

**Name of Work :- Construction Of 2000MT capacity Godown Building at Godhra  
Dist:-Panchmahal.**

**SPECIFICATION INDEX**

<b>It. No.</b>	<b>Description of Item</b>	<b>Applicable specification reference</b>
1	Excavation for foundation upto 1.5 m depth including sorting out and stacking of useful materials and disposing off the excavated stuff upto 50 Meter lead.(C) Hard Murrum	As per Separate Sheet attached.
2	Excavation for foundation for depth from 1.5 m to 3.0 m including sorting out and stacking of useful materials and disposing off the excavated stuff upto 50 Meter lead. (D) Soft rock not requiring Blasting	As per Separate Sheet attached.
3	Providing and laying controlled cement concrete M-150 and curing complete including the cost of form work and reinforcement for reinforced concrete work in : (a) Foundations, footings Bases of columns and the like and Mass concrete.	As per Separate Sheet attached.
4	Providing and laying controlled cement concrete M 250 using B.T. stone aggregate and curing complete including the cost of form work but excluding the cost of reinforcement for reinforced concrete work in. (A) Foundation footing, base of columns & mass concrete.	As per Separate Sheet attached.
5	Providing and laying controlled cement concrete M 250 using B.T. stone aggregate and curing complete including the cost of form work but excluding the cost of reinforcement for reinforced concrete work in. For RCC Columns up to Plinth level.	As per Separate Sheet attached.
6	Providing and laying cement concrete 1:3:6 (1-Cement : 3- coarse sand : 6-hand broken stone aggregates 40 mm nominal size) and curing complete excluding cost of formwork in (A) Foundation and Plinth (upto 10 ton)	As per Separate Sheet attached.
7	Providing and Laying controlled cement concrete M-250 & including finising smooth with curing complete including the cost of form work but excluding cost of reinforcement concrete for RCC PLINTH BEAM for any cross sectional area of beam.	As per Separate Sheet attached.
8	Brick work using common Brunt clay building bricks having crushing strength not less than 35 Kg./Sq.cm.. in cement mortar 1:6 (1cement : 6 fine sand) (b) Conventional In Foundation and Plinth	As per Separate Sheet attached.
9	Filling in foundation and plinth with murrum or selected soil in layers of 20cm. thickness including watering, ramming and consolidating etc. completed.	As per Separate Sheet attached.
10	Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20 cm. in depth consolidating each deposited layer by ramming and watering.	As per Separate Sheet attached.
11	Filling foundation and plinth with sand under floors including watering, ramming and consolidating dressing etc, comp.	As per Separate Sheet attached.
12	Applying general insecticide pest control treatment to floors, cupboards etc. including labour and materials etc. complete.	As per Separate Sheet attached.

It. No.	Description of Item	Applicable specification reference
13	Providing and laying trimix vacume dewatering process cement concrete work ordinary M-200 and curing complete including compaction & Finishing of cement concrete road by trimix process providing extra labour charge for trimix vacuum dewatering service process on cement concrete road surface by using vacuum dewatering pump floater surface vibrator including making groove 5mm width and filling with polynile kpolynier and rough finish to surface as per instruction including levelling etc complete. for RCC TRIMMIX FLOOR SURFACE	As per Separate Sheet attached.
14	Providing and laying controlled cement concrete M-200 and curing comp. including the cost of form work but excluding the cost of reinforcement for reinforced concrete work for Columns, pillars, posts and struts AT GROUND FLOOR	As per Separate Sheet attached.
15	Providing and Laying controlled cement concrete M-200 and with curing etc.complete. Including the cost of formwork but excluding the cost of reinforcement for R.C.C work in Column heving any cross section area of Column.For First Floor Column.	As per Separate Sheet attached.
16	Providing and Laying controlled cement concrete M-200 and with curing etc.complete. Including the cost of formwork but excluding the cost of reinforcement for R.C.C work in beam heving any cross section area of BEAM. for First floor.	As per Separate Sheet attached.
17	Providing and laying controlled cement concrete M-200 and curing complete including the cost of form work but excluding the cost of reinforcement for reinforced concrete work in Lintels Ground Floor	As per Separate Sheet attached.
18	Providing and laying controlled cement concrete M-200 and curing complete including the cost of form work but excluding the cost of reinforcement for reinforced concrete work in CHHAJJAS For All FLOOR	As per Separate Sheet attached.
19	Providing and Laying controlled cement concrete M-200 including finising smooth with curing complete including the cost of form work but excluding cost of reinforcement for reinforced concrete work in VARTICAL AND HORIZONTAL FINS/ PADADI For all floor.	As per Separate Sheet attached.
20	Providing TMT Bar FE 500D reinforcement for R.C.C.work including bending, binding and placing in position complete upto floor two level	As per Separate Sheet attached.
21	Providing and laying brick work using common burnt clay building conventional type bricks having crushing strength not less than 35 Kg./Sqcm. in super structure in cement mortar 1:6 (1 cement : 6 fine sand) for Ground floor including the cost of all materials and labour charges etc. complete.	As per Separate Sheet attached.
22	Providing and laying brick work using common burnt clay building conventional type bricks having crushing strength not less than 35 Kg./Sqcm. in super structure in cement mortar 1:6 (1 cement : 6 fine sand) for First floor including the cost of all materials and labour charges etc. complete.	As per Separate Sheet attached.
23	Providing and fixing rolling shutters of approved make made of 80 mm wide M.S. laths inter-locked together through their entire length and jointed together at the ends by end locks mounted on specially designed pipe shaft with bracket plates, guide channels and arrangements for inside and outside locking with push-pull operation including the cost of hood cover and spring etc. complete.(B) Shutters having width 3.5 M. and above.	As per Separate Sheet attached.

It. No.	Description of Item	Applicable specification reference
24	Providing and fixing Glass bicks Partition using glass brick of required design,type size of glass bick 19 x 19 cm and fixing the same with 4mm dia alluminium bar at every 3rd layer with white cement etc.complete.	As per Separate Sheet attached.
25	Providing & fixing M.S. Grill using 16 mm dia M.S. Bars @ 15 cm C/C fixed in frame using angle 35 mm x 6 mm, 35 x 6 mm flat in center, and Galvanized wiremesh jali 20mm x 20 mm spacing, including red lead primer coat and two coats of oil painting etc. complete.	As per Separate Sheet attached.
26	Providing 10 mm thick cement plaster in single coat on fair side brick/concrete walls for interior plastering upto floor two level and finished even and smooth in cement mortar 1:3 (1 cement : 3 sand) including finishing with a floating coat of neat cement slurry etc. complete for Ceiling .	As per Separate Sheet attached.
27	Providing 15mm thick cement plaster in single coat on brick/concrete walls for interior plastering upto floor two level and finished even and smooth in (i) Cement mortar 1:4 (1-cement:4-sand) MALA finish plaster etc. complete. for Ground Floor	As per Separate Sheet attached.
28	20mm thick sand faced cement plaster on walls upto height 10 metres above ground level consisting of 12mm thick backing coat of C.M. 1:3 (1-cement : 3-sand) and 8mm thick finishing coat of C.M. 1:1 (1-cement : 1-sand) etc. complete.	As per Separate Sheet attached.
29	Providing and laying polished Kota stone slab flooring over 20mm (Average) thick base of cement mortar 1:6 (1-cement : 6-coarse sand) laid over and jointed with grey cement slurry including rubbing and polishing etc. complete.(A) 25mm thick	As per Separate Sheet attached.
30	Providing and laying water proofing tretment with chaina mosaic tiles flooring over avg 40 mm C.C. 1:2:4 {1 Cement : 2 sand : 4 Kapachi / Gritt 6 to 12 mm size} bedding for maintaining slope for plain and curve surface & 12 mm to 20 mm of broken piece of seramic / glazed tiles ( one for more color as directed ) to be laid over cement mortar bedding of C M 1:3 (1 cement : 3 sand ) containg one Kg of water profing materials per bag of O P C at plain or / and slops and to be tempered to bring mortar eramic up to surface with using white cement and colour pigment including rounding of junctions and extending them up to 15 cm along the wall and curing with bends any pattens or design as per drawing and cleaning by using oxalic acid etc complete.	As per Separate Sheet attached.
31	Wall painting (two coats) with plastic emulsion paint of approved brand and manufacture on undecorated wall surface to give an even shade including throughly brushing the surface free from mortar droppings and other foreign matter and sand papered smooth & including Birla Putty	As per Separate Sheet attached.
32	Finishing wall with weatherproof exterior emulsion paint on wall surface (two coats) to give an required shape even shade after thoroughly brushing the surface to remove all dirt and remains of loose powdered materials.etc.complete.	As per Separate Sheet attached.
33	Providing and Fixing PROFLEX type self supported Roof (Arch Type) using Cold rolled,Galvalume steel colour coated sheet 1.0mm thick conforming to ASTMA 653,A792 DIN,ALU Zinc Coating : AZ150 and Regular Modified Polyster painting with epoxy primer service coat at bottom,including necessary fixtures & Fastening for Lighting arrangement and turbo ventilator with sky light.	As per Separate Sheet attached.

It. No.	Description of Item	Applicable specification reference
34	Providing and fixing Turbo Ventilator made from Alluminium and stainless steel with ploy Carbonate Sky Light of size 2 x 7 feet including fixing in roof as and where directed by Engineer in charge etc.complete.	As per Separate Sheet attached.
35	Providing throating or Plaster Drip and moulding to RCC Chhajja.	As per Separate Sheet attached.
36	Providing 12mm wide groove/notch in plaster including finishing the same etc.complete for all height/	As per Separate Sheet attached.
37	Providing corrugated G.I.sheet of class-3 roof ing fixed with glavani shed iron JorL Hooks,Bolt sand nuts 8 mm diameter with bitume nand G.I.limpet washer orG.I.limpet washer.filled with white lead complete excluding the cost of purlins,Rafters andTrusses.(1) 0.80 mmthickness.	As per Separate Sheet attached.
38	Box cutting the road surface to proper slope and camber for making a base for road work including removing the excavated stuff with desposing on the road side slope as directed up to 50 mt. Lead	As per Separate Sheet attached.
39	Spreading blindage or road crust filling the gap sin metal and leveling to camber and gradient as directed.(ii) Sand & Supplying of screened cleaned pea(rounded) gravel of following sizes) (B ) Supplying of unscrened gravel	As per Separate Sheet attached.
40	Providing and laying, Spreding and compacting graded stone aggrigate to wet mix mecadam 150 mm thick in one layer each layer not exceeding 150mm in thickness as per MORT & H specification including premixing the material with water at OMC in mechanical mix plant carriage of mixed materialby tipper to site laying in uniform layers with paver in sub base/base course on well prepared surface and compacting with vibratory roller to achieve the desired density.	As per Separate Sheet attached.
41	Providing and laying foundation cement concrete 1:3:6 ( 1 cement :3 coarse sand : 6 aggregate 20mm nominal size ) graded concrete and curing complete	As per Separate Sheet attached.
42	Providing and and laying controlled cement concrete M250 and curing etc. comp. excluding the cost of form work and reinforcement for R.C.C. work for internal road.	As per Separate Sheet attached.
43	Compaction and finishing of cement concrete road by tremix process, providing extra labour charge for tremix ( Vaccum dewatering service ) process on cement concrete road surface by using vaccum dewatering pump floater surface vibrator including making groove 5mm width and filling with polyvynile polymer and rough finish to surface as per instruction including leveling etc. complete.	As per Separate Sheet attached.
44	Supplying and installing of Dry Chemical Powder type 5 Kg. capacity fire extinguisher as per IS 2171 ISI mark with necessary fitting etc. complete.	As per Separate Sheet attached.
45	Providing carbon dioxide type fire extinguisher 4.50 Kg. capacity with IS mark and test certificates of explosive department of Nagpur.	As per Separate Sheet attached.

It. No.	Description of Item	Applicable specification reference
46	Point wiring for Light / Bell with 2-1.5 sq.mm & earth wire of 1.5 sq.mm (Green) both are of ISI marked 1.1 KV grade FRLS PVC insulated multi strand copper wires up to 10 mtr length , in below type of pipe erected with 6A Modular type switch / bell push & accessories and earth continuity of following type, erected on PVC / Metallic/Wooden box, single mounting base frame covered with textured/metallic/white front plate modules erected on / in wall / ceiling as per pipe erected, with necessary Lamp holder/ceiling rose / H.D.Connector as directed. (f) with medium class Rigid PVC pipe and accessories erected concealed in wall/ceiling complete Ca-III ( Make:- Pipe:Precision/Polycab/Vraj/Nihir /Astral, Wire: Polycab/RR Kabel/KEI/Finoloex/Havells, Accessories: Havells/Anchor/Greatwhite/Vinay	As per Separate Sheet attached.
47	Point wiring for FAN with 2-1.5 sq.mm & earth wire of 1.5 sq.mm (Green) both are of .ISI marked 1.1 KV Grade FRLS PVC insulated multi strand copper wires up to 10 mtr length, in below type of pipe erected with 6A Modular type switch and hum free EME step type electronic fan regulator mounted and accessories with earth continuity of following type erected on PVC / Metallic/Wooden box, single mounting base frame covered with textured/metallic/white front plate modules erected on / in wall / ceiling as per pipe erected. with necessary ceiling rose / H.D.Connector as directed. (f) with medium class Rigid PVC pipe and accessories erected concealed in wall/ceiling complete Ca-III ( Make:- Pipe:Precision/Polycab/Vraj/Nihir /Astral, Wire: Polycab/RR Kabel/KEI/Finoloex/Havells, Accessories: Havells/Anchor/Greatwhite/Vinay	As per Separate Sheet attached.
48	Point wiring for Individual Plug with & earth wire of 1.5 sq.mm (Green) both are of ISI marked 1.1 KV grade FRLS PVC insulated multi strand copper wires up to 10 mtr length, in below type of pipe erected complete with Modular type switch & 5 pin Plug erected on PVC / Metallic/Wooden box covered with appropriate front plate modules erected on / in wall / ceiling as per pipe erected with following type of accessories.[I] For 6A Plug and 6 a switch with 2-1.5 sq.mm Cu. Wire from nearby switchboard/mcb db board (f) with medium class Rigid PVC pipe and accessories erected concealed in wall/ceiling complete Cat III ( Make:- Pipe:Precision/Polycab/Vraj/Nihir /Astral, Wire: Polycab/RR Kabel/KEI/Finoloex/Havells, Accessories: Havells/Anchor/Greatwhite/Vinay	As per Separate Sheet attached.
49	Point wiring for on board Looped Plug with 6A Modular type switch & 5 pin socket erected on PVC / Metallic/Wooden box, single mounting base frame covered with textured / metallic/white front plate modules erected on / in wall / ceiling with following type accessories. Ca-III ( Make:- Accessories: Havells/Anchor/Greatwhite/Vinay,C&S	As per Separate Sheet attached.
50a	Providing following type of Modular Type Accessories mounted with PVC / metallic/Wooden box, single mounting base frame covered with textured / metallic/white front plate , modules erected with necessary connections as per site situation directed by Engineer In charge (9) 16 Amp. SP one way switch Cat.III ( Make:-Accessories: Havells/Anchor/Greatwhite/Vinay,C&S)	As per Separate Sheet attached.
50b	(10) 6/16Amp. Universal socket Cat.III ( Make:- Havells/Anchor/Greatwhite /Vinay,C&S )	As per Separate Sheet attached.
51	Providing and erecting Mains with 1.1 KV grade FRLS PVC insulated ISI marked stranded Copper conductor wire in following type of pipe to be erected concealed in /flushed on wall/ceiling, with 1.5 sq. mm copper conductor FRLS PVC insulated stranded wire of green colour for earth continuity of following size (a) with medium class Rigid PVC pipe and accessories. (b) 2 wire 2.5 sq. mm (make:Pipe:Precision/Polycab/Vraj/Nihir /Astral, Wire: Polycab/RR Kabel/KEI/Finoloex/Havells, )	As per Separate Sheet attached.

It. No.	Description of Item	Applicable specification reference
52	providing and erecting Mains with 1.1 KV grade FRLS PVC insulated ISI marked stranded Copper conductor wire in following type of pipe to be erected in / on wall / ceiling with 2.5 sq. mm copper conductor FRLS PVC insulated stranded wire of green colour for earth continuity of following size (a) with medium class Rigid PVC pipe and accessories. (h) 4 wire 6 sq. mm (Make:Pipe:Precision/Polycab/Vraj/Nihir /Astral, Wire: Polycab/RR Kabel/KEI/Finoloex/Havells,	As per Separate Sheet attached.
53	Supplying and erecting Flexible PVC insulated multi strand multi core 1.1 kv grade ISI marked copper wires of following size to be erected as directed.(e) 1.50 Sq.mm 3 core round PVC sheathed (Make:Pipe:Precision/Polycab/Vraj/Nihir /Astral, Wire: Polycab/RR Kabel/KEI/Finoloex/Havells,	As per Separate Sheet attached.
54	Providing & erecting Switch board for Computer or electric apparatus consisting of following modular type accessories mounted with PVC / Metallic concealed/open box with single mounting base frame covered with textured/metallic /white front plate,modules erected with necessary connections as directed.1 no. 6A/16A universal plug-switch combined.3 nos. 6A Switch 3 nos. 6A 5 pin Plug For Modular Type Accessories Cat. III ( Make:- Havells/Anchor/Greatwhite /Vinay ,C&S)	As per Separate Sheet attached.
55	Supplying and erecting LED indoor fittings with LEDs of wattage 0.2 Watt to 0.5 Watt assembled on single MCPCB, with housing used as a heat sink shall be made of thick sheet Steel conforming to IS: 513/CRCA/ aluminium die cast powder coated and high U.V. & corrosion resistance with diffuser with company mark/name 160V to 270V, Power Factor more than 0.9, THD < 15%, CCT 3000 K to 6500K, Luminaire efficacy> 85 lumens/watt ,LED LED driver efficiency > 85 % ( fitting required LM-79 & LM-80 Certificates)(NOTE: Below description have shown ranges of Wattage capacity of LED fittings.The Engineer incharge may select any wattage capacity between the ranges shown.) (A) Tube Light with integral driver (v) 36-40 Watts, Surge-2 KV, IP-20, conventional 4 feet Ca-III ( Make :- Phillips, Havells, OSRAM, Crompton, Wipro, Jaguar )	As per Separate Sheet attached.
56(a)	Supplying and erecting LED street light / Flood light fittings with High power White LEDs wattage of 3 Watt and above assembled on single MCPCB, efficiency more than 130 lm/w and corrosion free High pressure die cast aluminum housing with smooth finish powder coated and heat sink extruded aluminium with diffuser and Polycarbonate optics/ lenses, with toughened glass with company mark/name engraved or embossed 160 to 270 V,Power Factor more than 0.95, THD < 10 %, CCT 3000 K to 5700K,Uniformity ratio >0.45, Luminaire efficacy> 100 lumens/watt . LED driver efficiency > 85 %.( fittings required LM-79 & LM-80 certificates)(NOTE: Below description have shown ranges of Wattage capacity of LED fittings.The Engineer incharge may select any wattage capacity between the ranges shown.) ((A) Street Light (IP-65), Surge protection -4KV integral and ,Light must have 440VAC line supply with over-voltage protection.(ii) above 48 to 60 Watts Cat-III ( Make :- Phillips, Havells, OSRAM, Crompton, Wipro, Jaguar )	As per Separate Sheet attached.
56(b)	(B) Flood Light (IP-65), Surge protection -4KV integral and ,Light must have 440VAC line supply with over-voltage protection.(ii) above 48 to 60 Watts Cat-III ( Make :- Phillips, Havells, OSRAM, Crompton, Wipro, Jaguar )	As per Separate Sheet attached.
56(c)	(iii) Above 60 to 90 watts Cat-III ( Make :- Phillips, Havells, OSRAM, Crompton, Wipro, Jaguar )	As per Separate Sheet attached.

It. No.	Description of Item	Applicable specification reference
56(d)	(C) Post Top Lantern LED fitting comprises of finish cast aluminum spigot and spun aluminum canopy fixed with opal polycarbonate, pipe arrangement for vertical mounting driver and accessories wired upto terminal block.IP 65 (ii) 40W Cat-III ( Make :- Phillips, Havells, OSRAM, Crompton, Wipro, Jaguar )	As per Separate Sheet attached.
57	Providing and erecting Approved make Four pole moulded case circuit breaker having breaking capacity ICU of 25 KA. at 415 V, having normal current rating up to 25 A to 100A. with Fixed thermal & magnetic release suitable to work on A.C. supply 50 c/s. with all internal connections, spreader tinned copper & complete erected in existing 16 G.M.S. housing ICS=100% of ICU only Cat III (Make: L & T, Havells, C&S, Indoasian)	As per Separate Sheet attached.
58	Providing and erecting Approved make Four pole moulded case circuit breaker having breaking capacity ICU of 35 KA. at 415 V. having Normal current rating 200A. with variable Thermal & magnetic release suitable to work on A.C. supply 50 c/s. with all internal connections, spreader tinned copper & complete erected in existing 16 G.M.S. housing ICS=100% of ICU only. Cat III (Make: L & T, Havells, C&S, Indoasian)	As per Separate Sheet attached.
59(a)	Supplying and erecting triple pole & neutral 440V / 500V panel mounting Copper Busbars with four equal Nos. of electrolyte bus having current density not more than 1.6 Amp. / sq.mm (Rated current / cross section area) duly wrapped with colour insulating tape for phase sequence of following current carrying capacity, erected with necessary bus bar supports /insulators, main cable socket to each bar, erected in existing cubical panel with necessary connections. (A) Suitable for 100 Amp. Capacity	As per Separate Sheet attached.
59(b)	(B) Suitable for 200 Amp. capacity	As per Separate Sheet attached.
60	providing and erecting Miniature circuit breaker single pole 0.5A to 2A system and having breaking capacity 10 KA to be erected in existing box. confirming to IS 8828/1996 with ISI Mark (Make: L & T, Havells, C&S, Indoasian)	As per Separate Sheet attached.
61	providing and erecting Miniature circuit breaker single pole 6A to 25A suitable to operate on 240 V A.C. system and having breaking capacity 10 KA to be erected in existing box. confirming to IS 8828/1996 with ISI Mark Cat.III (Make : L & T, Havells, C&S, Indoasian)	As per Separate Sheet attached.
62(a)	Providing & erecting 415V MCB Four Pole Switch for Lighting Load (B curve) having 10KA breaking capacity & confirms to IS :8828 in existing box having following capacity(a) 6 to 32 Amp. Cat.III (Make: L & T, Havells, C&S, Indoasian)	As per Separate Sheet attached.
62(b)	(b)40 Amp. Cat.III (Make: L & T, Havells, C&S, Indoasian)	As per Separate Sheet attached.
63	Plastic enclosure fitted with DIN rail suitable for incorporating Three /Four nos. MCB(Make: L & T, Havells, C&S, Indoasian)	As per Separate Sheet attached.
64	Providing and erecting Sheet Steel powder coated MCB distribution board - flush / surface mounted fitted with busbar, neutral link, earth bar and DIN rail, Conforms to IS 8623-1 & 3, IEC 61439-1 & 3 without MCB to house appropriate nos. of MCBs.(The DBs should be used of same company of MCB to be used) suitable for (B) three phase incoming and single phase horizontal type outgoing Per phase isolation type (PPI) (b) sheet steel double door (ii)6 way(Make: L & T, Havells, C&S, Indoasian)	As per Separate Sheet attached.

It. No.	Description of Item	Applicable specification reference
65	providing and erecting Approved make RCCBs conforming to IS: 12640 and having sensitivity of 30 mA and Short Circuit withstand capacity of 10 KA and suitable for operation on single phase 240 V,50Hz. having characteristic of quick action & tripping with all advance feature & do not incorporate any electronic component. for following Max. rating erected as directed. (i) 25 Amps.DP.Cat-III (Make: L & T,Havells,C&S,Indoasian)	As per Separate Sheet attached.
66	Providing and erecting Pipe type earthing with 40 mm dia 2.5 mtr long 'B' grade G.I. pipe with necessary coupling buch buried in specially prepared earth pit & G.I. earth wire of 8 SWG erected & connected as directed (For panel)	As per Separate Sheet attached.
67	For using salt and charcoal / coke as required for pipe type earthing.	As per Separate Sheet attached.
68	Supplying & erecting earth pit of minimum bore dia.150mm size approved make Earthing Electrode consisting Pipe-in-Pipe Technology as per IS 3043-1987 made of corrosion free hot dipped G.I.Pipes having Outer pipe dia of 50mm having 80-200 Micron galvanising, Inner pipe dia of 25 mm having 200-250 Micron galvanising, connection terminal dia of 12mm with constant ohmic value surrounded by highly conductive compound with high charge dissipation suitable for following type of applications with chamber and heavy duty cover. (A)(approved make OEM has to submit test certificate including value of earth resistance of installation duly stamped and signed by agency and officer Incharge has to ensure the value of earthing resistane mentioned in test Certificate) & having back filling compound of (B) Inner chemical (CCM Compound)- Resistivity:- 0.2 ohm / meter testing as per IEC 62561-2017, Voltage drop:- < 1 volt at no load & dry form, Sulphar content:- <2%(C) Back fill Compound :- Earthing compound should be capable to retain moisture for long time Necessary test report must be submitted by Agency. (a) For Electrical Inst	As per Separate Sheet attached.
69	Providing & erecting weather proof, dust & vermin proof, floor mounted front operated indoor type cubical panel board necessary IP-42 and above protection as per approval from engineer incharge made from 14 SWG thick CRC M.S. sheet for outer body & doors, 16 SWG thick CRC M.S.sheet for internal partitions with necessary accesories , supporting angles/ flats channel including cutting, bending, drilling, welding, riveting with internal partitions & cable alley as per requirements & instruction of engineer-in-charge with erection of supplied switch gears, BUSBARS, suitable size of inter connecting PVC copper wire / copper-aluminium strips, rubber grommets, rib, bakelite control fuses/MCB for measuring instruments, earth bus & earth bolts, foundation flange - bolts-base Plates, sufficient nos. of hinged doors, handles with locking arrangement and rubber gasket,heavy duty end terminal connection,danger notice board,necessary ventilation,earthing strip complete. The Panel shall be painted with epoxy powder coating. (The rates excludes the cost of switchgears, bus bars, inter connecting mains & Copper Aluminium strip	As per Separate Sheet attached.
70	Add for specialised type of fabrication work on height by using scaffolding or tower stair or rope as well as for lift machine room & siren works.	As per Separate Sheet attached.
71(a)	Providing and erecting XLPE(IS:7098)(I)-88 ISI armoured cable multistrand Aluminium conductor for 1.1 KV. to be laid on wall with necessary clamps or in existing trench / pipe of following size of cables (C) 3 1/2 core 50 Sq. mm ( 25 Sq.1/2 mm core) (Mkae:- Finolix,RR Kable,Havells,polycab,KEI)	As per Separate Sheet attached.



It. No.	Description of Item	Applicable specification reference
71(b)	(F) 3 1/2 core 70 Sq. mm (35 Sq. mm 1/2 core) (Mkae:- Finolix,RR Kable,Havells,polycab,KEI)	As per Separate Sheet attached.
72	Providing and erecting XLPE (IS:7098)(I)-88 ISI armoured cable multistrand / Solid Aluminium conductor for 1.1 KV. to be laid on wall with necessary clamps or in existing trench / pipe of following size of cables (B) 4 core 6 Sq. mm (Mkae:- Finolix,RR Kable,Havells,polycab,KEI)	As per Separate Sheet attached.
73	Providing and erecting XLPE (IS:7098)(I)-88 ISI armoured cable multistrand Aluminium conductor for 1.1 KV. to be laid on wall with necessary clamps or in existing trench / pipe of following size of cables (A) 4 core 16 Sq. mm (Mkae:- Finolix,RR Kable,Havells,polycab,KEI)	As per Separate Sheet attached.
74	Making trench in soft soil of suitable width of 90 cm deep for laying cable or locating the fault all over the run and back filling the same and making the surface as normal ground..	As per Separate Sheet attached.
75	Providing & laying approved make Double walled corrugated pipes (DWC) of polyethylene(conforming to IS 14930 II )with necessary connecting accessories of same material at required depth in existing trench for laying of cable. below ground / road surface for enclosing cable (A)50 mm Outer dia	As per Separate Sheet attached.
76(a)	Providing and, fixing heavy duty flange type brass cable gland with rubber ring for PVC insulated armoured cable complete with out going tails, insulating tape etc for following size of cables.(B) 2 to 4 core 6 Sq. mm	As per Separate Sheet attached.
76(b)	(D) 2 to 4 core 16 Sq. mm	As per Separate Sheet attached.
77(a)	Providing and, fixing heavy duty flange type brass double compression type cable gland with rubber ring for PVC insulated armoured cable complete with out going tails, insulating tape etc for following size of cables.. (A) 3 core 35/50 Sq. mm	As per Separate Sheet attached.
77(b)	(E) 3 & 1/2 core 70 Sq. mm	As per Separate Sheet attached.
78(a)	Solder less crimping type Aluminium lugs conforming to IS suitable for cable of following size evenly crimped with high pressure tool & connected to switchgear terminals with brass/cadmium plated nut bolts in an approved manner. (A) 1.5/ 2.5/4/6 Sq.mm	As per Separate Sheet attached.
78(b)	(C) 16/25 Sq.mm.	As per Separate Sheet attached.
78(c)	(D) 35/50 Sq.mm.	As per Separate Sheet attached.
78(d)	(E) 70 Sq.mm.	As per Separate Sheet attached.
79	Providing and erecting Approved make Ceiling fan with double ball bearing ISI mark with condenser A.C. 230V.50 c/s.1200 mm. sweep complete, canopy erected on existing hook or clamp with earthing. [Make shall be approved by Engineer in charge] (Make: Bajaj,Havells, Orient, Crompton)	As per Separate Sheet attached.
80	Supplying and erecting 19 / 20 mm. nominal bore Medium Class M.S. Pipe down rod erected duly painted for fan complete with proper insulation without leakage and earthing.	As per Separate Sheet attached.
81	Supplying & erecting single phase approved make industrial exhaust fan suitable for medium duty ring mounted low noise operation suitable for medium duty having following dia size and maximum speed in RPM [A] 305 mm dia 900 RPM Cat II (Make: Bajaj,Havells, Orient, Crompton)	As per Separate Sheet attached.

It. No.	Description of Item	Applicable specification reference
82	Supplying and erecting approved make double ball bearing oscillating type Heavy duty bracket fan with Aluminium Blades A.C. 230V. 50cy/s wall mounted with height adjustment and rotary tilting device complete with guard, wall bracket,mounting accessories as directed.(B) 600mm (Make: Bajaj,Havells, Orient,	As per Separate Sheet attached.
83	Supplying and erecting approved make Octagonal pole made from HR sheet steel. The pole should be made as per IS. and shall be coated with hot dip galvanizing as per IS 2629/2633/4759, suitable suspend local wind speed with integral Junction box consist of terminal plate of min 6mm Hylam sheet, standard profile 35mmX7.5mm Din-Rail for MCB Mounting, stud type terminal and arrangement for cable termination to be erected With Suitable foundation (Included) as per details given by manufacturer considering site requirement. (C) 5 Mtr. Long 70 mm Top X 130 mm bottom dia, 3 mm thickness with 200mmX200mmX12mm base plate, 4-M16 Bolts and 600mm long with necessary G.I. J Bolts .Approx Pole weight 46 kg	As per Separate Sheet attached.
84	Supplying & erecting approved make SMC press moulded composite FRP. loop-in, loop-out approx. 2mm thick box complete with Bakelite connector strip 5way(3P+N+E),DIN rail for mounting mob & hinged doors as per requirement having locking arrangements with mounting clamp with nuts, bolts & washers suitable for erection on pole with cable clamps& earth bolt of following size of box. (C)150mm x 125mm x 100mm [deep]	As per Separate Sheet attached.
85	Supplying and erecting Street light pole bracket comprising main B Class GI pipe of 4.2 cm/require outside dia. complete with suitable B Class G.I. sleeve tubing of approx. 45cms.length and suitable for 76.5mm/80mm/require size of pole top having nuts and bolts for fixing the brackets and having spread of 0.5 mtr. Length with 110 deg.with vertical plane and suitable welded stiffener reducer and nipple with check nut complete painted with one coat.of Red oxide / PU base primer and two coats of Aluminium / PU paint. paint with following nos of arms.[A] Single Arm bracket 0.5 Mtr	As per Separate Sheet attached.
86	Supplying and erecting B class Galvanized iron pipe having smooth finished bore of the pipe on both ends erected nuts and bolts along the pole / wall shaping the pipe as per site requirement. Pipe dia as following. (E) 65 mm dia.	As per Separate Sheet attached.
87	Supplying & erecting approved make IP 55 grade Company fabricated Timer Panel of following capacity for switch On-Off street lights on time scheduling basis made from 16G CRCA sheet duly epoxy power painted inside and outside with hinged doors and locking arrangement consisting of suitable size of 4 Pole MCB and 4 pole contactor (cat-III)with analog time switch, auto manual switch of same make and suitable input and output Bakelite terminals and with door earthing approved by Engineer in charge. (B) 40 Amp	As per Separate Sheet attached.
88	Providing & erecting water cooler having storage capacity 150 Ltr. & cooling capacity 150 Ltr.per hour @ an ambient temp of 45° C. The outlet temp. of the water should drop by 15°C within a hour, The water cooler should be comprising of hermetically sealed compressor, fan motor, condensing unit, water tank surrounded by evaporating, coil, thermostats, relay etc.complete with necessary inlet & outlet connection. The body of water cooler will be made from Stainless Steel. (Make: usha,Blue Star,Voltas)	As per Separate Sheet attached.
89	Supplying & erecting 5 stage single reverse osmosis water purification system with M.S. powder coated frame, prefilter housing with 'O' ring presediment filter GAC filter, carbon filter suitable buster DC pump capacity 80 psi, mention with 40 psi inline type post carbon filter auto low & high pressure switches with following size of storage tank & LPH capacity & erected as directed [C] 50 Ltr / Hr with 150 psi 2 nos booster pump	As per Separate Sheet attached.

It. No.	Description of Item	Applicable specification reference
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Executive Engineer  
Godhra (R & B) Division  
Godhra