



# भारत हेवी इलेक्ट्रिकल्स लिमिटेड

(भारत सरकार का उपक्रम)

## BHARAT HEAVY ELECTRICALS LIMITED

(A Govt. of India Undertaking)

**TCN - 01**

Ref: PSER:SCT:BAR-C1075:TCN-01

Date: 01-02-2010

Sub	Tender change notice (TCN- 01).	
Job	Providing of all services of manpower, tools & plants, watch & ward, supervision including supply of materials and consumables for construction of Residential quarters & field hostel including fencing etc & electrical works at 2 X 660 MW Barh (STG-II) STPP Project, PO-Barh, Dist-Patna, Bihar.	
Ref	1.0	Tender no PSER:SCT:BAR-C1075:10
	2.0	BHEL's NIT, vide reference no Ref: PSER:SCT:BAR-C1075 :10: Dated 15/01/2010
	3.0	Other references (if any).

With reference to above, following points, relevant to tender, may please be noted and complied with while submitting offer.

- 1.0 Due date of submission of offer is extended from 05-02-2010 to 08-02-2010, 15-00 hrs.
- 2.0 There is a repetition of scope of item no.28, page-11 of 17, in the rate schedule-2, in item no. 36, page 12 of 17 of BOQ cum RATE Schedule, VOL-III A . As such, the following scope stands revised as under for item no. 36.

SN	Description	Qty	Unit	Rate	Amount
36	Construction of 3.6x.90x2 M size <b>Septic tank</b> in all types of soil with 250 mm thick brick masonry in cement Mortar of 1:6 15 cm thick cement concrete 1:4:8 grade in bed, 75 mm thick 1:2:4 grade cement concrete flooring and 100 mm thick over RCC slab of 1:2:4 grade, 75 mm thick partition wall, 15 mm thick plaster on brick wall finished with neat cement providing M.S. rugs etc., complete as per drawing including excavation, disposal of surplus earth with a load of 50 Mtr. item includes all material, labour, leads, lifts etc., complete but excluding C.I manhole cover.	3	Each		
a)	Providing and laying of 2mm thick PVC flooring & 100mm high skirting with all materials and labour etc complete.	400	SQM		
-	<del>Providing PVC pipe and fittings and fixtures of Supreme or equivalent make with all materials, labour etc complete for drinking water.</del>	-	-	-	-
-	<del>for external 32mm dia</del>	-	M	-	-
-	<del>for external 40mm dia</del>	-	M	-	-

- 3.0 For Schedule -III & IV, in the list of approved makes other than those specifically mentioned above, 11 items have not indicated due to typographical error. The same are stands incorporated in totality as under :

### LIST OF APPROVED MAKES OTHER THAN THOSE SPECIFICALLY MENTIONED ABOVE

1. SINGLE CORE STRANDED Cu WIRE PVC INSULATED - FINOLEX/EVERSHINE KDK/ANCHOR
2. MCB/MCCB WITH BOX - SIEMENS/STANDARD/MDS/HAVEL/GE
3. RIGID PVC CONDUIT - PLAZA/PLICA/PIONEER MARKED AS PER IS-9537
4. FLEXIBLE PVC CONDUIT - PLAZA/PLICA/PIONEER
5. IRON CLAD TPN/DP MAIN SWITCH - SURYA/FLORA/STANDARD/L&T
6. DISTRIBUTION FUSE BOARD - STANDARD/HAVEL/ASIATIC ELECTRIC

पावर सेक्टर पूर्वी क्षेत्र (मुख्यालय)

POWER SECTOR EASTERN REGION, DJ-9/1, SALT LAKE CITY, KOLKATA - 700 091

फैक्स/Fax : (033) 23211960 फोन/Phone : बोर्ड/EPABX : 23211798/ 1691

7. ELECTRONIC REGULATOR - RIDER/ANCHOR OR ISI APPROVED
8. POWER CABLE- NICCO/INCAB/GLOSTER/CRYSTAL/FINOLEX.
9. LUGS -DOWEL/UML
10. GLAND - COMMET/SUNIL&CO.
11. CEILING FAN - POLAR/KHAITAN/CROMPTON/ORIENT
12. 5,6 PIN SOCKET WITH SWITCH - ANCHOR/NORTH-EAST

4.0 Considering all the above, the rate schedule has been revised and enclosed herewith as VOLUME-III, REV-01. The REV-0 stands deleted and not to be considered for quoting purpose.

4.0 All other terms & conditions shall remain unchanged.

Thanking you,

Yours faithfully,  
for BHARAT HEAVY ELECTRICALS LTD

SDGM (SCT)

पावर सेक्टर पूर्वी क्षेत्र (मुख्यालय)

POWER SECTOR EASTERN REGION, DJ-9/1, SALT LAKE CITY, KOLKATA - 700 091

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## BOQ CUM SCHEDULE OF RATES

## VOLUME – IIIA (REV 1)

## PREAMBLE

1	This preamble forms part of tender document and schedule of items. The tender should read this preamble carefully in rates for various items. Clauses under this preamble shall be read in conjunction with Volume- IB, Volume- ID and Volume- II and other tender sections as applicable.
2	The work shall be carried out strictly as per specifications description of the items in these schedule and / or Engineer's instructions.
3	Items of work provided in this schedule but not covered in this specification shall be executed strictly as per instruction of the Engineer.
4	Unless specifically mentioned otherwise in the tender document, the tender shall quote for the finished items and shall provide for the complete cost towards power, fuel, tools, tackles, equipment, constructional plants, temporary works, labour, dismantling of all temporary piping, structures, valves, pumps, tanks & other misc. equipment, strengthening of roads/culverts/bridges etc. including arranging all clearances etc. required for carrying out different activities & tests, materials, consumables, levies, taxes (except service tax), transport, layout, repairs, rectification, maintenance till handing over, supervisions, colonies, shops, establishments overheads, profits and all incidental items not specifically mentioned but reasonably implied and necessary to complete the work according to the complete tender document and this schedule.
5	The quantities of the various items mentioned in this schedule of items are approximate, based on very preliminary information and may vary to any extent or be deleted altogether. The quoted rates of each item will remain firm throughout the period of execution including extension, for reasons whatsoever, as long as variation in the total value of work executed under any part of this contract including extra, if any but excluding any price variation remains, within thirty percent ( $\pm 30\%$ ) of the awarded price as per LOI.
6	The rates quoted shall be inclusive of cleaning of site of any vegetation, dressing, clearing of old structures/foundations/pipelines and leveling etc. including fixing of gird pillars, benchmarks etc. required for commencement of site activities. No separate payment will be made towards the same.
7	Rates shall be quoted in figures and in words in clear legible writing. No overwriting is allowed. All scoring and cancellations should be countersigned and in case of illegibility the interpretation of Engineer shall be final. All entries shall be in English language.
8	All works items wise shall be measured upon completion and paid for at the rates quoted and accepted as per BHEL approved payment schedule / billing break-up.
9	The tender shall be deemed to have visited site and made himself aware of all the site conditions, studied the specifications and details of work to be done within the time schedule attached and to have acquainted himself of the conditions prevailing at site.
10	No splitting of the job is envisaged. Decision of BHEL in this regard shall be final and binding to the bidders.
11	Engineer's decision shall be final and binding on the contractor regarding clarification of items in the schedule with respect to the other sections/volumes of the contract.
12	The work shall be carried out as per construction drawings, specifications and the description of the items in this schedule and/or Engineer's instructions. Drawings enclosed with this documents are only indicative giving some idea of the idea of the type of work involved. The layout, sizes and details of the building, structures and foundations shown in tender drawings may vary at a large extent during actual construction. Final drawings will be issued progressively during the execution of the work.
13	For Miscellaneous items of SCH-1 & SCH-2, if No rates are quoted by the bidder, the same shall be considered at PAR with DSR-7 Rates by BHEL during evaluation & awarding.
14	<b>Note: Bidders to note the following for quoting their rates.</b>
	a) Only authorized persons of bidder having power should sign in the price bid. All the pages must be signed
	b) For bid evaluation purpose (deciding L1), grand total price as mentioned above shall be considered.
	c) Quoted rates shall be inclusive of all taxes, duties etc., except service tax as per tender terms. Service tax (as applicable) shall be payable/reimbursable extra as per tender terms.

VOLUME-III					
CONSTRUCTION OF TEMPORARY FIELD HOSTEL					
FOR 2X660 MW THERMAL UNITS (4 & 5) AT BARH STPP STG-II PROJECT, PATNA, BIHAR					
BOQ CUM RATE SCHEDULE				SCHEDULE-I	
ST NO	DESCRIPTION	qty	UNIT	Rate per Unit (In Figs & In Words)	TOTAL AMOUNT (In Figs & In Words)
100	EARTH WORK IN EXCAVATION, BACKFILLING AND DISPOSAL AS PER SPECIFICATION & DRAWINGS				
101	Excavation with lift up to 2.0 meters including providing coffer dams, shoring, strutting, sheeting, bracing, draining and pumping out water to maintain reasonably dry working condition for all activities, clearing all grass, vegetation etc. including trimming of excavation bottom, staking, levelling, grading etc. of excavated materials, loading and unloading etc. all complete as per specifications, drawings and instructions of the engineer, including a lead upto 300 m,				
i)	In all types of soils including expansive soil, ash, morrum, laterite,	2000	CUM		
102	Filling using selected excavated materials in trenches, plinths, sides of foundations and other underground structures, pipes, area levelling etc. in layers not exceeding 250 mm thickness including lead upto 1.0 Km and all lifts and including loading from stock pile, carting, unloading, filling, watering and compacting/ramming each layer, all complete as per specifications, drawings & as directed by engineer to achieve the following densities.				
i)	Ordinary manual compaction.	1510	CUM		
103	Sand filling (river sand) in plinth in layers not exceeding 15cm as directed by BHEL and consolidating same by thorough saturation with water and ramming complete including the cost of supply of sand. (Payment to be made on measurement of finished qty).	350	CUM		
104	Single brick flat soling of picked jhama bricks including ramming and dressing bed to the proper level and filing the joints with powder earth or local sand including all materials, labour etc. complete.	550	SQM		
105	Plain cement Concrete 1 : 3 : 6 ( 1 cement : 3 sand : 6 graded stone aggregate of 20 mm nominal size) as filling course or lean concrete at any level below foundations, drain, septic tank, floors, hume pipes, materials, labour etc complete (Cement - PPC/OPC/PSC to be supplied by the vendor with test certificate from direct manufacturer of ACC /ULTRATECH /CETURY /BIRLA /LAFARGE /INDIA CEMENT etc).	160.00	CUM		
106	Reinforced / plain cement concrete 1 :1.5: 3 (1 cement : 1.5 sand : 3 graded stone aggregate of 20 mm nominal size) for foundation, columns, beams, chajjas, RCC sleepers, RCC shelf, over head tanks slab, super structure slabs etc excluding cost of shuttering and reinforcement if any but including all materials, labour, curing etc complete all the levels (Cement - PPC/OPC/PSC to be supplied by the vendor with test certificate from direct manufacturer of ACC / ULTRATECH/CETURY/BIRLA/LAFARGE/INDIA CEMENT etc)	350.00	CUM		
107	Reinforced/ plain cement concrete 1:2:4 for RCC floor etc. with approved stone chips 20mm down for floor, drain etc excluding cost of shuttering and reinforcement if any but including all materials, labour, curing etc complete all the levels. (Cement - PPC/OPC/PSC to be supplied by the vendor with test certificate from direct manufacturer of ACC /ULTRATECH /CETURY /BIRLA /LAFARGE /INDIA CEMENT etc).	20.00	CUM		
108	Damp Proof Course 40mm thk. 1:1.5:3 concrete (10mm down aggregate) with 2% of approved admixture of water proofing compound. Hot bitumen @ 1.7Kg./sqm shall be applied before & after the DPC as per specification (cement shall be supplied by BHEL free of cost as per SCC).	125.00	SQM		
109	Hire and labour charges for 25mm thick shuttering for bldg. works for concrete foundations, floor/ roof slabs, beams, lintels, columns, chajja, fins etc including fitting, fixing and striking out carefully after completion of work for below ground and upto 6m height from finished floor level.				
(i)	Without vertical props.	725.00	SQM		
(ii)	With vertical props up to (+) 6M height.	700.00	SQM		

VOLUME-III					
CONSTRUCTION OF TEMPORARY FIELD HOSTEL					
FOR 2X660 MW THERMAL UNITS (4 & 5) AT BARH STPP STG-II PROJECT, PATNA, BIHAR					
BOQ CUM RATE SCHEDULE				SCHEDULE-I	
ST NO	DESCRIPTION	qty	UNIT	Rate per Unit ( In Figs & In Words)	TOTAL AMOUNT ( In Figs & In Words)
110	Brick work in cement mortar (1:6) in foundation, plinth, pier, abutment, wing walls, water tank, septic tank, drains, culvert etc including all materials, labours, scaffolding and other incidental etc. complete. (Cement - PPC/OPC/PSC to be supplied by the vendor with test certificate from direct manufacturer of ACC /ULTRATECH /CETURY /BIRLA / LAFARGE /INDIA CEMENT etc).				
(i)	Ordinary bricks / fly ash bricks, Class designation 75 below plinth lvl.	145.00	CUM		
111	12.5 cm thick brick work in cement mortar (1 cement :4 sand) in foundation, plinth, pier, abutment, walls, water tank, septic tank, drains, culvert, super structure etc including cost of scaffolding and other incidental work etc. completed. (Cement - PPC /OPC /PSC to be supplied by the vendor with test certificate from direct manufacturer of ACC / ULTRATECH / CETURY / BIRLA / LAFARGE / INDIA CEMENT etc).				
(i)	Ordinary bricks / fly ash bricks, Class designation 75, below plinth level.	95	SQM		
(ii)	Ordinary bricks / fly ash bricks, Class designation 75, above plinth lvl upto 6.5 M height.	2000.00	SQM		
112	Supply, transporting, straightening, cutting, bending, placing at any level, binding in position mild steel reinforcements in concrete including cost of reinforcement and binding wire, labour etc complete all as per specifications & drawings (Contractor will provide MS round from SAIL/ TISCO/ IISCO/ SRMB/ SHRICON/ SHYAM STEEL/ ELEGANT etc).	2.50	MT		
113	Supply, transporting, straightening, cutting, bending, placing at any level, binding in position high yield strength steel reinforcements in concrete including cost of reinforcement and binding wire, labour etc complete all as per specifications & drawings (Contractor will provide TMT bar Fe-415/500 quality from SAIL/ TISCO/ IISCO/ SRMB/ SHRICON/ SHYAM STEEL etc). Payment terms - a) On receipt of materials at site - 70%; b) On completion of erection & fixing - 30%.	66.00	MT		
114	Plaster to wall floor, slab soffits, fins, sills etc. with sand cement mortar including rounding off or chamfering corners as directed and racking out joints or roughening of concrete surface including chipping & application of cement slurry where necessary etc complete as per drawing and direction of engineer. (Cement - PPC/ OPC/PSC to be supplied by the vendor with test certificate from direct manufacturer of ACC / ULTRATECH/CETURY/ BIRLA/ LAFARGE /INDIA CEMENT etc)				
(i)	Inside plaster With 1:6 cement mortar average 12 mm thick	520.00	SQM		
(ii)	6 mm th. Cement Plaster with 1:4 cement mortar	200.00	SQM		
(iii)	outside plaster With 1:6 cement mortar average 15 mm thick above GL.	1500.00	SQM		
115	Providing & Fixing 300 x300 mm x 7 mm thick coloured ceramic floor tile ( grade iv ) of mat finish in floors of kitchens, toilets at all elevations with 20/25mm thick bed of cement mortar 1:4 and jointing with matching coloured cement slurry etc complete with all labour and materials . Floor tile to be laid on slope. (Vendor will supply all material).	750.00	SQM		
116	Providing & Fixing 300 x300/200x200 mm x 5/6 mm thick coloured ceramic wall tile for dado in kitchens, toilets, entrance, lobby etc.at all elevations with 12 mm thick bed of cement mortar 1:3 and jointing with matching coloured cement slurry etc complete with all labour and materials. (Vendor will supply all material).	350.00	SQM		
117	Providing & fixing 20mm thick Black stone slab of required size over RCC platform for kitchen including all materials and labour complete including 6 mm thick 1:3 cement sand bed mortar 10/12 mm as required.	20.00	SQM		

**VOLUME-III**

**CONSTRUCTION OF TEMPORARY FIELD HOSTEL**

**FOR 2X660 MW THERMAL UNITS (4 & 5) AT BARH STPP STG-II PROJECT, PATNA, BIHAR**

**BOQ CUM RATE SCHEDULE**

**SCHEDULE-I**

ST NO	DESCRIPTION	qty	UNIT	Rate per Unit ( In Figs & In Words)	TOTAL AMOUNT ( In Figs & In Words)
118	Supplying, fitting and fixing openable steel windows conforming to IS:1036-1975 and IS:7452-1974 with non friction projecting type of hinges fitted with revetts or nut bolt system as directed, glazing cleats, lugs, two nos m s anodised peg stays and fastner for each window of size 900mmX1200mm, 4mm thick clear glass pane, including fixing in position, fixing lugs in cement concrete 1:2:4 with stone chips 12.5mm down cutting holes & mending goods damages, 8mm dia ms round guard bar welded horizontally 125 c/c with each window etc. complete with one coat of primer and two coats of synthetic enamel finish in all respect.	85.00	SQM		
119	Providing <b>plaster of paris</b> 2 mm thick punning over finished plaster surface and finished with one coat of acrylic emulsion primer followed by two coats of <b>acrylic emulsion paint inside room</b> to give smooth and even surface as per specification at all levels.	450.00	SQM		
120	Applying one coat of <b>cement primer and two finished coats</b> of water proofing cement paint Seacem or equivalent on plastered or concrete surface to receive water proofing cement based paint including scraping, cleaning and preparing the surface throughly complete as per direction of the Eng-in-charge. After completion of painting rooms / areas are to be handed over with neat and clean condition. From ground floor to roof outside building	1650.00	SQM		
121	<b>Supplying &amp; fitting Panel shutter of maindoor</b> as per design including fitting and fixing the same in position including the cost of hinges and other fittings viz, 3x2 nos Nos. MS butt hinges, one No. Brass tower bolt (100 mm long), one No. brass sliding door bolt of 240 mm long 16/15mm dia, one no magnetic door catcher, safety chain inside, with teak wood polish. Lock & fittings shall be done by the contractor & complete with two coats of synthetic enamel paint finish. <b>35 mm thick shutter with 19 mm thick panel from best indian season Hard wood.(MAIN DOOR)</b>	10	SQM		
122	<b>Supplying &amp; fitting 30mm thick pnelled shutter for toilet and kitchen</b> with 12mm BWR ply pannelled door for internal use as per ISI approved / design including fitting and fixing the same in position including the cost 3x2 nos Nos. MS butt hinges, 1 No. brass tower bolt (150 mm long), 1 No. brass sliding door bolt of 300 mm long 15/16mm dia, one magnetic door catcher, two nos 100mm brass handle with one coat of wood primer paint of Berger make. Panelled Shutter shall be GAMAR wood 30x100mm. (FOR TOILET AND KITCHEN)	560	SQM		
123	Providing attach toilet with following facilities as directed by BHEL: (a) Inside size of toilet 2.0M x 2.5M, (b) 5mm thick white colour ceramic floor tile & inside walls tile upto 1.35 M height from finish floor, (c) one white vitreous wash basin 550x400 mm (Hindustan make or equivalent) with CI bracket, 15 mm cp brass pillar taps, 32 mm PVC waste water pipe, 32mm CP brass waste,one CP towel rail 550mm long, one best quality 550x400mm mirror etc complete, (d) one European type WC Pan with seat and lid black colour, low level 10 lts capacity white PVC flushing cistern, etc (e) all inside pipe lines shall be 15mm /20mm PVC & concealed pipes, (f) main external supply water pipe line shall be 25mmdia PVC of 6 M,(g) Soil pipe shall be min 75mm dia CI for below floor if any and outside shall be 100mm pvc of supreme or equivalent. Masonry , concreting & plastering will be paid as per respective items. Price to be quoted as lumsum for each set of toilet.	30	SET		
124	Supplying brass ferrule for connecting mains with PVC/ PPR Pipe of 20mm dia and upto 45cm long with plumbing joint coupling at both ends with cap and lining etc.	2	Each		
125	Providing,laying & jointing glazed stoneware pipes grade A with stiff mixture of cement mortar in the proportion of 1:1 (1 cement:1 fine sand) including testing of joints etc. complete( <b>100 mm diameter</b> )	180	RM		
126	C.I. or similar patent vent cowl supplied, fitted and fixed in position.				
	a) 100mm	10	Each		

VOLUME-III					
CONSTRUCTION OF TEMPORARY FIELD HOSTEL					
FOR 2X660 MW THERMAL UNITS (4 & 5) AT BARH STPP STG-II PROJECT, PATNA, BIHAR					
BOQ CUM RATE SCHEDULE				SCHEDULE-I	
ST NO	DESCRIPTION	qty	UNIT	Rate per Unit (In Figs & In Words)	TOTAL AMOUNT (In Figs & In Words)
127	Supplying and fixing full way gun metal valve standard pattern beet, Indian make with fitting (Zebu, J.J.Sumon. Pratap, Alto brand) supplied, fitted and fixed.				
	a) 20mm	40	Each		
128	Providing & fixing P or S trap 100 mm dia. C.I.	30	Each		
129	Construction brick masonry <b>manholes</b> of inside size 90x80 cm and 45-60 cm deep with 75 class designation bricks in cement mortar 1: 5 (1 cement : 5 fine sand), RCC top slabs with 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate of 20 mm size), foundation concrete 1:1:8 (1 cement : 4 coarse sand : 8 graded stone aggregate of 40 mm nominal size), inside plastering 12 mm thick with cement mortar 1:3 (1 cement : 3 coarse sand) finished with a floating coat of neat cement and making channels in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded aggregate of 20 mm nominal size) neatly finished complete as per standard design excluding CI manhole cover.	15.00	NO.		
130	Construction of 3.6x.90x2 M size <b>Septic tank</b> in all types of soil with 250 mm thick brick masonry in cement Mortar of 1:6 15 cm thick cement concrete 1:4:8 grade in bed, 75 mm thick 1:2:4 grade cement concrete flooring and 100 mm thick over RCC slab of 1:2:4 grade, 75 mm thick partition wall, 15 mm thick plaster on brick wall finished with neat cement providing M.S. rugs etc., complete as per drawing including excavation, disposal of surplus earth with a load of 50 Mtr. item includes all material, labour, leads, lifts etc., complete but excluding C.I manhole cover.	3.00	NO.		
131	Providing and fixing <b>square mouth stone ware gully trap</b> grade'A' conforming to IS:651 complete with G.I. Grating, brick masonry chamber with bricks of class designation '50' and water tight C.I. Cover with frame of 300 x 300 mm size (inside), the weight of cover to be not less than 4.5 kgs and frame to be not less than 2.70 kg as per specification. 100X100 MM P TYPE	4.00	NO.		
132	Construction <b>soak pit</b> of 2.5Mtr dia and 3 Mtr depth filled with brick bats including S.W. drain pipe 100 mm dia and 1.2 meter long complete as per standard design.	3.00	NO.		
133	Providing and laying soil, waste and vent pipes, centrifugally cast (spun) iron S&S pipes				
	100mm	50.00	RM		
	125 mm	60.00	RM		
134	Providing and laying of 2mm thick PVC flooring & 100mm high skirting with all materials and labour etc complete.	1000	SQM		
135	Providing PVC pipe and fittings and fixtures of Supreme or equivalent make with all materials, labour etc complete for drinking water .				
a)	for external 32mm dia	30	M		
b)	for external 40mm dia	25	M		
c)	for external 50mm dia	30	M		
136	Supply, Fitting & fixing/laying of GI pipe as per IS 1239/IS 3589 with all necessary accessories i.e socket, bends, tees, unions, cross, elbow, nipple, long screw, reducing sockets, reducing tees, short pieces etc. complete for making common ring header for construction/drinking water including cost of all necessary jointing materials labour etc. all complete (payment will be made on the center line measurement of total pipeline including all specials).				
a)	25 mm medium quality	75	RM		
b)	32 mm medium quality	50	RM		
c)	40 mm medium quality	25	RM		
d)	50 mm medium quality	30	RM		
137	Providing and fixing Salem Stainless Steel A ISI 304 (18/8) kitchen sink as per I.S. 13983 with G.I. Brackets and stainless steel plug 40 mm including the walls wherever required. )				
	610 x 460 mm bowl depth 200 mm	2	Each		

VOLUME-III					
CONSTRUCTION OF TEMPORARY FIELD HOSTEL					
FOR 2X660 MW THERMAL UNITS (4 & 5) AT BARH STPP STG-II PROJECT, PATNA, BIHAR					
BOQ CUM RATE SCHEDULE				SCHEDULE-I	
ST NO	DESCRIPTION	qty	UNIT	Rate per Unit ( In Figs & In Words)	TOTAL AMOUNT ( In Figs & In Words)
138	Providing & fixing P.V.C. water tank (Syntex or equivalent) in position. The work to including making all necessary inlet & outlet pipes (PPR -PN -16 Pipe, 40 mm. OD), fixture, ball cocks, valves (two nos.) etc. all complete as per specification at all heights and levels				
a)	2000 Litre capacity	3	NO		
139	Complete electricals works of the Field Hostel as detailed in SCHEDULE-3	1	SET		
140	1.2M high fencing with M S angle post of size 40X40X5 mm 1.8 M long post placed every 3M centre to centre, 450mm length angle embedded in concrete (1:2:4) block size 300mmx300mmx450mm deep, every 15th post, last but one end post corner post shall be strutted on both sides and post on one side only and provided with 8 horizontal lines and two diagonals interwoven with horizontal wires, of barbed wire 9.38 kg per 100 metres (min) between two post fitted and fixed with GI staples turn buckles etc complete. Contractor to supply all materials including cement and structural steel. Cost of excavation, concrete, backfilling shall be measured and paid separately as per respective items).				
a)	for structural angle with two coats of bitumen based protective coating etc complete.	1500	KG		
b)	for G I barbed with all fixing etc complete.	618	KG		
141	Supply & Installation of Borewell (including all above ground 2M 100mm GI pipes, all above ground GI Pipes valves, filter, tees, couplings complete with 1 hp motor + submersible pumps, electrical controls, cables, etc complete items for water upto 6M high tank) including all Labour for boring through any type of soil, rock & boulders for sinking tubewell of required dia. With top enlargement by boring system including hire charges and labour for Machine tools and plants, staging force pumping set, and making arrangement for water required for boring etc. complete and lowering of casing pipes, strainers blind pipes etc. complete for 100 mm dia upto 20M and 50 mm dia. from 20M to 75M & beyond from GL. Depth of boring to be decided at the time of execution. Length to be measured actual at site. (Minimum depth to be reached 70M with 100 mm dia. gravel packing for last five metres and the gap between bore dia and 50mm dia PVC pipe.	2	sets		
	for 100 mm dia bore hole for depth range 0- 25 Mtrs from GL..				
	for 50 mm dia for bore hole depth range 25-55 Mtrs from GL..				
	for 50mm dia strainer for bore depth 55-65 mtrs from GL				
<b>TOTAL OF SCHEDULE-I</b>					
142	MISC ITEMS : For items not covered above, quote % above or below the CPWD schedule (DSR-2007).				
a)	Rate of complete item.				
b)	Rate of supply of materials at site only.				
c)	Rate for execution complete excluding supply of materials.				



**CONSTRUCTION OF TOWNSHIP (FOR FOREIGNER) AND MISC ENABLING CIVIL WORKS FOR 2X660 MW THERMAL UNITS (4 & 5) AT BARH STPP STG-II PROJECT, PATNA, BIHAR.**

**BOQ CUM SCHEDULE OF RATES**

**SCHEDULE-2**

ST NO	DESCRIPTION	QNTY	UNIT	Rate per Unit ( In Figs & In Words)	Amount
1	Earthwork in Excavation with lift up to 2.0 meters including providing coffer dams, shoring, strutting, sheeting, bracing, draining and pumping out water to maintain reasonably dry working condition for all activities, clearing all grass, vegetation etc. including trimming of excavation bottom, staking, levelling, grading etc. of excavated materials, loading and unloading etc. all complete as per specifications, drawings and instructions of the engineer, including a lead upto 300 m,				
a)	In all types of soils including expansive soil, ash, morrum, laterite,	850	CUM		
2	Filling using selected excavated materials in trenches, plinths, sides of foundations and other underground structures, pipes, area levelling etc. in layers not exceeding 250 mm thickness including lead upto 1.0 Km and all lifts and including loading from stock pile, carting, unloading, filling, watering and compacting/ramming each layer, all complete as per specifications, drawings & as directed by engineer to achieve the following densities.				
a)	Ordinary manual compaction.	535	CUM		
3	Sand filling (river sand) in plinth in layers not exceeding 15cm as directed by BHEL and consolidating same by thorough saturation with water and ramming complete including the cost of supply of sand. (Payment to be made on measurement of finished qty).	250	CUM		
4	Single brick flat soling of picked jhama bricks including ramming and dressing bed to the proper level and filling the joints with powder earth or local sand including all supply of materials, labour etc. complete.	405	SQM		
5	Plain cement Concrete 1 : 3 : 6 (1 cement : 3 sand : 6 graded stone aggregate of 20 mm nominal size) as filling course or lean concrete at any level below foundations, drain, septic tank, floors, hume pipes, materials, labour etc complete (Cement - PPC/OPC/ PSC to be supplied by the vendor with test certificate from direct manufacturer of ACC / ULTRATECH / CETURY / BIRLA / LAFARGE / INDIA CEMENT etc).	90	CUM		
6	Reinforced / plain cement concrete 1 : 1.5 : 3 ( 1 cement : 1.5 sand : 3 graded stone aggregate of 20 mm nominal size) for foundation, columns, beams, chajjas, RCC sleepers, RCC shelf, over head tanks slab, super structure slabs etc excluding cost of shuttering and reinforcement if any but including all materials, labour, curing etc complete all the levels (Cement - PPC/OPC/PSC to be supplied by the vendor with test certificate from direct manufacturer of ACC /ULTRATECH /CETURY /BIRLA /LAFARGE /INDIA CEMENT etc).	120	CUM		

**CONSTRUCTION OF TOWNSHIP (FOR FOREIGNER) AND MISC ENABLING CIVIL WORKS FOR 2X660 MW THERMAL UNITS (4 & 5) AT BARH STPP STG-II PROJECT, PATNA, BIHAR.**

BOQ CUM SCHEDULE OF RATES				SCHEDULE-2
7	Reinforced/ plain cement concrete 1:2:4 for RCC floor etc. with approved stone chips 20mm down for floor, drain etc excluding cost of shuttering and reinforcement if any but including all materials, labour, curing etc complete all the levels. (Cement - PPC/OPC/PSC to be supplied by the vendor with test certificate from direct manufacturer of ACC /ULTRATECH /CETURY /BIRLA /LAFARGE /INDIA CEMENT etc & steel reinforced/plain to be supplied).	15	CUM	
8	Damp Proof Course 40mm thk. 1:1.5:3 concrete (10mm down aggregate) with 2% of approved admixture of water proofing compound. Hot bitumen @ 1.7Kg./sqm shall be applied before & after the DPC as per specification (cement shall be supplied by BHEL free of cost as per SCC).	100	SQM	
9	Hire and labour charges for 25mm thick shuttering for bldg. works for concrete foundations, floor/ roof slabs, beams, lintels, columns, chajja, fins etc including fitting, fixing and striking out carefully after completion of work for below ground and upto 6m height from finished floor level.			
a)	Without vertical props.	625	SQM	
b)	With vertical props .	300	SQM	
10	Supply, transporting, straightening, cutting, bending, placing at any level, binding in position mild steel reinforcements in concrete including cost of reinforcement and binding wire, labour etc complete all as per specifications & drawings (Contractor will provide MS round from SAIL/ TISCO/ IISCO/ SRMB/ SHRICON/ SHYAM STEEL/ ELEGANT etc).	1	MT	
11	Supply, transporting, straightening, cutting, bending, placing at any level, binding in position high yield strength steel reinforcements in concrete including cost of reinforcement and binding wire, labour etc complete all as per specifications & drawings (Contractor will provide TMT bar Fe-415/500 quality from SAIL/ TISCO/ IISCO/ SRMB/ SHRICON/ SHYAM STEEL etc). Payment terms - a) On receipt of materials at site - 70%; b) On completion of erection & fixing - 30%.	22	MT	
12	Brick work in cement mortar (1:6) in foundation, plinth, pier, abutment, wing wlls, water tank, septic tank, drains, culvert etc including all materials, labours, scaffolding and other incidental etc. complete. (Cement - PPC/OPC/PSC to be supplied by the vendor with test certificate from direct manufacturer of ACC /ULTRATECH /CETURY /BIRLA /LAFARGE /INDIA CEMENT etc & all other materials to be supplied by the vendor).			
a)	Ordinary bricks / fly ash bricks, Class designation 5 below plinth lvl.	35	CUM	
13	12.5 cm thick brick work in cement mortar (1 cement :6 sand) in foundation, plinth, pier, abutment, walls, water tank, septic tank, drains, culvert, super structure etc including cost of scaffolding and other incidental work etc. completed. (Cement - PPC / OPC / PSC to be supplied by the vendor with test certificate from direct manufacturer of ACC / ULTRATECH / CETURY / BIRLA / LAFARGE / INDIA CEMENT etc& all other materials to be supplied by the vendor).			
a)	Ordinary bricks / fly ash bricks, Class designation 5, below plinth level.	393	SQM	

**CONSTRUCTION OF TOWNSHIP (FOR FOREIGNER) AND MISC ENABLING CIVIL WORKS FOR 2X660 MW THERMAL UNITS (4 & 5) AT BARH STPP STG-II PROJECT, PATNA, BIHAR.**

BOQ CUM SCHEDULE OF RATES				SCHEDULE-2	
b)	Ordinary bricks / fly ash bricks, Class designation 5, above plinth lvl upto EL (+) 6.5M height.	825	SQM		
14	Plaster to wall floor, slab soffits, fins, sills etc. with sand cement mortar including rounding off or chamfering corners as directed and racking out joints or roughening of concrete surface including chipping & application of cement slurry where necessary etc complete as per drawing and direction of engineer. (Cement - PPC/OPC/PSC to be supplied by the vendor with test certificate from direct manufacturer of ACC /ULTRATECH /CETURY /BIRLA /LAFARGE /INDIA CEMENT etc& all other materials to be supplied by the vendor).				
a)	Inside plaster With 1:6 cement mortar average 12.5 mm thick	582	SQM		
b)	6 mm th. Cement Plaster with 1:4 cement mortar	200	SQM		
c)	outside plaster With 1:6 cement mortar average 15 mm thick above GL.	1200	SQM		
15	Providing & Fixing 300 x300 mm x 7 mm thick coloured ceramic floor tile ( grade iv ) of mat finish in floors of <b>kitchens, toilets at all elevations with 20/25mm thick bed of cement</b> mortar 1:4 and jointing with matching coloured cement slurry etc complete with all labour and materials . Floor tile to be laid on slope. (Vendor will supply all material).	125	SQM		
16	Providing & Fixing 300 x300/200x200 mm x 5/6 mm thick coloured ceramic wall tile for <b>dado in kitchens, toilets, entrance, lobby etc.</b> at all elevations with 12 mm thick bed of cement mortar 1:3 and jointing with matching coloured cement slurry etc complete with all labour and materials. (Vendor will supply all material).	285	SQM		
17	Providing & Fixing fully vitrified coloured tile glazed or <b>mat finish for floors</b> at all elevations (premium quality) to be laid on 20 mm thick bed of cement mortar 1:4 and jointing with matching coloured cement slurry etc complete with all labour and materials. (Vendor will supply all material).	438	SQM		
18	Providing and laying 7 mm thk matt/ mirror vitrified ceramic tiles of appd make on 43 mm thick underbed of 1 part cement and 3 parts coarse sand by weight mixed with sufficient water, complete as per specification laid in pattern of following sizes.				
	600x600 mm.	35	SQM		
19	Providing and laying 40mm thick <b>inter lock paving (size 220x110mm approx)</b> for ground floor in parking area and other ground floor area with all complete including sand bed of 25mm average thickness. Bottom shall be of 75 mm thick PCC 1:4:8 for which payment will be made separately.	55	SQM		
20	Providing & fixing 20mm thick Black stone slab of required size over RCC platform for kitchen including all materials and labour complete including 6 mm thick 1:3 cement sand bed mortar 10/12 mm as required.	14	SQM		

**CONSTRUCTION OF TOWNSHIP (FOR FOREIGNER) AND MISC ENABLING CIVIL WORKS FOR 2X660 MW THERMAL UNITS (4 & 5) AT BARH STPP STG-II PROJECT, PATNA, BIHAR.**

BOQ CUM SCHEDULE OF RATES				SCHEDULE-2	
21	Supplying, fitting and fixing openable steel windows conforming to IS:1036-1975 and IS:7452-1974 with non friction projecting type of hinges fitted with revetts or nut bolt system as directed, glazing cleats, lugs, two nos m s anodised peg stays and fastner for each window of size 900mmX1200mm, 4mm thick clear glass pane, including fixing in position, fixing lugs in cement concrete 1:2:4 with stone chips 12.5mm down cutting holes & mending goods damages, 10mm dia ms round guard bar welded horizontally 125 c/c with each window etc. complete with one coat of primer and two coats of synthetic enamel finish in all respect.	40	SQM		
22	Providing <b>plaster of paris</b> 2 mm thick punning over finished plaster surface and finished with one coat of acrylic emulsion primer followed by two coats of <b>acrylic emulsion paint</b> to give smooth and even surface as per specification at all levels.	600	SQM		
23	Providing & applying one coat of <b>cement primer and two finished coats</b> of water proofing cement paint Seacem or equivalent on plastered or concrete surface to receive water proofing cement based paint including scraping, cleaning and preparing the surface throughly complete as per direction of the Eng-in-charge. After completion of painting rooms / areas are to be handed over with neat and clean condition. From ground floor to roof outside building	2256	SQM		
24	<b>Supplying &amp; fitting Panel shutter of maindoor</b> as per design including fitting and fixing the same in position including the cost of hinges and other fittings viz . 3x2 nos Nos. MS butt hinges, one No. Brass tower bolt (100 mm long), one No. brass sliding door bolt of 240 mm long 16/15mm dia, one no magnetic door catcher, safety chain inside, with teak wood polish. Lock & fittings shall be done by the contractor & complete with two coats of synthetic enamel paint finish. <b>35 mm thick shutter with 19 mm thick panel from best indian season Hard wood.(MAIN DOOR)</b>	35	Sqm		
25	<b>Supplying &amp; fitting 30mm thick pnelled shutter for toilet and kitchen</b> with 12mm BWR ply pannelled door for internal use as per ISI approved / design including fitting and fixing the same in position including the cost 3x2 nos Nos. MS butt hinges, 1 No. brass tower bolt (150 mm long), 1 No. brass sliding door bolt of 300 mm long 15/16mm dia, one magnetic door catcher, two nos 100mm brass handle with one coat of wood primer paint of Berger make. Pannelled Shutter shall be GAMAR wood 30x100mm. (FOR TOILET AND KITCHEN)	25	Sqm		

**CONSTRUCTION OF TOWNSHIP (FOR FOREIGNER) AND MISC ENABLING CIVIL WORKS FOR 2X660 MW THERMAL UNITS (4 & 5) AT BARH STPP STG-II PROJECT, PATNA, BIHAR.**

BOQ CUM SCHEDULE OF RATES				SCHEDULE-2
26	Providing attach toilet with following facilities as directed by BHEL: (a) Inside size of toilet 1.575Mx2.7M, (b) 5mm thick white colour ceramic floor tile & inside walls tile upto 1.5 M height from finish floor, (c) one white vitreous wash basin 550x400 mm (Hindustan make or equivalent) with CI bracket, 15 mm cp brass pillar taps, 32 mm PVC waste water pipe, 32mm CP brass waste, one CP towel rail 550mm long, one best quality 550x400mm mirror etc complete, (d) one European type WC Pan with seat and lid black colour, low level 10 lts capacity white PVC flushing cistern, etc (e) all inside pipe lines shall be 15mm /20mm PVC & concealed pipes, (f) main external supply water pipe line shall be 25mmdia PVC of 6 M, (g) <b>Bathtub ( 1650 x 750mm) of approved make</b> complete in all respect including testing. (h) Soil pipe shall be min 75mm dia CI for below floor if any and outside shall be 100mm pvc of supreme or equivalent. Masonry , Concreting & plastering will be paid as per respective items. Price to be quoted as lumpsum for each set of toilet.	10	SET	
27	Providing and fixing Salem Stainless Steel A ISI 304 (18/8) kitchen sink as per I.S. 13983 with G.I. Brackets and stainless steel plug 40 mm including the walls wherever required. )			
	610 x 460 mm bowl depth 200 mm	10	Each	
28	Providing PVC pipe and fittings and fixtures of Supreme or equivalent make with all materials, labour etc complete for drinking water.			
a)	For external 32mm dia	80	M	
b)	For external 40 mm dia	120	M	
c)	For external 50 mm dia	65	M	
29	Providing PVC pipe with fittings and fixtures of Supreme or equivalent make with all materials labour etc. complete for external sewer line / waste water line connection upto open drain or manhole to manhole/ septic tank/ soak pit as directed by BHEL.			
a)	For external 75 mm dia	34	M	
b)	For external 100 mm dia	38	M	
30	Supplying and fixing full way gun metal valve standard pattern beet, Indian make with fitting (Zebu, J.J.Sumon. Pratap, Alto brand) supplied, fitted and fixed.			
	a) 20mm	20	Each	
31	Supplying brass ferrule for connecting mains with PVC/PPR Pipe of 20mm dia and upto 45cm long with plumbing joint coupling at both ends with cap and lining etc.	2	Each	
32	Providing and fixing <b>square mouth stone ware gully trap</b> grade'A' conforming to IS:651 complete with G.I. Grating, brick masonry chamber with bricks of class designation '50' and water right C.I. Cover with frame of 300 x 300 mm size (inside), the weight of cover to be not less than 4.5 kgs and frame to be not less than 2.70 kg as per specification. 100X100 MM P TYPE	3	Each	
33	Providing and laying soil, waste and vent pipes, centrifugally cast (spun) iron S&S pipes			
	100mm	15	RM	

**CONSTRUCTION OF TOWNSHIP (FOR FOREIGNER) AND MISC ENABLING CIVIL WORKS FOR 2X660 MW THERMAL UNITS (4 & 5) AT BARH STPP STG-II PROJECT, PATNA, BIHAR.**

BOQ CUM SCHEDULE OF RATES				SCHEDULE-2
	125 mm	20	RM	
34	Providing & fixing P or S Trap 100 mm dia C I	20	Each	
35	Construction brick masonry <b>manholes</b> of inside size 90x80 cm and 45-90 cm deep with 75 class designation bricks in cement mortar 1: 5 (1 cement : 5 fine sand), RCC top slabs with 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate of 20 mm size), foundation concrete 1:1:8 (1 cement : 4 coarse sand : 8 graded stone aggregate of 40 mm nominal size), inside plastering 12 mm thick with cement mortar 1:3 (1 cement : 3 coarse sand) finished with a floating coat of neat cement and making channels in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded aggregate of 20 mm nominal size) neatly finished complete as per standard design excluding C.I manhole cover.	4	Each	
36	Construction of 3.6x.90x2 M size <b>Septic tank</b> in all types of soil with 250 mm thick brick masonry in cement Mortar of 1:6 15 cm thick cement concrete 1:4:8 grade in bed, 75 mm thick 1:2:4 grade cement concrete flooring and 100 mm thick over RCC slab of 1:2:4 grade, 75 mm thick partition wall, 15 mm thick plaster on brick wall finished with neat cement providing M.S. rugs etc., complete as per drawing including excavation, disposal of surplus earth with a load of 50 Mtr. item includes all material, labour, leads, lifts etc., complete but excluding C.I manhole cover.	3	Each	
a)	Providing and laying of 2mm thick PVC flooring & 100mm high skirting with all materials and labour etc complete.	400	SQM	
37	Construction <b>soak pit</b> of 2.5Mtr dia and 3 Mtr depth filled with brick bats including S.W. drain pipe 100 mm dia and 1.2 meter long complete as per standard design.	3	Each	
38	Supply, Fitting & fixing/laying of GI pipe as per IS 1239/IS 3589 with all necessary accessories i.e socket, bends, tees, unions, cross, elbow, nipple, long screw, reducing sockets, reducing tees, short pieces etc. complete for making common ring header for construction/drinking water including cost of all necessary jointing materials labour etc. all complete (payment will be made on the center line measurement of total pipeline including all specials).			
a)	25 mm medium quality	200	RM	
b)	32 mm medium quality	55	RM	
c)	40 mm medium quality	75	RM	
d)	50 mm medium quality	25	RM	
e)	65 mm medium quality	28	RM	
39	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 -300mm dia, as per specification.	30	RM	
40	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 - 450mm dia, as per specification.	20	RM	

**CONSTRUCTION OF TOWNSHIP (FOR FOREIGNER) AND MISC ENABLING CIVIL WORKS FOR 2X660 MW THERMAL UNITS (4 & 5) AT BARH STPP STG-II PROJECT, PATNA, BIHAR.**

BOQ CUM SCHEDULE OF RATES				SCHEDULE-2
40	Providing, laying and jointing <b>glazed stone ware pipes</b> grade A with stiff mixture of cement mortar in the proportion of 1:1 (1 cement : 1 fine sand) including testing of joints etc., complete 75 mm dia pipe.	100	RM	
41	Providing & fixing P.V.C. water tank (Syntex or equivalent) in position. The work to including making all necessary inlet & outlet pipes (PPR -PN -16 Pipe, 40 mm. OD), fixture, ball cocks, valves (two nos.) etc. all complete as per specification at all heights and levels			
a)	2000 Litre capacity	4	No	
42	Complete electricals works of each unit as detailed in SCHEDULE-4	10	SET	
43	Supply & Installation of Borewell (including all above ground 2M 100mm GI pipes , all above ground GI Pipes valves ,filter , tees, couplings complete with 1 hp motor + submersible pumps , electrical controls ,cables , etc complete items for water upto 6M high tank) including all Labour for boring through any type of soil,rock & boulders for sinking tubewell of required dia. With top enlargement by boring system including hire charges and labour for Machine tools and plants, staging force pumping set, and making arrangement for water required for boring etc. complete and lowering of casing pipes , strainers blind pipes etc. complete for 100 mm dia upto 20M and 50 mm dia. from 20M to 75M & beyond from GL. Depth of boring to be decided at the time of execution. Length to be measured actual at site.( Minmum depth to be reached 70M with 100 mm dia. gravel packing for last five metres and the gap between bore dia and 50mm dia PVC pipe.	2	sets	
	for 100 mm dia bore hole for depth range 0- 25 Mtrs from GL..			
	for 50 mm dia for bore hole depth range 25-55 Mtrs from GL..			
	for 50mm dia strainer for bore depth 55-65 mtrs from GL			
<b>TOTAL OF SCHEDULE-2</b>				
44	MISC. ITEMS - For items not covered above, quote % above or below the CPWD schedule (DSR-2007).			
44.1	Rate of complete item.			
44.2	Rate of supply of materials at site only.			
44.3	Rate for execution complete excluding supply of materials.			

**VOLUME-III A**

**BOQ RATE SCHEDULE FOR ITEM NO. FOR ITEM NO.139 OF SCH-1**

SCHEDULE-3					
SN	Description	Qty	UNIT	Rate	Amount
1	Supply and fixing of 240V, double pole ELCB of rating 20A.	1	no.		
2	Supply and fixing 240V single door MCB Distribution board made of sheet steel duly painted enclosure along with interconnection.	7	nos.		
3	MCB SP 5A-55(outgoing).	55	nos.		
4	MCB SP 32A-1 (outgoing-fridge, AC, room heater, microwave, geyser).	5	nos.		
5	Supply and fixing of PVC 150x100mm Switch board with matching color cover with switch cut out and interconnection.				
	with 1 no. piano key type switch for call bell	1	no.		
	with 2 nos. piano key type switches and 1 no. 240V,5 pin,5A socket	27	no.		
	with 1 no. 240V,5pin,5A socket	1	no.		
	with 2 nos. piano key type switches	24	no.		
	with 3 nos. piano key type switches fan regulator	1	no.		
	with 3 nos. piano key type switches,fan regulator and 1 no. 240V,5 pin,5A socket	1	no.		
	with 3 nos. piano key type switches and 1 no. 240V, 5pin, 5A socket	1	no.		
6	Supply and fixing of 240V, 15A, 6 pin socket with its switch.	40	nos.		
7	Supply of 48" sweep ceiling fan complete with 100W electronic regulator.	26	nos.		
	Fixing from roof ceiling providing plate with fasteners (4 nos.) and S hook duly fixed, commissioning of 48" sweep ceiling fan alongwith mounting rod and 100W electronic regulator.				
	Fixing from roof truss with suitable clamp arrangement, commissioning of 48" sweep ceiling fan alongwith mounting rod and 100W electronic regulator.				
	Tubular Down rod of suitable size, fabrication & supply of hardwares for above ceiling fans including painting etc.				
8	Supply of 230 V, 12" exhaust fan alongwith external louvre.	26	nos.		
	Fixing,Wall cutting, finishing, making good of the same, commissioning of 12" exhaust fan alongwith louvre.				
9	Providing and fixing 2 x 40 Decorative type flourescent tube fitting (Crompton / Philips / Bajaj make),fabricated from CRCA sheet steel and finished with stove enamel paint complete with Accessories like flourescent lamp,copper wound polyster choke, starter, seat, rotor holder and terminal block duly pre-wired with copper conductor, including connections, fixing on wall, false ceiling or under roof tusties with clamps as required	27	nos.		



**VOLUME-III A**

**BOQ RATE SCHEDULE FOR ITEM NO. FOR ITEM NO.139 OF SCH-1**

					SCHEDULE-3
SN	Description	Qty	UNIT	Rate	Amount
10	Supply of Luminaries of type Fluorescent, decorative, recessed type with mirror optic reflector (2 x 40/36 W) Model Bajaj BJMM-236 or equivalent from CROMPTON/PHILIPS	55	nos.		
	Supply of mounting rail type fixture made of painted MS Sheet Steel suitable for 2x40/36 W wall/ceiling mounted fluorescent lamp with reflector, complete with starter, power factor improvement (HPF), RF capacitor, Copper wound ballast and lamps. Including all fixing/supporting accessories complete. Model CROMPTON IGP-1324 or equivalent from BAJAJ/PHILIPS				
	Fixing from roof truss with suitable clamp arrangement, down rod, ball & socket suspension, & commissioning of mounting rail type fixture made of painted MS Sheet Steel suitable for 2x40/36 W wall/ceiling mounted fluorescent lamp with reflector, complete with starter, power factor improvement (HPF), RF capacitor, Copper wound ballast and lamps. Including all fixing/supporting accessories complete.				
11	Supplying and Fixing of Call Bell	1	nos.		
12	Supplying and fixing of 1x250 W HPSV outdoor type fitting with 1 no. 10A DP switch for controlling 2 fittings, DP switches to be fixed on outside of the store shed wall	18	nos.		
13	Supply, drawing through case, termination, testing & commissioning of 1 core 6 sqmm PVC insulated, stranded Copper wire of 1.1 KV grade as lighting & power wiring.	595	RM		
14	Supply, drawing through case, termination, testing & commissioning of 1 core 4 sqmm PVC insulated, stranded Copper wire of 1.1 KV grade as power wiring.	130	RM		
15	Supply, drawing through PVC case, termination, testing & commissioning of 1 core 2.5 sqmm PVC insulated, stranded Copper wire of 1.1 KV grade as lighting & power wiring.	180	RM		
16	Supplying, drawing through PVC case, termination, testing & commissioning of 1 core 1 sqmm PVC, stranded Copper wire of 1.1KV grade as lighting wiring.	120	RM		
17	Supply, drawing through case, termination, testing & commissioning of 1 core 1 sqmm PVC insulated, stranded green Copper wire of 1.1 KV grade as earth wiring.	10	RM		
18	Supply and fixing of 1" dia flexible PVC case with all bends tees circular box clamps, saddles etc. along with the accessories in surface/recess in beam/roof slab/wall including chase cutting the wall/above false ceiling and making good the same as required.	500	RM		
19	Supply and fixing of 1/2" dia flexible PVC case with all bends tees circular box clamps, saddles etc. along with the accessories in surface/recess in beam/roof slab/wall including chase cutting the wall/above false ceiling and making good the same as required.	150	RM		
<b>TOTAL</b>					

## VOLUME-III A

## BOQ RATE SCHEDULE FOR ITEM NO. FOR ITEM NO.139 OF SCH-1

					SCHEDULE-3
SN	Description	Qty	UNIT	Rate	Amount
	<b>LIST OF APPROVED MAKES OTHER THAN THOSE SPECIFICALLY MENTIONED ABOVE</b>				
	1. SINGLE CORE STRANDED Cu WIRE PVC INSULATED - FINOLEX/EVERSHINE KDK/ANCHOR				
	2. MCB/MCCB WITH BOX - SIEMENS/STANDARD/MDS/HAVEL/GE				
	3. RIGID PVC CONDUIT - PLAZA/PLICA/PIONEER MARKED AS PER IS-9537				
	4. FLEXIBLE PVC CONDUIT - PLAZA/PLICA/PIONEER				
	5. IRON CLAD TPN/DP MAIN SWITCH - SURYA/FLORA/STANDARD/L&T				
	6. DISTRIBUTION FUSE BOARD - STANDARD/HAVEL/ASIATIC ELECTRIC				
	7. ELECTRONIC REGULATOR - RIDER/ANCHOR OR ISI APPROVED				
	8. POWER CABLE- NICCO/INCAB/GLOSTER/CRYSTAL/FINOLEX.				
	9. LUGS -DOWEL/UML				
	10. GLAND - COMMET/SUNIL&CO.				
	11. CEILING FAN - POLAR/KHAITAN/CROMPTON/ORIENT				
	12. 5,6 PIN SOCKET WITH SWITCH - ANCHOR/NORTH-EAST				

## BOQ RATE SCHEDULE FOR ITEM NO. FOR ITEM NO.42 OF SCH-2

SCHEDULE-4					
SN	Description	Qty	UNIT	U/Rate	Amount
1	Supply and fixing of 240V, double pole ELCB of rating 10A.	1	no.		
2	Supply and fixing 240V single door MCB Distribution board made of sheet steel duly painted enclosure along with interconnection.	1	no.		
3	MCB SP 5A-6(outgoing).	6	nos.		
4	MCB SP 20A-1(outgoing-fridge, AC, room heater, microwave, geyser).	1	no.		
5	Supply and fixing of PVC 150x100mm Switch board with matching color cover with switch cut out and interconnection.				
a	with 1 no. piano key type switch for call bell	1	no.		
a	with 2 nos. piano key type switches and 1 no. 240V, 5 pin, 5A socket	1	no.		
c	with 1 no. 240V, 5 pin, 5A socket with piano type key switch	1	no.		
d	with 2 nos. piano key type switches and 1 no. 240V, 5 pin, 5A socket	1	no.		
e	with 3 nos. piano key type switches and 1 no. 5A socket and fan regulator	1	no.		
f	with 3 nos. piano key type switches and 1 no. 240V, 5 pin, 5A socket	1	no.		
g	with 3 nos. piano key type switches	1	no.		
6	Supply and fixing of 240V, 15A, 6 pin socket with its switch.	6	nos.		
7	Supply of 48" sweep ceiling fan complete with 100W electronic regulator.	3	nos.		
	Fixing from roof ceiling providing plate with fasteners (4 nos.) and S hook duly fixed, commissioning of 48" sweep ceiling fan alongwith mounting rod and 100W electronic regulator.				
	Fixing from roof truss with suitable clamp arrangement, commissioning of 48" sweep ceiling fan alongwith mounting rod and 100W electronic regulator.				
	Tubular Down rod of suitable size, fabrication & supply of hardwares for above ceiling fans including painting etc.				
8	Supply of 230 V, 12" exhaust fan alongwith external louvre.	2	nos.		
	Fixing, Wall cutting, finishing, making good of the same, commissioning of 12" exhaust fan alongwith louvre.				
9	Providing and fixing 2 x 40 Decorative type fluorescent tube fitting (Crompton / Philips / Bajaj make), fabricated from CRCA sheet steel and finished with stove enamel paint complete with Accessories like fluorescent lamp, copper wound polyester choke, starter, seat, rotor holder and terminal block duly pre-wired with copper conductor, including connections, fixing on wall, false ceiling or under roof tusties with clamps as required	4	nos.		
	Supply of Luminaries of type Fluorescent, decorative, recessed type with mirror optic reflector (2 x 40/36 W) Model Bajaj BJMM-236 or equivalent from CROMPTON/PHILIPS				

## BOQ RATE SCHEDULE FOR ITEM NO. FOR ITEM NO.42 OF SCH-2

SCHEDULE-4					
SN	Description	Qty	UNIT	U/Rate	Amount
10	Supply of mounting rail type fixture made of painted MS Sheet Steel suitable for 2x40/36 W wall/ceiling mounted fluorescent lamp with reflector, complete with starter, power factor improvement (HPF), RF capacitor, Copper wound ballast and lamps. Including all fixing/supporting accessories complete. Model CROMPTON IGP-1324 or equivalent from BAJAJ/PHILIPS Fixing from roof truss with suitable clamp arrangement, down rod, ball & socket suspension, & commissioning of mounting rail type fixture made of painted MS Sheet Steel suitable for 2x40/36 W wall/ceiling mounted fluorescent lamp with reflector, complete with starter, power factor improvement (HPF), RF capacitor, Copper wound ballast and lamps. Including all fixing/supporting accessories complete.	4	nos.		
11	Supplying and Fixing of Call Bell	1	nos.		
12	Supply, drawing through case, termination, testing & commissioning of 1 core 6 sqmm PVC insulated, stranded Copper wire of 1.1 KV grade as lighting & power wiring.	25	RM		
13	Supply, drawing through case, termination, testing & commissioning of 1 core 4 sqmm PVC insulated, stranded Copper wire of 1.1 KV grade as power wiring.	10	RM		
14	Supply, drawing through PVC case, termination, testing & commissioning of 1 core 2.5 sqmm PVC insulated, stranded Copper wire of 1.1 KV grade as lighting & power wiring.	20	RM		
15	Supplying, drawing through PVC case, termination, testing & commissioning of 1 core 1 sqmm PVC, stranded Copper wire of 1.1KV grade as lighting wiring.	25	RM		
16	Supply, drawing through case, termination, testing & commissioning of 1 core 1 sqmm PVC insulated, stranded green Copper wire of 1.1 KV grade as earth wiring.	10	RM		
17	Supply and fixing of 1" dia flexible PVC case with all bends tees circular box clamps, saddles etc. along with the accessories in surface/recess in beam/roof slab/wall including chase cutting the wall/above false ceiling and making good the same as required.	30	RM		
18	Supply and fixing of 1/2" dia flexible PVC case with all bends tees circular box clamps, saddles etc. along with the accessories in surface/recess in beam/roof slab/wall including chase cutting the wall/above false ceiling and making good the same as required.	40	RM		
<b>TOTAL</b>					

## BOQ RATE SCHEDULE FOR ITEM NO. FOR ITEM NO.42 OF SCH-2

					SCHEDULE-4
SN	Description	Qty	UNIT	U/Rate	Amount
<b>LIST OF APPROVED MAKES OTHER THAN THOSE SPECIFICALLY MENTIONED ABOVE</b> 1. SINGLE CORE STRANDED Cu WIRE PVC INSULATED - FINOLEX/EVERSHINE KDK/ANCHOR 2. MCB/MCCB WITH BOX - SIEMENS/STANDARD/MDS/HAVEL/GE 3. RIGID PVC CONDUIT - PLAZA/PLICA/PIONEER MARKED AS PER IS-9537 4. FLEXIBLE PVC CONDUIT - PLAZA/PLICA/PIONEER 5. IRON CLAD TPN/DP MAIN SWITCH - SURYA/FLORA/STANDARD/L&T 6. DISTRIBUTION FUSE BOARD - STANDARD/HAVEL/ASIATIC ELECTRIC 7. ELECTRONIC REGULATOR - RIDER/ANCHOR OR ISI APPROVED 8. POWER CABLE- NICCO/INCAB/GLOSTER/CRYSTAL/FINOLEX. 9. LUGS -DOWEL/UML 10. GLAND - COMMET/SUNIL&CO. 11. CEILING FAN - POLAR/KHAITAN/CROMPTON/ORIENT 12. 5,6 PIN SOCKET WITH SWITCH - ANCHOR/NORTH-EAST					