

**OFFICE OF THE SUPERINTENDING ENGINEER
CIRCLE-I, R&B SECTOR, KMDA
UNNYAN BHAVAN, BLOCK-A (5th FLOOR), SALT LAKE CITY
Kolkata – 700 091
NOTICE INVITING e-QUOTATION
No.07/SE/R&B/C-I/KMDA of 2022 – 2023 dt.31.01.2023
OF THE SUPERINTENDING ENGINEER,
CIRCLE-I, R&B SECTOR, KMDA**

Memo. No.:- 101/SE/C-1/R&B/KMDA

Dated: 31/01/2023

On-line Quotation is hereby invited by specialized bidders having specialized machineries by owned (as per format given in IRT) for executing the work as stated below having credentials in State Govt./Central Govt./State or Central Govt. Undertaking as per given below

**NOTICE INVITING ELECTRONIC QUOTATION No. 07/SE/R&B/C-1/KMDA of 2022-2023
OF THE SUPERINTENDING ENGINEER,CIRCLE-1, R&B Sector, KMDA.**

Sl. No.	Name of work(s)	Earnest Money	Rate inclusive of GST and other duties)	Period of completion	Eligibility of One job Tenderer
		(In Rs.)	(In Rs.)		
1.	Emergent demolition work of Old & distressed Chitpur Rail over Bridge (ROB) along with entire approaches of Chitpur Bridge having Superstructure & substructure comprising deck slab and other ancillary components above pile cap with the methodology as approved by the Eastern Railways Authority	Initially 10.00 Lakh. <i>(Details of earnest money has been narrated in sl. no.-1 below)</i>	Bidders have to quote their rate inclusive of all. Authority would bear the charges in NOC's and permissions. Selected bidders have to arrange the approval of their Dismantling schemes from Eastern Railways. Permissions from Chief Railway safety commissioners clearance (CRS) or Principal Chief Engineer clearance/TRD /Rail (Line/Power) block permission and all other State Govt. Departments like ; Transport Dept. / KP/ PWD /KMC /CESC/Telephones etc.	75 (Seventy Five) days	Bonafide resourceful & reliable agencies eligible through pre-qualification

C.1. The bidder should quote in one consolidated rate for entire scope of work of the BOQ excluding all the expenses and cost related to the NOC/ Permissions from the various government departments. No extra payment on any other account will be payable.

- 1. Railway NOC/ CRS clearance or PCE clearance / block permission along with their expenses are to be solely borne by the Department. No other payment would be made for said expenses.**

2. Work shall be executed making co-ordination with the P.W.D., Transport, KMC, Railway Authority, CESC utility service provider and any other concerned agencies for.
3. During execution precautionary measures shall be taken so as to cause minimum disruption to the Railway Traffic.
4. During execution precautionary measures shall be taken for utility services (Underground and over ground) provided by KMC, CESC and other Depts.
5. Work shall be executed only after getting dismantling scheme as submitted by the selected bidder approved from the Eastern Railway authority considering the working hour of dismantling may be bare minimum as for which no extra claim will be entertained.
6. Arrangement of Railway Cranes, Railway wagons etc. for disposal of unserviceable materials as scrap / other requirements if required shall have to be borne by the agency at his own cost.
7. Construction of path way over the Railway Tracks for disposing or moving machineries during execution of work shall have to be borne by the agency at his own cost.
8. The work shall be carried out by the successful bidder after receipt of permission/NOC from Transport Department, Traffic Department of Kolkata Police Authority and the charges if any shall be borne by the agency.
9. Work shall be executed only after receipt of Railway Traffic Blockade and Power Blockade from Eastern Railway Authority.
10. Stacking of unserviceable materials and machineries shall be arranged by the agency at his own cost.
11. All safety measures during the dismantling shall be taken as per Railway norm / guideline / order.

C2. Scope of Work:- The intending bidders should inspect the site and assess the probable component of works both within and outside the Railway boundary connection with the dismantling of distressed Chitpur Rail over Bridge and along with entire approach roads . While quoting the rates the bidder should consider the work consists of dismantling of the following tentative components beside the demolition of the RoB structure up to the level above pile cap:-

- i) Providing and laying WBM / other materials for Crane & Trailer movement in connection with dismantling of Chitpur ROB and approaches as required.
- ii) Temporary site office
- iii) Providing drain, as required
- iv) The cost of laying pipeline for damage caused to existing pipelines, if any
- v) The cost of sheet piling required for safety of the existing KMC pipeline.
- vi) The cost of boundary wall, P-way laying of track if damaged will be fully repaired by the agency at his own cost & expenses
- vii) Arranging railway cranes, railway wagons, etc. by the tenderer as required.

C3. A. The work of dismantling shall be executed with utmost safety measures without creating any pollution and the rate quoted by the bidder shall be inclusive of all charges thereof. Any work related to dismantling should conform the safety standards of Railway Authority and NGT Norms under the MOEF & CC, GoI.

B. The lowest quoted amount of BOQ by the bidder may be considered as the lowest bidder.

C4. Prime Machineries:-

- | | |
|-----------------------|----------|
| 1. Jaw Crusher | - 1 no |
| 2. Excavator | - 5 nos |
| 3. Diamond Cutter | - 3 nos |
| 4. Backo Loader (JCB) | - 2 nos |
| 5. Hydraulic Breaker | - 2 nos |
| 6. Dumper/ Tipper | - 10 nos |
| 7. Concrete Cutting | - 1 no |

The prime machineries like the jaw crusher and diamond cutter are preferably and/or should be owned and not to be more than 5 (five) years old & in sound condition to be deployed at site

C5.

1.a) Joint Ventures are not preferred.

b) Engagement of Sub-Contractor/Subletting is not permitted until and unless allowed by the Authority.

2. A prospective bidder shall be allowed to participate in the particular Job either in the capacity of individual or as a partner of a firm. ***If found to have applied severally in a single job, all of his/ their bids will be considered as non-responsive for that job***, without assigning any reason thereof.

And

If individual entity is found to be present in more than one bidding farm for a specific Sl. as a Proprietor or/ and Partner, in that case all the bids of the respective firms containing that particular entity shall be considered as non-responsive.

1. In the event of e-filling, intending Quotationer may download the Tender documents from the website: <http://wbtenders.gov.in> directly with the help of Digital Signature Certificate. Earnest Money has to be deposited by the Quotationer through the following payment mode as per Memorandum of Finance Department vide No. 3975-F(Y) dated 28th July, 2016 (Refer "Annexure-I" in Bidders Guideline).

1. Earnest Money:

In 1st phase 10.00 lakh shall have to be submitted as earnest money on-line at the time of submission of bid.

In 2nd Phase, the balance earnest money (if any) shall have to be deposited by L1 bidder in addition to the already deposited amount to cover the total EMD @ 2% (two percent) of tendered / bid amount.

The amount of pre-defined Earnest Money is to be submitted online in the following payments modes:

1.1. EMD – Online Payment.

1.2. The intending bidders should follow the website: <http://wbtenders.gov.in> website for any corrigendum.

1.3. Eligibility criteria for participation in tender:-

Owing to the emergent nature of work , the bidders who have completed dismantling of Major ROB & Bridges in a single job contract by using Jaw Crusher & Diamond Cutting machine etc. or similar major and sophisticated equipment/machineries with their proper dismantling scheme, drawing and having such Credential in last 5 years. Credential certificate issued by the Executive Engineer or equivalent competent authority of a State/ Central Government, State /Central Government undertaking, Statutory/ autonomous bodies constituted under the Central/State statute/ Local body of State Govt, on the executed value of completed taken as credential.

1. Intending bidders should have to set up local office at Kolkata or should have anywhere in west Bengal.
2. Three Government of West Bengal Enterprises viz. "Mackintosh Burn Limited", "Westinghouse Saxby Farmer Limited" and "Britannia Engineering Limited", are exempted from earnest money for participation in Item Rate Tender vide Order No. 430(3)-W(C)/1M-208/15 dated 31.08.2015 of The Joint Secretary, P.W. Department, Works Branch, Govt. of West Bengal subject to the condition that they will furnish Security Deposit if selected in the Item Rate Tender.
3. Both statutory cover (Technical Bid and Financial Bid) and non-statutory cover are to be submitted concurrently duly digitally signed in the website <http://wbtenders.gov.in> (Online)
4. The Technical Bid and Financial Bid have to be submitted online on or before 21 day after uploading of tender.
5. The FINANCIAL OFFER of the prospective Bidders will be considered only if the TECHNICAL BID of the Tenderer found qualified by the Bid Evaluation Committee. The decision of the Bid Evaluation Committee will be final and absolute in this respect. The list of Qualified Tenderer will be displayed in the website
6. Agency shall quote his rate inclusive of 18% (Eighteen percent) GST and 1% (One percent) of Labour Welfare Cess .

7. Eligibility criteria for participation in the Tender:-

a) Intending tenderers should produce credentials of a similar nature of completed work amounting **Rs.4.00 (four) crores** in a single work during last 5 (five) years prior to the date of issue of the tender notice and minimum average annual turnover of Rs. **10.0 (Ten) crores** in the last 5 (Five) assessment year ending on 31st March 2022 (Refer section – B Form No- II E); or,

N.B. : 1. The credential certificate(s) for completed work(s) should contain:- (a) Name of the work, (b) Name of the Client, (c) Amount put to tender, (d) Schedule month and year of commencement and completion as per work order, (e) Actual month and year of completion, (f) Gross bill amount of the completed work detail communicational address of client must be indicated in the Credential Certificate.

N.B. : 2. Similar nature of works means who have completed and having specialization in dismantling of Major ROB, Bridges and Flyovers by using sophisticated and precise equipment

like Jaw Crusher and Diamond Cutting Machines etc. in a single contract last 5 years prior to publication of this tender.

N.B. :3 Credential certificate issued by the Executive Engineer or equivalent competent authority of a State/ Central Government, State /Central Government undertaking, Statutory/ autonomous bodies constituted under the Central/State statute/ Local body of State Govt, on the executed value of completed taken as credential.

- 8) i) The prospective Tenderer shall have in their full time engagement experienced technical personnel, the minimum being **five Graduate Engineers and five Diploma Engineers**. (Authenticated documents in respect of qualification and engagement shall be furnished for Technical Evaluation.). [Non Statutory Documents].ESI & PF Certificate till 31/03/2023
- ii) Technical documents must be accompanied with (a) Last 3 yrs Income Tax Return, (b) Last 3 yrs audit balance (c) Either Professional Tax Clearance Certificate or Professional Tax Deposit Challan (at least for F.Y. 2022-23), (d) Pan Card, (e) GST Registration Certificate, (f) Trade License (at least for F.Y. 2022-23) [Non statutory Documents].
- iii) The prospective Tenderer or any of their constituent partner shall neither have abandoned any work nor any of their contract have been rescinded during the last 5 (five) years. Such abandonment or rescission will be considered as disqualification towards eligibility. (A declaration in this respect has to be furnished by the prospective Tenderer as described in Section-B, FORM - VII without which the Technical Bid shall be treated as non-responsive
- iv) In case of Proprietorship, Partnership Firms and the Company, Tax Audit Report are to be furnished along with the Balance Sheet and Profit & Loss Account and all the Schedules forming the part of Balance Sheet and Profit & Loss Account in favour of the Tenderer (consecutive five financial years). No other name except Tenderer's name, in such encloser will be entertained.
- V) The prospective Tenderer should own machineries. Conclusive proof of ownership in favour of owned machineries in working condition shall have to be submitted along with the application. (Ref. Section - B, FORM - IV).
- vi) **Registered Partnership Deed (for Partnership Firm only) along with registered Power of attorney to be submitted along with the application.**
- vii) Declaration regarding Structure of the Organization, duly signed by the applicant to be submitted along with the application **(Ref. Section - B, FORM - III).**
- viii) Each and every field of Section -B, FORM-II & FORM-II (A) must be filled-up properly by the applicant and the Chartered Accountant as given in the said form, otherwise the quotation will be treated as cancelled.

Net worth of company as on 31st march 2022 certified by Chartered Accountant shall be positive. Bank Solvency Certificate/ Credit Facility Certificate should be minimum 40% of Tender quoted value.

- ix) Registered Unemployed Engineers' Co-operative Societies / Labour Co-operative Societies are

required to furnish valid Bye Law, Current Audit Report, Current N.O.C. from A.R.C.S. and Minutes of last A.G.M. The Engineers Co-operative also has to submit documents of the society consists at least 10 (ten) members out of which at least 60% should hold degree or diploma in any branch in Engineering as per Memo. No. 44-A/4M-11/2002 dt. 09.01.2004 of Deputy Secretary-III, P.W.D.

- x) The prospective Tenderer shall be allowed to participate in a single job either in the capacity of individual or as a partner of a firm. If found to have applied severally in a single job, his all applications will be rejected for that job.
 - xi) Prevailing safety norms has to be followed so that LTI (Loss of time due to injury) is zero.
 - xii) Any intending Tenderer who have failed to execute any works contract under any Directorate of this department and was terminated by any sub-rule under Clause-3 of Tender Form No. 2911 or terminated under any Clause of standard bidding document by Engineer-in-Charge/ Employer during last 05(five) years will not be eligible to participate in any Tender under any Directorate under this department.
 - xiii) A comprehensive drawing showing all the details regarding layout of Fire Protection System in 5(Five) hard copies and 1(one) soft copy is to be submitted to Engineer-in-charge.
Modification, if any, suggested by Engineer-in-Charge is to be incorporated and the same to be Re submitted to Engineer-in-charge after getting approved of the same the scheme is to be implemented.
9. Where an individual person holds a digital certificate in his own name duly issued to him against the company or the firm of which he happens to be a director or partner, such individual person shall, while uploading any Item Rate Tender for and on behalf of such company or firm, invariably upload a copy of registered power of attorney showing clear authorization in his favour, by the rest of the directors of such company or the partners of such firm, to upload such Item Rate Tender. The power of attorney shall have to be registered in accordance with the provisions of the **Registration Act, 1908.**
10. Running payment for the work may be made to the executing agency as per availability of fund. The executing agency may not get a running payment unless the gross amount of running bill will be 50 (fifty) lakh or 30% of the quoted amount whichever is less. Provisions in Clause(s) 7, 8 & 9 contained in W.B. Form No. 2911(ii) so far as they relate to quantum and frequency of payment is to be treated as superseded.
11. **No mobilization /secured advance** will be allowed.
12. Agencies shall have to arrange land for erection of Plant & Machineries, storing of materials, labour shed, laboratory etc. at their own cost and responsibility.
13. All materials such as cement, steel which are required for the proposed scheme as mentioned including cement, steel shall be of specified grade and approved brand in conformity with relevant code of practice (latest revision) and manufactured accordingly and **shall be procured and supply by the agency at their own cost including all taxes** . Authenticated evidence for purchase of cement and steel are to be submitted along with challan and test certificates. In the event of further testing opted by the E-I-C then such testing from any Govt. approved testing laboratory shall have to be conducted by the agency at their own cost. (Specific permission is to be required from the Item Rate Tender inviting authority.
14. Steel materials procure & supply by the contractor shall be of TOR steel rod / HYSD / TMT Bar of Fe415. Fe500, Fe550/550D grade (The grade to be decided by the E-I-C or as per instruction reflect on the approved drawing of this department or as stipulated in the

departmental schedule of rates.

15. Cement procure and supply by the contractor shall be of Ordinary Portland Cement 53 grade, 43 grade conforming (IS 8112) or PPC/PSC (The grade to be decided by the E-I-C or as per instruction reflect on the approved drawing of this department or as stipulated in the departmental schedule of rates.

16. The Contractors shall also abide by the provision of the child labour (Prohibition and regulation

Act.1986) . No labour below the specified age (as per G.O.) shall be employed on the work.

17. **Constructional Labour Welfare Cess @ 1(one) %** of cost of construction will be deducted from every Bill of the selected agency.

18. A **Tender shall remain valid** for a period not less than 180 (One hundred twenty) days after the dead line date for Financial Bid Submission. Tender valid for a shorter period shall be rejected by the Bid **Evaluation Committee** as non-responsive. If the Tenderer withdraws the Tender during the validity period of Tender, the earnest money as deposited will be forfeited forthwith without assigning any reason thereof.

B. The charges of Railway or other Govt. Agency to be borne by the successful bidder and no reimbursement will be made. Therefore, the Tenderer are to quote rate considering all such expenses to be incurred .

19. :- **Important information:- Date & Time schedule (online)**

<i>Sl. No.</i>	<i>Particulars</i>	<i>Date & Time</i>
1	Date of Publishing NIQ & Tender Documents	07.02.2023 at 1.00PM
2	Document download Start Date (online)	07.02.2023 at 1.00 PM
3	Pre Bid Meeting with the intending Tenderers	15.02.2023 at 1.00 PM
4	Bid Submission Start Date	07.02.2023 at 1.00 PM
5	Bid Submission End Date	28.02.2023-at 1.00 PM(21days)
6	Date of opening of Technical Proposals	02.03.2023 at 1.00 P.M. (23days)
7	Date of uploading the list of Technical qualified bidders(online)	After evaluation of technical proposal
8	Date of opening the Financial Proposal (Online)	To be notified at the time of uploading the Technical Qualified bidders. (Online)

20. **Security Deposited amount @ 3% (2 % EMD + 1 % of the final bill) or as applicable will be released on successful completion of the dismantling work, disposal of the rubbish and other materials and disposal of the same to the location within 40 KM from the site as approved by Engineer-in-Charge.**

21. All Tenderers are requested to be present in the office of the Superintending Engineer, Circle-

I,R&B Sector, KMDA at schedule time and date during opening the financial bid.

22. Site of work and necessary drawings as submitted by the tenderer duly approved by Eastern railway will be handed over to the agency before execution of the work agency phase wise.

23. The Tenderer, at his own responsibility and risk is encouraged to visit and examine the site of works and its surroundings and obtain all information that may be necessary for preparing the Tender and entering into a contract for the work as mentioned in the Tender before submitting offer with full satisfaction. The cost of visiting the site shall be at his own expense.

24. A. The intending Tenderer shall clearly understand that whatever may be the outcome of the present invitation of Tender, no cost of Bidding shall be reimbursable by the Department. The Superintending Engineer, Circle-I,R&B Sector, KMDA reserves the right to reject any application and to accept or reject any offer without assigning any reason whatsoever and is not liable for any cost that might have incurred by any Rate at the stage of Bidding.

B. PLANT & MACHINERY:

The prospective bidders **should own** and produce the required machineries not more than 5 years old and in sound condition and should be available in Kolkata to qualify the technical bid owing to the emergency nature of work.

In case of Bidder purchase the machinery from the Manufacturer/Authorized Dealer:-

In proof of Ownership of Prime Machinery shall be not more than 5 (Five) years old, the Bidders will have to submit :-

- a) The scanned copy of Original Tax Invoice in favour of the Bidder
- b) The scanned copy of Original Delivery Challan in favour of the Bidder
- c) The scanned copy of Original Way Bill in favour of the Bidder

26. Refund of EMD : The Earnest Money of all the unsuccessful Tenderer, deposited online, shall be refunded .

27. Prospective applicants are advised to note carefully the minimum qualification criteria as mentioned in 'Instructions to Bidders' in Section - 'B' before submission of Tender.

28. Conditional/ Incomplete Tender will not be accepted.

29. The intending Tenderer are required to quote the rate **on line**.

30. Contractor shall have to comply with the provisions of (a) the Contract Labour (Regulation Abolition) Act. 1970, (b) Apprentice Act. 1961 and (c) Minimum Wages Act. 1948 of the notification thereof or any other laws relating thereto and the rules made and order issued there under from time to time.

31. **Guiding schedule of rates:** Current Schedule of Rates of Public Works Department for "Building Works", "Sanitary & Plumbing Works" and "Road & Bridge Works" with effect from 01.12.2015 along with up-to-date corrigendum and addendum to be applicable herein.

32. During scrutiny, if it comes to the notice of Tender inviting authority at any point of time that the credential or any other papers found incorrect/manufactured/fabricated/ tempered/ forged that **Tenderer will not be allowed to participate in the Tender and that Tender will be out rightly rejected without any prejudice with forfeiture of earnest money** and the Tender inviting authority reserves the right to take legal action as deems fit and debarment/ suspension of contractor shall be made as per Public Works Department's
33. The Superintending Engineer, KMDA. and Bid Evaluation Committee reserves the right to cancel the Tender due to unavoidable circumstances and no claim in this respect will be entertained.
34. In case if there be any objection regarding selection, the Tenderer should lodge to the Bid Evaluation Committee within **02 Days (48 Hours)** from the date of publication of list of qualified agencies and beyond that time schedule no objection will be entertained by the Bid Evaluation Committee.
35. For technical qualification the Tender inviting authority may verify the credential, presence of machinery as required on due date and other documents if necessary. After verification if it is found that the documents, machineries, credentials submitted by the Tenderer :either not available, or manufactured or false, in that any such case their tenders may be rejected .
36. If any discrepancy arises between two similar clauses on different notification, the clause as stated in later notification will supersede former one in following sequence.
(1) Form No. 2911(ii), (2) NIE-Q, (7) Special terms & conditions, (4) Technical Specification, (5) Financial Bid.

37. Qualification criteria.

The Tender inviting and accepting authority, through a Bid Evaluation Committee, will determine the eligibility of each Tenderer. The bidders shall have to meet all the minimum regarding:-

- a) ***Financial Capacity.***
- b) ***Technical Capability comprising of personnel and equipment capability.***
- c) ***Experience/Credential***

The eligibility of a Tenderer will be ascertained on the basis of the digitally signed documents in support of the minimum criteria as mentioned in (a), (b) and (c) above and the declaration executed **through prescribed affidavit in non-judicial stamp paper of appropriate value duly notarized.** If any document, submitted by a Tenderer, is either manufacture or false, in such cases the eligibility of the Tenderer will be out rightly rejected at any stage without any prejudice.

38. The Contractor has to submit the work programme i.e. Bar Chart at the time of making formal agreement.
39. The contractor undertakes to have the site clean, free from all surplus materials, rubbish etc. upto the satisfaction of the Engineer-in-Charge. All surplus materials, rubbish, etc. will have to be removed to the places fixed by the Engineer-in-Charge and nothing extra will be paid upto a lead of 75 mtr. from the work site.

**Superintending Engineer,
Circle-I, R&B Sector, KMDA**

Copy with the copy of Notice Inviting Tender is forwarded for information to:

1. The Deputy Secretary, Public Relation Cell, KMDA (please find 4(four) Copies of this NIT for Publication in Leading dailies and website of KMDA.
2. The Chief Engineer, R&B, KMDA.
3. The Director of Finance, KMDA
- 4-7. The Superintending Engineer, II / III / IV / V, T&T Sector, KMDA
8. The A.C.F.A., R&B Sector, KMDA
9. The Executive Engineer, North Division, R&B, KMDA
10. The Junior Engineer, R&B, Circle-I, KMDA
11. Notice Board.

***Superintending Engineer,
Circle-I, R&B Sector, KMDA***

**SECTION –
B FORM –I
TECHNICAL PRE QUALIFICATION
APPLICATION**

**(To be furnished ONLINE on the authentic official letterhead of
the bidder)**

To
The Superintending Engineer
Circle- I, R&B
Sector,KMDA

Ref: - Tender

for _____
_____ (Name of work) _____

**Quotation .No.:(Sl. No.) of 2022-23 of Superintending Engineer, Circle-1, R&B
Sector,KMDA**

Dear Sir,

Having examined the Statutory, Non statutory & IRT documents, I /we hereby submit all the necessary information and relevant documents for evaluation.

The application is made by me / us on behalf of _____ In the capacity _____ duly authorized to submit the order.

The necessary evidence admissible by law in respect of authority assigned to us on behalf of the group of firms for Application and for completion of the contract documents is attached herewith.

We are interested in bidding for the work(s) given in Enclosure to this

letter. We understand that:

(A) Tender Inviting & Accepting Authority/Engineer-in-Charge reserve the right to reject any application without assigning any reason.

Encl:- e-Filling:-

1. Statutory Documents
2. Non Statutory Documents

Date: -

Signature of applicant including title
and capacity in which application is made.

DECLARATION BY THE TENDERER

I/We have inspected the emergent site of work and have made myself/ourselves fully acquainted with local conditions in and around the site of work. I /We have carefully gone through the Notice Inviting Quotation and other tender documents mentioned therein along with the tender condition with Notice Inviting Quotation No.....(Sl. No.) of 2022-2023 of Superintending Engineer, Circle-I, R&B Sector, KMDA. I/We have also carefully gone through the 'Priced schedule of Probable Lumsum/Trunkey basis and Quantities Thereof'.

My/Our tender is offered taking due consideration of all factors regarding the local site conditions stated in this Detailed Notice Inviting Tender to complete the proposed dismantling work as per detailed (supplied during execution) drawings referred to above in all respects.

I/We promise to abide by all the stipulations of the contract documents and carry out and complete the work to the satisfaction of the department.

*I/We also agree to produce the mentioned Machineries , tools and plants, at our cost required for **the Dismantling work as required to qualify in technical bid being the work Emergent in nature.***

Signed by an authorized officer of the firm

Title of the officer

Name of the Firm with Seal

Date _____

SECTION –B
FORM -IIE
FINANCIAL STATEMENT
FOR AVERAGE ANNUAL TURN OVER

Information of audited financial statements for the last year to demonstrate the current soundness of the bidders financial position:

TO CALCULATE
AVERAGE ANNUAL TURN
OVER

A table containing value of annual turnover undertaken by the bidder during the last 5 years is as follows:

Sl No.	Year	Value of turnover
1	17-18	
2	18-19	
3	19-20	
4	20-21	
5	21-22	

<p>..... Signature, name and designation of authorized signatory For and on behalf of..... Name of the applicant</p>	<p>.....Name of the statutory Auditors Firm: Seal of the audit form: Signature, name and designation and membership no of authorized signatory</p>
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A table # containing value of all the existing commitments and completed during the next years (prescribed time completion of the works for which Bids are invited) is as follows:

Sl. No	Name of Work / Project	Name of the Employer	Percentage of participation of Bidder in project	Stipulated period of completion as per Agreement / LOA with the start date	Value of Contract as per Agreement / LOA Rs. -----	value of work Completed Rs. -----	Balance value of work to be completed Rs. -----	Anticipated date of completion	Financial liability to incurred for the said work/ project during the period of the subject contract Rs. -----
1	2	3	4	5	6	7	8	9	10

Note:

All the documents to be submitted in support of Annexure-A must be duly signed with seal by the applicant/bidder and authenticated by Statutory Auditor's firm.

<p>.....</p> <p>.....</p> <p>Signature, Name and designation of Authorized Signatory</p> <p>For and on behalf of</p> <p>.....</p> <p>(Name of the Applicant)</p>

SECTION – B

FORM –III

**AFFIDAVIT – “Y”
Annexure-IV**

**(To be furnished in Non – Judicial Stamp paper
of appropriate value duly notarized)**

1. I, the undersigned, declare that all the statements made in the attached documents in respect of mode ownership of machineries are true and correct.

Certified that required specified machineries for the works under this NIQ can be inspected on and from 30/12/2022 which can be immediately installed/mobilized at site.as per instruction of EIC subject to being the successful tenderer.

3. The undersigned also hereby certifies that neither our firm _____ nor any constituent firm had been debarred to participate in tender by any govt/semi govt during the last 5(five) years prior to the date of this NIT.
4. The undersigned understands and agrees that further qualifying information may be requested and agrees to furnish any such information at the request of the Department.
5. Certified that I have applied in the Tender in the capacity of individual/ as a partner of a firm.
6. Certified that I have access to or have available liquid assets (aggregate of working capital, cash-in-hand, uncommitted Bank Guarantees) and/ or credit facilities not less than 10 crore put to tender. In this respect, I have attached necessary documents with this application.
7. I, the undersigned do certify that all the statement mad in the attached documents are true and correct. If any declaration submitted is found/ascertain to be in correct/fabricated/misrepresented / fraudulent etc. accordingly tender will be liable to be cancelled / terminated immediately & I / my firm/ company shall also be liable to prosecuted under section 197, 199 & 200 of Indian Penal Code. 1860 along with section-71 & section-73 of Indian Information & Technology act 2008 & any other applicable law for the time being in force in addition to forfeiture of Earnest Money / Security Deposit.

Signed by an authorized officer of the firm

Title of the officer

Name of the Firm with Seal

Date_____

SECTION - B
FORM-IV

STRUCTURE AND ORGANISATION

A.1 Name of applicant

A.2 Office Address

Phone & Mobile No

E-Mail Id

(Updated Mobile No., E-mail ID
On Firm's Letter Head)

A.3 Name and address of Bankers

A.4 Attach an organization chart showing the structure of the company with names of Key personnel and technical staff with Bio-data.

Note: Application covers Proprietary Firm, Partnership, Limited Company or Corporation,

Signature of applicant including title
and capacity in which application is made.

SECTION –B
FORM – V

C. DEPLOYMENT OF MACHINERIES FOR dismantling of BRIDGE WORKS:-
(Original document of *Own* possession to be annexed)

Note:-

Name of Machine	Make	Type	Capacity	Motor / Engine No.	Machine No.	Possession Status		Date of release If Engaged	Machine situated at with address
						Idle	Engaged		
1	2	3	4	5	6	7	8	9	10

For each item of equipment the application should attach copies of ;tax invoice

Signature of applicant including title
and capacity in which application is made

SECTION –B
FORM – V (Cont.)

I, the undersigned, declare that all the statements made in the attached documents in respect of mode of ownership of machineries are true and correct.

Certified that required specified machineries for the works under this NIQ will be installed at the working site within 07 days (maximum) from the date of LOA / work order.

The undersigned also hereby certifies that neither our firm -----
----- nor any constituent firm had been debarred to participate in tender by govt/semi govt/state/central govt/ during the last 5 (five) years prior to the date of this NIQ.

The undersigned understands and agrees that further qualifying information may be requested and agrees to furnish any such information at the request of the Department.

Certified that I have applied in the Tender in the capacity of individual / as a partner of a firm and I have not applied severally for the same job.

Certified that I have applied in the tender in the capacity of individual / as a partner of a firm

Certified that I have access to or have available liquid assets (aggregate of working capital, cash-in-hand, uncommitted Bank Guarantees) and / or credit facilities not less than 10% of the estimated cost put to tender. In this respect, I have attached necessary documents with this application.

I, the under-signed do certify that all the statements made in the attached documents are true and correct. If any declaration submitted is found / ascertain to be incorrect/ fabricated/ misrepresented/ fraudulent etc. accordingly tender will be liable to be cancelled/ terminated immediately & I/ my firm/ company shall also be liable to prosecuted under section 197, 199 & 200 of Indian penal Code, 1860 along with section -71 & section – 73 of Indian information & Technology act 2008 & any other applicable law for the time being in force in addition to forfeiture of Earnest Money/ Security Deposit.

Signed by an authorized officer of the firm

Title of the officer

Name of the firm with seal

Date _____

**SECTION – B FORM –
VI EXPERIENCE
PROFILE**

Name of the Firm:

D.1 LIST OF PROJECTS COMPLETED THAT ARE SIMILAR IN NATURE:

Name of Employer	Name, Location & nature of work	Name of Consulting Engineer responsible for supervision	Contract price in Indian Rs.	Percentage of Participation of company	Original Date of start of work	Original Date of completion of work	Actual Date of starting the work	Actual Date of completion of work	Reasons for delay in completion (if any)

Note: a) Certificate from the Employers to be attached

b) Non-disclosure of any information in the Schedule will result in disqualification of the firm

**Signature of applicant including title
and capacity in which application is made**

Special terms and conditions

C.1 General :

Unless otherwise stipulated all the works are to be done as per general conditions and general specifications as mentioned either in—

(i) 'Departmental Schedule', which means the Public Works (Roads) Department Schedule of Rates for Road works, Bridge & Culvert Works and Carriage etc. in different district of West Bengal for the working area including up-to-date addenda and corrigenda, if any, issued by the Superintending Engineer, Bridge Planning Circle, or in

(ii) Latest edition of the book of name 'Specification for Road and Bridge Works' of the M.O.R.T. & H., Surface Transport (Roads Wing), Government of India, published by Indian Roads Congress, New Delhi, for the specification of various works.

For general conditions and general specifications of items of works including supply and carriage works, not appearing in the aforesaid two specification books, relevant Public Works Department Schedule of Rates for Building Works and Materials & Labour in force including up-to-date addenda and corrigenda, if any, issued from competent authority as applicable for the working area of concern Western Highway Circle at the time of submission of tender for the working area will be considered.

C.2 Definition of Engineer-in-Charge and commencement of work :

The word "Engineer-in-Charge" means the Executive Engineer, Roads& Bridges Sector, KMDA of the concerned Division. The word "Department" appearing anywhere in the tender documents means R&B Sector, KMDA, who have jurisdiction, administrative or executive, over part of whole of the works forming the subject matter of the tender or contract. The word "approved" appearing anywhere in the documents means approved by the Engineer-in-Charge. In case, the work is transferred to any other Division, the Executive Engineer under whom the work will be executed should be treated as the Engineer-in-Charge. The work shall have to be taken up within seven days of the receipt of the work order or otherwise mentioned therein. Failure to do so will constitute a violation of the contract stipulation as regards of proportionate progress and timely completion of work and the contractor will thereby make himself liable to pay compensation or other penal action as per stipulation of the printed tender form.

C.3 Terms & Conditions in extended period :

As Clause 5 of W.B.F. No. 2911 (ii) as the case may be when an extension of time for completion of work is granted by the Engineer-in-Charge against proper reasoning's, it will be taken for granted by the working contractor that the validity of the contract is extended automatically upto the extended period with all terms and conditions rates etc. remaining unaltered, i.e. the tender is revalidated upto the extended period.

[Except in case of adjustment of price for increase or decrease of basic materials which is

guided by relevant G.O. s stated in Cl. No. 9 of NIT]

C.4 Co-operation with other agencies and damages and safety of road users :

All works are to be carried out in close co-operation with the Department and other contract or contracts that may be working in the area of work. The work should also be carried out with due regard to the convenience of the road users and occupants of the adjacent locality, if any. All arrangements and programme of work must be adjusted accordingly. All precautions must be taken to guard against chances of injury or accidents to workers, road users, occupants of the adjacent locality etc. The contractor must see that all damages to any property which, in the opinion of the Engineer-in-Charge are due to the negligence of the contractor are promptly rectified by the contractor at his own cost and expenses and according to the direction and satisfaction of the Engineer-in-Charge.

C.5 Transportation arrangement :

The contractor shall arrange for all means of transport including railways wagons required for carriage and supply of materials and also the materials required for the construction work. The Department may however, at their own discretion grant necessary certificates, if required, for booking of railways wagons etc. But, in case of failure of the department to help the contractor in this respect, the contractor will have arrange at his own initiative so that progress of work will not hamper and no claim whatever on this ground will be entertained under any circumstances. If railways facilities are not available, the contractor will have to depend on transport of materials by road as necessary to complete the work without claiming any extra payment from department in this regard. The contractor must consider this aspect while quoting rate.

C.6 Contractor's Site Office :

The contractor shall have an office adjacent to the work as may be approved by the Engineer-in-Charge where all directions and notice of any kind whatsoever, which the Engineer-in-Charge or his representative may desire to give to the contractor in connection with the contract, may be left or sent by post to such office or delivered to the contractor's authorised agent or representative. For such intimation to the contractor's site office, it shall be deemed to the sufficient enough to be served upon the contractor.

C.7 Incidental and other charges :

The cost of all materials, hire charges to Tools and plants, labour, Corporation/Municipal Fees for water supply, Royalty or road materials (if any), electricity and other charges of Municipalities or statutory local bodies, ferry charges, Toll charges, loading and unloading charges, handling chargers, overhead

charges etc. will be deemed to have been covered by the rates quoted by the contractor inclusive of also Sales Tax (Central and/or State), Income Tax, Octroi Duty/Terminal Tax, Turnover Tax, VAT etc. All other charges for the execution of the specified work, including supply of materials and related carriage, complete or finished in all respect upto the entire satisfaction of the Engineer-in-charge of the work. No claim extra claim in this regard

beyond the specified rate as per work schedule whatsoever in this respect will be entertained.

C.8 Authorised Representative of Contractor :

The contractor shall not assign the agreement or sublet any portion of the work. The contractor, may however, appoint and authorized representative in respect of one or more of the following purpose only.

- a) General day to day management of work.
- b) To give requisition for Departmental materials, Tools & Plants etc. to receive the same and sign hand receipts thereof.
- c) To attend measurements when taken by the Departmental Officers and sign the records of such measurements which will be taken of acceptance by the contractor.

The selection of the authorized representatives shall be subject to the prior approval of the Engineer-in-Charge concerned and the contractor shall in writing seek such approval of the Engineer-in-Charge giving therein the name of work, Tender No., the Name, Address and the specimen signature of the representative he wants to appoint and the specific purposes as specified here-in-above, which the representative will be authorized for. Even after first approval, the Engineer-in-Charge may issue at any subsequent date, revised directions about such authorized representative and the contractor shall be bound to abide by such directions. The Engineer-in-Charge shall not be bound to assign any reason for his revised directions. Any notice correspondence etc. issued to the authorized representative or left at his address, will be deemed to have been issued to the contractor.

C.9 Power of Attorney :

The Provision of the power of attorney, if any, must be subject to the approval of the Department. Otherwise the Department shall not be bound to take cognizance of such of attorney.

C.10 Extension of time :

For cogent reasons over which the contractor will have no control and which will retard the progress, extension of time for the period lost will be granted on receipt of application from the contractor before the expiry date of contract. No claim whatsoever for idle labour, additional establishment, cost of materials and labour and hire charges of tools & plants etc. would be entertained under any circumstances. The contractor should consider the above factor while quoting this rate. Applications for such extension of time should be submitted by the contractor in the manner indicated in Clause-5 of the printed form of W.B.F. No.2911 (ii).

C.11 Contractor's Godown :

The contractor must provide suitable godowns for cement and other materials at the site of work. The cement godown is to be sufficient in capacity and it must be water tight with either an elevated floor with proper ventilation arrangement underneath the floor or if solid raised flooring is made, cement is to be stored on bamboo or timber dunnage to the satisfaction of the Engineer-in-Charge. No separate payment will be made for these godowns or for the store yard. Any cement, which is found at the time of use to have been damaged, shall be rejected and must immediately to remove from the site by the contractor as per directed of the Engineer-in-Charge.

C.12 Arrangement of Land :

The contractor will arrange land for installation of his Plants and Machineries, his godown, storeyard, labour camp etc. at his own cost for the execution of the work. Departmental land, if available and if applied for, may be spared for the purpose on usual charges as fixed by the Engineer-in-charge.

C.13 Use of Government Land :

Before using any space in Government land for any purpose whatsoever, approval of the Engineer-in-charge will be required. Departmental land, if available and if applied for, may be spared for the purpose on usual charges as fixed by the Engineer-in-charge. The contractor shall make his own arrangements for storage of tools, plant, equipments; materials etc. of adequate capacity and shall clear and remove on completion of work and shed, huts etc. which he might have erected in Government land. If after such use, the contractor failed to clear the land, Department will arrange to remove those installation and adequate recovery will be made from the dues of the contractor.

C.14 Work Order Book :

The contractor shall within seven days of receipt of the order to take up work, supply at his own cost one Work Order Book to Sub-Divisional Officer/Assistant Engineer Concerned, who is authorized to receive and keep in custody the Work Order Book on behalf of the Engineer-in-Charge. The Work Order Book shall be kept at the site of work under the custody of Sub-Divisional Officer/Assistant Engineer or his authorized representative. The Work Order Book shall have machine numbered pages in triplicates. Directions or instruction from Departmental officers to be issued to the Contractor will be entered (in triplicate) in the Work Order Book (except when such directions or instructions are given by separate letters). The contractor or his authorized representative shall regularly note the entries made in the Work Order Book and also record thereon the action taken or being taken by him complying with the said directions or instruction on any relevant point relating to the work. The contractor or his authorized representative may take away the triplicate page of the Work Order Book for his own record and guidance. Cases of supplementary items or of claims may not be entertained unless supported by entries in the Work Order Book or any written order from the Tender Accepting Authority.

The first page of the Work Order Book shall contain the following particulars:

- a) Name of the Work
- b) Reference to contract number
- c) Contractual rate in percentage
- d) Date of opening of the Work Order Book
- e) Name and address of the Contractor
- f) Signature of the Contractor
- g) Name & address of the Authorized representative (if any of the contractor authorized by him)
- h) Specific purpose for which the contractor's representatives is authorized to act on behalf of the Contractor.
- i) Signature of the authorized representative duly attested by the Contractor.
- j) Signature of the Sub-Divisional Officer/Assistant Engineer concerned.

K) DATE OF ACTUAL COMPLETION OF WORK.

L) DATE OF RECORDING FINAL MEASUREMENT.

Entries in (k) & (l) above shall be filled in on completion of the work and before the Work Order Book is recorded in the office of the Sub-Divisional Officer/Assistant Engineer.

C.15 Clearing Of Materials :

Before starting any work, work site, where necessary, must be properly dressed after cutting clearing all varieties of jungles shrubs, bamboo clusters or any undesirable vegetation from the alignment or site of works on completion of works all temporary structure or obstruction including some pipes in underground work, if any, must also be removed. All scars of construction shall be obliterated and the whole site shall be left in a clear and neat manner to the satisfaction of the Engineer-In-Charge. Total length (in case of road project) shall be demarcated by proper chainaging an on with fixing 200m post as per direction of Engineer-in-Charge on both side of the alignment and Bench Marking at desired locations as per direction of Engineer-in-Charge. No separate payment shall be made for all these works, the cost thereof being deemed to have been included in the rates of various items of works quoted by the contractor in the schedule of probable items of works.

C.16 Sundry Materials :

The contractor must erect temporary pillars, master pillars etc. as may be required in suitable places as directed by the Engineer-In-Charge at his own cost before starting and during the work by which the departmental staff will check levels layout different works and fix up alignment and the contractor shall have to maintain and protect the same till completion of the work. All machineries and equipments like Level Machine, Staff, Theodolite etc. and other sundry material like, pegs, strings, nails flakes instruments etc. and also skill labour require for setting out the levels for laying out difference structures and alignment shall also be supplied by the contractor as per direction of Engineer-in-Charge at his own cost without any extra claim towards the department.

C.17 Supplementary / Additional items of Works :

Notwithstanding the provisions made in the related printed tender form any item of the work which can be legitimately be considered as not stipulated in the specific price schedule of probable items of work but has become necessary as a reasonable contingent item during actual execution of work will have to be done by the Contractor, if so directed by the Engineer-in-Charge and the rates will be fixed with manner as stated below: -

(a) Rate of supplementary items shall be analysed to the maximum extend possible from rates of the allied items of work appearing in the P.W. (Roads) Department schedule of rates of probable items of work forming part of tender document Rates for the working area enforce at the time of N.I.T.

(b) In Case, extra items do not appear in the above Public Works Department Schedule of Rates, such items for the works shall be paid at the rates entered in the Public Works Department Schedule of Rates for the working area enforce at the time of N.I.T.

(c) If the rates of the supplementary items cannot be computed even after applications of clauses stated above, the same shall be determined by analyses from market rates of material, labour and carriage cost prevailing at the time of execution of such items work. Profit and overhead charges (both together) at 10% (Ten percent) will be allowed only; the contractual percentage will not be applicable.

Black-market rates shall never be allowed.

Contractual percentage shall only be applicable with regard to the portions of the analysis based on clauses (a) & (b) stated above only.

It may be noted that the cases of supplementary items of claim shall not be entertained unless supported by entries in the Work Order Book or any written order from the tender accepting authority.

C.18 Covered up works :

When one item of work is to be covered up by another item of work the latter item shall not be done before the formal Item has been measure up and has been inspected by the Engineer-in-Charge or the Sub-Divisional Officer/Assistant Engineer, as the authorized representatives of the Engineer-in-Charge and order given by him for proceeding with the latter item of work. When however, this is not possible for practical reasons, the Sub-

Assistant Engineer, if so authorized by the Sub-Divisional Officer/Assistant Engineer may do this inspection in respect of minor works and issue order regarding the latter item.

C.19 Approval of Sample :

Samples of all materials to be supplied by the contractor and to be used in the work shall have to be approved by the Engineer-in-Charge and checking the quality of such materials shall have to be done by the concerned Department or as directed by Engineer-in-Charge prior to utilization in the work.

C.20 Water and energy :

The contractor shall have to arrange on his own cost, required energy for operation of equipments and machineries, for operating of pumping set, illuminating work site, office etc. that may be necessary in difference stages of execution of work. No facility of any sort will be provided for utilization of the departmental sources of energy existing at site of work. Arrangement for obtaining water for the work should also be made by the contractor at his own cost. All cost for getting energy and / or for any purpose whatsoever will have to be borne by the contractor for which no claim will be entertained.

All materials, tools and plants and all labour (skilled and unskilled) including their housing, water supply, sanitation, light, procurement of food for contractors staff & crews, medical aids etc. are to be arranged for by the contractor at his own cost. The cost for transportation of labour, materials and all other incidental items as required for work shall also have to be borne by the Contractor without any extra claim from department.

C.21 Road opened to traffic :

It should be clearly understood that the contractor will be responsible to keep the road open to all kinds of traffic during execution of the work. The work should be so arranged and the programmed of work must be as adjusted as would not disturb the smooth flow of road traffic in any way. If necessary diversion road should be provided and maintained by the contractor at his own cost for the entire period of work, if not separately provided in the tender. The Contractor should take all necessary precautions including guarding, lighting and barricading as necessary, to guard against the chances of injury or accident to the road user and traffic and ferry users during execution of the work for which nothing extra will be paid except otherwise mentioned in specific price schedule. The contractor will also indemnify the Department against consequences of any such injury or accident, if so happens, as per opinion of the Engineer-in-Charge, due to contractor's fault in compliance with any of such obligations.

Suitable road sign as and where necessary should be provided by the contractor at his own cost as per direction of the Engineer-in-charge and shall also be maintained till the completion of the work. Road barriers with red light at night are to be placed where the existing surface is disturbed with proper road signs. All these shall be done at the cost of

the contractor without any extra claim towards department.

C.22 Drawings :

All works shall be carried out in conformity with the drawings supplied by this Department. The Contractor shall have to carry out all the works according to the departmental General Arrangement Drawing and Detail Working Drawings to be supplied by the Department from time to time.

C.23 Serviceable Materials :

The responsibility for stacking the serviceable materials (as per decision of the Engineer-in-Charge) obtained during dismantling of existing structures/roads and handing over the same to the Engineer-in-charge of work of this Department lies with the contractor and nothing will be paid on this account. In case of any loss or damage of serviceable materials prior to handing over the same to this Department, full value will be recover from the Contractor's bill at rates as will be assessed by the Engineer-in-charge.

C.24 Unserviceable Materials :

The Contractor shall remove all unserviceable materials, obtained during execution at place as directed. The contractor shall dressed up and clear the work site after completion of work as per direction of the Engineer-in-Charge. No extra payment will be made on this account.

C.25 Contractor's risk for loss or damage :

All risk on account of railway or road carriage or carriage by boat including loss or damage of vehicles, boats, barges, materials or labour, if any, will have to be borne by the contractor without any extra claim towards department.

C.26 Idle labour & additional cost :

Whatever may be the reason no claim on idle labour, enhancement of labour rate additional establishment cost, cost of Toll and hire and labour charges of tools and plants, railway freight etc. would be entertained under any circumstances.

C.27 Charges and fees payable by contractor :

a) The contractor shall pay all fees required to be given or paid by any statute or any regulation or by-law of any local or other statutory authority which may be applicable to the works and shall keep the department against all penalties and liabilities of every kinds for breach of such statute regulation or law.

b) The Contractor shall save, harmless and indemnify the department from and against all claims, demands, suit and proceedings for or an account of infringement of any patent rights, design, trade mark of name of other protected write in respect of any

constructional plant, machine, work, materials, thing or process used for or in connection with works or temporary works or any of them.

C.28 Issue of Departmental Tools and Plants :

All Tools and Plants required for the work will have to be supplied by the Contractor at his own cost; all cost of fuel and stores for proper running of the Tools and Plants must be borne by the Contractor.

C.29 Realization of Departmental claims :

Any some of money due and payable to the contractor (including security deposit returnable to him) under this contract may be appropriated by the Government and set off against any claim of Government for the payment of sum of money arising out of this contract or under any other contract made by the contractor with the Government.

C.30 Compliance of different Acts :

The contractor shall comply with the provisions of the Apprentices Act, 1961, Minimum Wages Act, 1848. Contract Labour (Regulation and Abolition) Act 1970 and the rules and orders issued hereunder from time to time. If he fails to do so, Engineer-in-Charge or Superintending Engineer of the concern Circle of P.W. (Roads) Directorate may at his discretions, take necessary measure over the contract.

The Contractor shall also make himself for any pecuniary liabilities arising out on account of any violation of the provision of the said Act(s). The Contractor must obtain necessary certificate and license from the concerned Registering Office under the Contract Labour (Regulation & Abolition) Act, 1970.

The contractor shall be bound to furnish the Engineer-In-Charge all the returns, particulars or date as are called for from time to time in connection with implementation of the provisions of the above Acts and Rules and timely submission of the same, failing which the contractor will be liable for breach of contract and the Engineer-in-Charge may at his discretion take necessary measures over the contract.

C.31 Safety, Security and Protection of the Environment :

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

(a) have full regard for the safety of all persons and the Works (so far as the same are not completed or occupied by the department),

(b) provide and maintain at his own cost all lights, guards, fencing, warning signs and watching, when and where necessary or required by the Engineer-in-Charge for the protection of the Works or for the safety and convenience of the public or others,

(c) take all reasonable steps to protect the environment on and off the Site and to avoid damage or nuisance to persons or to property of the public or others resulting from pollution, noise or other causes arising as a consequence of his methods of operation,

(d) ensure that all lights provided by the Contractor shall be screened so as not to interfere with any signal light of the railways or with any traffic or signal lights of any local or other authority.

C.32 Commencement of work :

The work must be taken up within the date as stipulated in the work order and completed in all respects within the period specified in Notice Inviting Tender.

C.33 Programme of work :

Before actual commencement of work the contractor shall submit a programme of construction of work clearly showing the required materials, men and equipment. The contractor will submit a programme of construction in the pattern of Bar Chart or Critical Path Method and a time table divided into four equal periods of progress of work to complete the work within the specific period for approval of the Engineer-In-Charge who reserves the right to make addition, alterations and substitutions to such programme in consultation with the contractor and such approved programme shall be adhered to by the contractor unless the same is subsequently found impracticable in part or full in the opinion of the Engineer-In-Charge and is modified by him. The contractor must pray in writing, showing sufficient reasons therein for modification of programme. The conditions laid down in clause 2 of the printed tender form regarding the division of total period and progress to work and the time table there for as provided in the said clause shall be deemed to have been sufficiently complied with the actual progress of work and does not fall short of the progress laid down in the approved time table for one fourth, half and three fourth of time allowed for the work.

C.34 Setting out of the work :

The contractor shall be responsible for the true and perfect setting out of the work and for the correctness of the position, levels, dimensions and alignments of all parts of work, if any rectification or adjustment becomes necessary the contractor shall have to do the same at his own cost according to the direction of the Engineer-in-Charge. During progress of works, if any, error appears or arises in respect of position, level, dimensions or alignment of any part of the work contractor shall at his own cost rectify such defects to the satisfaction of the Engineer-in-Charge. Any setting out that may be done or checked by either of them shall not in any way relieve the contractor from their responsibility for

correctness and rectification thereof.

C.35 Precautions during works :

The contractor shall carefully execute the work without disturbing or damaging underground or overhead service utilities viz. Electricity, Telephones, Gas, Water pipes, Sewers etc. In case disturbances of service utilities is found unavoidable the matter should immediately be brought to the notice of the Engineer-in-Charge and necessary precautionary measures as would be directed by the Engineer-in-Charge shall be carried out at the cost and expenses of the contractor. If the service utilities are damaged or disturbed in any way by the contractor during execution of the work, the cost of rectification or restoration of damages as would be fixed by the Engineer-in-Charge concerned will be recovered from the contractor.

C.36 Testing of qualities of materials & workmanship :

All materials and workmanship shall be in accordance with the specifications laid down in the contract and also as per M.O.R.T. H's specification for Road and Bridge Works (Latest Revision) and relevant IS codes and the Engineer-In-Charge reserves the right to test, examine and measure the materials/workmanship direct at the place of manufacture, fabrication or at the site of works or any suitable place. The contractor shall provide such assistance, instrument, machine, labour and materials as the Engineer-in-Charge may require for examining, measuring and testing the works and quality, weight or quantity of materials used and shall supply samples for testing as may be selected and required by the Engineer-in-Charge without any extra cost. Besides this, he will carry out tests from outside Laboratory as per instruction of Engineer-in-Charge. The cost of all such tests shall be borne by the agency and that must be considered during quoting rate.

C.37 Timely completion of work :

All the supply and the work must have to be completed in all respects within the time specified in Notice Inviting Tender from the date of commencement as mentioned in work order. Time for completion as specified in the tender shall be deemed to be the essence of the contract.

C.38 Procurement of materials :

All materials required to complete execution of the work shall be supplied by the contractor after procurement from authorised and approved source.

C.39 Rejection of materials :

All materials brought to the site must be approved by the Engineer-In-Charge. Rejected materials must be removed by the Contractor from the site within 24 hours of the issue of order to that effect. In case of non-compliance of such order, the Engineer-In-Charge shall have the authority to cause such removal at the cost and expense of the contractor and the contractor shall not be entitled to claim for any loss or damage of that account.

C.40 Implied elements of work in items :

Except of such items as are included in the Specific Priced Schedule of probable items and approximate quantities no separate charges shall be paid for traffic control measures, shoring, shuttering, dewatering, curing etc. and the rates of respective items or works are to be deemed as inclusive of the same.

C.41 Damaged cement :

Any cement lying at contractor's custody which is found at the time of use to have been damaged shall be rejected and must immediately be removed from the site by the contractor or disposed of as directed by Engineer-in-Charge at the costs and expenses of the contractor.

C.42 Issue of Departmental Materials :

Departmental materials will not be issued under any circumstances.

C.43 Force Closure :

In case of force closure or abandonment of the works by the Department the contractor will be eligible to be paid for the finished work and reimbursement of expenses actually incurred but not for any losses.

C.44 Tender Rate :

The contractor should note that the tender is strictly based on the rates quoted by the Contractor on the priced schedule of probable item of work. The quantities for various other items of works as shown in the priced schedule of probable items of works are based on the drawing and design prepared by the Department. If variations become necessary due to design consideration and as per actual site conditions, those have to be done by the contractor at the time of execution at the rate prescribed in the tender condition. **No conditional rate will be allowed in any case.**

C.45 Delay due to modification of drawing and design :

The contractor shall not be entitled for any compensation for any loss due to delays arising out of modification of the work and due to non-delivery of the possession of site, if any.

C.46 Additional Conditions :

A few additional conditions under special terms and conditions :

C.48.1. Rate quoted shall be inclusive of clearing site including removal of surplus (both serviceable & unserviceable) earth, rubbish, materials etc. as per direction of the Engineer-in-Charge.

C.48.2. Rate quoted shall be inclusive of West Bengal Sales Tax, Income Tax Octroi and all other duties, if any.

C.48.3. Display board (Informatory) of size 150cm X 90cm is to be provided at starting and end chainage of the work-site with aluminum plate hoisted on steel tubular pipe/ angle post to a height of 1.5 Metre at the cost of the contractor including fitting, fixing, painting, lettering etc. complete as per direction of Engineer-in-Charge.

C.48.4. The Contractor is to display caution board maintaining I.R.C. norms at his own cost as per direction of Engineer-in-Charge.

C.48.5. Deep excavation of trenches and left out for days shall be avoided.

C.48.6. Labour welfare Cess will be deducted @ 1(one) % of gross bill value as per rule.

C.48.7. The whole work will have to be executed as per Departmental drawings available in this connection at the tender rate.

C.48.8. Income Tax Will be deducted from each bill of the contractor as per applicable rate and rules in force.

C.48.9. In accordance with the West Bengal Taxation Laws (amendment) Ordinance, 1993 amending the West Bengal Finance (Sales Tax) Act, 1994 necessary S.T / VAT will be deducted as per rate in force from the bill in addition to other deduction as per extent rules.

C.47 Payment of Bills :

As mentioned in clause 5 of the NIT

C.48 Refund of Security Deposit :

As mentioned in Cl. 18 of NIT.

C.49 Arbitration :

As mentioned Cl. 6 of NIT

C.50 Penalty for suppression / Distortion of Facts :

If any tenderer fails to produce the original hard copies of the documents (especially Completion Certificates and audited balance sheets), or any other documents on demand of the Tender Inviting Authority or

Screening Committee within a specified time frame or if any deviation is detected in the hard copies from the uploaded soft copies or if there is any suppression, the tenderer will be suspended from participating in the tenders on e-Tender platform for 3 (Three) years period. In addition, his user ID will be deactivated and Earnest Money Deposit will stand forfeited. Besides, it may be construed as an attempt to disturb the tendering process and shall be dealt with accordingly legally against such defaulting tenderers. Such tenderers may even be debarred from taking part in future bids under P.W.(Roads) Directorate for a period of two years. Any intending bidder who have failed to execute more than one works contract under any directorate of this department and was terminated by any sub rule under Clause 3 of tender from No.

2911(ii) or terminated under any clause of standard bidding document by the Engineer In-Charge / Employer during last 3 (Three) years will not be eligible to participate in any bid under any directorate under this department for another two years from the date of imposition of last termination notice by the Engineer In- Charge / Employer.

In the event of taking penal measures of suspension and debarment of suppliers, contractors and consultants who are participating in the tender process for their false declaration or forgery or falsification of records submitted or failure to execute committed contract or for their failure to perform contractual obligations and thereby resulting delay in execution of the public works or execution of faulty works, detailed guidelines for

such action will be followed as per Govt. Order vide memo no. 547-W(C)/1M-387/15 dated-16.11.2015

SECTION - D

Special Specification for Road Works

D.1 Name of Work :

As per Detailed NIT

D.2 Site Condition :

The contractor before tendering must visit the site and satisfy himself as to the extent of the proposed construction difficulties and problems, if any, to start, to continue and complete the work within the time as stipulated in this tender without dislocation of normal traffics during day as well as to night. No interruption in works due to any site condition shall be engaged as to complete the work in time. The execution of the work should however be planned and phased so that there are no undue hazards to the movement of normal traffic over the road. No additional payment will be entertained on this account.

Difficulties and inconveniences in transporting materials over the bad roads, Kutcha roads, incomplete roads and over the weak and damaged culverts

should be taken into consideration by the Contractor. The materials for the work may be required to carry over kutchra roads. These approach roads should be maintained by the Contractor at his own cost.

Difficulties in collection of different materials in lot, over the road flank due to insufficient space if there be, should be noted by the bidder. No rate or time will be allowed on these accounts as stated. The bidder should quote his rate taking into consideration regarding security of the materials. Nothing would be entertained under any circumstances beyond the respective tendered provisions.

D.3 Preliminaries :

During execution of the work contractor will remain responsible for providing reasonable facilities to traffic on the road and also lighting and guarding of the road during night for its safety while the work is in progress and no extra rate will be paid on this account before taking up the work.

Approximately half of the road width including one flank shall be kept clear to the traffic from all obstruction and the surface shall be properly cleaned and leveled as far as possible.

Sign Boards / Direction Boards are to be erected at required points of specified size indicating in red letters on a white back ground as per direction of the Engineer-in-charge. Cost of which should be born by he agency.

Road barriers shall be placed wherever the existing road surface disturbed with proper' road signs. During night, these should be provided with the light, Night

Guard e.g. 'Chowkidar' for watching the barrier etc. shall also be maintained by the Contractor to give due warning to road users specially at night.

D.1 Embankment & Sub-Grade :

(As per **clause-305** of "Specification for Road and Bridge Works of MORTH')

D.1.1 Scope:

The top 500 mm of the road embankment over the entire formation width and directly supporting the road pavement will be termed as 'Sub-Grade'.

D.1.2. Compaction :

Each layer of the material shall be thoroughly compacted to the densities as specified in tender. Subsequent layers shall be placed only after the finished layer has been tested and accepted by the Engineer-in-Charge.

D.1.3 Density & Compaction requirements

for embankment and sub-Grade: (following table as guideline)

Type of work/material		Maximum laboratory dry unit weight (tested as per IS:2720(Pt-8))	Relative compaction as percentage of maximum laboratory dry density (As per IS: 2720 (Pt-8))
1	Embankment :	(i) Embankment height upto 3m not subjected to extensive flooding	1.52 gm/cc
		(ii) Embankment height exceeding 3m subjected to extensive flooding	1.60 gm/cc
2	Sub-grade and earthen shoulder/ verges/ backfill :	-----	1.75 gm/cc
3	Expensive clays	(i) Sub-grade and 500mm portion below sub-grade	-----
		(ii) Remaining portion of embankment	-----

When density measurement reveals any soft areas in the embankment/sub-grade earthen shoulder (verge), further compaction shall be carried out as directed by the Engineer. In spite of that, the specified compaction is not achieved, the materials in the soft areas shall be removed replaced by approved materials, compacted to the density requirements and satisfaction of the

Engineer.

D.1.4 Drainage :

The surface of the embankment/sub-grade at all times during construction shall be maintained at such a cross fall (not flatter than that required for effective drainage of an earthen surface) as will shed water and prevent ponding.

D.2 Granular Sub-Base & Base :

(As per **clause-401 & 404** of 'Specification for Road and Bridge Works of MORTH')

D.2.1 Granular Sub-Base :

D.2.1.1 Scope:

The work shall consist of laying and compacting well graded materials on prepared sub-grade in accordance with the requirement as per specifications. The material shall be laid in one or more layers as sub-base or lower sub-base and upper sub-base as necessary according to lines, grades and cross sections as shown on the drawings or as directed by the Engineer-in-Charge.

D.2.1.2 Materials :

The materials to be used for the work shall be natural sand, muram, gravel, crushed stone, or combination thereof depending upon the grading requirement. Materials like crushed slag, crushed concrete, brick metal and kankar may be allowed only with the specific approval of Engineer-in-Charge. The materials shall be free from organic or other deleterious constituents and conform to one of three grading as stipulated.

D.2.1.3 Physical Requirements aggregates :

The material shall have a 10% fines value of 50KN or more (for sample in soaked condition & tested in compliance with BS: 812, Pt.-111). The water absorption of coarse aggregate shall be determined as per IS: 2386, Pt.-3 and if this value greater than 2%, soundness test shall be carried out as per IS: 383. For Grading-II & Grading-III materials, the CBR shall be determined at the density and moisture content likely to be developed in equilibrium conditions which shall be taken as being the density relating to a uniform air void content of 5%.

D.2.1.4 Grading of materials :

D.2.1.4.1 For Closed Graded G.S.B :

IS Sieve Designation	Percentage by weight passing the IS Sieve		
	Grading - I	Grading - II	Grading - III
75 mm	100	----	----
53 mm	80-100	100	----
26.5 mm	55-90	70-100	100
9.5 mm	35-65	50-80	65-95
4.75 mm	25-55	40-65	50-80
2.36 mm	20-40	30-50	40-65
425	10-25	15-25	20-35
75	3-10	3-10	3-10
Minimum CBR Value	30	25	20

D.2.1.4.2 For Coarse Graded G.S.B :

IS Sieve Designation	Percentage by weight passing the IS Sieve		
	Grading - I	Grading - II	Grading - III
75 mm	100	----	----
53 mm	----	100	----
26.5 mm	55-75	50-80	100
9.5 mm	----	----	----
4.75 mm	10-30	15-35	25-45
2.36 mm	----	----	----
425	----	----	----
75	< 10	< 10	< 10
Minimum CBR Value	30	25	20

For both the gradations, the materials passing 425 sieve for all the three grading when tested according to IS : 2720, Pt.-5 shall have **Liquid Limit** not more than **25 percent** and **Plasticity Index** not more than **6 percent**.

D.2.1.5 Preparation of sub-grade & Preparation of mix :

Immediately prior to the laying of sub-base materials the sub grade shall be prepared by removing all vegetation and other extraneous materials, lightly sprinkled with water, if necessary, and rolling with one pass of at least 8-10 ton smooth wheeled roller to make the laying bed as per true line, level and cross-fall/ camber.

When the sub-base materials consists of combination of materials mentioned here-in-above, mixing shall be done mechanically by the mixing-place method, otherwise mixing shall be done as per direction of Engineer-in-Charge.

D.2.1.6 Spreading and compaction :

Spreading and compaction shall be done as per clause-401.4.2 of 'Specification for Road and Bridge Works of MORTH'. The sub-base material of grading as specified in the contract shall be spread on the prepared sub-grade by any approved method. The thickness of loose layers shall be so regulated that the minimum thickness of the layer after consolidation does not exceed 100 mm or as specified in the contract. Moisture content of the loose material may be checked where necessary, in accordance with IS: 2720 (Pt-2) and suitably adjusted by sprinkling water. After water has been added the materials shall be processed by approved means, if so directed by the Engineer in charge, until the layer is uniformly wet.

Immediately thereafter, rolling shall be started with at least 8-10 tonnes smooth wheeled Roller. Rolling shall commence at the edges and progress towards the center longitudinally except that on super-elevated portions where it shall progress from the lower to the upper edge parallel to the centerline of the pavement. Each pass of the roller shall uniformly overlap not less than one-third of the track made in the preceding pass. During rolling, the grade and cross fall shall be checked with the help of straight edge and camber board respectively and any high spots or depressions which become apparent, shall be corrected by removing or adding fresh material. Rolling shall be continued till the density achieved is at least 98% of the maximum dry density for the material determined as per IS: 2720 (Part-8). The surface of any layer of material on completion of compaction shall be well closed free from movement under compaction equipment and from compaction planes, ridges, cracks or loose material. All loose segregated or otherwise defective areas shall be made good to the full thickness of layer and re-compacted.

D.2.2 Jhama Metal Consolidation :

D.2.2.1 Scope:

This work consists of clean, crushed aggregates mechanically interlocked by rolling and bonded together with screening, binding material, where necessary and water laid on a prepared sub-grade/sub-base/ base or existing pavement, as the case may be and finished in accordance with the requirements of stipulated specifications and in conformity with the lines, grades, cross section and thickness as per approved plans or a

directed by the Engineer in charge.

D.2.2.2 Materials for Jhama Metal :

Jhama metal of size 40 mm to 70 mm shall be obtained by breaking good quality kiln burnt jhama bats, must not be spongy or with any coating of foreign materials, uniformly vitrified and heavily picked jhama brick and the colour should be copper red to black. The metal should be more or less cubical in shape.

D.2.2.3 Grading of materials & Physical requirement :

Grading of Jhama materials should conform to the following gradation or as directed by Engineer-in-Charge.

Grading Type	Size Range	IS Sieve Designation	Percentage by weight passing the IS Sieve
Grading-1	90mm to 45mm	125 mm	100
		90 mm	90-100
		63 mm	25-60
		45 mm	0-15
		22.4 mm	0-5
Grading-2	63mm to 45mm	90 mm	100
		63 mm	90-100
		53 mm	25-75
		45 mm	0-15
		22.4 mm	0-5

Impact Value under wet condition should only be tested in accordance with IS: 5640. (Shall not exceed 30%)

D.2.2.4 Construction Operations :

Immediately prior to the laying of sub-base, the sub grade finished shall be prepared by removing all vegetation and other extraneous matter, lightly sprinkled with water, if necessary, and rolling with one pass of at least 8-10 ton smooth wheeled roller

D.2.2.5 Spreading and Compacting :

The course aggregates shall be spread uniformly and evenly open the prepared sub-base

to proper profile by using templates placed across the road about 6 metres apart in such quantities that the thickness of each compacted layer shall not more than 100 mm for Grading-I and 75mm for Grading-2. The spreading shall be done from roadside stacks. In no case shall be aggregates be dumped in heaps directly on the surface prepared to receive the aggregates. The surface of the aggregates spread shall be carefully checked with templates and all high or low spots and segregated spots shall rectified by removing or adding aggregates as may be required. The surface shall be checked frequently with a straight edge while spreading and rolling so as to ensure a finished surface as per approved plans or as directed by the Engineer-in-Charge.

Immediately following the spreading of the course aggregates, rolling shall be started with at least 8-10 ton smooth wheeled roller of approved type. Except on super-elevated portions where the rolling shall proceed from inner edge to the outer, rolling shall begin from the edges gradually progressing towards the center. First the edges shall be compacted with roller running forward and backward. The roller shall then move inwards parallel to the center line of the road, in successive passes uniformly lapping preceding trace by at least one half width. Rolling shall be continued until the aggregates are thoroughly keyed and if required and desired by Engineer-in-Charge screening of approved type shall be applied to produce a dense, compacted mass as per requirement. The roller surface shall be checked transversely and longitudinally with template and any irregularities corrected by loosening the surface adding or removing necessary amount of aggregates and re-rolling until the entire surface conforms to desired camber and grade. In no case shall the use of screenings be permitted to make up depressions.

D.3 Wet Mix Macadam :

(As per **clause-406** of 'Specification for Road and Bridge Works of MORTH')

D.3.1. Scope:

This work shall consists of laying compacting, cleaning, crushed, graded, aggregate and granular materials and premixed with water to a dense mass on a prepared sub-base/base or existing pavement in accordance with the requirement of the specification indicated in the table. The material shall be laid in one or more layers as necessary to lines, grades and cross-sections as directed by the Engineer in charge.

The thickness of a single compacted Wet Mix Macadam layer shall not be less than 75 mm nor more than 100mm and compaction shall have to be done by Vibratory Roller as per the approval of the Engineer in charge. Rolling should continue till density achieved is at least 98 percent maximum dry density as per IS: 2720(Part VIII).

D.3.2. Grading requirement for Aggregates:

As per following table :-

IS Sieve Designation	Percent by weight passing the IS Sieve
53 mm	100
45 mm	95-100
26.5 mm	-----
22.4 mm	60-80
11.2 mm	40-60
4.75 mm	25-40
2.36 mm	15-30
600	8-22
75	0-8

Materials finer than 425 shall have Plasticity Index (PI) not exceeding 6.

D.3.3. Preparation of Mix :

Wet Mixed Macadam shall be prepared in a approved mixing plant of suitable capacity having provision for controlled addition of water and forced/positive mixing arrangement like Pug mill of Pan type mixer on concrete batching plant.

D.3.4. Spreading of Mix :

Immediately after mixing, the aggregate shall be spread uniformly and evenly upon the prepared sub-base/base in required quantities. The mix may be spread either by a paver finisher or motor grader.

The surface of the aggregate so laid shall be carefully checked with templates and all high or low spots remedied by removing or adding aggregate as may be required. No segregation of larger and fine particles should be allowed. The aggregate as spread should be of uniform gradation with no pockets of fine material

D.3.5. Compaction of the Mix :

After the mixed have been laid to the required thickness grade and cross fall /camber, the same shall be uniformly compacted to the full, depth as per the specification. The compaction shall be done with a help of Vibratory Roller of minimum static weight of 80 K N to 100 K N or equivalent capacity roller.

D.4 Water Bound Macadam :

(As per **clause-404** of "Specification for Road and Bridge Works of MORTH')

D.4.1. Scope:

Description water bound macadam consist of clean, crushed aggregates mechanically interlocked by rolling and bonded together with screening, binding material, where necessary and water laid on a prepared sub-grade/sub-base/ base or existing pavement, as the case may be and finished in accordance with the requirements of stipulated specifications and in conformity with the lines, grades, cross section and thickness as per approved plans or a directed by the Engineer in charge.

D.4.2. Preparation of base :

The sub-base to receive the W.B.M. course shall be prepared to the specified line and camber and made free of dust and other extraneous materials. Pothole and depressions shall be corrected in an approved manner and rolled until firm with the materials used in sub-base.

D.4.3. Spreading Course Aggregates :

The course aggregates shall be spread uniformly and evenly open the prepared sub-base to proper profile by using templates placed across the road about 6 metres apart in such quantities that the thickness of each compacted layer is not more than 100 mm for grading I & 75 mm for grading in II & ill. The spreading shall be done from roadside stacks. In no case shall be aggregates be dumped in heaps directly on the surface prepared to receive the aggregates. The surface of the aggregates spread shall be carefully checked with templates and all high or low spots remedies by removing or adding aggregates as may be required. The surface shall be checked frequently with a straight edge while spreading and rolling so as to course a finished surface as per approved plans or as directed by the Engineer –in-Charge.

The course aggregates shall not normally be spread more than 3(three) days in advance of the subsequent construction operations.

D.4.4. Compaction of the Mix :

Immediately following the spreading of the course aggregates, rolling shall be started with at least 8-10 ton tandem or vibratory rollers of approved type. Except on super-elevated portions where the rolling shall proceed from inner edge to the outer, rolling shall begin from the edges gradually progressing towards the center. First the edges shall be compacted with roller running forward and backward. The roller shall then move inwards parallel to the center line of the road, in successive passes uniformly lapping preceding trace by at least one half width. Rolling shall be discontinued when the aggregates are partially compacted with sufficient void space in them to permit application of screening. The roller surface shall be checked transversely and longitudinally with template land any irregularities corrected by loosening the surface adding or removing necessary amount of aggregated and re-rolling until the entire surface conforms to desired camber

and grade. In no case shall the use of screenings be permitted to make up depressions.

D.4.5. Application of Screenings :

After the course aggregates has been rolled partially with sufficient void spans, screenings to completely fill the interstices shall be applied gradually over the surface. These shall not be damped or wet at time of application. Dry rolling shall be done while the screenings are being spread so that vibration of the roller causes them to settle into the voids of the course aggregates. The screenings shall be spread uniformly in successive thin layers either manually or mechanically.

The screenings shall be applied at a slow and uniform in to the course or more application so as to ensure filling of all voids. This shall be accompanied by dry rolling and rigorous booming. These operations shall continue until no more screenings can be forced into the voids of the course aggregates. The spreading, rolling and brooming of screenings shall be carried out in only such length of the road which could be completed within one day's operation.

D.4.6. Sprinkling of Water Grouting :

After the screenings have been applied, the surface shall be copiously sprinkled with water, swept and rolled. Hand brooms shall be used to sweep the wet screenings into void and to distribute them evenly. The sprinkling, sweeping and rolling operations shall be continued, with additional screenings applied as necessary until the course aggregates has been thoroughly keyed, well bonded and firmly set in its full depths and a grout has been formed at screenings. Care shall be taken to se that the base or sub grade does not get damaged due to the addition of excessive quantities of water during construction.

D.4.7. Setting, Drying and Curing :

After compaction of water bound macadam course, the payment shall be allowed to dry overnight. Next morning hungry spots shall be filled with screenings as directed lightly sprinkle with water; if necessary, and rolled this surface shall be cured for at least 3 days. No traffic shall be allowed in the road until the macadam has set. The compacted W B M course should be allowed to completely dry and set before the next pavement course is laid over it.

D.4.8. Physical Requirements of Course Aggregates for Water Bound Macadam for Sub-base /Base Courses :

Test	Test Method	Requirement
Los Angeles Abrasion Value	IS-2386 (Part-4)	40 percent (max.)

OR		
Aggregate Impact value	2386 (Part-4) OR IS 5640 (For brick metal, kankar, Laterite etc which get softened in presence of water to be tested under wet conditions).	30 percent (max.)
Combined Flakiness and Elongation Index (Total)	IS- 2386 (Part-1)	40 percent (max.)

D.4.9 Grading Requirement of Course Aggregates :

D.4.8.1 Aggregate Grading :

Grading Type	Size Range	IS Sieve Designation	Percent by Wt. Passing
Grade-3	53 mm to 22.4 mm	63 mm	100
		53 mm	95-100
		45 mm	65-90
		22.4 mm	0-10
		11.2 mm	0-5
Grade-2	63m to 45m	90 mm	00
		63 mm	90-100
		53 mm	25-75
		45 mm	0-15
		22.4 mm	0-5
Grade-1	90mm to 45mm	125 mm	100
		90 mm	90-100
		63 mm	25-60
		45 mm	0-15

		22.4 mm	0-5
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Compacted thickness of single layer with Grade-1 aggregate should not exceed 100mm and Compacted thickness of single layer with Grade-2 and Grade-3 should not exceed 75mm.

D.4.8.2 Grading of Screening:

Grading Type	Size of screening	IS Sieve Designation	Percent by Wt. Passing
Screening Type-'A'	13.2 mm	13.2 mm	100
		11.2 mm	95-100
		5.6 mm	15-35
		180	0-10
Screening Type-'B'	11.2 mm	11.2 mm	100
		5.6 mm	90-100
		180	15-35

D.4.10 Blinding Materials :

Blinding materials to be used for water bound macadam as a filler material meant for preventing raveling, shall comprise of a suitable materials approved by the Engineer in charge having a P I Value of less than 6 where the road will not be immediately open to traffic and P I Value of 9 when the road will be immediately be opened to traffic. Quantity of blinding materials to be used as provided in the item of work.

D.5 Primer Coat Over Granular Base :

(As per **clause-502** of "Specification for Road and Bridge Works of MORTH')

D.5.1 Scope:

The work shall consist of application of single coat of bituminous primer to an absorbent granular surface preparatory to any superimposed bituminous treatment.

D.5.2 Materials:

The choice of bituminous primer shall depend upon the porosity characteristics of the surface to be primed and shall be decided by the Engineer in charge.

D.5.3 Weather and Seasonal Limitation :

The bituminous primer shall applied on a wet surface or during dust storm when the weather is foggy or rainy

D.5.4 Equipment :

The primer distributor shall be equipped for spraying the material uniformly at the specified rates and temperatures

D.5.5 Preparation of road surface :

The surface to be primed shall be swept clean, free from dust and shall be dry. It shall shape to the specified grades and section. It shall also be free from dust, any other irregularities and segregated materials: minor depressions and potholes may be ignored until the surface is primed, after which they shall patched with a suitable premix material prior to the surface treatment.

D.5.6 Application of bituminous primer :

The bituminous primer shall be spread uniformly over the dry surface as prepared by using suitable and approved sprayer at specified rates and temperature so as to provide a uniform unbroken spread of primer.

Temperature of application of a primer needs only be high "enough to permit the primer to be effectively sprayed through suitable sprayer to cover the granular base surface uniformly. The temperature of bitumen emulsion at the time of application may vary from 10°C to 50°C. Any scale of excess primer left on any part of the surface should be swept out over the adjacent surface.

D.6 Bituminous Construction :

(As per **clause-501** of "Specification for Road and Bridge Works of MORTH')

D.6.1 Materials :

(As per **clause-501.2** of "Specification for Road and Bridge Works of MORTH')

D.6.1.1 Bitumen :

The binder shall be a penetration bitumen of VG(30)/60-70 Grade as per IS: 73-1961/ IS:73-2006 or an appropriate grade to the region, traffic, rainfall and other environmental conditions as per stipulation of 'Specification for Road and Bridge Works of MORTH' or as directed by the Engineer-in-charge. The approved brand of Cationic Bitumen Emulsion shall be decided by the Engineer in charge.

D.6.1.2 Aggregates :

The aggregates shall consist of crushed stone. They shall be clean strong durable of fairly cubical shape and free from disintegrated pieces, organic of deleterious matters and adherent coating and of low porosity. The aggregates shall satisfy the physical requirements set forth below.

Physical Requirement of aggregate

for bituminous works : (D.6.1.2-contd.) :

(As per **clause-504.2.2** of "Specification for Road and Bridge Works of MORTH')

Sl.	Test	Test Method	Item of works For Bituminous Macadam	Item of works For Mix Seal Surfacing
1.	Los Angeles Abrasion Value	IS: 2386 (Part-4)	40% Maximum	40% Maximum
	OR Aggregate Impact value		30% Maximum	30% Maximum
2.	Combined Flakiness and Elongation Index (Total)	IS: 2386 (Part-1)	<u>30%Maximum</u>	30% Maximum
3.	Stripping Value	IS: 6241	95% Maximum	95% Maximum
4.	Soundness i) Loss with sodium sulphate 54 cycles	IS: 2386 (Part-5)	12% Maximum	12% Maximum
	Soundness ii) Loss with Magnesium sulphate 5 cycles water absorption		18% Maximum	18% Maximum

Aggregate grading for potholes repairing works of different thickness will be determined by the Engineer-in-charge or as specified on the contract.

D.6.2 Constructional Operation :

(As per **clause-501.3 & 501.4** of "Specification for Road and Bridge Works of MORTH')

For Premixed method: HMP of approved type shall be employed for mixing the aggregates with the bituminous binder. For 60-70/VG-30 Grade bitumen, the binder shall be heated to a temperature between 150°C- 165°C in approved boilers. The aggregates should be dry and suitable heated to a temperature from 150°C- 170°C separately before these are mixed with hot bitumen in the HMP, provided the difference in temperature between the binder and aggregate at no time exceeds 14°C. The mixing of binder with aggregates shall be continued until the same are thoroughly coated with the binder and temperature of the mix should not exceed 165°C. The mix shall immediately be transported from the HMP to the laying site. The laying temperature of the mix shall not be less than 125°C. All rolling (breakdown, intermediate and finishing) as per clause-501.6 of 'Specification for Road and Bridge Works of MORTH' should be completed before temperature of the mix comes down to 90°C.

D.6.3 Spreading and rolling :

(As per **clause-501.5 & 501.6** of "Specification for Road and Bridge Works of MORTH")

The premixed materials shall be filled in the potholes with rakes to required thickness without any undue loss of time and compacting the same with at least 8-10 ton tandem or vibratory roller. When the roller has passed over the whole area once any high spots or depression which becomes apparent shall be corrected by removing or adding premixed materials and finishing the top of the repaired surface, leveled with the adjoining area and completely sand blinding at the rate as specified in the respective item of works. Rolling operation shall be completed in all respects before the temperature of the mix falls below 80°C. The roller wheels shall be kept damp.

D.7 Open graded premix carpet :

(As per **clause-511** of "Specification for Road and Bridge Works of MORTH")

D.7.1 Scope :

This work shall consist of laying and compacting an open graded carpet of 2 cm thickness in a single course composed of suitable small sized aggregates, premixed with bituminous binder on a previously prepared base, in accordance with the requirements of these specification to serve as a wearing course

D.7.2 Binder :

The binder shall be a penetration bitumen of 60-70/ VG-30 Grade as per IS: 73-1961 or an appropriate grade to the region, traffic, rainfall and other environmental conditions as per stipulation of 'Specification for Road and Bridge Works of MORTH' or as directed by the Engineer-in-charge. The approved brand of Cationic Bitumen Emulsion for tack coat, if applied shall be decided by the Engineer in charge.

D.7.3 Aggregates :

The aggregates shall consist of crushed stone, crushed gravel/shining or other stone.

This shall be clean, durable, fairly cubical in shape and free from disintegrated pieces organic or other deleterious matters and adherent coating. They shall preferably be hydrophobic and of low porosity.

D.7.4 Construction Operation :

As per clause-D.7.5 of this section & clause-511 of “Specification for Road and Bridge Works of MORTH’.

D.8 Mix Seal Surfacing :

(As per **clause-512** of “Specification for Road and Bridge Works of MORTH’)

D.8.1 Scope :

This work shall consist of laying and compacting mix seal surfacing in a single course composed of suitable aggregates premixed with a bituminous binder on a previously prepared base, in accordance with the requirements of these Specifications, to serve as a wearing course.

D.8.2 Binder :

The binder shall be a penetration bitumen of 60-70 Grade as per IS: 73-1961 or an appropriate grade to the region, traffic, rainfall and other environmental conditions as per stipulation of ‘Specification for Road and Bridge Works of MORTH’ or as directed by the Engineer-in-charge. The approved brand of Cationic Bitumen Emulsion for tack coat shall be decided by the Engineer in charge.

D.8.3 Aggregates :

The aggregates shall consist of crushed stone, crushed gravel/shining or other stone. This shall be clean, durable, fairly cubical in shape and free from disintegrated pieces organic or other deleterious matters and adherent coating. They shall preferably be hydrophobic and of low porosity.

D.8.3.1 Aggregate Gradation :

IS Sieve Designation	Percent by weight passing the sieve	
	For Type-‘A’ MSS	For Type-‘B’ MSS
13.2mm	----	100
11.2mm	100	88-100
5.6mm	52-88	31-52
2.8mm	14-38	5-25
90 micron	0-5	0-5

D.8.4 Construction Operation :

As per clause-D.7.5 of this section & clause-511 of "Specification for Road and Bridge Works of MORTH".

D.8.5 Proportioning of materials :

The total quantity of aggregates used for Type 'A' or 'B' Mix Seal Surfacing shall be 0.27 cubic metres per 10 square metres area. The quantity of binder used for premixing in terms of straight-run bitumen shall be 22.0kg and 19.0 kg per 10 square metres area for Type A and B surfacing respectively

D.8.6 Opening to Traffic :

Traffic may be allowed after completion of the final rolling when the mix has cooled down to the surrounding temperature. After rolling is complete, traffic may be permitted for movement on the newly laid bituminous surface. Spreading of stone dust in extreme emergency case be allowed on freshly laid bituminous surface and in that eventualities cost of stone dust shall deemed to have been included in the rate and no extra cost on this account whatsoever will be admissible

D.9 Seal Coat :

(As per **clause-513** of "Specification for Road and Bridge Works of MORTH")

D.9.1 Scope :

This work shall consist of application of seal coat for sealing of the voids in a bituminous surface laid to the specified levels, grade and cross fall/ camber.

D.9.2 Materials :

D.9.2.1 Binder :

The binder shall be a penetration bitumen of 60-70 Grade as per IS: 73-1961 or an appropriate grade to the region, traffic, rainfall and other environmental conditions as per stipulation of 'Specification for Road and Bridge Works of MORTH' or as directed by the Engineer-in-charge. The approved brand of Cationic Bitumen Emulsion for tack coat shall be decided by the Engineer in charge. Quantity of bitumen shall be as stipulated in the 'Specific Priced Schedule of probable items with approximate quantities'.

D.9.2.2 Aggregate :

(i) **For Type-'A' Seal Coat** : Stone chips of appropriate size, 100 percent passing through 11.2mm sieve and fully retained on 2.36mm sieve, with angular fragmented, clean, hard, tough and durable type shall be used. Quantity of stone chips shall be as stipulated in the 'Specific Priced Schedule of probable items with approximate quantities'.

(ii) **For Type-'B' Seal Coat** : Sand or Grit of appropriate size, 100 percent passing through 2.36mm sieve and fully retained on 180 micron sieve with clean, hard, uncoated, dry type free from soft or flaky/elongated materials, organic and other deleterious substances shall be used. Quantity of Sand or Grit shall be as stipulated in the 'Specific Priced Schedule of probable items with approximate quantities'.

D.9.3 Preparation of surface:

The seal coat shall be applied immediately after laying of bituminous course which is required to be sealed. Before application of seal coat materials the surface shall be clean free of any dust or any extraneous materials. Tack coat with appropriate rate shall be applied on old bituminous surface with specific prior permission of Engineer-in-Charge.

D.9.4 Construction Operation :

As per clause-513.3.3 for Type-‘A’ Seal Coat & clause-513.3.4 for Type-B Seal Coat of “Specification for Road and Bridge Works of MORTH’.

D.9.5 “Specification for Road & Bridge Works” by MORTH :

The work specification as laid down in “speciation’s for Road & Bridge Works” by MORTH (4th revision) shall be final and binding, in case if any work procedure found unsuitable/ not mentioned/ ammended as stated in this Price Bid.

This Column are mandatory

ANNEXURE- X**DETAILS FOR BANIFICIARY DATA ENTRY**

Sl. No	Particulars	
1	Beneficiary Name	
2	Bank A/c No	
3	IFSC Code	
4	MICR Code	
5	Account type	
6	Beneficiary Type	
7	Group	

8	PAN Number	
9	Mobile Number	
10	GSTIN Number	
11	ADHAR Number	
12	Address	
13	Email ID	