DEENDAYAL PORT AUTHORITY

An ISO 9001:2008 & ISO 14001:2004 Certified Port

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No.: EL/WK/ Date: 15/10/2025.

EXPRESSION OF INTEREST

EXPRESSION OF INTEREST [EOI] for "Construction of CISF Barrack providing drainage line, parade ground, Toilet block and SWD. Culvert at Kandla."."

(This Notice is issued only to elicit Expression of Interest from the parties interested in the work and does not constitute any binding commitment from the Deendayal Port Authority to proceed with the work or invite any or all the parties in the subsequent bidding process. The Open Tenders will be issued subsequently.)

Executive Engineer (Electrical), DPA invites Expression of Interest for the work of "Construction of CISF Barrack providing drainage line, parade ground, Toilet block and SWD. Culvert at Kandla" from the reputed firms from those who have executed similar work in Government/public sectors and other leading private organizations. The Expression of Interest (EOI) documents containing details of Scope of Work and Technical Specifications are enclosed herewith.

The interested firms are requested to submit their expression of interest for the said work in BOQ format as enclosed at Annexure I. The completed EOI (Expression of Interest) shall be submitted to the office of the undersigned on or before 31/10/2025.

Yours faithfully

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Executive Engineer (Electrical)
Deendayal Port Authority

Name of Work :-Construction of CISF Barrack providing drainage line, parade ground, Toilet block and SWD. Culvert at Kandla

Sr no	Description	Qty	Rate	Unit	Amount
1	Supply of M.S. dust and vermin proof pedestal type main distribution panel for providing power distribution to entire CISF Complex as per Technical Specification no:-1	1		No	
2	Installation, Testing & Commissioning of Main distribution panel at the site decided by Engineer-in-charge and as per Technical Specification no :-2	1		No	
3	Supply at site 4 Core armoured LT aluminum conductor XLPE cable of 1.1KV grade of the following type & size as per IS: 7098 (Part - I) 1988 & as per Technical Specification No. 3 a) 4 core x 240 Sq.mm. b) 4 core x 120 Sq.mm. c) 4 core x 50 Sq.mm. d) 4 core x 35 Sq.mm. e) 4 core x 4 Sq.mm.	 350 375 60 60 120		 Mtr Mtr Mtr Mtr Mtr	
4	Laying of single / double 4.0 Core LT armoured aluminum conductor XLPE cable of 1.1KV grade of the following type & size through various types of laying as per technical specification no 4 a) Excavation in soft/hard soil Laying of Single / double length through excavation up to 4.0 core x 240 Sq.mm as per Technical Spec No. 4. b) Laying of cable Single / double up to 4core x 240Sqmm in half round RCC pipe of 6" internal dia as per technical specification no 4(b) c) Laying up to 4.0 C x 240Sqmm LT armoured aluminum conductor XLPE cable of 1.1KV grade of the following type & size through HDPE pipe under Rail/ Road crossing/Cement concrete flooring/ muddy area after making Horizontal Boring.as per Technical Spec No. 4(c) d) Laying up to 4.0 Core x 240Sqmm LT armoured aluminum conductor XLPE cable of 1.1KV grade on wall / metal stress surface with suitable of saddles & clamps as per Technical Spec No. 6	 40 255 150 20		 Mtr Mtr Mtr Mtr	
5	Supply of Hot dip Galvanized perforated type cable tray complete with coupler plates, fasteners, clamps and fixing hardware's etc as per technical spec no. 5 a) Cable tray 2 MM thick- perforated type -50mm x 25 mm x 2.5mtr b) Cable tray 2 MM thick- perforated type - 100mm x 25 mm x 2.5mtr	 100 80		 Mtr Mtr	
6	Fixing of Hot dip Galvanized perforated type as per technical specification no. 6.	360		Mtr	

7	Supply of following type of Distribution Boards as per Technical Specification No. 7 a) 6Way TPN DB (8+18) IP 43 with metal door (SHDB). b) 4Way TPN DB (8+12) IP 43 with metal door (SHDB)	 12 12		 No No	
8	Fixing of following type of Distribution Boards as per Technical Specification No. 8 a) 6Way TPN DB (8+18) IP 43 with metal door (SHDB). b) 4Way TPN DB (8+12) IP 43 with metal door (SHDB)	 12 12		 No No	
9	Supply of following type of MCBs as per Technical Specification No.09 a) 25/32 /40A DP MCB with 10kA Breaking Capacity in 'C' Series b) 63 A TPN MCB with 10kA Breaking Capacity in 'C' Series	 54 12		 No No	
10	Fixing of following type of MCBs as per Technical Specification No.09 a) 25/32 /40A DP MCB with 10kA Breaking Capacity in 'C' Series b) 63 A TPN MCB with 10kA Breaking Capacity in 'C' Series	 54 12		 No No	
11	Providing & fixing following concealed / Surface wiring for 3 Phase / Single phase sub-circuit from the main switch /meter. DBs / MCBs to the switch board as per Technical Specification No. 11 a) with 2 x 2.5 sq.mm. copper conductor (single phase and neutral. b) with 2 x 4 sq.mm. copper conductor (single phase and neutral) c) with 4 x 6 sq.mm. copper conductor (Three phase and neutral)	 480 150 132		 Mtr Mtr Mtr	
12	Providing and Fixing concealed / Surface wiring for light/tube/bell point with PVC insulated single core standard copper conductor wire as per Technical Specification No. 12 a) light point with 1.5 sq.mm. copper conductor	 240		 No	
13	Providing and Fixing concealed wiring for FAN point with PVC insulated single core standard copper conductor wire & step cut electronic fan regulator as per Technical Specification No.13	 54		 No	
14	Providing and fixing 5 pin 5/6 A X250 Volt half plug point as per Technical Specification no. 14 a) 5 pin 5/6 A X250 (half point). b) 5 pin 5/6 A X250 (Full point)	 48 174		 No No	
15	Providing and fixing concealed wiring for 15/16A X250 Volt Power point as per Technical Specification No 15	 54		 No	

16	Supply at site following type of BLDC fan, or Brushless DC Fan energy-efficient ceiling fan with all accessories as per Tech Spec no 16 a) 1200 mm sweep ceiling fan. b) 1400 mm sweep ceiling fan.	 200 100		 No No	
17	Fixing at site following type of BLDC fan, or Brushless DC Fan energy-efficient ceiling fan with all accessories as per Tech Spec no 17 a) 1200 mm /1400mm sweep ceiling fan.	 200		 No	
18	Supply of exhaust fan of following type & size as per Technical Specification No. 18 a) 225mm sweep	 18		 No	
19	Fixing of exhaust fan of following type & size as per Technical Specification No. 19 a) 225mm sweep	 18		 No	
20	Supply of following Energy Efficient LED Tube Light fixture Complete accessories as per Tech Spec No . 20. a) 36/ 40Watt LED Tube light fixture. b) 50 Watt LED Tube light fixture	 300 200		 No No	
21	Fixing of following Energy Efficient LED Tube Light fixture Complete accessories as per Tech Spec No . 21. a) 36/ 40/50 Watt LED Tube light fixture.	 300		 No	
22	Supply of Energy Efficient 240W Flood light LED fixture with Complete accessories for per tech spec no 22. a) 240Watt LED Flood light Luminary	 10		 No	
23	Fixing of Energy Efficient 240W Flood light LED fixture with Complete accessories for per tech spec no 23. a) 240Watt LED Flood light Luminary.	 10		 No	
24	Supply at site GRP/FRP Poles of following sizes as per Technical Specification No.24 a) 7.0 Mtrs long Anchor type pole with FRP/GRP single arm			 No	
25	Erection of following supplied GRP/FRP Poles of following sizes as per Technical Specification No.25 a) 7.0 Mtrs long Anchor type pole with FRP/GRP single arm	 20		 No	
26	Supply of 120Watt LED energy efficient street light fixture with Complete accessories for fixing on FRP/ GRP Anchor type pole per technical speci no 26.	 18		 No	
27	Fixing of 120Watt LED Street Light Luminaries with all accessories as per technical specification no 27.	 18		 No	
28	Re-erection, cabling testing & commissioning of single /double arm pole at the CISF Complex parade ground as per Technical Specification No. 28.	 10		 No	

29	Painting of pole with supply of paint as per Technical Specification No. 29	25		No	
30	Providing & Fixing of Chemical Treated Gel Earthing as per Technical Specification No. 30	12		No	
31	Supply, Laying, connecting of GI strip as per technical Specification no 31 i) G.I Strip of size 25 X 3 mm	50		Mtr	
32	Supply, Laying, connecting of GI Wire Connecting earth station to the equipment as per Technical Specification No 32	100		Mtr	
				TOTAL.	

Technical specification

Technical specification no 1 for Item No. 1

This includes design, manufacture and supply at site outdoor pedestal type Main Distribution Panel suitable for 415 Volts, 3ph, 4 wire, 50 Hz. AC supply system including all switchgears and internal wiring. with top canopy, double shutter, handle with locking arrangement (pad lock – 5 levers with keys). The panel shall be dust and vermin proof, single front type, indoor type, and fabricated from CRCA sheet steel of 2.0 mm. thickness. The panel shall be mounted on 75 mm. x 40 mm. "C" Channel. The panel shall be painted with SIEMENS grey paint. Before painting the panel, the surface treatment shall be carried out by 7-tank process. The panel shall be provided with metallic engraved/Radium film labels on front for identification of Incoming & Outgoing feeders as directed. The neoprene gaskets shall be provided on the periphery of the doors of all feeders. The sleeved electrolytic copper busbars with epoxy insulators with Bakelite support and separators shall be provided with colour code. The panel shall be complete in all respect with cable glands, lugs for incoming & outgoing cables and also shall be provided with 2 nos. of earthing terminals.

The Main Distribution Panel panel shall be specious for easy maintenance and shall be specious to be provided with all the material mentioned below.

1. 200A, 415 Volt 50 Hz Open Execution 4 pole change over Switch — 1No.
2. 160 A 415 Volt 50Hz 36KA Breaking Capacity MCCB — 1 No.
3. 125 A 415 Volt 50Hz 36KA Breaking Capacity MCCB — 4 No.
4. 100A, 415 Volt 50Hz 36KA Breaking Capacity MCCB — 6 Nos.
5. Suitable size ammeter & Voltmeter for the above panel — 1 each
6. 4 Way Selector switch unit complete for Voltmeter/Ammeter. — 2 No.
7. Electronic energy meter in poly carbonate body 10-100A, 3phase, 4wire with electro mechanical counter of class -1. — 1 No.
8. 3 phase Air Break Contractor of 100A — 1 No.
9. Surface mounted light sensor timer Switch — 1 No

Electrolytic grade copper bus bar for Phase & Neutral, PVC sleeved with colour code, Danger Board, tie belt, M.S Wall mounted stand etc.

All these components shall be mounted in the panel by means of suitable cadmium passivated hardware. The panel shall be complete in all respects with cable glands, lugs for incoming and outgoing cables including interconnection with PVC insulated cable single core, standard copper conductor of 650/1100V grade.

The panel shall be tested as per IS. The panel shall be provided with 2 Nos. S.S. terminals for earthing. The Panel shall be manufactured from type test holder having type test certificate of feeder panel of similar or above ratings.

The design of the panel should be such that it should accommodate the switch gears indicated above. The contractor should visit the site and submit the drawing and BOQ of panel with their make & line diagram along with dimension of the panel for approval of Engineer-in-Charge. The Contractor shall manufacture the panel only after getting written approval from Engineer-in-charge. The material shall be used from KPT approved make.

The LED Indication lamp 1 no. for ON indication shall be provided on each feeder. The control wiring & power wiring shall be done properly and the power wiring shall be brought up to the Power terminal block of suitable ampere capacity.

The panel shall be designed, fabricated and supplied from manufacturers who are having type test certificate holders, i.e. CPRI/ERDA of similar capacity not less than 3 years.

The design of the panel should be such that it should accommodate in the existing Substation accordingly before fabrication / design of panel. The contractor should visit the site and submit the drawing and BOQ of panel with their make & line diagram along with dimension of the panel for approval of Engineer-in-Charge. The Contractor shall manufacture the panel only after getting written approval from Engineer-in-charge. The material shall be used from DPA approved make.

Technical specification no 2 for Item No. 2

This includes Erection / Installation, testing and commissioning of supplied L.T distribution panel, dust and vermin proof, free standing, compartmentalized, fabricated from 2mm thick SWG CRCA sheet steel.

The panel shall be firmly installed in existing substation at New CISF Building (Kandla) over the trench line/ platform as decided by Engineer-in-charge with proper size of foundation bolts on “C” channel of 75 x50 x 6 mm size after proper alignment of the panel. The channel shall be properly grouted on the floor / CC foundation using proper size of grouting bolts as desired by Engineer-in-charge.

This includes end terminations of Incoming and outgoing cables in all respect with cable glands, lugs for incoming & outgoing cables and also connections of earthing with 2 nos. of earthing terminals with supplied panel. The panel shall be commissioned as per relevant IS specification and IE rules-1956 with update amendments. The results of the test shall be confirming to the relevant IS specification and copies of the results shall be furnished to Engineer-in-charge by Contractor. The work includes all labour and material including necessary civil work as directed by Engineer-in-Charge.

Technical specification no 3 for Item No. 3

This includes supply at site 1.1 KV grade, 4 core aluminum conductor of the given sizes in schedule “B”, XLPE insulated armoured cable confirming to IS: 7098 (Part-I) 1985 with up to date amendments and of approved make with ISI mark. The manufacturer shall produce TYPE TEST certificate with similar size of cable, which shall not be more than 3 years old. The cable shall have marking/embossing at the interval of

every meter showing its progressive length. During the cable inspection, the manufacturer shall show the relevant ROUTINE TESTS to inspecting authority or otherwise the manufacturer shall produce the routine test certificate during supply of cable at site. This includes all the labour, taxes loading, unloading at site as directed by Engineer-in-Charge, but excluding GST

Technical specification no 4 for Item No. 4

This includes laying & end termination of 1.1 KV grade XLPE armoured L.T cable of following size in proposed Steel Structure / wall /Beam / G.I pipe of suitable size or in a trench to be excavated by digging asphalted road, paved area covered with RCC Slabs, soiled area with stone etc including excavation of hard and soft soil as per the case may be and provided sand cushioning at the bottom and above the cable and by providing second class bricks including refilling of trench as mentioned below. The contractor shall not allow lay the cables without Jacks. While laying the cables, drums of cables shall be placed on the Jacks strictly for pulling the cables for laying to avoid any damage to cables.

1. **Laying of Cable**:

(a) **In Hard/Soft Soil:** This includes laying of single length HT/LT armoured aluminum Conductor XLPE Cable of 11KV Grade (excluding supply of cable) through excavation in soft/hard soil. The trench to be excavated 0.3 mtr. wide 1.0 mtr. deep. The bed of 50mm of river sand shall be provided in the bottom of the excavated trench. The cable shall be laid over the bed of river sand. This includes providing & laying of bricks on both sides of cable lengthwise i.e. parallel to the cable and the gaps shall be filled by fresh river sand. The cable shall be covered by keeping two bricks over the side bricks shown in the sketch. The filling of the trench shall be done with the excavated stuff & should be watered and rammed properly to its original position. The excess excavated stuff shall be disposed off from the Site of work and spreaded in low laying area as directed. The same trench would be used to place two circuits (cables) side by side in horizontal fashion.

The contractor shall provide heat shrinkable straight through joints of relevant size of approved make if the laying of cable shall be more than standard drum length. This includes all labour and material as directed by Engineer-in-Charge. Such cable joints shall be under the scope of work of the contractor at no extra cost or obligation from DPA. Such cable joining work is completely to be done by the contractor at his own cost. The rates shall be inclusive of all material, required tools tackles and labour and as directed by Engineer-In-charge, but excluding GST.

Sketch

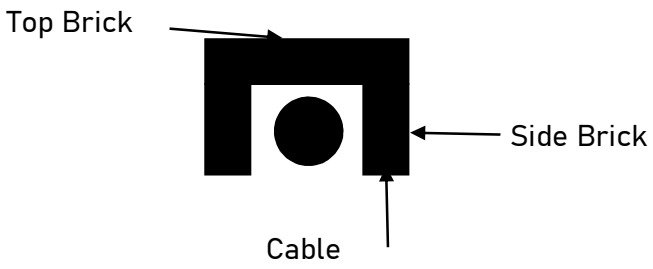


Fig 1.1

b) **In ½ Round RCC Hume pipe** The item includes laying of single length cable of size 4 core x 50 Sq.mm & 4C x 70Sqmm LT armoured aluminum Conductor XLPE Cable of 1.1KV Grade both in the ½ round RCC hume Pipe 6" I/D the half round pipe should be laid on the coarse sand. The cable shall be laid on the existing half round pipe as shown in the drawing after laying of cable the pipe should be filled with fine sand and covered with half round pipe.. At every approximately 15mtr length of there should be inspection chamber provided. The item includes required material and labour as directed by Engineer in charge.

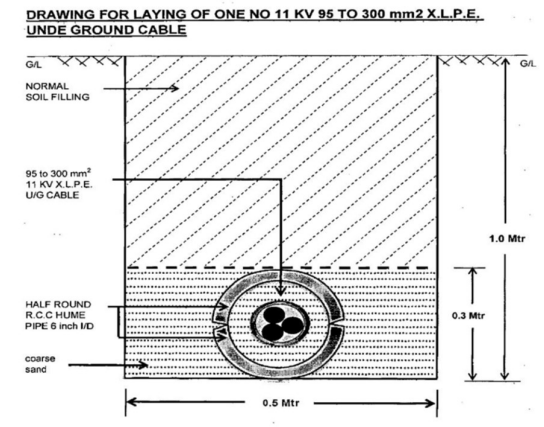


Fig 1.2

c) **Through HDPE Pipe under rail/road crossing/muddy area:** This includes making of Horizontal Directional Drilling of suitable dia including putting suitable diameter HDPE. HDPE pipe shall have strength of 10Kg/Sq.cm. Providing of HDPE pipe is also in the scope of contractor. Depth of horizontal boring shall be minimum 165 cm or according to construction of Road/Rail network/muddy area or as per direction of Engineer-In- Charge. Laying of HDPE pipe coupled by HDPE socket only after standard length in excavated trench / tunnel and also sealing of HDPE pipe ends by suitable cap at both end. After completion of boring job back filling & dressing of excavated trench to be carried out as per the original. The contractor shall arrange JCB machine for excavation, water for drilling, de-watering pump, HDD equipment at their own cost. The rates shall be inclusive of all material, required tools tackles and labour and as directed by Engineer-In-charge, but excluding GST. The two circuits (cables) to be laid in the separate HDPE pipe. side by side in horizontal fashion.
This includes also includes passing of HT/LT cable through buried HDPE pipe. The pipe shall be sealed at both the end by suitable cap after the laying of cable in HDPE pipe. The rates shall be inclusive of all material, required tools tackles and labour, as directed by Engineer-In-charge, but excluding GST.

d) **Laying on walls, cable tray beam**: The work consists of laying LT cables on wall surface, beam, cable tray, etc. with suitable size of G.I. saddles/spacer of 2mm thick and shall be rigidly fixed on cemented wooden gutties or polymeric gutties at a distance of not more than 0.5 mtr interval. And wherever the cable is to be run on tray same shall be fixed with suitable size of clamp & hardware. This also includes termination at both ends by required size of cable gland and with suitable size of lugs with all material and labour and as directed by Engineer-in-charge.
This also includes end termination of cables at both the sides including cable glands etc. Termination and jointing kits for 1.1 KV grade XLPE cables shall be proven approved make. A loop of sufficient length shall be kept for future requirement. The contractor should provide cable route marker fixed on the M.S angle and properly grouted on the ground showing the size of the cable running.

L.T cable termination & jointing shall be done strictly in accordance with kit manufacturer's instructions, drawing and as directed by Engineer-in-Charge. Cable jointer shall be qualified to carry out LT/ HT cable jointing and termination work. The work includes all material and labour as directed by Engineer-in-charge.

CABLE ROUTE AND JOINT MARKERS

- Permanent means of indicating the positions of joints on site should be provided. During the course of permanent reinstatement cable and joint markers, should be laid directly above the route of the cable and the position of the joint respectively.
- Wherever it is not possible to place the marker directly over the cable route or joint the marker should be suitably placed near the cable route or joint on which the distance of the cable route or joint at right angles to and parallel to the marker should be clearly indicated.
- The site requirement & position of fixing the markers will be decided by the Engineer-In-charge

or his nominee.

- The type of route marker & letters to be written on the route marker will be decided while execution by the Engineer-in-charge.
- Route marker should be visible and the pedestal should be buried underneath the ground firmly by providing CC foundation.
- Route Marker of C.C. (1:2:4) 150x150x750 (in mm) Concrete Stone (DPT Mark with Approved Yellow Color Embedded in Earth atleast 300 mm below the ground Level at Approx. Distance 10 Meter or as directed by EIC
  Cable laying, shall include the route marker, cable tagging, dressing, removing the old unused cable from the RCC Trench, appropriate size of glands & ferrule work as per requirement etc.

Technical specification no 5 for Item No. 5

This includes supply of Cable Trays & Accessories, Tray Covers and Fittings:

SL	DESCRIPTION	. SPECIFICATION
1	ITEM	Cable Tray
2	APPLICABLE STANDARD	IS-1079 Grade0, IS 2629, IS 2633
3	TRAY SIZE	50mm (W) x 25 mm (H)
4	TRAY TYPE	PERFORATED
5	MATERIAL OF CONSTRUCTION	MS H.R. SHEET AS PER IS 1079 Grade 0
6	TRAY LENGTH (EACH PIECE)	2.5 METER.
7	TRAY / COUPLER PLATE THICKNESS	2 mm (+/- 0.2 mm)
8	ACCESSORIES	EACH TRAY LENGTH SHALL BE SUPPLIED WITHSUITABLE COUPLER PLATES, NUTS, BOLTS AND WASHERS.
9	GALVANIZING STANDARD.	AS PER IS 2629 & IS 4759
10	PURITY OF ZINC	99.5% AS Per IS 209, 1992.
11	THICKNESS & MASS OF ZINC COATING	75-micron average & 610 gms/m2
12	FINISH	A. Perforated tray – Hot dip galvanized B. Nut, Bolt

Technical specification no 6 for Item No. 6

This include fabrication & Installation of perforated type cable trays including horizontal, vertical bends, reducers, tees, cross members & other accessories as required and duly suspended from the ceiling and /or fix to steel/RCC columns, beams or any other structure members with MS suspenders, angles, channels with all required material, accessories and labors as directed by Engineer-In-charge.

Technical specification no 7 for Item No. 7

This includes supply of double doors SP&N / TPN DB with IP42 degree of protection. The DB shall be made from special grade of CRCA sheet and powder coated. The DB shall be consisting with Insulated Busbar, Insulated IP2X neutral bars & earth bar DIN Rail and neutral link& Circuit identification labels & Blanking. The rates shall be excluding the cost of MCB as directed by Engineer-in-Charge.

a) This includes supply of 6 Way (8 Incomer + 18 Outgoing) double door TPN DB with IP42 degree of protection. The DB shall be made from special grade of CRCA sheet and powder coated. The DB shall be fitted with Busbar, DIN Rail and neutral link. The rates shall be excluding the cost of MCB as directed by Engineer-in-Charge.

b) This includes supply of 4 Way (8 Incomer + 12 Outgoing) double door TPN DB with IP42 degree of protection. The DB shall be made from special grade of CRCA sheet and powder coated. The DB shall be fitted with Busbar, DIN Rail and neutral link. The rates shall be excluding the cost of MCB as directed by Engineer-in-Charge.

Technical specification no 8 for Item No. 8

This includes fixing & commissioning of supplied double door TPN DB on wall / structure as directed. The DB shall be fixed rigidly on wall through suitable size of nut bolts/anchor fasteners/cemented wooden gutties as directed. This includes necessary wiring, connections & earth linking with all material, labour tools & tackles as directed by Engineer-In-charge & While fixing the new distribution board old distribution board should be removed and in place of that new DB should be fitted.

Technical specification no 09 for Item No. 9

a) This includes supply of DIN Rail mounted 'C' Series **25/32/40 Amps**. X 240 Volts 50 Hz. **Double Pole MCB** with 10kA Breaking Capacity. The supplied MCB shall be conforming to IS: 8828:1996, IEC: 60898-1:1995. The terminals of MCB shall be serrated type.

b) This includes supply of DIN Rail mounted 'C' Series **63 Amps**. X 415 Volts 50 Hz. **Triple Pole Neutral (TPN)** MCB with 10kA Breaking Capacity. The supplied MCB shall be conforming to IS: 8828:1996, IEC: 60898-1:1995. The terminals of MCB shall be serrated type.

Technical specification no 10 for Item No. 10

a) This includes fixing & commissioning of supplied DP MCB in existing TPN double door DB on wall / structure. The MCB shall be fixed on DIN Rail provided in existing DB. This includes necessary 1ϕ wiring, connections, distribution & earth linking of DB with all material, labour tools & tackles as directed by Engineer-In-charge.

b) This includes fixing & commissioning of supplied TPN MCB in existing TPN double door DB on wall / structure. The MCB shall be fixed on DIN Rail provided in existing DB. This includes necessary 3ϕ wiring, connections, distribution & earth linking of DB with all material, labour tools & tackles as directed by Engineer-In-charge.

Technical specification no 11 for Item No. 11

(a) The item includes providing & fixing concealed wiring for single phase sub-circuit from the main switch /meter /DBs / MCBs to the switchboard with Flame Retardant, 1100 Voltage grade, single core stranded copper conductor wire of size 2.5 sq. mm. for phase & neutral wire and 1.5 Sq.mm continuous stranded copper conductor wire for earth to be laid through PVC Round Pipe of size 25 mm Diameter of Medium Mechanical Strength (MMS) type and other accessories such as Tee, junction box, inspection bends, elbow etc. of approved make. The proper size of grove shall be prepared by contractor on wall/ceiling as case may be & the conduit pipe shall be laid through prepared grove and in case of new construction the pipes shall be laid during reinforcement work. After laying of pipe the grove shall be closed with mixture of cement & sand and to match with existing surface of wall/ceiling. Complete work consists of necessary wiring connections and earth linking at both the ends with all materials and labour as directed by Engineer-in-charge.

(b) The item includes providing & fixing concealed wiring for single phase sub-circuit from the main switch /meter /DBs / MCBs to the switchboard with Flame Retardant, 1100 Voltage grade, single core stranded copper conductor wire of size 4.0 sq. mm. for phase & neutral wire and 1.5 Sq.mm continuous stranded copper conductor wire for earth to be laid through PVC Round Pipe of size 25 mm Diameter of Medium Mechanical Strength (MMS) type and other accessories such as Tee, junction box, inspection bends, elbow etc. of approved make. The proper size of grove shall be prepared by contractor on wall/ceiling as case may be & the conduit pipe shall be laid through prepared grove and in case of new construction the pipes shall be laid during reinforcement work. After laying of pipe the grove shall be closed with mixture of cement & sand and to match with existing surface of wall/ceiling. Complete work consists of necessary wiring connections and earth linking at both the ends with all materials and labour as directed by Engineer-in-charge.

(c) The item includes providing & fixing concealed wiring for three phase sub-circuit from the main switch /meter /DBs / MCBs to the switchboard with Flame Retardant, 1100 Voltage grade, single core stranded copper conductor wire of size 6.0 sq. mm. for 3 phase & 4Sqmm for neutral wire and 1.5 Sq.mm continuous stranded copper conductor wire for earth to be laid through PVC Round Pipe of size 25 mm Diameter of Medium Mechanical Strength (MMS) type and other accessories such as Tee, junction box, inspection bends, elbow etc. of approved make. The proper size of grove shall be prepared by contractor on wall/ceiling as case may be & the conduit pipe shall be laid through prepared grove and in case of new construction the pipes shall be laid during reinforcement work. After laying of pipe the grove shall be closed with mixture of cement & sand and to match with existing surface of wall/ceiling. Complete work consists of necessary wiring connections and earth linking at both the ends with all materials and labour as directed by Engineer-in-charge.

Technical specification no 12 for Item No. 12

The item includes providing & fixing concealed wiring for light/tube/bell point from switchboard with Flame Retardant, 1100 Voltage grade, single core stranded copper conductor wire of size 1.5 sq. mm. for phase & neutral wire and 1.0 Sq.mm continuous stranded copper conductor wire for earth to be laid through PVC Round Pipe of size 20 mm Diameter of Medium Mechanical Strength (MMS) type and other accessories such as Tee, junction box, inspection bends, elbow etc. of approved make. The proper size of grove shall be prepared by contractor on wall/ceiling as case may be & the conduit pipe shall be laid through prepared grove and in case of new construction the pipes shall be laid during reinforcement work. After laying of pipe the grove shall be closed with mixture of cement & sand and to match with existing surface of wall/ceiling. The work also includes providing & fixing of Bell Push/Flush type SP switch 6A x 250V semi-modular Anchor Nova type or equivalent with ISI mark and to meet specifications & 3 plate Ceiling Rose/Angle Holder made from polycarbonate on suitable size of PVC box with cover. The PVC box shall be embedded properly in the wall and the switches shall be fixed on cover of the embedded box. The complete work consists necessary wiring connections and earth linking at both the ends with all materials and labour as directed by Engineer-in-charge.

Technical specification no 13 for Item No. 13

The item includes providing & fixing concealed wiring for fan point from switchboard with Flame Retardant, 1100 Voltage grade, single core stranded copper conductor wire of size 1.5 sq. mm. for phase & neutral wire and 1.0 Sq.mm continuous stranded copper conductor wire for earth to be laid through PVC Round Pipe with of size 20 mm Diameter of Medium Mechanical Strength (MMS) type and other accessories such as Tee, junction box, inspection bends, elbow etc. of approved make. The proper size of grove shall be prepared by contractor on wall/ceiling as case may be & the conduit pipe shall be laid through prepared grove and in case of new construction the pipes shall be laid during reinforcement work. After laying of pipe the grove shall be closed with mixture of cement & sand and to match with existing surface of wall/ceiling. The work consists providing & fixing of Flush type SP switch 6A x 250V semi-modular Anchor Nova type or equivalent with ISI mark and to meet specifications, Step cut electronic fan regulator with rotary steps & 3 plate Ceiling Rose made from polycarbonate on suitable size of PVC box with cover. The PVC box shall be embedded properly in the wall and the switches shall be fixed on cover of the embedded box. The complete work consists necessary wiring connections and earth linking at both the ends with all materials and labour as directed by Engineer-in-charge.

Technical specification no 14 for Item No. 14

a) The item includes providing & fixing half point in existing switch board with Flame Retardant, 1100 Voltage grade, single core stranded copper conductor wire of size 1.5 sq. mm. for phase, neutral & earth. The work consists providing & fixing of Flush type SP switch 6A x 250V semi-modular Anchor Nova type or equivalent with ISI mark and to meet specifications, and 2 in 1 socket 6A x 250V made from polycarbonate on existing switchboard. The complete work consists necessary wiring connections and earth linking with all materials and labour as directed by Engineer-in-charge.

b) The item includes providing & fixing concealed wiring for plug point with Flame Retardant, 1100 Voltage grade, single core stranded copper conductor wire of size 1.5 sq. mm. for phase & neutral wire and 1.0 Sq.mm continuous stranded copper conductor wire for earth to be laid through PVC Round Pipe of size 20 mm Diameter of Medium Mechanical Strength (MMS) type and other accessories such as Tee, junction box, inspection bends, elbow etc. of approved make. The proper size of grove shall be prepared by contractor on wall/ceiling as case may be & the conduit pipe shall be laid through prepared grove and in case of new construction the pipes shall be laid during reinforcement work. After laying of pipe the grove shall be closed with mixture of cement & sand and to match with existing surface of wall/ceiling The work consists providing & fixing of Flush type SP switch 6A x 250V semi-modular Anchor Nova type or equivalent with ISI mark and to meet specifications, and 2 in 1 socket 6A x 250V made from polycarbonate on suitable size of PVC box with cover. The PVC box shall be embedded properly in the wall and the switch & Socket shall be fixed on cover of the embedded box. The complete work consists necessary wiring connections and earth linking at both the ends with all materials and labour as directed by Engineer-in-charge.

Technical specification no 15 for Item No. 15

The item includes providing & fixing concealed wiring for Power point with Flame Retardant, 1100 Voltage grade, single core stranded copper conductor wire of size 4.0 sq. mm. for phase & neutral wire and 2.5 Sq.mm continuous stranded copper conductor wire for earth to be laid through PVC Round Pipe of size 25 mm Diameter of Medium Mechanical Strength (MMS) type and other accessories such as Tee, junction box, inspection bends, elbow etc. of approved make. The proper size of grove shall be prepared by contractor on wall/ceiling as case may be & the conduit pipe shall be laid through prepared grove and in case of new construction the pipes shall be laid during reinforcement work. After laying of pipe the grove shall be closed with mixture of cement & sand and to match with existing surface of wall/ceiling. The work consists providing & fixing of 5 in 1 combined unit suitable for 20A & 10A with switch, socket, fuse & indicator with ISI mark. The PVC box of suitable size shall be embedded properly in the wall and the combined unit shall be fixed on embedded PVC box. The complete work consists necessary wiring connections and earth linking at both the ends with all materials and labour as directed by Engineer-in-charge.

Technical specification no 16 for Item No. 16

Supply of 1200mm sweep & 1400mm sweep BLDC fan, or Brushless DC Fan energy-efficient ceiling fan that uses a brushless DC motor. These fans are known for their low power consumption, typically around 28-35 watts, and quiet operation compared to traditional induction motor fans. Key specifications include a 1200mm/1400mm sweep size, a 5-star energy rating, and a remote control for speed and on/off functions.

Key Specifications of BLDC Fans:

- **Motor Type:** Brush less DC (BLDC).
- **Power Consumption:** Typically, 28-35 watts.
- **Sweep Size:** Common sizes include 1200mm (48 inches)./1400mm
- **Rated Voltage:** 230V AC.

- **Rated Frequency:** 50 Hz.
- **Speed Control:** Remote control with multiple speed settings.
- **Air Delivery:** Ranges from 220-230 m^3/min.
- **Noise Level:** Typically, around 65 dBA.
- **Energy Efficiency:** 5-star energy rating, offering significant energy savings.
- **Other Features:** Remote control, timer functions, and potentially features like "night mode" with variable air delivery.
- **Make:-** ORIENT/ ATOMBERG/BAJAJ/CROMPTON/USHA/HAVELLS.

Technical specification no 17 for Item No. 17

This includes fixing & commissioning of supplied ceiling fan with all accessories in existing hook including necessary wiring and connection from nearest point / Ceiling rose through PVC flexible copper conductor wire and earth linking etc. The rotary step cut electronic regulator shall be fixed and screwed rigidly on switch board including wiring and connection etc. with all material and labour as directed by Engineer-in-charge.

Technical specification no 18 for Item No. 18

This includes supply of BLDC wall mounting fan energy efficient BLDC motor with blade sweep 16 inch (400mm) having 3 no's blades, working on input voltage of 220/250 Volts A.C. 50HZ Single phase, with power consumption 40W, Air delivery minimum 75CMM, RPM of the fan 1500, having swinging and three step speed control & option with Remote operation with in-built speed regulator operated by pull cord. The guards of fan shall be metal powder coated. Good quality material of blade should be PVC. The Color of the fan should be Black or Brown Classic Look with minimum 2 years' replacement warranty.

The complete detail brochure along with the fan model and make to be submitted to check the technical details and accessories such as remote along with cells, screws & nuts for fixing. The rates shall be inclusive of all the of miscellaneous charges excluding GST on fan as directed by Engineer-in-Charge

MAKE: ORIENT/ ATOMBERG/BAJAJ/CROMPTON/USHA/HAVELLS

Technical specification no 19 for Item No. 19

This includes fixing & commissioning of supplied exhaust on existing exhaust hole so that discharge of exhaust air can be done easily. However if exhaust hole is not provided, it is to be done by contractor. The fan shall be fixed with wooden frame and grouting of the frame of fan is to be done by suitable size of anchor fastener bolts, and by providing metallic mesh/louvers as directed to other side so that birds can be restricted in the passage. This includes connections with 3 core flexible copper cable from nearest source of supply & necessary connections & earth linking with all material and labour and as directed by Engineer-In-Charge.

Technical specification no 20 for Item No. 20

Supply at site environmental friendly energy efficient 40 Watt tube fixture. The fixture should be of low power consumption & having high efficiency as per technical description given below :

Technical Requirement for LED 40 Watt tube fixture

Sr no	Description	Technical Specification required
1	Power Consumption	**40 /50Watts**
2	Length:	Typically 4 feet (1.2 meters)
3	Lumen Output:	Can range from 4000 to 5200 lumens
4	Luminous Efficacy:	110-130 lumens per watt, depending on the model
5	Color Temperature (CCT):	Often 6500K, which is a cool white or daylight color
6	Input Voltage:	180-270V AC
7	Color Rendering Index (CRI):	Typically >80, indicating high-quality light that accurately shows colors
8	Lifespan:	Approximately 50,000 hours
9	Power Factor (PF):	Greater than 0.95 for efficient power usage
10	Body Material:	Common materials include high-quality polycarbonate (PC) and aluminum
11	Ingress Protection (IP) Rating	Ratings vary by model, with IP33 being common for indoor use and IP55 for more durable applications
12	Surge protection: .	Built-in protection, frequently rated at 2.5 kV or 4 kV, guards against power surges
13	Diffuser:	Polycarbonate material to diffuse light and reduce glare
	Additional Features	
14	LED Make:	Can include brands like Edison, Everlight, OSRAM, NICHIA, or CREE
15	Application:	Suitable for both residential and commercial (office, household) use
16	Surge Protection:	Built-in protection against voltage spikes, such as 4KV or 5KV
17	Energy Efficiency:	Provides brighter illumination than fluorescent tubes while consuming less energy
18	Make of LED Tube	Philips /Wipro / Bajaj / Crompton with 1 year replacement Guarantee

Technical specification no 21 for Item No. 21

This includes fixing & commissioning of supplied 20-22W LED Tube Light luminaries on wall/ceiling at suitable height on cemented wooden gutties as directed, and connections with 3 core flexible copper cable from nearest source of supply/ceiling rose & necessary connections with all material and labour and as directed by Engineer-In-charge.

Technical specification no 22 for Item No. 22

This includes supply of 240 W LED pre-wired Street Light Fitting with constant current LED driver. Operating voltage for luminaries shall be 230 Volts 50Hz. A.C. supply. The rate shall exclusive of GST & inclusive of all taxes, packing, forwarding, insurance, transportation and unloading at site of work etc. The luminaries shall be comprises with following Technical particulars.

	Light Technical	
1	Luminous Flux	30,000 lm
2	Correlated Color Temperature (Nom)	6500 K
3	Luminous Efficacy (rated) (Nom)	120 lm/W
4	Color rendering index (CRI)	80
5	Number of light sources	1
6	Beam angle of light source	110 degree(s)
7	Light source color	865 cool daylight
8	Optic type Symmetric	110º
9	Luminaire light beam spread	110°
10	Effective projected area	0.134 m²
11	Light Source	High power discrete LEDs with secondary lenses for optimum optical performance
	Operating and Electrical Line	
1	Frequency	50 or 60 Hz
2	Inrush current	115 A
3	Inrush time	0.15 ms
4	Power Consumption	250 W
5	Power Factor (Fraction)	0.9
6	Connection	Flying leads/wires Cable
7	Cable	1.0 m without plug 3-pole
8	Number of products	One MCB of 16 A type B 10
9	Suitable for random switching	No
	Mechanical and Housing	
1	Housing Material	Aluminum die-cast
2	Reflector material	Polycarbonate
3	Optic material	Glass
4	Optical cover material	Tempered glass
5	Housing Color	Grey
6	Mounting device	Mounting bracket adjustable
7	Optical cover finish	Clear
8	Ingress protection code	IP65 [Dust penetration-protected, jet-proof]
9	Mech. impact protection code	IK08 [6 J]
10	Optical cover type	Tempered glass
11	Net Weight (Piece)	4.800 kg
12	Certification preferred/essential	LM79/ LM 80
13	Make	Philips/ Wipro/ Bajaj

Technical specification no 23 for Item No. 23

This work includes fixing & commissioning of 240Watt LED Flood Light luminaries on the CISF building both front and back side. The fitting shall be fixed at existing building. This includes providing & fixing of suitable size of bracket made from GI pipe with 2mm thick clamps. The supplied fitting shall be fixed on GI pipe bracket or nipple to be provided building the position will be shown by Engineer-in-charge. This also includes necessary wiring & connections with 3 core flexible copper cable from nearest source of supply & necessary earth linking connections with all material, labour tools & tackles as directed by Engineer-In-charge.

Technical specification no 24 for Item No. 24

This includes supply at site Anchor type GRP/FRP 7.5 Meters long conical pole flange type along with base plate, Anchor bolts & single / double arm. The GRP/FRP pole shall be made from glass fiber reinforced polymer composite with cast iron metallic base frame integrated with GRP pole by in- situ bounding and covered with GRP coating. The pole shall have standard dimensions and provision of entry of cable. The pole shall be designed to withstand the maximum wind speed of 180 Km/hr. The GRP/FRP pole shall be provided with internal type Junction Box with required size of clamp etc. at eye level including connector and kit Kat fuse. The Junction box shall be vandal resistance and shall be dust proof to ensure safety of inside connections & shall have suitable locking arrangement. The pole should be joint less & having smooth surface and light weight. The pole shall be non-conductive and shock-proof.

The dimensions of the pole are stated as under:

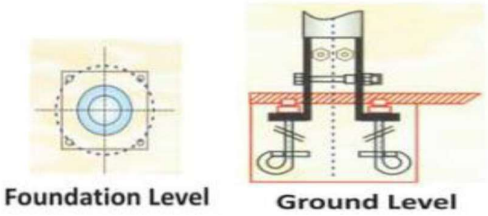
1. Overall length	:	Minimum 7500 mm.
2. Top dia.	:	Minimum 114 mm.
3. Bottom dia.	:	Minimum 187 mm.

The pole shall be provided on top with the double arm / single arm GRP/FRP bracket of approx 1000 mm each and shall be suitable nipple for receiving Street light fitting of integral type.

The load testing of the pole shall be carried out as per relevant specification with latest modification by the firm and the firm shall submit clear test certificate.

Technical specification no 25 for Item No. 25

This includes fixing & erection of supplied long Double / Single arm, detachable type FRP pole on foundation to be provided by excavation of pit of 1.00mt x 1.00mt & 1.30mt deep after carrying out necessary excavation. At the bottom of pit 10cm of sand layer shall be provided and over that 10cm CC of 1:4:8 mix shall be provided and then supplied Anchor bolt shall be buried in the CC up to the length of 1165mm and thereafter pit shall be filled with 1:2:4 CC mix of cement sand and 6 to 20mm graded metal course aggregate concrete. The termination and connection through connector and fuse of junction box shall be done through cable brass glands of suitable size including earth linking to the pole and junction box with SWG 8 GI wire and necessary connection to the street light luminaries with 3c x 2.5Sq.mm flexible cable with all material and labour as directed by Engineer-in-charge.



Technical specification no 25 for Item No. 25

This includes supply of 120W LED pre-wired Street Light Fitting with constant current LED driver. Operating voltage for luminaries shall be 230 Volts 50Hz. A.C. supply. The rate shall inclusive of all taxes, excise duty, VAT, packing, forwarding, insurance, transportation and unloading at site of work etc. The luminaries shall be comprises with following Technical particulars.

Sr.	DESCRIPTION	MINIMUM VALUE
01	Input Power	**120W**
02	Input voltage AC	90-300 V
03	Input Frequency	50 HZ +/-1 HZ
04	Life	50,000 glow hrs.
05	Inter-changeability	Suitable for pole pipe bracket
06	Total Harmonic Distortion	<15% maximum
07	Working Temperature	-20°C to +50°C
08	Working Humidity	10% to 90% RH
09	Temperature	6500° K
10	Colour rendering index **(CRI):**	Typically ≥70, sometimes >80 Ra, providing good color accuracy.
11	Lumens / Watt	130 Lum/W
12	Finishing	Excellent with Powered Coating
13	Power factor	Not less than 0.90
14	Warrantee	**Minimum 02 year**
15	Heat sink	Good thermal management System should be provided & LED must be mounted on heat Sink conductive aluminium bars With suitable large surface area by Means of fines to dissipate the heat to ambient air.
16	Beam angle	Beam angle 75 ° x 135 °
17	Lamp Housing	Pressure Die cast aluminium housing
18	LENS Material	Convex Lens (Polycarbonate cover/PMMA) 65mm dia
19	Ingress protection Level	IP 67
20	Power efficiency	Min. 80%
21	Road viewing angle Light Source	**Horizontal 120 Degree & Vertical 70 Degree SMD LED array with lens**
22	Guarantee / Warrantee	**Minimum 03 year**
23	Makes	Phillips / Bajaj / Wipro / Crompton
24	Certification preferred/essential	LM79/ LM 80
25		

Technical specification no 26 for Item No. 26

a) This includes fixing & commissioning of supplied Street Light luminaire with lamp suitable for 1x120w LED Luminary, 230 Volts 50Hz. A.C. supply. The fitting shall be fixed at existing GRP/ FRP Pole. This includes providing & fixing of suitable size of bracket made from GI pipe with 2mm thick clamps. The supplied fitting shall be fixed on GI pipe bracket or nipple provided on existing tubular pole. This also includes necessary wiring & connections with 3 core flexible copper cable from nearest source of supply & necessary earth linking connections with all material, labour tools & tackles as directed by Engineer-In-charge.

Technical specification no 27 for Item No. 27

a) Re-erection of the tilted pole if required extra making of muffing around the pole using cement concrete foundation of 1:2:3 (cement, sand, gravel). The dimension of muffing shall be as desired by EIC. This also includes dismantling of existing muffing wherever required and removal of debris from site. The muffing shall be paint with white Lime (chuna) paint.

The work includes fixing & commissioning of supplied Street Light luminaire with lamp suitable LED Luminary, 230 Volts 50Hz. A.C. supply. The fitting shall be fixed at existing GRP/ FRP Pole. This

also includes necessary wiring & connections with 3 core flexible copper cable from nearest source of supply if the main supply cable is damaged / in fault same should be removed / fault rectified by fault locater and necessary cable joint of approved cable joint kit the entire work & necessary earth linking connections with all material, labour tools & tackles as directed by Engineer-In-charge.

Technical specification no 28 for Item No. 28

a) Surface Preparation

1 Cleaning All surfaces to be painted shall be scraped or wire brushed to remove all flaking or loose paint. Wire wheels and/or cup brush grinder attachments may be used.

2 All welds should be inspected and any failed welds should be reported prior to painting.

3 All metal surfaces shall be thoroughly cleaned of oil, grease, soil, rust scale, and all other foreign substances. Oil and grease may be removed with clean rags saturated in mineral spirits.

4 After cleaning metal surfaces and before applying paint, the contractor shall clean the pole and the paved area surrounding the base of all sand, dust, or other foreign matter in order to prevent such materials from being blown on to the freshly painted surface.

5 All surfaces that are not to be painted (glass/plastic panels, attached signs, light pole inventory number, hand-hole screws, etc.) shall be protected from paint and painting operations.

b) Rust Treatment

Any areas showing signs of oxidization shall be thoroughly wire brushed and treated with a rust converter that has been approved by the project manager. This process is necessary to arrest oxidization and ensure proper primer adhesion. The rust treatment must be applied in accordance with label instructions.

c) Primer

All surfaces must be primed prior to painting with an appropriate rust-inhibiting and/or rust stabilizing lead-free alkyd oil-based red-oxide primer prior to application of finish coats.

The primer must be approved in advance by the City's project manager and must be applied in accordance with label instructions.

d) Application

Color The finish color shall be "grey / silver/green" and a sample must be submitted to and approved in advance by the Engineer- in-charge

- Coatings shall be applied in accordance with coating manufacturer's instructions.
- A minimum of two (2) finish coats of urethane gloss enamel paint shall be applied. All application equipment, tools, pressure settings, and techniques shall be used in accordance with manufacturer's instructions.
- Mixing and thinning of coatings, including multi-component materials shall be in accordance with coating manufacturer's instructions. Containers shall be kept closed when not in use to avoid contamination.
- The contractor shall not use mixed coatings beyond pot life limits.
- After the primer is cured, the contractor shall brush-apply a stripe coat to critical locations on the steel such as welds, corners, and edges using a specified intermediate coat.
- Uniformly apply coatings at spreading rate required to achieve specified dry film thickness (DFT).
- The application of all coatings, including exterior coatings shall be free of film characteristics or defects that would adversely affect the performance of the coating system and affect appearance.
- All work shall be warranted for material and workmanship (peeling or washing) for a minimum of one (1) year.

Technical specification no 29 for Item No. 29

Supply & Fixing: This includes making of **muffing around the pole** using cement concrete foundation of 1:2:3 (cement, sand, gravel). The dimension of muffing shall be as desired by EIC. This also includes dismantling of existing muffing wherever required and removal of debris from site. The muffing shall bepaint with white Lime (chuna) paint. The work includes all labour & material as directed by Engineer-in-Charge, but excluding GST.

Technical specification no 30 for Item No. 30

Scope of Work - Supply, installation, commissioning & testing of complete set of Maintenance Free Chemical Earthing. **Specifications of items** –

i) Copper Bonded Electrode.
- Diameter 76 mm (approx.)
- Length – 03 meter, connected with 50 x 6 mm Pure Copper internal strip with suitable terminal
- The portion between pipes and internal strip shall be filled with CCM
- Electrode shall be capable of handling 40 KA 1-Sec Short time current
- The earthing Electrode shall be supplied with suitable earth Pit Cover.

ii) Ground Enhancement Material / Back Fill Compound / Grounding Compound (50 Kg. for each earth pit) .
- Ground Enhancement Material / Backfill / Grounding compound shall be permanent and maintenance free. (No re- charging with salts or any other chemicals) and shall maintain its earth resistance with time.
- It must set up firmly and not dissolve or decompose or otherwise pollute the soil or the local water table.
- It shall be suitable for use in dry form or slurry form.
- The Ground Enhancement Material / Backfill / Grounding compound shall not depend on the continuous presence of water to maintain its conductivity.

Installation, Commissioning & Testing –

(i) Complete installation, commissioning and testing of Earthing System shall be in the scope of party only. It includes, excavation, making of earth pit, fixing of electrode with back fill earthing compound, fixing of earth pit cover, any other civil work as per instruction of engineer-in-charge and site requirement. The earthing system shall be complete in all respect. The earth resistance shall be as per IS 3043.

(ii) The suitable pits shall be drawn with the help of a boring machine, an auger or any other means as required by site conditions and nature of ground strata which shall be in the scope of contractor.

General Requirements – Maintenance Free Chemical Earthing.

1 Contractor shall provide warranty of the earthing system for one (01) years (minimum) from the date of commissioning.
2 Make Model and full specification of the offered items shall be provided by the contractor supported by the relevant catalogue / leaflet.
3 Essential items required for complete installation and commissioning of the earthing system shall be supplied by the contractor.
4 Installation, commissioning and testing of the complete earthing system shall be done by the contractor at our works.
5 All tools & tackles shall be arranged by the contractor for execution of the work.
6 Electric and water supply will be provided by DPA free of cost.
7 Material Test Report / Type Test Report from government approved laboratory shall be submitted by the contractor along with the supply of material.
8 Repairing of wall / floor at original position shall be done by the contractor. Cement, concrete, sand and wall paint etc. shall be supplied by the contractor only.
9 Any other civil work required and its repairing at original position shall be done by the contractor.

Technical specification no 31 for Item No. 31

This includes supply at site, laying, fixing and connecting of G.I strip of size 25 x 3 mm from earth station / existing earthing system to L.T. panel, L.T switchgears, etc. as directed. The G.I strip also shall be laid from earth station to LT switch gears & transformers etc. directly connected to two separate and distinct main earth as directed and shall be clamped suitably on wall/floor or buried in the ground / pucca trench as directed. The work includes all material & labour required shall be done as directed by Engineer-in-charge.

Technical specification no 32 for Item No. 32

This includes supply at site, laying, fixing and connecting of G.I wire of size 8 SWG from earth station/existing earthing system to Junction Boxes/Distribution Boards/lighting accessories etc. as directed. The G.I wire also shall be laid from earth station to Junction Boxes/Distribution Boards/lighting accessories etc. directly connected to two separate and distinct main earth as directed and shall be clamped suitably on wall/floor or buried in the ground / pucca trench as directed. The work includes all material & labour required shall be done as directed by Engineer-in-charge.

Note: 1) The drops of the light/fan/plug points etc. shall be considered in suitable size of concealed PVC pipe to be laid along with sub-circuit pipe up to switch board without any extra payment.

2) The suitable length of down rods of ceiling fans shall be provided by considering the height of false ceiling, so that fans shall be accommodate below false ceiling without any extra payment.

3) If any ancillary work arises during the execution of work the Contractor shall complete the item/items by carrying out such ancillary work without any extra payment.

4) The work shall be carried out with entire satisfaction of Engineer-in-Charge.

Seal & Sign of Contractor

Executive Engineer (E)
Deendayal Port Authority

NEW CISF BARRAK WIRING (TENTATIVE DRAWING)

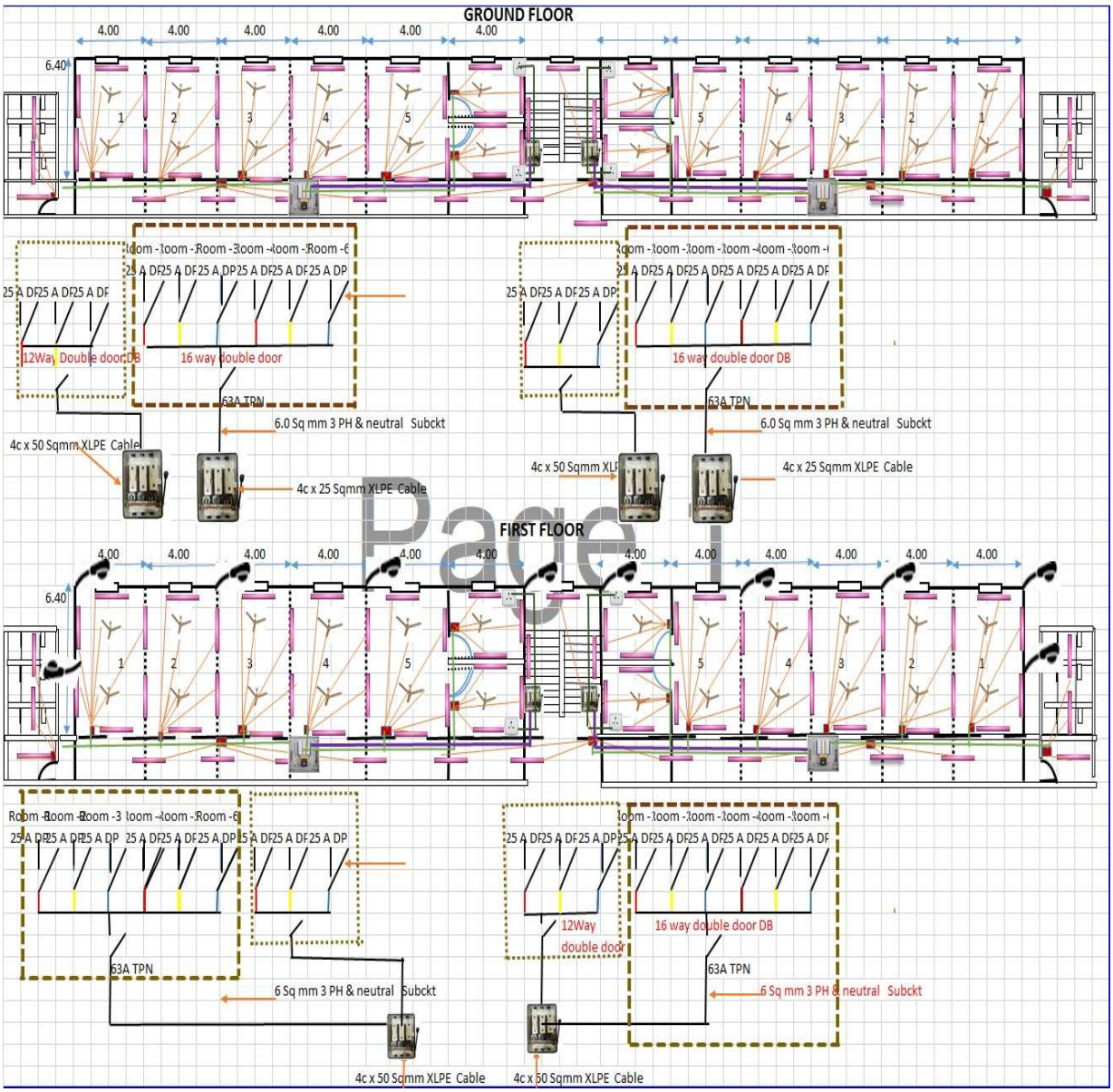


Fig (1.1)

Seal & Sign of Contractor

Executive Engineer (E)
Deendayal Port Authority

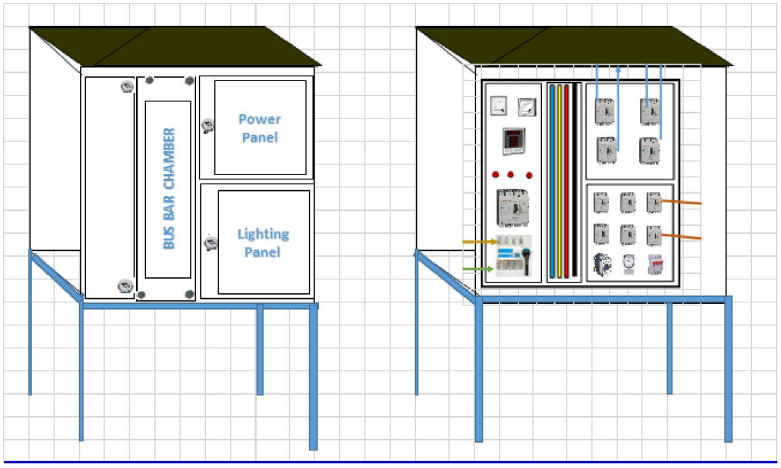


Fig (1.2)

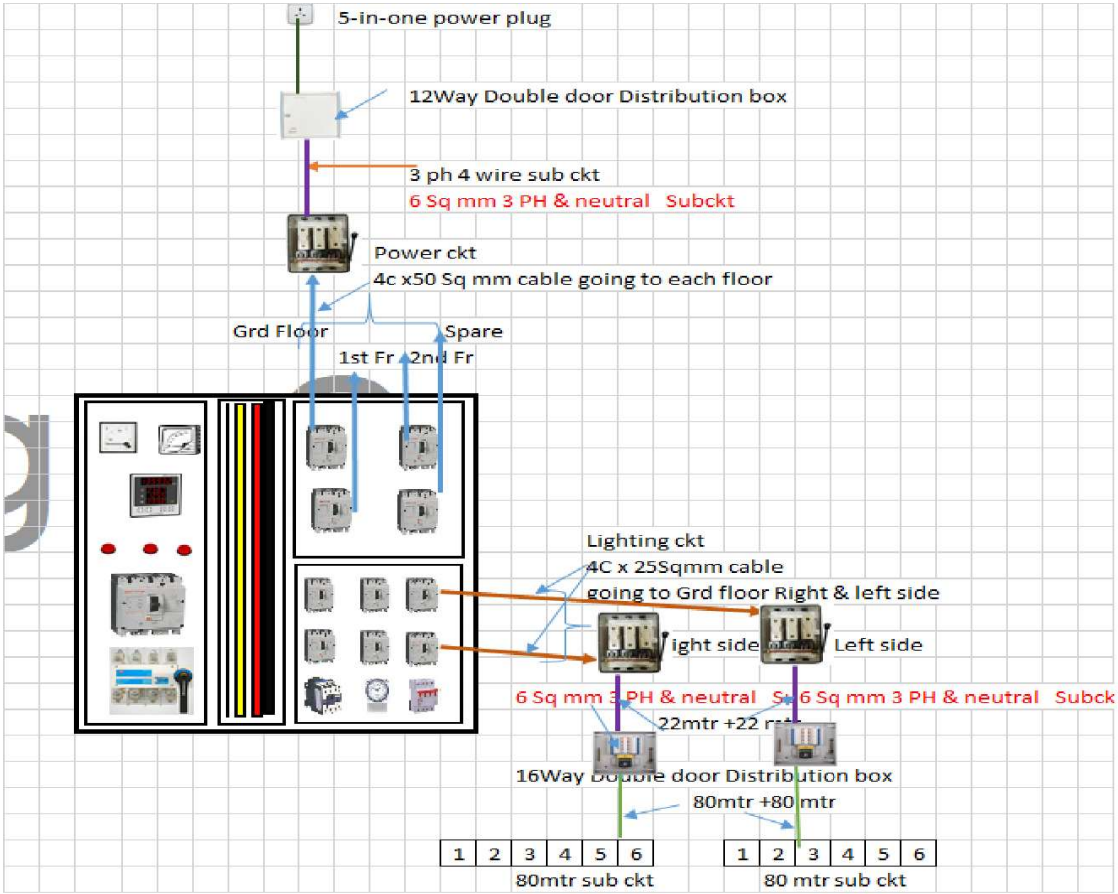


Fig 1.3

Seal & Sign of Contractor

Executive Engineer (E)
Deendayal Port Authority