

Name of Work: Package: Construction of New Animal Husbandary Epic Center at (1) Sarsavani (2) Latipura and (3) Mujpur, Ta. Padra, Dist. Vadodara (Deposit Work)

SPECIFICATION INDEX

It. No.	Description of Item	Applicable specification reference
1	Excavation for foundation upto 1.5 m depth including sorting out and stacking of useful materials and disposing off the excavated stuff upto any lead. (B) Dense or Hard soil	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 any lead. (B) Dense or Hard soil	As per Separate Sheet attached.
3	Providing and laying cement concrete work 1:2:4 (1- Cement : 2- Coarse sand : 4- graded stone aggregates 20 mm nominal size) and curing complete Including cost of formwork But Excluding The Cost Of reinforcement for reinforced concrete work in (A) Foundations, footings, Base or columns and Mass concrete . (For PCC)	As per Separate Sheet attached.
4	Providing and laying controlled cement concrete M.250 and curing complete including the cost of formwork but excluding the cost of reinforcement for reinforced concrete work in (A) Foundations, footings, Base of columns and Mass concrete. (For Footing)	As per Separate Sheet attached.
5	Providing and laying controlled c.c. M.250 & curing complete including the cost of form work but excluding the cost of reinforcement for reinforced concrete work in Collumns, pillars, posts & struts upto floor two level for G.F. (For Column Up to PL)	As per Separate Sheet attached.
6	Providing and laying controlled cement concrete M.250 and curing complete including the cost of formwork but excluding the cost of reinforcement for reinforced concrete work in (C) Slabs, landing, shelves, Balconies, Lintels, Beams, Girders and Cantilever upto floor two level.(For Ground Beam)	As per Separate Sheet attached.
7	Filling available excavated earth (Excluding rock) in trenches plinth, sides of foundation etc in layers not exceeding 20 cm in depth consolidating each deposited layer by ramming and watering.	As per Separate Sheet attached.
8	Filling in foundation and plinth with murrum or selected soil in layers of 20cm. thickness including watering, ramming and consolidating etc.	As per Separate Sheet attached.
9	Filling in plinth with sand under floors including watering, ramming consolidating and dressing etc. complete.	As per Separate Sheet attached.
10	Anti-Termite System:Providing and laying of permanent piping technology anti-termite treatment before flooring work by installing LLDP (Low linear density polyethylene) tube of 8 mm O.D. & 6.4 mm 1.D. with inbuilt pressure compensation chip every 30 cm interval in the tube, having working pressure of 2 Kg/cm ² and release rate of 1.9 ltr/hour fixed by P-clips and nails. The LLDP pipe shall be installed at the entire periphery of the building and at internal network of building at a depth of 20 to 200 mm under floor at every 2 to 3 mtr. c/c distance (adjusted as per building layout) & Ends of loop pass through a PVC elbow of minimum 32 mm ID at junction box of wall and floor level, entering into a steel reinforced grooved flexible pipe of minimum 22 mm ID leading into junction box and the loops shall terminate in junction boxes & test every junction during injecting chemicals for termite control treatment. The anti termite chemical Imidacloprid 30.5% SC mix as per IS-6313 (part III) shall be injected by the pressure pump diluted with water @ 10.5 ml/5 ltr of water at the rate of 2 Kg/sq.cm @ 5 Ltr/SMT. The contractor shall submit approved line plan for piping system and junction boxes dully approved by Engineer-in-Charge with bond of 5 year warranty.(i)Anti Termite chemical injected area (Chemical injecting incl. labour cost)	As per Separate Sheet attached.

It. No.	Description of Item	Applicable specification reference
11	Providing and laying damp proof course 25mm thick cement concrete 1:2:4 (1-Cement : 2 coarse sand : 4 stone aggregate 10 mm nominal size) and curing complete.	As per Separate Sheet attached.
12	Brick work using common burnt clay building bricks having crushing strength not less than 35 kg./Sq.Cm. in foundation and plinth in Cement Mortar 1:6 (1- Cement : 6 -fine sand)(B) Conventional(For B/w Up to Plinth)	As per Separate Sheet attached.
13	Brick work using Common burnt clay building bricks having crushing strength not less than 35 kg/sq.cm in Super Structure above floor Two Level in cement mortar 1:6 (1 cement : 6 fine sand) (B) Conventional.(For B/W Uo to GF Slab)	As per Separate Sheet attached.
14	Half brick masonry in common brunt clay building bricks having crushing strength not less than 35 Kg/Sq.Cm. in Cement mortar 1:4 (1- Cement : 4 -coarse sand) in Superstructure above plinth level up to floor two Level(B) Conventional	As per Separate Sheet attached.
15	Providing and laying cement concrete 1:3:6 (1- Cement : 3- Coarse sand : 6- crushed stone aggregates 20 mm nominal size) and curing complete including cost of formwork in (A) Wall Caps / Coping	As per Separate Sheet attached.
16	Providing and laying controlled cement concrete M.200 and curing complete excluding the cost of formwork and reinforcement for reinforced concrete work in (C) Slabs, landing, shelves, Balconies Lintels, Beams, Girders and Cantilever upto floor two level. (For Lintel).	As per Separate Sheet attached.
17	Providing and laying controlled c.c. M.200 & curing complete including the cost of form work but excluding the cost of reinforcement for reinforced concrete work in Collumns, pillars, posts & struts upto floor two level for G.F.(For Column)	As per Separate Sheet attached.
18	Providing and laying controlled cement concrete M.200 and curing complete Including the cost of formwork but excluding the cost of reinforcement for reinforced concrete work in (C) Slabs, landing, shelves, Balconies Lintels, Beams, Girders and Cantilever upto floor two level. (For Beam)	As per Separate Sheet attached.
19	Providing and laying controlled cement concrete M.200 and curing complete including the cost of formwork but excluding the cost of reinforcement for reinforced concrete work in (C) Slabs, landing, shelves, Balconies Lintels, Beams, Girders and Cantilever upto floor two level.(For Grade slab)	As per Separate Sheet attached.
20	Providing and laying controlled cement concrete M.200 and curing complete including the cost of formwork but excluding the cost of reinforcement for reinforced concrete work in (C) Slabs, landing, shelves, Balconies Lintels, Beams, Girders and Cantilever upto floor two level.(For slab)For GF Slab	As per Separate Sheet attached.
21	Providing TMT Bar FE 500D reinforcement for R.C.C. work including bending ,binding and placing in position complete up to floor two level	As per Separate Sheet attached.
22	Providing and fixing M.S. Fan clamps type 1 to 16mm diaM.S. bar bent to shape with hooked ends to R.C.C. slabscuring, laying including painting the exposed portion ofloops, all as per standard design complete	As per Separate Sheet attached.
23	Providing & fixing 40 mm thick Single shutter flush door solid core finished with both side 1 mm thick lamination both side like 'NOVAPAN 'or equivalent, of natural wood grain shade as approved by this office having telephone black granite 18 mm thick frame with double stone as per the instruction of Engineer in charge.with necessary SS hinges and fixtures etc . complete.	As per Separate Sheet attached.

It. No.	Description of Item	Applicable specification reference
24	Providing & fixing 35 mm thick Single shutter flush door solid core finished with both side 1 mm thick lamination both side like 'NOVAPAN' or equivalent, of natural wood grain shade as approved by this office having telephone black granite 18 mm thick frame with double stone including fixed ventilation above lintel level as per drg and as per the instruction of Engineer in charge with necessary SS hinges and fixtures etc. complete.	As per Separate Sheet attached.
25	Providing and fixing window having extruded aluminum colour anodized section frame main outer size 95mm x 24mm x 1.17mm (of Jindal section no. 2459 @ Wt. 0.738 Kg/mt), horizontal three track member size 92mm x 31.75mm x 1.30mm (of Jindal section no. 8688, @ Wt. 1.07 Kg/mt), vertical member of size 92mm 31.75mm x 1.50mm (of Jindal section no. 8933 @ Wt. 1.06 Kg/mt) with sliding shutters of horizontal member size 40mm x 18mm x 1.29mm (of Jindal Section No. 8947 @ Wt. of 0.456 Kg/mt), vertical member of size 40mm x 18mm x 1.29 mm (of Jindal section no: 8949 @ Wt. of 0.456 kg / mt) with 5 mm th transparent bronze colour tinted float glass with powder coated aluminum fittings and fixtures and transparent silicon sealant glass fixing Including 18 mm Granite Frame as per details etc.	As per Separate Sheet attached.
26	Providing and fixing FRP frame size 125x65 mm and 35mm thick FRP shutter with wood grain raised paneled design finish shutter having extra reinforcement on sides & edges in Gel coat finish. The core of the shutter & frame is to be filled up with injected polyurethane foam done in situ along with embedded wooden pieces for stiffening & also taking hinges & fixtures. The whole FRP frame & shutter is to be water proof weather proof, termite proof & resistance to mild acid/alkali. Rates are to be inclusive of S.S hinges with fastener sleeve & aluminium fixtures & fastenings.	As per Separate Sheet attached.
27	Providing and fixing Louver type ventilators with powder coated aluminum fittings and fixtures and Blue glass fixing to Adjustable louvers and black granite frame as per details and executed as per directed by Engineer in charge.	As per Separate Sheet attached.
28	Providing and fixing M.S. grills of required pattern to wooden/Marble/Granite/Stone frames of windows etc. with M.S. flats at required spacings and frame around, square or round bars with round headed bolts and nuts or by screws (A) Ornamental Grill.	As per Separate Sheet attached.
29	Providing and fixing M.S. grills of required pattern to wooden/Marble/Granite/Stone frames of windows etc. with M.S. flats at required spacings and frame around, square or round bars with round headed bolts and nuts or by screws (A) Ornamental Grill.	As per Separate Sheet attached.
30	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.
31	P & L 24" x 24" vitrified 8 mm thick tile flooring over 20 mm (average) base of cement mortar 1:6 (1 cement: 6 coarse sand) on new surface or fixing on existing flooring by adhesive material including dismantling of existing flooring and jointed with color cement slurry including finished with flush pointing & cleaning the surface etc. complete for light shade	As per Separate Sheet attached.
32	P & L 24" x 24" vitrified 8 mm thick tile flooring over 20 mm (average) base of cement mortar 1:6 (1 cement: 6 coarse sand) on new surface or fixing on existing flooring by adhesive material including dismantling of existing flooring and jointed with color cement slurry including finished with flush pointing & cleaning the surface etc. complete for anti-slip.	As per Separate Sheet attached.

It. No.	Description of Item	Applicable specification reference
33	Providing and laying Marbo Grenite tiles 8 to 10 mm thick , 24" x 24" in skirting risers of steps and dedo on 10mm thick cement plaster 1:3 (1-cement : 3-coarse sand) and jointed with white cement slurry.	As per Separate Sheet attached.
34	Providing and laying polished Kota stone slab flooring over 20mm (Average) thick base of cement mortar 1:6 (1-cement : 6-coarse sand) or L.M. 1.1.5 (1-Lime putty :1.5 - coarse sand) laid over and jointed with grey cement slurry mixed with pigment to match the shade of slab including rubbing and polishing etc. complete. (B) 30mm thick.	As per Separate Sheet attached.
35	Providing and laying 18 mm thick machine cut, free edges, machine polished Black Granite tread and risers in single piece with 1 cm nosing and necessary grooves on treads etc. complete.	As per Separate Sheet attached.
36	Providing and laying BBCC of 75mm th. Layer in CM (1:3) including sparaying two coat of water proofing chemical with selected brand by enginner incharge .i.e.perma or other with leveling complete for ready base of china mosaic tratment.	As per Separate Sheet attached.
37	Providing and laying broken china mosaic flooring for terrace using 12 mm to 20 mm broken pieces of glazed tiles to be laid over cement mortar 1:3 to plain or slope and to be tempered to bring mortar creme out upto surface using white cement including rounding off junctions and extending them upto 15 cm along the wall,clearing with water and oxalic acid etc. as directed.	As per Separate Sheet attached.
38	Providing and cement vata (10cm x 10cm size) quarter round in cement mortar 1:1 including neat cement finishing watering etc. complete.	As per Separate Sheet attached.
39	Providing 15mm thick cement plaster in single coat on Rough (Similar)side of single or half brick walls for interior plastering upto floor two level and finished even and smooth in (ii) Cement mortar 1:4 (1-cement :4-sand) (Interior Plaster)	As per Separate Sheet attached.
40	Providing 15 mm 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) (ceiling Plaster)	As per Separate Sheet attached.
41	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.
42	Providing throating or plaster drip and moulding to R.C.C. Chhajja.	As per Separate Sheet attached.
43	Applying two coats of Birla or Asian acrylic lappy (putty) and two coats of primer of approved brand and manufacture on new wall surface to give an even shade including thoroughly brushing the surface free from mortar dropping and other foreign matter and sand papered smooth. (Interior Wall Putty)	As per Separate Sheet attached.
44	Applying two coats of Birla or Asian acrylic lappy (putty) and two coats of primer of approved brand and manufacture on new wall surface to give an even shade including thoroughly brushing the surface free from mortar dropping and other foreign matter and sand papered smooth. (Ceiling Putty)	As per Separate Sheet attached.
45	Wall painting two coats with plastic emulsion paint of approved brand and manufacture on wall surfaces to give an even shade including thoroughly brushing the surface free from mortar droppings and other foreign matter and sand papered smooth. (Interior Wall Paint)	As per Separate Sheet attached.
46	Finishing wall with weather proof exterior emulsionpaint on wall surface (two coats) to give an requiredshape even shade after thoroughly brushing the surfaceto remove all dirt, and remains of loose powdered materials.etc complete (Exterior Wall Paint)	As per Separate Sheet attached.

It. No.	Description of Item	Applicable specification reference
47	Wall painting two coats with plastic emulsion paint of approved brand and manufacture on wall surfaces to give an even shade including thoroughly brushing the surface free from mortar droppings and other foreign matter and sand papered smooth on ceiling. (Ceiling Paint)	As per Separate Sheet attached.
48	Providing laying and jointing in true line and level 40mm dia. U.P.V.C. Pipe (SCH- 40) for cold water including fittings make PRINCE /SUPREME/ ASTRAL / FINOLEX or equivalent as approved by Engineer In Charge. Pipe shall be fixed on the wall with the help of clamp at every two metre C/C or shall be concealed as directed including necessary fittings etc. including testing of pipe and joints and fixing the same with adhesive solvent, including cost of all materials.	As per Separate Sheet attached.
49	Providing laying and jointing in true line and level 32mm dia. U.P.V.C. Pipe (SCH- 40) for cold water including fittings as approved by Engineer In Charge. Pipe shall be fixed on the wall with the help of clamp at every two metre C/C or shall be concealed as directed including necessary fittings etc. including testing of pipe and joints and fixing the same with adhesive solvent, including cost of all materials.	As per Separate Sheet attached.
50	Providing laying and jointing in true line and level 15mm dia. U.P.V.C. Pipe (SCH- 40) for cold water including fittings as approved by Engineer In Charge. Pipe shall be fixed on the wall with the help of clamp at every two metre C/C or shall be concealed as directed including necessary fittings etc. including testing of pipe and joints and fixing the same with adhesive solvent, including cost of all materials.	As per Separate Sheet attached.
51	Providing and fixing concealed center point to wall ceiling & floor CPVC (SDR 13.5) PIPE having National Sanitation Foundation (NSF) seal for potable water of following dia. nominal bore tube fittings and clamps including making good the wall, ceiling and floor etc. complete. [F] 50mm.	As per Separate Sheet attached.
52	Providing and fixing concealed center point to wall ceiling & floor CPVC (SDR 13.5) PIPE having National Sanitation Foundation (NSF) seal for potable water of following dia. nominal bore tube fittings and clamps including making good the wall, ceiling and floor etc. complete. [C] 25 mm.	As per Separate Sheet attached.
53	Providing laying and jointing in true line and level 110 diameter U.P.V.C. SWR Type B pipe conforming to IS 13592-1992 with one end plain and other end socketed with rubbering, & fitting conforming to ISI 14735-1999 of approved make for drainage system pipe line, pipe shall be jointed with each other with rubber lubricant, pipe shall be fixed on wall using of PVC clamp of the size 110 mm diameter x 149 mm length x 145 mm high at every 2000 mm center to center or shall be concealed in walls as directed including necessary fittings such as Cowel vent, bends, shoes etc. including testing of pipes and joints and jointed with adhesive solvent cement including cost of all materials.	As per Separate Sheet attached.
54	Providing and fixing screw down bib taps of following size.(A) Brass screw down bib tap polished bright. (ii) 20mm dia.	As per Separate Sheet attached.
55	Providing and fixing pillar tap, capstan head, screw down high pressure with screws, shanks and back nuts. (ii) 20mm dia.	As per Separate Sheet attached.
56	Providing and fixing chromium plated brass half turn flush cock of approved quality including fixing in pipe line etc. complete.(ii) 25mm dia.	As per Separate Sheet attached.
57	Providing and fixing Gun metal check or non return full way wheel valve.40 mm dia.	As per Separate Sheet attached.
58	Providing and fixing Gun metal check or non-return fullway wheel valve. (C) 25mm dia.	As per Separate Sheet attached.

It. No.	Description of Item	Applicable specification reference
59	Providing and fixing Granite of 18 to 20mm thick having minimum single piece length of 210mm to be fixed on Walls to act as Study Table / Wash Basin, including fixing the same using cement mortar in proportion 1:1 etc. comp, Necessary Groove in Walls By Machine, Front Side Round the edge and cutting hole in granite stone for wash basin, Computer Wire, including rubbing and polishing finishing jointed with grey cement slurry including rubbing and polishing finishing etc complete. etc complete.. with all labour & material & equipment.....etc. Completed as directed by Engineer-in-charge (A) Granite slab 18mm thick	As per Separate Sheet attached.
60	Providing and fixing C.P.Brass towel rail complete with C.P.Brass brackets fixed to wooden plugs with c.p.brass screws.(B) 600 mm x 20 mm size.	As per Separate Sheet attached.
61	Providing and fixing C.P. brass shower rose with 15mm or 20mm inlet.(A) 100mm dia. Each	As per Separate Sheet attached.
62	Providing and fixing 600mm x 450mm bevelled edge mirror of superior glass mounted on 6mm thick A.C. sheet or plywood sheet and fixing to wooden plug with C.P. brass screws and washers.	As per Separate Sheet attached.
63	Providing and laying wash down water closet (european type Wall Hung WC pan) Florentine series FLS-WHT 0111B including providing and fixing metropole Flush cock seat cover, jet wash etc complete unit of jaquar Branch (or equivalent) including installing and fitting as per manufacturers standards by skilled trained plumber including testing etc complete quality and brand as approved by Engineer in charge.	As per Separate Sheet attached.
64	Providing laying and jointing in true line and level 160 diameter U.P.V.C. SWR Type B pipe conforming to IS 13592-1992 with one end plain and other end socketed with rubbering, & fitting conforming to ISI 14735-1999 of approved make for drainage system pipe line, pipe shall be jointed with each other with rubber lubricant, pipe shall be fixed on wall using of PVC clamp of the size 160 mm diameter x 210 mm length x 196 mm high at every 2000 mm center to center or shall be concealed in walls as directed including necessary fittings such as bends, shoes etc. including testing of pipes and joints and jointed with adhesive solvent cement including cost of all materials.	As per Separate Sheet attached.
65	Providing and fixing PVC SWR Nahni trap IS 14735 for drain - 100 mm diameter with jali of the following nominal diameter of self cleansing design with C.I. screed down or hinged grating including the cost of cutting and making good the walls.	As per Separate Sheet attached.
66	Providing and laying (two level or slopes) and jointing with stiff mixture of cement mortar in proportion 1:1 salt glazed stone ware pipes following nominal internal diameter including testing of pipes and joints etc complete. 150 mm dia.	As per Separate Sheet attached.
67	Constructing brick masonry chamber for under ground C.I. inspection chamber and bends with bricks having crushing strength not less than 35 kg/sq.cm in C.M. 1:5 C.I. cover with frame (light duty) 455 mm x 610 mm internal dimension total weight of cover with frame to be not less than 38 kgs.(weight of cover 23 kg and wt.of frame 15 kg) R.C.C. top slab with 1:2:4 mix (1 cement:2 coarse sand:4 graded stone aggregates 20 mm size) foundation concrete 1:5:10 inside plaster 15 mm thick cement mortar 1:3 finished smooth with a floating coat of neat cement on wall and bed concrete etc complete.(I) Inside dimensions 455 mm x 610 mm and 450 mm deep for single pipe line.	As per Separate Sheet attached.

It. No.	Description of Item	Applicable specification reference
68	Constructing Manhole with R.C.C. top slab in 1:2:4 mix (1-cement :2-coarse sand : 4-graded stone aggregate 20mm nominal size) foundation concrete 1:3:6 mix (1-cement : 3- coarse sand :6-Brick bats 40 + 50mm size) inside plastering 15mm thick with Cement Mortar 1:5 (1-Cement : 5 coarse sand) finished with a floating coat of neat cement and making channels in cement concrete 1:2:4 mix (1-Cement :2-Coarse sand :4-stone aggregate 20mm nominal size) finished smooth complete including curing and festing (i) Inside size900mm x 1200mm and 1.5M. deep including C.I. cover with frame size 560mm diameter total weight of cover and frame to be not less than 128 kgs. (Wt. of cover 64 Kg. and Wt. of frame 64 Kg.)(A) With 230mm thick walls of brick msonry using brick having crushing strength not less than 35Kg. / Sq.cm. in Cement Mortar 1:5 (1- Cement: 5-Coarse sand) (1) A type depth 0.90 Metre for 150mm diameter sewer.	As per Separate Sheet attached.
69	Providing erecting and fixing double coated Syntex or equivalent PVC. (ISI) mark water tank of reqd capacity each with all necessary fittings & connection etc. comp on terrace.	As per Separate Sheet attached.
70	Providing and fixing ball cock of approved quality as directed.(A) Copper metal(i) 25 mm dia.	As per Separate Sheet attached.
71	Providing and laying sandwich type kitchen platform of size 2.10 x0.76 x 0.76 m and respected length with dhar polish or moulding having base 4" and sपोर्ट & base with marble or Kota as per site requirement also loft and base finish with glaze tile and top with selected shed of marble or granite with gas pipe provision and sink including all fittings ,material and labour as per directed by engineer incharge.	As per Separate Sheet attached.
72	Providing & Fixing Co2 type portable ABC Dry Powder Type ABS Fire Extinguisher Capacity 4.5 Kg. Discharge Range 3mt. Timing 60 to 180 Sec. standard approved IS code No. 2878:2004	As per Separate Sheet attached.
73	(B) Providing sock pit of 5.00 Cu.M. Volume includingexcavating and filling brickbats with dry masonry workat top for 45cm. height including covering the top withstone including providing vatas in C.M. 1:3 with finishing curing etc. complete as directed.	As per Separate Sheet attached.
74	Providing and fixing pre-cast Rubber Dye / steel Dye inter locking concrete block 60mm thick with grade of concrete M300 pnumatic compressed / vibrated mechanically and as per approved design Confirming to IS 15658 : 2006 including 35 mm Sand layer for levelling and filling the joint with sand in proper line and level as per guidlines of IRC : SP 63-2018 etc. Complete.	As per Separate Sheet attached.
75	Providing and fixing pre-cast concrete kerb stone of gray cement based concrete block 30cm length,30cm height and 15cm thick of M250 grade concret as per approved design and including excavation for fixing in proper line and level,filling the joint with C:M 1:3 (1cement:3fine sand) etc complete	As per Separate Sheet attached.

It. No.	Description of Item	Applicable specification reference
76	<p>Providing and fixing eco-friendly light weight calcium silicate false ceiling tiles having Tegular edge & 15 mm Thick Densified edges on the Tile Periphery for Extra Strength The Light weight calcium silicate ceiling tiles shall have , light reflection 85% non-combustible as per B.S. 476 part IV, 100% humidity resistance and also having thermal conductivity 0.043° w/m KC.for the best thermal Insulation . The Light weight calcium Silicate tile shall be of approved texture Fine fissured/ Spintone/Cosmos having NRC value of 0.5 & Globe having NRC value of 0.75 NRC or equivalent of size 595 X 595 mm to be laid on true horizontal level suspended inter locking metal grid of hot dipped galvanized steel sections (galvanizing @120 grams per sqm including both side) consisting of main 'T' runner suitably spaced at joints to get required length and size of 24X38mm made from 0.30 mm thick (minimum) sheet, 1200mm centre to centre, and cross 'T' of size 24X28mm made out of 0.33mm (Minimum) sheet spaced 1200mm along spaced between main 'T' at 600mm centre to centre to form agrid of 1200X600mm and secondary cross 'T' of length 600mm and size 24x28mm made of 0.30 mm thick (Minimum) sheet to be interlocked at middle of the 1200X600mm panel to form grid of size 600X600mm resting on periphery walls/partitions on a perimeter wall angle pre-coated steel of size (24X24X3000mm made of 0.40mm thick (minimum) sheet with the help of rawl plugs at 450mm centre to centre with 25mm long dry wall screws @ 230mm interval and laying 15mm thick Densified edges light weight calcium silicate ceiling tiles of approved texture (Fine Fissured/Cosmos/Spintone) in the grid including, cutting /making opening for services like diffusers, grills, light fittings, fixtures, smoke detectors etc.,</p>	As per Separate Sheet attached.
	<p>wherever required, Main 'T' runners to be suspended from ceiling using G.I. slotted cleats of size 25X35X1.6mm fixed to ceiling with 12.5mm dia and 50mm long dash fasteners, 4mm G.I. adjustable rods with galvanized steel level clips of size 85X30X0.8mm, spaced at 1200mm centre to centre long main 'T' bottom exposed with 24mm of all T-sections shall be pre-painted with polyester baked paint, for all heights, as per specifications, drawings and as directed by engineer-in-charge. Note:- Only calcium silicate false ceiling area will be measured from wall to wall. No deduction shall be made for exposed frames/opening (cut outs) having area less than 0.30 sqm. The calcium silicate ceiling tiles shall have NRC. Value of 0.50 (Minimum) for Fine fissured/Spintone/Cosmos and 0.75 NRC for Globe, light reflection 85% non-combustible as per B.S. 476 part IV, 100% humidity resistance and also having thermal conductivity. 0.043° w/m KC.for the best thermal Insulation</p>	
77	<p>Painting lines, deashes, arrows, letters etc on roads, Air fields, on walls and like in two coats with road marking paint, brushing including cleaning the surface of all dirt, dust and other foreign matter. (i) Upto 10cm in width</p>	As per Separate Sheet attached.
78	<p>Clearing and grubbing road land including uprooting rank vegetation grass bushes, shrubs, sapling and trees girth up to 300 mm removal of stumps of trees cut earlier and disposal of unserviceable materials (A) By manual means in area of light jungle</p>	As per Separate Sheet attached.
79	<p>Providing and laying controlled cement concrete M -250 and finishing smooth with curing etc complete, including the cost of formwork but excluding the cost of reinforcement for R.C.C. work in (A) Foundations, footings, Base of Columns and Mass concrete.</p>	As per Separate Sheet attached.

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80	Providing, fixing and erecting steel shed including M.S. G.I. pipe (class-B), framing of structure with hollow section And painting with two coats of oil paint including priming coat. Rates including with necessary fabrication work including cutting, welding, making holes by drilling machine & fixing in line and level of all structure including cost of all laboures, fixtures, fastening and equipments etc. complete.	As per Separate Sheet attached.
81	Office Table:- 18mm thick three layer pre laminated particle board Work with PVC Edge band 2mm thick wrapped around the top, Decorative aluminium bidding in top and modesty including all necessary elements with necessary features and fastning finish all as per directed by Engineer in Charge. 6FT Office Table (Dimension :- 180 cm x 90cm x 75 cm) with suitable Brand.	As per Separate Sheet attached.
82	Revolving Chair:- Full-Back Executive Office Chair upholstered in bonded leather and PVC, Padded seat and back for all-day comfort and support, Pneumatic seat-height adjustment; 360-degree swivel; smooth-rolling casters and having overall dimension 73.9D x 66.5W x 115.6H Centimeters with Armrest (Brown) with selected brand.	As per Separate Sheet attached.
83	File Rack:- lack Adjustable 5-Shelf Shelving Unit Storage Rack Utility Rack Garage Shelves Display Rack Steel Boltless Rivet Rack, 60 inches Height 1-Pack ({5 - SECTION } 5'[H] X 2'[L] X 1'[D]) with suitable Brand.	As per Separate Sheet attached.
84	Steel Stool:- Office Stainless Steel Stool having minimum oveall dimension 35.6D x 35.6W x 76.2H Centimeters, made with S.S. leg and rubber pad/bushing with suitable Brand which will select by enginner in charge.	As per Separate Sheet attached.
85	Chair:- S.S. Chair for Office having seat and back with selected cushion, Fabric, Pattern, PU with arm rest and minimum overall dimension 78.7D x 41.9W x 78.7H Centimeters with suitable Brand which will select by engineer in charge.	As per Separate Sheet attached.
86	Stainless Steel Office Almirah :Suppliny and instaling Portable Modern double Door steel almariah with nearer 30 kg wt having diamension 36 x 18 x 78.5 inch made from ss,Eco friendly and UV resistant in grey color having min 4 partioin for file rack and other copartment as per selected and directed by Engineer incharge.	As per Separate Sheet attached.
87	Providing and fixing Precast RCC Compound Wall made of I shape verticle Pre cast Pre tension post of size 2100 mm height , section 150 mm x 150 x 50 mm center slot and edge chamfer made from concrete grade M-25 (For Vertical Post), 2135 mm x 300mm x 50 mm plank made of pre cast and pretension from concrete grade M-25 with 3 nos of 4mm tension wire and Edge 10 x 10 mm chamfer (For Panel)7 panel in row position having center to center space not more than 2.25 meter and segemnt height made of 2100 mmasper design or as per directed by engineer incharge.	As per Separate Sheet attached.
88	Providing and fixing ms grill entarnace gate of predetermine design including all material like hinges,roller,stopper ,rail head , handle etc having coat of red lead and painting with wcted colour guide by engineer incharge.	As per Separate Sheet attached.
89	Providing and laying controlled cement concrete M.250 and curing complete including the cost of formwork and Excluding the cost fo reinforcement for reinforced concrete work in (D) Columns, Pillars posts and struts, upto floor two level.	As per Separate Sheet attached.
90	Providing and laying burnt brick masonry for super structure with ordinary portland cement mortar 1:5 proportion including providing scaffolding racking out joints curing etc. complete for all leads and lifts. (Conventional Bricks) upto floor two level.	As per Separate Sheet attached.
91	Providing and laying and fixing 50 mm thick expansion joint by hydro cell semi rigid UV resistance with high performance laminated closed cell polythene foam joint filler in sheet foam as directed, etc. complete.	As per Separate Sheet attached.

It. No.	Description of Item	Applicable specification reference
ELECTRIFICATION		
92	Point wiring for Light/ Bell with 2-1.5 sq.mm & earthwire of 1.5 sq.mm (Green) both are of ISI marked 1.1 KV grade FRLS PVC insulated multistrand copper wires, in following type of pipe to be erected concealed in/ on surface on wall/ceiling complete with 6A Modular type switch/ bell push & accessories and earth continuity of following type, erected on PVC / Metallic box, single mounting base frame covered with textured/metallic front plate modules erected on/ in wall/ ceiling as per pipe erected, with necessary Lamp holder/ ceiling rose/ H.D.Connector as directed. (a) with medium class Rigid PVC pipe and accessories erected flushed on wall/ceiling completeCat-III	As per Electrification Booklet attached.
93	Point wiring for FAN with 2-1.5 sq.mm & earthwire of 1.5 sq.mm (Green) both are of .ISI marked 1.1 KV Grade FRLS PVC insulated multistrand copper wires, in following type of pipe to be erected concealed in / flushed on wall/ceiling complete with 6A Modular type switch and hum free EME four or more step type electronic fan regulator with separately mounted and accessories with earth continuity of following type erected on PVC / Metallic box, single mounting base frame covered with textured/metallic front plate modules erected on / in wall / ceiling as per pipe erected. with necessary ceiling rose / H.D.Connector as directed. (a) with medium class Rigid PVC pipe and accessories, Cat-III	As per Electrification Booklet attached.
94	Point wiring for Looped Plug with 6A Modular type switch & 5 pin socket erected on PVC / Metallic box, single mounting base frame covered with textured / metallic front plate modules erected on / in wall / ceiling with following type accessories, Cat-III	As per Electrification Booklet attached.
95	Point wiring for Individual Plug with & earthwire of 1.5 sq.mm (Green) both are of ISI marked 1.1 KV grade FRLS PVC insulated multistrand copper wires, in following type of to be erected concealed in / on surface of wall / ceiling complete with Modular type switch & 5 pin Plug erected on PVC / Metallic box covered with appropriate front plate modules erected on / in wall / ceiling as per pipe erected with following type of accessories. [II] For 16A Plug with 2-2.5 sq.mm Cu. Wire, (a) with medium class Rigid PVC pipe and accessories erected flushed on wall/ceiling complete, Cat-III	As per Electrification Booklet attached.
96	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 [B] For Modular Type Accessories, Cat-III	As per Electrification Booklet attached.
97	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 mm ²	As per Electrification Booklet attached.
98	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.(h) 2.50 Sq.mm 3 core round PVC sheathed	As per Electrification Booklet attached.

It. No.	Description of Item	Applicable specification reference
99	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	As per Electrification Booklet attached.
100	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 0.95, 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/ non-integral driver, (v) 36-40 Watts, Surge-2 KV, IP-20, conventional 4 feet, Cat-III	As per Electrification Booklet attached.
101	Supplying and erecting led lamps with following wattage capacity of 220 to 240 voltage, minimum 15000 burning hours life, 500 V in built-surge protection, Polycarbonate diffuser, mounting suitable for E14 / E27 / B22 lamp holders, pf >= 0.5 (A) LED Lamps integral type, with PC diffuser suitable LAMP holder (ii) 5 to 8 watts CAT-III	As per Electrification Booklet attached.
102	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]]	As per Electrification Booklet attached.
103	Supplying and erecting 19/20 mm. nominal bore Medium Class M.S. Pipe down rod erected duly painted for fan complete with necessary 24/ O.20, 3 core flexible wire with earthing.	As per Electrification Booklet attached.
104	Supplying & erecting approved make low noise decorative exhaust fan having square frame ABS body with inbuilt lowers & square frame.200mm with 1350RPM Cat.II	As per Electrification Booklet attached.
105	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	As per Electrification Booklet attached.
106	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 (i)4 way	As per Electrification Booklet attached.
107	Providing & erecting 415 V MCB Four Pole for Motor & Inductive Load (C Curve) having 10KA breaking capacity & confirms to IS :8828 in existing box having following capacity (b)40 Amp., Cat-III	As per Electrification Booklet attached.
108	Providing & erecting 240 V MCB double pole switch for lighting Load (B Curve) having 10 KA breaking capacity & confirms to IS : 8828 in existing box having following capacity CAT-III (a)6 to 32 A	As per Electrification Booklet attached.
109	Plastic enclosure fitted with DIN rail suitable for incorporating One / Two nos. MCB	As per Electrification Booklet attached.

It. No.	Description of Item	Applicable specification reference
110	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., Cat-III	As per Electrification Booklet attached.
111	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 resistance 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, Sulphur 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 Installation up to 440V in normal soil Length of pipe - 1 Mtr Back filling compound - 1 Nos Bag of 15 Kg.	As per Electrification Booklet attached.
112	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	As per Electrification Booklet attached.
113	Providing and erecting XLPE(IS:7098)(I)-88 ISI armoured cable 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) 2 core 6 Sq. mm	As per Electrification Booklet attached.
114	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 Electrification Booklet attached.
115	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. (i) above 36 to 48 watts cat-iii	As per Electrification Booklet attached.
116	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	As per Electrification Booklet attached.

It. No.	Description of Item	Applicable specification reference
117	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 Electrification Booklet attached.
118	Providing 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 76.5 mm /80mm / required size of pole top having sufficient fasteners for fixing the brackets and having spread of 1.5.mtr. length with 110 deg.with vertical plane & suitable welded stays, reducer and with check nuts 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 1 Mtr Replacing old & u/s 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.	As per Electrification Booklet attached.
119	(A) 1.5/ 2.5/4/6 Sq.mm	As per Electrification Booklet attached.
120	(C) 16/25 sqmm	As per Electrification Booklet attached.
121	Solder less crimping type Copper 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 to 6 Sq.mm	As per Electrification Booklet attached.
122	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.with enclosure	As per Electrification Booklet attached.
123	Supplying KITKAT pattern porcelain cut-out fuse with base of following current capacity erected on existing block board. (v) 100 A. 500 V. cat-iii	As per Electrification Booklet attached.
124	Supplying and erecting nuwood 12mm thick on existing angle iron frame or wooden patti	As per Electrification Booklet attached.
125	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 50mm	As per Electrification Booklet attached.
126	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 Electrification Booklet attached.

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