



**BHARAT HEAVY ELECTRICALS LIMITED**  
**RAMACHANDRAPURAM:: HYDERABAD::502032**  
**FACTORY CIVIL & PROJECTS DEPARTMENT**  
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**Schedule-A**

**Tender Notice No.**  
**HY/PROJ-EC/ELEC/OT-39/2014-15**  
**Dtd.16.01.2015**

**Price Bid**

**Name of the work: Lighting works for 400 M Yards & Annexe of Plate and Pipe Yard**

**SCOPE OF WORK:**

- (i) Street lighting
- (ii) Room lighting
- (iii) Concreting of street light poles (foundations)

**PART - A (Electrical Works)**

SI.No	Work Description	Unit	Qty	Unit rate in Rs.	Total Amount in Rs
1	<b>STREET LIGHTING</b>				
a	Shifting & Erection of 10 mtr high hot dip galvanised octagonal pole with top 70mm A/F, bottom 175mm A/F made up of 3mm thick HT steel plate having a base plate of size 275 x 275 x 16mm with 1000/1500 mm long single/double arm bracket. Fixing of Bakelite sheet box with kit kat fuse/6A fuse & stud type terminal block suitable for 4Cx16 sq.mm cable on each pole. Poles erection shall be carriedout as per the site engineer's instructions.	Nos	90	2,975.00	267,750.00
b	Shifting, Erection & Testing of 250W SON lighting fixtures on street light poles.	Nos	175	340.00	59,500.00
c	Supply, Laying and Termination of 3Cx2.5 Sq.mm Cu flexible cable for connecting between light fitting and stud type terminal block.	Mts	1,600.00	63.75	102,000.00
d	Shifting, Erection and Testing of out door type Feeder Pillar comprising of the 63A TPN MCB as incomer along with single dial timer & contactor , 9nos 16A SP MCB.	Nos	5	2,550.00	12,750.00
e	Supply and Erection of the following Earthing material. The job includes supply of 8SWG GI wire for connecting between GI pipe electrode and pole/panel.				
	1) 20dia 1.5 m long MS rod/GI pipe for poles.	Nos	90	510.00	45,900.00
	2) 40 dia 1.5 m long GI pipe for feeder pillar.	Nos	5	2,125.00	10,625.00

2	<b>ROOMS LIGHTING</b>				
a	Supply and fixing of 3pin, 250 V. 20/16 Amps power socket cum switch with indication Roma type code 21124 and 21077 of Anchor make or North West. Fixed on suitable modular type concealed box top cover. Testing & commissioning.	Nos	8	434.60	3,476.80
b	Supply and fixing of 25A, 250V box type, mounting double pole MCB and heavy duty plug & socket with O/L & S/C protection of Nortwest make Cat.No. ACPU 6M - BTJ fixing on suitable modular type concealed box with suitable top cover for Air Conditioner.	Nos	2	952.00	1,904.00
c	Supply and installation of concealed / surface PVC/MS Pipe wiring with 2.5 sq. mm PVC insulated copper wire multistrand of make Finolex / Rediant / Finocab / Havells / L&T. The wiring point for 20/16 A. power socket including 14 G./2.5sq.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 leavel or as per the site engineers instruction.	Pts	10	1,408.76	14,087.60
d	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 / finocab/ 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 couduit / PVC pipe etc. Each ciruit should not have more than 7 points 700 watts.	Pts	306	952.84	291,569.04
e	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.	Nos	196	231.24	45,323.04
f	Fixing, connecting and testing of 2x36W different types of Tube light/false ceiling fittings. The light fitting shall be fixed with suitable down rod, ball and 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.	Nos	137	483.80	66,280.60
g	Fixing, connecting and testing of ceiling fan.The job includes supply of 1.5sq.mm copper wire for connection between ceiling rose and fan. fixing of electronic regulator on the Roma switch board.	Nos	57	318.16	18,135.12

h	Supply and fixing step regulators for ceiling fans suitable for 1200mm, Modular type Anchor Roma. Testing & commissioning. Model No.21496.	Nos	50	520.00	26,000.00
i	Shifting, Assembly & installatiobn of BHEL free issued Periphary light luminaire with POT OPTICS reflector and toughened glass cover for use with SON - T 150 W. lamps complete with all accessories by providing BHEL free issued GI Pipe neatly bent (120degrees) and fixed at a height of 15 Mtrs. or as per site Engineers instructions / as required by site conditions. Testing and commissioning.	Nos	5	508.40	2,542.00
j	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.	Nos	50	356.70	17,835.00
k	Supply and Installation of MCB DB with TPN 415V, 12way (for lighting circuits) consisting of 10 to 20A -- 12nos MCBs on each phase with double door metallic cover having transparent window, sheet enclosed, dust & vermin proof. Model S210 of STANDARD/ KOPP MAKE along with controlling 100A ICTPN (sheet enclosure, Standard/KOPP make) switch fuse unit with HRC fuses, cable entry & reverse entry box, cable glands, PVC marking ferrules etc. It is to be concealed in the wall or as per the site engineer's instructions. The job includes labelling / writing the connection chart inside the door with WHITE duco paint as required, double earthing, testing & commissioning.	Nos	2	15,215.00	30,430.00
l	Supply, Erection and Testing of 230V ,12" dia(305mm), 50W, 900rpm, 1200cu.M/hr, Heavy duty Exhaust Fan. Make: USHA/GEC/CG/Almonard, 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)	Nos	2	2,537.90	5,075.80
3	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.	Nos	1	6,143.44	6,143.44

4	Shifting & Earthing of Equipment from nearest Earth riser with 50x6mm/ 25x3mm GI flat. Work includes supply and apply of Aluminium paint at each welding points.	Mts	60.00	19.68	1,180.80
5	Excavation of cable trench(500x600mm)				
	i) In soil, excavation of 600mm 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.	Mts	600.00	281.26	168,756.00
	ii) Cutting of Road, RCC & Hard rock	Mts	40.00	356.70	14,268.00
	iii) Supply & laying of 9" dia 2 M long RCC hume pipes at Road and Railway track crossings.	Nos	20	624.84	12,496.80
6	Supply of Bulkhead light fittings with grey colour toughened frosted glass cover and Fixing in Weigh Bridge pit. Philips make, Model: NXC101 1xA60-60W-CL B22, 60W bulb of Model: GLS 60W Superlux.	Nos	10	800.00	8,000.00
7	Shifting and laying of LT power PVC armoured aluminium cable including Dressing				
	a) 31/2C x 50sq.mm	Mts	800.00	12.30	9,840.00
	b) 4C x 16sq.mm	Mts	1,600.00	9.84	15,744.00
8	Power cable termination including supply of cable glands & lugs(Copper/Aluminium).				
	a) 31/2C x 50sq.mm	Nos	20	321.44	6,428.80
	b) 4C x 16sq.mm	Nos	200	194.34	38,868.00
9	Fabrication and Erection of structural steel for equipment/cable tray support etc.including red oxide painting. Supply of red oxide paint is in the scope of contractor.	Ton	0.50	7,434.12	3,717.06
10	Supply and Erection of special earth pit (tinned copper plate 600 x 600 x 6mm) for 150T Weigh Bridge electronic earthing as per drawing. The work including supply of material for alternate layers of charcoal, salt and brick/RCC chamber, cement plastering, MS/Cast Iron cover plate, Testing & Commissioning. The job including breaking of RCC flooring inside the block.	No	1	22,140.00	22,140.00
11	Modification of street light double arm brackets wherever fouling with gantry cranes. Job includes removal of arm brackets from poles, cut and re-weld with increased angle to avoid fouling and re-fixing to pole.	Nos	85	250.00	21,250.00
<b>Total</b>					<b>1,350,016.90</b>

**PART-B Concreting of Street Light Poles (Foundations)**

S No.	Description	Unit	Qty	Unit rate in Rs.	Total Amount in Rs
1 a)	<b>Earth work in excavation in all soils</b> 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 1.5 m, getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 50M.	Cu.m	135	103.40	13,959.00
b)	..do.. Upto 3.00m 1st additional depth	Cu.m	27	122.30	3,302.10
2	<b>Reinforcement for R.C.C. work</b> including straightening, cutting,bending,placing in position and binding grills with binding wire all complete by cold twisted bars.(Only reinforcement steel will be issued by BHEL on FREE of cost at their stores)	M.T.	4.68	4,003.00	18,734.04
3	Providing and laying in position specified grade of <b>Reinforced Cement Concrete</b> excluding the cost of centering, shuttering, finishing and reinforcement- <b>all work up above plinth level upto floor V with 1:(1.5):3</b> (1 cement:1.5 coarse sand: 3 graded stone aggregate of 20mm nominal size). <b>Only cement will be issued by BHEL on free of cost at their stores.</b>	Cu.m	58.5	1,641.28	96,014.88
4	<b>Conveyance</b> of excavated soil up to a lead of 2 Kms, including loading, unloading and spreading etc., complete as directed by Engineer-in-charge.	Cu.m	64.8	56.41	3,655.37
5	<b>Centering</b> and shuttering including strutting, propping etc., and removal of form work, for columns,pillars, piers, abutments, machine foundations,posts and struts.	Sq.m	405	180.40	73,062.00
6	Providing and laying in position <b>cement concrete</b> of specified grade excluding the cost of centering and shuttering,including consolidation by vibrations for all works upto plinth level with <b>1:4:8</b> (1 cement:4 coarse sand: 8 graded stone aggregate of 20 mm nominal size). <b>Only cement will be issued by BHEL on free of cost at their store.</b>	Cu.m	6.3	1,560.50	9,831.15
7	<b>Filling</b> with available excavated earth ( excluding rock) in trenches, plinth,sides of foundations etc., in layers not exceeding 20 cm in depth, consolidation of each deposited layer by ramming and watering,lead upto 50.00 m and lift upto 1.50 m.	Cu.m	97.2	45.70	4,442.04

8	25 mm diameter ISI marked PVC conduit.	R.M	90	19.44	1,749.60
<b>Total</b>					224,750.18
Add increase in VAT 1% over the material cost (70% of above value)					1,573.25
<b>Total</b>					<b>226,323.43</b>

**Total Value of tender : Part A + Part B**

**1,576,340.33**

**Total : Fifteen lakhs Seventy Six thousand Three hundred and Forty Rupees and Thiry three Paisa only.**

**Noter :** 1) Tha above rates are inclusive of **VAT**.

2) The contractor shall indicate **Service Tax** separately as extra in price bid. Service tax will be released on submission of valid documentary proof.

3) The Contractor has to submit separate Service tax invoice alongwith RAB (Running Account Bill)

4) The quantities indicated in the schedule are tentative and may increase or decrease or delete.

5) Any other works not mentioned but required for completion of the project are to be carried out by the contractor with mutually agreed rates and vetted by finance.

6) The contractor shall mark with paint on all panels regarding power cables size & FROM/TO destinations.

7) Contractor shall shift the materials from different locations inside the factory to the project site and return back the left over materials after completion of the work to the project stores or as per the instructions of the site engineer.

8) Manpower should be at the description of the site Engineer.

9) The contractor should follow all the statutory requirements, Environmental Management System (EMS),

10) Contractor has to ensure neatness of the site by removing unwanted materials/scrap materials.

11) Safety : Contractor has to ensure usage of safety shoes, safety helmets, safety belts, safety net & anchoring rope, hand gloves etc. during erection and commissioning for all his personnel.

12) Penalty: 0.50 % of the gross value of work will be levied for every week's or part thereof delay by the agency subject to a maximum of 10 % gross value of the work executed after the schedule period of completion.

13) Payment Terms: Payment will be based on work % completion/milestone basis.

14) The agencies are advised to visit the site to understand the nature of work/quantum of work in its true perspective to avoid any complications.

**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 Figures	In Words
<b>Excess</b>		
<b>Less</b>		
<b>Estimated Value</b>		