

Name of work: Special repairs to Electrical Installation in various building of Science campus in Bharathi women's College, Chennai 108

EMD: Rs. 30000/-			Date of Tender 29.04.22		
Sl. No.	Approximate Quantity	Description of Work	Rate in Figure & in Words	Per	Amount
1	98 pts (Ninety eight points)	Rewiring with 2x1.5 sqmm (22/0.3) PVC insulated SC unsheathed Cu. Conductor of 1100V grade in suitable PVC rigid pipe on wall and ceiling with PVC accessories and with TW switch box and 5A FT switch with painting with suitable colour for Open PVC light / Fan Point (For electronic regulator) (5 Points Per Coil)		1 pt (One point)	
2	279 pts (Two hundred and seventy nine points)	Rewiring with 2x1.5 sqmm (22/0.3) PVC insulated SC unsheathed Cu. Conductor of 1100V grade in suitable PVC rigid pipe on wall and ceiling with PVC accessories and with TW switch box and 5A FT switch with painting with suitable colour for Open PVC light point/fan polint (for Electronic regulator.(6 Points Per Coil)		1 pt (One point)	
3	231 Nos (Two hundred and thirty one numbers)	Renewal by supply and fixing of 4' LED Single box type fitting complete with TW round blocks on wall or ceiling with 18W LED tube with PVC unsheathed Copper leads from terminals to the fitting. (Higher End)		1 No (Each)	
4	4 Nos (Four numbers)	Renewal by supply and fixing of WT Bulk head fitting with guard (Higher End) suitable for LED bulb with 9W LED bulb.		1 No (Each)	

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5	35 Nos (Thirty five numbers)	Renewal by supply and fixing of 9W LED bulb in battern type holder on wall/ ceiling (Philips/Bajaj/crompton/Klite) fo Night lamp.		1 No (Each)	
6	94 Nos (Ninety four numbers)	Renewal by supply and fixing of 1200 mm (48") AC ceiling fan complete with 500mm down rod on the existing clamp with stepped electronic 300W regulator. (Higher End)		1 No (Each)	
7	6 Nos (six numbers)	Supply and fixing of 450 mm (18") sweep (Heavy duty) AC exhaust fan complete without provision of hole in the wall.		1 No (Each)	
8	66 Nos (Sixty six numbers)	Supply and fixing of 1 No. 6A modular 3pin wall socket with 6A modular FT control switch (Higher End) concealed in suitable MS modular Box covered with Front cover plate in flush with wall with earth connection.		1 No (Each)	
9	89 Nos (Eighty nine numbers)	Renewal by supply and fixing of 3 Nos. 6A modular 3pin wall socket with 6A modularFT control switches (Higher End) on wall with suitable PVC modular Box covered with modular front cover plate on earth connection.		1 No (Each)	

10	24 Nos (Twenty four numbers)	Renewal by supply and fixing of 1 No. 16A modular 3pin wall socket with 16A modularFT control switch (Higher End) in suitable PVC modular Box covered with modular Front cover plate on wall with earth connection.		1 No (Each)	
11	36 Nos (Thirty six numbers)	Renewal by supply and fixing of 16A 2P MCB 10kA along with sheet steel enclosure with suitable angle iron frame work on wall with earth connection.		1 No (Each)	
12	5 Nos (Five numbers)	Renewal by supply and fixing of 32A 4P MCB 10kA along with sheet steel enclosure with suitable angle iron frame work on wall with earth connection.		1 No (Each)	
13	11 Nos (Eleven numbers)	Renewal by supply and fixing of 12 way Single pole and neutral MCB sheet steel enclosure Distribution board with IP 42 protection metal Double door type with 1No 32 Amps DP MCB as incoming and 10 Nos 6A to 32A SPMCB outgoing on angle iron frame with earth connection only. The MCB DB and MCB's should be with ISI mark (Higher End)		1 No (Each)	
14	5 Nos (Five numbers)	Renewal by supply and fixing of 4 way TPN 7 Segment MCB DB with metal / acrylic door cover with IP 42 protection with 1 No. 63A FP MCB and 63A 30mA FP ELCB as incoming, 3nos. 63 A DP MCB Isolators for sub incomers and 12Nos. 6A to 32A SP MCB as outgoing on angle iron frame with MS cable entry boxes with earth connection. The MCBDB and MCB's should be with the ISI mark (Higher End)		1 No (Each)	

15	3 Nos (Three numbers)	Renewal by supply and fixing of Three Phase 8 way Vertical type MCB DB with IP 42 protection Double door type DB (legrand) with 1No 63A 4P MCB 10kA as incoming and 6 Nos 32A TP MCB and 6 Nos 6-32A SP MCB as outgoing with cable entry boxes on suitable angle iron frame with earth connection only. (The MCB DB and MCB's should be Like legrand make)		1 No (Each)	
16	2123 mts (Two thousand one hundred and twenty three metres)	Renewal by supply and run of 2 of 2.5sqmm (22/0.3) PVC insulated SC unsheathed Cu.Conductor of 1100V Grade in suitable PVC rigid pipe on wall and ceiling with continuous earth wire connection 14SWG TC wire with painting of suitable colour.		1 Mt (One Metre)	
17	248 mts (Two hundred and forty eight metres)	Renewal by supply and run of 2 of 4 sqmm (56/0.3) PVC insulated SC unsheathed Cu.Conductor of 1100V Grade in suitable PVC rigid pipe on wall and ceiling with continuous earth wire connection of 14 SWG TC wire with painting of suitable colour .		1 Mt (One Metre)	
18	120 mts (One hundred and twenty metres)	Renewal by supply and run of 4 of 10 sqmm (140/0.3) PVC insulated SC unsheathed Cu Conductor of 1100 V grade in suitable PVC rigid pipe on wall and ceiling with continuous earth wire connection of 14 SWG TC wire with painting of suitable colour		1 Mt (One Metre)	
19	106 mts (One hundred and six metres)	Renewal by supply and laying of 3 1/2 x240 sq.mm PVC armoured LTUG cable in HDPE pipe 120mm / 103.50mm in a trench to be excavated at a depth of 0.75 metre and refilling the earth to make good.		1 Mt (One Metre)	

20	90 mts (Ninety metres)	Renewal by supply and clamping of 31/2 x 240 sq.mm PVC LTUG armoured LTUG cable on post or on wall with MS Clamps.		1 Mt (One Metre)	
21	4 Nos (Four numbers)	Renewal by supply and fixing of brass cable gland for 31/2 x 240 sq.mm PVC armoured LTUG cable with earth connection.		1 No (Each)	
22	4 Nos (Four numbers)	Renewal by supply and providing cable end termination of 3 1/2 x 240 sq.mm PVC LTUG Aluminum armoured cable with necessary aluminium cable sockets by crimping etc. with electrical connection complete.		1 No (Each)	
23	12 mts (Twelve metres)	Renewal by supply and clamping of 31/2 x 120 sq.mm PVC LTUG armoured LTUG cable on post or on wall with MS Clamps.		1 Mt (One Metre)	
24	7 Nos (Seven numbers)	Renewal by supply and fixing of brass cable gland for 31/2 x 120 sq.mm PVC armoured LTUG cable with earth connection.		1 No (Each)	

25	7 Nos (Seven numbers)	Renewal by supply and providing cable end termination of 3 1/2 x 120 sq.mm PVC LTUG Aluminum armoured cable with necessary aluminium cable sockets by crimping etc. with electrical connection complete.		1 No (Each)	
26	24 mts (Twenty four metres)	Renewal by supply and clamping of 31/2 x 70 sq.mm PVC LTUG armoured LTUG cable on post or on wall with MS Clamps.		1 Mt (One Metre)	
27	4 Nos (Four numbers)	Renewal by supply and fixing of brass cable gland for 31/2 x 70 sq.mm PVC armoured LTUG cable with earth connection.		1 No (Each)	
28	4 Nos (Four numbers)	Renewal by supply and providing cable end termination of 3 1/2 x 70 sq.mm PVC LTUG Aluminum armoured cable with necessary aluminium cable sockets by crimping etc. with electrical connection complete.		1 No (Each)	
29	155 mts (One hundred and fifty five metres)	Renewal by supply and clamping of 31/2 x 35 sq.mm PVC LTUG armoured LTUG cable on post or on wall with MS Clamps.		1 Mt (One Metre)	

30	4 Nos (Four numbers)	Renewal by supply and fixing of brass cable gland for 31/2 x 35 sq.mm PVC armoured LTUG cable with earth connection.		1 No (Each)	
31	4 Nos (Four numbers)	Renewal by supply and providing cable end termination of 3 1/2 x 35 sq.mm PVC LTUG Aluminum armoured cable with necessary aluminium cable sockets by crimping etc. with electrical connection complete.		1 No (Each)	
32	408 mts (Four hundred and eight metres)	Renewal by supply and laying of 4 x 16 sq.mm PVC armoured LTUG cable in a trench to be excavated at a depth of 0.75 meter putting 0.15 mt. Layer of sand and covering the cable completely with bricks and sand and refilling the earth to make good.		1 Mt (One Metre)	
33	228 mts (Two hundred and twenty eight metres)	Renewal by supply and clamping of 4 x 16 sq.mm PVC LTUG armoured LTUG cable on post or on wall with MS Clamps. (SD-221)		1 Mt (One Metre)	
34	14 Nos (Fourteen numbers)	Renewal by supply and fixing of brass cable gland for 4 x 16 sq.mm PVC armoured LTUG cable with earth connection.		1 No (Each)	

35	17 Nos (Seventeen numbers)	Renewal by supply and fixing of 30W LED street light fitting complete with suitable dia GI pipe (class 'B') complete on the existing post / wall with PVC unsheathed Cu. Leads with MS clamps and aluminium painting. (Philips/ Havells/ Equivalent)		1 No (Each)	
36	5 Nos (Five numbers)	Renewal by Supply and fixing of 100W LED Flood light fitting complete with suitable angle iron frame complete on the existing post / wall with PVC unsheathed Cu. Leads with MS clamps and aluminium painting. (havells/Equivalent)		1 No (Each)	
37	16 Nos (Sixteen numbers)	Renewal by supply and fixing of 6 Mtr height 65mm (2 1/2") G.I Pipe 'B' class with 300mm x 300mm x 6mm MS Base Plate duty welded at the bottom with concreting with construction of masonry pedestal a SMC Junction box with hylum sheet, 4 way heavy duty connector and 1 No 6A SP MCB with a MCB channel (L & T make) provided at a height of 1.5 mtr from the ground level with one coat of red oxide primer paint and two coat of anti corrosive aluminium paint of reputed make to the pole with erecting the lamp post with necessary service with connection from junction box to the fitting with 5 Mtrs of 1.5 sq. mm x 3 core PVC insulated copper wire, 1 No. of 1.5mtr 20mm dia G.I. pipe 'B' class with suitable bend with special type clamps and 1 No of 48 W LED street light fitting (Higher End) complete with necessary connection etc.		1 No (Each)	
38	1 No. (One number)	Renewal by supply, Erection, Testing and commissioning of 400A capacity Dust and Vermin Proof Cubical Panel Board made up of 16 SWG CRCA sheet steel with Renewal by supply and fixing of the following interior mounting fuse switches with HRC fuses arranged in two Horizontal or vertical rows with one switch over the other with a central bus bar chamber and two nos of Horizontal or vertical cable chambers at the two ends one on each side next to the fuse switch chamber and confirming to IE rules.		1 No (Each)	

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1. 400A TPN SDF unit interior only with HRC fuses Double break Switch (Higher end) - = 1 no
 2. 250A TPN SDF unit interior only with HRC fuses Double break Switch (Higher end) - = 2 nos
 3. 200A TPN SDF unit interior only with HRC fuses Double break Switch(Higher end) = 2 nos
 4. 125A TPN SDF unit interior only with HRC fuses Double break Switch (Higher end) - = 3 nos
- (All the TPN switches should be (Higher end) with front handle make only)

The bus bar chamber will consist of suitable size of copper flat (not below 50x6mm) for phase and neutral buses on epoxy moulded bus insulators at proper and sufficient spacing between the buses as per IE rules. This bus bar chamber should be segregated from the adjacent chambers by providing hylem sheet of suitable thickness as partisans suitable size of copper flats should be provided all round the panel for earth bus.

The fuse switches should be connected with the phase and neutral buses with suitable size of rigid copper rod or flat and each switch should be connected with 2 nos. 25x6 mm earth bus with 2 runs of No:8 SWG rigid copper rod with suitable lugs. Phase and neutral copper buses should be tinned properly.

The panel should have a separate metering chamber at the top side consisting of Digital Multifunction meter Model LT MFM 4405 LED meter CI 0.5/ like and 3nos 400/5 CTR and 1nos 200/5 CTR CT arrangements LED indicator lamps should be provided with control switches and fuse units.

The panel should be painted with one coat of Red oxide as primer coat and two coats of enamel paint of approved colour, Approved by the site engineer and also the danger board. The capacity of fuse switches, size of the incoming and outgoing cables, the place to which the supply is fed shall be marked on switch chamber.

		The panel board should be mounted on suitable MS channel provided all round at bottom of the panel. The whole arrangement should be erected on a masonry pedestal to be constructed with suitable foundation bolts and nuts such that the lowest switch handle is at the height of 0.75m from the ground level.			
39	1 No. (One number)	Renewal by supply and fixing of 400A TPN Switch Disconnecter Fuse Units in Sheet Steel Enclosure with HRC fuses Double Break switch with suitable angle iron frame work with MS cable entry boxes with PWD earthing		1 No (Each)	
40	1 No. (One number)	Renewal by supply and fixing of 315A TPN Switch Disconnecter Fuse Units in Sheet Steel Enclosure with HRC fuses Double Break switch with suitable angle iron frame work with MS cable entry boxes with PWD earthing		1 No (Each)	
41	70 Nos (Seventy numbers)	Renewal by supply and fixing of 12mm MS fan hook by chipping the ceiling, find the rod and fixing fan hook and redoing the ceiling well with rich cement mortar as directed by the site officer.		1 No (Each)	
42	3 Nos (Three numbers)	Renewal by supply and fixing of 3600 Ansi Lumens Projector, XGA (1024x768) Resolution, Contrast Ratio: 20000:1 SD XVI Part P/16		1 No (Each)	

43	3 Nos (Three numbers)	Renewal by supply and fixing 8" x 6" motorised screen SD XVI Part P/19		1 No (Each)	
44	3 Nos (Three numbers)	Renewal by supply and fixing of 3 feet ceiling mount Kit SD XVI Part P/21		1 No (Each)	
45	3 Nos (Three numbers)	Renewal by supply and fixing of 20 metre HDMI cable SD XVI Part P/22		1 No (Each)	
46	1 No. (One number)	Renewal by Supply and fixng of TNEB meter board suitable for 3 phase 100A service connection made up of suitable angle iron frame work of size 2 feet x 1-1/2 feet using angle iron of size 1-1/2" x 1-1/2" x 1/4" rigidly fixed on wall covered with hylem sheet of size 2 feet x 1-1/2 feet of 12mm thickness with necessary bolts and nuts supports and supply and fixing of 3 Nos. 100A fuse units (500V), 1 No. neutral link, copper earth flat of size 1" x 1/4" with inter connection of EB meter to fuse units by 16 Sq.mm PVC insulated copper wire with earth connection complete.		1 No (Each)	

47	1 No. (One number)	<p>Renewal by supply and Fabrication, Erection, Testing and commissioning of pedestal mounted pillar box made out of 16 SWG CRCA MS Sheet of size 48"x48"x18" outdoor type with three compartment with lock and key facilities with sealing(TNEB Type) arrangement with dust and vermin proof and space for fixing TNEB Electronic type energy meter suitable for 3 phase 415 V 4 wire 50hz AC supply having 400A Capacity copper bus bar on suitable bus insulators and provision for mounting 3 nos CTS of 400A/5A for incoming to the energy meter and supply and fixing of 3 NOs 400A/400V fuse units and neutral link on 6mm Thick Hylum sheet and provision for cable entry for both incoming and outgoing cables at the bottom and painting the board with two coats of anti-corrosive paint of approved colour with earth connection and comprising the following.</p> <ol style="list-style-type: none"> 1. 6mm thick hylum sheet in metering compartment for fixing 3 phase 415V 4 wire digital energy metre. 2. 3 Nos 1" x 1/2" and 1 No. 1/4" x 1/4" copper bus bar on suitable bus support with 315/5A CTS. 3. 2 Nos. earth bus of 1"x 1/8" Copper flat in the rear side of the panel. 4. Base channel fixed at the bottom of pillar box 5. View glasses fixed at both compartments. <p>Caution/ Danger Board.</p> <ol style="list-style-type: none"> 6. 3 Nos. 400A fuse units & 1 No. 250A neutral link on hylum sheet 7. For meter wiring should be made with identification fe rules 8. The whole arrangement should be Erected on suitable masonry pedestal. 9. 250A TPN Switch Disconnecter fuse with HRC fuses placed in the Bottom Chamber. 10. Painting of the panel with 2 coats of epoxy paint over one coat of red oxide. 		1 No (Each)	
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48	5 Nos (Five numbers)	Earthing as per the ISI specification with an earth electrode of 2.1mt class 'B' GI pipe of dia not less than 40mm, with copper earth plate of size 125mm x 50mm x 6mm, with necessary funneling arrangements with necessary masonry work and with 38mm RCC cover slab for the brick masonry.		1 No (Each)		
49	281 mts (Two hundred and eighty one metres)	Renewal by supply and run of 1 of NO: 8 SWG Cu wire for earth connection.		1 Mt (One Metre)		
			TOTAL			
		12%	GST			
			GRAND TOTAL			
		49 Items (Forty nine items)				