

Name of the Work: YPR-CSDR Doubling: Internal Electrification of Banaswadi station building, provision of lighting arrangements for open and covered platforms at Banaswadi station and any other associated works.

Sl. No	Schedule	Schedule Description	Amount
1	Schedule-A	Schedule of Rates and Quantities for Internal Electrification of Banaswadi Station Building	30,83,790.87
2	Schedule-B	Schedule of Rates and Quantities for Provision of Lighting arrangements to FOB and Platform at Banaswadi Railway Station	15,65,720.96
4	Schedule-C	Schedule of Rates and Quantities for Provision of Approach Road Lights at Banaswadi Railway Station	10,80,941.31
3	Schedule-D	Schedule of Rates and Quantities for Provision of Pump at Banaswadi Railway Station	2,85,464.00
4	Schedule-E	Schedule of Rates and Quantities for Provision of Diesel Generator at Banaswadi Railway Station	16,73,951.60
5	Schedule-F	Schedule of Rates and Quantities for Provision of Power Supply Arrangement at Banaswadi Railway Station	63,88,007.69
		Total Amount put to tender excluding GST	1,40,77,876.45

Section 9: BILL OF QUANTITIES

Schedule A: Schedule of Rates and Quantities for Internal Electrification of Banaswadi Station Building

Sl. No	Description	Unit	Qty	Rate	Amount Excl. GST
1	Supplying heavy gauge PVC conduit pipe 25 mm dia 2 mm thick confirming to IS 2509 with suitable size bends, metal/PVC Junction boxes, adhesive paste etc., and running before concreting the slab. The conduit should be tied to the reinforcement rods by using binding wires and unused ways of junction boxes and pipe ends should be covered using PVC end enclosures, run with 18SWG GI fish wire wherever necessary. 25 mm dia 2 mm thick	Mtr	953.00	78.00	74,334.00
2	Supplying heavy gauge PVC conduit pipe 32 mm dia 2.5 mm thick confirming to IS 2509 with suitable size bends, metal/PVC Junction boxes, adhesive paste etc., and running before concreting the slab. The conduit should be tied to the reinforcement rods by using binding wires and unused ways of junction boxes and pipe ends should be covered using PVC end enclosures, run with 18SWG GI fish wire wherever necessary. 32 mm dia 2.5 mm thick	Mtr	155.00	103.00	15,965.00
3	Supplying heavy gauge PVC Conduit Pipe 25 mm dia 2 mm thick with suitable size bends, metal junction boxes adhesive paste etc., by groove cutting in the wall and fixing by bracing U or J hooks and cement plastering upto the wall surface and run with 18 SWG GI fish wire run throughout the conduit wherever necessary. 25 mm dia 2 mm thick	Mtr	501.00	79.00	39,579.00
4	Supplying heavy gauge PVC Conduit Pipe 32 mm dia 2.5 mm thick with suitable size bends, metal junction boxes adhesive paste etc., by groove cutting in the wall and fixing by bracing U or J hooks and cement plastering upto the wall surface and run with 18 SWG GI fish wire run throughout the conduit wherever necessary. 32 mm dia 2.5 mm thick	Mtr	107.00	99.00	10,593.00

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Sl. No	Description	Unit	Qty	Rate	Amount Excl. GST
5	Supplying and wiring adopting loop system in existing PVC Conduit /casing capping casing capping using 2x1.5Sqmm (Phase & Neutral) & 1x1.0 sqmm (Earth wire) FRLS multi strand PVC insulated copper wire (confirming to IS-694: and latest amendments) without control switch shall be fixed on the existing plastic sheet/ gang box, the other end of the wires shall be terminated with sufficient loose length in a wood/PVC round block. complete for each outlet. Short point upto 3Mtr from tapping point to out let via switch box.	Point	23.00	269.00	6,187.00
6	Supplying and wiring adopting loop system in existing PVC Conduit /casing capping casing capping using 2x1.5Sqmm (Phase & Neutral) & 1x1.0 sqmm (Earth wire) FRLS multi strand PVC insulated copper wire (confirming to IS-694: and latest amendments) without control switch shall be fixed on the existing plastic sheet/ gang box, the other end of the wires shall be terminated with sufficient loose length in a wood/PVC round block. complete for each outlet. Medium point above 3Mtr upto 6Mtr from tapping point to out let via switch	Point	41.00	379.00	15,539.00
7	Supplying and wiring adopting loop system in existing PVC Conduit /casing capping casing capping using 2x1.5Sqmm (Phase & Neutral) & 1x1.0 sqmm (Earth wire) FRLS multi strand PVC insulated copper wire (confirming to IS-694: and latest amendments) without control switch shall be fixed on the existing plastic sheet/ gang box, the other end of the wires shall be terminated with sufficient loose length in a wood/PVC round block. complete for each outlet. Long point above 6Mtr upto 10Mtr from tapping point to out let via switch	Point	92.00	555.00	51,060.00

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8	Supplying and wiring adopting loop system in existing PVC Conduit /casing capping casing capping using 2x1.5sqmm (Phase & Neutral) & 1x1.0 sqmm (Earth wire) FRLS multi strand PVC insulated copper wire (confirming to IS-694: and latest amendments) without control switch shall be fixed on the existing plastic sheet/ gang box, the other end of the wires shall be terminated with sufficient loose length in a wood/PVC round block. complete for each outlet. Two outlet in a row, above 3Mtr upto 6Mtr from tapping point to out let via switches.	Point	7.00	677.00	4,739.00
9	Wiring for lighting/power circuit using one of FRLS PVC insulated 1100V grade, multistrand copper wire with low conductor resistance single core in open or concealed system of wiring with specified IS694:2010 1.5 mm²	Mtr	1246.00	26.00	32,396.00
10	Wiring for lighting/power circuit using one of FRLS PVC insulated 1100V grade, multistrand copper wire with low conductor resistance single core in open or concealed system of wiring with specified IS-694: confirming to latest amendments. 2.5 mm²	Mtr	2492.00	42.00	1,04,664.00
11	Wiring for lighting/power circuit using one of FRLS PVC insulated 1100V grade, multistrand copper wire with low conductor resistance single core in open or concealed system of wiring with specified IS-694: confirming to latest amendments. 4 mm²	Mtr	862.00	63.00	54,306.00
12	Wiring for lighting/power circuit using one of FRLS PVC insulated 1100V grade, multistrand copper wire with low conductor resistance single core in open or concealed system of wiring with specified IS-694: confirming to latest amendments. 6 mm²	Mtr	265.00	92.00	24,380.00

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Sl. No	Description	Unit	Qty	Rate	Amount Excl. GST
13	Wiring for lighting/power circuit using one of FRLS PVC insulated 1100V grade, multistrand copper wire with low conductor resistance single core in open or concealed system of wiring with specified IS-694: confirming to latest amendments. 10 mm²	Mtr	380.00	167.00	63,460.00
14	Supplying and drawing Flexible Multicore Cable manufactured with electrolytic grade flexible copper with low conductor confirming to IS 8130-1984 and (Virgin) PVC insulation sheathed suitable for working voltage upto 1100 Volts as per IS-694:1990 3C X 1.5 mm²	Mtr	207.00	72.00	14,904.00
15	Supplying and drawing Flexible Multicore Cable manufactured with electrolytic grade flexible copper with low conductor confirming to IS 8130-1984 and (Virgin) PVC insulation sheathed suitable for working voltage upto 1100V as per IS- 694:2010 3C X 2.5 mm²	Mtr	207.00	113.00	23,391.00
16	Supplying and drawing Flexible Multicore Cable manufactured with electrolytic grade flexible copper with low conductor confirming to IS 8130-1984 and (Virgin) PVC insulation sheathed suitable for working voltage upto 1100V as per IS- 694:2010 3C X 4 mm²	Mtr	207.00	172.00	35,604.00
17	Supplying and flush mounting powder coated / galvanized metal box suitable for mounting modular switch plates. The box should be firmly flush mounted after due groove cutting in Brick/Stone/C.C wall 1-2 Way	Each	9.00	138.00	1,242.00
18	Supplying and flush mounting powder coated / galvanized metal box suitable for mounting modular switch plates. The box should be firmly flush mounted after due groove cutting in Brick/Stone/C.C wall 3 Way	Each	9.00	159.00	1,431.00

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Sl. No	Description	Unit	Qty	Rate	Amount Excl. GST
19	Supplying and flush mounting powder coated / galvanized metal box suitable for mounting modular switch plates. The box should be firmly flush mounted after due groove cutting in Brick/Stone/C.C wall 4-5 Way	Each	15.00	177.00	2,655.00
20	Supplying and flush mounting powder coated / galvanized metal box suitable for mounting modular switch plates. The box should be firmly flush mounted after due groove cutting in Brick/Stone/C.C wall 6 Way	Each	28.00	220.00	6,160.00
21	Supplying and flush mounting powder coated / galvanized metal box suitable for mounting modular switch plates. The box should be firmly flush mounted after due groove cutting in Brick/Stone/C.C wall 8 Way	Each	7.00	261.00	1,827.00
22	Supplying and flush mounting powder coated / galvanized metal box suitable for mounting modular switch plates. The box should be firmly flush mounted after due groove cutting in Brick/Stone/C.C wall 10-12 Way	Each	25.00	319.00	7,975.00
23	Supplying and fixing superior quality modular switch mounting polycarbonate plate with necessary supporting back plate with required nos. of machine screws, bolts nuts etc., complete on the existing metal/PVC box. 1 to 2 Module	Each	9.00	137.00	1,233.00
24	Supplying and fixing superior quality modular switch mounting polycarbonate plate with necessary supporting back plate with required nos. of machine screws, bolts nuts etc., complete on the existing metal/PVC box. 3 Module	Each	9.00	161.00	1,449.00
25	Supplying and fixing superior quality modular switch mounting polycarbonate plate with necessary supporting back plate with required nos. of machine screws, bolts nuts etc., complete on the existing	Each	15.00	175.00	2,625.00

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Sl. No	Description	Unit	Qty	Rate	Amount Excl. GST
	metal/PVC box. 4 Module				
26	Supplying and fixing superior quality modular switch mounting polycarbonate plate with necessary supporting back plate with required nos. of machine screws, bolts nuts etc., complete on the existing metal/PVC box. 6 Module	Each	28.00	234.00	6,552.00
27	Supplying and fixing superior quality modular switch mounting polycarbonate plate with necessary supporting back plate with required nos. of machine screws, bolts nuts etc., complete on the existing metal/PVC box. 8 Module	Each	7.00	284.00	1,988.00
28	Supplying and fixing superior quality modular switch mounting polycarbonate plate with necessary supporting back plate with required nos. of machine screws, bolts nuts etc., complete on the existing metal/PVC box. 10-12 Module	Each	25.00	344.00	8,600.00
29	Supplying and fixing of modular switch & connected accessories on existing modular switch plate as per IS 3854 and IS 1293. 6A One Way Switch	Each	233.00	102.00	23,766.00
30	Supplying and fixing of modular switch & connected accessories on existing modular switch plate as per IS 3854 and IS 1293. 6A Two Way Switch	Each	14.00	166.00	2,324.00
31	Supplying and fixing of modular switch & connected accessories on existing modular switch plate as per IS 3854 and IS 1293. 6A Three Way socket	Each	55.00	171.00	9,405.00
32	Supplying and fixing of modular switch & connected accessories on existing modular switch plate as per IS 3854 and IS 1293. Stepped Fan Regulator Two Module	Each	31.00	357.00	11,067.00

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Sl. No	Description	Unit	Qty	Rate	Amount Excl. GST
33	Supplying and fixing of modular switch & connected accessories on existing modular switch plate as per IS 3854 and IS 1293. 16A One Way Switch	Each	38.00	180.00	6,840.00
34	Supplying and fixing of modular switch & connected accessories on existing modular switch plate as per IS 3854 and IS 1293. 6/16A Universal Socket	Each	38.00	236.00	8,968.00
35	Supplying And fixing/replacing of 6/16/32A electrical accessories on existing switch board. 6A Bakelite Ceiling Rose	No	123.00	78.00	9,594.00
36	Supplying And fixing/replacing of 6/16/32A electrical accessories on existing switch board. 6A Pendant Holder	No	15.00	71.00	1,065.00
37	Design, fabrication supply and erection of 63A Industrial interlocking type plug and socket with 100A 4 pole MCCB 25KA adjustable type, 32A, 5 pin industrial plug and socket with 32AFPMCB - 1 No and 20A 3 pin industrial type plug and socket with 20A DP MCB, all enclosed in CRCA sheet enclosure complete including all auxiliary accessories as per specification.	Set	4.00	26,627.78	1,06,511.11
38	Supplying and fixing regular MCB distribution boards on wall/wood board / flush mounting using required clA, bolts, nuts etc., with provision for fixing suitable type capacity MCB's single phase/3 phase/single door with powder coated painting Made out of 14 SWG MS enclosure. III-Double Door 6 Way TP & N	Each	2.00	4,940.00	9,880.00

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Sl. No	Description	Unit	Qty	Rate	Amount Excl. GST
39	Supplying and fixing regular MCB distribution boards on wall/wood board / flush mounting using required clA, bolts, nuts etc., with provision for fixing suitable type capacity MCB's single phase/3 phase/single door with powder coated painting Made out of 14 SWG MS enclosure. III-Double Door 12 Way TP & N	Each	3.00	8,735.00	26,205.00
40	Supplying and fixing regular MCB distribution boards on wall/wood board / flush mounting using required clA, bolts, nuts etc., with provision for fixing suitable type capacity MCB's single phase/3 phase/single door with powder coated painting Made out of 14 SWG MS enclosure. II-Double Door 6 Way SP & N	Each	2.00	1,791.00	3,582.00
41	Supplying and fixing regular MCB distribution boards on wall/wood board / flush mounting using required clA, bolts, nuts etc., with provision for fixing suitable type capacity MCB's single phase/3 phase/single door with powder coated painting Made out of 14 SWG MS enclosure. II-Double Door 12 Way SP & N	Each	2.00	2,329.00	4,658.00
42	Supplying & fixing miniature circuit breakers on existing MCB distribution boards using necessary fixing materials and 'C' Type curve, indicator ON/OFF, energy cross-3 with Short circuit breaking capacity of 10K and complete wiring as required confirming to IEC 60898. 6-32 A SP	Each	25.00	415.00	10,375.00
43	Supplying & fixing miniature circuit breakers on existing MCB distribution boards using necessary fixing materials and 'C' Type curve, indicator ON/OFF, energy cross-3 with Short circuit breaking capacity of 10K and complete wiring as required confirming to IEC 60898. 6-32 A DP	Each	29.00	739.00	21,431.00

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Sl. No	Description	Unit	Qty	Rate	Amount Excl. GST
44	Supplying & fixing miniature circuit breakers on existing MCB distribution boards using necessary fixing materials and 'C' Type curve, indicator ON/OFF, energy cross-3 with Short circuit breaking capacity of 10K and complete wiring as required confirming to IEC 60898. 40 A TPN	Each	10.00	3,044.00	30,440.00
45	Supplying & fixing miniature circuit breakers on existing MCB distribution boards using necessary fixing materials and 'C' Type curve, indicator ON/OFF, energy cross-3 with Short circuit breaking capacity of 10K and complete wiring as required confirming to IEC 60898. 50-63 A TPN	Each	4.00	3,088.00	12,352.00
46	Supplying, fixing and wiring Residual current circuit breaker (RCCB) 240/450V upto 300mA sensitivity on existing wood/ panel board 32-40A 4 pole	Each	4.00	5,147.00	20,588.00
47	Supplying and fixing Microprocessor based Electronic timer (without contactor, Din Mounting using necessary bolts, nuts and washers etc.,) 3-120sec setting.	Each	13.00	2,315.00	30,095.00
48	Supplying and fixing Microprocessor Based Astronomical timer Switch with using necessary bolts, nuts and washers.	Each	2.00	4,843.00	9,686.00
49	Supplying of 4 feet -PVC Batten with integrated LED tube 20/22 W with high quality diffuser with Life of 25000 burning hours & 70% lumen maintenance with CRI > 80. Power Input: 220-240V@ 50/60Hz & Power factor >0.9 along with CE approved. 2 years Warranty against any manufacturing defect working under standard electrical condition. LED light fitting 1 x 4' - 20/22 W	Each	48.00	690.00	33,120.00

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Sl. No	Description	Unit	Qty	Rate	Amount Excl. GST
50	Supplying of 4 feet -PVC Batten with integrated LED tube 36/40 W with high quality diffuser with Life of 25000 burning hours & 70% lumen maintenance with CRI > 80. Power Input: 220-240V@ 50/60Hz & Power factor >0.9 along with CE approved. 2 years Warranty against any manufacturing defect working under standard electrical condition. LED light fitting 1 x 4' - 36/40 W	Each	53.00	1,269.00	67,257.00
51	Supplying of 1 feet -PVC Batten with integrated LED tube 9/10 W with high quality diffuser with Life of 25000 burning hours & 70% lumen maintenance with CRI > 80. Power Input: 220-240V@ 50/60Hz & Power factor >0.9 along with CE approved. 2 years Warranty against any manufacturing defect working under standard electrical condition. LED light fitting 1 x 2' - 9/10 W	Each	9.00	551.00	4,959.00
52	Supply of round/square recess/surface mounted rolling type LED Down light with 15-18 W GU 10 LED Lamp Rib Fabricated from die cast aluminium with white powder coated pre wired to mains connector & has swivelling unit of aluminium die cast eye ball & LED Lamp position retained by circular wire spring, with Life of 25000 burning hours & 70% lumen maintenance with CRI>80. Power Input:220-240V @ 50/60Hz & Power factor > 0.9 along with CE approved. 2 years Warranty against any manufacturing defect working under standard electrical condition LED square or round down light 15-18W	Each	20.00	1,324.00	26,480.00

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Sl. No	Description	Unit	Qty	Rate	Amount Excl. GST
53	Supplying of recess mounting non integral type .36 W LED luminaire comprising of pressure decast/extruded aluminium housing, with spring loaded false ceiling clamps, Power LEDs with CCT 6500 degree K, CRI> 70%. efficacy > 100 lumen per W, 120degree beam spread, life> 25000 burning hours and Compliance to IS 10322/IEC 60598, LM 79 & LM 80. The lamp compartment is enclosed with anti glare opal diffuser which enhances the lighting level LEDs are driven by HF electronic driver integrated in a separate control gear assembly., with PF > 0.95, power loss should< 5% of lamp Wage., short circuit & open circuit protection to be integrated in the circuit, THD less than 20%, Life as per LM 79. The operating input voltage should be between 130 to 275 V. BIS Approved and Tested by NABL/CPRI accredited laboratory with 2 years Warranty against any manufacturing defect working under standard electrical condition. LED modular down light 2'x2' 36 W	Each	10.00	4,553.00	45,530.00
54	Fixing all types and all capacities of fluorescent /false ceiling /spot light / CFL / LED fittings indoor on the wall/ ceiling /rafters / girders using 23/0.0076" twin twisted PVC insulated wires, required Nos of round blocks and clA.	Each	110.00	122.00	13,420.00
55	Supply and fixing of 50W, Energy saving, environment friendly and robust open type vertical high bay/medium bay lighting with high power COB LED light as source-The light fitting shall be similar to Havells lliosbay Plus highbay	Each	4.00	5,941.54	23,766.16

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Sl. No	Description	Unit	Qty	Rate	Amount Excl. GST
56	Supply of LED floodlight luminaire with pressure die cast aluminium housing body for optimal thermal dissipation. Lamp compartment comprising of anti glare clear diffuser with Injection moulded polycarbonate/clear glass material, delivering superior light output Rated life Burning Hrs 50000 hr @ Lumen Maintenance of 70%, CCT > 5500K, IP 66 optical and electrical compartment & impact resistance of complete luminaire > IK08. Power Factor >0.9 with mains, Surge Protection- Min 5KV along with Over voltage/ Overload, short circuit/ miss-wiring protection. Compatible for pole mauling with outer dia of 40mm to 50mm. Universal Voltage driver to operate wide voltage range from 100 V to 270V 50/60Hz application. Compliance to IS 10322/ IEC 60598, LM 79 & LM 80 Adherence with RoHS. UL approved MCPCB. Top access street light with single screw to ensure ease of maintenance at the sight site location with minimized minimal tools. LED Light fixture with 100 W System Power consumption. LED Efficiency> 130lm/w, nominal CRI >75. Luminaire manufacturer should have in- house facility accredited by NABL / CPRI & any Government certified agency & Design & Development facility certified by ISO 9001:2008. Housing with supplier word mark / name shall be Engraved / Embossing on the die cast housing / Body part Warranty of 2 Years against any manufacturing defect working under standard electrical conditions as mentioned above should be given by LED manufacturer & Cree/Nichia/ Lumileds/Osram make LED Source LED Floodlight 100W	Each	10.00	9,486.00	94,860.00

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Sl. No	Description	Unit	Qty	Rate	Amount Excl. GST
57	Supplying of Ceiling Fan with Capacitor rating As per guideline of BEE 5 star rating and IS:374/79 and also comply with IS: 1709/1984 with latest amendment, Rated voltage 220 V/50 Hz, Rated power input 48 W +/- 10 %, Rated current As per IS:374/79, Rated power factor 0.9 lagging(min), Rated speed 350 +/- 10% RPM, Rated air delivery 210 +/- 10% Cubic Meter Minimum, Rated service value 4.2 CMM / W, Three Blades of blade leaf 1.05 mm thick Aluminium Alloy sheet, Class B motor insulation, Bearing Two ball bearings, Top 6202, Bottom 6201, as per IS specification, Motor winding. Temp rise Shall not exceed 75 deg C over and ambient of 40 OC by resistance method at 245 V, Insulation resistance Shall not be less than Two Mega Ohms (2M Ohms), Leakage current Should not exceed 210 Micro Amp, Power input, W& current, Air Delivery & Fan Speed as per IS:374/1979 with latest amendment, 2 year manufacturer Warranty. 48" Sweep 5 Star (1200 mm)	Each	31.00	4,303.00	1,33,393.00
58	Supplying of wall mounting fan suitable to operate at singlephase 230v AC. supply. 300mm Sweep	Each	5.00	2,492.00	12,460.00
59	Fixing a ceiling / Wall mounting fan of all capacities and all types to the existing 'S' hook with fan regulator to the existing board together with supplying and fixing 5 A. ceiling rose, necessary length of 23 / 0.0076 inch PVC insulated twin twisted copper wire and wiring.	Each	36.00	171.00	6,156.00
60	Supplying of 1440rpm heavy duty exhaust fan with bracket blades suitable to operate on 230V 50Hz, AC Supply complete. 12" Sweep (300 mm)	Each	5.00	2,969.00	14,845.00

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Sl. No	Description	Unit	Qty	Rate	Amount Excl. GST
61	Supply, erection, testing, commissioning of exhaust fan suitable for 1-phase, 230 Volts, AC supply system complete with capacitor, louver shutters, grouting bolts with nuts, making opening/ modification in the wall to suit the size of the fan, making good the damages, connections with 1.5sq. mm FR, PVC insulated, multi stranded copper conductor, single core/ three cable as instructed, earthing etc. as required. AC exhaust fan 150 mm with louver shutters.	Each	9.00	1,929.74	17,367.62
62	Fixing one exhaust fan in the nitch already left in the wall with bolts and nuts and 5 A. ceiling rose with sufficient length of 23/0.0076 inch PVC insulated twin core wire.	Each	14.00	492.00	6,888.00
63	Supplying And Fixing Metal Fan Box with Round Hook.	No	33.00	117.00	3,861.00
64	Supplying, erecting, testing & commissioning of ON-LINE UPS system suitable for operation on 230V, 50Hz, A/C supply, with isolation transformer all accessories complete and Excluding batteries and wiring complete. 3 kVA ON LINE UPS	Each	1.00	38,719.00	38,719.00
65	Supplying, installation, testing & commissioning of 12V DC, AH batteries in poly propylene container for U.P.S. Sealed maintenance free batteries. 42 AH capacity	Each	6.00	5,092.00	30,552.00
66	Grounding Pipe GI Grounding pipe, B - Class, 42 mm dia, 2.5 Mtr long, 3.2 mm thick with bolt, nut, GI Strips and washer complete Minimum Weight of GI Pipe: 7.3 Kg	No	6.00	743.00	4,458.00
67	Grounding Pipe Good Quality well burnt Charcoal for grounding purposes packed in non-returnable gunny bag of 30 Kg each	No	6.00	676.00	4,056.00

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Sl. No	Description	Unit	Qty	Rate	Amount Excl. GST
68	Grounding Pipe Good Quality Salt for grounding purposes packed in 50 Kg gunny bag	Bag	6.00	310.00	1,860.00
69	Digging of Pit for providing GI Pipe type Earthing Ordinary Soil	Per Pit	6.00	759.00	4,554.00
70	Constructing brick masonry chamber of internal dimension 450x300mm and depth of 600mm (inner dimensions) with modular bricks of CD 75 in cement mortar 1:6, bed concrete 150mm thick with 1:3:6, plastering 12 mm thick with cement mortar 1:4, CC 1:2:4 coping 75mm thk for fixing CI cover & frame etc. excluding the cost of CI frame and cover..	Each	6.00	3,240.00	19,440.00
71	Supply, erection, testing and commissioning of self contained drinking water cooler 150 liters capacity complete with all connected standard fittings, accessories etc. and 5 kVA, wall mounted, I.C. controlled electronic auto-voltage corrector with time delay relay, supply and erection of earth electrode and connection to earthing system etc. as required.	No	2.00	64,792.41	1,29,584.82

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Sl. No	Description	Unit	Qty	Rate	Amount Excl. GST
72	Design, supply, insallation, testing & Commissioning of LT panel outdoor type made out of 2 mm CRCA sheet steel, free floor standing with MS Channel, vermin and dust proof Siemens grey powder coated paint with cable alleys, locking arrangements, suitable copper bus bars & all accessories as per specifications LT Panel 160 Amp comprising of the items indicated as under: 1. Motorized Auto Transfer Switch 160A, FP-1 No 2. Incoming MCCB 160A, FP, 36kA, Microprocessor Based fixed type MCCB - 1 No 3. Outgoing MCCB 63A, FP, 25kA Microprocessor Based fixed type MCCB - 6 Nos 4. Outgoing MCCB 40A, FP, 25kA Microprocessor Based fixed type MCCB - 2 Nos 5. Outgoing MCB 32A, 4 Pole, 10kA - 4 Nos 6. Outgoing MCB 16A, 4 pole, 10kA - 2 Nos 7. Outgoing MCB 32A, Double Pole, 10kA - 4 Nos 8. Outgoing MCB 16A, Double pole, 10kA - 4 Nos 9. Digital Multi data meter with RS 485 port- 1Nos, RYB indication lamp (LED type) Set, including all heat shrinkable sleeves, flexible Cu wires, lugs, sleeves, terminals & PVC troughs as per site condition	Each	1.00	3,87,972.59	3,87,972.59

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Sl. No	Description	Unit	Qty	Rate	Amount Excl. GST
73	Design, supply, insallation, testing & Commissioning of LT panel outdoor type made out of 2 mm CRCA sheet steel, free floor standing with MS Channel, vermin and dust proof Siemens grey powder coated paint with cable alleys, locking arrangements, suitable copper bus bars & all accessories as per specifications LT Panel 250 Amp comprising of the items indicated as under: 1. Incoming MCCB 250A, FP, 36kA, Microprocessor Based fixed type MCCB - 1 No 2. Outgoing MCCB 160A, FP, 25kA Microprocessor Based fixed type MCCB - 2 Nos 3. Outgoing MCCB 100A, FP, 25kA Microprocessor Based fixed type MCCB - 2 Nos 4. Outgoing MCCB 63A, FP, 25kA Microprocessor Based fixed type MCCB - 2 Nos 5. Outgoing MCB 32A, 4 Pole, 10kA - 2 Nos 6. Outgoing MCB 16A, 4 pole, 10kA - 2 Nos 7. Outgoing MCB 32A, Double Pole, 10kA - 4 Nos 8. Outgoing MCB 16A, Double pole, 10kA - 4 Nos 9. Modular digital time switch and 3 phase contactor 63 A - 2 Set 10. Digital Multi data meter with RS 485 port- 1Nos, RYB indication lamp (LED type) Set, including all heat shrinkable sleeves, flexible Cu wires, lugs, sleeves, terminals & PVC troughs as per site condition.	Each	1.00	3,29,410.69	3,29,410.69
74	Supply and laying of GI/Copper strips for grounding connections, using necessary fixing materials as required. 25 x 3 mm GI strip	Mtr	92.00	82.00	7,544.00
75	Supply and laying of GI/Copper strips for grounding connections, using necessary fixing materials as required. 25 x 6 mm GI strip	Mtr	58.00	128.00	7,424.00
76	Supplying of FIRST AID CHART with lamination. Complete	Each	5.00	400.00	2,000.00
77	Supplying of first aid box. Complete	Each	2.00	600.00	1,200.00
78	Supplying of two bucket stand alongwith buckets. Complete	Each	1.00	1,100.00	1,100.00

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Sl. No	Description	Unit	Qty	Rate	Amount Excl. GST
79	Supplying and installation of RUBBER MAT 1mtr x 1mtr -10 mm thick. complete including cost of materials, labour, usage charges of machinery complete as per specifications.	Each	5.00	1,900.00	9,500.00
80	Supply and installation of 2 Kg CO2 Gas Type Fire Extinguisher Squeeze grip type, used Unused Mechanism, Squeeze Grip, Gross Weight 9.1 Kg. empty Weight 7.1 Kg. Can Height 595MM Diameter 108MM, Discharge Time less than 8 Secs, Controllable discharge mechanism, Applicable on Class 8&C Fire, 8 Rating 88, Can Construction : Hot spinning/Forging, Valve Construction : Forging & Machining, Internal Coating of Can : Not Applicable, External coating of Can : Spray Painting, Sheet metal thickness: 4.0MM ISI Approved, 1 Year Warranty.with instalert system with Superior quality EPDM Rubber Hosepipe etc., including cost cost of supporting materials like MS stand & accessories if it is fixing n floor / MS brackets & accessories if it is fixing on wall,, labour, usage charges of machinery complete as per specifications. complete	Each	2.00	5,500.00	11,000.00
81	Supply and installation of 4kg Stored Pressure Type, Pressure Guage, Gross Weight 7.4Kg, empty weight 3.4Kg, Can Height 480MM, Diameter 160MM, Discharge Time less than 13Secs, Controllable discharge mechanism (Squeeze grip with easy snap safety seal), Range minimum 4meters, Can construction Deep drawn & Co., Mig welded, valve Construcion Forging and Mechining, Internal Coating of Can: Epoxy powder coating, External Coating of Can: Epoxy Polyester power coating, Sheet metal thickness: 1.60MM, IS 15683 and CE Approved 5years warranty. with inst alert system with Superior quality EPDM Rubber Hose pipe etc., including cost of supporting materials like MS stand & accessorioes if it is fixing in floor/MS brackets & accessories if it is fixing on wall, labour, usage charges of machinery complete as per specifications. complete	Each	1.00	3,350.00	3,350.00
82	2 mm thick perforated cable GI tray with on existing MS angle support using necessary GI bolts/nuts and washer or welding as required. 150 x 50 mm	Mtr	115.00	463.00	53,245.00

Section 9: BILL OF QUANTITIES

Sl. No	Description	Unit	Qty	Rate	Amount Excl. GST
83	Supplying and fixing angle iron frame work fabricated out of M.S. angle iron.. and M.S. Flat of size 50*6 with bolts, washers etc., and painted with 2 coats of red oxide and then two coats of approved paint. 40 x 40 x 6 mm	Mtr	61.00	305.00	18,605.00
84	"Supply, installation, testing & commissioning of Daylight Occupancy Sensor Switch:- Surface Mount with movement detector & daylight sensing with built-in switch. It will switch off the lights in a room or area when it is vacated or day light is sufficient enough and thus save upto 30% of electrical energy The Occupancy switch Surface Mount can switch any load upto 6A, Daylight override Prevent Automatic switch-ON when sufficient daylight is available in order to create additional power savings To enable this feature necessary settings are available on the device for adjusting required light level. Device mounting heights between 2.5 and 3.5 meter, for movement detection covering an area of 4 to 5 square meters (desk work) and 6 to 8 meters for larger movements like walking (at 25 deg Cel ambient). "Functions- Automatic control of lights/electrical load switch ON/OFF automatically when any movement is detected, with adjustable time settings for Switch ON/OFF(30 seconds to 30 minutes). Red LED indicator on detection of movement." Smart timer- The smart timer will extend the delay time by the set delay time if movement is detected shortly after switch off, assuming that the area is still in use, but very little movement is made. "Power Supply- Voltage 230 V +/-10%,. 50/60Hz AC Supply, .. Maximum load 6 A (1440 VA) any load. Maximum wire range 0.75 to 1.5mm ² , ..Mains distribution system TN-S with Neutral grounded,,"	Each	23.00	3,500.00	80,500.00
85	Epoxy Terminating Kit (Pothead) suitable for 1.1 kV, LTUG Cable Up to 4C x 50 Sqmm	Set	11.00	324.00	3,564.00
86	Epoxy Terminating Kit (Pothead) suitable for 1.1 kV, LTUG Cable Up to 3.5C x 70/95/120 Sqmm	Set	5.00	382.00	1,910.00

Section 9: BILL OF QUANTITIES

Sl. No	Description	Unit	Qty	Rate	Amount Excl. GST
87	Fabrication, Supplying, Erection, Testing and Commissioning of 16 Mtr ms long Polygon high mast with Single/Multiple telescopic sections having, (minimum overlap distance of 1.5 times of top section) thickness as per BSEN 10025 grades 355 JO/ASTM A572-50 steel sheet plate for shaft suitable to withstand a wind velocity of 47 m/s as per IS 875 part 3(as per GA Drawing). Base plate as per IS 2062/ASTM A572-50. The mast shall be Galvanized in single Hotdip as per BSEN ISO 1461/ASTM A123 with an average 70 microns as per IS 2629, and welded as per BS 5135 Single L-Seam joint The mast shall have 2 Way head frame with die cast LM-6 pulleys, stainless steel axle, Phosphorus Bronze bearing bush press-fitted with separate guides for 2 runs of 5 mm dia, stainless steel wire rope of AISI 304 grade 7/19-core, (Factor of Safety as per TR no-7). 2.5 mm ² EPR insulated PCP sheathed trailing power cable housed inside the bottom shaft of mast with door having locking arrangement The mast shall have manual/power tool (Suitable reversible geared motor operating on 230/415V, 50Hz, shall be provide above 15 Mtr mast) The mast shall have lantern of 2 segments, suitable dia with max load carrying capacity as per IS 1239. The mast shall be erected on existing RCC footing. The mast shall be supplied with 3 mm thick template, lightning arrester of 1.2m length galvanized pipe with top arrow fitted on top of the head frame cover and GLS type aviation twin l A fitting with wiring complete. (excluding foundation) as per technical data. Including Control panel 16 m - Top 150 mm and Bottom 410 mm dia	Each	1.00	1,95,000.00	1,95,000.00

Section 9: BILL OF QUANTITIES

Sl. No	Description	Unit	Qty	Rate	Amount Excl. GST
88	Supply of LED floodlight luminaire with pressure die cast aluminium housing body for optimal thermal dissipation. Lamp compartment comprising of anti glare clear diffuser with Injection moulded polycarbonate/clear glass material, delivering superior light output Rated life Burning Hrs 50000 hr @ Lumen Maintenance of 70%, CCT > 5500K, IP 66 optical and electrical compartment & impact resistance of complete luminaire > IK08. Power Factor >0.9 with mains, Surge Protection- Min 5KV along with Over voltage/ Overload, short circuit/ miss-wiring protection. Compatible for pole mauling with outer dia of 40mm to 50mm. Universal Voltage driver to operate wide voltage range from 100 V to 270V 50/60Hz application. Compliance to IS 10322/ IEC 60598, LM 79 & LM 80 Adherence with RoHS. UL approved MCPCB. Top access street light with single screw to ensure ease of maintenance at the sight site location with minimized minimal tools. LED Light fixture with 240 W System Power consumption. LED Efficiency> 130lm/w, nominal CRI >75. Luminaire manufacturer should have in- house facility accredited by NABL / CPRI & any Government certified agency & Design & Development facility certified by ISO 9001:2008. Housing with supplier word mark / name shall be Engraved /Embossing on the die cast housing / Body part Warranty of 2 Years against any manufacturing defect working under standard electrical conditions as mentioned above should be given by LED manufacturer & Cree/Nichia/ Lumileds/Osram make LED Source. LED Floodlight 240W	Each	8.00	22,068.00	1,76,544.00
89	Providing and laying in position Cement Concrete for levelling course for all works in foundation. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed, laid in layers not exceeding 150 mm thickness, well compacted using plate vibrators, including all lead & lifts, cost of all materials of quality, labour, Usage charges of machinery, curing, and all the other appurtenances required to complete the work as per technical specifications.	CMT	0.90	6,217.00	5,595.30

Section 9: BILL OF QUANTITIES

Sl. No	Description	Unit	Qty	Rate	Amount Excl. GST
	Mix 1:3:6 Using 20 mm nominal size graded crushed coarse aggregates				
90	Providing and laying in position Cement Concrete for levelling course for all works in foundation. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed, laid in layers not exceeding 150 mm thickness, well compacted using plate vibrators, including all lead & lifts, cost of all materials of quality, labour, Usage charges of machinery, curing, and all the other appurtenances required to complete the work as per technical specifications. Mix 1:2:4 Using 20 mm nominal size graded crushed coarse aggregates	CMT	3.31	6,243.00	20,664.33
91	Supplying, fitting and placing TMT FE 550 / 550D Steel Reinforcement including cost of all materials, machinery, labour, cleaning, straightening, cutting, bending, hooking, laping/welding joints, tying with binding wire / soft annealed steel wire and other ancillary operations complete as per drawing and technical specification. All other type of structures	Quintal	1.48	7,371.30	10,909.52
92	Earth work excavation by manual means for drains, canals, waste weir, draft, approach channels, key trenches, foundation of Buildings & bridges and such simillar works in all kinds of soils, as per drawing and technical specifications, including setting out, shoring, strutting, barricading, caution lights, removal of stumps and other deleterious matter, excavated surface leveled and sides neatly dressed disposing off the excavated stuff or sorting & stacking the selected stuff for reuse in a radius of 50 m and lift upto 1.5 m including cost of labour, tools & other appurtenances required to complete the work. In all kinds of soils Depth upto 1.5 m	CMT	11.76	242.00	2,845.92

Section 9: BILL OF QUANTITIES

Sl. No	Description	Unit	Qty	Rate	Amount Excl. GST
93	Refilling available earth around trenches/pipelines, cables in layers not exceeding 20 cms in depth, compacting each deposited layer by ramming after watering with a lead upto 50 m, and lift upto 1.5 m. Including cost of all labour complete as per specifications	CMT	7.55	160.00	1,208.00
94	1.1 kV, XLPE or Heat resistant PVC insulated, PVC extruded Inner Seath Armoured LTUG Cable as per IS-1554 (Part1) or IS-7098 Part-1, Armouring strip thickness and resistivity as per IS-3975 35 Sqmm, 4 Core, (15 GI Strips - 4 x 0.8 mm)	Km	0.20	1,76,070.00	35,214.00
95	Laying of cable in Existing Trench/GI pipe/Stone Ware/RCC Hume pipe using Wooden/Aluminum Rollers as directed by the departmental staff LT Cable 35 to 95 Sqmm	Km	0.20	31,139.00	6,227.80
Total					30,83,790.87

Section 9: BILL OF QUANTITIES

Schedule B: Schedule of Rates and Quantities for Provision of Lighting arrangements to FOB and Platform at Banaswadi Railway Station

Sl. No	Description	Unit	Qty	Rate	Amount Excl. GST
1	Fabricating, supplying and erection of 5M ms long hot dip Galvanized Octagonal hot dip Pole with BSEN 10025 grade S 355 JO steel plate for shaft, IS 2062 for base plate with door opening arrangements, including suitable boards, Bakelite sheet and MCBs as per IS specifications suitable to withstand the wind speed of 47 m/s for 5M Pole in single section and single joint welded as per IS 9595/IS10178AWS having dimensions bottom 130 mm , top 70 mm with 3 mm thick, suitable base plate and 4Nos of long J bolts along with template and the Pole shall be hot dip galvanized in single dipping with not less than 65micron as per ASTM-A123 and 153 etc., (excluding foundation) as per drawing appended. 5 m - Top 70 mm and Bottom 130 mm dia	Each	15	9,900.00	1,48,500.00
2	Supplying, and fixing of Hot dip Galvanized M.S.Bracket suitable for out door luminaries and mounted on Octagonal pole using necessary bolts, nuts etc., complete. Single Arm Bracket with 1000 mm Standard 40/50 mm dia	Each	5	1,700.00	8,500.00
3	Supplying, and fixing of Hot dip Galvanized M.S.Bracket suitable for out door luminaries and mounted on Octagonal pole using necessary bolts, nuts etc., complete. Double Arm Bracket with 1000 mm Standard 40/50 mm dia	Each	10	2,700.00	27,000.00

Section 9: BILL OF QUANTITIES

Sl. No	Description	Unit	Qty	Rate	Amount Excl. GST
4	Providing and laying in position Cement Concrete for levelling course for all works in foundation. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed, laid in layers not exceeding 150 mm thickness, well compacted using plate vibrators, including all lead & lifts, cost of all materials of quality, labour, Usage charges of machinery, curing, and all the other appurtenances required to complete the work as per technical specifications. Mix 1:3:6 Using 20 mm nominal size graded crushed coarse aggregates	CMT	0.96	6,217.00	5,968.32
5	Providing and laying in position Cement Concrete for levelling course for all works in foundation. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed, laid in layers not exceeding 150 mm thickness, well compacted using plate vibrators, including all lead & lifts, cost of all materials of quality, labour, Usage charges of machinery, curing, and all the other appurtenances required to complete the work as per technical specifications. Mix 1:2:4 Using 20 mm nominal size graded crushed coarse aggregates	CMT	11.52	6,243.00	71,919.36
6	Supplying, fitting and placing TMT FE 550 / 550D Steel Reinforcement including cost of all materials, machinery, labour, cleaning, straightening, cutting, bending, hooking, laping/welding joints, tying with binding wire / soft annealed steel wire and other ancillary operations complete as per drawing and technical specification. All other type of structures	Quintal	2.273	7,371.30	16,754.96
7	Supplying of 1.1 kV, XLPE or Heat resistant PVC insulated, PVC extruded Inner Seath Armoured LTUG Cable as per IS-1554 (Part-1) or IS-7098 Part-1, Armouring strip thickness and resistivity as per IS-3975 16 Sqmm, 4 Core, (11 GI Strips - 4 x 0.8 mm)	KM	1.37	1,41,842.00	1,94,323.54

Section 9: BILL OF QUANTITIES

Sl. No	Description	Unit	Qty	Rate	Amount Excl. GST
8	Earth work excavation for pipelines/cables by Manual means upto 600 mm trench width, as per drawing and technical specifications, including setting out, shoring, strutting, barricading, caution lights, removal of stumps and other deleterious matter, including dressing of excavated surfaces, disposing off or leveling the excavated earth or sorting & stacking the selected earth for reuse in a radius of 50 m. Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering and lift upto 1.5 m including cost of labour, tools, usage& other appurtenances required to complete the work. In all kinds of soils. Depth upto 1.50m	Mtr	685	484.00	3,31,540.00
9	Laying of cable in Existing Trench/GI pipe/Stone Ware/RCC Hume pipe using Wooden/Aluminum Rollers as directed by the departmental staff. LT Cable 2.5 to 25 Sqmm	KM	1.37	20,886.00	28,613.82
10	Optical Fibre Cable (OFC) and its Accessories Supply and laying of HDPE/PLB Pipe 50/42 mm	KM	1.2	85,014.00	1,02,016.80

Section 9: BILL OF QUANTITIES

Sl. No	Description	Unit	Qty	Rate	Amount Excl. GST
11	Providing, laying and jointing HDPE pipes of specified grade and conforming to IS 4984-2016 with latest ammendments and conveying to work site including loading and unloading at both destinations and rolling and lowering into trenches, laying true to line and jointing of pipes and specials with electrofusion welding, giving hydraulic test as per relevant ISS with all lead and lifts including encasing the pipe alround to a depth of not less than 15 cms. with soft gravel or selected earth available from the excation, testing and commissioning. The rate is exclusive of required specials and fittings wherever necessary like saddle Tee, stub ends, flanged sets, bedns, reducers etc. complete (Contractor will make his own arrangements for procuring water for testing) etc. complete. NOTE: Upto 110mm dia Coil shall be used. For: HDPE PE 80 PN 6.0 HDPE Grade PE80-PN6.0, 63mm dia	Mtr	180	189.00	34,020.00

Section 9: BILL OF QUANTITIES

Sl. No	Description	Unit	Qty	Rate	Amount Excl. GST
13	Supply of LED Streetlight luminaire with pressure die cast aluminium housing body for optimal thermal dissipation. Lamp compartment comprising of anti glare clear diffuser with Injection moulded polycarbonate material, delivering superior light output Rated life Burning Hrs 50000 hr @ Lumen Maintenance of 70%, maximum light intensity should be between 60 degrees to 70 degrees. CCT > 5500K, IP66 optical and electrical compartment & impact resistance of complete luminaire > IK08. Power Factor >0.9 with mains, Surge Protection- Min 5KV along with Over voltage/Overload, short circuit/ miss-wiring protection. Compatible for pole mounting with outer dia of 40mm to 50mm. Universal Voltage driver to operate wide voltage range from 100V to 270V 50/60Hz application. Compliance to IS 10322/IEC 60598, LM 79 & LM 80 Adherence with RoHS. UL approved MCPCB. Top access street light with single screw to ensure ease of maintenance at the sight site location with minimized minimal tools. LED Light fixture with 40 W System Power consumption. LED Efficiency>130lm/w, nominal CRI >75. Luminaire manufacturer should have in-house facility accredited by NABL/CPRI & any Government certified agency & Design & Development facility certified by ISO 9001:2008. Housing with supplier word mark /name shall be Engraved / Embossing on the die cast housing/ Body part. Warranty of 2 Years against any manufacturing defect working under standard electrical conditions as mentioned. LED Streetlight 40W	Each	15	4,024.00	60,360.00
14	Fixing halogen/metal halide /SVL/IL/LED floodlight fitting over existing pole / wall ceiling including cIA, bolts, nuts and wiring using suitable capacity wires.	Each	15	162.00	2,430.00
15	Grounding Material Pipe Grounding GI Grounding pipe, B - Class, 42 mm dia, 2.5 Mtr long, 3.2 mm thick with bolt, nut, GI Strips and washer complete Minimum Weight of GI Pipe: 7.3 Kg	No	10	743.00	7,430.00

Section 9: BILL OF QUANTITIES

Sl. No	Description	Unit	Qty	Rate	Amount Excl. GST
16	Grounding Material Pipe Grounding Good Quality well burnt Charcoal for grounding purposes packed in non returnable gunny bag of 30 Kg each	No	10	676.00	6,760.00
17	Grounding Material Pipe Grounding Good Quality Salt for grounding purposes packed in 50 Kg gunny bag	Bag	10	310.00	3,100.00
18	Constructing brick masonry chamber of internal dimension 450x300mm and depth of 600mm (inner dimensions) with modular bricks of CD 75 in cement mortar 1:6, bed concrete 150mm thick with 1:3:6, plastering 12 mm thick with cement mortar 1:4, CC 1:2:4 coping 75mm thk for fixing CI cover & frame etc. excluding the cost of CI frame and cover.	Each	10	3,549.00	35,490.00
19	Digging of Pit for providing GI Pipe type Earthing Ordinary Soil	Per Pit	10	759.00	7,590.00
20	Supply of Aluminium End Terminal (Lug) 16 Sqmm	No	120	2.00	240.00
21	Providing PVC ringite pipes conforming to IS 4985:2000 with latest amendments and conveying to worksite, rolling and lowering into trenches, laying true to line and level and perfect linking at joints, testing and commissioning, including loading unloading at both destinations and cuts of pipes wherever necessary including jointing of PVC pipes and specials (excluding cost of specials) with jointing of approved type, with all labour with all lead & lift including encasing the pipe around to a depth of not less than 15 cms. with soft gravel or selected earth available from the excavation etc. complete and giving necessary hydraulic test to the required pressure as per ISS (Contractor will make his own arrangements for procuring water for testing) etc., complete for PVC pipes 75mm dia., 6 kg/sqcm & class 3	Mtr	45	220.00	9,900.00

Section 9: BILL OF QUANTITIES

Sl. No	Description	Unit	Qty	Rate	Amount Excl. GST
22	Supplying and drawing Flexible Multicore Cable manufactured with electrolytic grade flexible copper with low conductor confirming to IS 8130-1984 and (Virgin) PVC insulation sheathed suitable for working voltage upto 1100V as per IS- 694:2010 3C X 2.5 mm2	Mtr	105	113.00	11,865.00
23	Guy Wire & GI Wire as per IS-2141 8 SWG GI Wire (4.064 mm Dia), Std Wt: 131 Kg/KM	MT	0.179	75,040.00	13,432.16
24	Supplying of 4 feet -PVC Batten with integrated LED tube 20/22 W with high quality diffuser with Life of 25000 burning hours & 70% lumen maintenance with CRI > 80. Power Input: 220-240V@ 50/60Hz & Power factor >0.9 along with CE approved. 2 years Warranty against any manufacturing defect working under standard electrical condition. LED light fitting 1 x 4' - 20/22 W	Each	35	690.00	24,150.00
25	Supplying of 4 feet -PVC Batten with integrated LED tube 36/40 W with high quality diffuser with Life of 25000 burning hours & 70% lumen maintenance with CRI > 80. Power Input: 220-240V@ 50/60Hz & Power factor >0.9 along with CE approved. 2 years Warranty against any manufacturing defect working under standard electrical condition. LED light fitting 1 x 4' - 36/40 W	Each	14	1,269.00	17,766.00
26	Fixing all types and all capacities of fluorescent /false ceiling /spot light / CFL / LED fittings indoor on the wall/ ceiling /rafters / girders using 23/0.0076" twin twisted PVC insulated wires, required Nos of round blocks and clA. On wall/ ceiling / Rafter / Girders	Each	49	122.00	5,978.00

Section 9: BILL OF QUANTITIES

Sl. No	Description	Unit	Qty	Rate	Amount Excl. GST
27	Open Conduit System Supplying heavy gauge PVC conduit pipe 25 mm dia 2 mm thick confirming to IS 2509 with suitable size bends, junction boxes, adhesive paste etc , and fixing using inverted wood plugs in case of RCC ceiling and RCC wall/ stone structure or rawl plugs in case of brick walls and cement plastering the damaged portion using heavy gauge saddles at an interval of 700mm using NF screws. 25 mm dia 2 mm thick	Mtr	185	81.00	14,985.00
28	Supplying PVC flexible conduit pipe 25 mm dia fixing on surface over inverted tapered wooden plugs or phill plugs or rawl plugs and clamped using heavy gauge saddles at an interval of 300 mm using NF screws and on either end of the pipe terminated completely 25 mm	Mtr	70	22.00	1,540.00
29	Wiring for lighting/power circuit using one of FRLS PVC insulated 1100V grade, multistrand copper wire with low conductor resistance single core in open or concealed system of wiring with specified IS-694:confirming to latest amendments. 1.5 mm²	Mtr	370	26.00	9,620.00
30	Wiring for lighting/power circuit using one of FRLS PVC insulated 1100V grade, multistrand copper wire with low conductor resistance single core in open or concealed system of wiring with specified IS-694:confirming to latest amendments. 2.5 mm²	Mtr	555	42.00	23,310.00

Section 9: BILL OF QUANTITIES

Sl. No	Description	Unit	Qty	Rate	Amount Excl. GST
31	Supply and Installation / Fixing / Provision of Pole box with HRC Fuse / MCB provision and suitable connector / terminal for 3 Ph/ 1 Ph connections with Loop-In & Loop- Out terminals for 10 mm ² /25 mm ² 3.5 C Al/Ar/Cu/Ar Cable and branch out 2.5 mm ² 2 core Al/Cu PVC Insulated cable, enclosed in a Thermoplastic, Polystyrene enclosure, which should be shock proof, safe, IP65(Weather Proof), rust proof, dust proof, water proof having Internally Embedded Gasket with provision for cable entry through IP65 Thermoplastic, polyamide glands and/or grommets. 200 mm x 200 mm x 98 mm	Each	3	2,300.00	6,900.00
32	Providing, Laying and Fixing of GI pipes conforming to IS 1239:1990 with latest amendments complete with GI fittings (excluding the cost of fittings) with cuts and threads wherever necessary, including testing for water tightness, with all lead and commissioning. Contractor will make his own arrangements for procuring water for testing) For:Heavy Duty GI Pipe etc. complete. Heavy Duty GI pipe of 80mm dia	Mtr	12	1,009.00	12,108.00

Section 9: BILL OF QUANTITIES

Sl. No	Description	Unit	Qty	Rate	Amount Excl. GST
33	"Supply, installation, testing & commissioning of Daylight Occupancy Sensor Switch:- Surface Mount with movement detector & daylight sensing with built-in switch. It will switch off the lights in a room or area when it is vacated or day light is sufficient enough and thus save upto 30% of electrical energy The Occupancy switch Surface Mount can switch any load upto 6A, Daylight override Prevent Automatic switch-ON when sufficient daylight is available in order to create additional power savings To enable this feature necessary settings are available on the device for adjusting required light level. Device mounting heights between 2.5 and 3.5 meter, for movement detection covering an area of 4 to 5 square meters (desk work) and 6 to 8 meters for larger movements like walking (at 25 deg Cel ambient). "Functions- Automatic control of lights/electrical load switch ON/OFF automatically when any movement is detected, with adjustable time settings for Switch ON/OFF(30 seconds to 30 minutes). Red LED indicator on detection of movement." Smart timer- The smart timer will extend the delay time by the set delay time if movement is detected shortly after switch off, assuming that the area is still in use, but very little movement is made. "Power Supply- Voltage 230 V +/-10%, 50/60Hz AC Supply, Maximum load 6 A (1440 VA) any load. Maximum wire range 0.75 to 1.5mm ² , ..Mains distribution system TN-S with Neutral grounded."	Each	7	3,500.00	24,500.00
34	Hot Dipped Galvanized Iron Cable Tray Supplying and installing following size of perforated Hot Dipped Galvanised Iron cable tray (Galvanisation thickness not less than 50 microns) with perforation not more than 17.5%, in convenient sections, joined with connectors, suspended from the ceiling with two numbers GI Suspenders i/c base of suitable size GI angle, GI bolts & nuts, fastner etc as required. 150 mm width X 50 mm depth X 1.6 mm thickness	Mtr	370	803.00	2,97,110.00
Total					15,65,720.96

Section 9: BILL OF QUANTITIES

Schedule C: Schedule of Rates and Quantities for Provision of Approach Road Light at Banaswadi Railway Station

Sl. No	Description	Unit	Qty	Rate	Amount Excl. GST
1	Fabricating, supplying and erection of 5M ms long hot dip Galvanized Octagonal hot dip Pole with BSEN 10025 grade S 355 JO steel plate for shaft, IS 2062 for base plate with door opening arrangements, including suitable boards, Bakelite sheet and MCBs as per IS specifications suitable to withstand the wind speed of 47 m/s for 5M Pole in single section and single joint welded as per IS 9595/IS10178AWS having dimensions bottom 130 mm , top 70 mm with 3 mm thick, suitable base plate and 4Nos of long J bolts along with template and the Pole shall be hot dip galvanized in single dipping with not less than 65micron as per ASTM-A123 and 153 etc., (excluding foundation) as per drawing appended. 5 m - Top 70 mm and Bottom 130 mm dia	Each	25	9,900.00	2,47,500.00
2	Supplying, and fixing of Hot dip Galvanized M.S.Bracket suitable for out door luminaries and mounted on Octagonal pole using necessary bolts, nuts etc., complete. Single Arm Bracket with 1000 mm Standard 40/50 mm dia	Each	25	1,700.00	42,500.00
3	Supplying, and fixing of Hot dip Galvanized M.S.Bracket suitable for out door luminaries and mounted on Octagonal pole using necessary bolts, nuts etc., complete. Double Arm Bracket with 1000 mm Standard 40/50 mm dia	Each	2	2,700.00	5,400.00

Section 9: BILL OF QUANTITIES

Sl. No	Description	Unit	Qty	Rate	Amount Excl. GST
4	Providing and laying in position Cement Concrete for levelling course for all works in foundation. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed, laid in layers not exceeding 150 mm thickness, well compacted using plate vibrators, including all lead & lifts, cost of all materials of quality, labour, Usage charges of machinery, curing, and all the other appurtenances required to complete the work as per technical specifications. Mix 1:3:6 Using 20 mm nominal size graded crushed coarse aggregates	CMT	1.6	6,217.00	9,947.20
5	Providing and laying in position Cement Concrete for levelling course for all works in foundation. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed, laid in layers not exceeding 150 mm thickness, well compacted using plate vibrators, including all lead & lifts, cost of all materials of quality, labour, Usage charges of machinery, curing, and all the other appurtenances required to complete the work as per technical specifications. Mix 1:2:4 Using 20 mm nominal size graded crushed coarse aggregates	CMT	10.56	6,243.00	65,941.69
6	Supplying, fitting and placing TMT FE 550 / 550D Steel Reinforcement including cost of all materials, machinery, labour, cleaning, straightening, cutting, bending, hooking, laping/welding joints, tying with binding wire / soft annealed steel wire and other ancillary operations complete as per drawing and technical specification. All other type of structures	Quintal	3.788	7,371.30	27,924.33
7	Supplying of 1.1 kV, XLPE or Heat resistant PVC insulated, PVC extruded Inner Seath Armoured LTUG Cable as per IS-1554 (Part-1) or IS-7098 Part-1, Armouring strip thickness and resistivity as per IS-3975 16 Sqmm, 4 Core, (11 GI Strips - 4 x 0.8 mm)	KM	0.65	1,41,842.00	92,197.30

Section 9: BILL OF QUANTITIES

Sl. No	Description	Unit	Qty	Rate	Amount Excl. GST
8	Earth work excavation for pipelines/cables by Manual means upto 600 mm trench width, as per drawing and technical specifications, including setting out, shoring, strutting, barricading, caution lights, removal of stumps and other deleterious matter, including dressing of excavated surfaces, disposing off or leveling the excavated earth or sorting & stacking the selected earth for reuse in a radius of 50 m. Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering and lift upto 1.5 m including cost of labour, tools, usage& other appurtenances required to complete the work. In all kinds of soils. Depth upto 1.50m	Mtr	650	484.00	3,14,600.00
9	Laying of cable in Existing Trench/GI pipe/Stone Ware/RCC Hume pipe using Wooden/Aluminum Rollers as directed by the departmental staff. LT Cable 2.5 to 25 Sqmm	KM	0.65	20,886.00	13,575.90
10	Optical Fibre Cable (OFC) and its Accessories Supply and laying of HDPE/PLB Pipe 50/42 mm	KM	0.6	85,014.00	51,008.40

Section 9: BILL OF QUANTITIES

Sl. No	Description	Unit	Qty	Rate	Amount Excl. GST
11	Providing, laying and jointing HDPE pipes of specified grade and conforming to IS 4984-2016 with latest ammendments and conveying to work site including loading and unloading at both destinations and rolling and lowering into trenches, laying true to line and jointing of pipes and specials with electrofusion welding, giving hydraulic test as per relevant ISS with all lead and lifts including encasing the pipe alround to a depth of not less than 15 cms. with soft gravel or selected earth available from the excation, testing and commissioning. The rate is exclusive of required specials and fittings wherever necessary like saddle Tee, stub ends, flanged sets, bedns, reducers etc. complete (Contractor will make his own arrangements for procuring water for testing) etc. complete. NOTE: Upto 110mm dia Coil shall be used. For : HDPE PE 80 PN 6.0 HDPE Grade PE80-PN6.0, 63mm dia	Mtr	200	189.00	37,800.00

Section 9: BILL OF QUANTITIES

Sl. No	Description	Unit	Qty	Rate	Amount Excl. GST
12	Supply of LED Streetlight luminaire with pressure die cast aluminium housing body for optimal thermal dissipation. Lamp compartment comprising of anti glare clear diffuser with Injection moulded polycarbonate material, delivering superior light output Rated life Burning Hrs 50000 hr @ Lumen Maintenance of 70%, maximum light intensity should be between 60 degrees to 70 degrees. CCT > 5500K, IP66 optical and electrical compartment & impact resistance of complete luminaire > IK08. Power Factor >0.9 with mains, Surge Protection- Min 5KV along with Over voltage/Overload, short circuit/ miss-wiring protection. Compatible for pole mounting with outer dia of 40mm to 50mm. Universal Voltage driver to operate wide voltage range from 100V to 270V 50/60Hz application. Compliance to IS 10322/IEC 60598, LM 79 & LM 80 Adherence with RoHS. UL approved MCPCB. Top access street light with single screw to ensure ease of maintenance at the sight site location with minimized minimal tools. LED Light fixture with 40 W System Power consumption. LED Efficiency>130lm/w, nominal CRI >75. Luminaire manufacturer should have in-house facility accredited by NABL/CPRI & any Government certified agency & Design & Development facility certified by ISO 9001:2008. Housing with supplier word mark /name shall be Engraved / Embossing on the die cast housing/ Body part. Warranty of 2 Years against any manufacturing defect working under standard electrical conditions as mentioned. LED Streetlight 40W	Each	25	4,024.00	1,00,600.00
13	Fixing halogen/metal halide /SVL/IL/LED floodlight fitting over existing pole / wall ceiling including c/a, bolts, nuts and wiring using suitable capacity wires.	Each	25	162.00	4,050.00
14	Grounding Material Pipe Grounding GI Grounding pipe, B - Class, 42 mm dia, 2.5 Mtr long, 3.2 mm thick with bolt, nut, GI Strips and washer complete Minimum Weight of GI Pipe: 7.3 Kg	No	5	743.00	3,715.00

Section 9: BILL OF QUANTITIES

Sl. No	Description	Unit	Qty	Rate	Amount Excl. GST
15	Grounding Material Pipe Grounding Good Quality well burnt Charcoal for grounding purposes packed in non returnable gunny bag of 30 Kg each	No	5	676.00	3,380.00
16	Grounding Material Pipe Grounding Good Quality Salt for grounding purposes packed in 50 Kg gunny bag	Bag	5	310.00	1,550.00
17	Constructing brick masonry chamber of internal dimension 450x300mm and depth of 600mm (inner dimensions) with modular bricks of CD 75 in cement mortar 1:6, bed concrete 150mm thick with 1:3:6, plastering 12 mm thick with cement mortar 1:4, CC 1:2:4 coping 75mm thk for fixing CI cover & frame etc. excluding the cost of CI frame and cover.	Each	5	3,549.00	17,745.00
18	Digging of Pit for providing GI Pipe type Earthing Ordinary Soil	Per Pit	5	759.00	3,795.00
19	Supply of Aluminium End Terminal (Lug) 16 Sqmm	No	208	2.00	416.00
20	Providing PVC ringtite pipes conforming to IS 4985:2000 with latest amendments and conveying to worksite, rolling and lowering into trenches, laying true to line and level and perfect linking at joints, testing and commissioning, including loading unloading at both destinations and cuts of pipes wherever necessary including jointing of PVC pipes and specials (excluding cost of specials) with jointing of approved type, with all labour with all lead & lift including encasing the pipe alround to a depth of not less than 15 cms. with soft gravel or selected earth available from the excavation etc. complete and giving necessary hydraulic test to the required pressure as per ISS (Contractor will make his own arrangements for procuring water for testing) etc., complete for PVC pipes 75mm dia., 6 kg/sqcm & class 3	Mtr	5	220.00	1,100.00

Section 9: BILL OF QUANTITIES

Sl. No	Description	Unit	Qty	Rate	Amount Excl. GST
21	Supplying and drawing Flexible Multicore Cable manufactured with electrolytic grade flexible copper with low conductor confirming to IS 8130-1984 and (Virgin) PVC insulation sheathed suitable for working voltage upto 1100V as per IS- 694:2010 3C X 2.5 mm²	Mtr	187.5	113.00	21,187.50
22	Guy Wire & GI Wire as per IS-2141 8 SWG GI Wire (4.064 mm Dia), Std Wt: 131 Kg/KM	MT	0.2	75,040.00	15,008.00
Total					10,80,941.31

Section 9: BILL OF QUANTITIES

Schedule D: Schedule of Rates and Quantities for Provision of Pump at Banaswadi Railway Station

Sl. No	Description	Unit	Qty	Rate	Amount Excl. GST
1	Providing Submersible Pump Set of 150mm dia suitable for bore well and confirming to IS 8034-2000;3 Phase, SS Bowl & Impeller with Low volt Motor as per specifications, to work site as per necessary ammendments and instructions of engineer incharge of Work 7.50 HP 90LPM @ 165m= 16 STG Outlet Dia- 2.00"	Each	1	40,810.00	40,810.00
2	Supplying and drawing 3 core flat PVC sheathed submersible pump cable manufactured with electrolytic grade copper with flexible copper with low resistance conductor confirming to IS:8130-1984 and virgin grade PVC insulation and powder coating extruded PVC sheathed suitable for working voltage upto 1100 V as per IS-694:2010. 3C x 4 mm²	Mtr	400	168.00	67,200.00
3	Supply, installing, testing and commissioning COMMON control panel consisting of the following INCOMING: 1 No set of Phase indicating lamps with SFU of suitable rating 1 No Analog Ammeter 1 No Analog Voltmeter 1No Phase selector switch, Isolating switch OUTGOING for Main Electrical Pump: 1 No. MCB 1 No. DOL or S/D Starter suitable for respective HP 1 No. Electrical Protection Like single Phase preventer, under voltage over Voltage, under current over current & dry run protection suitable for the pump described above 1 no Indoor type Note: 1) DOL- Direct Online Starter 2) S-D- Star Delta Starter etc. complete. 6 to 15 HP pumps	Each	1	15,900.00	15,900.00

Section 9: BILL OF QUANTITIES

Sl. No	Description	Unit	Qty	Rate	Amount Excl. GST
4	1.1kV, XLPE or Heat resistant PVC insulated, PVC extruded Inner Seath Armoured LTUG Cable as per IS-1554 (Part-1) or IS-7098 Part-1, Armouring strip thickness and resistivity as per IS-3975 16 Sqmm, 4 Core, (11 GI Strips - 4 x 0.8 mm)	KM	0.5	1,41,842.00	70,921.00
5	Earth work excavation for pipelines/cables by Manual means upto 600 mm trench width, as per drawing and technical specifications, including setting out, shoring, strutting, barricading, caution lights, removal of stumps and other deleterious matter, including dressing of excavated surfaces, disposing off or leveling the excavated earth or sorting & stacking the selected earth for reuse in a radius of 50 m. Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering and lift upto 1.5 m including cost of labour, tools, usage & other appurtenances required to complete the work. In all kinds of soils. Depth upto 1.50m	Mtr	250	484.00	1,21,000.00
6	Laying of cable in Existing Trench/GI pipe/Stone Ware/RCC Hume pipe using Wooden/Aluminum Rollers as directed by the departmental staff. LT Cable 2.5 to 25 Sqmm	KM	0.5	20,886.00	10,443.00
TOTAL					2,85,464.00

Section 9: BILL OF QUANTITIES

Schedule E: Schedule of Rates and Quantities for Provision of Diesel Generator at Banaswadi Railway Station

Sl. No	Description	Unit	Qty	Rate	Amount Excl. GST
1	DIESEL GENERATOR SET Supplying, installing, testing and commissioning of Diesel Generator set with following specifications. Power rating as per standard reference condition as per-BS 5514/ISO 3046/ ISO 8528 & IS 1002/ISO 3046 Generator set specifications. 125 KVA / 100 kw Please refer Item No. 10.1.7, Pg No: 41 of 105 of COMMON SCHEDULE OF RATES FOR KPTCL, ESCOMs & PWD Electrical 2023 - 2024 Volume – 6	Set	1	9,08,620.00	9,08,620.00
2	Supply, Erection, testing and commissioning of AMF panel suitable for 62.5 kVA DG set. The panel is of cubical type base/floor mounting control panel with hinged doors, undrilled bottom gland plate, aluminium Bus Bar with the accommodation forA 4 pole contactor for alternator with thermal O/L relay,..... A 4 pole contactor for mains, HRC fuse for short circuit protection, Microprocessor based AMF module with supply failure timer, Restoration timer, 3 impulse automatic engine start/stop logic, Mains/generator voltage,capacity bypass switch and frequency sensing, PCC 1301controller with water temperature/Lube oil pressure/engine speed, Voltage/ampere/Frequency/ kVA, Running-hour count, No of starts, Fault indication, over / under speed, Fails to start, Low oil pressure, High engine temperature, Under/over voltage, over current, Earth fault relay, with indications for Mains on, Load on Mains, Battery charger on Push buttons AMF module by pass Mode, Battery charger unit with inbuilt Auto/Manual and Flat/Boost facility. The complete set shall have sufficient safety and adhere to NEC, NBC 2016, IEC, CPWD specifications, PCB norms and KSGEI Acts and Rules. 82.5 KVA to 125 KVA	Each	1	1,09,531.00	1,09,531.00
3	Supply of 1.1 kV, XLPE or Heat resistant PVC insulated, PVC extruded Inner Seath Armoured LTUG Cable as per IS-1554 (Part- 1) or IS-7098 Part-1, Armouring strip thickness and resistivity as per IS-3975. 240 Sqmm, 3.5 Core, (30 GI Strips - 4 x 0.8 mm)	KM	0.3	8,62,666.00	2,58,799.80

Section 9: BILL OF QUANTITIES

Sl. No	Description	Unit	Qty	Rate	Amount Excl. GST
4	Laying of cable in Existing Trench/GI pipe/Stone Ware/RCC Hume pipe using Wooden/Aluminum Rollers as directed by the departmental staff LT Cable 120 to 240 Sqmm	KM	0.3	32,278.00	9,683.40
5	Earth work excavation for pipelines/cables by Manual means upto 600 mm trench width, as per drawing and technical specifications, including setting out, shoring, strutting, barricading, caution lights, removal of stumps and other deleterious matter, including dressing of excavated surfaces, disposing off or leveling the excavated earth or sorting & stacking the selected earth for reuse in a radius of 50 m. Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering and lift upto 1.5 m including cost of labour, tools, usage& other appurtenances required to complete the work. In all kinds of soils. Depth upto 1.50m	CUM	200	484.00	96,800.00
7	Providing and constructing load bearing wall with Solid Concrete blocks of size 400x200x200mm having block density more than 1800kg/m ³ and minimum compressive strength of 4.00 N/mm ² conforming to IS 2185 (Part - I) - 2005 and constructed with CM 1:4 as per IS 2572:2005 including cost of all materials, labour, scaffolding and curing, usage charges of machinery etc complete as per specifications.	Sqmt	15	1,310.00	19,650.00
8	Providing 15 mm cement plaster on the rough side of single or half brick wall of mix 1:4 (1 cement: 4 fine sand) including rounding off corners wherever required smooth rendering, providing and removing scaffolding, including cost of materials, labour, curing complete as per specifications and as per directions of Engineer-in-charge.	m ²	50	295.00	14,750.00
9	Providing and laying in position Cement Concrete for levelling course for all works in foundation. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed, laid in layers not exceeding 150 mm thickness, well compacted using plate vibrators, including all lead & lifts, cost of all materials of quality, labour, Usage charges of machinery, curing, and all the other appurtenances required to complete the work as per technical	CMT	8	5,664.00	45,312.00

Section 9: BILL OF QUANTITIES

Sl. No	Description	Unit	Qty	Rate	Amount Excl. GST
	specifications. Mix 1:4:8 Using 40 mm nominal size graded crushed coarse aggregates				
10	Providing and laying in position Cement Concrete for levelling course for all works in foundation. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed, laid in layers not exceeding 150 mm thickness, well compacted using plate vibrators, including all lead & lifts, cost of all materials of quality, labour, Usage charges of machinery, curing, and all the other appurtenances required to complete the work as per technical specifications. Mix 1:2:4 Using 20 mm nominal size graded crushed coarse aggregates	CMT	10	6,243.00	62,430.00
11	Supplying, fitting and placing TMT FE 550 / 550D Steel Reinforcement including cost of all materials, machinery, labour, cleaning, straightening, cutting, bending, hooking, laping/welding joints, tying with binding wire / soft annealed steel wire and other ancillary operations complete as per drawing and technical specification. All other type of structures	Quintal	8	7,371.30	58,970.40
12	Grounding Material Pipe Grounding GI Grounding pipe, B - Class, 42 mm dia, 2.5 Mtr long, 3.2 mm thick with bolt, nut, GI Strips and washer complete Minimum Weight of GI Pipe: 7.3 Kg	No	5	743.00	3,715.00
13	Grounding Material Pipe Grounding Good Quality well burnt Charcoal for grounding purposes packed in non returnable gunny bag of 30 Kg each	No	5	676.00	3,380.00
14	Grounding Material Pipe Grounding Good Quality Salt for grounding purposes packed in 50 Kg gunny bag	Bag	5	310.00	1,550.00
15	Constructing brick masonry chamber of internal dimension 450x300mm and depth of 600mm (inner dimensions) with modular bricks of CD 75 in cement mortar 1:6, bed concrete 150mm thick with 1:3:6, plastering 12 mm thick with cement mortar 1:4, CC 1:2:4 coping 75mm thk for fixing CI cover & frame etc. excluding the cost of CI frame and cover..	Each	5	3,549.00	17,745.00

Section 9: BILL OF QUANTITIES

Sl. No	Description	Unit	Qty	Rate	Amount Excl. GST
16	Digging of Pit for providing GI Pipe type Earthing Ordinary Soil	Per Pit	5	759.00	3,795.00
17	Providing chain link fencing 50 mm size of 8 guage properly stretched between rectangular Poles and fixed with suitable bolts & nuts, the free ends shall be welded to the Pole and block pipe at top and bottom as required including cost of all materials, labour, lead and lifts, cutting, bending wherever necessary, wastage and lapping etc., complete as per the direction of the engineer in-charge for work including two coats of approved quality paint over one coat of primer paint.	Sqmt	60	987.00	59,220.00
TOTAL					16,73,951.60

Section 9: BILL OF QUANTITIES

Schedule F: Schedule of Rates and Quantities for Power Supply Arrangement at Banaswadi Station Building

Sl. No	Description	Unit	Quantity	Rate (Incl ASL & Excl. GST)	Amount Excl. GST
1	Line Supports (Pole) Supply of Pre-Stressed Tubular Spun Pole - 11 Mtr Long, 500 Kg WL (Dwg No. BESCO/GM/QS&S/45 Dtd 24.11.2018) as per IS-13158: 1991	No	2	19,472.20	38,944.40
2	Supply of Three H Frame without Transformer Seating and Seating angle support cross arm for 11 Mtr Spun Pole for 63/100/250/500 kVA (UG Cable) - MS (Dwg No. BESCO/GM/QS&S/69 Dtd 24.11.2018)	Set	2	23,180.30	46,360.60
3	Supply of HT ST Support 50x8 mm Flat - MS (Dwg No. BESCO/GM/QS&S/04 Dtd 24.11.2018)	No	18	100.10	1,801.80
4	Lightning Arrester as per IEC-60099-4 Supply of 9 kV, 5 kA Lightning Arrester Metal Oxide Ceramic type with GROUND DISCONNECTOR (Dwg No. BESCO/GM/QS&S/26 Dtd 24.10.2007)	Set of 3 Nos	2	1,012.00	2,024.00
5	GOS as per IS-9921, IS-1977 Supply of 11 kV, 200 Amps Single Break GOS (Dwg No. BESCO/GM/QS&S/23 Dtd 24.11.2018)	Set	4	10,395.00	41,580.00
6	GOS as per IS-9921, IS-1977 Supply of H - Frame Set for fixing 11 kV, 200 Amps Single Break GOS - (For DP structure for providing New GOS for sectionalisation) - MS	Set	4	4,765.20	19,060.80
7	Insulator as per IS-1445 for Ceramic, IS- 7935 for GI Pin, IEC-61109 for Polymeric Supply of 11 kV, 5 kN Composite/Polymeric Pin Insulator (24 mm dia FRP Rod)	No	18	225.50	4,059.00
8	Insulator as per IS-1445 for Ceramic, IS- 7935 for GI Pin, IEC-61109 for Polymeric Supply of DISC Insulator 45 kN Porcelain	No	6	561.00	3,366.00
9	ACSR Conductor as per IS-398 (Part - 2/1996) Supply of Rabbit ACSR (6/3.35 mm Al + 1/3.35 mm St), Std Wt: 214 Kg/KM	Km	0.2	50,857.40	10,171.48

Section 9: BILL OF QUANTITIES

Sl. No	Description	Unit	Quantity	Rate (Incl ASL & Excl. GST)	Amount Excl. GST
10	Supply of 11 kV, 3 Core, XPLE HTUG Cable with pressure extruded inner sheeth, ROUND WIRE ARMOURED as per IS-7098 (Part-2) Armouring wires dia and Resistivity as per IS-3975 95 Sqmm, (54 GI Wires - 2.5 mm Dia)	Km	1.5	9,78,632.60	14,67,948.90
11	Supply of 11 kV, Jointing & Cable Termination Kit as per IS-13573 Heat Shrinkable Straight Through Jointing Kit for XLPE Cable with Copper Lug & Al Ferrule 3x95 Sqmm	Set	6	8,042.10	48,252.60
12	Supply of 11 kV, Jointing & Cable Termination Kit as per IS-13573 Supply of Heat Shrinkable Outdoor Type Cable Termination Kit for XLPE Cable 3x95 Sqmm	Set	4	4,473.70	17,894.80
13	Supply of 11 kV, Jointing & Cable Termination Kit as per IS-13573 Supply of Heat Shrinkable Indoor Type Cable Termination Kit for XLPE Cable 3x95 Sqmm	Set	6	4,118.40	24,710.40
14	Distribution Transformer - 3 Phase, 11kV/433V - Stacked CRGO Core with Oil as per IS-1180 (Part-1): 2014 B. CABLE ENTRY TYPE 250 kVA, Aluminium Wdg, Star 2 (5 Star)	No	1	5,96,965.60	5,96,965.60
15	Compact RMU (VCB/SF6 Type) with Copper Busbar, 350 MVA, 630 Amps as per IEC62271/IS-3427 3 Way RMU, 2 OD + 1 VL (One Incomer + One Breaker + One Outgoing)	Unit	1	6,04,505.00	6,04,505.00
16	Supply of LT Distribution Box as per IS-13947 Part-1&2 LT Distribution Box for 250 kVA DTC with MCCB's (Sheet Metal) (Dwg No. BESCO/GM/QS&S/08 Dtd 24.11.2018)	No	1	25,095.40	25,095.40

Section 9: BILL OF QUANTITIES

Sl. No	Description	Unit	Quantity	Rate (Incl ASL & Excl. GST)	Amount Excl. GST
17	LT Metering Cubicle at Low Tension for 50 KW to 150 KW having specification & design as per the prototype approval (Excluding Meter Cost & Modem Cost)	unit	1	87,870.20	87,870.20
18	Measuring Equipment Supply of LT 3 Phase, 4 Wire, CT Operated DLMS Complaint ETV Meter-5A, class 0.5s Accuracy (Used for 25 HP/18KW & Above Installations, DTC Metering).	No	2	3,735.60	7,471.20
19	CT PT Operated ETV Meter 0.2s Accuracy Class with ABT feature and DLMS protocol with ToD with RS 232 Port UNIDIRECTIONAL (Used for HT Installation, LT Metering Cubicle {50-150 KW})	No	1	21,576.50	21,576.50
20	LT Current Transformer, 3.75 VA, Ring type as per IS-2705 Part-1&2 CT Ratio - 150/5A, 0.5 Accuracy Class	No	8	543.40	4,347.20
21	Supply of 1.1 kV Class Armoured Aluminium Cable with glands/lugs/ferrules : 4C x 240 Sq mm	Mtr	600	2,162.60	12,97,560.00
22	Straight Through Jointing Kit Suitable for 1.1 kV Class LTUG Cable as per IS-13573 240 to 300 Sqmm	Set	2	1,941.50	3,883.00
23	Epoxy Terminating Kit (Pothead) suitable for 1.1 kV, LTUG Cable 3.5/4C x 225/240/300 Sqmm	Set	12	646.80	7,761.60
24	Providing, Laying and Fixing of GI pipes conforming to IS 1239:1990 with latest amendments complete with GI fittings (excluding the cost of fittings) with cuts and threads wherever necessary, including testing for water tightness, with all lead and commissioning. Contractor will make his own arrangements for procuring water for testing) For:Heavy Duty GI Pipe etc. complete. Heavy Duty GI pipe of 100mm dia	Mtr	12	1,553.20	18,638.40
25	Grounding Material Pipe Grounding Supply of GI Grounding pipe, B - Class, 42 mm dia, 2.5 Mtr long, 3.2 mm thick with bolt, nut, GI Strips and washer complete Minimum Weight of GI Pipe: 7.3 Kg	No	9	817.30	7,355.70

Section 9: BILL OF QUANTITIES

Sl. No	Description	Unit	Quantity	Rate (Incl ASL & Excl. GST)	Amount Excl. GST
26	Grounding Material Pipe Grounding Supply of Good Quality well burnt Charcoal for grounding purposes packed in non-returnable gunny bag of 30 Kg each	No	9	743.60	6,692.40
27	Grounding Material Pipe Grounding Supply of Good Quality Salt for grounding purposes packed in 50 Kg gunny bag	Bag	9	341.00	3,069.00
28	GI/Copper strips for grounding connections, using necessary fixing materials as required. 25 x 3 mm GI strip	Mtr	25	90.20	2,255.00
29	GI/Copper strips for grounding connections, using necessary fixing materials as required. 25 x 6 mm GI strip	Mtr	20	140.80	2,816.00
30	GI/Copper strips for grounding connections, using necessary fixing materials as required. 50 x 6 mm GI strip	Mtr	15	239.80	3,597.00
31	Full Threaded Bolt & Nut as per IS-1367 GI 16x50 mm	MT	0.02	1,45,828.10	2,916.56
32	Route & Joint indicating slab with MS Anchor rod	No	5	146.30	731.50
33	Supply of Mild Steel Tubes 14 guage	Kg	300	66.00	19,800.00
34	Heavy Duty Copper Terminal Long Barrel 95 Sqmm Copper Terminal, Apprx Wt: 58 Gm	No	25	141.90	3,547.50
35	Heavy Duty Copper Terminal Long Barrel 240 Sqmm Copper Terminal, Apprx Wt: 218 Gm	No	18	390.50	7,029.00

Section 9: BILL OF QUANTITIES

Sl. No	Description	Unit	Quantity	Rate (Incl ASL & Excl. GST)	Amount Excl. GST
36	Constructing brick masonry chamber of internal dimension 450x300mm and depth of 600mm (inner dimensions) with modular bricks of CD 75 in cement mortar 1:6, bed concrete 150mm thick with 1:3:6, plastering 12 mm thick with cement mortar 1:4, CC 1:2:4 coping 75mm thk for fixing CI cover & frame etc. excluding the cost of CI frame and cover.	Each	9	3,903.90	35,135.10
37	Alkathine tube Supply of Transparent Alkathine tube 19 mm dia, 2 mm thick in coils of 30 Mtr	Coil	5	568.70	2,843.50
38	Providing and installing at site of work P.V.C. pipes including cost of pipes nd specials and labour, including lowering into trenches, laying true to line, level and perfect linking at joints leak proof including jointing of approved type with all labour charges and all lift charges, handling charges including encasing the pipe around to a depth not less than 15 cms with gravel or selected earth available from the excavation etc. complete. 75mm (weight of pipe - 0.651 kg)	Mtr	15	177.10	2,656.50
39	Supply of Caution/Danger Board.	No	6	165.00	990.00
40	Monoplast	100 Gm	5	70.40	352.00
41	Erection of 11 Mtr long Concrete Spun Pole in a pit of 2.5 Mtr depth (Mechnised Labour)	No	2	2,798.40	5,596.80
42	Spun Pole Painting (supplying & applying two coats of enamel paints to 11 Mtr Spun Pole) and painting	Pole	2	5,012.70	10,025.40
43	Digging of Pit 2.5 Mtr depth for erection of 11 Mtr long Tubular Spun Pole as per approved Drawing. Ordinary Soil	Per Pit	2	2,095.50	4,191.00

Section 9: BILL OF QUANTITIES

Sl. No	Description	Unit	Quantity	Rate (Incl ASL & Excl. GST)	Amount Excl. GST
44	Providing and laying in position Cement Concrete for levelling course for all works in foundation. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed, laid in layers not exceeding 150 mm thickness, well compacted using plate vibrators, including all lead & lifts, cost of all materials of quality, labour, Usage charges of machinery, curing, and all the other appurtenances required to complete the work as per technical specifications. Mix 1:3:6 Using 20 mm nominal size graded crushed coarse aggregates	Cum	4.3	6,838.70	29,406.41
45	Providing and laying in position Cement Concrete for levelling course for all works in foundation. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed, laid in layers not exceeding 150 mm thickness, well compacted using plate vibrators, including all lead & lifts, cost of all materials of quality, labour, Usage charges of machinery, curing, and all the other appurtenances required to complete the work as per technical specifications. Mix 1:2:4 Using 20 mm nominal size graded crushed coarse aggregates	Cum	8	6,867.30	54,938.40
46	Providing Solid Concrete Bricks of size 225x100x75mm having strength 5Mpa & above for superstructure above plinth level in all shapes and sizes with Cement mortar 1:4 (1 cement : 4 coarse sand) including cost of all materials, labour, scaffolding and usage charges of machineries & other incidental charges complete as per the direction of Engineer-in-charge of the work.	CUM	8	10,112.30	80,898.40
47	Providing 12 mm cement plaster with cement mortar 1:6 (1 cement: 6 fine sand) including rounding off corners wherever required smooth rendering, providing and removing scaffolding, including cost of materials, labour, curing complete	Sqm	50	265.10	13,255.00
48	Digging of Pit for providing GI Pipe type Earthing Ordinary Soil	Per Pit	9	834.90	7,514.10
49	Fixing of HT/LT Single Top Support	Each	18	123.20	2,217.60

Section 9: BILL OF QUANTITIES

Sl. No	Description	Unit	Quantity	Rate (Incl ASL & Excl. GST)	Amount Excl. GST
50	Fixing of DOLO, GOS, LA, Fuse Board, Service Mains, Spacer, Insulator Etc., Fixing DOLO Cutout/Horn Gap Fuse including fixing of cross arm and wiring	Each	2	260.70	521.40
51	Fixing of DOLO, GOS, LA, Fuse Board, Service Mains, Spacer, Insulator Etc., Fixing of GOS including wiring (11 kV Single Break 200 Amps)	Set	4	1,214.40	4,857.60
52	Erection of H-Frame.	No	4	355.30	1,421.20
53	Fixing of 3 Nos Lightning Arrestor including wiring	Set of 3 Nos	2	130.90	261.80
54	Erection of Transformer & Structures Erection of 100 kVA Transformer	Each	1	1,749.00	1,749.00
55	Laying of UG Cables by Trenchless Technology (HDD) by adopting Horizontal Boring & Drawing of cable including preparation at site Normal soil 5/6" Bore	Rmtr	1200	1,043.90	12,52,680.00
56	Earth work excavation for pipelines/cables by Manual means upto 600 mm trench width, as per drawing and technical specifications, including setting out, shoring, strutting, barricading, caution lights, removal of stumps and other deleterious matter, including dressing of excavated surfaces, disposing off or leveling the excavated earth or sorting & stacking the selected earth for reuse in a radius of 50 m. Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering and lift upto 1.5 m including cost of labour, tools, usage& other appurtenances required to complete the work. In all kinds of soils. Depth upto 1.50m	Mtr	450	532.40	2,39,580.00
57	Laying of cable in Existing Trench/GI pipe/Stone Ware/RCC Hume pipe using Wooden/Aluminum Rollers as directed by the departmental staff HT Cable 3x95 to 150 Sqmm	Km	0.4	67,454.20	26,981.68

Section 9: BILL OF QUANTITIES

Sl. No	Description	Unit	Quantity	Rate (Incl ASL & Excl. GST)	Amount Excl. GST
58	Laying of cable in Existing Trench/GI pipe/Stone Ware/RCC Hume pipe using Wooden/Aluminum Rollers as directed by the departmental staff LT Cable 120 to 240 Sqmm	Km	0.8	35,505.80	28,404.64
59	Making and Fixing pot head for HT Cable only Heat shrinkable type 3x95 to 3x150 Sqmm	Set	10	2,923.80	29,238.00
60	Cable Joint and wiring (for HT Cable only) Heat shrinkable Straight Through Joint 3x95 to 3x150 Sqmm	Set	6	3,132.80	18,796.80
61	Making and Fixing pot head for LT UG Cable Heat shrinkable Type Terminations 35 to 95 Sqmm	Set	12	209.00	2,508.00
62	Fixing foundation frame of channels and angle iron welding fixing in concrete aligning the RMU on foundation bed, assembly of units, connecting Bus Bars from panel to panel initial filling of oil etc., complete. 1 Panel	No	3	5,326.20	15,978.60
63	Lettering the RMU with enamel paint and also writing single line diagram of each panel, caution Board, Danger Board etc., including cost of Paint, Brush etc.,	Per Panel	3	1,057.10	3,171.30
64	Stringing of conductor Squirrel, Weasel, binding of conductor on each insulator and dead ending on strain or disc/strain insulator by means of clamps. do - for Rabbit ACSR per KM/Wire	Km	0.2	4,797.10	959.42
65	Providing and fixing G.I. chain link fabric fencing of required width in mesh size 50x50 mm including strengthening with 2 mm dia wire or nuts,bolts and washers as required complete as per the direction of Engineerin-charge. (Made of G.I. wire of dia 4 mm)	Sqm	55	883.30	48,581.50
66	Fixing of Route Joint Indicating Slab	No	5	127.60	638.00
TOTAL					63,88,007.69

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