.2 Variations and gradual compliance with Service Levels for Signage and Road Safety

In order to respect the Contractor's initial mobilization period, compliance with any of the service level criteria stated above for Signage and Safety Devices shall not be expected until Initial Rectification with surface renewal/Upgradation work period from the start date. Other limitations to the compliance requirement are:

All missing kilometer shall be put in place within the initial 6 Months from start date.

### D3.2.3 Procedures for Inspection

The criteria for Signage and Road Safety will be checked at sections selected by the E/I based on visual appearance. Five years warranty and test certificate for angle of retro reflectivity and durability from manufacturers must be attached as per IRC 67-2012. The E/I shall be the sole judge of compliance. If a specified criterion is not met, the one-kilometer section in which the deficit occurs will be judged non-compliant.

### D3.3 Drainage (Table D3.3.1 –O&M300)

The following notes requirements are to be read in conjunction with the Specifications as stated in Section V part D and Table D3.3.1

Further to Table D3.3.1, the following requirements are to be addressed by the Contractor:

The highest priority should be given to adequate drainage of the pavement and shoulders. Where ponding of water is observed in the vicinity of the pavement or shoulders, the Contractor shall immediately shape a waterway to remove the water to the adjacent side drain. Temporary drains across existing shoulders shall be shallow and tapered as to not affect the safety of traffic or pedestrians, and shall be reinstated by shaping and/or grading when conditions are favorable to allow normal 'sheet' flow. The following visual inspections should be made:

#### (i) Cross drainage pipes, culverts and pits

*Quality levels and tolerance criteria:*

##### (a) Inside surface area of each cross pipe, culvert or pit must not be deteriorated:

No more than 10 percent of the inside surface area of each cross pipe can be deteriorated. Deterioration includes spalled or crushed concrete, crushed metal, or any other structural deterioration along the length of the pipe/culvert.

Where the defect is a collapsed or an un-maintainable unit or structure, the defect shall be referred to the E/I for repair.

The condition of the inside surface of the pipes can be detected by visual inspection.

##### (b) Waterway free of obstruction:

Each pipe/culvert must have at least 80% of its waterway open.

##### (c) No erosion at either end of the pipe/culvert that affect the structural integrity:

Erosion at either end should be less than 200mm and should not affect the structural integrity of the pipe/culvert or head wall. Erosion can be detected by visual inspection.

##### (d) No dip in road over pipe indicating structural problems:

No dips in the roadway over pipe deeper than 30 mm (measured longitudinally) are allowed. Dips are indicative of the settlement or erosion of the backfill material located around the cross pipe and may present a safety and pavement Performance problem. Dips in the roadway are to be visually identified from the shoulder or side drain and measured with a scale in mm.

**(e) The headwalls and end protection at each end of the pipe/culvert:**

No tolerance. The headwalls and end protection located at each end of the pipe/culvert should be intact and secured. The condition of the headwalls and end protection can be evaluated by visual inspection.

Concrete/Masonry repairs < 1m<sup>3</sup> at any one location shall be carried out by the Contractor to repair any defects and concrete damage.

White washing of exposed concrete/masonry areas of cross drainage structures shall be carried out in two coats to give an even and smooth surface for protection, including the scraping and cleaning of old surface

**(ii) Minor Bridges and HL Bridges**

Cleaning and clearing of deck, footway, expansion joints and downpipes should be done. Any accumulation of material which affects proper drainage of water or restricts the operation of expansion should be cleaned.

Repair of spalled superstructure, posts, parapets, railing and wearing course. Minor work on structural components and other repairs, protection of exposed surface.

The bearing should be checked for any damages or non-functioning. It should be replaced when visualized by E/I. Repair of damaged concrete railing/RCC railing and replacement of crash barrier may be done.

**(iii) Side drains, culvert inlet/outlet drains, kerb and channelling**

Side drains collect the runoff of water from the pavement and shoulders parallel to the road and distribute to more major waterways. Culvert inlet/outlet drains channel water into and away from the road.

*Quality levels and tolerance criteria:*

**(a) All side drains and culvert inlet/outlet drains must be graded such that positive drainage of surface flow exists:**

Unpaved side drains or culvert inlet/outlet drains must not have depressions or high spots that either hold or trap water a distance of > 3 metres within the drain for several days. Depressions and high spots can be detected by visual inspection.

**(b) No severe erosion along the side drains and culvert inlet/outlet drains:**

No areas where the grass, sod, or gravels have been washed away or where soil erosion deeper than 200mm exists are allowed. Erosion can be detected by visual inspection.

**(c) Outlets of side drains and culvert inlet and outlet drains must provide positive drainage:**

Drains shall empty freely into larger channels as designed and should not exhibit erosion deeper than 200 mm. The condition of the outlet can be detected by visual inspection.

**(d) No obstruction to flow of water:**

- Cleaning of channels, including kerb and channel, and reshaping earthen drain, including culvert inlet and outlet drain to maintain flow of water and protected time and road side from scour.

At the commencement of the Contract, where reinstatement/construction of side drains and culvert inlet/outlet drains are required to repair complete blockages, work will be identified during the initial survey and will be carried out under Initial Rectification, Minor improvement, Surface renewal, Construction of bridge/drainage /protection during Milestone 1. All subsequent drain maintenance works shall be carried out under O&M

**D3.3.1 Service Levels**

In general terms, the Contractor must ensure that all drainage elements and structures are sound and without any obstructions which may reduce their normal cross-section and impede the free flow of water.

The Service Level requirements for drainage structures or devices are as shown in the following Table D3.3.1

**Table D3.3.1 Standard Jobs, Intervention Criteria and Response Times for Drainage**

	Standard Job Description	Intervention Criteria	Method of Measurement	Response Time	
				Hazardous (H)	Routine (R)
<b>O&amp;M 301 O&amp;M 302 O&amp;M 303</b>	<b>SURFACE DRAIN CLEANING (O&amp;M 301)</b>				
	Cleaning of channels, including kerb and channel, and reshaping earthen drains, including culvert inlet and outlet drains, to maintain flow of water and protect road and roadside from scour.	When there is, or is likely to be restriction or ponding of water or scouring	As per MoRD Specification- Clause-1907	<b>15 Days</b>	<b>30 Days</b>
	<b>CULVERT CLEANING (O&amp;M 302)</b>				
	Cleaning of Barrel/Vent, culverts, pits and storm water drains to maintain flow of water.	When debris blocks > 20% of culvert area and inhibits free flow.	As per MoRD Specification- Clause-1908		
	<b>CULVERT REPAIR (O&amp;M 303)</b>				
	Repair or replacement of damaged pipes, culverts, pits, surrounds grates, lids or lintels and headwalls	When deterioration of pipe, culvert or pit >10% or structure is in precarious condition.	As per MoRD Specification- Clause-1908		
Whitewashing of exposed concrete/masonry to be carried out as required	White washing parapets of C.D works	As per MoRD Specification- Clause-1915			

**D3.2.2 Variations and Gradual Compliance with Service Levels**

In order to respect the Contractor’s initial mobilization period, compliance with any of the service level criteria stated above for drainage shall not be expected during the period of Initial Rectification, Minor improvement, Surface renewal, Construction of bridge/drainage /protection.

Other limitations to the compliance requirement are:

All drains must be cleaned and defect free immediately prior to the commencement of the wet seasons.

**D3.3.3 Procedures for Inspection**

The cleanliness and condition of drainage structures (including open drains, causeways and all other types of drainage devices) is part of the criteria for the “Durability of the Road”. It is verified on a regular basis, in particular before and during the rainy seasons. The drainage structures to be verified are determined by the E/I. Inspection is done visually.

The basic principle used to determine the cleanliness of drainage structures or devices is “the percentage of the theoretical cross-section of the structure or device which is unobstructed”. This percentage is specified in Table D3.3.1 above. For a one km road section, the cleanliness of drainage ditches must be verified at least on two subsections of 50 meters each.

For any one km section of the road, compliance with this criterion requires that (i) all drainage structures are clean in the sense defined above; (ii) all structures and devices are structurally sound, based on the judgment of the E/I.

**D3.4 Vegetation (Table D3.4.1 -OM400)**

The tree planted in the Initial Rectification with surface renewal/Upgradation period should be maintained for five years for its healthy survival and growth. Hundred percent payment for dead trees if found during five years shall be deducted.

The following notes requirements are to be read in conjunction with the Specifications as stated in Section V part D and Table D3.4.1

Further to Table D3.4.1, the following requirements are to be addressed by the Contractor:

**(i) Naturalgrass**

Vegetation grown for the purpose of protecting shoulders, slopes, and embankments from erosion, and for aesthetic purposes. Natural Grass is considered that generally located along the roadway edges.

*Quality levels and tolerance criteria:*

Sight distance is clear in intersections, passing zone and curves: Grass height should not prevent adequate sight distance (stopping or passing) at intersections, passing zones, and curves and must not obstruct the drainage.

**(ii) Trees and shrubs**

Consists of trees, limbs, shrubs and creepers located within the right-of-way. Trees and shrubs located in landscaped areas should be evaluated as landscaping.

*Quality levels and tolerance criteria:*

**(a) Fallentrees**

No tolerance. Any fallen tree on the road formation shall be removed immediately.

**(b) Sight distance or sign obstructions:**

No tolerance. Brush, as defined above, should not affect sight distance (stopping or passing), at intersections, passing zones, and curves. In addition, brush should not encroach onto any signs to the extent that visibility or readability of the sign is affected. Sight distance or sign obstructions can be detected by visual inspection.

**(c) Vertical clearance:**

No tolerance. A vertical clearance of at least 5.0 m over roadway should be maintained at all times. All tree limbs, shrubs, and creepers should be trimmed back to maintain this clearance. The measurement of the vertical clearance should be from the highest point of elevation on the traffic lanes or shoulders.

**(d) No trees presenting a leaning hazard:**

No tolerance. Trees or other vegetation that are leaning and present a safety hazard should not be located within the right-of-way. In addition, dead or dying vegetation that is either located within a clear zone or could fall on vehicles or pedestrians must not be present. Leaning vegetation can be detected by visual inspection.

**D3.4.1 Service Levels**

This section specifies the Service Levels to be complied with in the case of vegetation growing within the road right-of-way: Vegetation is to be controlled to the heights and clearance, at the locations and with the restrictions asset out in the table and diagram below:

**Table D3.4.1 Standard Jobs, Intervention Criteria and Response Times Vegetation**

	Standard Job Description	Intervention Criteria	Method of Measurement	Response Time	
				Hazardous (H)	Routine (R)
O&M 401	<b>TREE and SHRUB MANAGEMENT (O&amp;M 401)</b>				
	Cutting of branches of trees, shrubs and trimming of grass and weeds from the Roadway or within the Road land.	Tree limbs or trees that are in immediate danger of falling and causing a danger to the public	As per MoRD Specification- Clause-1914		30 Days
		Trees and shrubs which restrict intersection sight distance or obscure safety signs	As per MoRD Specification- Clause-1914		
		New tree and shrub growth within drains, clear zones, the shoulder and verge.	As per MoRD Specification- Clause-1914		
		Trim trees to maintain:			
		- minimum 1 metre from back edge of shoulder and/or kerb;	As per MoRD Specification- Clause-1914		
		- minimum 5 metre height clearance over pavements	As per MoRD Specification- Clause-1914		

### **D3.4.2 Variations and Gradual Compliance with Service Levels**

In order to respect the Contractor's initial mobilization period, compliance with any of the service level criteria stated above for vegetation shall not be expected until Initial Rectification with surface renewal/Upgradation period from start date. Other limitations to the compliance requirement are:

**(a) Use of Herbicides**

Use of herbicides is not allowed.

**(b) Tree removal**

Removal or cutting of trees growing within the road right-of-way shall only be undertaken after approval of the E/I and/or appropriate authority.

### **D3.4.3 Means used for Assessing Compliance with Service Levels**

The height of vegetation, and its clearance above the road surface and visibility of signs, is part of the criteria for the "Road User Comfort". They will be measured at road sections selected by the E/I based on their visual appearance. The height is measured by using a ruler; it is defined as the vertical distance between the ground and the highest point of the vegetation. Clearance is also measured with a ruler or visibility from a distance of 50m assessed as normal driving speed; it is defined as the distance between the lowest point of the tree (or other plant) above the road surface or obstruction of the sign.

The average height of vegetation in a one km section will be equal to the average of five values measured in at sections selected by the E/I. The visibility is measured for any obstruction of any sign.

For any one km section of road, compliance with this criterion requires that the average vegetation height measured within the section of one km is below the maximum value stated in the contract or obstruction to any sign.

### **D3.5 Shoulders and Slopes (Table 3.5.1 – O&M200)**

The Contractor is responsible for the maintenance of all embankment and cut slopes along the roads sections included in the contract. In particular he is responsible for ensuring they are stable, without deformations and erosions. Nevertheless, the reconstruction and major improvements to retaining structures and slope stabilization is excluded from the Contractor's obligations, unless specified elsewhere in the Technical Specifications.

The following notes requirements are to be read in conjunction with the Specifications as stated in Section V part D and Table D3.5.1

Further to Table D3.5.1, the following requirements are to be addressed by the Contractor:

The shoulder is defined as the area from the edge of the paved lane to the point to the verge or side drain

**(i) Unsealed Shoulder Repair (O&M201)**

The activity aims to maintain the shoulder facility to support the pavement edge, the occasional use by traffic, its function as the drainage path for water runoff from the carriageway and to ensure the elimination of an edge drop off at the edge of sealed pavement. The Contractor shall fill depressions, scours and areas of drop off and ensure shoulder material supports the sealed edge. The material used for shoulder maintenance should be mechanically cohesive and able to display stability in wet weather. Shoulder material shall be suitably compacted. Where the edge drop-off is >70mm over a continuous significant distance greater than 100m, the Contractor is to include reset the shoulder in the Initial Rectification, Minor improvement, Surface renewal, Construction of bridge/drainage /protection.

**(ii) Embankment and Batter Repairs (O&M202)**

Repair of isolated embankment and batter damage, including at culvert sites and at other drainage structures, resulting from scouring, washouts, erosion, of volume <math>10\text{m}^3</math> at any one site, shall be carried out to reinstate the embankment or batter to its original profile by means of constructing backfill with embankment quality material as approved by the E/I.

**D3.5.1 Service Levels**

The Service Level requirements are shown in the following table:

**Table D3.5.1 Standard Jobs, Intervention Criteria and Response Times for Shoulders and Embankments**

	Standard Job Description	Intervention Criteria	Method of Measurement	Response Time	
				Hazardous (H)	Routine (R)
O&M 201 O&M 202	UNSEALED SHOULDER REPAIR (O&M 201)				
	Making up the irregularities/loss material on shoulder to design level/profile	When potholes or scouring > 70 mm depth measured with a 1.2 m straightedge, or when there is significant holding of water	As per MoRD Specification- Clause-1903		6 Days
	RAIN CUTS (O&M 202)				
	Restoration of rain cuts in the embankments and shoulders	When embankment gets affected by rain cuts	As per MoRD Specification- Clause-1902		



### **D3.5.2 Variations and gradual compliance with Service Levels**

In order to respect the Contractor's initial mobilization period, compliance with any of the service level criteria for slope stability shall be Initial Rectification with surface renewal/Upgradation period in accordance with Structure activities.

### **D3.5.3 Procedures for Inspection**

The visual inspection will be undertaken as part of the Formal and Informal inspections. The criteria for Slopes will be checked at sections selected by the E/I based on visual appearance. The E/I shall be the sole judge of compliance. If a specified criterion is not met, the one-kilometer section in which the deficit occurs will be judged non-compliant.

### **D4 Payment Reductions**

In accordance with the relevant clauses of the GC, Payment Reductions are applied in case of non-compliance with Service Level requirements.

Payment shall include provision for all costs associated with the management, administration, plant, equipment, labor and materials in keeping all asset items within the specified Response Code levels.

Where payment is made on a Lump Sum basis, the Contractor shall execute the work and perform its obligations under the Contract and the sum payable by the E/I to the Contractor shall be the Lump Sum, adjusted by any additions or deductions made under the Contract.

Payment shall be made in equal quarterly installments in O&M. The Quarterly will be determined by dividing the O&M Lump Sum for the Schedule 1 Item 1 divided by twenty (20) quarters (period of contract). These installments are subject to deductions for the deletion of sections from O&M responsibilities and for work not undertaken or not undertaken to the quality required.

The Maintenance Program Compliance Sheet (Appendix C) and the Non-Conformance Report (Appendix C) shall accompany the Contractor's invoice for payment. Any works detailed in the subsequent E/I's Memorandum not met within the final Response Time may be subject to a deduction on the quarterly installment.

The results of each formal inspection of the Service Levels and other performance criteria will be recorded by the E/I in the form of a Memorandum. The Memorandum will state the type and location of any non-compliance detected, in particular those non-compliances already shown in the standard tables provided by the Contractor as part of their monthly statement. For each individual case of non-compliance, the E/I will determine a date by which the Contractor must have completed the necessary measures in order to remedy the cause of the non-compliance. A follow-up site visit is therefore necessary at the date fixed by the E/I, or soon thereafter, in order to verify that the Contractor has indeed remedied the cause of non-compliance.

If at the date indicated in the Memorandum, the Contractor has not remedied the cause for non-compliance, independent of the reason given for their failure to do so, the Contractor is subject to Payment Reductions in accordance with the relevant clauses of the GC.

**Payment Reductions are variable over time. If the Contractor fails to remedy a cause of non-compliance for which a payment reduction has already been applied, the amount of the payment reduction shall be doubled for that particular non-compliance every quarter until the non-compliance is corrected. On the successive fourth quarter if the non-compliance is not corrected, it shall be deemed a breach of Contract under Clause 59.1 of the General Conditions and the Contract shall be terminated.**

The calculation of the initial amounts of payment reductions, and the formula for their adjustment over time, is to be based on the following rules:

**(i) Payment Reductions for non-compliance with Road User Service Comfort Measures and Durability** (other than roughness): For any road or road section as specified in NIT, the E/I may reduce the quarterly payment by the percentage of non-complying kilometers as determined by the Project Manger each quarter. The payment will therefore be **Table A13.1.1(Monthly)/ Table A13.1.1(Quarterly)**.

**(a) Failure to achieve Response Time or stated quality.**

Where the Contractor fails to complete **O&M** to the Intervention Criteria within the Response Time or quality specified, the E/Imay deduct monies from payments due under the Contract. The amount of deduction shall be based as per **Table A13.1.1(Monthly)/Table A13.1.1(Quarterly)**. Deductions will continue to be made on a monthly basis until the work is satisfactorily completed. The minimum deduction for any item will be based on a per kilometer basis.

**(b) Action by the E/I in the event of Non-Compliance in Standard Jobactivities.**

The results of each formal inspection of the site and other performance criteria will be recorded by the E/Iin the form of a Memorandum. The Memorandum will state the type and location of any non-compliance detected and in particular those non- compliances already provided by the Contractor as part of Maintenance Compliance Program Sheet (Form O&M08). For each non-compliance the E/Iwill schedule a minimum of 7 days' notice from the issue of the Memorandum for the Response Time to complete then on-compliance.

A follow-up site visit shall be arranged at the date fixed by the **E/I** in order to verify that the Contractor has remedied the cause of non-compliance.

If the Contractor has not remedied the cause for non-compliance at the date of the final Response Time indicated in the Memorandum, independent of the reason given by him for his failure to do so, a payment deduction may be made.

No deductions will be levied on the Contractor for failure to fully meet the maintenance intervention standards for period duration up to the defined in the individual activity group of the Technical Specifications, while the Contractor is establishing on site and setting maintenance routines. For subsequent monthly payments, deductions will be levied in accordance with the Contract provisions.

**(c) Method for PaymentDeduction**

For the purpose of establishing cause for a payment deduction for non-compliance, each road is evaluated between kilometre stones. If kilometre stones have not been erected, a datum is established by the E/I from which even kilometre distances are measured. The minimum measurement for non-compliance is one(1) kilometre.

**PART 3**

**CONDITIONS OF CONTRACT AND CONTRACT FORMS**

**SECTION VI**

**GENERAL CONDITIONS (GC)**

**Section -VI**  
**General Conditions (GC)**

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## A. CONTRACT AND INTERPRETATION

### 1. Definitions

1.1 Boldface type is used to identify defined terms.

**Schedule of Prices/ Bill of Quantities** means the priced and completed Schedule of Prices/BOQ forming part of the Contractor's Bid.

The **Certificate of Completion** is a document issued by the E/I upon completion of **Initial Rectification, Minor improvement, Surface renewal, Construction of bridge/drainage /protection, road safety measures and tree plantation at the end of slope of road within Right of Way on the road alignment** and Emergency Works, or parts thereof, as applicable, in accordance with GC 54.1

The **Completion Date** is the date of completion of the Works and Services as certified by the E/I, in accordance with Sub-Clause 10.2.

The **Contract** is the Contract between the E/I and the Contractor to execute, complete, **Initial Rectification, Minor improvement, Surface renewal, Construction of bridge/drainage /protection, road safety measures and tree plantation at the end of slope of road within Right of Way on the road alignment** and to carry out the **Operation & Management (O&M)** Services. It consists of the documents listed in Clause 3 below.

The **Contractor** is a person or corporate body whose Bid to carry out the Works and Services has been accepted by the Employer.

The **Contractor's Bid** is the completed bidding document submitted by the Contractor to the Employer.

The **Contract Price** is the price stated in the Letter of Acceptance and thereafter as adjusted in accordance with the provisions of the Contract.

**Days** are calendar days; **months** are calendar months.

A **Defect** is any part of the Works and Services not completed in accordance with the Contract.

The **Defects Liability Certificate** is the certificate issued by E/I after the Defects Liability Period has ended upon correction of defects by the Contractor.

The **Defects Liability Period** is the period specified in the Contract and is applicable for **Initial Rectification, Minor improvement, Surface renewal, Construction of bridge/drainage /protection on the road alignment** with exclusions identified in the PC, if any.

**Drawings** include calculations and other information provided by the Contractor for the execution of the Contract.

**Emergency Works** is a set of necessary and sufficient activities to reinstate the Road and reconstruct its structure or right of way strip damaged as a result of natural calamities such as flood, cyclone, earthquake etc. The need for execution of Emergency Works is jointly

identified by the E/I and the Contractor and for starting of execution of Emergency Works the E/I shall issue a Work Order.

**The Employer** is the party who employs the Contractor to carry out the Works and Services. The Employer may delegate any or all functions to a person or body nominated by him for specified functions.

**The Initial Contract Price** is the Contract Price listed in the Employer's Letter of Acceptance.

**Equipment** is the Contractor's machinery and vehicles brought temporarily to the Site to construct the Works and to carry out the Services.

**Initial Rectification Works** on the road alignment works required in the initial stage of the Contract to allow the Contractor to bring the road up to the required Service Level Criteria.

The **Intended Completion Date** is the date on which it is intended that the Contractor shall complete the Works and Services. The Intended Completion Date is specified in the Particular Conditions (PC). The Intended Completion Date may be revised only by the Engineer-in-charge by issuing an extension of time.

**Materials** are all supplies, including consumables, used by the Contractor for incorporation in the Works and for provision of Services.

**Engineer -in- charge (E/I)** is the Executive Engineer of the concerned Works Division.

**Road** means the road or network of roads for which the Works and Services are contracted under the Contract.

The **Road Management Office** is the location indicated by the Contractor from which the Road Manager operates, and where the Contractor shall receive notices/communications/correspondences.

The **Road Manager** is a person appointed by the Contractor who is in charge of managing all activities of the Contractor under the Contract. He is also the Contractor's Representative for the purposes of this contract.

**Services** means all interventions on the Road under the Contract and all activities related to the management and evaluation of the Road which shall be carried out by the Contractor in order to achieve and keep the Road Performance Standards as defined by the Service Levels, and to receive full payment of the quarterly fee under the contract.

**Service Levels** are the minimum performance standards for the level of quality of conditions of the Road defined in the Specifications which the Contractor shall comply with.



The **Site** is the area defined as such in the Particular Conditions of Contract (PC).

**Site Investigation Reports** are those that were included in the bidding documents and are factual and interpretative reports about the surface and subsurface conditions at the Site.

The **Start Date** is the date when the Contractor has started the physical execution of the Works and Services on the site. It does not necessarily coincide with any of the Site Possession Dates.

A **Subcontractor** is a person or corporate body who has a contractual agreement with the Contractor to carry out certain activities related to the services to be provided under the contract, which may include work on the Site.

**Specifications** means the Specifications of the Works and Services for Rural Roads of Ministry of Rural Development and included in the Contract and any modification or addition made or approved by the E/I.

A **Variation** is an instruction given by the E/I which varies the Works or Services.

The **Works** are what the Contract requires the Contractor to construct, install, and hand over to the E/I, as covered under Initial Rectification, Minor improvement, Surface renewal, Construction of bridge/drainage /protection on the road alignment. **Operation & Management (O&M) is defined separately.**

**Work Order** is an order issued by the E/I to the Contractor authorizing the execution of Emergency Works, as provided for in Clause 27 hereunder.

- 2. Interpretation**      2.1 In interpreting these General Conditions (GC), singular also means plural, male also means female or neuter, and vice versa. Headings have no significance. Words have their normal meaning under the language of the Contract unless specifically defined. The E/I will provide instructions clarifying queries about these General Conditions (GC).
- 3. Documents Forming the Contract**      3.1 The documents forming the Contract shall be interpreted in the following order of priority:
- (1) Agreement,
  - (2) Letter of Acceptance,
  - (3) Contractor's Bid,
  - (4) Particular Conditions (PC),
  - (5) General Conditions (GC),
  - (6) Specifications,
  - (7) Drawings,
  - (8) Schedule of Prices/ Bill of Quantities, and
  - (9) Any other document listed in the PC as forming part of the contract document.

- 4. Language and Law** 4.1 The language of the Contract and the law governing the Contract are stated in the PC.
- 5. Notices** 5.1 Unless otherwise stated in the Contract, all notices to be given under the Contract shall be in writing, and shall be sent by personal delivery, airmail post, special courier, fax or E-mail to the address of the relevant party set out in the PC, with the following provisions:
- 5.1.1 Any notice sent by fax or E-mail shall be confirmed within two (2) days after dispatch by notice sent by airmail post or special courier, except as otherwise specified in the Contract.
- 5.1.2 Any notice sent by **airmail post or special courier** shall be deemed (in the absence of evidence of earlier receipt) to have been delivered ten (10) days after dispatch. In proving the fact of dispatch, it shall be sufficient to show that the envelope containing such notice was properly addressed, stamped and conveyed to the postal authorities or courier service for transmission by airmail or special courier.
- 5.1.3 Any notice delivered personally or **sent by fax or E-mail** shall be deemed to have been delivered on date of its dispatch.
- 5.1.4 Either party may change its postal, fax or E-mail address or addressee for receipt of such notices by ten (10) days' notice to the other party in writing.
- 5.2 Notices shall be deemed to include any approvals, consents, instructions, orders and certificates to be given under the Contract.
- 5.3 The Contractor shall provide at its own cost, and maintain in operation permanently during the duration of the Contract, such communications equipment which ensures that both written (fax or E-mail) and oral (voice) communications can be established at all times
- (a) between the Road Manager and his senior fieldstaff;
- (b) between the E/I and the Road Manager;
- (c) between the public telephone system and the Road Manager;
- (d) The equipment to be provided and maintained includes the equipment located at the E/I's office.
- 5.4 At the Start Date of the Contract, the Contractor must communicate to the E/I the address of his office, including the postal, fax and E-mail address, which for the purposes of this contract is called the Road Management Office, where Notices will be addressed to. The E/I may require that the physical location of the Road Management Office is within the close geographical area of the Road.

If the Contractor fails to communicate the address of his Road Management Office, and the E/I is otherwise unable to locate the Road Manager, all notifications to the Contractor shall be valid if a copy is sent to the Contractor's legal address.

**6. Settlement of Disputes**

6.1.1 If any dispute or difference of any kind what-so-ever shall arise in connection with or arising out of this Contract or the execution of Works or **Operation & Management (O&M)** Services there under, whether before its commencement or during the progress of work and Services or after the termination, abandonment or breach of the Contract, it shall be referred to Empowered Standing Committee which will consist of:

- I. One official member, Chairman of the Standing Empowered Committee, not below the rank of Additional Secretary to the State Government;
- II. One official member in the rank of Engineer-in-chief-cum-Additional Commissioner-cum-Special Secretary/Engineer-in-Chief;
- III. One official member in the rank of Chief Engineer as indicated in particular conditions of contract (PC).

Such decision in respect of every matter, so referred shall, subject to review as hereinafter provided, be final and binding upon the contractor.

In case, the works is already in progress, the contractor shall proceed with the execution of the works, including **Operation & Management (O&M)** Services thereof, pending receipts of the decision of the Employer “within 45 days of arising the dispute or difference” as aforesaid with all the diligence.

6.1.2 The Contractor and the E/I will be entitled to present their case in writing duly supported by documents. If so requested, the Standing Empowered Committee “within 90 days of decision of the Employer” may allow one opportunity to the Contractor and the E/I for oral arguments for a specified period. The Empowered Committee shall give its decision within a period of 90 (ninety days) from the date of appeal, failing which the contractor can approach the appropriate court for the resolution of the dispute.

6.1.3 The decision of the Standing Empowered Committee will be binding on the E/I for payment of claims up to 5% (five percent) of the Initial Contract Price. The Contractor can accept and receive payment after signing as “in full and final settlement of all claims”. If he does not accept the decision, he is not barred from approaching the courts. Similarly, if the E/I does not accept the decision of the Standing Empowered Committee above the limit of 5% (five percent) of the Initial Contract Price, he will be free to approach the courts applicable under the law.

## 6.2 Arbitration

6.2.1 In view of the provision of the clause 6.1 on Dispute Redressal System, it is the condition of the Contract that there will be no arbitration for the settlement of any dispute between the parties.

### B. ASSIGNMENT OF RESPONSIBILITIES

## 7. Scope of Works and Services

7.1 Unless otherwise expressly limited in the Specifications, the Contractor's obligations cover the Design, the carrying out of all Works and the performance of all Services required for keeping the Road in accordance with the Service Levels defined in the Specifications, while at the same time respecting the plans, procedures, specifications, drawings, codes and any other documents as identified in the Specifications. Such specifications include, but are not limited to, the provision of supervision and engineering services; the supply of labor, materials, equipment; Contractor's Equipment; construction utilities and supplies; temporary materials, structures and facilities; transportation (including, without limitation, unloading and hauling to, from and at the Site); and storage, except for those supplies, works and services that will be provided or performed by the E/I, if any, as set forth in the corresponding Specifications.

7.2 The Contractor shall, unless specifically excluded in the Contract, perform all such work, services and/or supply all such items and materials not specifically mentioned in the Contract but that can be reasonably inferred from the Contract as being required for attaining the Performance Standards (as specified in Clause 24 of GC) as if such work, services and/or items and materials were expressly mentioned in the Contract.

## 8. Design Responsibility

8.1 The Contractor shall be responsible for the design and programming of the Works and Services, and for the accuracy and completeness of the information used for that design and programming in accordance with the requirements established in the Specifications.

### 8.2 Specifications and Drawings

8.2.1 The Contractor shall execute the basic and detailed design and the engineering work in compliance with the provisions of the Contract and the Specifications, or where not so specified in accordance of direction of Engineer-in-Charge.

The Contractor shall be responsible for any discrepancies, errors or omissions in the specifications, drawings and other technical documents that it has prepared, whether such specifications, drawings and other documents have been approved by the E/I or not, provided that such discrepancies, errors or omissions are not because of inaccurate information furnished in writing to the Contractor by or on behalf of the E/I.

8.2.2 The Contractor shall be entitled to disclaim responsibility for any design, data, drawing, specification or other document, or any modification thereof, provided or designated by, or on behalf of, the E/I, by giving a notice of such disclaimer to the E/I.

### 8.3 Codes and Standards

Wherever references are made in the Contract to codes and standards in accordance with which the Contract shall be executed, the edition or the revised version of such codes and standards current at the date twenty-eight (28) days prior to date of bid submission shall apply unless otherwise specified. During Contract execution, any changes in such codes and standards shall be applied after approval by the E/I and shall be treated in accordance with GC Clause 63.

### 8.4 Approval/Review of Technical Documents by E/I

8.4.1 For those Works specified in the PC, the Contractor shall prepare (or cause its Subcontractors to prepare) and furnish to the E/I the documents listed in the Specifications (List of Documents for Approval or Review) for its approval or review.

Unless otherwise specified in the PC, the Contractor shall not be required to submit for the E/I's approval the Design or other technical documents concerning the **Operation & Management (O&M)** Services remunerated through quarterly payments.

Any part of the Works covered by or related to the documents to be approved by the E/I shall be executed only after the E/I's approval thereof.

GC Sub-Clauses 8.4.2 through 8.4.7 shall apply only to those documents requiring the E/I's approval, but not to those furnished to the E/I for his information or review only.

8.4.2 Within fourteen (14) days after receipt by the E/I of any document requiring the E/I's approval in accordance with GC Sub-Clause 8.4.1, the E/I shall either return one copy thereof to the Contractor with its approval endorsed thereon or shall notify the Contractor in writing of its disapproval thereof and the reasons therefore and the modifications that the E/I proposes.

If the E/I fails to take such action within the said fourteen (14) days, then the said document shall be deemed to have been approved by the E/I.

8.4.3 The E/I shall not disapprove any document, except on the grounds that the document does not comply with some specified provision of the Contract or that it is contrary to good engineering practice.

- 8.4.4 If the E/I disapproves the document, the Contractor shall modify the document and resubmit it for the E/I's approval in accordance with GC Sub-Clause 8.4.2. If the E/I approves the document subject to modification(s), the Contractor shall make the required modification(s), whereupon the document shall be deemed to have been approved.
- 8.4.5 If any dispute or difference occurs between the E/I and the Contractor in connection with or arising out of the disapproval by the E/I of any document and/or any modification(s) thereto that cannot be settled between the parties within a reasonable period, then such dispute or difference may be referred to the Empowered Standing Committee for decision in accordance with GC Sub-Clause 6 hereof. If such dispute or difference is referred to the Empowered Standing Committee, the E/I shall give instructions as to whether and if so, how, performance of the Contract is to proceed. The Contractor shall proceed with the Contract in accordance with the E/I's instructions, provided that if the Empowered Standing Committee upholds the Contractor's view on the dispute and if the E/I has not given notice, then the Contractor shall be reimbursed by the E/I for any additional costs incurred by reason of such instructions and shall be relieved of such responsibility or liability in connection with the dispute and the execution of the instructions as the Empowered Standing Committee shall decide, and the Time for Completion shall be extended accordingly.
- 8.4.6 The E/I's approval, with or without modification of the document furnished by the Contractor, shall not relieve the Contractor of any responsibility or liability imposed upon it by any provisions of the Contract except to the extent that any subsequent failure results from modifications required by the E/I.
- 8.4.7 The Contractor shall not depart from any approved document unless the Contractor has first submitted to the E/I an amended document and obtained the E/I's approval thereof, pursuant to the provisions of this GC Sub-Clause 8.4.

If the E/I request any change in any already approved document and/or in any document based thereon, the provisions of GC Clause 63.2 shall apply to such request.

- 9. Copyright** 9.1 The copyright in all drawings, documents and other materials containing data and information furnished to the E/I by the Contractor herein shall remain vested in the Contractor or, if they are furnished to the E/I directly or through the Contractor by any third party, including suppliers of materials, the copyright in such materials shall remain vested in such third party.
- 10. Start Date and Completion** 10.1 The Contractor shall start the Works and Services within the period specified in the PC. Upon request from the Contractor, the E/I shall confirm in writing the Start Date; after verifying that works and services have started on the Site.
- 10.2 (i)The Contractor shall attain the required Service Levels and the Completion of the **Initial Rectification, Minor improvement, Surface renewal, Construction of bridge/drainage /protection on the road alignment**(or of a part where a separate time for Completion of such part is specified in the Contract) within the time schedules included in the PC and the Specifications, or within such extended time to which the Contractor shall be entitled under GC Clause 64 hereof.
- (ii)The Contractor shall attain the required Service Levels and the Completion of the **Operation & Management**Services(or of a part where a separate time for Completion of such part is specified in the Contract) within the time schedules included in the PC and the Specifications, or within such extended time to which the Contractor shall be entitled under GC Clause 64 hereof.
- 11. Contractor's Responsibilities** 11.1 The Contractor shall carry out the Works and Services (including associated purchases and/or subcontracting) necessary to comply with the requirements established in the Specifications with due care and diligence in accordance with theContract.
- 11.2 The Contractor confirms that it has entered into this Contract on the basis of a proper examination of the data relating to the Works and Services required, including any data and tests provided by the E/I, and on the basis of information that the Contractor could have obtained from a visual inspection of the Site and of other data readily available to it relating to the Road as of the datetwenty-eight(28) days prior to bid submission. The Contractor acknowledges that any failure to acquaint itself with all such data and information shall not relieve its responsibility for properly estimating the difficulty or cost of successfully performing the Works and Services.
- 11.3 The Contractor shall also acquire in its name all permits, approvals and/or licenses from all local, state or central government authorities or public service undertakings in the country of the E/I that are necessary for the performance of the Contract, including, without limitation, visas for the Contractor's and Subcontractor's personnel and entry permits for all imported Contractor's Equipment (if any). The Contractor shall acquire all other permits, approvals and/or licenses that are not the responsibility of the E/I under GC Sub-Clause 14.3 hereof and that are necessary for the performance of the Contract.

11.4 The Contractor shall comply with all laws in force in the country of the E/I and where the Works and Services are carried out. The laws will include all local, state, central or other laws that affect the performance of the Contract and bind upon the Contractor. The Contractor shall indemnify and hold harmless the E/I from and against any and all liabilities, damages, claims, fines, penalties and expenses of whatever nature arising or resulting from the violation of such laws by the Contractor or its personnel, including the Subcontractors and their personnel, but without prejudice to GC Sub- Clause 14.1 hereof.



- 12. Subcontracting** 12.1 The Contractor may subcontract activities listed in the PC. Any other activity under the Contract may be subcontracted only when approved by the E/I. Subcontracting shall not alter the Contractor's obligations nor relieve the Contractor from any liability or obligation under the Contract and he shall be responsible for the acts, defaults and neglects of any Subcontractor, his agents, servants or workmen as fully as if they were the acts, defaults or neglects of the Contractor, his agents, servants or workmen.
- ~~12.2 Notwithstanding GC Sub Clause 12.1, the Contractor may subcontract under his own responsibility and without prior approval of the E/I the small Works and Services also listed in the PC.~~
- 13. Assignment of Contract** 13.1 Neither the E/I nor the Contractor shall, without the express prior written consent of the other party (which consent shall not be unreasonably withheld), assign to any third party the Contract or any part thereof, or any right, benefit, obligation or interest therein or thereunder, except that the Contractor shall be entitled to assign either absolutely or by way of charge any monies due and payable to it or that may become due and payable to it under the Contract.
- 14. E/I's Responsibilities** 14.1 The E/I shall apply due diligence to ensure the accuracy of all information and/or data to be supplied to the Contractor as described in the Specifications, except when otherwise expressly stated in the Contract.
- ~~14.2 The E/I shall be responsible for acquiring and providing legal and physical possession of the Site and access thereto, and for providing possession of and access to all other areas reasonably required for the proper execution of the Contract, including all requisite rights of way, as specified in the corresponding Specifications. The E/I shall give full possession of and accord all rights of access thereto on or before the date(s) specified in the PC.~~
- 14.3 The E/I shall acquire and pay for all permits, approvals and/or licenses from all local, state or national government authorities or public service undertakings in the country where the Site is located, when such authorities or undertakings require the E/I to obtain them in the E/I's name, are necessary for the execution of the Contract, and are specified in the corresponding Specifications.
- ~~14.4 If requested by the Contractor, the E/I shall use its endeavors assist the Contractor in obtaining in a timely and expeditious manner permits, approvals and/or licenses necessary for the execution of Contract from all local, state or central government authorities or pub service undertakings that such authorities or undertakings require Contractor or Subcontractors or the personnel of the Contractor~~

14.5 The E/I shall be responsible for the continued operation of the Road after Completion, in accordance with GC Sub-Clause 28, and shall be responsible for facilitating the Guarantee Test(s) for the Road, in accordance with GC Sub-Clause 20.

14.6 All cost involved in the performance of the obligations under this GC Clause 14 shall be the responsibility of the E/I, save those to be incurred by the Contractor with respect to the performance of Guarantee Tests, in accordance with GC Sub-Clause 20

**15. Confidential Information**

15.1 The E/I and the Contractor shall keep confidential and shall not, without the written consent of the other party hereto, divulge to any third party any documents, data or other information furnished directly or indirectly by the other party hereto in connection with the Contract, whether such information has been furnished prior to, during or following termination of the Contract. Notwithstanding the above, the Contractor may furnish to its Subcontractor(s) such documents, data and other information it receives from the E/I to the extent required for the Subcontractor(s) to perform its work under the Contract, in which event the Contractor shall obtain from such Subcontractor(s) an undertaking of confidentiality similar to that imposed on the Contractor under this GC Clause 15.

15.2 The E/I shall not use such documents, data and other information received from the Contractor for any purpose other than the operation and management of the Road. Similarly, the Contractor shall not use such documents, data and other information received from the E/I for any purpose other than the design, procurement of Plant and Equipment, construction or such Works and Services as are required for the performance of the Contract.

15.3 The obligation of a party under GC Sub-Clauses 15.1 and 15.2 above however, shall not apply to that information which

- (a) now or hereafter enters the public domain through no fault of that party;
- (b) can be proven to have been possessed by that party at the time of disclosure and which was not previously obtained, directly or indirectly, from the other party hereto;
- (c) Otherwise lawfully becomes available to that party from a third party that has no obligation of confidentiality.

15.4 The above provisions of this GC Clause 15 shall not in any way modify any undertaking of confidentiality given by either of the parties hereto prior to the date of the Contract in respect of the Works and Services or any part thereof.

15.5 The provisions of this GC Clause 15 shall survive termination, for whatever reason of contract.

## C. EXECUTION OF WORKS AND SERVICES

### 16. Representatives 16.1 Engineer-in-charge

The Executive Engineer shall represent and act as the E/I at all times during the period of the Contract. All notices, instructions, orders, certificates, approvals and all other communications under the Contract shall be given by the Engineer- in - charge, except as herein otherwise provided.

### 16.2 Road Manager

16.2.1 If the Road Manager is not named in the Contract, then the Contractor shall appoint the Road Manager before the Start Date and shall request the E/I in writing to approve the person so appointed. If the E/I makes no objection to the appointment within fourteen (14) days, the Road Manager shall be deemed to have been approved. If the E/I objects to the appointment within fourteen (14) days giving the reason therefore, then the Contractor shall appoint a replacement within fourteen (14) days of such objection, and the foregoing provisions of this GC Sub-Clause 16.2.1 shall apply thereto.

16.2.2 The Road Manager shall represent and act for the Contractor at all times during the period of the Contract and shall give to the E/I all the Contractor's notices, advices, information and all other communications under the Contract. The Road Manager shall be in charge of the day-to-day management of the works and services to be provided under the contract on behalf of the Contractor, and shall have legal and all other faculties to take all necessary decisions related to the execution of the contract.

All notices, instructions, information and all other communications given by the E/I to the Contractor under the Contract shall be given to the Road Manager or, in its absence, its deputy, except as herein otherwise provided.

The Contractor shall not revoke the appointment of the Road Manager without the E/I's prior written consent, which shall not be unreasonably withheld. If the E/I consents thereto, the Contractor shall appoint some other person as the Road Manager, pursuant to the procedure set out in GC Sub- Clause 16.2.1.

16.2.3 The Road Manager may, subject to the approval of the E/I (which shall not be unreasonably withheld), at any time delegate to any person any of the powers, functions and authorities vested in him or her. Any such delegation may be revoked at any time. Any such delegation or revocation shall be subject to a prior notice to the E/I signed by the Road Manager, and shall specify the powers, functions and authorities thereby delegated or revoked.

Any act or exercise by any person of powers, functions and authorities so delegated to him or her in accordance with this GC Sub-Clause 16.2.3 shall be deemed to be an act or exercise by the Road Manager.

16.2.4 From the Start Date until Completion, the Road Manager shall supervise all work and services done at the Site by the Contractor and shall be present at the Site throughout normal working hours except when on leave, sick or absent for reasons connected with the proper performance of the Contract. Whenever the Road Manager is absent from the Site, a suitable person shall be appointed to act as his or her deputy.

16.2.5 The E/Imay by notice to the Contractor object to any representative or person employed by the Contractor in the execution of the Contract who, in the reasonable opinion of the E/I, may behave inappropriately, may be incompetent or negligent, or may commit a serious breach of the Site regulations provided under the Specifications. The E/I shall provide evidence of the same, whereupon the Contractor shall remove such person from the Site.

16.2.6 If any representative or person employed by the Contractor is removed in accordance with GC Sub-Clause 16.2.5, the Contractor shall, where required, promptly appoint a replacement.

## **17. WorkProgram    17.1 Contractor'sOrganization**

The Contractor shall supply to the E/I a chart showing the proposed organization to be established by the Contractor for carrying out the Works and Services. The chart shall include the identities of the key personnel together with the curricula vitae of such key personnel to be employed as included in the Contractor's Bid. The Contractor shall promptly inform the E/I in writing of any revision or alteration of such an organization chart.

### **17.2 Program of Performance**

Not later than the Start Date, the Contractor shall prepare and supply to the E/I a program of performance of the Contract, made in the form specified in the Specifications and showing the sequence in which it proposes to design and carry out the Works and Services, as well as the date by which the Contractor reasonably requires that the E/I shall have fulfilled its obligations under the Contract so as to enable the

Contractor to execute the Contract in accordance with the program and to achieve Completion in accordance with the Contract. The Contractor shall update and revise the program as and when appropriate, but without modification in the Time of Completion given in the PC and any extension granted in accordance with GC Clause 64, and shall supply all such revisions to the E/I.

### **17.3 Progress Report**

The Contractor shall monitor progress of all the activities specified in the program referred to in GC Sub-Clause 17.2 above, and supply a progress report to the E/I every month together with his Monthly Statement. The progress report shall be in a form acceptable to the E/I in accordance with the Specifications.

### **17.4 Progress of Execution**

If at any time the Contractor's actual progress falls behind the program referred to in GC Sub-Clause 17.2, or it becomes apparent that it will so fall behind, the Contractor shall prepare and supply to the E/I a **revised program**, taking into account the prevailing circumstances, and shall notify the E/I of the steps being taken to expedite progress so as to attain Completion of the Works and Execution of Services activities within the Time for Completion under GC Sub-Clause 10.2, any extension thereof entitled under GC Sub-Clause 64, or any extended period as may otherwise be agreed upon between the E/I and the Contractor.

### **17.5 Work Procedures**

The Contract shall be executed in accordance with the Contract Documents and the procedures given in the Specifications.

## **18. Execution of Works**

### **18.1 Setting Out/Supervision/Labor**

18.1.1 *Bench Mark.* The Contractor shall be responsible for the true and proper setting-out of the Works in relation to bench marks, reference marks and lines provided to it in writing by or on behalf of the E/I.

If, at any time during the progress of execution of the Works, any error shall appear in the position, level or alignment of the Works, the Contractor shall forthwith notify the E/I of such error and, at its own expense, immediately rectify such error to the reasonable satisfaction of the E/I. If such error is based on incorrect data provided in writing by or on behalf of the E/I, the expense of rectifying the same shall be borne by the E/I.

18.1.2 *Contractor's Supervision.* The Contractor shall give or provide all necessary supervision during the execution of the Works, and the Road Manager or its deputy shall be on the Site to provide full-time supervision of the execution. The Contractor shall provide and employ only technical personnel who are skilled and experienced in their respective callings and supervisory staff who are competent to adequately supervise the work at hand.

## **18.2 Contractor's Equipment**

18.2.1 All Contractor's Equipment brought by the Contractor onto the Site shall be deemed to be intended to be used exclusively for the execution of the Contract. The Contractor shall not remove the same from the Site without approval of the E/I.

18.2.2 Unless otherwise specified in the Contract, upon completion of the Works and Services, the Contractor shall remove from the Site all Equipment brought by the Contractor onto the Site and any surplus materials remaining thereon.

18.2.3 The E/I will, if requested, use its best endeavors to assist the Contractor in obtaining any local, state or central government permission required by the Contractor for the export of the Contractor's Equipment imported by the Contractor for use in the execution of the Contract that is no longer required for the execution of the Contract.

## **18.3 Site Regulations and Safety**

The E/I and the Contractor shall establish Site regulations setting out the rules to be observed in the execution of the Contract at the Site and shall comply therewith. The Contractor shall prepare and submit to the E/I, proposed Site regulations for the E/I's approval, which approval shall not be unreasonably withheld.

Such Site regulations shall include, but shall not be limited to, rules in respect of security, safety, traffic control, accident response, gate control, sanitation, medical care, and fire prevention.

## **18.4 Access to site for Other Contractors**

18.4.1 The Contractor shall, upon written request from the E/I, give site access to other contractors employed by the E/I on or near the site.

## **18.5 Site Clearance**

18.5.1 *Site Clearance in Course of Execution:* In the course of carrying out the Contract, the Contractor shall keep the Site reasonably free from all unnecessary obstruction, store or remove any surplus materials, clear away any wreckage, rubbish or temporary works from the Site, and remove any Contractor's Equipment no longer required for execution of the Contract.

18.5.2 *Clearance of Site after Completion:* After Completion of all parts of the Works and Services, the Contractor shall clear away and remove all wreckage, rubbish and debris of any kind from the Site, and shall leave the Site and the Road clean and safe.

### **18.6 Watching and Lighting**

The Contractor shall provide and maintain at its own expense all lighting, fencing, and watching when and where necessary for the proper execution and the protection of the Works and Services, for the protection of his own installations and his equipment, for the safety of the owners and occupiers of adjacent property and for the safety of the public.

### **18.7 Access to the Site**

The Contractor shall allow the E/I and any person authorized by the E/I access to the Site and to any place where work in connection with the Contract is being carried out or is intended to be carried out.

### **18.8 Management Meetings**

18.8.1 The E/I shall convene the management meeting and contractor shall attend a management meeting. The business of a management meeting shall be to review the plans for remaining work and to deal with matters raised by either the Contractor or the E/I.

18.8.2 The E/I shall record the business of management meetings and provide copies of the record to those attending the meeting. The responsibility of the parties for actions to be taken shall be decided by the E/I either during or after the management meeting and stated in writing to all who attended the meeting.

**19. Staff and Labor** 19.1 The Contractor shall employ the key personnel named in the Contractor's Bid, to carry out the functions stated in the Specifications or other personnel approved by the E/I. The E/I will approve any proposed replacement of key personnel only if their relevant qualifications and abilities are substantially equal to or better than those of the personnel listed in the Contractor's Bid.

### **19.2 Labor**

- (a) The Contractor shall provide and employ on the Site for the execution of the Works and Services such skilled, semi-skilled and unskilled labor as is necessary for the proper and timely execution of the Contract. The Contractor is encouraged to use local labor that has the necessary skills.
- (b) Unless otherwise provided in the Contract, the Contractor shall be responsible for the recruitment, transportation, accommodation and catering of all labor, local or expatriate, required for the execution of the Contract and for all payments in connection therewith.
- (c) The Contractor shall be responsible for obtaining all necessary permit(s) and/or visa(s) from the appropriate authorities for the entry of all labor and personnel to be employed on the Site into the country where the Site is located.

- (d) The Contractor shall at its own expense provide the means of repatriation to all of its and its Subcontractor's personnel employed on the Contract at the Site to their various home countries. It shall also provide suitable temporary maintenance of all such persons from the cessation of their employment on the Contract to the date programmed for their departure. In the event that the Contractor defaults in providing such means of transportation and temporary maintenance, the E/I may provide the same to such personnel and recover the cost of doing so from the Contractor.
- (e) The Contractor shall at all times during the progress of the Contract use its best endeavors to prevent any unlawful, riotous or disorderly conduct or behavior by or amongst its employees and the labor of its Subcontractors.
- (f) The Contractor shall provide lodging, medical assistance, alimentation and sanitary installations for the employees living in the contractor's base camps to comply with the Social, Sanitary and Health Conditions of Labor requirements established in the Specifications.
- (g) The Contractor shall, in all dealings with its labor and the labor of its Subcontractors currently employed on or connected with the Contract, pay due regard to all recognized festivals, official holidays, religious or other customs and all local laws and regulations pertaining to the employment of labor.
- ~~(h) HIV AIDS Prevention. If so indicated in the PC, the Contractor shall conduct an HIV AIDS awareness programme via an approved service provider or specialized NGO, and shall undertake such other measures as are specified in this Contract to reduce the risk of the transfer of the HIV virus between and among the Contractor's Personnel and the local community, to promote early diagnosis and to assist affected individuals. The Contractor shall throughout the contract: (i) conduct Information, Education and Consultation Communication (IEC) campaigns, at least every other month, addressed to all the Site staff and labor (including all the Contractor's employees, all Sub-Contractors and Consultants' employees working on the Site, and truck drivers and crew making deliveries to the Site for Works and Services executed under the contract, and to the immediate local communities, concerning the risks, dangers and impact, and appropriate avoidance behavior with respect to of Sexually Transmitted Diseases (STD) or Sexually Transmitted Infections (STI) in general and HIV/AIDS in particular; (ii) provide male or female condoms for all Site staff and labor as appropriate; and (iii) provide for STI and HIV/AIDS screening, diagnosis, counselling and referral to a dedicated national STI and HIV/AIDS program, (unless otherwise agreed) of all Site staff and labor.~~



- (i) ~~If so indicated in the PC, the Contractor shall include in the program to be submitted for the execution of the Works and Services under Sub-Clause 17 a program for Site staff and labour and their families in respect of Sexually Transmitted Infections(STI) and Sexually Transmitted Diseases (STD) including HIV/AIDS. The STI, STD and HIV/AIDS alleviation program shall indicate when, how and at what cost the Contractor plans to satisfy the requirements of this Sub-Clause and the related specification. For each component, the program shall detail the resources to be provided or utilized and any related sub-contracting proposed. The program shall also include provision of a detailed cost estimate with supporting documentation. Payment to the Contractor for preparation and implementation this program shall not exceed the Provisional Sum dedicated for this purpose.~~

### **19.3 Removal of staff**

If the E/I asks the Contractor to remove a person who is a member of the Contractor's staff or work force, stating the reasons, the Contractor shall ensure that the person leaves the Site within seven days and has no further connection with the work in the Contract.

### **19.4 Work at Night and on Holidays**

19.4.1 Unless otherwise provided in the Contract, if and when the Contractor considers it necessary to carry out work at night or on public holidays so as to meet the Service Levels and the Time for Completion, and requests the E/I's consent thereto (if such consent is needed), the E/I shall not unreasonably withhold such consent.

## **20. Test and Inspection**

- 20.1** The Contractor shall at its own expense carry out on the Site all such tests and/or inspections as are specified in the Specifications and in accordance with the procedures described in the Specifications.
- 20.2** The E/I their designated representatives shall be entitled to attend the aforesaid test and/or inspection.
- 20.3** For tests to be carried out on the initiative of the Contractor whenever the Contractor is ready to carry out any such test and/or inspection, he shall give a reasonable advance notice of such test and/or inspection and of the place and time thereof to the E/I. The Contractor shall provide the E/I with a signed report of the results of any such test and/or inspection.

- 20.4** If the E/I fails to attend a scheduled test and/or inspection, or if it is agreed between the parties that such persons shall not attend, then the Contractor may proceed with the test and/or inspection in the absence of such persons, and may provide the E/I with a signed report of the results thereof.
- 20.5** The E/I may require the Contractor to carry out any test and/or inspection not required by the Contract, provided that the Contractor's reasonable costs and expenses incurred in the carrying out of such test and/or inspection shall be added to the Contract Price. Further, if such test and/or inspection impede the progress of the works and/or the Contractor's performance of its other obligations under the Contract, due allowance will be made in respect of the Time for Completion and the other obligations soaffected.
- 20.6** If Initial Rectification, Minor improvement, Surface renewal, Construction of bridge/drainage /protectionor Emergency Works fail to pass any test and/or inspection, the Contractor shall either rectify or replace such works and shall repeat the test and/or inspection upon giving a notice under GC Sub-Clause 20.3.
- 20.7** If any dispute or difference of opinion shall arise between the parties in connection with or arising out of the test and/or inspection of the Works and Services, or part of them, that cannot be settled between the parties within a reasonable period of time, it may be referred to the Standing Empowered Committee for determination in accordance with GC Sub-Clause6.1.
- 20.8** The Contractor agrees that neither the execution of a test and/or inspection of the Works and Services or any part of them, nor the attendance by the E/I, nor the issue of any test certificate pursuant to GC Sub-Clause 20.4, shall release the Contractor from any other responsibilities under theContract.
- 20.9** No part or foundations shall be covered up on the Site without the Contractor carrying out any test and/or inspection required under the Contract. The Contractor shall give a reasonable notice to the E/I whenever any such part or foundations are ready or about to be ready for test and/or inspection; such test and/or inspection and notice thereof shall be subject to the requirements of theContract.
- 20.10** The Contractor shall uncover any part of the Works or foundations, or shall make openings in or through the same as the E/I may from time to time require at the Site, and shall reinstate and make good such part or parts.

If any parts of the Works or foundations have been covered up at the Site after compliance with the requirement of GC Sub-Clause 20.9 and are found to be executed in accordance with the Contract, the expenses of uncovering, making openings in or through, reinstating, and making good the same shall be borne by the E/I, and the Time for Completion shall be reasonably adjusted to the extent that the Contractor has thereby been delayed or impeded in the performance of any of its obligations under theContract.

- 21. Initial Rectification, Minor improvement, surface renewal, Const. bridge, drainage/ protection**
- 21.1** If so, indicated in the PC, Initial Rectification, Minor improvement, Surface renewal, Construction of bridge/drainage /protection on the road alignment works shall be carried out explicitly in accordance with the Specifications and as specified in the bidding documents and in the Contractor's Bid. ~~Input quantities for Initial Rectification with surface renewal/Upgradation Works including reconstruction / strengthening / widening Works are estimated by the Contractor to achieve the performance criteria for Initial Rectification with surface renewal/Upgradation Works including reconstruction / strengthening / widening works given in the Specifications. The specific Initial Rectification with surface renewal/Upgradation Works including reconstruction / strengthening / widening are offered by the Contractor at a Lump Sum price.~~
- 22. Minor Improvement Works**
- 22.1** Minor Improvement Works are required and will consist of a set of interventions that add new characteristics to the roads in response to new traffic and safety or other conditions. Minor Improvement Works quantities are offered at unit prices included in the Schedule of Prices.
- ~~**22.2** The execution of Minor Improvement Works shall be requested by the Engineer in charge, who will issue a Work Order defining the requested works to be carried out by the Contractor, based on the activities priced in the Schedule of Prices. The Work order shall specify the activities to be carried out and the corresponding price. The E/I shall confirm his acceptance by signing the Work Order.~~
- 23. Operation & Management Services**
- 23.1** **Operation & Management Services** are those activities necessary for keeping the Road in compliance with the Performance Standards pursuant to GC Clause 24. Operation & Management Services shall include all activities required to achieve and keep the Road Performance Standards and Service Levels. These Services will be remunerated pursuant to GC Clause 44.2(b).
- 24. Performance Standards**
- 24.1** The Contractor shall carry out the Operation & Management Services to achieve and keep the Road complying with the Service Levels defined in the Specifications. He will carry out all Works in accordance with the performance standards indicated in the Specifications.
- 25. Contractor's Self-Control of Quality and Safety**
- 25.1** The Contractor shall, throughout the execution and completion of the Works and Services, maintain a System which shall ensure that the work methods and procedures are adequate and safe at all times and do not pose any avoidable risks and dangers to the health, safety and property of the workers and agents employed by him or any of his subcontractors, of road users, of persons living in the vicinity of the roads under contract, and any other person who happens to be on or along the roads under contract.

**25.2** Unless specified otherwise in the PC, the Contractor shall establish, within his own organizational structure, a specific Unit staffed with qualified personnel, whose task is to verify continuously the degree of compliance by the Contractor with the required Service Levels. That Unit will also be responsible for the generation and presentation of the information needed by the contractor for the documentation required as defined in the Specifications. The Unit will be responsible for maintaining a detailed and complete knowledge of the condition of the Road and to provide to the Road Manager all the information needed in order to efficiently operate and manage the Road. The Unit shall also carry out, in close collaboration with the E/I, the verifications on the ServiceLevels.

**25.3** The Contractor's Self-Control Unit mentioned in GCSUB-Clause25.2 shall report the level of compliance with the required Service Levels in the standard format presented in the Specifications.

**26. Environmental and Safety Requirements**

**26.1** The Contractor shall, throughout the design, execution and completion of the Works and Services, and the remedying of any defects therein:

- (a) have full regard for the safety of all persons employed by him and his subcontractors and keep the Site (so far as the same is under his control) in an orderly state appropriate to the avoidance of danger to such persons;
- (b) provide and maintain at his own cost all guardrails, fencing, warning signs and watching, when and where necessary or required by Sub-Clause 18.3 of the Contract or by any duly constituted authority, for the protection of the Works and Services or for the safety and convenience of his workers and road users, the public or others; and
- (c) take all reasonable steps to protect the environment (both on and off the Site) and to limit damage and nuisance to people and property resulting from pollution, noise and other results of his operations.

**27. Work Orders for Emergency Works**

**27.1** Emergency Works shall be executed by the Contractor on the basis of Work Orders issued by the E/I.

**27.2** Work Orders shall be issued in writing and shall include the date on which the Work Order was issued and the signature of the E/I. Two copies of the Work Order shall be transmitted by the E/I to the Contractor, who shall immediately countersign one copy, including the date of acceptance, and return it to the E/I.

**27.3** If the Contractor has any objection to a Work Order, the Road Manager shall notify the E/I of his reasons for such objection within ten (10) days of the date of issuing the Work Order. Within five (5) days of the Road Manager's objection, the E/I shall cancel, modify or confirm the Work Order in writing.

**28. Taking Over Procedures**

**28.1** When the whole of the Works and Services have been substantially completed and have satisfactorily passed any Tests on Completion prescribed by the Contract, the Contractor may give a notice to that effect to the E/I, accompanied by a written undertaking to finish with due expedition any outstanding work during the Defects Liability Period. Such notice and undertaking shall be deemed to be a request by the Contractor for the E/I to issue a Taking-Over Certificate in respect of the Works and Services. The E/I shall, within twenty-one (21) days of the date of delivery of such notice, either issue to the Contractor a Taking-Over Certificate, stating the date on which the Works and Services were substantially completed in accordance with the Contract, or give instructions in writing to the Contractor specifying all the conditions to be complied with and all the work which is required to be done by the Contractor before the issue of such Certificate. The E/I shall also notify the Contractor of any defects in the Works and Services affecting substantial completion that may appear after such instructions and before completion of Taking-Over Certificate within twenty-one (21) days of completion, to the satisfaction of the E/I, of the Works and Services so specified and remedying any defects sonotified.

**28.2** Similarly, in accordance with the procedure set out in Sub-Clause 28.1, the Contractor may request and the E/I shall issue a Taking-Over Certificate in respect of:

- (a) any Section in respect of which a separate Time for Completion is provided in the contract,
- (b) any substantial part of the Works and Services which has been both completed to the satisfaction of the E/I and, otherwise than as provided for in the Contract, occupied or used by the E/I,or
- (c) any part of the Works and Services which the E/I has elected to occupy or use prior to completion (where such prior occupation or use is not provided for in the Contract or has not been agreed by the Contractor as a temporarymeasure).

**29. Emergency Works**

**29.1** The need for execution of Emergency Works is jointly identified by the E/I and the Contractor and the starting of the execution of Emergency Works shall always require a Work Order issued by the E/I.

**29.2** The execution of Emergency Works shall be requested by the Contractor based on losses or damages occurred as a result of natural phenomena (such as strong storms, flooding or earthquakes) with imponderable consequences, or on the possibility of damages or losses occurring, or the safety of individuals, works, services or equipment being at risk as result of the natural phenomena. Inorder to characterize the Emergency Works, the Contractor shall forward a Technical Report to the E/I requesting the execution of Emergency Works and characterizing the situation. On the basis of the said report, and of his own judgment of the situation, the E/I may issue a Work Order to theContractor.

- 29.3** The E/I or even Government authorities may declare an Emergency Situation on the basis of local legislation. In those cases, the E/I may issue a Work Order for Emergency Works to the Contractor even without a request by the Contractor.
- 29.4** If the Contractor is unable or unwilling to do such work immediately, the E/I may do or cause such work to be done as the E/I may determine necessary in order to prevent damage to the Road. In such event the E/I shall, as soon as practicable after the occurrence of any such emergency, notify the Contractor in writing of such emergency, the work done and the reasons therefore. If the work done or caused to be done by the E/I is work that the Contractor was liable to do at its own expense under the Contract, the reasonable costs incurred by the E/I in connection there with shall be paid by the Contractor to the E/I. Otherwise, the cost of such remedial work shall be recovered by the E/I.
- 30. Quality of materials used by Contractor**
- 30.1** The quality of materials used by the Contractor for the execution of the Contract shall be in compliance with the requirements of the Specifications. If the Contractor is of the opinion that materials of higher quality than those stated in the Specifications need to be used in order to ensure compliance with the Contract, he shall use such better materials, without being entitled to higher prices or remunerations.
- 30.2** Under no circumstances may the Contractor make any claim based on the insufficient quality of materials used by him, even if the material used was authorized by the E/I.
- 30.3** The Contractor shall carry out at his own cost the laboratory and other tests that he needs to verify if materials to be used comply with the Specifications, and shall keep records of such tests. If requested by the E/I, the Contractor shall hand over the results of the tests.
- 31. Signaling and demarcation of work zones and bypasses**
- 31.1** To ensure the safety of road users, including non-motorized road users and pedestrians, the Contractor is responsible to install and maintain at his cost the adequate signaling and demarcation of work sites, which in addition must comply with the applicable legislation.
- 31.2** If the execution of services and works under the contract is likely to interfere with traffic, the Contractor shall take at his cost the measures necessary to limit such interference to the strict minimum, or any danger to the workers or others. For that purpose, he is entitled to install, within the right-of-way of the road, temporary bypasses, structures or other modifications to be used by traffic during the execution of works and services. The Contractor shall notify the E/I of any such temporary installations.

**31.3** If the execution of Works and Services by the Contractor makes it necessary to temporarily close a road section, and a traffic detour has to be implemented over other public roads or streets, the Contractor shall be responsible for the adequate signaling of the detour, under the same conditions as stated in GC Sub-Clause 31.1.

**31.4** The Contractor shall inform the local authorities and the local police about such activities to be carried out by him which may cause any significant interruptions or changes to the normal traffic patterns. Such information shall be made in writing and at least seven (7) days before the beginning of such activities. Upon request from the Contractor, the E/I shall assist the Contractor in the coordination with the local authorities and the local police.

#### **D. ALLOCATION OF RISKS**

### **32. E/I's Risks**

**32.1** From the Start Date until the Defects Correction Certificate has been issued, the following are E/I's risks insofar as they directly affect the execution of the Works and Services included in this Contract:

- (a)** war, hostilities (whether war be declared or not), invasion, act of foreign enemies;
- (b)** rebellion, revolution, insurrection, military or usurped power, or civil war;
- (c)** riot, commotion or disorder, unless solely restricted to employees of the Contractor or of his Subcontractors and arising from the conduct of the Works and Services;
- (d)** loss or damage due to the use or occupation by the E/I of any unfinished Section or part of the Works, except as may be provided for in the Contract;
- (e)** any operation of the forces of nature against which an experienced contractor could not reasonably have been expected to take precautions.

- 33. Contractor's Risks** 33.1 The E/I carries the risks which this Contract states are E/I's risks, and the remaining risks are the Contractor's risks.
- 34. Loss of or Damage to Property; Accident or Injury to Workers; Indemnification**
- 34.1 Subject to GC Sub-Clause 34.3, the Contractor shall indemnify and hold harmless the E/I and its employees and officers from and against any and all suits, actions or administrative proceedings, claims, demands, losses, damages, costs, and expenses of whatsoever nature, including attorney's fees and expenses, in respect of the death or injury of any person or loss of or damage to any property arising in connection with the execution and by reason of the negligence of the Contractor or its Subcontractors, or their employees, officers or agents, except any injury, death or property damage caused by the negligence of the E/I, its contractors, employees, officers or agents.
- 34.2 If any proceedings are brought or any claim is made against the E/I that might subject the Contractor to liability under GC Sub- Clause 34.1, the E/I shall promptly give the Contractor a notice thereof and the Contractor may at its own expense and in the E/I's name conduct such proceedings or claim and any negotiations for the settlement of any such proceedings or claim.
- If the Contractor fails to notify the E/I within twenty-eight (28) days after receipt of such notice that it intends to conduct any such proceedings or claim, then the E/I shall be free to conduct the same on its own behalf. Unless the Contractor has so failed to notify the E/I within the twenty-eight (28) day period, the E/I shall make no admission that may be prejudicial to the defence of any such proceedings or claim.
- The E/I shall, at the Contractor's request, afford all available assistance to the Contractor in conducting such proceedings or claim, and shall be reimbursed by the Contractor for all reasonable expenses incurred in so doing.
- 34.3 The E/I shall indemnify and hold harmless the Contractor and its employees, officers and Subcontractors from any liability for loss of or damage to property of the E/I, other than the Works not yet taken over, that is caused by fire, explosion or any other perils, in excess of the amount recoverable from insurances procured under GC Clause 35, provided that such fire, explosion or other perils were not caused by any act or failure of the Contractor.
- 34.4 The party entitled to the benefit of an indemnity under this GC Clause 34 shall take all reasonable measures to mitigate any loss or damage which has occurred. If the party fails to take such measures, the other party's liabilities shall be correspondingly reduced.
- 35. Insurance** 35.1 The Contractor at his cost shall provide, in the joint names of the E/I and the Contractor, insurance cover from the StartDate to the date of completion, in the amounts and deductibles stated in the PC for the following events which are due to the Contractor's risks :



- a) loss of or damage to the Works, Plant and Materials;
- b) loss of or damage to Equipment;
- c) loss of or damage to property (except the Works, Plant, Materials, and Equipment) in connection with the Contract; and
- d) Personal injury or death.

**35.2** Insurance policies and certificates for insurance shall be delivered by the Contractor to the Engineer for the Engineer's approval before the Start Date. All such insurance shall provide for compensation to be payable in Indian Rupees to rectify the loss or damage incurred.

**35.3** Deleted

**35.4** Alterations to the terms of insurance shall not be made without the approval of the Engineer.

**35.5** Both parties shall comply with any conditions of the insurance policies.

**36. Unforeseen  
Conditions**

**36.1** If, during the execution of the Contract, the Contractor shall encounter on the Site any physical conditions (other than climatic conditions) or artificial obstructions that could not have been reasonably foreseen prior to the date of the Contract Agreement by an experienced contractor on the basis of reasonable examination of the data relating to the Road (including any data and tests provided by the E/I), and on the basis of information that it could have obtained from a visual inspection of the Site or other data readily available to it relating to the Road, and if the Contractor determines that it will in consequence of such conditions or obstructions incur additional cost and expense or require additional time to perform its obligations under the Contract that would not have been required if such physical conditions or artificial obstructions had not been encountered, the Contractor shall promptly, and before performing additional work or using additional Plant and Equipment or Contractor's Equipment, notify the E/I in writing of

- (a) the physical conditions or artificial obstructions on the Site that could not have been reasonably foreseen;
- (b) the additional work and/or Plant and Equipment and/or Contractor's Equipment required, including the steps which the Contractor will or proposes to take to overcome such conditions or obstructions;
- (c) the extent of the anticipated delay;
- (d) the additional cost and expense that the Contractor is likely to incur.

On receiving any notice from the Contractor under this GC Sub-Clause 36.1, the E/I decides upon the actions to be taken to overcome the physical conditions or artificial obstructions encountered. Following such consultations, the E/I shall instruct the Contractor of the actions to be taken.

**36.2** Any reasonable additional cost and expense incurred by the Contractor in following the instructions from the E/I to overcome such physical conditions or artificial obstructions referred to in GC Sub- Clause 36.1 shall be paid by the E/I to the Contractor as an addition to the Contract Price.

**36.3** If the Contractor is delayed or impeded in the performance of the Contract because of any such physical conditions or artificial obstructions referred to in GC Sub-Clause 36.1, the Time for Completion shall be extended in accordance with GC Clause 64.

**37. Change in  
Laws and  
Regulations**

**37.1** If, after the date twenty-eight (28) days prior to the date of Bid submission, in the country where the Site is located, any law, regulation, ordinance, order or by-law having the force of law is enacted, promulgated, abrogated or changed (which shall be deemed to include any change in interpretation or application by the competent authorities) that subsequently affects the cost of the Contractor and/or the Time for Completion, the Contract Price shall be correspondingly increased or decreased, and/or the Time for Completion shall be reasonably adjusted to the extent that the Contractor has thereby been affected in the performance of any of its obligations under the Contract. Notwithstanding the foregoing, such additional or reduced costs shall not be separately paid or credited if the same has already been accounted for in the price adjustment provisions where applicable, in accordance with the PC.

**38. Force  
Majeure**

**38.1** “Force Majeure” shall mean any event beyond the reasonable control of the E/I or of the Contractor, as the case may be, insofar as they directly affect the execution of the Services and Works included in this Contract and which is unavoidable notwithstanding the reasonable care of the party affected, and shall include, without limitation, the following:

- (a) war, hostilities or warlike operations (whether a state of war be declared or not), invasion, act of foreign enemy and civil war;
- (b) rebellion, revolution, insurrection, mutiny, usurpation of civil or military government, conspiracy, riot, civil commotion and terrorist acts;

- (c) confiscation, nationalization, mobilization, commandeering, requisition by or under the order of any government or de jure or de facto authority or ruler or any other act or failure to act of any local state or national government authority;
  - (d) strike, sabotage, lockout, embargo, import restriction, port congestion, lack of usual means of public transportation and communication, industrial dispute, shipwreck, shortage or restriction of power supply, epidemics, quarantine and plague;
  - (e) earthquake, landslide, volcanic activity, fire, flood or inundation, tidal wave, typhoon or cyclone, hurricane, storm, lightning, or other inclement weather condition, nuclear and pressure waves or other natural or physical disaster;
  - (f) shortage of labor, materials or utilities where caused by circumstances that are themselves Force Majeure.
- 38.2** If either party is prevented, hindered or delayed from or in performing any of its obligations under the Contract by an event of Force Majeure, then it shall notify the other in writing of the occurrence of such event and the circumstances thereof within fourteen (14) days after the occurrence of such event.
- 38.3** The party who has given such notice shall be excused from the performance or punctual performance of its obligations under the Contract for so long as the relevant event of Force Majeure continues and to the extent that such party's performance is prevented, hindered or delayed. The Time for Completion shall be extended in accordance with GC Clause 64.
- 38.4** The party or parties affected by the event of Force Majeure shall use reasonable efforts to mitigate the effect thereof upon its or their performance of the Contract and to fulfil its or their obligations under the Contract, but without prejudice to either party's right to terminate the Contract under GC Sub-Clause 38.6.
- 38.5** No delay or non-performance by either party hereto caused by the occurrence of any event of Force Majeure shall
- (a) constitute a default or breach of the Contract;
  - (b) give rise to any claim for damages or additional cost or expense occasioned thereby;
- if and to the extent that such delay or non-performance is caused by the occurrence of an event of Force Majeure.
- 38.6** If the performance of the Contract is substantially prevented, hindered or delayed for a single period of more than sixty (60) days or an aggregate period of more than one hundred and twenty (120) days on account of one or more events of Force Majeure during the currency of the Contract, the parties will attempt to develop a mutually satisfactory solution, failing which either party may terminate the Contract by giving a notice to the other, but without prejudice to either party's right to terminate the Contract under GC Clause 59.
- 38.7** In the event of termination pursuant to GC Sub-Clause 38.6, the rights and obligations of the E/I and the Contractor shall be as specified in GC Sub-Clauses 59.1.2 and 59.1.3.
- 38.8** Notwithstanding GC Sub-Clause 38.5, Force Majeure shall not apply to any obligation of the E/I to make payments to the Contractor herein.

**E. GUARANTEES AND LIABILITIES**

**39. Completion Time Guarantee and Liability**

**39.1** The Contractor guarantees that it shall attain specified Service Levels and the Completion of Initial Rectification, Minor improvement, Surface renewal, Construction of bridge/drainage /protection on the road alignment (or a part for which a separate time for completion is specified in the PC) within the time schedules specified in the PC and the Specifications, pursuant to GC Sub-Clause 10.2, or within such extended time to which the Contractor shall be entitled under GC Clause 64 hereof.

**39.2** If the Contractor fails to attain specified Service Levels within the contractually agreed time schedules as given in the Specifications, the contractor shall receive reduced payments for **Operation and Management (O&M)** Services, for such default and not as a penalty, in accordance with the Specifications.

**39.3** If the Contractor fails to attain the Completion of Initial Rectification, Minor improvement, Surface renewal, Construction of bridge/drainage /protection (or a part for which a separate time for completion is specified in the PC clause 39.1) within the contractually required time schedules, the contractor shall pay to the E/I liquidated damages for such default and not as a penalty, in accordance with the PC and the Specifications.

**39.4** The payment reductions and liquidated damages indicated in GC 39.2 and 39.3 shall be the only monies due from the Contractor for such defaults, and they will be applied for every day of delay, in accordance with the PC and the Specifications. The aggregate amount of such liquidated damages and payment reductions shall in no event exceed the “aggregate liability” in accordance with GC Clause 42. The payment or deduction of such sums shall not relieve the Contractor from his obligation to complete the Works and Services, or from any other of his obligations and liabilities under the Contract.

**40. Performance Guarantee and Liability**

**40.1** The Contractor guarantees that during the Performance Tests or Inspections for Initial Rectification, Minor improvement, Surface renewal, Construction of bridge/drainage /protection and all parts thereof shall attain the Performance Standards specified in the corresponding Specifications.

**40.2** If, for reasons attributable to the Contractor, the minimum level of the Performance Standards specified in the corresponding Specifications are not met either in whole or in part, the Contractor shall at its cost and expense make such changes, modifications and/or additions to the Road or any part thereof as may be necessary to meet at least the minimum level of such Standards. The Contractor shall notify the E/I upon completion of the necessary changes, modifications and/or additions and shall request the E/I to repeat the Test or Inspection until the minimum level of the Standards has been met. If the Contractor eventually fails to meet the minimum level of Performance Standard, the E/I may consider termination of the Contract, pursuant to GC Clause 59.

**40.3** If, for reasons attributable to the Contractor, the Performance Standards relating to Initial Rectification, Minor improvement, Surface renewal, Construction of bridge/drainage /protection specified in the corresponding Specifications are not attained either in whole or in part, the Contractor shall, at the Contractor's choice, either

(a) make such changes, modifications and/or additions to the Works and Services or any part thereof that are necessary to attain the Performance Standards at its cost and expense, and shall request the E/I to repeat the Test, or

(b) pay liquidated damages to the E/I in respect of the Works and Services which fail to meet the Performance Standards in accordance with the provisions in the corresponding Specifications.

**40.4** The payment of liquidated damages under GC Sub-Clause 40.3, up to the limitation of liability specified in the PC, shall completely satisfy the Contractor's guarantees under GC Sub-Clause 40.1, and the Contractor shall have no further liability whatsoever to the E/I in respect thereof. Upon the payment of such liquidated damages by the Contractor, the E/I shall issue the Certificate of Completion for the Works or any part thereof in respect of which the liquidated damages have been so paid.

#### **41. Defect Liability**

**41.1** The Contractor warrants that the Works and Services or any part thereof shall be free from defects in the design, engineering, materials and workmanship of the Works and Services executed.

**41.2** Defects Liability Period, which begins from the completion of Initial Rectification, Minor improvement, Surface renewal, Construction of bridge/drainage /protection, road safety measures and tree plantation at the end of slope of road within Right of Way on the road alignment and ends 45 days after successful completion of the Operation & Management Services as specified in the contract. The Defects Liability Period shall be extended for as long as the Defects remain to be corrected.

If during the Defect Liability Period any defect should be found in the design, engineering, materials and workmanship of the Works and Services executed by the Contractor, the Contractor shall promptly, in consultation and agreement with the E/I regarding appropriate remedying of the defects, and at its cost, repair, replace or otherwise make good (as the Contractor shall, at its discretion, determine) such defect as well as any damage to the Road caused by such defect. The Contractor shall not be responsible for the repair, replacement or making good of any defect of any damage to the Road arising out of or resulting from improper **Operation & Management** of the Road by the E/I after taking over.

- 41.3** The Contractor's obligations under this GC Clause 41 shall not apply to
- (a) any works or materials that have a normal life shorter than the Defect Liability Period stated herein;
  - (b) any designs, specifications or other data designed, supplied or specified by or on behalf of the E/I or any matters for which the Contractor has disclaimed responsibility herein;
  - (c) any other materials supplied or any other work executed by or on behalf of the E/I, except for the work executed by the E/I under GC Sub-Clause 41.6.
- 41.4** The E/I shall give the Contractor a notice stating the nature of any such defect together with all available evidence thereof, promptly following the discovery thereof. The E/I shall afford all reasonable opportunity for the Contractor to inspect any such defect.
- 41.5** The E/I shall afford the Contractor all necessary access to the Site to enable the Contractor to perform its obligations under this GC Clause 41.
- 41.6** If the Contractor fails to commence the work necessary to remedy such defect or any damage to the Road caused by such defect within a reasonable time (which shall in no event be considered to be less than fifteen (15) days), the E/I may, following notice to the Contractor, proceed to do such work, and the reasonable costs incurred by the E/I in connection therewith shall be paid to the E/I by the Contractor or may be deducted by the E/I from any monies due the Contractor or claimed under the Performance Security. The decision of Engineer shall be final and binding on the contractor. ***The E/I shall be the final authority to decide the quantity and its estimation regarding remedy of defects under DLP.***
- 41.7** If the Road or any part thereof cannot be used by reason of such defect and/or making good of such defect, the Defect Liability Period of the Road or such part, as the case may be, shall be extended by a period equal to the period during which the Road or such part cannot be used because of any of the aforesaid reasons.
- 41.8** Except as provided in GC Clauses 40 and 41, the Contractor shall be under no liability whatsoever and howsoever arising, and whether under the Contract or at law, in respect of defects in the Road or any part thereof, the Plant and Equipment, design or engineering or work executed that appear after Completion of the Works and Services, except where such defects are the result of the gross negligence, fraud, criminal or wilful action of the Contractor.

**42.1 Except in cases of criminal negligence or willful misconduct,**

- (a) the Contractor shall not be liable to the E/I, whether in contract, tort, or otherwise, for any indirect or consequential loss or damage, loss of use, loss of production, or loss of profits or interest costs, provided that this exclusion shall not apply to any obligation of the Contractor to pay liquidated damages to the E/I and
- (b) the aggregate liability of the Contractor to the E/I, whether under the Contract, in tort or otherwise, shall not exceed the limit specified in the PC.

**42. Limitation of Liability**

- 43. Liability for Damages through Traffic Accidents and Traffic Interruptions**
- 43.1** The Contractor cannot be held liable for losses or damages of any kind arising out of traffic accidents on the roads included in the Contract, unless those traffic accidents have been caused directly by potholes or other major defects of the Road covered by the Contract he failed to repair in a timely manner, criminal acts, willful misconduct or gross negligence of the Contractor.
- 43.2** Under no circumstances can the Contractor be held liable for losses or damages of any kind and to anyone arising out of interruptions of traffic or traffic delays on the road included in the Contract, including any indirect or consequential loss or damage, loss of use, loss of production, or loss of profits or interest costs.

#### F. PAYMENT

- 44. Contract Price**
- 44.1** The Contract Price shall be as specified in the Form of Contract Agreement to be paid in the currencies indicated in the PC.
- 44.2** Unless indicated otherwise in the PC, and except in the event of a Change as provided for in the Contract, the **Contract Price** shall be:
- (a) For Initial Rectification, Minor improvement, Surface renewal, Construction of bridge/drainage /protection on the road alignment, to be paid against quantity of the work done according to work progress as indicated in PC;
  - (b) For **Operation & Management**, (carried out under output and performance) to be paid as indicated in PC;
- 44.3** The Contractor shall be deemed to have satisfied itself as to the correctness and sufficiency of the Contract Price, which shall, except as otherwise provided for in the Contract, cover all its obligations under the Contract.
- 45. Advance Payment**
- 45.1** On the request of the Contractor, the Employer will make the following advance payment to the Contractor against submission by the Contractor of an e-Bank Guarantee from a Nationalized/ scheduled within state of Bihar acceptable to the Employer in amounts equal to 110% (one hundred ten percent) of the amount of the advance payment being requested:
- (a) Mobilization advance up to 5% (five percent) of the initial contract price excluding the contract price for **Operation & Management**.
  - (b) Equipment Advance up to 90% (ninety percent) of the cost of the new equipment brought to the site, subject to a maximum of 10% ( ten percent) of the initial contract price excluding the contract price for **Operation & Management**.
- The guarantee shall remain effective until the advance payment has been repaid, but the amount of the guarantee shall be progressively reduced by the amounts repaid by the Contractor. Interest will not be charged on the advance payment. However, if the Contract is terminated due to default of the Contractor, the Mobilization Advance and the Equipment Advance shall be deemed to be an interest-bearing advance at the base rate of the State Bank of India, as application on the date of such advance payment. The e-Bank Guarantee of a joint venture shall be in the name of the joint venture.

- 45.2 The Contractor is to use the advance payment only to pay for Equipment, plant and Mobilization expenses required specifically for execution of the Works. The Contractor shall demonstrate that the advance payment has been used in this way by supplying copies of invoices or other documents to the E/I within 28 days of release of advance payment.
- 45.3 The advance payment shall be repaid by deducting proportionate amounts from payments otherwise due to the Contractor for the Initial Rectification, Minor improvement, Surface renewal, Construction of bridge/drainage /protection, following the schedule of completed percentages of the Works on a payment basis. No account shall be taken of the advance payment or its repayment in assessing valuations of work done, Variations, price adjustments, Compensation Events, or Liquidated damages.
- 46. Schedule of Prices**
- 46.1 The Schedule of Prices shall contain items for Groups of Activities which include the provision of **Operation & Management** (measured by performance standards) and Works. The Schedule of Prices for Works shall include, unit price for Initial Rectification, Minor improvement, Surface renewal, Construction of bridge/drainage /protection.
- 46.2 **Operation & Management** shall be measured and billed separately and will be remunerated as indicated in GC Clause 44.2.
- 46.3 Initial Rectification, Minor improvement, Surface renewal, Construction of bridge/drainage /protection will be remunerated against quantity of the work done according to work progress as indicated in GC Clause 44.2.
- 46.4 Minor Improvement Works will be remunerated after acceptance by the E/I and shall be paid according to the product unit price using the prices included in the Schedule of Prices.
- 46.5 Each Emergency Work Order issued by the E/I will be pursuant to GC Clauses 29 and 61 and will be prepared based on the Specifications and on the unit prices on the basis of input based method and on the Current SOR rate just before the execution of work.
- 46.6 The Schedule of Prices/**Bill of Quantities** is used to calculate the Contract Price.
- 47. Measurement**
- 47.1 **Operation & Management** will not be input based; however, its payment will be affected by compliance with the Performance Standards pursuant to GC Clause 24. **Operation & Management** shall be billed in fixed quarterly amounts as per the Schedule of Prices /**Bill of Quantities**. Payments will be made with Reductions if the Performance Standards are not achieved, as defined in the Specifications. The Reductions for non-compliance with the Performance Standards will be applied on a daily basis for the period under which the Road does not achieve the Performance Standards, in accordance with the methodology specified in the Specifications.



Initial Rectification, Minor improvement, Surface renewal, Construction of bridge/drainage /protection on the road alignment will be measured on the basis indicated in the PC, based on the quantity of actual work done as defined in the Specifications, concluded by the Contractor and approved by the E/I. The prices shall be those stated in the Schedule of Prices.

**47.2** Minor Improvement Works will be measured on the basis indicated in the PC and in accordance with the unit of measurement used for product unit price included in the Schedule of Prices. The prices shall be those stated in the Schedule of Prices.

**47.3** Emergency Works shall be billed in each specific Emergency Work as approved by the E/I.

**48. Price Adjustments**

**48.1** Contract payments shall be adjusted for increase or decrease in rates and prices in accordance with the principles and procedures and as per formula given in the Particular Conditions.

~~**48.2** To the extent that full compensation for any rise or fall in costs to the Contractor is not covered by the provisions of this or other clauses in the Contract, the rates and prices included in the Contract shall be deemed to include amounts to cover the contingency of such other rise and fall in costs.~~

**49. Monthly Statements and Payments**

**49.1** The Contractor shall submit to the E/I **monthly statements** in the format indicated in the Specifications, of the estimated value of

- (i) Operation & Management Services, and measured value of
- (ii) Initial Rectification, Minor improvement, Surface renewal, Construction of bridge/ drainage /protection, road safety measures and tree plantation at the end of slope of road within Right of Way in road alignment & measured value of
- (iii) Second time Surface Renewal

**49.2** The E/I shall check the Contractor's monthly statement and **certify within fourteen (14) days** the amount to be paid to the Contractor.

**49.3** The value of Services executed shall be certified by the E/I taking into account the quarterly amount included in the Schedule of Prices for **Operation and Management (O&M) Services** and the achievement of the Performance Standards for the **Operation and Management (O&M) Services** adjusted for any payment reductions in accordance with GC Sub-Clause 47.1.

**49.4** The value of Works executed shall be certified by the E/I taking into account the value of the quantities of products executed and the prices in the Schedule of Prices.

**49.5** The E/I may exclude any item certified in a previous certificate or reduce the proportion of any item previously certified in any certificate in the light of later information.

- 50. Payments**
- 50.1** Payments shall be adjusted for deductions for **advance payments, retention, and reductions** for not achieving Performance Standards for **Operation & Management Services**. The E/I shall pay the Contractor the amounts certified in accordance with GC Clause 49, **within seven (7) days of the date of each certificate positively.**
- 50.2** Unless otherwise stated, all payments and deductions will be paid or charged in the proportions of currencies comprising the Contract Price.
- 50.3** Items of the Works for which no rate or price has been entered in the Schedule of Prices will not be paid for by the E/I and shall be deemed covered by other rates and prices in the Contract.
- 51. Retention and Reductions**
- 51.1** The E/I shall retain the percentage indicated in the PC from each payment due to the Contractor for Initial Rectification, Minor improvement, Surface renewal, Construction of bridge/drainage /protection in road alignment except for the types of works specified in the PC. The regular quarterly payments for performance-based **Operation & Management Services**. will not be subject to retentions, unless indicated in the PC.
- 51.2** On completion of the Initial Rectification, Minor improvement, Surface renewal, Construction of bridge/drainage /protection in road alignment half the total amount retained shall be repaid to the Contractor and the other half after twelve (12) months have passed and the E/I has certified that all Defects notified to the Contractor have been corrected before the end of this period.
- ~~**51.3** On completion of the whole Works and Services, the Contractor may substitute retention money with an “on demand” Bank guarantee.~~
- 51.4** Reduction of quarterly payments for **Operation and Management (O&M) Services** due to non-compliance with the Service Levels will be made as indicated in GC Sub-Clause 47.1. The amount of Reduction for the days in which the Road was not complying with the Performance Standards will not be paid or repaid, even after the Contractor re-establishes the quality levels to the standards required by the contract.
- 52. Taxes and Duties**
- 52.1** Except as otherwise specifically provided in the Contract, the Contractor shall bear and pay all taxes, duties, levies and charges assessed on the Contractor, its Subcontractors or their employees by all municipal, state or national government authorities in connection with the Works and Services in and outside of the country where the Site is located.
- 52.2** If any tax exemptions, reductions, allowances or privileges may be available to the Contractor in the country where the Site is located, the E/I shall use its best endeavors to enable the Contractor to benefit from any such tax savings to the maximum allowable extent.

**52.3** For the purpose of the Contract, it is agreed that the Contract Price specified in the Form of Contract Agreement is based on the taxes, duties, levies and charges prevailing at the date twenty-eight (28) days prior to the date of bid submission in the country where the Site is located (hereinafter called “Tax”). If any rates of Tax are increased or decreased, a new Tax is introduced, an existing Tax is abolished, or any change in interpretation or application of any Tax occurs in the course of the performance of the Contract, which was or will be assessed on the Contractor, Subcontractors or their employees in connection with performance of the Contract, an equitable adjustment of the Contract Price shall be made to fully take into account any such change by addition to the Contract Price or deduction therefrom, as the case may be, in accordance with GC Clause 37 hereof.

## **53. Securities**

### **53.1 Issuance of Securities**

The Contractor shall provide the securities specified below in favour of the E/I at the times, and in the amount, manner and form specified below.

### **53.2 Advance Payment Security**

**53.2.1** The Contractor shall, within twenty-eight (28) days of the notification of contract award, provide a security in an amount equal to the advance payment calculated in accordance with the corresponding PC to the Contract Agreement.

**53.2.2** The security shall be in the form provided in the bidding documents or in another form acceptable to the E/I. The amount of the security shall be reduced in proportion to the value of the Works and Services executed by and paid to the Contractor from time to time, and shall automatically become null and void when the full amount of the advance payment has been recovered by the E/I. The security shall be returned to the Contractor immediately after its expiration.

### **53.3 Performance Security**

**53.3.1** The Contractor shall, within fifteen (15) days of the notification of contract award, provide a security for the due performance of the Contract in the amount specified in the PC.

**53.3.2** The security shall be in one of the forms of guarantees provided in the bidding documents, as stipulated by the E/I in the PC.

**53.3.3** The security shall automatically become null and void, twelve (12) months after Completion of all Works and Services under the Contract, provided however, that if the Defects Liability Period has been extended on any part of the Works pursuant to GC Sub-Clause 41.8 hereof, the Contractor shall submit an additional security in an amount proportionate to the Contract Price of that part. The security shall be returned to the Contractor immediately after its expiration.

- 54. Certificate of Completion**      **54.1** The Contractor shall request the E/I to issue a Certificate of Completion of **Initial Rectification, Minor improvement, Surface renewal, Construction of bridge/drainage /protection on the road alignment** and Emergency Works, or parts thereof, as applicable, and the E/I will do so upon deciding that the work is completed.
- 55. Final Statement**      **55.1** The Contractor shall supply the E/I with a detailed account of the total amount that the Contractor considers payable under the Contract before the end of the Defects Liability Period. The E/I shall issue a Defects Liability Certificate and certify any final payment that is due to the Contractor within fifty-six (56) days of receiving the Contractor’s account if it is correct and complete. If it is not, the E/I shall issue within fifty-six (56) days a schedule that states the scope of the corrections or additions that are necessary. If the Final Account is still unsatisfactory after it has been resubmitted, the E/I shall decide on the amount payable to the Contractor and issue a payment certificate.
- 56. Discharge**      **56.1** Upon submission of the Final Statement, the Contractor shall give to the E/I, a written discharge confirming that the total of the Final Statement represents full and final settlement of all monies due to the Contractor arising out of or in respect of the Contract. Provided that such discharge shall become effective only after payment due under the Final Payment Certificate issued pursuant to Sub-Clause 55 has been made and the performance security referred to in Sub-Clause 53.3, if any, has been returned to the Contractor.
- 57. AsBuilt Drawings and Manuals**      **57.1** If “as built” Drawings and/or manuals are required, the Contractor shall supply them by the dates stated in the PC.
- 57.2** If the Contractor does not supply the Drawings and/or manuals by the dates stated in the PC, or they do not receive the E/I’s approval, the E/I shall withhold the amount stated in the PC from payments due to the Contractor.

#### **G. REMEDIES**

- 58. Suspension** **58.1** The E/I may request by notice to the Contractor, to suspend performance of any or all of its obligations under the Contract. Such notice shall specify the obligation of which performance is to be suspended, the effective date of the suspension and the reasons therefore. The Contractor shall there upon suspend performance of such obligation (except those obligations necessary for the care or preservation of the Site and Works) until ordered in writing to resume such performance by the E/I.

If, by virtue of a suspension order given by the E/I, other than by reason of the Contractor's default or breach of the Contract, the Contractor's performance of any of its obligations is suspended for an aggregate period of more than ninety (90) days, then at any time thereafter and provided that at that time such performance is still suspended, the Contractor may give a notice to the E/I that the E/I shall, within twenty-eight (28) days of receipt of the notice, order the resumption of such performance or request and subsequently order a change in accordance with GC Sub-Clause 63.1, excluding the performance of the suspended obligations from the Contract.

If the E/I fails to do so within such period, the Contractor may, by a further notice to the E/I, elect to treat the suspension as termination of the Contract under GC Sub-Clause 59.1.

**58.2 If**

- (a) the E/I has failed to pay the Contractor any sum due under the Contract within the specified period, has failed to approve any invoice or supporting documents without just cause pursuant to the Contract, or commits a substantial breach of the Contract, the Contractor may give a notice to the E/I that requires payment of such sum, with interest thereon as stipulated in GC Sub-Clause 50.1, requires approval of such invoice or supporting documents, or specifies the breach and requires the E/I to remedy the same, as the case may be. If the E/I fails to pay such sum together with such interest, if fails to approve such invoice or supporting documents or give its reasons for withholding such approval, or fails to remedy the breach or take steps to remedy the breach within fourteen (14) days after receipt of the Contractor's notice; or
- (b) the Contractor is unable to carry out any of its obligations under the Contract for any reason attributable to the E/I, including but not limited to the E/I's failure to provide possession of or access to the Site, or failure to obtain any governmental permit under the E/I's responsibility and necessary for the execution and/or completion of the Works and Services,

Then the Contractor may by fourteen (14) days' notice to the E/I suspend performance of all or any of its obligations under the Contract, or reduce the rate of progress.

**58.3** If the Contractor's performance of its obligations is suspended or the rate of progress is reduced pursuant to this GC Clause 58, then the Time for Completion shall be extended in accordance with GC Sub-Clause 64, and any and all additional costs or expenses incurred by the Contractor as a result of such suspension or reduction shall be paid by the E/I to the Contractor in addition to the Contract Price, except in the case of suspension order or reduction in the rate of progress by reason of the Contractor's default or breach of the Contract.

**58.4** During the period of suspension, the Contractor shall not remove from the Site any Plant and Equipment or any Contractor's Equipment, without the prior written consent of the E/I.

**59. Termination**

**59.1.1** The E/I may terminate the Contract if the Contractor causes a fundamental breach of the Contract.

**59.1.2** Fundamental breaches of Contract shall include, but shall not be limited to, the following:

- (a) the Contractor stops work for 28 days when no stoppage of work is shown on the current Programme and the stoppage has not been authorized by the Engineer;
  - (b) the Contractor is declared as bankrupt or goes into liquidation other than for approved reconstruction or amalgamation;
  - (c) the Engineer gives Notice that failure to correct a particular Defect is a fundamental breach of Contract and the Contractor fails to correct it within a reasonable period of time determined by the Engineer;
  - (d) the Contractor does not maintain a Security, which is required;
  - (e) the Contractor has delayed the completion of the Works by the number of days for which the maximum amount of liquidated damages can be paid, as defined in clause 40.4;
  - (f) the Contractor fails to provide insurance cover as required under clause 35;
  - (g) if the Contractor, in the judgement of the E/I, has engaged in the corrupt or fraudulent practice in competing for or in executing the Contract. For the purpose of this clause, "corrupt practice" means the offering, giving, receiving, or soliciting of anything of value to influence the action of a public official in the procurement process or in Contract execution. "Fraudulent Practice" means a misrepresentation of facts in order to influence a procurement process or the execution of a contract to the detriment of the E/I and includes collusive practice among Bidders (prior to or after bid submission) designed to establish bid process at artificial non-competitive levels and to deprive the E/I of the benefits of free and open competition.
  - (h) if the Contractor has not completed at least thirty percent of the value of Initial Rectification, Minor improvement, Surface renewal, Construction of bridge/drainage /protection in the road alignment required to be completed after half of the completion period has elapsed;
  - (i) If the contractor fails to deploy machinery and equipment or personnel as specified in the PC at the appropriate time.;and
  - (j) any other fundamental breaches as specified in the PC.
- 59.1.3** *Notwithstanding the above, the E/I may terminate the Contract for convenience.*
- 59.1.4** If the Contract is terminated, the Contractor shall stop work immediately, make the Site safe and secure, and leave the Site as soon as reasonably possible.

## **59.2 Payment upon Termination**

**59.2.1** If the Contract is terminated because of a fundamental breach of Contract by the Contractor, the Engineer shall issue a certificate for value of the work done and Materials ordered, less liquidated damages, if any, less advance payments received up to the date of the issue of the certificate and less the percentage to apply to the value of the work not completed, as indicated in the PC. If the total amount due to the E/I exceeds any payment due to the Contractor, the difference shall be recovered from the security deposit, and performance security. If any amount is still left un-recovered it will be recovered from any dues payable to the contractor from any State Govt. works including State Public Sector works executed by the Contractor.

**59.2.2** If the Contract is terminated at the E/I's convenience, the Engineer shall issue a certificate for the value of the work done, the reasonable cost of removal of Equipment, repatriation of the Contractor's personnel employed solely on the Works, and the Contractor's costs of protecting and securing the Works and less advance payments received up to the date of the certificate, less other recoveries due in terms of the Contract, and less taxes due to be deducted at source as per applicable law.

## **H. PROVISIONAL SUM**

### **60. Provisional Sum**

**60.1** “Provisional Sum” means a sum included in the Contract for use when authorized by the E/I for Emergency Works and for contingencies, which sum may be used, in whole or in part, or not at all, on the instructions of the E/I. The Contractor shall be entitled to only such amounts in respect of the work, supply or contingencies to which such Provisional Sums relate as the E/I shall determine in accordance with this Clause.

### **61. Use of Provisional Sum for Emergency Works**

**61.1** After detecting a situation which in the opinion of the Contractor justifies the execution of Emergency Works or otherwise as defined in GC Clause 29, the Contractor shall submit a Technical Report to the E/I characterizing the situation. The emergency work shall be executed as per specification on the basis of Current SOR just before execution of the work if the rates of any item are not included in the contract.

**61.2** If the execution of the Emergency Works requires any activity not priced in the Schedule of Prices, the Contractor will use the price breakdowns included in the Contractor's Bid in order to form the unit prices of the unpriced items to be including in the Price Quotation of the Emergency Works, all in accordance with agreed methodology for approving new prices.

**61.3** Upon receiving the request for Emergency Works including a Price estimate based on clause 61.1 & 61.2 the E/I may issue a Work Order in accordance with GC Sub-Clause 29.2 for execution of the Emergency Works with a payment Schedule agreed with the Contractor. The cost of these Works will be covered by the amounts included in the Provisional Sum.

- 62. Use of Provisional Sum for Contingencies**      **62.1** The use of the Provisional Sum to cover for Contingencies will be done under the control and initiative of the E/I in accordance with the conditions of the Contract.

### **I. CHANGE IN CONTRACT ELEMENTS**

- 63. Change in Assignments to Contractor**      **63.1 Introducing a Change**
- 63.1.1** If so indicated in the PC, the E/I shall have the right to propose, and subsequently require, that the he order the Contractor from time to time during the performance of the Contract to make any change, modification, addition or deletion to, in or from the Assignments to the Contractor (hereinafter called “Change”), provided that such Change falls within the general scope of the Assignment and does not constitute unrelated work and that it is technically practicable, taking into account both the state of advancement of the Works and Services and the technical compatibility of the Change envisaged with the nature of the Works and Services as specified in the Contract.
- 63.1.2** If so, indicated in the PC, the Contractor may from time to time during its performance of the Contract propose to the E/I any Change that the Contractor considers necessary or desirable to improve the quality, efficiency or safety of the Works and Services. The E/I may at its discretion approve or reject any Change proposed by the Contractor.
- 63.1.3** Notwithstanding GC Sub-Clauses 63.1.1 and 63.1.2, no change made necessary because of any default of the Contractor in the performance of its obligations under the Contract shall be deemed to be a Change, and such change shall not result in any adjustment of the Contract Price or the Time for Completion.
- 63.1.4** The procedure on how to proceed with and execute Changes is specified in GC Sub-Clauses 63.2 and 63.3, further details and sample forms are provided in the Sample Forms and Procedures section in the bidding documents.
- 63.2 Changes Originating from E/I**
- 63.2.1** If the E/I proposes a Change pursuant to GC Sub-Clause 63.1.1, it shall send to the Contractor a “Request for change Proposal,” requiring the Contractor to prepare and furnish to the E/I, as soon as reasonably practicable, a “Change Proposal,” which shall include the following:
- (a) Brief description of the Change
  - (b) Effect on the Time for Completion
  - (c) Estimated cost of the Change
  - (d) Effect on Functional Guarantees (if any)
  - (e) Effect on any other provision of the Contract



**63.2.2** Prior to preparing and submitting the “Change Proposal,” the Contractor shall submit to the E/I an “Estimate for Change Proposal,” which shall be an estimate of the cost of preparing and submitting the Change Proposal.

Upon receipt of the Contractor’s Estimate for Change Proposal, the E/I shall do one of the following:

- (a) accept the Contractor’s estimate with instructions to the Contractor to proceed with the preparation of the Change Proposal,
- (b) advise the Contractor of any part of its Estimate for Change Proposal that is unacceptable and request the Contractor to review its estimate,
- (c) advise the Contractor that the E/I does not intend to proceed with the Change.

**63.2.3** Upon receipt of the E/I’s instruction to proceed under GC Sub-Clause 63.2.2 (a), the Contractor shall, with proper expedition, proceed with the preparation of the Change Proposal, in accordance with GC Sub-Clause 63.2.1.

**63.2.4** The pricing of any Change shall, as far as practicable, be calculated in accordance with the rates and prices included in the Contract. If such rates and prices are inequitable, the parties thereto shall agree on specific rates for the valuation of the Change.

~~**63.2.5** If before or during the preparation of the Change Proposal it becomes apparent that the aggregate effect of compliance therewith, and with all other Change Orders that have already become binding upon the Contractor under this GC Clause 63, would be to increase or decrease the Contract Price as originally set forth in the Contract Agreement by more than fifteen percent (15%), the Contractor may give a written notice of objection thereto prior to furnishing the Change Proposal as aforesaid. If the E/I accepts the Contractor’s objection, the E/I shall withdraw the proposed Change and shall notify the Contractor in writing thereof.~~

~~The Contractor’s failure to so object shall neither affect its right to object to any subsequent requested Changes or Change Orders herein, nor affect its right to take into account, when making such subsequent objection, the percentage increase or decrease in the Contract Price that any Change not objected to by the Contractor represents.~~

**63.2.6** Upon receipt of the Change Proposal, the E/I and the Contractor shall mutually agree upon all matters therein contained. Within fourteen (14) days after such agreement, the E/I shall, if it intends to proceed with the Change, issue the Contractor with a ChangeOrder.

If the E/I is unable to reach a decision within fourteen(14) days, it shall notify the Contractor with details of when the Contractor can expect a decision.

If the E/I decides not to proceed with the Change for whatever reason, it shall, within the said period of fourteen (14) days, notify the Contractor accordingly. ~~Under such circumstances, the Contractor shall be entitled to reimbursement of all costs reasonably incurred by it in the preparation of the Change Proposal, provided that these do not exceed the amount given by the Contractor in its Estimate for Change Proposal submitted in accordance with GC Sub-Clause 63.2.2.~~

**63.2.7** If the E/I and the Contractor cannot reach agreement on the price for the Change, an equitable adjustment to the Time for Completion, or any other matters identified in the Change Proposal, the E/I may nevertheless instruct the Contractor to proceed with the Change by issue of a “Pending Agreement ChangeOrder.”

Upon receipt of a Pending Agreement Change Order, the Contractor shall immediately proceed with effecting the Changes covered by such Order. The parties shall thereafter attempt to reach agreement on the outstanding issues under the ChangeProposal.

If the parties cannot reach agreement within sixty (60) days from the date of issue of the Pending Agreement Change Order, then the matter may be referred to the Empowered Standing Committee in accordance with the provisions of GC Sub-Clause 6.1.

### **63.3 Changes Originating from Contractor**

**63.3.1** If the Contractor proposes a Change pursuant to GC Sub-Clause 63.1.2, the Contractor shall submit to the E/I a written “Application for Change Proposal,” giving reasons for the proposed Change and including the information specified in GC Sub-Clause 63.2.1.

Upon receipt of the Application for Change Proposal, the parties shall follow the procedures outlined in GC Sub-Clauses 63.2.6 and 63.2.7. However, should the E/I choose not to proceed, the Contractor shall not be entitled to recover the costs of preparing the Application for ChangeProposal.

**64. Extension  
Time for  
Completion**

**64.1** The Time(s) for Completion specified in the PC shall be extended if the Contractor is delayed or impeded in the performance of any of its obligations under the Contract by reason of any of the following:

- (a) any Change in the Works and Services as provided in GC Clause 63,
- (b) any occurrence of Force Majeure as provided in GC Clause 38 and unforeseen conditions as provided in GC Clause 36,
- (c) any suspension order given by the E/I under GC Clause 58,
- (d) any changes in laws and regulations as provided in GC Clause 37, or
- (e) any default or breach of the Contract by the E/I, or any activity, act or omission of any other contractors employed by the E/I, or
- (f) any other matter specifically mentioned in the Contract

by such period as shall be fair and reasonable in all the circumstances and as shall fairly reflect the delay or impediment sustained by the Contractor.

**64.2** Except where otherwise specifically provided in the Contract, the Contractor shall submit to the E/I a notice of a claim for an extension of the Time for Completion, together with particulars of the event or circumstance justifying such extension as soon as reasonably practicable after the commencement of such event or circumstance. As soon as reasonably practicable after receipt of such notice and supporting particulars of the claim, the E/I and the Contractor shall agree upon the period of such extension. In the event that the Contractor does not accept the E/I's estimate of a fair and reasonable time extension, the Contractor shall be entitled to refer the matter to a Empowered Standing Committee, pursuant to GC Sub- Clause 6.1.

**64.3** The Contractor shall at all times use its reasonable efforts to minimize any delay in the performance of its obligations under the Contract.

**65. Release from  
Performance**

**65.1** If the Contract is frustrated by the outbreak of war or by any other event entirely outside the control of either the E/I or the Contractor, the E/I shall certify that the Contract has been frustrated. The Contractor shall make the Site safe and stop work as quickly as possible after receiving this certificate and shall be paid for all work carried out before receiving it and for any work carried out afterwards to which a commitment was made.

**66. Inspections  
and Audits**

**66.1** The Contractor shall permit the E/I and/or persons appointed by the E/I to inspect the Site and/or the accounts and records of the Contractor and its sub-contractors relating to the performance of the Contract, and to have such accounts and records audited by auditors appointed by the E/I if required by the E/I. The Contractor's attention is drawn to Sub-Clause 67.1 [Corrupt or Fraudulent Practices] which provides, inter alia, that acts intended to materially impede the exercise of the E/I's inspection and audit rights provided for under Clause 66 constitute a prohibited practice subject to contract termination (as well as to a determination of ineligibility under the Procurement Guidelines).

**67. Corruptor  
Fraudulent  
Practices**

**67.1** If the E/I determines that the Contractor has engaged in corrupt, fraudulent, collusive, coercive or obstructive practices, in competing for or in executing the Contract, then the E/I may, after giving 14 days' notice to the Contractor, terminate the Contractor's employment under the Contract and expel him from the Site, and the provisions of Clause 59 shall apply.

**67.2** Should any employee of the Contractor be determined to have engaged in corrupt, fraudulent, collusive, coercive, or obstructive practice during the execution of the Works, then that employee shall be removed in accordance with Clause 19.3.

**67.3 For the purposes of this Sub-Clause:**

**(i)** “corrupt practice” is the offering, giving, receiving or soliciting, directly or indirectly, of anything of value to influence improperly the actions of another party

**(ii)** “fraudulent practice” is any act or omission, including a misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain a financial or other benefit or to avoid an obligation;

**(iii)** “collusive practice” is an arrangement between two or more parties designed to achieve an improper purpose, including to influence improperly the actions of another party;

**(iv)** “coercive practice” is impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of the party to influence improperly the actions of a party;

**(v)** “obstructive practice” is

**(va)** deliberately destroying, falsifying, altering or concealing of evidence material to the investigation or making false statements to investigators in order to materially impede a E/I investigation into allegations of a corrupt, fraudulent, coercive or collusive practice; and/or threatening, harassing or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation; or

**(vb)** acts intended to materially impede the exercise of the Bank's inspection and audit rights provided for under Clause 66 [Inspections and Audits].

**SECTION VII**

**PARTICULAR CONDITIONS (PC)**

## Section VII. Particular Conditions(PC)

The following Particular Conditions shall supplement the GC. They are to be completed by the E/I and presented as part of the Bidding Documents. Whenever there is a conflict, the provisions herein shall prevail over those in the GC.

### Reference to GC clauses

<b>1.</b>	Defects Liability Period, which begins <b>from the completion</b> of Initial Rectification, Minor improvement, Surface renewal, Construction of bridge/drainage /protection , road safety measures and tree plantation at the end of slope of road within Right of Way on the road alignment and ends <b>45 days after successful completion of the Operation &amp; Management Services as specified in the contract.</b>
	<b>The Employer</b> is: Engineer-in-chief-cum- Additional Commissioner-cum-Special Secretary/ Engineer-in-chief, Rural Works Department, Bihar, Patna.
	<b>The site</b> is the area encompasses ROW of the Rural Roads in Packages. <b>The Start Date</b> shall be the date of agreement.
	<b>The Intended Completion Date for the whole of the Works and Services is 7 years from the start date.</b>
	<b>The name of the E/I:</b> Executive Engineer of concerned Works Division.
	For Rapid Response of Operation and Management Services each bidder must have a <b>Rapid Road Repair Vehicle.</b>
<b>3.</b>	<p>1. The following documents are also part of the Contract: <b>Appendices</b></p> <p>2. Addendum issued (if any) during bidding process shall be between contractor's bid and Particular Condition.</p> <p>3. Any other document forming part of the agreement will be placed below serial number 9.</p>
<b>4.</b>	The language of the Contract is English/Hindi <b>and</b> the law governing the Contract is the law of the Union of India.
<b>5.</b>	<p>The address of the <b>E/I</b> is:  <b>Address:</b> .....  <b>Telephone and fax numbers:</b> .....  <b>Mobile No.</b>.....  <b>E-Mail address:</b> .....</p> <p>The address of the <b>Contractor</b> is:  <b>Address:</b> .....  <b>Telephone and fax numbers:</b> .....  <b>Mobile No.</b>.....  <b>E-Mail address:</b> .....</p>
<b>6.1.1</b>	Chief Engineer Maintenance and Upgradation.

10.2	Time Schedule: -					
	Sl.no.	Status of Road	Major Activity	Duration (months)		
10.2	1	Pavement is available as per specified traffic condition but currently Surface is damaged less or equal to 50%.	Initial Rectification <b>without Surface Renewal, First time Surface Renewal, Second time Surface Renewal, Operation &amp; Management Services as per BOQ.</b>	(i)	Initial Rectification <b>without Surface Renewal.</b>	06
				(ii)	Operation & Management Services.	06
				(iii)	First time Surface Renewal.	03
				(iv)	Operation & Management Services.	45
				(v)	Second time Surface Renewal.	03
				(vi)	Operation & Management Services.	21
					<b>Total</b>	<b>84</b>
	2	Pavement is available as per prescribed traffic condition but currently Surface is damaged more than 50%.	Initial Rectification with Surface Renewal, <b>Second time Surface Renewal, Operation &amp; Management Services as per BOQ.</b>	(i)	Initial Rectification with Surface Renewal.	09
				(ii)	Operation & Management Services.	51
				(iii)	Second time Surface Renewal.	03
				(iv)	Operation & Management Services.	21
					<b>Total</b>	<b>84</b>
	3	Pavement thickness and wideness are less than required specified traffic condition.	Initial Rectification, Minor improvement (including Strengthening/widening) with <b>Surface Renewal, Second time Surface Renewal, Operation &amp; Management Services as per BOQ.</b>	(i)	Initial Rectification, <b>Minor improvement (including Strengthening/widening) with Surface Renewal.</b>	12
				(ii)	Operation & Management Services.	48
				(iii)	Second time Surface Renewal.	03
				(iv)	Operation & Management Services.	21
	11.4	“The Contractor shall comply with all laws in force in the country of the E/I and where the Works and Services are carried out” will be read as “The Contractor shall comply with all laws in force in”.				
	12.1	The Contractor is allowed to subcontract (only to those contractors who are domicile of Bihar) the following activities: <i>25% of whole work except O&amp;M Services.</i>				
	12.2	Remove GC Clause 12.2				
14.2	Remove GC Clause 14.2					
14.3	Remove GC Clause 14.3					
18.2.1	The Contractor shall commission the equipment [as described in Bid data sheet of [ITB 4.4 B (b) (i)] at site within 14 days of execution of agreement.					

<b>19.1</b>	The Contractor shall deploy Key personnel [as described in Bid data sheet of [ITB 4.4 B (b) (ii)] at site within 14 days of execution of agreement.
<b>21.1</b>	The Contractor shall carry out the Initial Rectification, Minor improvement Works (including strengthening/widening), Surface renewal, Construction of bridge/drainage /protection, road safety measures and tree plantation at the end of slope of road within Right of Way as per BOQ/Specifications/contract document.
<b>22.1</b>	The Contractor shall carry out the Minor improvement Works (including strengthening/widening) as per BOQ/Specifications.
<b>22.2</b>	Minor improvement Works shall be done as per BOQ/Specifications/ contract document. There is no need to issue separate Work Order for Minor improvement Works by Engineer-in-charge.
<b>25.2</b>	The Contractor shall establish a Self-Control Unit
<b>39.1</b>	<b>Time for Completion for whole of the Works and Services is 7 years (84 months) from the Agreement date.</b> <b>The Time for Completion are the following: -</b>

Sl. no.	Status of Road	Major Activity	Duration (months)			Milestone
1	Pavement is available as per specified traffic condition but currently Surface is damaged less or equal to 50%.	Initial Rectification without Surface Renewal, First time Surface Renewal, Second time Surface Renewal, Operation & Management Services as per BOQ.	(i)	Initial Rectification without Surface Renewal.	06	
			(ii)	Operation & Management Services	06	
			(iii)	First time Surface Renewal	03	Milestone 1 (at the end of 15 months from the Agreement date)
			(iv)	Operation & Management Services	45	Milestone 2 (at the end of 63 months from the Agreement date)
			(v)	Second time Surface Renewal	03	
			(vi)	Operation & Management Services	21	
					<b>Total</b>	<b>84</b>



Sl.no.	Status of Road	Major Activity	Duration (months)			Milestone
2	Pavement is available as per prescribed traffic condition but currently Surface is damaged more than 50%.	Initial Rectification with Surface Renewal, <b>Second time Surface Renewal</b> , Operation & Management Services as per <b>BOQ</b> .	(i)	Initial Rectification with Surface Renewal.	09	Milestone 1 (at the end of <b>09 months from the Agreement date</b> )
			(ii)	Operation & Management Services	51	
			(iii)	<b>Second time Surface Renewal</b>	03	Milestone 2 (at the end of <b>63 months from the Agreement date</b> )
			(iv)	Operation & Management Services	21	
			<b>Total</b>			<b>84</b>
Sl.no.	Status of Road	Major Activity	Duration (months)			Milestone
3	Pavement thickness and wideness are less than required specified traffic condition.	Initial Rectification, Minor improvement (including Strengthening/widening) with <b>Surface Renewal, Second time Surface Renewal</b> , Operation & Management Services as per <b>BOQ</b> .	(i)	Initial Rectification, Minor improvement (including Strengthening/widening) with <b>Surface Renewal</b>	12	Milestone 1 (at the end of <b>12 months from the Agreement date</b> )
			(ii)	Operation & Management Services	48	
			(iii)	<b>Second time Surface Renewal</b>	03	Milestone 2 (at the end of <b>63 months from the Agreement date</b> )
			(iv)	Operation & Management Services	21	
			<b>Total</b>			<b>84</b>

<b>39.3</b>	<p>For Initial Rectification, Minor improvement, Surface renewal, Construction of bridge/drainage /protection on road alignment (<b>Milestone 1</b>) the liquidated damages shall be <b>1% of Initial Rectification, Minor improvement, Surface renewal, Construction of bridge/drainage /protection, road safety measures and tree plantation at the end of slope of road within Right of Way on the road alignment Contract Price, rounded off to the nearest thousand, per week</b>. Maximum limit of Liquidated Damages will be 10 percent of Initial Rectification, Minor improvement, Surface renewal, Construction of bridge/drainage /protection on the road alignment Contract Price.</p> <hr/> <p><b>For Second time Surface renewal (Milestone 2)</b> the liquidated damages shall be <b>0.5% of Second time Surface renewal Contract Price, rounded off to the nearest thousand, per week</b>. Maximum limit of Liquidated Damages will be <b>10%</b> of <b>Second time Surface renewal</b> on the road alignment Contract Price.</p>
<b>40.3</b>	<p>For non-compliance with the performance Standards on <b>road roughness</b> at the measurement in accordance to Clause 40.3, the Contractor can either</p> <p>(a) correct the non-compliance at his own cost for retesting within the timeframe agreed with the Engineer or</p> <p>(b) pay Liquidated Damages for non-complying sections at <b>Rs 1000 per 200m road section for calendar day</b> of non-compliance. In the event that the Contractor agrees to correct the non-compliance but fails to do so in the agreed timeframe, Liquidated Damages shall be imposed.</p>

40.4	The maximum amount of Liquidated Damages shall be not <b>more than 10%</b> of the value of (Initial Rectification, Minor improvement, Surface renewal, Construction of bridge/drainage /protection), <b>Second time Surface renewal</b> respectively.
41.6	The Defect also includes the work identified to be executed to bring the roads service below intervention criteria.
42.1	The aggregate liability of the Contractor to the E/I, excluding payment reductions defined in GC 47.1, shall not exceed the amount of <b>twenty (20) percent</b> of contract amount
44.1	The payment of the Contract Price will be made in the following currencies: <b>Indian Rupees</b>
44.2 (a)	Contract Price shall be for Work (Initial Rectification, Minor improvement, Surface renewal, Construction of bridge/drainage /protection) on road alignment. Payment shall be done as per measured quantity indicated in the MB on compliance as per specification and specified service level.
44.2(b)	Contract Price shall be for <b>Services(Operation &amp; Management)</b> . Payment for the <b>Operation &amp; Management</b> shall done quarterly (1/24 <sup>th</sup> of total 72 months) from the completion date of Initial Rectification, Minor improvement, Surface renewal, Construction of bridge/drainage /protection , road safety measures and tree plantation at the end of slope of road within Right of Way on the road alignment on compliance as per specification and specified service level.
46.2	Payment for the <b>Operation &amp; Management</b> shall done quarterly (1/24 <sup>th</sup> of total 72 months) from the completion date of Initial Rectification, Minor improvement, Surface renewal, Construction of bridge/drainage /protection , road safety measures and tree plantation on the road alignment. The monthly Installments will be determined by dividing the quoted amount for the <b>Operation &amp; Management</b> by 72 months. The installments are subject to deductions for work not under taken or not under taken to the specified service level and response time.
46.3	Payment for Work (Initial Rectification, Minor improvement, Surface renewal, Construction of bridge/drainage /protection , road safety measures and tree plantation) done as per measured quantity indicated in the MB and on compliance as per specification and specified service level.
46.4	In case Pavement thickness and wideness are less than required specified traffic condition. Minor improvement (including Strengthening/widening) is done after <b>Initial Rectification, and before Surface renewal work. Minor improvement Works shall be done as per BOQ/Specifications/ contract document. There is no need to issue separate Work Order for Minor improvement Works by Engineer-in-charge.</b>
47.1	The <b>Operation &amp; Management</b> Services will be carried out under output and performance based for which the payment will be done quarterly subject to deductions for work not under taken or not under taken to the specified service level and response time.
47.2	<b>Initial Rectification, Minor improvement, Surface renewal, Construction of bridge/drainage /protection , road safety measures and tree plantation at the end of slope of road within Right of Way on the road alignment</b> will be measured on the basis of actual quantities of items completed as certified by the Engineer-in-charge.

<p><b>48.</b></p>	<p><b>Price Adjustments shall be made on the following basis: -</b></p> <p>(a) Price Adjustment shall apply Only for <b>Surface renewal (For second time Bituminous work)</b>.</p> <p>(b) Price adjustment shall not be applied to work valued on the basis of Current Cost/ current prices/Current SOR.</p> <p>(c) Payment Certificates shall be adjusted for increase or decrease in cost of Labour, Materials, Fuels and, Local Materials in accordance with the formulae given below:  <b>Surface renewal</b>(As per Work done)  <math display="block">B_n = a + b \times WPI_n / WPI_o + c \times B_i_n / B_i_o + e \times L_n / L_o + f \times F_n / F_o</math> Where:  “B<sub>n</sub>” is the adjustment multipliers to be applied to the value of the work carried out in month number “n”, for <b>Surface renewal</b>  ”a” is a fixed coefficient, representing the non-adjustable portion in contractual payments;  “b”, “c”, “e” and “f” are coefficients representing the estimated proportion of each cost element related to the execution of the Works (i.e. WPI, bitumen, labour, and fuel).  The value of coefficients is as below:-  Where a = 15 % - Non adjustable portion of payments  b = 15 % - WPI  c = 45% - Bitumen  e = 15% - Labour  f = 15% - Fuel  “L<sub>n</sub>”, “B<sub>i</sub>”, “F<sub>n</sub>” and “WPI<sub>n</sub>” are the prevailing indices for reference prices for Labour, Bitumen, Fuel and Wholesale Price Index respectively for the period “n” on the day 28 days prior to the last day of the period being invoiced.  L<sub>o</sub>, B<sub>io</sub>, F<sub>o</sub> and WPI<sub>o</sub> are the base cost indices or references prices for labour, Bitumen, Fuel and wholesale price index respectively and shall be the indices prevailing 28 days before bid opening.  The intended sources of indices detailed above shall be outlined below, if the source for any of indices is in doubt, it shall be determine by the Engineers in charge.  Labour(L) - Consumer price index for industrial workers for Jamalpur centre as published by labour Bureau, Ministry of Labour, Govt of India, New Delhi.  Bitumen (Bi) - Official retail price of Bitumen at the local Barauni.  Fuel (F) - Official retail price of High speed diesel (HSD) at the existing consumer pumps of BPCL/IOCL/HPCL at divisional Head quarter town of the concerned RWD Division.  WPI - All India Wholesale price index (All Commodities) as published by the office of the Economic adviser to the Govt of India, Ministry of Commerce and Industry.  Total amount payable to the contractor = B<sub>n</sub> X R  The Value of R (Running Payment) Shall be exclusive of Seigniorage, Labour Cess, GST and other taxes.</p> <ul style="list-style-type: none"> <li>• Payment not subject to Price Escalation</li> <li>• Payment made to the contractor in respect of the following item will not be adjusted in accordance with Price Escalation.</li> </ul> <p>(a) Variations ordered by Engineer in Charge.  (b) Payment made in regard to return of retention money or security deposit.</p>
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50.	The E/I shall pay the Contractor the amounts certified in accordance with GC Clause 49, within seven (21) days of the date of each monthly statement submitted by Contractor.
51.1	The retention for all Works other than O&M Services is fixed at 5%.
51.2	<p>51.2 (a) After 6 months upon issuing certificate of completion for <b>Initial Rectification, Minor improvement, First Surface renewal, Construction of bridge/drainage /protection</b>, 20% of the amount retained under <b>Initial Rectification, Minor improvement, First Surface renewal, Construction of bridge/drainage /protection, road safety measures and tree plantation</b> shall be repaid to the contractor and other 30% after twenty-four (24) months have passed since completion of all <b>Initial Rectification, Minor improvement, First Surface renewal, Construction of bridge/drainage /protection road safety measures and tree plantation</b> activities and the E/I has certified that all defects notified to the Contractor have been corrected. On completion of <b>Initial Rectification, Minor improvement, First Surface renewal, Construction of bridge/drainage /protection</b> works <b>road safety measures and tree plantation</b>, the contractor may substitute balance 50% of the retention money with an “on demand” e-Bank Guarantee of Nationalized/Scheduled Bank with in the state of Bihar. Last 50% shall be refunded after completion of 7 years and 45 days of Contract adjusting any dues to be paid by Contractor.</p> <p>51.2 (b) On completion of <b>Second Surface renewal</b> work, 20% of the amount retained under <b>Second Surface renewal</b> work shall be repaid to the contractor and other 30% after twelve (12) months have passed since completion of all <b>Second Surface renewal</b> activities and the E/I has certified that all defects notified to the Contractor have been corrected. On completion of <b>Second Surface renewal</b> works the contractor may substitute balance 50% of the retention money with an “on demand” e-Bank Guarantee of Nationalized/Scheduled Bank with in the state of Bihar. Last 50% shall be refunded after completion of 7 years and 45 days of Contract adjusting any dues to be paid by Contractor.</p>
51.3	<i>GC Clause 51.3 may be deleted.</i>
51.4	<p><b><i>Following may be added at the end of the Clause 51.4:</i></b></p> <p>For any particular Month, the total Payment reduction for non-compliance of <b>Operation &amp; Management Services</b> shall not exceed the amount of the Monthly Payment for O&amp;M.</p> <p>If the Contractor incurs a deduction to the Monthly payment for <b>Operation &amp; Management Services</b> as applicable under Clause D4 of the Technical Specification of:</p> <p>(i) 25% or more of the possible monthly payment for</p> <p>(a) any three consecutive months, or</p> <p>(b) for any six months during the period of the Contract, or</p> <p>(ii) 50% or more of the possible monthly payment for any one month</p> <p>The E/I considers the above a fundamental breach of Contract and may terminate the Contract in accordance with Clause 59 of the General Conditions and Clause 59.1 of the Particular Conditions, all the due amounts to the contractor will be retained.</p>

53.2.1	The amount of the Advance payment security shall be the value of the advancepayment amount.
53.3.1	The successful bidder /contractor shall provide to the E/I a total <b>Performance Security of five (5) percent</b> of the Contract Amount covering the time period of completion of Initial Rectification, Minor improvement, Surface renewal, Construction of bridge/drainage /protection, road safety measures, tree plantation, <b>Second time Surface renewal</b> , including successful completion of Operation & Management.
53.3.2	The standard form of performance Security acceptance to the E/I shall be an electronic Bank Guarantee (e-BG) only of Nationalized/ scheduled Bank.
53.3.3	The word ‘issue’ will be read as ‘submit’.
57.1	<i>The following Drawings and/or Manuals are required at the following dates:</i> <b>Bar Charts for</b> Initial Rectification, Minor improvement, Surface renewal, Construction of bridge/drainage /protection – <b>30 days after completion.</b>
57.2	If the required documents are not supplied in accordance with PC 57.1, the amount to be withheld is <b>0.2% of the contract price.</b>
59.1	The condition of persistent failure to execute the contract is given if and when the Contractor breaches Clause 40.4 or Clause 51.4 of the Particular Conditions or Clause D4 of the Technical Specifications, whichever occurs earlier.
59.1.2(i)	30 days.
59.2.1	The percentage to apply to the value of the work not completed representing the E/I’s additional cost for completing the Works shall be 20 percent.
60	Provisional sum includes emergent maintenance/construction on roads and structures affected by natural calamity like flood, earthquake, etc. as directed by E/I.
61.2	The rate quoted by the contractor for Work (Initial Rectification, Minor improvement, Surface renewal, Construction of bridge/drainage /protection on road alignment) and Services ( <b>Operation and Management (O&amp;M)</b> ) will also be applicable for emergent works item.
63.1.1	The E/I has the right to propose a change in the contract: <b>Yes</b>
63.1.2	Contractor’s right to propose a change in the contract: <b>No</b>
63.2.5	Deleted
63.2.6	The line “Under such circumstances, the Contractor shall be entitled to reimbursement of all costs reasonably incurred by it in the preparation of the Change Proposal, provided that these do not exceed the amount given by the Contractor in its Estimate for Change Proposal submitted in accordance with GC Sub-Clause 63.2.2.” is deleted.

<b>64.2</b>	<b>The line</b> “Except where otherwise specifically provided in the Contract, the Contractor shall submit to the E/I a notice of a claim for an extension of the Time for Completion, together with particulars of the event or circumstance justifying such extension as soon as reasonably practicable after the commencement of such event or circumstance” will be read as “Except where otherwise specifically provided in the Contract, the Contractor shall submit to the E/I a notice of a claim for an extension of the Time for Completion, together with particulars of the event or circumstance justifying such extension. <b>But not later than 28 days of the occurrence of the event or circumstances.</b>
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**SECTION VIII**  
**Annex to Particular Conditions – Contract Forms**

**INDEX .....**

<b>AnnexA:</b>	Letter of Acceptance
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ANNEX- A

**Letter of Acceptance**

(letterhead paper of the E/I)

To: \_\_\_\_\_ [date]  
\_\_\_\_\_ [name] and  
address of the Contractor]

Dear Sir(s),

This is to notify you that your Biddated \_\_\_\_\_ for execution of the \_\_\_\_\_ [name of the contract and identification number, as given in the Instructions to Bidders] for the Contract Price of Rupees \_\_\_\_\_ (\_\_\_\_\_) [amount in words and figures], as corrected and modified in accordance with the Instructions to Bidders<sup>1</sup> is hereby accepted by our Agency.

We note that as per bid, you do not intend to subcontract any component of work.

[OR]

We note that as per bid, you propose to employ M/s. .... as sub-contractor for executing .....

*[Delete whichever is not applicable]*

You are hereby requested to furnish Performance Security including an additional security for unbalanced bid in terms of ITB clause 27.4, for an amount of Rs. \_\_\_\_\_ within 21 days in accordance with the Conditions of Contract using for that purpose form in Section VIII annex D and sign the contract, failing which action as stated in Para 34.2 of ITB will be taken.

Yours faithfully,

Authorized Signature  
Name and Title of Signatory  
Name of Agency

1 Delete "corrected and" or "and modified" if only one of these actions applies. Delete "as corrected and modified in accordance with the Instructions to Bidders" if corrections or modifications have not been effected.



**ANNEX- B**

**AGREEMENT FORM**

This Agreement made the .....day of....., .....

BetweenThe..... (“**The E/I**”) of the one part, and .....

[Name & addressofContractor] ..... (“**The Contractor**”) of the other part.

Whereas theE/I is desirous that the Contractor execute Initial Rectification, Minor improvement, Surface renewal, Construction of bridge/drainage /protection and performance based Rural Road contractfor the **Operation & ManagementServices** of Roads/Construction of Bridge .....(hereinafter called “**The Works & Services**”) and the **E/I** has accepted the Bid by the **Contractor** for the execution of such **The Works & Services** and the remedying of any defects therein, at a contract price of Rs.....

Sl. No.	Package Number	Road Name	Length (Km)

NOW THIS AGREEMENT WITNESSETH and the Parties hereto agree as follows:

1. In this Agreement, words and expression shall have the same meanings as are respectively assigned to them in the General condition hereafter referred to, and they shall be deemed to form and be read and construed as part of this Agreement.
2. In consideration of the payments to be made by the E/I to the Contractor as herein after mentioned, the Contractor hereby covenants with the E/I to execute and complete the **Works & Services** and remedy any defects therein in conformity in all aspects with the provisions of the contract.
3. The E/I hereby covenants to pay the Contractor in consideration of the execution and completion of the Works and the remedying the defects wherein the contract price or such other sum as may become payable under the provisions of the contract at the times and in the manner prescribed by the contract.
4. The following documents shall be deemed to form and be read and construed as part of this Agreement, viz:
  - i) Letter of Acceptance
  - ii) Contractor’s Bid
  - iii) Section VI – General Conditions,
  - iv) Section VII – Particular Conditions
  - v) Section V – Technical Specifications (General and Supplementary Technical Specifications)
  - vi) Appendix A – Drawings
  - vii) Section IV – Works Schedule/BOQ
  - viii) Quality Plan for Output and Performance Based Road Contract as per Clause A14.1 of the Technical Specifications
  - ix) Appendices to the Contract
  - x) Addenda issued during bid period

- xi)** Any other relevant documents listed in the Particular Conditions together with any post bid correspondence.

In witness whereof the parties thereto have caused this Agreement to be executed the day and year first before written.

The Common Seal of .....

was here unto affixed in the presence of :

Signed, sealed and delivered by the said .....

in the presence of:

Binding Signature of E/I

Binding Signature of Contractor

**PERFORMANCE BANK GUARANTEE (UNCONDITIONAL)**

**ANNEX-C**

To: \_\_\_\_\_ [name of E/I]  
\_\_\_\_\_ [address of E/I]

WHEREAS \_\_\_\_\_ [name and address of Contractor] (hereinafter called "the Contractor") has undertaken, in pursuance of Contract No. \_\_\_\_\_ dated \_\_\_\_\_ to execute \_\_\_\_\_ [name of Contract and brief description of Works] (hereinafter called "the Contract");

AND WHEREAS it has been stipulated by you in the said Contract that the Contractor shall furnish you with a Bank Guarantee by a recognized bank for the sum specified therein as security for compliance with his obligations in accordance with the Contract;

AND WHEREAS we have agreed to give the Contractor such a Bank Guarantee;

NOW THEREFORE we hereby affirm that we are the Guarantor and responsible to you, on behalf of the Contractor, up to a total of \_\_\_\_\_ [amount of guarantee]<sup>1</sup> \_\_\_\_\_ [in words], such sum being payable in the types and proportions of currencies in which the Contract Price is payable, and we undertake to pay you, upon your first written demand and without cavil or argument, any sum or sums within the limits of [amount of guarantee]<sup>1</sup> as aforesaid without your needing to prove or to show grounds or reasons for your demand for the sum specified therein.

We hereby waive the necessity of your demanding the said debt from the Contractor before presenting us with the demand.

We further agree that no change or addition to or other modification of the terms of the Contract or of the Works to be performed thereunder or of any of the Contract documents which may be made between you and the Contractor shall in any way release us from any liability under this guarantee, and we hereby waive notice of any such change, addition or modification.

This guarantee shall be valid until 28 days from the date of expiry of the Defects Liability Period.

Signature and seal of the guarantor \_\_\_\_\_  
Name of Bank \_\_\_\_\_  
Address \_\_\_\_\_  
Date \_\_\_\_\_

1 An amount shall be inserted by the Guarantor, representing the percentage of the Contract Price specified in the Contract and denominated in Indian Rupees.

**BANK GUARANTEE FOR ADVANCE PAYMENT (UNCONDITIONAL)**

**ANNEX D**

To: \_\_\_\_\_ *[name of E/I]*  
\_\_\_\_\_ *[address of E/I]*  
\_\_\_\_\_ *[name of Contract]*

Gentlemen:

In accordance with the provisions of the General conditions, Sub-clause 51.1 ("Advance Payment") of the above-mentioned Contract, \_\_\_\_\_ *[name and address of Contractor]* (hereinafter called "the Contractor") shall deposit with \_\_\_\_\_ *[name of E/I]* a bank guarantee to guarantee his proper and faithful performance under the said Clause of the Contract in an Amount of \_\_\_\_\_ *[amount of guarantee]*<sup>1</sup> \_\_\_\_\_ *[in words]*.

We, the \_\_\_\_\_ *[bank or financial institution]*, as instructed by the Contractor, agree unconditionally and irrevocably to guarantee as primary obligator and not as Surety merely, the payment to \_\_\_\_\_ *[name of E/I]* on his first demand without whatsoever right of objection on our part and without his first claim to the Contractor, in the amount not exceeding \_\_\_\_\_ *[amount of guarantee]*<sup>1</sup> \_\_\_\_\_ *[in words]*.

We further agree that no change or addition to or other modification of the terms of the Contract or of Works to be performed there under or of any of the Contract documents which may be made between \_\_\_\_\_ *[name of E/I]* and the Contractor, shall in any way release us from any liability under this guarantee, and we hereby waive notice of any such change, addition or modification.

This guarantee shall remain valid and in full effect from the date of the advance payment under the Contract until \_\_\_\_\_ *[name of E/I]* receives full repayment of the same amount from the Contractor.

Yours truly,

Signature and seal: \_\_\_\_\_  
Name of Bank/Financial Institution: \_\_\_\_\_  
Address: \_\_\_\_\_  
Date: \_\_\_\_\_

- a) An amount shall be inserted by the bank representing the amount of the Advance Payment, and denominated in Indian Rupees.

**Note: All italicized text (including footnotes) is for use in preparing this form and shall be deleted from the final product.**

## **APPENDICES**

- **Appendix A – Drawings**
- **Appendix B – Asset Inventory Information**
- **Appendix C – Forms of Contract**
- **Appendix D – Terms of Reference for Videographic Survey**

## **APPENDIX A– INDEX MAP**

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**NAME OF THE PROJECT:**

**RURAL ROAD STRENGTHENING AND MANAGEMENT PROGRAM**

**UNDER**

**MUKHYA MANTRI GRAMIN SADAK UNNAYAN YOJANA**

**(MMGSUY)**

Initial Rectification, Minor improvement, Surface renewal, Construction of bridge/drainage /protection and Operation & Management (O&M) for Rural Road Strengthening and Management Program  
Under  
Mukhya Mantri Gramin Sadak Unnayan Yojana  
(MMGSUY)

**APPENDIX B – ASSET INVENTORY INFORMATION**

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Initial Rectification, Minor improvement, Surface renewal,  
Construction of bridge/drainage /protection and  
Operation & Management (O&M)  
Structure identity, Location of structure, Type of structure,  
Dimensions, Comments

## APPENDIX C - FORMS OF CONTRACT

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The Contractor is required under the terms of this Contract to establish a Quality Plan, part of which advises the E/I of inspections, programming and compliance reporting. The following forms are samples of details required in the operations of a Contract. These sample forms are available to the Contractor and shall be used as part of his reporting requirement unless an alternative form is approved by the E/I. Over the term of the Contract, the Contractor shall improve and further enhance these forms and shall **incorporate any changes to these forms** as directed by the E/I.

### **Form No. O&M01 – Operation and Management (O&M) Services Inspection Report**

To undertake monthly inspections of the roads under this contract and report all defects outside Intervention Criteria to the E/I. by the 3<sup>rd</sup> working day of each month

**Form No. O&M 01Q –Summary of three months falling in the quarter Operation and Management (O&M)Services inspection report** - To undertake monthly inspections of the roads under this contract and report all defects outside Intervention Criteria to the E/I By 3<sup>rd</sup> working day of each quarter start month.

### **Form No. O&M 02 – Monthly WorksProgram**

The Contractor is required to complete a Monthly Works Program of maintenance activities to be undertaken during the following month and submit to the E/I. This schedule is to be delivered by the 5<sup>th</sup> working day of each month and shall include all activities outside Intervention Criteria and approved Emergency WorksItems.

### **Form No O&M 03 – Monthly Progress Report**

The Contractor is required to submit the E/I, details of the quantity of work completed and an estimate of the costs to achieve compliance. This information is used in assessing the viability of future works, work method efficiencies and base information for the state-wide Road Maintenance Management System (RMMS).

By the 30<sup>th</sup> of each month the Contractor shall provide to the E/I full details of all repairs undertaken in each kilometre indicating the amount of work completed for each Item and the total cost of works for each kilometre, as required under Clause A13.1 of the Technical Specification.

**Form No. O&M 03Q –Summary of three months falling in the quarter Operation and Management (O&M)Services–** It is summary of monthly progress report.

### **Form No OM04A – Maintenance Program Compliance Sheet**

Compliance against the Program shall be assessed for each month by E/I and shall be submitted by the 5<sup>th</sup> working day of next month. The form shall highlight the extent of works as scheduled in the Program for the month and the extent of the actual workscompleted.

### **Form No O&M 04B – Management Programme Compliance Sheet**

Details of all compliances against the management requirements of the contract shall be detailed in OM04B and submitted along with Maintenance Program Compliance sheet.

### **Form No O&M 05 – Non-Conformance Report**

Details of all non-conformances in respect to the **Quality Plan and the Contract requirements** shall be detailed in the Form OM05. A copy of the completed form shall be submitted to the E/I within 7 days of registering the non-conformances. This form should be used in a constructively so as to continually improve the Contractor's management systems and processes.



**Form No O&M06– Condition Survey – Field data Collection Sheet**

The Contractor shall record road and asset condition survey information using Form **O&M06**. This shall include the initial condition survey per Clause A13.2.1 of the Technical Specification.

**Form No. O&M 07 – Initial Rectification, Minor improvement, Surface renewal, Construction of bridge/drainage /protectionService Level Compliance Sheet.**

Compliance against the Program shall be assessed for each month and shall be submitted on the due date of the Program. The form shall highlight the **extent of actual works completed**.

**GovernmentOfBihar  
Rural WorksDepartment**

**OPERATION AND MANAGEMENT (O&M)SERVICESINSPECTIONREPORT**

**RoadFrom:** ..... **To:**.....

**Length of Road:**..... **Date:** ..... /..... /.....

**Inspector:**..... **Position:**.....

Standard work item		Work	Units of work required in each kilometre										Comments
No.	Name	Units	1	2	3	4	5	6	7	8	9	10	
<b>O&amp;M100 Sealed Pavement</b>													
O&M101	Pothole Patching	m <sup>2</sup>											
O&M102	Surface Depression and Rut Patching	m <sup>2</sup>											
O&M103	Crack Sealing	Lm											
O&M104	Surface Treatment												
	(a) Loss of Aggregate (Surface Ravelling )	m <sup>2</sup>											
	(b) Bleeding / Flushing	m <sup>2</sup>											
	(c) Crocodile Cracking	m <sup>2</sup>											
O&M105	Edge Repair	m <sup>2</sup>											
O&M106	Digouts	m <sup>2</sup>											
O&M107	Concrete Pavement	m <sup>3</sup>											
	Other activities												
<b>O&amp;M200 Shoulder</b>													
O&M201	Unsealed Shoulder												
	(a) Edge Drop-off	Lm											
	(b) Roughness, Scouring or Potholes	Lm											
	(c) Holding water	Lm											
O&M202	Embankment Repair	No											
	Other activities												
<b>O&amp;M 300 Drainage including culverts major and minor bridges</b>													
O&M301	Surface Drains & Verge	Lm											
O&M302	Culvert Cleaning	Lm											
O&M303	Culvert and Pit Repair												
	Other activities												



**GovernmentOfBihar  
Rural WorksDepartment**

**OPERATION AND MANAGEMENT (O&M)SERVICESSUMMARY OF QUARTERLYINSPECTION REPORT**

RoadFrom: ..... To:.....

Length of Road:..... Date: ..... /..... /.....

Inspector:..... Position:.....

Standard work item		Work	Units of work required in each km										Comments
No.	Name	Units	1	2	3	4	5	6	7	8	9	10	
<b>O&amp;M100 Sealed Pavement</b>													
O&M101	Pothole Patching	m <sup>2</sup>											
O&M102	Surface Depression and Rut Patching	m <sup>2</sup>											
O&M103	Crack Sealing	Lm											
O&M104	Surface Treatment												
	(a) Loss of Aggregate (Surface Ravelling )	m <sup>2</sup>											
	(b) Bleeding / Flushing	m <sup>2</sup>											
	(c) Crocodile Cracking	m <sup>2</sup>											
O&M105	Edge Repair	m <sup>2</sup>											
O&M106	Digouts	m <sup>2</sup>											
O&M107	Concrete Pavement	m <sup>3</sup>											
	Other activities												
<b>O&amp;M200 Shoulder</b>													
O&M201	Unsealed Shoulder												
	(a) Edge Drop-off	Lm											
	(b) Roughness, Scouring or Potholes	Lm											
	(c) Holding water	Lm											
O&M202	Embankment Repair	No											
	Other activities												
<b>O&amp;M 300 Drainage including culverts major and minor bridges</b>													
O&M301	Surface Drains & Verge	Lm											
O&M302	Culvert Cleaning	Lm											
O&M303	Culvert and Pit Repair												
	Other activities												

Standard work item		Work	Units of work required in each km										Comments
No.	Name	Units	1	2	3	4	5	6	7	8	9	10	
<b>O&amp;M400 Vegetation</b>													
O&M401	Grass Control												
	a) Roadside – General Tidy	Ha											
	b) Clear near safety signs, km posts and roadside furniture	Ha											
O&M402	Tree and Shrub Management	Ha											
	Other activities												
<b>O&amp;M500 Signage and Road Safety</b>													
O&M501	Signs Maintenance	No											
O&M502	Guard stones	Lm											
O&M503	Distance stones	No											
O&M504	Road markings	No											
	Other activities												
<div style="display: flex; justify-content: space-between; align-items: flex-end; padding: 5px;"> <span>[Signature of Contractor/ Authorized representative]</span> <span>Date</span> <span>Time</span> <span>Place</span> </div>													

**Note:- Enclose photographs with this report**

**Government of Bihar  
Rural Works Department**

**ROADNAME**.....

**MONTHLY WORKS PROGRAM**

Contractor:..... Road.....

Period from : ...../...../..... to ...../...../.....

Standard Work item No. Name	Location	Equipment	Quantity Man /days	Dates																												Total Works Completed	
				S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S		

**Planned by (Contractor/Authorized Representative)**..... **On**...../...../.....

Name Signature

**Approved by E/I:** On ...../...../.....

.....

Name Signature

**Government of Bihar  
Rural Works Department  
MONTHLY PROGRESS REPORT**

Road No. \_\_\_\_\_ Road Name from \_\_\_\_\_ to \_\_\_\_\_  
 ..... ..

Period for the month of \_\_\_\_\_  
 .....

Standard Work item		Work	Previous	Quantity	Quantity	Rs.	Rs.	Rs.	Comments
No.	Description	Unit	Quantity	(Month)	(Total)	(Previous)	(Month)	(Total)	
<b>1 Pavement Maintenance</b>									
<b>O&amp;M100 Sealed Surface</b>									
O&M101	Pothole patching	m <sup>2</sup>							
O&M102	Regulation of wheel ruts and depressions	m <sup>2</sup>							
O&M103	Crack sealing	Lm							
O&M104	Surface Treatment								
	(a) Loss of aggregate (Surface ravelling)	m <sup>2</sup>							
	(b) bleeding / flushing	m <sup>2</sup>							
	(c) crocodile cracking	m <sup>2</sup>							
O&M105	Edge repair	m <sup>2</sup>							
O&M106	Digouts	m <sup>2</sup>							
O&M107	Repair concrete pavement	M <sup>3</sup>							
	Other Activity								
<b>O&amp;M200 Shoulder</b>									
O&M201	Unsealed Shoulder								
	(a) Drop off from edge of seal to shoulder	Lm							
	(b) Roughness, Scouring or Potholes	Lm							
	(c) Holding water	Lm							
O&M202	Embankment and batter repair	No							
	Other Activity								
<b>O&amp;M 300 Drainage including culverts major and minor bridges</b>									
O&M301	Surface Drains and Verges	Lm							
O&M302	Culvert Pit Cleaning and Strom	Lm							
O&M303	Culvert and Pit Repair								
	Other Activity								

<b>2. Roadside Maintenance</b>									
<b>OM400 Vegetation</b>									
OM401	Grass Control								
OM402	Tree and shrub management								
	<b>Other Activity</b>								
<b>OM500 Signage and Road Safety</b>									
OM501	Signs maintenance	No							
OM502	Guard stones	Lm							
OM503	Guideposts, Distance Markers,	No							
OM504	Road marking	No							
	<b>Other Activity</b>								
<p>Progress prepared by (Contractor/                      Authorized Representative) : on ..... /...../.....  <span style="display: block; text-align: right;">Signature</span></p> <p>Approved by E/I: <span style="display: inline-block; width: 150px; border-bottom: 1px solid black;"></span> <span style="display: inline-block; width: 150px; border-bottom: 1px solid black;"></span> on ..... /...../.....  <span style="display: block; text-align: right;">Signature</span></p>									



**Government of Bihar  
Rural Works Department**

**SUMMARY OF QUARTERLY PROGRESS REPORT**

RoadNo. \_\_\_\_\_ RoadNamefrom \_\_\_\_\_ to \_\_\_\_\_  
 ..... ..

Period for the month of \_\_\_\_\_  
 .....

Standard Work item		Work	Previous	Quantity	Quantity	Rs.	Rs.	Rs.	Comments
No.	Description	Unit	Quantity	(Month)	(Total)	(Previous)	(Month)	(Total)	
<b>1 Pavement Maintenance</b>									
<b>O&amp;M100 Sealed Surface</b>									
O&M101	Pothole patching	m <sup>2</sup>							
O&M102	Regulation of wheel ruts and depressions	m <sup>2</sup>							
O&M103	Crack sealing	Lm							
O&M104	Surface Treatment								
	(a) Loss of aggregate (Surface ravelling )	m <sup>2</sup>							
	(b) bleeding / flushing	m <sup>2</sup>							
	(c) crocodile cracking	m <sup>2</sup>							
O&M105	Edge repair	m <sup>2</sup>							
O&M106	Digouts	m <sup>2</sup>							
O&M107	Repair concrete pavement	M <sup>3</sup>							
	Other Activity								
<b>O&amp;M200 Shoulder</b>									
O&M201	Unsealed Shoulder								
	(a) Drop off from edge of seal to shoulder	Lm							
	(b) Roughness, Scouring or Potholes	Lm							
	(c) Holding water	Lm							
O&M202	Embankment and batter repair	No							
	Other Activity								
<b>O&amp;M 300 Drainage including culverts major and minor bridges</b>									
O&M301	Surface Drains and Verges	Lm							
O&M302	Culvert Pit Cleaning and Strom	Lm							
O&M303	Culvert and Pit Repair								
	Other Activity								

<b>2. Roadside Maintenance</b>									
<b>OM400 Vegetation</b>									
OM401	Grass Control								
OM402	Tree and shrub management								
	<b>Other Activity</b>								
<b>O&amp;M500 Signage and Road Safety</b>									
O&M501	Signs maintenance	No							
O&M502	Guard stones	Lm							
O&M503	Guideposts, Distance Markers,	No							
O&M504	Road marking	No							
	Other Activity								
<p>Progress prepared by (Contractor/ Authorized Representative) : _____ on ..... / ..... / .....</p> <p style="text-align: center;">Signature</p> <p>Approved by E/I: _____ on ..... / ..... / .....</p> <p style="text-align: center;">Signature</p>									

**OPERATION AND MANAGEMENT (O&M) SERVICES PROGRAM COMPLIANCE SHEET (O&M04 A)**

CONTRACT No:            Page:.... of....

Date:

ROAD:                    FROM:                    TO:

CONTRACTOR:

INSPECTOR:

REF	STANDARD JOB	DISTANCE										DETAILS (Non-compliance Report etc.)	
		...0	...1	...2	...3	...4	...5	...6	...7	...8	...9		
OM101	Pothole Patching												
OM102	Regulation												
OM103	Crack Sealing												
OM104	Surface Treatment												
OM105	Edge Repair												
OM106	Dig out Repair												
OM107	Concrete Pavement												
OM201	Shoulder Repair												
OM202	Emb& Batter												
OM301	Drains Cleaning												
OM302	Culvert Cleaning												
OM303	Culverts Repair												
OM401	Grass Control												
OM402	Tree Trimming												
OM501	Sign Maintenance												
OM502	Guardstones												
OM503	Distance Stones												
OM504	Rd Marking												

**MANAGEMENT PROGRAM COMPLIANCE SHEET(OM04B)**

CONTRACT No: \_\_\_\_\_ Page:..... of....

Date:

ROAD: \_\_\_\_\_ FROM: \_\_\_\_\_ TO: \_\_\_\_\_

CONTRACTOR: \_\_\_\_\_ INSPECTOR: \_\_\_\_\_

SI No.	Management Requirements	Details (Compliance /Non Compliance)
1	Initial condition report	
2	Mile stone Compilation report	
3	As built drawings	
4	Bar charts for Initial Rectification with Initial Rectification, Minor improvement, Surface renewal, Construction of bridge/drainage /protection	
5	<b>Operation and Management (O&amp;M)Services</b> inspection reports	
6	Monthly works programme	
7	Operation and Management (O&M) ServicesProgramme Compliance Report	
8	Any other report	

E/I	Name	Signature
-----	------	-----------

**NON-CONFORMANCE REPORT**

Report No. : .....

CONTRACTOR:..... Date:.....

CONTRACT No:..... Originator:.....

ROAD:.....

Location:.....

Description of Non-Conformance:

.....  
.....  
.....

Corrective Action:

.....  
.....  
.....

Date of Anticipated Completion: .....

Checked By:

NAME SIGNATURE

Date of Actual Completion: .....

E/I:

NAME SIGNATURE

Condition Survey – FieldDataCollection

Sheet.....of.....

Date:..... Road No: .....Road Name:.....

Chainage: .....to.....

Standard Work Item	Kms						Remarks
Pothole	m <sup>2</sup>						
Pothole	No.						
Dep& Rut Patch	m <sup>2</sup>						
Crack Sealing	m						
Edge Breaks>100mm	m						
(a) Stripping+Ravelling	m <sup>2</sup>						
(b) Bleeding	m <sup>2</sup>						
(c) Crocodile	m <sup>2</sup>						
(d) Delamination	m <sup>2</sup>						
Culvert Cleaning	No						
Culvert Painting	No.						
Culvert+Drain Repair	No.						
Guard Stone Paint	No.						
Guard Stone Replace	No.						
Dist. Markers Paint	No.						
Dist. Markers Repair/Replace	No.						
(a)Low Shoulder	m						
(b) High Shoulder	m <sup>2</sup>						
(c) Spot Shoulder	m <sup>2</sup>						
Dig -Out	m <sup>2</sup>						
Trench Filling	No.						
Damage Signs	No.						
Missing Signs	No.						
Bridge Parapet Repair	No.						

Signature of Contractor :

Signature of E/I:

Date:

Time:

Place:

**INITIAL RECTIFICATION, MINOR IMPROVEMENT, SURFACE RENEWAL, CONSTRUCTION OF BRIDGE/DRAINAGE /PROTECTIONWORKS SERVICELEVELCOMPLIANCE**

CONTRACT No: \_\_\_\_\_ Page:..... of....

Date:

ROAD: \_\_\_\_\_ FROM: \_\_\_\_\_ TO: \_\_\_\_\_

CONTRACTOR: \_\_\_\_\_ INSPECTOR: \_\_\_\_\_

REF	items	DISTANCE										DETAILS (Non-compliance Report etc.)	
		1	2	3	4	5	6	7	8	9	10		
1.	Bituminous Pavement Repairs (Mandatory)												
	(i) Thickness of BT layer												
	(ii) Bitumen percent												
	III Maximum IRI for any length of a pavement upon receiving Surface layer												
2.	Shoulder and Embankments (Items as per contract document)												
3.	Drainage including culverts including major and minor bridges (Items as per contract document)												
4.	Vegetation (Items as per contract document)												
5.	Signage and Road Safety (Items as per contract document)												

Progress prepared by (Contractor/  
Authorized Representative) : \_\_\_\_\_ on ..... /...../.....  
Signature

Approved by E/I: \_\_\_\_\_ on ..... /...../.....  
Signature

#### **APPENDIX D – TERMS OF REFERENCE FOR VIDEOGRAPHIC SURVEY**

The contractor shall also be required to take a video record of all roads under this contract within the first 15 days from start date. The video shall be taken during daylight hours with the Digital Video Camera mounted in the front position with the camera aligned with the center of the road. Video records shall also be taken of all Bridge, Culvert and other structures. The Video graphic recording shall be done at the running vehicular speed of 5 Kmph and the vehicle running in the pro direction of Sun rays. The E/I may require that specific camera shots or angles be taken during the recording of such important features like junctions, culvert structures, damaged signage, road furniture and other road assets etc. The video shall be taken in the presence of the E/I or his nominated representative. The Contractor shall supply the E/I with set of two copies of CD/DVD of each video recording within 21 days after the notice to commence.



