



BHARAT HEAVY ELECTRICALS LIMITED
RAMACHANDRAPURAM::HYDERABAD::32
FACTORY CIVIL ENGINEERING DEPARTMENT

SCHEDULE- A

Tender Notice No:

HY/FCD/OT-27/14-15, Dt: 18.09.14

PRICE BID

Item no. 5

Name of work: Construction of shed for dining hall at New pipe & plate yard.

S. No.	Description of the item	Qty	Unit	Rate (₹)	Amount (₹)
	Part-I Civil Items				
1	Earth work in excavation in all soils by mechanical means (Hydraulic Excavators) / manual means in foundations trenches or drains (not exceeding 1.5m in width or 10 Sq.m on plan) including dressing of sides and ramming of bottoms, lift upto 1.5m, including getting out the excavated soil and disposal of surplus excavated soil as directed , within a lead of 50M.	60.00	Cu.m	103.40	6,204.00
2	----do---- up to First additional depth of 1.50 M to 3.00 M.	60.00	Cu.m	122.30	7,338.00
3	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering including consolidation by vibrations for all works up to plinth level with 1:4:8 (1 cement : 4 coarse sand : 8 graded stone aggregate of 20 mm nominal size). Only cement will be issued by BHEL on free of cost at their store.	18.00	Cu.M	1,560.50	28,089.00
4	Providing and laying in position specified grade of reinforced cement concrete excluding the cost of centering ,shuttering, finishing and reinforcement ,including consolidation by vibrations for all works up to plinth level with 1:1½:3 (1 cement : 1½ coarse sand : 3 graded stone aggregate of 20 mm nominal size).	23.00	Cu.M	1,641.30	37,749.90
5	Providing and laying in position specified grade, of Reinforced cement concrete excluding the cost of centering, shuttering, finishing and reinforcement - all work up to plinth level with 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate of 20 mm nominal size) -(Cement only will be issued on free of cost by BHEL)	40.00	cu.m	1,687.00	67,480.00

S. No.	Description of the item	Qty	Unit	Rate (₹)	Amount (₹)
6	Reinforcement for R.C.C. work including straightening , cutting , bending , placing in position and binding grills with binding wire all complete by cold twisted bars.(Reinforcement steel will be supplied by BHEL on free of cost at their stores)	1.90	M.T	4,003.00	7,605.70
7	Centering and shuttering including strutting, propping etc.; and removal of form work, for foundations, footings, bases of columns etc. for mass concrete- up to plinth level.	155.00	Sq.m	119.25	18,483.75
8	Coursed rubble masonry in second sort with hard stone in foundation & plinth with cement mortar 1:6 (1 cement :6 coarse sand).(Cement only will be issued on free of cost by BHEL)	4.00	Cu.M	1,521.00	6,084.00
9	Brick work with FPS bricks of class designation 75 in superstructure above plinth level up to ground floor in all shapes and sizes in cement mortar 1:6.(Cement only will be issued on free of cost by BHEL)	36.00	Cu.M	2,104.00	75,744.00
10	Plastering in CM 1:6 , 20 mm thick to internal and external surfaces of walls including the cost of all materials , labour , curing etc., complete -Upto 10.00 M level.(Cement only will be issued on free of cost by BHEL)	330.00	Sq.m	65.80	21,714.00
11	Filling with available excavated earth (excluding rock) in trenches , plinth , sides of foundations etc. in layers not exceeding 20 cm in depth , consolidation each deposited layer by ramming and watering , lead upto 50.00 m and lift upto 1.50 m.	120.00	Cu.M	45.70	5,484.00
12	Applying exterior emulsion paint 2 coats over one coat of primer to external new plastered surfaces including cost of all labour and other incidentals. (only exterior paint will be issued by BHEL on free of cost).	330.00	Sq.m	20.40	6,732.00

S. No.	Description of the item	Qty	Unit	Rate (₹)	Amount (₹)
13	Supplying and fixing aluminum door with single/double shutters made out of new anodised aluminum box section of size 44.50x 47.50x 2.00mm for verticals, top and middle rails and 101.60x44.50x2.00mm for bottom rail inclusive of supply and fixing of all aluminum fixtures and fittings such as handles , tower bolt 12mm dia 200mm long, hydraulic door closure of IS specification , 4" long(100mm) but hinges, stopper and suitable locking arrangement etc. complete . Wherever members are joined wooden runners are to be inserted in the box section for taking hinges, tower bolts, handles, hydraulic door closure and providing necessary rubber bedding for closing of door shutters all as directed by Engineer-in - charge. The rate shall include cost of door frame using aluminium box sections of size 101.60x44.50x2.00 mm. etc. complete all as directed by Engineer in charge .	5.04	Sq.m	2,629.47	13,252.53
14	Providing & Fixing of top fixed, side hung of NCL Secular windows fabricated from Roll formed section made of pre painted steel (Base steel as per IS 513 of 0.6 mm thick, 'D' quality, galvanized as per IS 277 with zinc 150 GSM / Sq. Mtr). Section for shutter should be of 46 x 46 mm, external frame should be of 46 x 52 mm, section for glass beading should be of 18 x 25 mm & center mullion should be 46 x 70 mm. The sections to be cut to length, meter joined with corner bracket. Centre mullions are to be fixed using mullion cap. Handle made of high grade aluminium powder coated & with nylon receiver & glazed with 4 mm thick, modi float glass. Gasket made of E.P.D.M. Corner brackets made of C.R.C.A with zinc phosphating. Mullion caps made of glass filled nylon. The above frames should be fixed to the concrete / masonry walls by means of self expanding screws.	27.00	Sq.m	2,820.00	76,140.00

S. No.	Description of the item	Qty	Unit	Rate (₹)	Amount (₹)
15	Vitrified flooring : Supply and laying of vitrified tiles of brighter shades and required design of premium quality (1st quality), in required texture and colour for floors/skirting/cladding using vitrified tiles of size 600 X 600 mm(± 5 mm), inclusive of cost of cutting , champering of tiles to required size, laid on 20mm thick or more as per site requirement to get proper slope cement mortar 1:4 (1 cement : 4 coarse sand) . The cost of the tile shall be Rs.65/- per Sft. (inclusive of all taxes and duties) and tiles of required make will be selected by department within the above specified cost. The rate quoted shall include cost of all materials, labour, colour tint material, leads and lifts etc. complete. Amount will be paid on the basis of measurement of the area of finished work only. It also includes surface preparation of floor giving necessary slopes, cleaning joints and grouting joints with pigmented additives to match shade of the tile. This includes making pockets for electrical, communication, network cables, junction boxes etc. complete in all respects. (The cement will be issued free of cost by BHEL at BHEL stores).	110.00	Sq.m	967.00	1,06,370.00
16	Providing and fixing in true horizontal level 600 mm x 600mm false ceiling system manufactured by M/s. Armstrong World Industries using DUNE SUPREME RH 99 MICROLOOK EDGE WITH SILHOUETTE GRID, using hot dipped galvanized steel section, rotary stitched main tee of size 15mm x 42 mm web height, having 0.36 mm gauge at every 600 mm centre to centre maximum and rotary stitched cross tee of size 15 mm x 42 mm, having 0.33 mm gauge at every 600 mm. c/c. and wall angle of size 19 x 19 mm., having 0.35 mm gauge fixed to the periphery of the wall. The above grid is suspended at every 600mm c/c. in both directions using 2.0 mm. thick pre-straightened GI wire, and laying Dune Supreme Microlook Edge ceiling tiles manufactured by M/s. Armstrong World Industries, of size 600mmx600mmx15mm having NRC 0.50, Light reflectance of >85% (WT), thermal conductivity k = 0.052-0.057 W/m0K, Humidity Resistance of 99% (having LIFETIME GUARANTEE against SAG), having Fire Performance CLASS O / CLASS 1 (BS 476), surface having 3 coats of white paint - crisp finely granulated with microperforations, back of the tile duly sanded and finished with a coat of protective paint over the formed grid and complete in all respects. Boards, where light fixtures to be fixed shall be handed over to Department. Make: Armstrong	108.00	Sq.m	1,062.00	1,14,696.00

S. No.	Description of the item	Qty	Unit	Rate (₹)	Amount (₹)
17	Inter-carting by loading and unloading of excavated earth from within the factory area within a 1 km radius and stacking and spreading in required thickness as directed by Engineer-in-charge.	20.00	Cu.m	39.53	790.60
18	Fabrication of structural steel work including all materials going into the process of fabrication and forming an integral part of steel work together with all shop and site rivets and electrodes for site welding as necessary and all site connections comprising sag rods, floor beams, girders, bracings, trusses and frame work for fixed false ceiling and for movable false ceiling, purlins with channel / angles, MS flat supports including all connections as per detailed drawings connected steel works etc., cleats, gusset plates, all bolts, nuts, washers, base plates, anchor bolts as per detailed drawings, cutting, welding and painting 2 coats of red-oxide primer before erection etc., complete. The rate shall include painting 2 coat of Red-oxide as per IS specifications and all charges for handling, leading and loading at the fabrication yard. The raw structural steel sections, electrodes, gasses will be issued by BHEL on FREE of cost at their stores	3.80	MT	7,109.97	27,017.89
19	Erection of Steel work out lined in item No.1 above including the charges for handling, leading and stacking at site at approved locations prior to erection including all site rivetting, bolting, jointing and site welding where ever required.	3.80	MT	3,047.10	11,578.98
20	Painting at site of all structural steel work with 2 coats of aluminium paint / synthetic enamel paint of approved shade to trusses, columns, girders, bracings etc., with aluminium paint or synthetic enamel paint as required etc., complete. The required paint only will be issued free of cost by B.H.E.L at their stores.	3.80	MT	560.71	2,130.70
21	Fixing of aluminium zinc alloy coated metallic hirib profile sheet of nominal 1015-1020mm effective cover width and 28-30 mm with factory cut and fixing to the roof shall be crest fixed to roof purlins with number 12-14 x 55 mm long polymer coated galvanised hex head self drilling screws with integral washers and EPDM seals (4 fastners for support) for sheet etc., complete as directed (Excluding cost of galvalume sheets which will be issued free of cost by BHEL at their stores) - For roofing, side cladding and louvers with necessary fixtures.	200.00	Sq.m	67.78	13,556.00

S. No.	Description of the item	Qty	Unit	Rate (₹)	Amount (₹)
22	Providing and fixing barge boards in required girth (200 mm horizontal, 200 mm vertical) with 0.50 mm color galvalume sheets upto a length of 2.50 M, fixed to steel members with self drilling / self stitching fasteners at maximum 500 mm c/c along the length of capping, flashing etc., complete as directed by Engineer-in-charge including the cost of galvalume sheets, fixtures, fittings etc., complete.	24.00	One Sq.m	542.50	13,020.00
23	Providing Aluminium zinc alloy coated metallic sheet ridges of same colour of roof sheet Fixing to steel members with self drilling fastners at Max. 500 mm C/C along length of Caping etc; Complete.	13.00	RM	610.00	7,930.00
	Total of Part-I			₹	6,75,191.04
	Part II: Sanitary Items				
1	Supply & fixing NP push cocks. with all accessories etc. Make Jaquar, oyester, Mark	27.00	Each	253.00	6,831.00
2	Supply & fixing of 18 mm thick best quality Jet Black colour machine cut mirror polished granite slabs in required sizes for counter wash basins, floorings, vanity counter, claddings, facias etc. including cutting, champering, rounding and mirror polishing etc. complete as directed. Cost of granite slabs shall be Rs. 1600/- per Sq. m and granite slabs of required design and colour will be selected by department.	16.00	sq.m	2,549.50	40,792.00
3	Supply & fixing of 10 mm thick best quality Jet Black colour machine cut mirror polished granite tiles in required sizes for Dadoos, . including cutting, champering, rounding and mirror polishing etc. complete as directed. Cost of granite tiles shall be Rs. 750/- per Sq. m and granite tiles of required design and colour will be selected by department.	63.00	Sqm	1,474.00	92,862.00
4	Supply & fixing in position PVC Pipes of 3" dia(as per IS 6kg/sq.m) of best quality for drainage lines / urinal / hand wash areas including chasing the brick wall, concrete etc. and making good the same after fixing the same etc. complete.	10.00	RM	108.70	1,087.00
5	Supplying and fixing CI Nahany traps 1st quality ISI marked conforming to IS: 1729 - 1979 with C.P Grating fixing with white cement as per site requirements with standard practice - 100mm inlet - 75 mm dia (3") outlet pipe - 4 Kgs.	2.00	Each	188.00	376.00

S. No.	Description of the item	Qty	Unit	Rate (₹)	Amount (₹)
6	Supply & fixing 25 mm dia Nominal Bore GI pipe medium Grade properties and weight as per IS 1239 ISI mark with GI fittings including the cost of GI pipe & its fittings, chasing brick work/concrete and making good the same ,cost of labour , all materials etc. complete.	50.00	RM	179.54	8,977.00
7	.. Do... 20mm dia (3/4")	10.00	RM	137.24	1,372.40
8	Supply & fixing of Gunmetal Gate (GM peet) valve as per IS -778 class-I, Indian make heavy type 25 mm (1/2") dia NB size.	2.00	Each	453.08	906.16
9	.. Do .. 20mm dia (3/4")	1.00	Each	307.38	307.38
10	Construction of brick masonry chamber of dimension 0.914 x 0.457 x 0.914 m (3' x 1'6" x 3') with brick in CM 1:6 including plastering over both sides with CM 1:4, 20 mm thick and fitted with light weight CI frame and cover of size 0.914 x 0.457 m in CM 1:4 including bed concrete of CC 1:4:8 as required, supplying and fixing one CI steps in brick masonry if necessary if necessary including earth work excavation in all soils, refilling around the chamber removing the surplus earth etc. complete as directed.CI frame and cover of 40 kgs.	1.00	Each	3,032.44	3,032.44
11	Construction of brick masonry chamber of size 23 x 30 Cm (9" x 12") in brick work in CM 1:6 and plastering in CM 1:4, 20 mm for gully trap 150 mmx100mm including cost of excavation, PCC 1:4:8, 75 mm thick, all materials, labour etc., complete.	1.00	Each	301.74	301.74
12	Providing and placing on terrace (at all floor levels) of polyethylene water storage tank of 1000 ltrs capacity with double layer approved brand and manufacture as per ISI with cover and suitable locking arrangement and making necessary holes for inlet and outlet and overflow pipes with fittings (ballcock, inlet and outlet nipples) without base support for tank. (Brick work will be paid separately).	1.00	Each	6,000.00	6,000.00
13	Supplying ,laying ,jointing and testing 152.4 mm (6") SWG pipes of ISI make conforming to ISI 651 & 4127 with airtight cement joints in Cement mortar 1:5:1 prop. including excavation of trenches and socket pits in anysoil(except rock requiring blasting) up to 1524 mm(5'.0") depth and refilling with watering and tamping.	20.00	RM	254.00	5,080.00

S. No.	Description of the item	Qty	Unit	Rate (₹)	Amount (₹)
14	Supplying,laying,jointing and testing 101.60 mm (4") SWG pipes of ISI make conforming to ISI 651 & 4127 with airtight cement joints in Cement mortar 1:5:1 prop. including excavation of trenches and socket pits in any soil(except rock requiring blasting) up to 914.40 mm(3'.0") depth and refilling with watering and tamping.	3.00	RM	149.00	447.00
15	Providing and Fixing PTMT waste coupling for wash basin and sink, of approved quality and colour. - waste Coupling 31 mm of 79 mm length and 62 mm breadth weighing not less than 45 gms.	2.00	Each	75.80	151.60
16	Supply & fixing of 6 mm thick mirror of approved quality "Modi float/Saintgobin glass", with 6 mm thick hard board back and with best quality teak wood frame (design beading) all round the mirror including necessary clamps, polishing to the beading, cost of all materials etc. complete.	2.00	Sq.m	1,358.30	2,716.60
	Total of Part-II			₹	1,71,240.32
	Part III: Electrical Works				
1	Supply of Indoor Industrial Type Tube light fittings of Philips Make (EBT) Type. Make: Philips Indoor Industrial Model No: TKC203 2XTLD 36W EBT	9.00	Nos.	2,460.00	22,140.00
2	Supply of Tube Lights suitable for the Tube Light Fittings of Philips make (Model No: TKC203 2XTLD 36W EBT) Make of Tube: Philips Model Type: 36W Tube suitable for TKC203 2XTLD 36W EBT	18.00	Nos.	45.00	810.00
3	Supply of Ceiling Fan with double ball bearing conforming to IS:374/79 class 1 with 56" (1400 MM) Sweep, 230V AC, 1 - Phase, White Color, 600mm Down Rod, Ornamental Design with gold finish shanks on blades and decorative canopy. Along with Electronic Regulator of Modular Type. Anchor Roma, Socket Type. Make: CG/Orient/Usha/Bajaj/Khaitan/Havell's	6.00	Nos.	2,323.02	13,938.12
4	Shifting, Assembly, Erection, Testing & Commissioning of 2x36W different types of Tube light fittings. The light fitting shall be fixed with suitable down rod, ball & socket etc. and the supply of the material is in the contractor's scope .The job includes supply of 1.5sq.mm copper wire for connection between ceiling rose and TL.	9.00	Nos	495.60	4,460.40

S. No.	Description of the item	Qty	Unit	Rate (₹)	Amount (₹)
5	Fixing, connecting and testing of ceiling fan.The job includes supply of Anchor roma ceiling rose &1.5sq.mm copper wire for connection between ceiling rose and fan. Fixing of free issued electronic regulator on the Roma switch board.	6.00	Nos	325.92	1,955.52
6	Supply, Erection and Testing of 230V ,12" dia(305mm), 50W, 900rpm, 1200cu.M/hr Exhaust Fans.Make: USHA/GEC/Khaitan, complete unit, wall mounting.(The job involves making suitable holes in the wall inclusive of masonry work or by making suitable MS frame above +20 ft. approximately from ground level)	2.00	Nos	2,599.80	5,199.60
7	Supply and fixing of 10 Amps 250 V. SP switches for control of light fitting and fans with Roma Type code : 21011 of Anchor or North West make . Fixed on a suitable modular type concealed box with suitable top cover. Testing & commissioning.	22.00	Nos	236.88	5,211.36
8	Supply and fixing of 3pin, 250 V. 10 Amps power socket cum switch with indication Roma type code 21113 and 21033 of Anchor make or North West. Fixed on suitable modular type concealed box top cover. Testing & commissioning.	3.00	Nos	365.40	1,096.20
9	Supply and execute the concealed / surface PVC/MS Pipe wiring with 1.5 sq. mm 660 / 1100. V. Grad PVC insulated copper wire multi strand of make Finolex / Rediant / fincab/ Havells/ L&T. In PVC pipe of suitable dia (As per IS for wiring points) with 14 G/1.5sq.mm green colour copper wire for earth continuity. Each light / fan point should be connected to three plate ceiling rose code 30090 of Roma modular type of Anchor or North West make / connector suspended duly with conduit / PVC pipe etc. Each circuit should not have more than 7 points 700 watts.	22.00	Pts	976.08	21,473.76
10	Supply and fixing of 250 V. 20/16 Amps power socket cum switch Roma type code 21124 and 21066 of Anchor make or North West. Fixed on suitable modular type concealed box top cover. Testing & commissioning.	1.00	Nos	530.00	530.00

S. No.	Description of the item	Qty	Unit	Rate (₹)	Amount (₹)
11	Supply and installation of concealed / surface PVC/MS Pipe wiring with 2.5 sq. mm PVC insulated copper wire multistrand of make Finolex / Rediant / Finecab / Havells / L&T. The wiring point for 20/16 A. power socket including 14 G./1.5sq.mm green colour copper wire for earth continuity. Independent circuit for each socket from power MCB distribution board (As per IS for wiring point) Testing and commissioning. The wiring should not be mixed with lighting pipe wiring and it should be run separately in the room / shed at a height of 2 feet from ground level or as per the site engineers instruction.	1.00	Pts	1,718.00	1,718.00
12	Supply and Erection of Earth pits for Equipment body earthing with 65mm dia GI pipe Medium (class-B), strictly as per IS: 3043, 3000mm long with holes of 12mm dia at 150mm apart at random & 50x6x260mm MS Earthing plate welded to pipe as per drawing. The work including supply of material for alternate layers of charcoal(75kgs), salt(150kgs) and making RCC/brick chambers with MS/cast iron cover. Contractor shall dig 300mm depth and 200mm width trench in the soil for laying the earth flat from earth pit electrode to earth mat/equipment.	2.00	Nos	6,293.28	12,586.56
13	Supply and Fixing of 230V, 150W Street Lighting Luminaire with 150W SON Tubular bulb. Fitting is to be provided with BHEL free issued GI Pipe neatly bent (120degrees) and fixed at a height of 5 Mtrs. / as per site Engineers instructions / as required by site conditions. Testing and commissioning. Make: Philips Model: SRX05 1xSON150W	2.00	Nos	6,531.72	13,063.44
14	Supply and Installation of MCB DB with MCB 415V, 8 way consisting of 10 to 20A -- 8nos MCBs on each phase , sheet enclosed, dust & vermin proof. Type KSTIL of STANDARD/ KOPP MAKE along with controlling 100A ICTPN in sheet enclosure with HRC fuses, PVC marking ferrules etc. It is to be fixed on a neatly fabricated steel frame and mounted on to walls or as required for lighting distribution. The job includes painting of steel frames, labelling / writing the connection chart inside the door with WHITE duco paint as required, double earthing, testing & commissioning.	1.00	Nos	14,711.76	14,711.76
15	Shifting and laying of LT power PVC armoured aluminium cable including Dressing				
	i) 31/2C X 50sq.mm	100.00	Mts	12.60	1,260.00

S. No.	Description of the item	Qty	Unit	Rate (₹)	Amount (₹)
16	Power cable termination including supply of cable glands & lugs(Copper/Aluminium).				
	i) 31/2C X 50sq.mm	2.00	Nos	329.28	658.56
17	Excavation of cable trench(500x1000mm)				
	i) In soil, excavation of 1000mm deep and 500mm width trench, supply & spreading of sand, supply & laying of bricks & shabad stone as per IS:1255 1983 and back filling after cable laid with marking plates.	80.00	Mts	288.12	23,049.60
	ii) Cutting of Road, RCC & Hard rock	10.00	Mts	365.40	3,654.00
	iii) Supply & laying of 9" dia 2 M long RCC hume pipes at Road and Railway track crossings.	10.00	Nos	640.08	6,400.80
18	Shifting, Fabrication and Erection of Structural Steel for equipment/ Cable Tray support, etc., including 2 coats of red oxide painting. Supply of red oxide paint is in the scope of the contractor.	0.20	Ton	7,615.44	1,523.09
19	Shifting and execution of Equipment earthing with 50x6 / 25x3mm GI flat.	100.00	Mts	20.16	2,016.00
	Total of Part-III			₹	1,57,456.77
	Total Value of work (Part-I, II & III)			₹	10,03,888.13
Total : ₹ Ten lakhs three thousand eight hundred eighty eight and thirteen paise only					

Note:

1	A penalty of 0.50 % of the gross value of work will be levied for every week's or part thereof delay in execution of work by the agency, subject to a maximum penalty of 10 % of gross value of the total work executed.
2	The rates are inclusive of all taxes and duties except Service tax, which is extra as per service tax norms will be paid by BHEL to the agency after submission of necessary documents.

Note : The bidders are required to quote the tender value on percentage (%) basis at excess or less or on par with estimate value in figures and words.

Tender %	In figure	In words
Excess		
Less		
Estimated value		