
TENDER SPECIFICATION

TENDER NO. BHEL/ NR/ SCT/ BAWANA/CVL-ROAD/979

FOR

**“BALANCE WORKS OF CONSTRUCTION AND DEVELOPMENT
OF ROADS, PAVEMENTS, SIDE DRAINS, CULVERTS & ROAD
CROSSINGS AT 2X750 MW CCPP, PRAGATI POWER
CORPORATION LTD., BAWANA”**

PART- II - PRICE BID



Bharat Heavy Electricals Limited
(A Govt. Of India Undertaking)
Power Sector – Northern Region,
Plot No. 25 , Sector - 16A ,
Distt. Gautam Budh Nagar,
NOIDA – 201 301 (INDIA)

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PRICE BID



ISO 9001, ISO 14001,
OHSAS 18001 & SA 8000
certified company
SubContract and Purchase
Deptt.

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(A Govt. Of India Undertaking)
Power Sector – Northern Region,
Plot No. 25 , Sector - 16A ,
Distt. Gautam Budh Nagar, NOIDA – 201 301(INDIA)
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IMPORTANT NOTE

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THIS TENDER SPECIFICATION ISSUED TO:

M/S-----

RATE SCHEDULE

Tender No.-: BHEL/ NR/ SCT/ BAWANA/CVL-ROAD/979

Job:- "BALANCE WORKS OF CONSTRUCTION AND DEVELOPMENT OF ROADS, PAVEMENTS, SIDE DRAINS, CULVERTS & ROAD CROSSINGS AT 2X750 MW CCPP, PRAGATI POWER CORPORATION LTD., BAWANA"

ITEM NUM	DESCRIPTION OF WORK	TOTAL VALUE 'A' IN INR (IN FIGURES AND WORDS)
1.0	TOTAL LUMSUM PRICE FOR "BALANCE WORK OF CONSTRUCTION AND DEVELOPMENT OF ROADS, PAVEMENTS, SIDE DRAINS, CULVERTS AND ROAD CROSSINGS AT 2X750 MW CCPP, PRAGATI POWER CORPORATION LTD., BAWANA, DELHI	

Notes:-

1. The rates of individual item for the entire scope of work as define in BOQ shall be arrived as per Calulation defined in Annexure- 'D'
2. The derived item rate will remain firm through out the contract period.

Name -:

Place -:

Date-:

Signature of
the Bidder
With Stamp

Annexure-D

BOQ ITEM NO.	DESCRIPTION	Unit	Quantity	Factor (F)	Rate= A*F/100000 (Rs.)	Amount = Rate* Quantity (Rs.)
100	EARTH WORK IN EXCAVATION, BACKFILLING AND DISPOSAL AS PER SPECIFICATION, DRAWINGS AND AS DIRECTED BY ENGINEER FOR THE FOLLOWING.					
101	Earth work in excavation upto 2m depth below ground level for foundation, trenches, pile line, strom water drains, etc. including setting out, clearing and grubbing removal of debris, dewatering if required, strutting, shoring / sheet piling if required, dressing the sides, levelling to grade and ramming the bottom, stacking / disposal of excavated material including levelling the earth if requird within the lead of 1 km etc. complete for all types of soils including laterrite, moorum etc. which can be excavated by means of crow bar, pick axe etc. but does not require chiseling or blasting.	Cum	2000	0.099		
103	Earth work in excavation for depth exceeding 2m but not exceeding 4m below ground level for foundation, trenches, pipe line, strom water drains, etc. including dewatering if required, strutting, shoring / sheet piling if required, dressing the sides, levelling to grade and ramming the bottom, stacking / disposal of surplus excavated material including levelling the earth if required within a lead of 1 km etc. complete for all types of soils including laterrite, moorum etc. which can be excavated by means of crow bar, pick axe etc. but does not require chiseling or blasting.	Cum	100	0.134		
116 (a)	Disposal of surplus excavated earth beyond an initial lead of 1 km and upto a lead of 2 km dumping and leveling the dumped soil and leveling the areas from where the material is transported, complete with all lifts as specified and directed by Engineer.	Cum	200	0.036		
118 (b)	Back filling around foundations 2nd plinths etc to proper grade and level with selected excavated soil directly from excavation area within a lead of 1Km including watering and ramming/compacting in layers of 15cm thickness to at least 90% of its maximum dry density for cohesive soils and 75% relative density for non-cohesive soils by manual/mechanical means, dressing etc complete including transportation.	Cum	5000	0.082		
121	Supply and filling sand under floors, in foundation and plinths including cost of sand, transporting for all leads, loading, unloading, spreading in layers in 25 cm loose thickness at all depths, watering, compaction with mechanised compaction machine or manually to minimum 80% of relative density, dressing and leveling etc complete.	Cum	900	0.59		

BOQ ITEM NO.	DESCRIPTION	Unit	Quantity	Factor (F)	Rate= A*F/100000 (Rs.)	Amount = Rate* Quantity (Rs.)
200	PROVIDING AND PLACING CONCRETE WORK INCLUDING COST OF LABOUR, MATERIALS AND EQUIPMENT FOR HANDLING, TRANSPORTATION, BATCHING, MIXING, PLACING, VIBRATING AND CURING (EXCLUDING COST OF CENTERING, SHUTTERING AND REINFORCEMENT) COMPLETE AT ALL ELEVATIONS AS PER DRAWING SPECIFICATIONS UNLESS SPECIFIED OTHER WISE AND AS DIRECTED BY ENGINEER FOR THE FOLLOWING . (CEMENT WILL BE ISSUED AS FOC ITEM)					
203	Plain Cement concrete of grade 1:2:4 as plinth protection etc. all complete.	Cum	410	2.633		
205	Concrete of grade M-25 conforming to IS:456 with coarse sand and graded hard stone agg. 20mm nominal size in all foundation, underground works, water retaining structures and outdoor works, floors etc. at any level below finished floor level, any shape, position and thickness etc. complete including use of plasticizer/supper plasticizer conforming to IS :9103 (latest) to achieve required slump in concrete to all complete.	Cum	1750	3.366		
208	Concrete of grade M-25 conforming to IS:456 with coarse sand and graded hard stone aggregate 20 mm nominal size in precast works like trench covers, lintels, etc including formwork / moulds for thickness varying from 50 mm to 250 mm including transportation, erection, fixing in position at all elevations and use of plasticizer whatever required all complete excluding the cost of reinforcement.	Cum	350	5.97		
213	Providing underbed for paving and ground floor for all buildings by preparation and consolidation of sub grade required level, laying of stone solling of 225 mm compacted thickness with 63 mm and down aggregate, filling the interstices with selected sand followed by 75 mm thick 1:4:8 PCC with (one part cement: 4 parts sand and 8 parts stone aggregate) with 40 mm nominal size aggregate for all lifts all complete as per specification and instruction of Engineer In-charge.	Sqm	960	1.13		
300	SUPPLYING, FIXING AND REMOVING FORMWORK AT ANY ELEVATION INCLUDING ALL LABOUR, MATERIAL, SCAFFOLDING COMPLETE INCLUDING POCKETS ETC. AS PER SPECIFICATIONS AND AS DIRECTED BY ENGINEER FOR THE FOLLOWING:					
301	Ordinary form work below finished ground floor level for foundation, footings, base of columns, walls, columns, plasters, beams, mass concrete, trenches etc.	Sqm	22562	0.307		
400	REINFORCEMENT					

BOQ ITEM NO.	DESCRIPTION	Unit	Quantity	Factor (F)	Rate= A*F/100000 (Rs.)	Amount = Rate* Quantity (Rs.)
402	Providing, straightening, cutting, bending , placing in position at any level, binding in position of steel reinforcements shall be TMT HYSD bars of grade Fe-415 and/or Fe-500 conforming to relevant IS codes, including cost of binding wire, labour, trnsportation to and from stores etc. complete all as per specifications, drawings and as directed by Engineer. (Reinforcement Steel will be issued as FOC Item)	MT	315	14.15		
700	M.S. EMBEDMENT					
701	Supply, fabricating and fixing of embedment, MS inserts, pipe sleeves, guide rails, angle pieces, rungs of various diameters, plates of dimension as required including cost of all labour, materials and equipment, transportation, loading, unloading, handling, welding, cutting, drilling, scaffolding and setting complete as per specifications, drawings and as directed by Engineer. (Structural Steel will be issued as FOC Item)	MT	30	31.294		
702	Supply, fabrication, transportation, delivery at site and erection, installation and alignment of MS Foundation bolts (grade-1 of IS:432 & IS:2062) assembly in concrete along with nuts, lock nuts (IS:1363, IS:1364 & IS:3138), washers, anchor plates, stiffeners plates, protective tapes etc. upto inclusive of 63 mm diameter and upto 2000 mm long, for columns templates including furnishing of labour, materials, equipments, welding, cutting, girding, threading, drilling, pipe sleeves wherever necessary etc. all complete as per specification and as directed by engineer.	MT	1	84.796		
704	Providing, fabricating, transporting, erecting and installing at all elevations miscellaneous steel PVC pipes, expansion fasteners in concrete/brick wall, for all kinds, including the cost of labour, materials and equipment, setting material in concrete, layout, scaffolding, handling at site, cutting, forming, grinding, drilling, bolting welding jointing, testing etc all complete as per drawings and specifications and instructions of engineer.					
(ii)	PVC conduits of all sizes	Quintal	25	17.531		
2200	SANITARY WORKS					
2209	Providing, laying light duty non-pressure NP3 class RCC pipes with collars jointed with stiff mixture of cement mortar 1:2 including testing of joints etc. complete-200 mm dia, as per specification.	RM	100	0.78		
2210	Providing, laying light duty non-pressure NP3 class RCC pipes with collars jointed with stiff mixture of cement mortar 1:2 including testing of joints etc. complete-300 mm dia, as per specification.	RM	100	1.207		
2211	Providing, laying light duty non-pressure NP3 class RCC pipes with collars jointed with stiff mixture of cement mortar 1:2 including testing of joints etc. complete-450 mm dia, as per specification.	RM	350	2.336		

BOQ ITEM NO.	DESCRIPTION	Unit	Quantity	Factor (F)	Rate= A*F/100000 (Rs.)	Amount = Rate* Quantity (Rs.)
2300	STRUCTURAL STEEL WORKS ALL items for fabrication should include supply, fabrication, erection, preparation of fabrication drawings, as per specifications including painting with a coat of primer and also inclusive of all necessary quality test to the satisfaction of engineer/customer for the following.					
2303	Supplying, fabrication, transportation, erection and alignment of factory made electroforged gratings 40 mm thick with steel conforming to IS:2062 at all elevations including preparation of design drawings and fabrication drawings in flooring, platforms, drain and trench covers, walk-ways, passages, staircases with edge binding strips and anti-skid nosing in treads, fixing clamps etc. complete with other fittings and fixtures including all taxes, duties, transpiration, packing, grinding, drilling, bolting (supply of permanent grade 'C' mild steel bolts and nuts to be paid separately under ST NO. 2309(ii)), all welding, edge preparation, blast cleaning of steel surfaces to near white metal surface (Sa 2 1/2) and shall be hot dip galvanised at the rate of 610 gm/sqm, complete as per specifications, drawings and instructions of the Engineer.	MT	20	110.67		
2400	ROAD WORK					
2401	Preparation of sub grade by excavating earth to required depth for all type of soil/ rock, dressing to camber and consolidating the base including making good the undulation etc. and disposal of surplus earth within plant boundary in accordance with IS:2720 all complete as per specification.	CUM	100	0.058		
2402	Supplying and filling with selected good earth of approved quality and pavement and shoulders etc. in compacted layers of maximum depth 200 mm including watering, rolling/consolidating and dressing etc. to required camber including traporatation, royalties complete.	CUM	100	0.331		
2403	Providing and laying interlocking M30 concrete blocks of thickness 75 mm as per paving for shoulders of approved colour and pattern and should be laid on the sub base and bedding as per specifications and recommendation of manufacturer.					
	Providing / Supplying of paver block	Sqm	585	0.228		
	Fixing of paver block	Sqm	1050	0.137		
	Final handing over and submission of quality documents	Sqm	1050	0.091		

BOQ ITEM NO.	DESCRIPTION	Unit	Quantity	Factor (F)	Rate= A*F/100000 (Rs.)	Amount = Rate* Quantity (Rs.)
2404	Providing and laying water bound macadam base/sub base course in layers of required thickness with stone aggregate 90 mm to 40 mm down size stone screening and binding material including screening, sorting, spreading to template and consolidation with road roller including carriage of spreading and consolidation of blinding material morum etc.including cost of material, labour, all complete.	CUM	1200.000	1.254		
2405	Providing and laying water bound macadam base/sub base course in layers of required thickness with stone aggregate 63 mm to 40 mm down size stone screening and bending material including screening, sorting, spreading to template and consolidation with road roller including carriage, spreading and consolidation of blinding material morum etc.including cost of material, labour, etc. all complete as per specification.	CUM	4061.080	1.327		
2406	Laying water bound macadam wearing course with stone aggregate 50 mm to 20 mm size stone screening and binding material including screening, sorting, spreading to template and consolidation with Road Roller including carriage, spreading and consolidation of binding material moorum etc. including cost of material labour etc. all complete as per specifications.	CUM	1019.000	1.313		
2407	Providing and applying Track coat of low viscosity liquid bitumen of suitable approved conforming to IS:73, 217 or 454 as applicable @ 10 KG/10 Sqm for an untreated WBM surface including scraping, cleaning with compressed air etc. complete.	Sqm	21556.000	0.035		
2408	Providing and mixing laying of compacted 75 thk. Bituminous Macadam Course. Bitumen shall be of a suitable grade complying with IS:73 and aggregates, binder material as specified in specification including hot mixing, hot laying, rolling all complete.	Sqm	21556.000	0.449		
2409	Providing, mixing and laying premix carpet (as per IRC-14) of compacted 50 mm thickness in a 2 layers of 25 each (first layer shall be provided during construction and second layer after commissioning of plant) composed of suitable small size aggregate premixed with a bituminous binder on a prepared base. Mixing applying rolling as per IRC specification.	Sqm	21806.000	0.271		
2410	Providing and applying liquid seal coat comprising of an application of a layer of bituminous binder at the rate of 9.8kg/10sqm followed by a cover of stone chips at the rate of 0.09 cum/10 sqm including rolling as per specification all complete.	Sqm	21621.000	0.07		

BOQ ITEM NO.	DESCRIPTION	Unit	Quantity	Factor (F)	Rate= A*F/100000 (Rs.)	Amount = Rate* Quantity (Rs.)
2411	Providing & laying edge protection on both edges of black topping using brick on edge (bricks with crushing strength of 75 kg/cm ²) with full brick width (230 mm) etc including fixing in 13mm thk. Cement mortar 1:6 complete.	RM	60.000	0.029		
2412	Supplying and laying edge protection on both edges of black topping using (400mmX150mmX350mm deep) precast concrete blocks / kerb stone of grade M25 with 20 mm aggregate and of shape as per detailed drawing including fixing in 13 mm thk. Cement mortar 1:2 in joints, finishing of joints with neat cement paste, making drainage opening where required etc. complete as per specification.	RM	6280.000	4.249		
2414	Dismantling of existing road consisting of premix, carpet, curb stone/brick on edge, bitumen macadam course, WBM, preparing sub grade to receive new WBM including camber consolidation including disposal of debris within a lead of 1 Km etc. complete and as directed by Engineer.	Sqm	890.000	0.156		
2415	Providing 25mm thick premix carpet on existing/damaged road surfaces (as per IRC-14) of compacted 25 mm thickness in a single course composed of suitable small size, aggregate premixed with bituminous binder on the existing base including tack coat, cleaning of existing surface, mixing applying rolling as per IRC specification.	Sqm	250.000	0.154		
2416	Concrete of grade M-30 in roads etc complete with 20 mm nominal size graded aggregate complete as per specification. (Cement wil be issued as FOC Item)	CUM	2820.000	3.629		
2418	Providing and laying concrete of grade M-10 as lean concrete with 40 mm nominal size graded aggregate in shoulders complete as per specification. (Cement will be issued as FOC Item)	CUM	2600.000	3.471		
	Total Amount (Rs.)					