



ONGC TRIPURA POWER COMPANY LIMITED

TECHNICAL SPECIFICATION

**Full Repair and Maintenance of 1100 mtr.(1.100 KM) RWIS existing
bituminous road at OTPC Palatana, Udaipur, Gomati, Tripura.**

ONGC TRIPURA POWER COMPANY LIMITED

PALATANA

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TECHNICAL SPECIFICATION

1.0) SCOPE OF WORK

Full Repair and Maintenance of 1100 mtr.(1.100 KM) RWIS existing bituminous road at OTC Palatana, Udaipur, Gomati, Tripura. The work has to be carried on turnkey basis i.e . supply of materials , mobilization of manpower and work related machineries and overall total work execution as per plan/existing area and hand over of the completed work as per specification . The Work location detail is mentioned as below.

A. In front of RWIS area Existing Road.

The said work has to be carried out as per BOQ and TSR/CPWD Specification.

Work Description:

Bidders can carry out site visit and get acquainted with work scope. The indicative work scope is as below:

1) Clearing and Grubbing Road Land:

Clearing and grubbing road land including uprooting wild vegetation, grass, bushes, shrubs, saplings and trees of girth upto 300 mm, removal of stumps of such trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned, upto a lead of 1000 m including removal and disposal of top organic soil not exceeding 150 mm in thickness as per MoRT&H Technical Specification clause 201. and instruction of Engineer-in-Charge.

2) Brick soling- Flat Brick soling:

Providing and laying flat brick soling layer on prepared subgrade according to lines, grades and cross-section shown on the drawing, filling joints with Earth, free from clay with a Plasticity Index not exceeding 6, watering and rolling the same with three wheeled road roller 80-100 kN as per MoRD Technical Specification Clause 412. and instruction of Engineer-in-Charge.

3) Brick edging laid length wise:

Providing and laying brick edging laid lengthwise on prepared subgrade according to lines, grades and cross-section shown on the drawing, filling joints with Earth, free from clay with a Plasticity Index not exceeding 6, watering and rolling the same with three wheeled road roller 80-100 kN as per MoRD Technical Specification Clause 412. and instruction of Engineer-in-Charge.

4) Brick on edge soling:

Providing and laying brick on edge soling layer on prepared subgrade according to lines, grades and cross-section shown on the drawing, filling joints with sand, watering and rolling the same with three wheeled road roller 80-100 kN as per MoRD Technical Specification Clause 412. and instruction of Engineer-in-Charge.

5) Water Bound Macadam Sub-Base / Base using Jhama Brick Aggregate:

"Providing, laying, spreading and compacting jhama brick aggregates of specific sizes to water bound macadam specification including spreading in uniform thickness, hand packing rolling with three wheel roller 80-100 kN in stages to proper grade and camber, applying and brooming binding materials to fill up the interstices of coarse aggregate, watering and compacting to the required density Grading- 3 as per MoRD Technical Specification Clause 405." and instruction of Engineer-in-Charge.

6) Tack coat using hot straight run bitumen of grade VG-30 on W.B.M.:

Providing and applying tack coat using hot straight run bitumen of grade VG-30, including heating the bitumen, spraying the bitumen, cleaning and preparing the existing road surface as per specifications:

On W.B.M. @ 0.75 kg/ sqm. Base and surface course (Granular Surface). and instruction of Engineer-in-Charge.

7) 25 mm thick Open-Graded Premix Carpet using Bituminous (Viscosity grade/ modified bitumen) Binder:

Providing, laying and rolling of open-graded premix carpet of 25 mm thickness composed of 13.2 mm to 5.6 mm aggregates either using Viscosity grade bitumen or emulsion to required line, grade and level to serve as wearing course on a previously prepared base, including mixing in a suitable plant, laying and rolling with a three wheel 80 - 100 kN static roller capacity, finished to required level and grades to be followed by seal coat of either Type A or Type B or Type C or Type D as per MoRD Technical Specification Clause 508. and instruction of Engineer-in-Charge.

Materials and Workmanship:-

The scope of work covered under this contract comprises **Full Repair and Maintenance of 1100 mtr.(1.100 KM) RWIS existing bituminous road at OTPC Palatana, Udaipur, Gomati, Tripura.** as per BOQ and TSR/CPWD Specification

The contractor under this contract binds himself to use first class materials. Quality of workmanship shall be of the highest order befitting the nature of the project. All work not up to the standard shall be summarily rejected and the Contractor will be required to dismantle the defective work and redo the work at his own cost and risk. The decision of OTPC EIC shall be final regarding the quality/standard of workmanship shall be final and binding on the contractor. The below is mentioned about approved make of various items.

Work Completion Period-

Maximum up to 120 days from the issue of the Work order.

2.0) **GENERAL CONDITIONS:**

1. These special conditions shall be read in conjunction with General Conditions of contract. However, the special condition mentioned shall supersede general terms & conditions wherever applicable.
2. Contractor will arrange proper necessary material and manpower at his own cost and will take all safety measures like safety belts, extra workmen to hold ladders etc. If it is observed that work is proceeding without adequate safety precautions, work may be stopped by Engineer in-charge and in such cases, contractor will be solely responsible for delay and its consequences thereof.
3. **Completion time:** The time shall be the essence of this contract and entire work as titled above is to be completed in all respects within a period of 120 Days (4 months) from the date of issue of handing over the site. The work has to be started within 15 days from the issue of work order. Any delay in completing the work for reasons attributable to the Contractor is liable for liquidated damages as per NIT. The contractor shall not be entitle to any compensation for any loss suffered by hindrance on account of delay in commencing or executing the work, whatever the cause for such delays may be including delays in procuring Government controlled or other materials.
 - (i) Under the force-majeure conditions or delay due to reasons beyond control of the contractor, OTPC may grant suitable time extension without penalty for which the contractor has to request along with the justification/ reasons well in advance to OTPC for approval without any prejudice to price escalation. No time extension request shall be considered after the expiry of completion period/contract. The decision of EIC regarding Time extension will be final and binding on the contractor.
4. The quoted rates shall be inclusive of all taxes (Service Tax, GST etc.) duties and cartage

etc.

5. **Deviations:** No deviation from the stipulated terms and conditions will be allowed. Tender will be unconditional.

6. **Site Conditions:** Contractor shall acquaint himself fully with the site conditions and the working environment of OTPC before quoting his rates. No Compensation on account of any site difficulties will be entertained, at a later date, after award of the work. Site will be handed over as it is where it is and nothing extra shall be paid for clearing and disposal site material .

7. Before tendering, the Contractor shall visit and examine the site and satisfy himself as to the site conditions, the correct dimensions of the work and facilities. The rates of different items are for all heights, depth, curvature and width unless otherwise specified against the item.

8. The material as specified in Scope of work is to be used. Party has to specify the detail of materials to be used in the tender. However final approval for the use of specific make will be given by EIC.

9. Test certificate of material & QC reports as per MoRT&H Technical Specification shall be furnished during work.

10. Gradient for proper slope on top surface shall be there.

11. Any settlement, potholes, edge failures, loose bricks, rutting, stripping, bleeding, depressions, or workmanship defects observed during the Defect Liability Period shall be rectified by the Contractor at no additional cost.

12. The quoted rates will be for all height, depth, lift, lead, shapes and sizes unless otherwise mentioned specifically in the description of item.

13. The Contractor shall execute all works in accordance with the latest MoRTH, MoRD Specifications, relevant IS Codes, and the directions of the Engineer-in-Charge (EIC)..

14. All materials shall be new, sound and conform to the approved specifications. Work shall not commence without approval of the alignment, levels and subgrade by the EIC.

15. Quality Control

a) The Contractor shall arrange, at his own cost:

b) Material approval before use.

c) Field density tests.

d) Brick quality tests.

e) Aggregate grading tests.

f) Bitumen temperature records.

g) Bitumen quantity records.

h) Thickness measurements.

i) Surface level checks.

j) Camber measurements.

Test reports shall be submitted before billing

16. Safety Requirements

- a) The Contractor shall provide:
 - b) Safety helmets
 - c) Reflective jackets
 - d) Safety shoes
 - e) Gloves
 - f) Dust masks
 - g) Traffic cones
 - h) Barricades
 - i) Blinkers and warning lights for night work
 - j) Flagmen during movement of construction equipment
17. Contractor shall co-ordinate his activities and co-operate with other agencies such as store dept. electrical dept. etc who will also be working in the complex.
 18. Contractor shall submit and finalize detailed quality MoRT&H Technical Specification assurance program within 15 days from the date of start of work as per specifications. This shall include setting up of testing lab, arrangement of testing apparatus / equipments, deployment of qualified experienced manpower, preparation of format for record, Field quality plan etc. On approval of Field quality plan the OTPC shall identify Customer Hold.
 19. Points (CHP) beyond which work shall not proceed without written approval from Engineer In charge.
 20. OTPC reserves the right to engage third party agency for quality inspection of all work done and material brought by the contractor for use in work. The contractor shall make all arrangement to carry out the tests so recommended and bear all expenses incurred.
 21. The work is planned to be carried out during day shift and sufficient manpower may be deployment to complete the work in stipulated time. The contractor shall observe provisions of the Factories Act/ Rules in respect of working hours, holidays, rest intervals, leaves and overtime to his employees. Work in second / third shift, overtime, Sundays or on other declared holidays should be carried out after getting written permission from Engineer Incharge.
 22. Contractor shall decide the number of employees to be deployed for execution of the work awarded to him and he or his authorized representative will be solely entitled to dictate such workers about the manner of carrying out the work as per the prescribed specifications and quality plan. However, contractor shall inform OTPC for engaging/ removing the workmen for executing the work.
 23. Contractor should engage contract workmen after seeking police verification (with no adverse remarks). Such police verification should not be older than three years at any point of time during the duration of the contract. Contract workmen deployed by contractor should have valid Biometric Gate Pass for entry into factory premises
 24. As a matter of administrative ease, the contractor should make all disbursements to his workmen preferably through marked, if available in market. However, all the material used in work shall have to be got approved by the Engineer Incharge before execution of the work. The contractor may have to furnish test certificate of all the materials to the satisfaction of department. If required, the material shall be got tested by the deptt. at CBRI or any other govt. approved agency at the risk and cost of the contractor
 25. As a matter of administrative ease, the contractor should make all disbursements to his

workmen preferably through their bank accounts.

26. Contractor will be responsible for good conduct of his employees. In case of any misconduct / misbehavior by any employee, the contractor will replace such employee(s) immediately.
27. Contractor shall pay minimum wages as applicable from time to time including leave with wages to their workers as per rules /act and any changes made thereafter.
28. In case of non-compliance of any of the workmen laws e.g. payment of minimum wages to his employees or remittance of contribution to the concerned authorities etc., the contractor shall be responsible for all the expenses /liability occurring / accruing on OTPC because of this including all expenditure of legal proceedings. All such expenses shall be recoverable from the contractor from any of his running contracts/security deposit/other dues with OTPC or from any contract entered with OTPC thereafter.
29. OTPC shall have the privy of the contract with the contractor only and will give instructions to the contractor or his authorized representatives. OTPC will have nothing to do or be concerned with the employment of employees working for the contractor. The relationship between OTPC and the contractor will be that of independent entities and nothing herein contained will amount to joint venture, partnership or an employer-employee relationship
30. The work shall be governed by CPWD specifications, General terms and conditions of OTPC contract, special conditions, environment-related conditions, new safety clause and any other relevant condition mentioned here.
31. All material brought to site for the use in the work should be ISI marked, if available in market. However, all the material used in work shall have to be got approved by the Engineer Incharge before execution of the work. The contractor may have to furnish test certificate of all the materials to the satisfaction of department. If required, the material shall be got tested by the deptt. at CBRI or any other govt. approved agency at the risk and cost of the contractor.
32. Security deposit shall be released as follows: 100% shall be released after satisfactory completion of the maintenance period of the work duly verified by Site Incharge and clearing of all dues.
33. Quantities mentioned in bill of quantity may vary on either side as per actual requirement at site. For the extra quantity upto 10%, the party has to execute the work at the same rate and terms and condition
34. Any extra item concerning to the completion of work will have to be executed by the same contractor, as per direction of Engineer Incharge. The rates of such item will be decided by the competent authority (for award of work) but on no account the work will be stopped.
- 35. Water and electricity:**

Water and electricity shall be supplied to the contractor by the OTPC subject to the following conditions:-

 - i) Source of supply of water/ electricity shall be provided at one/ two points for work at site, as decided by Engineer Incharge. Contractor shall have to make their own arrangement for laying of pipelines/ electricity connections from the source of supply provided at site.
36. All necessary precautions for safety and environmental aspects shall have to be taken by the contractor for activities performed by his workers.

37. Contractor must ensure that all workmen engaged in the work should wear safety personal protective equipments (PPEs) as directed by Engineer Incharge. In case workmens are found working without wearing PPEs as directed, then recovery may be made at the risk and cost of contractor by providing PPEs to workmens by OTPC at OTPC purchase cost.
38. Contractor should depute a qualified supervisor and one Safety supervisor dedicated for this work, who will monitor and coordinate the works from contractor's side and interact with the OTPC Engineers, responsible for supervision of work, on regular basis.
39. Contractor will take due permission for entry of all his workmen in OTPC. No unauthorized person will be allowed to work inside.
40. The contractor will arrange all necessary materials, tools, equipment, access ladders & scaffolding, measuring instruments and working consumables etc. needed for execution of the works. Safe custody of all such material will be contractor's sole responsibility. No extra charges will be paid for the same. Watch and ward of all material till the system is taken over by OTPC shall be the sole responsibility of the contractor and pilferage etc. shall be entirely to his account.
41. During execution of work, Engineer can make minor changes in the scope of work as per site conditions or other reasons. Contractor will have no extra claim in his rates for the same.
42. If during the execution of works, any damage is caused to OTPC property by contractor's/contractors' workers, contractor will duly make good the loss. OTPC has the right to make suitable deduction from contractor's bills along with penalty, if contractor fails to make good the loss.
43. During execution of work, the contractor/contractors should follow all standard norms of safety measures/precautions as per relevant IS codes and CPWD & MoRT&H Technical specifications to avoid accidents/damages to man, machines and buildings, at his own cost. Contractor will have his own arrangement to escort the workmen to the nearest hospital for treatment in case any injury happens to any worker during execution of work.
44. Manpower deployed by the contractor at our site for carrying out contract works is strictly prohibited being associated with any other works on the campus.
45. No material belonging to the contractor whether consumable or non-consumable should be brought inside the OTPC campus without proper entry at the Main Gate nor any material should be taken out without proper gate pass issued by the authorized representatives of the Centre.
46. During execution of the work, contractor should dispose off waste material on regular basis and should keep the area of work properly cordoned off and neat and clean asfar as possible. After completion of work, contractor should clear the site completely of all unwanted and junk material before submitting his final bill.

Annexure-I BoQ

SI No	Item No		Description of Item	Quantity	Unit
1	2.30	201	Clearing and Grubbing Road Land		
			Clearing and grubbing road land including uprooting wild vegetation, grass, bushes, shrubs, saplings and trees of girth upto 300 mm, removal of stumps of such trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned, upto a lead of 1000 m including removal and disposal of top organic soil not exceeding 150 mm in thickness as per MoRT&H Technical Specification clause 201.		
			(I) By Manual Means		
			(A) In area of light jungle		
				0.143	Hectare.
2	4.50	412	Brick soling		
			ii) Flat Brick soling		
			Providing and laying flat brick soling layer on prepared subgrade according to lines, grades and cross-section shown on the drawing, filling joints with Earth, free from clay with a Plasticity Index not exceeding 6, watering and rolling the same with three wheeled road roller 80-100 kN as per MoRD Technical Specification Clause 412.		
				2178.00	Sqm
3			iv) Brick edging laid length wise		
			Providing and laying brick edging laid lengthwise on prepared subgrade according to lines, grades and cross-section shown on the drawing, filling joints with Earth, free from clay with a Plasticity Index not exceeding 6, watering and rolling the same with three wheeled road roller 80-100 kN as per MoRD Technical Specification Clause 412.		
				7260.00	Mtr.
4	4.50	412	Brick soling		
			i) Brick on edge soling		
			Providing and laying brick on edge soling layer on prepared subgrade according to lines, grades and cross-section shown on the drawing, filling joints with sand, watering and rolling the same with three wheeled road roller 80-100 kN as per MoRD Technical Specification Clause 412.		

SI No	Item No		Description of Item	Quantity	Unit
				1089.00	Sqm
5	4.7	405	Water Bound Macadam Sub-Base / Base using Jhama Brick Aggregate		
			WBM Grading - 3		
			Providing, laying, spreading and compacting jhama brick aggregates of specific sizes to water bound macadam specification including spreading in uniform thickness, hand packing rolling with three wheel roller 80-100 kN in stages to proper grade and camber, applying and brooming binding materials to fill up the interstices of coarse aggregate, watering and compacting to the required density Grading- 3 as per MoRD Technical Specification Clause 405.		
			(A) By Manual Means	272.25	Cum
6	M-1.17	502 & 503	Tack coat using hot straight run bitumen of grade VG-30 on W.B.M.		
			Providing and applying tack coat using hot straight run bitumen of grade VG-30, including heating the bitumen, spraying the bitumen, cleaning and preparing the existing road surface as per specifications: On W.B.M. @ 0.75 kg/ sqm.		
			Base and surface course (Granular Surface)	3630.00	Sqm
7	5.12	508	25 mm thick Open-Graded Premix Carpet using Bituminous (Viscosity grade/ modified bitumen) Binder		
			Providing, laying and rolling of open-graded premix carpet of 25 mm thickness composed of 13.2 mm to 5.6 mm aggregates either using Viscosity grade bitumen or emulsion to required line, grade and level to serve as wearing course on a previously prepared base, including mixing in a suitable plant, laying and rolling with a three wheel 80 - 100 kN static roller capacity, finished to required level and grades to be followed by seal coat of either Type A or Type B or Type C or Type D as per MoRD Technical Specification Clause 508.		
			By Manual means		
			1) Bitumen (60/70 Grade) VG-30	3630.00	Sqm