

# TENDER SPECIFICATION

NO: BHE/PW/PUR/PIPVG-CVL BAL/PKG-II/1176

BALANCE CIVIL WORKS OF ROADS, DRAINS AND CULVERTS INSIDE  
BOUNDRY WALL AND RCC DRAINS OUT SIDE OF GPPC PIPAVAV PROJECT  
BOUNDARY WALL.

AT

2X350MW CCPP, GPPCL PIPAVAV, DISTT. AM0052ELI GUJARAT

**VOLUME :II – PRICE BID-1176**



**BHARAT HEAVY ELECTRICALS LIMITED**

(A GOVERNMENT OF INDIA UNDERTAKING)

POWER SECTOR - WESTERN REGION

SHREEMOHINI COMPLEX

345, KINGSWAY - NAGPUR 440 001

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**T E N D E R   S P E C I F I C A T I O N**

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EARNEST MONEY DEPOSIT: Please see Notice Inviting Tender.

LAST DATE FOR:                   Please see Notice Inviting Tender.

TENDER SUBMISSION:

THESE TENDER SPECIFICATION DOCUMENTS CONTAINING VOLUME-I-Tech Bid, VOLUME- II-Price Bid AND  
VOLIME-IBCD Rev-01 Rev-01 and Vol-II-B Section-D and Vol- IE-Technical specification ARE ISSUED TO:

M/s. ....

PLEASE NOTE:

THESE TENDER SPECS DOCUMENTS ARE NOT TRANSFERABLE.

For Bharat Heavy Electricals Limited

AGM (Purchase)

Place: Nagpur

Date:

Name of Work: <b>Balance Civil works for Road, drains &amp; Culverts at GPPC,Kovaya (Gujarat).</b>						
ITEM NO.	DESCRIPTION OF WORK	UNIT	QTY	Unit Rates in Figures (In Rs)	Unit Rates in Words (In Rs)	Total Amounts (In Rs)
100	<b>EARTH WORK IN EXCAVATION, BACKFILLING AND DISPOSAL AS PER SPECIFICATION, DRAWINGS AND AS DIRECTED BY ENGINEER FOR THE FOLLOWING:</b>					
101	Earth work in excavation <b>upto 2m depth</b> below ground level for foundation, trenches, pipe lines, storm water drains etc including setting out, clearing & 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 surplus excavated material within a lead of 1.0 KM etc complete for <b>all types of soils</b> including ash, laterite, morrum, weathered rock, decomposed rock, soft rock etc which can be excavated by means of crow bar, pick axe pneumatic rock breaker attachment with poclain/excavator etc but does not require chiselling or blasting.	CUM	21100.0			
103	Earth work in excavation for depth <b>exceeding 2m but not exceeding 4m</b> below ground level for foundation, trenches, pipe lines, storm 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 within a lead of 1.0 KM etc complete for <b>all types of soils</b> including ash, laterite, morrum, weathered rock, decomposed rock, soft rock etc which can be excavated by means of crow bar, pick axe, pneumatic rock breaker attachment with poclain/excavator etc but does not require chiselling or blasting.	CUM	50.0			
104	Earth work in excavation for depth <b>exceeding 2m but not exceeding 4m</b> below ground level for foundation, trenches, pipe lines, storm water drains etc including dewatering if required, strutting, shoring/sheet piling if required, dressing the sides, levelling to grade and stacking/disposal of surplus excavated material within a lead of 1.0 KM etc complete for <b>hard rock</b> requiring blasting/controlled blasting and/or chiselling, wedging, line drilling, pre shearing or any other means including supply, storage, handling of blasting materials etc without damaging the existing structures and as approved by Engineer.	CUM	9000.0			
118b	Back filling around foundations in plinths, trenches, drains etc to proper grade and level with <b>selected good soil from compulsorily excavated earth within a lead of 1 Km (from stock pile)</b> free from shingle, salts, organic materials, roots, sod or any other foreign substance including re-excavating loose thickness, watering and ramming in layers of 15cm thickness compacted to 75% of relative density for non cohesive soil and 90% of its maximum dry density for cohesive soils by manual/ mechanical means, dressing etc complete.	CUM	7265.0			
125	Providing and laying rubble soling with specified sizes of approved quality hard rock rubble or hand broken hard metal of sizes ranging from <b>63mm and down</b> , at all position and depths below or above finished ground floor level, below foundations, below flooring, and for providing hard standing etc in one layer of approximately 225 mm thickness, hand packing, filling in interstices with sand including watering, thoroughly compacting the layer all complete as per specification and the direction of the Engineer.	CUM	100.0			
200	<b>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) ETC COMPLETE AT ALL ELEVATIONS AS PER DRAWING, SPECIFICATIONS UNLESS SPECIFIED OTHERWISE AND AS DIRECTED BY ENGINEER FOR THE FOLLOWING:</b>					
202	Plain Cement Concrete of grade M10/1:3:6 as <b>levelling course</b> , under water retaining structures, equipment foundations, under foundations/floors etc all complete.	CUM	1300.0			

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ITEM NO.	DESCRIPTION OF WORK	UNIT	QTY	Unit Rates in Figures (In Rs)	Unit Rates in Words (In Rs)	Total Amounts (In Rs)
205	Concrete of grade M-30 conforming to IS:456 with coarse sand and graded hard stone aggregate 20mm nominal size in <b>foundations/substructure, grade slab, cable duct,paving, drains, under floors</b> etc at any level below finished floor level, any shape, position or thickness etc complete including use of plasticizer/ superplasticizer conforming to IS:9103 (latest) to achieve required slump in concrete all complete using <b>Sulphate Resisting Cement conforming to relevant IS Code.</b>	CUM	5340.0			
300	<b>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:</b>					
301	Ordinary form work (reasonably good steel/plywood surface)below finished ground floor level for foundations, footings, bases of columns, walls, columns pilasters, beams, mass concrete, trenches etc.	SQM	800.0			
302	Fairface form work with good quality water proof plywood of required thickness and smooth surface below finished ground floor level for foundations, footings, bases of columns, walls, columns pilasters, beams, mass concrete, trenches etc. including all material scaffolding etc.	SQM	46000.0			
400	<b>REINFORCEMENTS</b>					
402	Taking delivery of steel from BHEL stores/store yard, loading, transporting and unloading at site, straightening, cutting, bending, placing in position at any level, binding in position of <b>Tor steel reinforcements (TMT) supplied by BHEL free of cost, confirming to HCR -M Grade FE - 500</b> including cost of binding wire, labour, transportation to & from stores etc complete all as per specifications, drawings and as directed by Engineer. <b>Only HCR -M Grade FE - 500, reinforcement steel shall be supplied by BHEL free of cost.</b>	MT	550.0			
1800	<b>MISCELLANEOUS</b>					
1802	Providing and fixing in position 25mm wide and 25mm thick <b>blown bitumen in expansion joints</b> as per specification. Grade of bitumen shall be 80/20	RM	400.0			
2400	<b>ROAD WORK</b>					
2401	Preparation of sub grade by excavating earth to required depth for all types of soil, dressing to camber and consolidating the base including making good the undulation etc and disposal of surplus earth within a lead of 1KM all complete as per specification.	CUM	3002			
2402	Supplying and filling with selected good earth/murum/conglomerated earth mixed with gravels of approved quality under pavement and shoulders etc. (from contractor's own borrow area) in compacted layers of maximum depth 200mm (in two layers each compacted thickness 100mm) including watering, rolling/consolidating and dressing etc to required camber including excavation, loading, <b>transportation, unloading, royalties, testing complete.</b>	CUM	1863			

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ITEM NO.	DESCRIPTION OF WORK	UNIT	QTY	Unit Rates in Figures (In Rs)	Unit Rates in Words (In Rs)	Total Amounts (In Rs)
2403	Providing, stacking and laying <b>granular morrum laid</b> for shoulder including watering, compaction with road roller to required level etc complete as per specification.	CUM	2125			
2404	Providing and Laying <b>water bound macadam base/sub base course</b> in layers of required thickness with stone aggregate <b>90mm to 40mm size</b> , including binding materials (murrum), screening of aggregates, sorting, spreading to template and consolidation with road roller . Rate shall be inclusive of cost of all material, labour etc. complete.	CUM	1655			
2405	Providing and Laying <b>water bound macadam base/sub base course</b> in layers of required thickness with stone aggregate <b>63 mm to 40mm size</b> , including binding materials (murrum), screening of aggregates, sorting, spreading to template and consolidation with road roller . Rate shall be inclusive of cost of all material, labour etc. complete.	CUM	6320			
2407	Providing and applying <b>Tack coat</b> of low viscosity liquid bitumen of a suitable approved grade conforming to IS 73, 217 or 454 as applicable @ 10 kg/10sqm for an untreated WBM surface including scraping, cleaning with compressed air etc complete.	SQM	28080			
2408	Providing, mixing and laying of compacted 75 thick <b>Bituminous Macadam Course</b> . 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	28080			
2409	Providing and laying <b>25mm thick premix carpet surfacing</b> with 2.25cum and 1.12 cum of stone chippings of size 12.5mm and 10mm respectively per 100 sqm with hot bitumen @ 52 kg. and 56 kg. per cu.m. of 12.5mm & 10mm size stone chippings respectively including a tack coat with hot bitumen @ 1.00 kg. per sq.m. of road surface including consolidation with road roller etc all complete with bitumen heated and then mixed with solvent at the rate of 70gms per kg of bitumen including cost of all material, labour all complete as per specification, drawings and instructions of the Engineer.	SQM	29082			
2410	Providing and applying <b>liquid seal coat</b> 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/10sqm including rolling as per specification all complete.	SQM	28080			
2412	Supply and laying (400mm x 150mm X 350mm deep) <b>precast concrete kerb stone</b> of shape as per detailed drawing including fixing in 13mm thick cement mortar 1:2 in joints, finishing of joints with neat cement paste, making drainage opening where required etc complete as per specifications.Existing pedastal to IMSC Sump #3,Transformer yard Unit#1 to IMSC Sump #1, Gas receiving station to SC Sump# 3 with road crossing.	RM	8200			
<b>Grand Total in figures (In Rs)</b>						
<b>Grand Total in Words Rs.....</b>						