PROJECT - PROPOSED CONSTRUCTION OF INDSETI BUILDING AT BALRAMPUR UNDER ZO GONDA (UP)

CIVIL WORKS

S.NO	DESCRIPTION OF WORK	UNIT	QUANTITY	RATE	AMOUNT
I	**BUILDING WORKS**				
1	**PREPARATORY WORKS**				
1	Clearing jungle including uprooting of rank vegetation, grass, brush wood, trees and saplings of girth up to 30 cm measured at a height of 1 m above ground level and removal of rubbish up to a distance of 50 m outside the periphery of the area cleared.	SQM	2856		
2	**EARTHING WORKS**				
2.1	Earth work in excavation by mechanical means (Hydraulic excavator) / manual means in foundation trenches or drains (not exceeding 1.5 m in width or 10 sqm on plan), including dressing of sides and ramming of bottoms, lift upto 1.5 m, including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 50 m. (For All kinds of soil)	CUM	670		
2.2	Filling available excavated earth (excluding rock) in trenches, plinth,sides of foundations etc. in layers not exceeding 20cm in depth,consolidating each deposited layer by ramming and watering, lead upto 50 m and lift upto 1.5 m.	CUM	390		
2.3	Excavating, supplying and filling of local earth (including royalty) by mechanical transport upto a lead of 5km also including ramming and watering of the earth in layers not exceeding 20 cm in trenches, plinth, sides of foundation etc. complete	CUM	430		
2.4	Supplying and filling in plinth with sand under floors, including watering, ramming, consolidating and dressing complete.	CUM	50		
3	**ANTI - TERMITE TREATMENT**				

3.1	Providing Pre-constructional anti- termite treatment and creating a chemical barrier to the building by injecting chemical emulsion of required concentrations raft slab and beam, under Cellular raft slab, around the footings, column pits, trenches, pits, wall trenches, back fill, plinth filling, junction of wall and floor, side walls of foundation, external perimeter of building, surrounding of pipes expansion joints, etc. as per IS specification and as per the instructions of chemical manufacturer and all as directed. The treatment shall be carried out strictly in accordance with the technical specification and conforming to IS 6313 (PART-2) or equivalent BS specification. The chemical to be used as insecticides for the treatment shall be Termite oil 20% (or) 50% EC and the application shall be dilute one part of chemical 20% or 50% EC with 19 or 49 parts of water to get 1% emulsion and strictly in accordance with the manufacturer's specification.(or)2.The chemical to be used as insecticides for the treatment shall be IMIDACLOPRID 30.5% S C and the application shall be applied at 0.075% active ingredients concentration i.e. 2.1ml formulated product diluted 1 lit of water and strictly in accordance with the manufacturer's specification.	SQM	740		
4	**PLAIN CEMENT CONCRETE**				
4.1	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level : 1:4:8 (1 cement : 4 coarse sand (zone-III) derived from natural sources : 8 graded stone aggregate 20 mm nominal size derived from natural sources)	CUM	137		
5	**PLINTH PROTECTION**				
5.1	Making plinth protection 50mm thick of cement concrete 1:3:6 (1 cement : 3 coarse sand (zone-III) derived from natural sources : 6 graded stone aggregate 20 mm nominal size derived from natural sources) over 75mm thick bed of dry brick ballast 40 mm nominal size, well rammed and consolidated and grouted with fine sand, including necessary excavation, levelling & dressing & finishing the top smooth.	SQM	110		
6	**STEEL REINFORCEMENT**				

	Supply, fabrication and placing of reinforcement steel of high yield strength ribbed bars of various diameters and grade TMT - FE500 / 550D conforming to IS 1786 for reinforced concrete work. The work includes recoiling, straightening, cutting, bending, fabricating, and placing in position, at all levels including lead and lift, according to drawings, specifications etc. complete and supply & use of 18G black annealed binding wire double fold to tie the bars in position and providing precast cement/ PVC cover blocks for main reinforcement to ensure specified cover and complete., including all labor charges etc	KG	76064		
7	**FORMWORK**				
	Centering and shuttering including strutting, propping etc. and removal of form work for :				
7.1	Foundations, footings, bases for columns	SQM	240		
7.2	Lintels, beams, plinth beams and cantilevers	SQM	1350		
7.3	Columns, Pillars, Piers, Abutments, Posts and Struts	SQM	715		
7.4	Suspended floors, roofs, landings, balconies and access platform :	SQM	1015		
7.5	Stairs, (excluding landings) except spiral-staircases	SQM	87		
7.6	Weather shade, Chajjas, corbels etc., including edges	SQM	210		
8	**REINFORCED CEMENT CONRETE**				
	Providing and laying in position ready mixed or site batched design mix cement concrete for reinforced cement concrete work; using coarse aggregate and fine aggregate derived from natural sources, Portland Pozzolana / Ordinary Portland /Portland Slag cement, admixtures in recommended proportions as per IS: 9103 to accelerate / retard setting of concrete, to improve durability and workability without impairing strength; including pumping of concrete to site of laying, curing, carriage for all leads; but excluding the cost of centering, shuttering, finishing and reinforcement as per direction of the engineer-in-charge; for the following grades of concrete. Note: Extra cement up to 10% of the minimum specified cement content in design mix shall be payable separately. In case the cement content in design mix is more than 110% of the specified minimum cement content, the contractor shall have discretion to either re-design the mix or bear the cost of extra cement. Concrete of M25 grade with minimum cement content of 330 kg /cum				
8.1	Foundation / Basement upto Plinth Level	CUM	350		
8.2	Ground Floor, First Floor & Terrace (All Works above Plinth Level)	CUM	330		
9	**BRICKWORK**				

9.1	1st Class Brick work in 1:6 Cement Mortar using best quality First class table moulded chamber burnt bricks of size 9" x 4-3/8" x 2-3/4" for foundation and plinth including supply of all materials, labour, tools, curing, etc., complete complying with standard specifiction.	CUM	52		
9.2	1st Class Brick work in 1:4 Cement Mortar using best quality First class table moulded chamber burnt bricks of size 9" x 4-3/8" x 2-3/4" for super structure above plinth level including supply of all materials, labour, tools, curing, etc., complete complying with standard specifiction.	CUM	440		
9.3	Brick partition walls of 11.50cm thickness using best quality First class table moulded chamber burnt bricks of size 9" x 4-3/8" x 2- 3/4" in Cement Mortar 1:4 (One Cement and 4 part coarse sand) using hoop iron reinforcement if found necessary including curing etc. (Hoop iron reinforcement will be measured and paid for separately)and paid for separately).	SQM	420		
10	**PLASTERING WORK**				
10.1	Providing and applying 6 mm thick Cement plaster in Cement mortar 1:3 (One part of Cement and Three parts of Sand), to finishing the exposed surfaces of Roof (or) floor slabs etc.to correct plane and level including scaffolding, hacking of surface, chiselling the undulated surface wherever necessary and curing etc., all materials and labour complete in all respects including all lead, lift and descent and as directed by the Enineer in charge. This rate includes the cost of providing Cement Mortar complete complying with standard specifications.	SQM	1220		
10.2	Providing & applying 12 mm thick cement plaster in cement mortar 1:4 (1 part of cement: 4 parts of fine sand) to walls internally in single coat at all levels to correct line and level including chicken wire mesh at all joints of brick and concrete surfaces with minimum overlap of 150 mm in all directions, scaffolding, rounding off or chambering of corners, offsets, fin/ bands, projections, etc. and cleaning of surface, raking out joints, roughening of surface, chiseling the undulated surface wherever necessary and curing, etc., all materials and labor complete in all respects including all lead, lift and descent and as directed.	SQM	2070		
10.3	Providing & applying 15 mm thick cement plaster in CM 1:4 (1 part of cement: 4 parts of sand) to walls externally in single coat or rough side of half brick wall at all levels to correct line and level including scaffolding, rounding off or chambering of corners, offsets, fin/ bands, projections, etc. and cleaning of surface, raking out joints, roughening of surface, chiseling the undulated surface wherever necessary and curing, etc., all materials and labor complete in all respects including all lead, lift and descent and as directed.	SQM	2445		

10.4	Providing & applying 12 mm thick cement plaster in cement mortar 1:4 (1 part of cement: 6 parts of corase sand) to walls internally in single coat at all levels to correct line and level including chicken wire mesh at all joints of brick and concrete surfaces with minimum overlap of 150 mm in all directions, scaffolding, rounding off or chambering of corners, offsets, fin/ bands, projections, etc. and cleaning of surface, raking out joints, roughening of surface, chiseling the undulated surface wherever necessary and curing, etc., all materials and labor complete in all respects including all lead, lift and descent and as directed.	SQM	620		
10.5	Forming groove of uniform size of approx. 12mm x 6mm in the outer wall as per approved design using various relevant tools , repairing edges and finishing the groove complete as per specifications and directions of Engineer-In-Charge	METER	710		
11	**FLOORING AND DADO WORKS**				
11.1	Paving the floor with best approved quality fine polished Kota stone slabs of size 600 x 600 of 18 / 20mm thick with machine cut edges laid over a cement mortar bed of 20mm thick using cement mortar 1:3 (One cement and three sand) fixing the slabs in true right angles with minimum possible width of joints and pointing the joints with white cement mixed with mathcing colouring pigments and polishing with floor polisher to a high degree of finish etc., The kota stone slabs and other materials to be used shall be got approved by the Engineer-In-Charge concerned before use on work, etc., complete as per standard speicification. This includes molding, nosing in the treads of the steps of Kota Stone Slab, polishing, complete.	SQM	172		
11.2	Providing and laying Double Charged Vitrified tiles in floor of 600mm x 600m size (thickness to be specified by the manufacturer) with water absorption less than 0.08% and conforming to IS:15622, of approved brand & manufacturer, in all colours and shade, laid on 20 mm thick cement mortar 1:4 (1 cement: 4 coarse sand) jointing with grey cement slurry @3.3 kg/sqm including grouting the joints with white cement and matching pigments etc. The tiles must be cut with the zero chipping diamond cutter only . Laying of tiles will be done with the notch trowel, plier, wedge, clips of required thickness, leveling system and rubber mallet for placing the tiles gently and easily. Shade of vitrified tile to be approved by Engineer - In - Charge. Basic Rate - Rs.650/ sq. meter	SQM	875		
11.3	Providing and laying Ceramic anti skid floor tiles of size 300x300 mm (thickness to be specified by the manufacturer), of 1st quality conforming to IS : 15622, of approved make, in all colours, shades, as approved by Engineer - In - Charge or Architect laid on 20 mm thick bed of cement mortar 1:4 (1 Cement : 4 Coarse sand), jointing with grey cement slurry @ 3.3 kg/ sq.m including pointing the joints with white cement and matching pigments etc., complete.	SQM	100		

11.4	Providing and fixing Ist quality ceramic glazed wall tiles of size 300 x 450 conforming to IS: 15622 (thickness to be specified by the manufacturer), of approved make, in all colours, shades except burgundy, bottle green, black of any size as approved by Engineer-in-Charge, in dados, over 12 mm thick bed of cement mortar 1:3 (1 cement : 3 coarse sand) and jointing with grey cement slurry @ 3.3kg per sqm, including pointing in white cement mixed with pigment of matching shade complete.	SQM	390		
11.5	Paving the floor with pre-polished anti-skid RAMP TILES equivalent to Johnson Endura Max Grip Tiles of 300mm x 300mm size (Shape & Colour to be approved by Bank) of 10 - 15 mm thick laid in Cement Mortar 1:3 (One Cement and Three sand) 20mm thick and pointed with white cement mixed with colouring pigment at the rate of 0.40 Kg. / sq.m., curing, etc., Basic cost-Rs.500/sq.m	SQM	50		
11.6	Providing and fixing 18 mm thick gang saw cut, mirror polished, premoulded and prepolished, machine cut for kitchen platforms, wash basin counters, window sills, facias and similar locations of required size, approved shade, colour and texture laid over 20 mm thick base cement mortar 1:4 (1 cement : 4 coarse sand), joints treated with white cement, mixed with matching pigment, epoxy touch ups, including rubbing, curing, moulding and polishing to edges to give high gloss finish etc. complete at all levels.	SQM	90		
11.7	Providing and fixing granite stone slab with table rubbed, edges rounded and polished, of size 75x50 cm deep and 1.8 cm thick, fixed in urinal partitions by cutting a chase of appropriate width with chase cutter and embedding the stone in the chase with epoxy grout or with cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 6mm nominal size) as per direction of Engineer-in-charge and finished smooth.	SQM	3.5		
12	**WATERPROOFING WORKS**				

12.1	Providing and laying integral cement based water proofing treatment including preparation of surface as required for treatment of roofs, balconies, terraces etc consisting of following operations: (a) Applying a slurry coat of neat cement using 2.75 kg/sqm of cement admixed with water proofing compound conforming to IS. 2645 and approved by Engineer-in-charge over the RCC slab including adjoining walls upto 300 mm height including cleaning the surface before treatment. (b) Laying brick bats with mortar using broken bricks/brick bats 25 mm to 115 mm size with 50% of cement mortar 1:5 (1 cement : 5 coarse sand) admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in-charge over 20 mm thick layer of cement mortar of mix 1:5 (1 cement :5 coarse sand) admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in-charge to required slope and treating similarly the adjoining walls upto 300 mm height including rounding of junctions of walls and slabs. (c) After two days of proper curing applying a second coat of cement slurry using 2.75 kg/ sqm of cement admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in-charge. (d) Finishing the surface with 20 mm thick jointless cement mortar of mix 1:4 (1 cement :4 coarse sand) admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in-charge including laying glass fibre cloth of approved quality in top layer of plaster and finally finishing the surface with trowel with neat cement slurry and making pattern of 300x300 mm square 3 mm deep. (e) The whole terrace so finished shall be flooded with water for a minimum period of two weeks for curing and for final test.“All above operations to be done in order and as directed and specified by the Engineer-in-Charge : With average thickness of 120 mm and minimum thickness at khurra as 65 mm.	SQM	580		

12.2	Providing and laying water proofing treatment to vertical and horizontal surfaces of depressed portions of W.C., kitchen and the like consisting of: (i) Ist course of applying cement slurry @ 4.4 kg/sqm mixed with water proofing compound conforming to IS 2645 in recommended proportions including rounding off junction of vertical and horizontal surface. (ii) IInd course of 20 mm cement plaster 1:3 (1 cement : 3 coarse sand) mixed with water proofing compound in recommended proportion including rounding off junction of vertical and horizontal surface. (iii) IIIrd course of applying blown or residual bitumen applied hot at 1.7 kg. per sqm of area. (iv) IVth course of 400 micron thick PVC sheet. (Overlaps at joints of PVC sheet should be 100 mm wide and pasted to each other with bitumen @ 1.7 kg/ sqm).	SQM	85		
12.3	Providing gola 75x75 mm in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 stone aggregate 10 mm and down gauge), including finishing with cement mortar 1:3 (1 cement : 3 fine sand) mixed with water proofing compund as per standard design : In 75x75 mm deep chase	METER	450		
12.4	CINDER FILLING - Providing and filling cinder in the sunken area of toilets laid over in single / multiple layers and consolidated to the required slope and finished thickness and beating the concrete with wooden beaters of approved pattern, keeping the surface constantly wet by sprinkling lime, jaggery water etc. complete complying with standard specifications and as directed	CUM	25		
12.5	Making khurras 45x45 cm with average minimum thickness of 5 cm cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate of 20 mm nominal size) over P.V.C. sheet 1 m x1 m x 400 micron, finished with 12 mm cement plaster 1:3 (1 cement : 3 coarse sand) and a coat of neat cement, rounding the edges and making and finishing the outlet complete.	EACH	35		
13	**RAILING AND HAND RAILS**				
13.1	Manufacturing,supplying and fixing of stainless steel railing for staircase using 50mm dia 304L grade stainless steel pipe of 1.6mm thick at required locations to a height of 900mm from finished floor level welded to 40mm dia stainless steel pipe post of 1.6mm thick as vertical at 900mm centre with 3 Nos of 25mm dia intermediate horizontal stainless steel pipe of 1.6mm thick in between.The vertical pipe has to be welded to the 100 x 100 x 6mm MS base plate encased in the base concrete.The rate is inclusive of the charges for cutting, bending, welding, grinding, polishing,conveyance, electrical charges,etc. complete. Balustrade will be of 100mm dia.	KG	430		

13.2	Manufacturing,supplying and fixing of stainless steel hand rails for staircase using 50mm dia 304L grade stainless steel pipe of 1.6mm thick will be provided with tubular supports made of 304L grade ss pipe of 25mm dia of 1.6mm thick welded to the railing.The supports will be grouted into the wall and provided with 93mm thick ss circular base plate of 304L grade.The rate shall included for grouting into concrete with necessary supporting arrangements the hand rail in floor polishing buffing, cutting, grinding, conveyance,welding charges,electrical charges,etc.complete.	METER	65		
14	**DOORS AND WINDOWS**				
14.1	Providing and fixing factory made uPVC white colour sliding glazed window upto 1.50 m in height dimension comprising of uPVC multi-chambered frame with in-built roller track and sash extruded profiles duly reinforced with 1.60 ± 0.2 mm thick galvanized mild steel section made from roll forming process of required length (shape & size according to uPVC profile), appropriate dimension of uPVC extruded glazing beads and uPVC extruded interlocks, EPDM gasket, wool pile, zinc alloy (white powder coated) touch locks with hook, zinc alloy body with single nylon rollers (weight bearing capacity to be 40 kg), G.I fasteners 100 x 8 mm size for fixing frame to finished wall and necessary stainless steel screws etc. Profile of frame & sash shall be mitred cut and fusion welded at all corners, including drilling of holes for fixing hardware's and drainage of water etc. After fixing frame the gap between frame and adjacent finished wall shall be filled with weather proof silicon sealent over backer rod of required size and of approved quality, all complete as per approved drawing & direction of Engineer-in-Charge.				
14.1.1	Three track three panels sliding window with fly proof S.S wire mesh (Two nos. glazed & one no. wire mesh panels) made of (big series) frame 116 x 45 mm & sash 46 x 62 mm both having wall thickness of 2.3 ± 0.2 mm and single glazing bead / double glazing bead of appropriate dimension.	SQM	65		
14.1.2	Two track two panels sliding window made of (small series) frame 52 x 44 mm &sash 32 x 60 mm both having wall thickness of 1.9 ± 0.2 mm and single glazing bead of appropriate dimension.	SQM	14		

14.2	UPVC VENTILATOR:Supplying and fixing UPVC (Un-PLASTICIZED Polyvinyl chloride) Louvered Ventilators of from the profile the size of outer frame 60x58mm and shutter profile the size of 60x78mm both profile size of 60x78mm both profiles are reinforced with GI/1MM 125GSM and 100% corrosion free , the profile are mulit chambered sections with wall thick of 2mm. The EPDM rubber (black colour) covered with all over he edges of frame and shutter . The corners and joints should be welded and cleaned. Radiation pin headed glass 4mm thick should be fixed to the wall with 100% packing with screws and silicon packing all aroundthe frame. The ventilator should be got approved from the Executive Engineer before use on work	SQM	8		
14.3	Providing and fixing factory made uPVC white colour fixed glazed windows/ ventilators comprising of uPVC multi-chambered frame and mullion (where ever required) extruded profiles duly reinforced with 1.60 ± 0.2 mm thick galvanized mild steel section made from roll forming process of required length (shape & size according to uPVC profile), , uPVC extruded glazing beads of appropriate dimension, EPDM gasket, G.I fasteners 100 x 8 mm size for fixing frame to finished wall, plastic packers, plastic caps and necessary stainless steel screws etc. Profile of frame shall be mitred cut and fusion welded at all corners, mullion (if required) shall be also fusion welded including drilling of holes for fixing hardware's and drainage of water etc. After fixing frame the gap between frame and adjacent finished wall shall be filled with weather proof silicon sealant over backer rod of required size and of approved quality, all complete as per approved drawing & direction of Engineer-in-Charge. (Single / double glass panes and silicon sealant shall be paid separately). Variation in profile dimension in higher side shall be accepted but no extra payment on this account shall be made.				
	Fixed window / ventilator made of (small series) frame 47 x 50 mm & mullion 47 x 68 mm both having wall thickness of 1.9 ± 0.2 mm and single glazing bead of appropriate dimension.	SQM	5		
14.4	Providing and fixing M.S. grills of required pattern in frames of windows etc. with M.S. flats, angles, square or round bars etc. including priming coat with approved steel primer all complete. Fixed to openings /wooden frames with rawl plugs screws etc.(35MM X 35MM X 3MM angle at the periphery and 12mm square bar in vertical and horizontal direction as per approved design)	KG	1920		

14.5	Supplying, fabricating and fixing easy to fit ERW steel Tubular closed frames for doors with rectangular/ L-Type sections as mentioned below joints mitred, welded and grinded finish, with profiles of required size, including fixing of necessary butt hinges and screws and applying a priming coat of approved anti-corrosive steel primer. Fixing with 6 nos. hole pass 20 cm long and 4 mm thickness embedded in brickork using cement concrete (Brand - Tata Ezyfit / APL Apollo)				
14.5.1	Single Door Frame Section : 100mm x 55 mm x 2.0mm	KG	500		
14.5.2	Double Door Frame Section : 140mm x 80mm x 2.0 mm	KG	196		
14.6	Providing and fixing factory made uPVC door frame made of uPVC extruded sections having an overall dimension as below (tolerance ±1mm), with wall thickness 2.0 mm (± 0.2 mm), corners of the door frame to be Jointed with galvanized brackets and stainless steel screws,joints mitred and Plastic welded. The hinge side vertical of the frames reinforced by galvanized M.S. tube of size 19 X 19 mm and 1mm (± 0.1mm) wall thickness and 3 nos. stainless steel hinges fixed to the frame complete as per manufacturer’s specification and direction of Engineerin-charge : Extruded section profile size 42x50 mm	METER	100		
14.7	Providing and fixing to existing door frames :				
	24 mm thick factory made PVC door shutters made of styles and rails of a uPVC hollow section of size 59x24 mm and wall thickness 2 mm (± 0.2 mm) with inbuilt edging on both sides. The styles and rails mitred and joint at the corners by means of M.S. galvanised/ plastic brackets of size 75x220 mm having wall thickness 1.0 mm and stainless steel screws. The styles of the shutter reinforced by inserting galvanised M.S. tube of size 20x20 mm and 1 mm (± 0.1 mm) wall thickness. The lock rail made up of 'H' section, a uPVC hollow section of size 100x24 mm and 2 mm (± 0.2 mm) wall thickness, fixed to the shutter styles by means of plastic/galvanised M.S. 'U' cleats. The shutter frame filled with a uPVC multi-chambered single panel of size not less than 620 mm, having over all thickness of 20 mm and 1 mm (± 0.1 mm) wall thickness. The panels filled vertically and tie bar at two places by inserting horizontally 6 mm galvanised M.S. rod and fastened with nuts and washers, complete as per manufacturer's specification and direction of Engineer-in-charge. (For W.C. and bathroom door shutter).	SQM	32		

14.8	Supply & Fixing of 40 mm thick. single leaf high density interior grade marine plywood shutters pasted both sides with 1 mm thick laminate of approved design with 35x12mm T.W.lipping on all edges with necessary adhesives and CP screws complying with standard specification. The cost is inclusive of SS bearing hinges of equivalent make of approved make, complete as per direction of Bank	SQM	22		
14.9	Supply & Fixing of 40mm thk.Double leaf high density interior grade marine plywood shutters pasted both sides 1.5mm thk.laminate approved design with 35x12mm T.W.lipping on all edges with necessary adhesives and CP screws complying with standard specification.The cost is inclusive of SS ball bearing hinges of quivalent make of aproved make complete as per direction of Bank	SQM	34		
14.10	Manufacturing, supplying and fixing of Double Steel doors with following specification.MS angle of size 40x40x6mm at 3.5 kg/m used for outer frame and MS Angle of size 35x35x5mm at 2.6 Kg/m for the shutter frame. Stiffeners with 32x6mm at 1.5 Kg/m MS Flat is provided as the lock rail of the door and welded intact on both ends to the shutter frame.18 G CR Sheets of best quality is laid as panel in the shutter frames. 18x5mm at 0.70 kg/m MS flat is welded over the 32x6mm at 1.50kg/m MS Flat on the rear side of the door, sandwiching the CR Sheet for rigidity. Additional stiffeners with 18x5mm at 0.7 Kg/m MS flats are provided diagonally on the rear side of the shutter. 300mm length of hinges 3Nos, for shutter is provided. 6 Nos. of 250mm length hold fasts 200mm length specified at the ends are welded to the outer frame of the door. Tower bolt 2 Nos. at the top provided.	SQM	5.5		
14.11	Providing and fixing in position collapsible steel shutters with vertical channels 20x10x2 mm and braced with flat iron diagonals 20x5 mm size, with top and bottom rail of T-iron 40x40x6 mm, with 40 mm dia steel pulleys, complete with bolts, nuts, locking arrangement, stoppers, handles, including applying a priming coat of approved steel primer.	SQM	7.5		
14.12	Providing 40x5 mm flat iron hold fast 400 mm long including fixing to frame and embedding in cement concrete block / brickwork	Nos	210		
14.13	Providing and fixing aluminium extruded section body tubular type universal hydraulic door closer (having brand logo with ISi, IS : 3564,embossed on the body, door weight upto 36 kg to 80 kg and door widthfrom 701 mm to 1000 mm), with double speed adjustment with necessary accessories and screws etc. complete	Nos	28		

14.14	Providing and fixing stainless steel door handles of 125mm with necessary screws etc. complete.	Nos	104		
14.15	Providing and fixing heavy duty stainless steel door handles in of 12 inch size on the main door with necessary screws etc. complete.	Nos	4		
14.16	Providing and fixing stainless steel sliding door bolts, ISI marked with required nuts and screws etc. complete : 300x16 mm	Nos	24		
14.17	Providing and fixing stainless steel tower bolts, ISI marked with necessary screws etc. complete : (300mm x 10mm)	Nos	88		
14.18	Providing and fixing bright finished stainless steel hanging type floor door stopper with necessary screws, etc. complete.	Nos	37		
14.19	Providing and fixing chromium plated brass 100 mm mortice latch and lock with 6 levers and a pair of lever handles of approved quality with necessary screws etc. complete.	Nos	4		
15	**PAINTING WORKS**				
15.1	Providing and applying two coats of white cement based wall putty of 1.5 mm thickness of approved Brand over plastered surface to prepare the surface even and smooth complete.	SQM	3830		
15.2	Providing and applying two coats of specially designed premium white cement based **waterproof wall putty** of maximum 1.5 mm thickness of approved Brand over external plastered surface to prepare the surface even and smooth complete.	SQM	2128		
15.3	Painting on New plastered Walls and Ceilings with two or more coats of first quality of Acrylic Emulsion (Make & Shade Approved by Bank / Architect). It shall include for preparing the surfaces clean, even and smooth with thoroughly brushing with broom, scratching with patti and sand papering respectively, so that the surfaces are free from oil, grease, dirt, mortar droppings & other foreign and loose matter. It shall also include for preparing the surface and filling of holes with 2 coat of first quality acrylic wall putty (Wall Putty to be paid extra) before priming coat of whiting / approved primer. The rate shall include cost of all materials such as plaster of paris, whiting /primer, glue (Fevicol), indigo / strainer, brushes, sand paper, patti, dhoti, broom stick, clean water with storage and other containers, labour, scaffolding / ladder charges, cleaning of floors and other sundries etc., all complete to the satisfaction of the Bank.	SQM	3830		

15.4	Painting on New Walls with two or more coats of first quality of Weather Proof Exterior Emulsion (Make & Shade Approved by Bank / Architect). It shall include for preparing the surfaces clean, even and smooth with thoroughly brushing with broom, scratching with patti and sand papering respectively, so that the surfaces are free from oil, grease, dirt, mortar droppings & other foreign and loose matter. It shall also include for preparing the surface and filling of holes with 1 coat of first quality Birla White Wall Seal Waterproof putty (Putty to be paid extra) before priming coat of external white primer. The rate shall include cost of all materials such as plaster of paris, whiting /primer, glue (Fevicol), indigo / stainer, brushes, sand paper, patti, dhoti, broom stick, clean water with storage and other containers, labour, scaffolding / ladder charges, cleaning of floors and other sundries etc., all complete to the satisfaction of the Bank.	SQM	2128		
15.5	Painting two coats of synthetic Enamel paint of approved colour and make over one coat of anti-corrosive red oxide Zinc chromate primer over steel work, suitably prepared for receiving the paint by surface scraping, rubbing applying filler etc. including cost of filler, primer, paint all complete as per drawings and specifications.	SQM	200		
15.6	10mm thick plaster of Paris (gypsum anhydrous) sheet 10mm thick pop board Curved surfaces	SQM	9		
16	**PLUMBING WORKS**				
A	**SANITARY FITTINGS**				
16.A.1	Providing and fixing floor mounted, white vitreous china single piece, double traps syphonic water closet of approved brand/make, shape, size and pattern including integrated white vitreous china cistern of capacity 10 litres with dual flushing system, including all fittings and fixtures with seat cover, cistern fittings, nuts, bolts and gasket etc including making connection with the existing P/S trap, complete in all respect as per directions of Engineer-in-Charge.	EACH	3		
16.A.2	Providing and fixing white vitreous china pedestal type water closet (European type W.C. pan) with seat and lid, 10 litre low level white P.V.C. flushing cistern, including flush pipe, with manually controlled device (handle lever), conforming to IS : 7231, with all fittings and fixtures complete, including cutting and making good the walls and floors wherever required :	EACH	13		
16.A.3	Providing and fixing water closet squatting pan (Indian type W.C. pan) with 100 mm sand cast Iron P or S trap, 10 litre low level white P.V.C. flushing cistern, including flush pipe, with manually controlled device (handle lever) conforming to IS : 7231, with all fittings and fixtures complete, including cutting and making good the walls and floors wherever required: White Vitreous china Orissa pattern W.C. pan of size 580x440 mm with integral type foot rests	EACH	3		

16.A.4	Providing and fixing white vitreous china flat back half stall urinal of size 580x380x350 mm with CP angle cock spreader flushing supported by CI/MS bracket including built in waste grating, CP bottle trap with extension piece. This includes supply and fixing of self closing angle cock pressmatic for Urinal with fall flanges and flush piping.	EACH	6		
16.A.5	Providing and keeping in stores, shifting to the place of installation, fixing, testing and commissioning of WHITE coloured vitreous china under counter Regular rectangular wash basin (550mm x 410mm x 190mm) with brackets / G.I. rag bolts and nuts painted, 32mm dia brass C.P. waste coupling, (heavy) , 15mm dia brass C.P. Single Lever Basin Mixer with flange, 15mm dia brass C.P. hot and cold water connecting pipe, etc., The work shall include,required extension nipples, cutting / chasing and making good the walls and floors - toilets. (Make: Parryware or equivalent) Model :Atom pro. Code:C897Q	EACH	10		
16.A.6	Providing, fixing, testing and commissioning of wall hung white vitreous china wash basin with full pedestal of approx. size 550mm x 400mm with CI brackets , 15mm dia CP Brass single hole basin mixer ,32mm dia brass C.P. waste coupling, (heavy) ,15mm dia brass C.P. hot and cold water connecting pipe, etc., of approved quality and make including painting of fitting and brackets, cutting and making good the walls whenever required	EACH	4		
16.A.7	Providing and fixing Stainless Steel A ISI 304 (18/8) kitchen sink as per IS:13983 with C.I. brackets and stainless steel plug 40 mm, including painting of fittings and brackets, cutting and making good the walls wherever required : Kitchen sink with drain board of size - 510x1040 mm bowl depth 250 mm	EACH	1		
16.A.8	Providing and fixing branded brass chrome plated round towel ring weighing not less than 420 grams with concealed fittings arrangement of approved quality and colour.	EACH	4		
16.A.9	Towel Rail :Supplying and fixing approved best quality brass CP towel rail 600mm long and 20mm dia with brackets of same materials including cost of teak wood plugs and CP screws, etc.,complete complying with standard specifications. .(Make:Parryware or equivalent) Code : T5901A1	EACH	10		
16.A.10	Providing and fixing PTMT Bottle Trap for Wash basin and sink : Bottle trap 38mm single piece moulded with height of 270 mm, effective length of tail pipe 260 mm from the centre of the waste coupling, 77 mm breadth with 25 mm minimum water seal, weighing not less than 263 gms	EACH	4		
16.A.11	Providing and fixing CP Brass 32mm size Bottle Trap of approved quality & make and as per the direction of Engineer-in-charge.	EACH	10		

16.A.12	Supply & Fixing of two in one CP **Health Faucet** of the closet mounting type with hose connected two way BIB COCK complete fittings. (Make: Parryware / Hindware / Cera)	EACH	3		
16.A.13	Providing and fixing 8 mm dia C.P. / S.S. Jet with flexible tube upto 1 metre long with S.S. triangular plate to Eureopean type W.C. of quality and make as approved by Engineer - in - charge.	EACH	12		
16.A.14	Providing and fixing 600x450 mm beveled edge mirror of superior glass (of approved quality) complete with 6 mm thick hard board ground fixed to wooden cleats with C.P. brass screws and washers complete.	EACH	5		
16.A.15	Providing and fixing mirror of superior glass (of approved quality) and of required shape and size with plastic moulded frame of approved make and shade with 6 mm thick hard board backing : Rectangular shape 1500x450 mm	EACH	4		
16.A.16	Providing and fixing chrome plated brass toilet paper holder	EACH	3		
16.A.17	Supplying & fixing of Chrome Plated **robe hook** with brackets including fixing over Wall tile dado / door shutter using suitable size non-corrosive screw nails etc. complete.(Make: Parryware or equivalent)	EACH	13		
16.A.18	Supplying and fixing wall mounted stainless steel single soap dish	EACH	4		
16.A.19	Supplying and fixing wall mounted stainless steel double soap dish	EACH	13		
16.A.20	Providing and fixing C.P. brass bib cock of 15mm nominal bore with fall flange of approved quality conforming to IS:8931	EACH	15		
16.A.21	Providing and fixing C.P. brass two way bib cock of 15mm nominal bore with single handle and wall flange of approved quality conforming to IS:8931	EACH	3		
16.A.22	18.51 Providing and fixing C.P. brass long body bib cock with fall flange and aerator of approved quality conforming to IS standards and weighing not less than 690 gms. : 15 mm nominal bore	EACH	7		
16.A.23	Providing and fixing C.P. brass stop cock (concealed) with wall flange of standard design and of approved make conforming to IS:8931 : 15 mm nominal bore.	EACH	17		
16.A.24	18.53.1 Providing and fixing C.P. brass angle valve with wall flange for basin mixer, health faucet, jet spray points of approved quality conforming to IS:8931 :15mm nominal bore	EACH	43		
16.A.25	18.53A Providing and fixing C.P. Brass extension nipple (size 15mmx50mm)of approved make and quality as per direction of Engineer-in-charge.	EACH	74		

16.A.26	Supplying and fixing in position CP shower rose with CP stop cock arrangement of size 15mm dia inlet and 100mm outlet to the pipe line with necessary cutting, threading and jointing using shellac etc., complete complying with standard specification and as directed by the departmental officers. (Make: Parryware or equivalent) Model :Coral Code:T9825A1, Model :Alpha Shower Code:T9885A1	EACH	7		
16.A.27	Providing and Fixing in position CP Brass Wall Mixer with bend pipe for overhead shower of approved quality and make	EACH	7		
16.A.28	Providing and Fixing in position CP Brass Single lever Kitchen Sink mixer (wall mounted) with long swivel spout and wall flange	EACH	1		
16.A.29	Providing and Fixing in position U-Shape Anti-Slip Wall Mounted Hand Rail made from SS 304 for Elderly / Specially Abled People in Handicapped Toilet (Size - 600mm x 100mm)	Each	1		
B	**WATER SUPPLY SYSTEM**				
16.B.1	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes,having thermal stability for hot & cold water supply, including all CPVC plain & brass threaded fittings, necessary reducer i/c fixing the pipe with clampsat 1.00 m spacing. This includes jointing of pipes & fittings with onestep CPVC solvent cement and the cost of cutting chases and making good the same including testing of joints complete as per direction of Engineer in Charge.Concealed work, including cutting chases and making good the walls etc. This includes all accessories like elbows, tees, union, reducer, offset, bend, etc necessary for completion of work				
	20 mm nominal dia Pipes	METER	150		
	25mm nominal dia Pipes	METER	40		
	32mm nominal dia Pipes	METER	100		
16.B.2	18.9.5 Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes,having thermal stability for hot & cold water supply including all CPVC plain & brass threaded fittings, necessary reducers for jointing pipes. This includes jointing of pipes & fittings with one step CPVC solvent cement, trenching, refilling & testing ofjoints complete as per direction of Engineer in Charge. his includes all accessories like elbows, tees, union, reducer, offset, bend, etc necessary for completion of work				
	40MM Nominal Dia Pipes	METER	130		

16.B.3	Providing and placing on terrace high density polyethylene water storage tank, IS : 12701 marked, with cover and suitable locking arrangement and making necessary holes for inlet, outlet and overflow pipes but without fittings and the base support for tank. (5 tanks of 1000 Litre Capacity)	METER	5000		
16.B.4	Providing and fixing gun metal gate valve with C.I. wheel of approved quality (screwed end) : 40 mm nominal bore	METER	10		
16.B.5	18.18.3 Providing and fixing ball valve (brass) of approved quality, High or low pressure, with plastic floats complete 25 mm nominal bore	METER	7		
C	**SOIL, WASTE AND VENT PIPE LINES**				
16.C.1	Supplying and fixing in position best quality PVC SWR pipe of TYPE - B CLASS (FIX O-RING TYPE) of various dia having ISI mark and providing leak proof joints using PVC adhesives including fixing to the wall with special PVC / MS clamp, teak wood plugs, brass screws, etc., and making connection to all sanitary fittings, dismantling masonry / RCC works wherever found necessary and making the good dismantled portion to the original condition, including testing for any leakages,etc., complete complying with standard specifications. This includes elbow, coupler, Single Y, Reducing Y, Swept Tee, Reducer Tee, etc.				
16.C.1.1	40mm dia 6kg/sq.cm class PVC Pipes	METER	20		
16.C.1.2	50mm dia 6kg/sq.cm class PVC Pipe	METER	30		
16.C.1.3	75mm dia 6kg/sq.cm class PVC Pipe	METER	70		
16.C.1.4	110mm dia 6kg/sq.cm class PVC Pipe	METER	115		
16.C.2	Supplying and fixing in position PVC nahini /Floor Trap with Stainless Steel Grating type of size 100x75/75x50 mm with best quality gratings of approved brand fixed over a bed of brick jelly lime concrete 1:2:5(One lime two sand and five aggregate) brick jelly 40mm and finishing with CM 1:3(One cement and three sand)wherever found necessary and making good to the original condition and giving connections to the PVC pipes etc.,	EACH	42		
16.C.3	Supplying and fixing in position of the following dia PVC specials such as PVC vent Cowl etc.,of approved quality and variety of various size confirming to ISS amend providing leak proof joint etc., including necessary cutting and fixing and giving connection to PVC pipes etc.,				
16.C.3.1	75MM DIA	EACH	8		
16.C.3.2	110MM DIA	EACH	10		
D	**EXTERNAL SEWERAGE SYSTEM**				

16.D.1	Supply and fixing in position best quality IS 4985 PVC SWR pipe of TYPE - B CLASS (FIX O-RING TYPE) of various size with approved quality and variety of various size confirming having ISI mark and providing leak proof joints including erection of below ground with excavation and refilling etc.,and making connection to Manholes /Gully trap,wherever necessary and making chipping good portion to the original condition,complying with standard specification etc., complete.				
16.D.1.1	75MM DIA SWR TYPE - B PIPE :	METER	33		
16.D.1.2	110MM DIA SWR TYPE - B PIPE :	METER	49		
16.D.2	Excavating trenches of required width for pipes, cables, etc including excavation for sockets, and dressing of sides, ramming of bottoms, depth upto 1.5 m, including getting out the excavated soil, and then returning the soil as required, in layers not exceeding 20 cm in depth, including consolidating each deposited layer by ramming, watering, etc. and disposing of surplus excavated soil as directed, within a lead of 50 m : Pipes, cables etc. exceeding 80 mm dia. but not exceeding 300 mm dia	METER	195		
16.D.3	Providing and laying cement concrete 1:5:10 (1 cement : 5 coarse sand : 10 graded stone aggregate 40 mm nominal size) all-round S.W. pipes including bed concrete as per standard design :				
16.D.3.1	250MM DIA NP2 PIPE	METER	150		
16.D.3.2	150MM DIA NP2 PIPE	METER	45		
16.D.4	Providing and laying non-pressure NP2 class (light duty) R.C.C. pipes with collars jointed with stiff mixture of cement mortar in the proportion of 1:2 (1 cement : 2 fine sand) including testing of joints etc. complete :				
16.D.4.1	250MM DIA	METER	150		
16.D.4.2	150MM DIA	METER	45		
16.D.5	Providing and fixing square-mouth S.W. gully trap class SP-1 complete with C.I. grating brick masonry chamber with water tightC.I. cover with frame of 300 x300 mm size (inside) the weight ofcover to be not less than 4.50 kg and frame to be not less than 2.70kg as per standard design: 100x100 mm size P type With common burnt clay F.P.S. (non modular) bricks of class designation 7.5.	EACH	12		

16.D.6	Constructing brick masonry manhole in cement mortar 1:4 (1 cement : 4 coarse sand) with R.C.C. top slab with 1:1.5:3 mix (1 cement : 1.5 coarse sand (zone- III) : 3 graded stone aggregate 20 mm nominal size), foundation concrete 1:4:8 mix (1 cement : 4 coarse sand (zone-III) : 8 graded stone aggregate 40 mm nominal size), inside plastering 12 mm thick with cement mortar 1:3 (1 cement : 3 coarse sand) finished with floating coat of neat cement and making channels in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) finished with a floating coat of neat cement complete as per standard design :				
16.D.7	Inside size 90x80 cm and 45 cm deep including C.I. cover with frame (light duty) 455x610 mm internal dimensions, total weight of cover and frame to be not less than 38 kg (weight of cover 23 kg and weight of frame 15 kg) : With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	EACH	10		
16.D.8	Extra for depth for manholes : Size 90x80 cm With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	METER	4		
E	**OTHER MISCELLANEOUS PLUMBING WORKS**				
16.E.1	Providing and fixing on wall face Unplasticised - UPVC moulded fittings/ accessories for Unplasticised Rigid PVC rain water pipes conforming to IS : 13592 Type A including jointing with seal ring conforming to IS : 5382 leaving 10 mm gap for thermal expansion.				
16.E.1.1	Coupler 75	EACH	22.00		
16.E.1.2	Coupler 110	EACH	24.00		
16.E.1.3	Single tee with door 75x75x75 mm	EACH	12.00		
16.E.1.4	Single tee with door 110x110x110 mm	EACH	16.00		
16.E.1.5	Bend 87.5 75 mm bend	EACH	32.00		
16.E.1.6	Bend 87.5 110 mm bend	EACH	36.00		
16.E.2	Supply and fixing in position best quality **PVC IS 4985 - CLASS-II - 4 Kg/Sqcm -110 MM Rain water pipes** of various size having ISI mark and providing leak proof joints with such as Bend, Tee Junction, door etc.,of approved qualityincluding fixing to the wall with special PVC /MS clamps, etc., and making connection to all sanitary fittings, wherever necessary and making chipping good to the original condition, complying with standard specification etc., complete.	METER	135		

16.E.3	Providing and fixing to the inlet mouth of rain water pipe PTMT (an Engineering Thermoplastic) grating square (Slit) 150 mm square with a height of 8 mm and weighing not less than 100 gms.	EACH	17		
F	**BOREWELL WORKS**				
16.F.1	Drilling borewell of required diameter for casing / strainer pipe, by suitable method prescribed in IS: 2800 (part I), including collecting samples from different strata, preparing and submitting strata chart/cbore log, including hire & running charges of all equipments, tools,plants & machineries required for the job, all complete as per directionof Engineer-in-charge, upto 90 metre depth below ground level for all types of soil, sand, stone, shale, pebbles (300 mm diameter)				
	All Types of Soil (300 mm Dia)	Meter	90		
	Rocky strata including Boulders of 300 mm diameter	Meter	25		
16.F.2	Supplying, assembling, lowering and fixing in vertical position in bore well, unplasticized PVC medium well casing (CM) pipe of required dia, conforming to IS: 12818, including required hire and labour charges, fittings & accessories etc. all complete, for all depths, as per direction of Engineer -in-charge. 150 mm nominal size diameter	Meter	115		
16.F.3	Gravel packing in tubewell construction in accordance with IS: 4097,including providing gravel fine/ medium/ coarse, in required grading & sizes as per actual requirement, all complete as per direction of Engineer-in-charge.	CUM	7		
16.F.4	Development of tube well in accordance with IS : 2800 (part I) and IS:11189, to establish maximum rate of usable water yield without sand content (beyond permissible limit), with required capacity air compressor, running the compressor for required time till well is fully developed, measuring yield of well by "V" notch method or any other approved method, measuring static level & draw down etc. by step draw down method, collecting water samples & getting tested in approved laboratory, i/c disinfection of tubewell, all complete, including hire & labour charges of air compressor, tools & accessories etc., all as per requirement and direction of Engineer-in-charge.	Hour	12		
16.F.5	Providing and fixing suitable size threaded mild steel cap or spot welded plate to the top of bore well housing/ casing pipe, removable as per requirement, all complete for borewell of:150 mm dia	Each	1		

16.F.6	Providing and fixing M.S. clamp of required dia to the top of casing / housing pipe of tubewell as per IS: 2800 (part I), including necessary bolts & nuts of required size complete : 150 mm clamp	Each	2		
16.F.7	Providing and fixing Bail plug/ Bottom plug of required dia to the bottom of pipe assembly of tubewell as per IS:2800 (part I).150 mm dia	Each	1		
16.F.8	Supply and fixing the Nylon Rope to connect the submersible motor in borewell etc., complete complying with standard specifications as directed by departmental officers	Meter	90		
16.F.9	Supply, errection and giving necessary water supply and electrical connections of new type 3 HP submersible pumpset confiming to IS- 14220 with ISI mark suitable for 150mm borewell, complete complying with standard specification including suitable 3-phase panel board with DOL with two level guard starter and accessories and Labour charges for the erection of submersible pump set in bore well including fixing and jointing the submersible cable (but excluding cost of 2.50 sqmm - 3 sq.mm core copper cable)with proper clamps upto othe starter to the required depth, valves section clamps, pressure gauges upto the exterior wall of the panel board consisting of JPICN switch starter, voltammeter, ammeter, 3 pilot (indicating) lamps, capacitor, single phasing preventor, water level guard and laying and jointing the cables and twin earthing as per I.E. rules etc. complete and testing pump sets on trial run for 3 days etc., complete complying with standard specifications. with Three phase panel board	Each	1		
16.F.10	Supply of 4.00 Sq.mm / PVC insulated and sheathed, 3 core flat type copper cable for submersible motor complete complying with standard specifications as directed by departmental officers	Meter	120		
16.F.11	Providing, supplying, lowering & laying of UPVC Column Pipes of 40mm (1.5") conforming to IS 15778 having thermal stability with brass and UPVC fittings like Elbow, Brass Tee, Brass Elbow, Offsets, with jointing of pipes with one step UPVC solvent cement with including cutting of chase including testing of the joints complete and making good the walls etc. Rate is inclusive of all material labour ,transportation,tools & tackles taxes, levies etc all complete as per as per specifications (From Submersible Pump to Ground Level)	Meter	95		
16.F.12	Providing and fixing gun metal gate valve with C.I. wheel of approved quality (screwed end) : 40mm nominal bore	Each	1		

16.F.13	Constructing masonry Chamber 30x30x50 cm inside, in brick work in cement mortar 1:4 (1 cement :4 coarse sand) for stop cock, with C. I. surface box 100x100 x75 mm (inside) with hinged cover fixed in cement concrete slab 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size), i/c necessary excavation, foundation concrete 1:5:10 (1 cement : 5 fine sand : 10 graded stone aggregate 40mm nominal size) and inside plastering with cement mortar 1:3 (1 cement : 3 coarse sand) 12mm thick, finished with a floating coat of neat cement complete as per standard design : With common burnt clay F.P.S.(non modular) bricks of class designation 7.5	Each	1		
I	**TOTAL AMOUNT (BUILDING WORKS)**				
II	**SEPTIC TANK & SOAK PIT WORKS**				
1	Earth work in excavation by mechanical means (Hydraulic excavator) / manual means in foundation trenches or drains (not exceeding 1.5 m in width or 10 sqm on plan), including dressing of sides and ramming of bottoms, lift upto 1.5 m, including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 50 m. This includes ramming, consolidating and dressing complete for laying PCC (All kinds of soil)	CUM	65		
2	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level : 1:4:8 (1 cement : 4 coarse sand (zone-III) derived from natural sources : 8 graded stone aggregate 20 mm nominal size derived from natural sources)	CUM	2.35		
3	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level : 1:2:4 (1 cement : 2 coarse sand (zone-III) derived from natural sources : 4 graded stone aggregate 20 mm nominal size derived from natural sources)	CUM	0.6		
4	Centering and shuttering including strutting, propping etc. and removal of formwork for :				
4.1	Lintels, Beams, Plinth Beams, etc	SQM	3.5		
4.2	Suspended Floor, roofs, etc	SQM	14.3		

5	Supply, fabrication and placing of reinforcement steel of high yield strength ribbed bars of various diameters and grade conforming to IS 1786 for reinforced concrete work. The work includes decoiling, straightening, cutting, bending, fabricating and placing in position at all levels including lead and lift, according to drawings, specifications, etc complete and supply and use of 18G black annealed binding wire double fold to tie the bars in position and providing precast cement / PVC cover blocks for main reinforcement to ensure specified cover and complete	KG	281.2		
6	Providing and laying in position specified grade of reinforced cement concrete, excluding the cost of centering, shuttering, finishing and reinforcement - All work up to plinth level : 1:1.5:3 (1 cement : 1.5 coarse sand (zone-III) derived from natural sources : 3 graded stone aggregate 20 mm nominal size derived from natural sources)	CUM	3.09		
7	Brickwork using best quality first class table moulded burnt bricks in foundation and plinth in cement mortar 1:4 (1 Cement : 4 Coarse Sand) including curing, etc, complete with standard specifications.	CUM	17.51		
8	Half Brickwork Masonry using best qulaity first class table moulded bricks in foundation and plinth in cement mortar 1:4 (1 Cement : 4 Coarse Sand) including curing, etc, complete with standard specifications.	SQM	9.5		
9	Providing, supply, mixing and laying cement plaster 12mm thick (1 Cement : 4 Coarse Sand) mixed with water proofing compound of approved manufacturer and finished with a floating coat of neat cement mix of (1 Cement : 3 fine sand) curing, etc all complete	SQM	63		
10	Providing, supply, mixing and laying cement plaster 15 mm thick (1 Cement : 4 Coarse Sand) on rough side of single or half brick wall mixed with water proofing compound of approved manufacturer and finished with a floating coat of neat cement mix of (1 Cement : 3 fine sand)all complete as per direction of Bank.	SQM	7.5		
11	Filling available excavated earth (excluding rock) in trenches, plinth,sides of foundations etc. in layers not exceeding 20cm in depth,consolidating each deposited layer by ramming and watering, lead upto 50 m and lift upto 1.5 m.	CUM	18		
12	Constructing Circular Soak Pit of 2.5 internal diameter and 3m effective depth including excavation and disposal of surplus earth, making 45cm x 45cm dry brick honey comb shaft with FPS bricks in the center, refiling it remaining area with coarse aggregate / brick bats, covering the outer periphery with honey comb brick as per drawing and RCC Slab on top 1:1.5:3 (1 Cement : 1.5 Coarse Sand : 3 graded stone aggregate) as required as per the standard design	EACH	1		

13	Providing orange colour safety foot rest of minimum 6 mm thick plastic encapsulated as per IS : 10910, on 12 mm dia steel bar conforming to IS: 1786, having minimum cross section as 23 mmx25 mm and over all minimum length 263 mm and width as 165 mm with minimum 112 mm space between protruded legs having 2 mm tread on top surface by ribbing or chequering besides necessary and adequate anchoring projections on tail length on 138 mm as per standard drawing and suitable to with stand the bend test and chemical resistance test as per specifications and having manufacture's permanent identification mark to be visible even after fixing, including fixing in manholes with 30x20x15 cm cement concrete block 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size) complete as per design.	EACH	16		
14	Supplying and fixing in position C.I Manhole covers (heavy duty) with frame of 0.6m x 0.6m size of best approved quality and as per standard specifications	EACH	2		
15	Provding and Fixing in position pre-cast RCC manhole cover and frame of required shape and approved quality (HD 20 Circular Shape internal diameter)	EACH	4		
II	**TOTAL AMOUNT (SEPTIC TANK WORKS)**				
III	**RAIN WATER HARVESTING WORKS**				
1	Earth work in excavation by mechanical means (Hydraulic excavator) / manual means in foundation trenches or drains (not exceeding 1.5 m in width or 10 sqm on plan), including dressing of sides and ramming of bottoms, lift upto 1.5 m, including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 50 m. This includes ramming, consolidating and dressing complete for laying PCC (All kinds of soil)	CUM	66		
2	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level 1:4:8(1 cement : 4 coarse sand (zone-III) derived from natural sources : 8graded stone aggregate 40 mm nominal size derived from natural sources)	CUM	9		
3	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete up to plinth level Thermo-Mechanically Treated bars of grade Fe-500D or more.	KG	90		

4	Providing and laying in position ready mixed or site batched design mix cement concrete for reinforced cement concrete work; using coarse aggregate and fine aggregate derived from natural sources, Portland Pozzolana / Ordinary Portland /Portland Slag cement, admixtures in recommended proportions as per IS: 9103 to accelerate / retard setting of concrete, to improve durability and workability without impairing strength; including pumping of concrete to site of laying, curing, carriage for all leads; but excluding the cost of centering, shuttering, finishing and reinforcement as per direction of the engineer-in-charge; for the following grades of concrete. Note: Extra cement up to 10% of the minimum specified cement content in design mix shall be payable separately. In case the cement content in design mix is more than 110% of the specified minimum cement content, the contractor shall have discretion to either re-design the mix or bear the cost of extra cement. Concrete of M25 grade with minimum cement content of 330 kg /cum	CUM	1		
5	Centering and shuttering including strutting, propping etc. and removal of form work for :Suspended floors, roofs, landings, balconies and access platform	SQM	6		
6	Drilling borewell of required diameter for casing / strainer pipe, by suitable method prescribed in IS: 2800 (part I), including collecting samples from different strata, preparing and submitting strata chart/cbore log, including hire & running charges of all equipments, tools,plants & machineries required for the job, all complete as per irectionof Engineer-in-charge, upto 90 metre depth below ground level for all types of soil, sand, stone, shale, pebbles (300 mm diameter)	METER	45		
7	Supplying, assembling, lowering and fixing in vertical position in bore well, unplasticized PVC medium well casing (CM) pipe of required dia, conforming to IS: 12818, including required hire and labour charges, fittings & accessories etc. all complete, for all depths, as per direction of Engineer -in-charge.				
	200 MM DIAMTER	METER	22		
8	Supplying, assembling, lowering and fixing in vertical position in recharge pit PVC slotted pipe conforming to IS: 12818, including hire & labour charges, fittings & accessories etc. all complete, for all depths, as per direction of Engineer-in-charge.				
	200 MM DIAMETER	METER	24		
9	Providing and fixing suitable size threaded mild steel cap or spot welded plate to the top of bore well housing/ casing pipe, removable as per requirement, all complete for borewell of 200mm dia	NO	1		

10	Providing and fixing Bail plug/ Bottom plug of required dia to the bottom of pipe assembly of tubewell as per IS:2800 (part I) : 200mm	NO	1		
11	Providing and fixing in position pre-cast R.C.C. manhole cover and frame of required shape and approved quality : L D- 2.5 : Rectangular shape 600x450 mm internal dimensions	EACH	3		
12	Brick work with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 in foundation and plinth in:Cement mortar 1:4 (1 cement : 4 coarse sand)	CUM	37		
13	12 mm cement plaster finished with a floating coat of neat cement of mix : 1:4 (1 cement: 4 fine sand)	SQM	161		
14	Supplying, filling, spreading & leveling stone boulders of size range 5 cm to 20 cm, in recharge pit, in the required thickness, for all leads & lifts, all complete as per direction of Engineer-in-charge.	CUM	0.9		
15	Supplying, filling, spreading & leveling gravels of size range 5 mm to 10 mm, in the recharge pit, over the existing layer of boulders, in required thickness, for all leads & lifts, all complete as per direction of Engineer-in-charge	CUM	0.9		
16	Supplying, filling, spreading & leveling coarse sand of size range 1.5 mm to 2 mm in recharge pit, in required thickness over gravel layer, for all leads & lifts, all complete as per direction of Engineer -in-charge.	CUM	5.4		
17	Providing and laying damp-proof course 40mm thick with cement concrete 1:2:4 (1 cement : 2 coarse sand (zone-III) derived from natural sources : 4 graded stone aggregate 12.5mm nominal size derived from natural sources)	SQM	26		
18	Providing and fixing factory made precast RCC perforated drain covers, having concrete of strength not less than M-25, of size 1000 x 450x50 mm, reinforced with 8 mm dia four nos longitudinal & 9 nos cross sectional T.M.T. hoop bars, including providing 50 mm dia perforations @ 100 to 125 mm c/c, including providing edge binding with M.S. flats of size 50 mm x 1.6 mm complete, all as per direction of Engineer in-charge.	EACH	110		
III	**TOTAL AMOUNT (RAIN WATER HARVESTING WORKS)**				
IV	**ROAD WORKS**				
1	Preparation and consolidation of sub grade with power road roller of 8 to 12 tonne capacity after excavating earth to an average of 22.5 cm depth, dressing to camber and consolidating with road roller including making good the undulations etc. and re-rolling the sub grade and disposal of surplus earthwith lead upto 50 metres.	SQM	226		

2	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level : 1:4:8 (1 cement : 4 coarse sand (zone-III) derived from natural sources : 8 graded stone aggregate 20 mm nominal size derived from natural sources)	CUM	32		
3	Providing and laying 60mm thick factory made cement concrete interlocking paver block of M -30 grade made by block making machine with strong vibratory compaction, of approved size, design & shape, laid in required colour and pattern over 50mm thick compacted bed of sand, compacting and proper embedding/laying of inter locking paver blocks into the sand bedding layer through vibratory compaction by using plate vibrator, filling the joints with sand and cutting of paver blocks as per required size and pattern, finishing and sweeping extra sand. complete all as per direction of Engineer-in-Charge	SQM	176		
4	Providing and laying at or near ground level factory made kerb stone of M-25 grade cement concrete in position to the required line, level and curvature, jointed with cement mortar 1:3 (1 cement: 3 coarse sand), on a bed of cement mortar making joints with or without grooves (thickness of joints except at sharp curve shall not to more than 5mm), including making drainage opening wherever required complete etc. as per direction of Engineer-in-charge (length of finished kerb edging shall be measured for payment). (Precast C.C. kerb stone shall be approved by Engineer-in-charge).	CUM	5		
IV	**TOTAL AMOUNT (ROAD WORKS)**				
V	**COMPOUND WALL & GATE**				
1	Earth work in excavation by mechanical means (Hydraulic excavator) / manual means in foundation trenches or drains (not exceeding 1.5 m in width or 10 sqm on plan), including dressing of sides and ramming of bottoms, lift upto 1.5 m, including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 50 m. This includes ramming, consolidating and dressing complete for laying PCC (All kinds of soil)	CUM	202.22		
2	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level : 1:4:8 (1 cement : 4 coarse sand (zone-III) derived from natural sources : 8 graded stone aggregate 20 mm nominal size derived from natural sources)	CUM	26.45		

3	Supply, fabrication and placing of reinforcement steel of high yield strength ribbed bars of various diameters and grade conforming to IS 1786 for reinforced concrete work. The work includes decoiling, straightening, cutting, bending, fabricating and placing in position at all levels including lead and lift, according to drawings, specifications, etc complete and supply and use of 18G black annealed binding wire double fold to tie the bars in position and providing precast cement / PVC cover blocks for main reinforcement to ensure specified cover and complete	KG	5683.5		
4	Providing and laying in position ready mixed or site batched design mix cement concrete for reinforced cement concrete work; using coarse aggregate and fine aggregate derived from natural sources, Portland Pozzolana / Ordinary Portland /Portland Slag cement, admixtures in recommended proportions as per IS: 9103 to accelerate / retard setting of concrete, to improve durability and workability without impairing strength; including pumping of concrete to site of laying, curing, carriage for all leads; but excluding the cost of centering, shuttering, finishing and reinforcement as per direction of the engineer-in-charge; for the following grades of concrete. Note: Extra cement up to 10% of the minimum specified cement content in design mix shall be payable separately. In case the cement content in design mix is more than 110% of the specified minimum cement content, the contractor shall have discretion to either re-design the mix or bear the cost of extra cement. Concrete of M25 grade with minimum cement content of 330 kg /cum				
4.1	Foundation / Basement upto Plinth Level	CUM	63.07		
4.2	Ground Floor, First Floor & Terrace (All Works above Plinth Level)	CUM	16.43		
5	Filling available excavated earth (excluding rock) in trenches, plinth,sides of foundations etc. in layers not exceeding 20cm in depth,consolidating each deposited layer by ramming and watering, lead upto 50 m and lift upto 1.5 m.	CUM	111.34		
6	Centering and shuttering including strutting, propping etc. and removal of form for :				
6.1	Foundations, footings, bases of columns, etc. for mass concrete	SQM	201.61		
6.2	Lintels, beams, plinth beams, girders, bressumers and cantilevers	SQM	157.44		
6.3	Columns, Pillars, Piers, Abutments, Posts and Struts	SQM	157.96		

7	Brickwork using best quality first class table moulded burnt bricks above plinth in cement mortar 1:4 (1 Cement : 4 Coarse Sand) including curing, etc, complete with standard specifications.	CUM	87		
8	Providing, supply, mixing and laying cement plaster 12mm thick (1 Cement : 4 Coarse Sand) curing, etc all complete	SQM	704.04		
9	Providing, supply, mixing and laying cement plaster 15 mm thick (1 Cement : 4 Coarse Sand) on rough side of single or half brick wall, etc all complete	SQM	378		
10	Painting on New Walls with two or more coats of first quality of Weather Proof Exterior Emulsion (Make & Shade Approved by Bank / Architect). It shall include for preparing the surfaces clean, even and smooth with thoroughly brushing with broom, scratching with patti and sand papering respectively, so that the surfaces are free from oil, grease, dirt, mortar droppings & other foreign and loose matter. It shall also include for preparing the surface and filling of holes with 1 coat of first quality Birla White Wall Seal Waterproof putty (Putty to be paid extra) before priming coat of external white primer. The rate shall include cost of all materials such as plaster of paris, whiting /primer, glue (Fevicol), indigo / stainer, brushes, sand paper, patti, dhoti, broom stick, clean water with storage and other containers, labour, scaffolding / ladder charges, cleaning of floors and other sundries etc., all complete to the satisfaction of the Bank.	SQM	1082		
11	Painting Steel work with Deluxe Multi Surface Paint to give an even shade. Two or more coat applied @ 0.90 ltr/10 sqm over an under coat of primer applied @ 0.80 ltr/10 sqm of approved brand and manufacture. (Y shape Angle)	SQM	19		
12	Painting two coats of synthetic Enamel paint of approved colour and make over one coat of anti-corrosive red oxide Zinc chromate primer over steel work, suitably prepared for receiving the paint by surface scraping, rubbing applying filler etc. including cost of filler, primer, paint all complete as per drawings and specifications.	SQM	24		
13	Providing and fixing concertina coil fencing with punched tape concertina coil 600 mm dia 10 metre openable length (total length 90 m), having 50 nos rounds per 6 metre length, upto 3 m height of wall with existing angle iron 'Y' shaped placed 2.4m or 3.00 m apart and with 7 horizontal R.B.T. reinforced barbed wire, stud tied with G.I. staples and G.I. clips to retain horizontal, including necessary bolts or G.I. barbed wire tied to angle iron, all complete as per direction of Engineer- in-charge, with reinforced barbed tape(R.B.T.) / Spring core (2.5mm thick) wire of high tensile strength of 165 kg/ sq.mm with tape (0.52 mm thick) and weight 43.478 gm/ metre (cost of M.S. angle shall be paid separately)	METER	210		

14	Structural steel work in single section, fixed with or without connecting plate, including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer all complete. (Y shaped Angle - 40mm x 40mm x 5mm)	KG	410		
15	Steel work welded in built up sections/ framed work, including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer using structural steel etc. as required. In gratings, frames, guard bar, ladder, railings, brackets, gates and similar works	KG	450		
	TOTAL AMOUNT (COMPOUND WALL + GATE)				
X	**TOTAL AMOUNT OF CIVIL WORKS**				
	ELECTRICAL WORKS				
	INTERNAL ELECTRICAL				
Sr. No.	**Description**	**Unit**	**Qty**		
1	Wiring for light point/ fan point/ exhaust fan point/ call bell point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable in surface / recessed PVC conduit, with modular switch, modular plate, suitable GI box and earthing the point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable etc. as required.				
	Group C	Point	250		
2	Wiring for twin control light point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable in surface / recessed PVC conduit, 2 way modular switch, modular plate, suitable GI box and earthing the point with 1.5 sq.mm. FRLS PVC insulated copper conductor single core cable etc. as required.	Point	10		
3	Wiring for light/ power plug with 2X4 sq. mm FRLS PVC insulated copper conductor single core cable in surface/ recessed PVC conduit alongwith 1 No. 4 sq. mm FRLS PVC insulated copper conductor single core cable for loop earthing as required.	Metre	200		
4	Wiring for circuit/ submain wiring alongwith earth wire with the following sizes of FRLS PVC insulated copper conductor, single core cable in surface/ recessed Steel conduit as required				
4.1	2 X 1.5 sq. mm + 1 X 1.5 sq. mm earth wire	Metre	50		
4.2	2 X 2.5 sq. mm + 1 X 2.5 sq. mm earth wire	Metre	420		
4.3	2 X 4 sq. mm + 1 X 4 sq. mm earth wire	Metre	50		
4.4	2 X 6 sq. mm + 1 X 6 sq. mm earth wire	Metre	20		

4.5	4 X 6 sq. mm + 2 X 6 sq. mm earth wire	Metre	20		
4.6	4x 10 sqmm+ 2x 6 sqmm earth wire	Metre	20		
5	Supplying and drawing of UTP 4 pair CAT 6 LAN Cable in the surface/ recessed Steel/ PVC conduit as required.				
5.1	1 run of cable	Metre	150		
5.2	2 run of cable	Metre	250		
5.3	3 run of cable	Metre	80		
6	Supplying and fixing of Stepped type 2 module electronic fan regulator on the existing modular plate & switch box including connections but excluding modular plate etc. as required.	Each	60		
7	Supplying and fixing modular blanking plate on the existing modular plate & switch box excluding modular plate as required.	Each	20		
8	Supplying and fixing suitable size GI box with modular plate and cover in front on surface or in recess including providing and fixing 3 pin 5/6 Amp modular socket outlet and 5/6 A modular switch, connection etc. as required.	Each	120		
9	Supplying and fixing suitable size GI box with modular plate and cover in front on surface or in recess including providing and fixing 6 pin 5/6 & 15/16 Amp modular socket outlet and 15/16 A modular switch, connection etc. as required.	Each	30		
10	Supplying & fixing of 3 pin, 5 amp ceiling rose on the existing junction box/ wooden block including connection etc as required.	Each	140		
11	Supplying and fixing brass batten/angle holder including connection etc. as required.	Each	40		
12	Installation, testing and commissioning of ceiling fan, including wiring the down rods of standard length (upto 30 cm) with 1.5 sq. mm FRLS PVC insulated, copper conductor, single core cable etc. as required.	Each	60		
13	Supplying and fixing extra conduit down rod of 20 cm lengthG.I. pipe 15 mm dia, heavy gauge including painting etc. as required. (Note : More than 5 cm length shall be rounded to the nearest 10 cm and 5 cm or less shall be ignored)	Each	60		
14	Installation of exhaust fan in the existing opening, including making good the damage, connection, testing, commissioning etc. as required.				
	Upto 450 mm sweep	Each	11		
15	Providing and fixing following rating and breaking capacity and pole MCCB with thermomagnetic release and terminal spreaders in existing cubicle panel board including drilling holes in cubicle panel, making connections, etc. as required.				

	100 Amp, 30 KA,FP MCCB	Each	1		
	125 A,36KA,FPMCCB	Each	1		
16	Supplying and fixing following way, single pole and neutral, sheet steel, MCB distribution board, 240 V, on surface/ recess, complete with tinned copper bus bar, neutral bus bar, earth bar, din bar, interconnections, powder painted including earthing etc. as required. (But without MCB/RCCB/Isolator)				
	12 way, Double door	Each	2		
17	Supplying and fixing following way, horizontal type three pole and neutral, sheet steel, MCB distribution board, 415 V, on surface/ recess, complete with tinned copper bus bar, neutral bus bar, earth bar, din bar, interconnections, powder painted including earthing etc. as required. (But without MCB/RCCB/ Isolator).				
	4 way (4 + 12), Double door	Each	4		
	6 way (4 + 18), Double door	Each	1		
18	Supplying and fixing of following ways surface/ recess mounting, vertical type, 415 V, TPN MCB distribution board of sheet steel, dust protected, duly powder painted, inclusive of 200 A, tinned copper bus bar, common neutral link, earth bar, din bar for mounting MCBs (but without MCBs and incomer) as required. (Note : Vertical type MCB TPDB is normally used where 3 phase outlets are required.)				
	4 way (4 + 12), Double door	Each	1		
	8 way (4 + 36), Double door	Each	1		
19	Supplying and fixing 5 A to 32 A rating, 240/415 V, 10 kA, “C” curve, miniature circuit breaker suitable for inductive load of following poles in the existing MCB DB complete with connections, testing and commissioning etc. as required.				
	Single pole	Each	80		
	Double pole	Each	5		
	Triple pole	Each	5		
20	Supplying and fixing single pole blanking plate in the existing MCB DB complete etc. as required.	Each	20		
21	Supplying and fixing following rating, four pole, 415 V, isolator in the existing MCB DB complete with connections, testing and commissioning etc. as required.				
a	40 A	Each	15		

b	63 A	Each	15		
c	100 A	Each	2		
22	Supplying and fixing 20 A, 240 V, SPN Industrial type socket outlet, with 2 pole and earth, metal enclosed plug top alongwith 20 A, “C” curve, SP, MCB, in sheet steel enclosure, on surface or in recess, with chained metal cover for the socket out let and complete with connections, testing and commissioning etc. as required.	Each	10		
23	Supplying and fixing 20 A, 415 V, TPN Industrial type socket outlet, with 4 pole and earth, metal enclosed plug top alongwith 20 A, “C” curve, TPMCB, in sheet steel enclosure, on surface or in recess, with chained metal cover for the socket out let and complete with connections, testing and commissioning etc. as required.	Each	10		
24	Supplying and fixing 30 A, 415 V, TPN Industrial type socket outlet, with 4 pole and earth, metal enclosed plug top alongwith 30 A, “C” curve, TPMCB, in sheet steel enclosure, on surface or in recess, with chained metal cover for the socket out let and complete with connections, testing and commissioning etc. as required.	Each	5		
25	Providing and fixing M.V. danger notice plate of 200 mm X 150 mm, made of mild steel, at least 2 mm thick, and vitreous enameled white on both sides, and with inscription in single red colour on front side as required.	Each	5		
26	Earthing with G.I. earth plate 600 mm X 600 mm X 6 mm thick including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe of 2.7 meter long etc. with charcoal/ coke and salt as required.	Set	2		
27	Earthing with copper earth plate 600 mm X 600 mm X 3 mm thick including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe of 2.7 meter long etc. with charcoal/ coke and salt as required.	Set	2		
28	Providing and fixing 25 mm X 5 mm copper strip in 40 mm dia G.I. pipe from earth electrode including connection with brass nut, bolt, spring, washer excavation and re-filling etc. as required.	Metre	5		
29	Providing and fixing 25 mm X 5 mm G.I. strip in 40 mm dia G.I. pipe from earth electrode including connection with G.I. nut, bolt, spring, washer excavation and re-filling etc. as required.	Metre	5		
30	Providing and fixing 25 mm X 5 mm copper strip on surface or in recess for connections etc. as required.	Metre	20		

31	Providing and fixing 25 mm X 5 mm G.I. strip on surface or in recess for connections etc. as required.	Metre	20		
32	Providing and fixing 6 SWG dia G.I. wire on surface or in recess for loop earthing as required.	Metre	80		
33	Laying of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 kV grade of following size in the existing RCC/ HUME/ METAL pipe as required.				
	Above 35 sq. mm and up to 95 sq. mm	Metre	180		
34	Supplying and making end termination with brass compression gland and aluminium lugs for following size of PVC insulated and PVC sheathed / XLPE aluminium conductor cable of 1.1kV grade as required.				
a	3½ X 35 sq. mm (32mm)	Each	4		
b	3½ X 50 sq. mm (35mm)	Each	4		
c	31/4 X 70 sq. mm (38mm)	Each	4		
d	3/4 X 95 sq. mm (45mm)	Each	4		
e	4 X 6/10 sq. Mm (25mm)	Each	8		
f	4 X 16 sq. mm (28mm)	Each	8		
g	4 X 25 sq. mm (28mm)	Each	4		
35	Supply, Installation, Testing and Commissioning of 1200 mm sweep, BEE 5 star rated, ceiling fan with Brush Less Direct Current (BLDC) Motor, class of insulation: B, 3 nos. blades, 30 cm long down rod, 2 nos. canopies, shackle kit, safety rope, copper winding, Power Factor not less than 0.9, Service Value (CM/M/W) minimum 6.00, Air delivery minimum 210 Cum/Min , 350 RPM (tolerance as per IS : 374-2019), THD less than 10%, remote or electronic regulator unit for speed control and all remaining accessories including safety pin, nut bolts, washers, temperature rise=75 degree C (max.), insulation resistance more than 2 mega ohm, suitable for 230 V, 50 Hz, single phase AC Supply, earthing etc. complete as required.	Each	63		

36	Supply, installation, Testing & Commissioning of Mounting rail / Batten made of CRCA powder coated with suitable lamp holding brackets for LED Tube rod 1200mm Single 20W on wall / ceiling including connection testing etc complete as required including Supply and fixing of Led tube rod comprising of LED tube with non integral / integral driver, 6500K color temp having 40000 burning hrs life with minimum @ L 70, system lumen output should be minimum with efficacy > 80 lm/W. LED driver PF 0.95 & THD < 20%. The colour rendering index of LED light should be more than 70. Submission LM 80-08 Form LED Source Manufacturer & LM79-08 / IS16106 from NABL approved lab. Manufacturer mandatory i/c connection wire, testing etc. to complete the job. 2 Yrs Guarantee certificate from manufacturer.	Each	140		
37	Supplying of Metalic Body **Exhaust Fan heavy duty 230V A.C 50 cycles, 300 mm sweep, energy efficient,** complete erected in position with all accessories.	Each	11		
38	Supplying, erection and testing of approved make wall mounting fan oscillating type with base, blades, guard, speed regulator etc. AC 230-250 volts with connections and including raw bolt/anchor hole fastener etc. complete finished and as required. 400 mm sweep	Each	2		
39	Supply, installation testing and commissioning RJ - 45 computer jack cat 6 with shutter modular (1Module)				
	RJ - 45 computer socket cat 6 tool less connection (1Module)	Each	5		
40	Supply, installation testing and commissioning of wall mounting rack, for computer switches complete as mentioned below :-				
	6U cabinet 300X600X500, wall mounting with 6 point 5 Amp. Socket power supply strip and fan, tray.	each	2		
	12U cabinet 600X600X500, wall mounting with 6 point 5 Amp. socket power supply strip and fan, tray.	each	1		
	LT PANEL				
41	**ALL LT PANELS SHALL HAVE SPECIFIC INCLUSIONS:**				
	The outgoing feeders as indicated below shall have suitable range of followings (except capacitor feeders).				
	All MCCB's shall be suitable for unless otherwise specified in the item (Icu=Ics= 1 sec=100%.)				
	All Outgoing Feeders of Main LT panel shall have Digital Multifunction Meter with Control SP MCB				
	Necessary control and firing card with proper control wiring and lugs of the required rating to be provided.				
	Each Incomer shall have Surge Protection Device.				

	Wiring with control MCB's shall be provided for all vertical sections of main LT panel.				
	All incoming as well as outgoing feeders shall have locking facility.				
	Suitable danger board shall be provided.				
	All MCCB's shall be provided with front rotary handle and operating mechanism for door interlock with Pad locking of MCCB's handles in "OFF" Position.				
	The Panel fabricator shall provide Al./ Copper Bus-bars link from Breakers wherever more than two nos. of cables are terminated in the breakers.				
	All incoming and outgoing air circuit breakers shall be placed on middle portion of the vertical in single tier formation.				
	All distribution sub panels shall be provided with class 0.5 accuracy meters as well as CTs.				
	All hinged door shall be earthed through 2.5 sq mm tinned braided copper wire.				
	Panels shall be Powder Coated with Siemens grey paint shade no. RAL-7032 of IS-5.				
	All motor feeders MCCBs shall be of motor duty.				
	Supporting/Base rigid steel framework.				
	TPN ACB's / MCCB's shall mean 3 pole ACB's / MCCB's with adequate size of neutral link.				
	Final rating & various parameter, in addition to the specified above shall be selected on the bases of ambient conditions at site, approved equipments rating, client specific requirements, standards specified in the tender, requirement for the NOC from various statutory authorities & as per detail designed stage calculations.				
	All Back access panel shall be housed with encapsulated Spark gap based class-1/type-1 SPD with in built fuse for each incomer at each Bus Section of 100kA 10/350mS as per IS/IEC 62305-3 LPL-I. All front operated panel/Sub panels shall be housed with Mov based class-2/type-2 SPD with in built fuse for each incomer at each Bus Section of In 10kA & Irms 20kA 5/20mS as per IS/IEC 62305-3 LPL-I.				
	Supplying, Installation, Testing & Commissioning of MAIN RAW POWER ELECTRICAL PANEL (AS PER SLD)	Set	1		
A	TOTAL OF INTERNAL ELECTRICAL				
	EXTERNAL ELECTRICAL WORK				
1	Supplying and fixing 5 A to 32 A rating, 240/415 V, 10 kA, "C" curve, miniature circuit breaker suitable for inductive load of following poles in the existing MCB DB complete with connections, testing and commissioning etc. as required.				
	Single pole	Each	20		

2	Earthing with G.I. earth plate 600 mm X 600 mm X 6 mm thick including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe of 2.7 meter long etc. with charcoal/ coke and salt as required.	Set	2		
3	Providing and fixing 25 mm X 5 mm G.I. strip on surface or in recess for connections etc. as required.	Metre	30		
4	Providing and fixing 6 SWG dia G.I. wire on surface or in recess for loop earthing as required.	Metre	60		
5	Laying of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 kV grade of following size in the existing RCC/ HUME/ METAL pipe as required. Up to 35 sq. mm	Metre	450		
6	Supplying and making end termination with brass compression gland and aluminium lugs for following size of PVC insulated and PVC sheathed / XLPE aluminium conductor cable of 1.1kV grade as required.				
	4 X 6/10 sq. Mm (25mm)	Each	8		
	4 X 16 sq. mm (28mm)	Each	8		
	4 X 25 sq. mm (28mm)	Each	4		
7	Erection of metallic pole of following length in cement concrete 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 40 mm nominal size) foundation including excavation and refilling etc. as required.				
	Above 6.5 metre and upto 8.0 metre	No.	15.00		
8	Supplying and fixing of 32 mm dia X 2.00 metres long G.I. pipe (medium class) bracket for mounting of fluorescent / HPMV / HPSV street light fitting on pole including bending the pipe to the required shape, 2 nos 40 mm X 3 mm flat iron clamps with nuts, bolts and washer, painting the flat iron with primer and finish paint etc. as required.	Each	15		
9	Supplying and laying of following size DWC HDPE pipe ISI marked along with all accessories like socket, bend, couplers etc. conforming to IS 14930, Part II complete with fitting and cutting jointing etc. in the existing trench, complete as required.				
	63 mm dia (CD-63 mm & ID-51 mm nominal)	Metre	250.00		

10	Supply and fixing street light with high power LED of 3 to 6 Watt each on existing bracket assembled on single MCPCB and additional unique peanut lens on each LED, system lumens output with efficacy>120 lm/Watt. luminiare having color temp upto 6500K & 50000 hrs. burning life with minimum @ L 70, The colour rendering index of LED light should be more than 70. Luminiare comprises of driver, PF> 0.95 & surge protection 10KV. Housing made of pressure die cast aluminium with heat resistant flat glass, IP65 protection. Submission LM 79-08/IS16106 (2012), IEC60598, IEC61347 i/c connection wire, testing etc. to complete the job. (60Watt, color temp 3000-6500k as required.)	Each	15		
11	Supply and fixing integral post top lantern LED fitting comprises of copper dust finish cast aluminium spigot and spun aluminium canopy fixed with opal polycarbonate, pipe arrangement for vertical mounting, open construction driver and accessories are wired upto terminal block. LED of 1 to 3 Watt each assembled on single MCPCB, having color temp upto 6500K & having 50000 burning hrs. life with minimum @ L 70, system lumen output should be minimum with fficacy>100lm/Watt. LED driver PF > 0.95 & surge protection 10KV. The colour rendering index of LED light should be more than 70. Submission LM 79-08/IS16106 (2012), IEC60598, IEC61347i/c connection wire, testing etc. to complete the job. (40 Watt LED, color temp 3000-6500k as required.)	Each	5		
12	SITC OF 8w-10w Sleek bollard- Flate Top - Translucent made up of Extruded aluminium bottom pipe (grade 6060 T6 with test certificate) Ø100 x 2.5mm thickness & die-cast aluminium top cover (grade ADC12 with test certificate). SS fasteners. clear silicone gaskets. Die-cast aluminium mounting plate (grade ADC12 with test certificate) with pure polyester powder coating. This mounting plate along with foundation bolts of suitable size to be used for ensuring firm grouting into the specially designed foudation. Hot dip galvanised foundation bolt. Mechanical resistance IK08, Height 600mm. Pure polyester powder coated process : Acid treatment & pure polyester powder coating. Translucent polycarbonate diffuser with controlled downward light emission. Lamp fixed position. This luminaire contains built-in LED modules CCT 3000K, CRI>80, MacAdam Step 3, Light Distrinution 360°, IP67. LED modules are engineered accordingly to the existing regulations of Lumen Maintenance (LM80) and Technical Memorandum (TM21), Lifespan of the luminaire >= 60,000 hours. Operating ambient temperature range is from -15°C to +50°C. Driver efficiency >85%, power factor >0.9, THD <10%, Surge protection 2.5KV. CE/BIS Certified.	Each	10		

13	Providing and erection of black painted galvanized decorative designer poles in different section, top 60mm dia., bottom 140mm dia. with gold colour painted ornamental cast aluminium ring having lockable weather proof flush door junction box in bottom section, base plate dia. 290mm having 4 holes of 22mm dia. complete erected in an approved manner on existing foundation. Suitable size & type of foundation bolts 4 nos. X 16mm X 450mm 'J' type (EN8 grade)				
	4 meter Height	Each	1		
	5 meter Height	Each	1		
	Supply of LT Cables				
14	Supply, following sizes of PVC sheathed XLPE Insulated Aluminium conductor/copper conductor power/ multicore control armoured cable of 1.1 KV grade,Conforming to IS 7098 (latest ammended).				
14.1	4C X 25 sq mm Aluminium Armoured	Metre	50		
14.2	4C X 6 sq mm Aluminium Armoured	Metre	350		
14.3	4C X 10 sq mm Aluminium Armoured	Metre	50		
14.4	4C X 16 sq mm Aluminium Armoured	Metre	50		
15	Supplying and erecting 12.5 m (clear height) High Mast (Top- 150mm, Bottom- 360mm) with lowering and raising motorized unit, lantern carriage assembly suitable for max. 6 nos. luminaries and its control gear box, lightning finial arrangement for fixing aviation light and foundation bolts on provided foundation as per specification	Each	1		
16	ALL LT PANELS SHALL HAVE SPECIFIC INCLUSIONS:				
	The outgoing feeders as indicated below shall have suitable range of followings (except capacitor feeders).				
	All MCCB's shall be suitable for unless otherwise specified in the item (Icu=Ics= 1 sec=100%.)				
	All Outgoing Feeders of Main LT panel shall have Digital Multifunction Meter with Control SP MCB				
	Necessary control and firing card with proper control wiring and lugs of the required rating to be provided.				
	Each Incomer shall have Surge Protection Device.				

	Wiring with control MCB's shall be provided for all vertical sections of main LT panel.				
	All Outgoing Feeders shall have LED type Indication Lamps for ON/OFF indication with suitable wiring, SP MCB etc.				
	All breakers shall be interlocked as per schematic diagram through PLC with Auto load management control.				
	All incoming as well as outgoing feeders shall have locking facility.				
	Suitable danger board shall be provided.				
	All MCCB's shall be provided with front rotary handle and operating mechanism for door interlock with Pad locking of MCCB's handles in "OFF" Position.				
	The Panel fabricator shall provide Al./ Copper Bus-bars link from Breakers wherever more than two nos. of cables are terminated in the breakers.				
	All incoming and outgoing air circuit breakers shall be placed on middle portion of the vertical in single tier formation.				
	All distribution sub panels shall be provided with class 0.5 accuracy meters as well as CTs.				
	All hinged door shall be earthed through 2.5 sq mm tinned braided copper wire.				
	Panels shall be Powder Coated with Siemens grey paint shade no. RAL-7032 of IS-5.				
	All motor feeders MCCBs shall be of motor duty.				
	Supporting/Base rigid steel framework.				
	TPN ACB's / MCCB's shall mean 3 pole ACB's / MCCB's with adequate size of neutral link.				
	Final rating & various parameter, in addition to the specified above shall be selected on the bases of ambient conditions at site, approved equipments rating, client specific requirements, standards specified in the tender, requirement for the NOC from various statutory authorities & as per detail designed stage calculations.				
	All Back access panel shall be housed with encapsulated Spark gap based class-1/type-1 SPD with in built fuse for each incomer at each Bus Section of 100kA 10/350mS as per IS/IEC 62305-3 LPL-I. All front operated panel/Sub panels shall be housed with Mov based class-2/type-2 SPD with in built fuse for each incomer at each Bus Section of In 10kA & Irms 20kA 5/20mS as per IS/IEC 62305-3 LPL-I.				
	Supplying, Installation, Testing & Commissioning of ELECTRICAL FEEDER PANEL (AS PER SLD)	Set	1		
B	TOTAL OF EXTERNAL ELECTRICAL				
	SOLAR WATER HEATER				

1	Supplying, erecting, testing and commissioning of 500 LPD capacity Pressurized Solar Water heating System along with support structure complete with 3 layered Borosilicate glass 3.3 glass material ETC tubes, triple layer aluminium nitrite coating material, collector with SS 304L manifold , the manifold inner material Thickness 0.6 mm Outer material Thickness 0.45 mm and Powder coated steel for outer manifold with suitable flow rate and capacity of insulated pre heater storage solar tank in SS 304L construction with minimum 2 mm thick shell and cone and outer, Outer cladding/cover is alumin-ium, thickness of cone and shell 22 SWG. Solar Water Heater System should be compatible with pressure water pump. The Storage tank is made of food Grade SS304L with Aluminium Stucco cladding and insulated with High quality PUF insulation to minimize the heat loss of water inside the tank. The support stand shall be made up of mild steel with anti-corrosive black powder coating and should be strong enough to withstand extreme weather conditions complete in all respect. The collector support frame structure should be in a position of withstanding a wind velocity of 100 kms/hr. shall be made with angle iron of 35mmx35mmx4mm; will have vertical support at top and bottom edge of the inclined plane of the collector at a distance of 1.5 M or less. The vertical support shall be firmly grouted with the roof. Proper cleaning and degreasing of the surface should be done with the help of three in one Solution before painting. Two coats of zinc chromate red oxide primer shall be applied followed by two coats of enamel paint of suitable Colour. The tank shall be provided with inlet and outlet connection to the storage tank and back to the collector and can withstand a pressure of up to 4 kg/sq.cm. The system shall include all required size strainers, nipples, tees, bends, piping, temperature gauge and Water Meter, 3KW back heaters and electrical control panel for heaters etc. as specified in technical specifications.Complete system designed and as approved by MNRE or State Govt. Solar Energy Dept. All ETC panel manufactured by MNRE approved vendor.	Set	2		
2	Supply, Installation, Testing and Commissioning of 1 HP Pressure Booster Pump with 20/24 Liter Pressure Tank and requisite accessories. This pump should be connected between cold water tank and SWH.	No	2		
3	Supply, laying and supporting of Hot Water pipeline of GI class B 25mm nominal dia with 50mm thick Rock wool/Mineral wool insulation cladded with aluminium sheet 24swg from system to the Duct on the terrace only after 6 mtrs flow, for the above systems.The scope of work includes supply and fixing of all necessary bends , joints, tees, elbow, air vent, etc. Complete the work as respects as directed by the Bank	Meter	40		

4	Providing and fixing 25mm nominal dia pipe Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply including all CPVC plain & brass threaded fittings This includes jointing of pipes & fittings with one step CPVC solvent cement, refilling & testing of joints complete as per direction of Engineer in Charge. The scope of work includes supply and fixing of all necessary bends , joints, tees, elbow, air vent	Meter	40		
5	Providing and fixing gun metal ball valve with C.I. wheel of approved quality (screwed end) : 25mm nominal bore	No	4		
6	Providing and fixing gun metal non- return valve of approved quality (screwed end) : 25mm nominal bore	No	4		
7	Providing and fixing G.I. Union in G.I. pipe including cutting and threading the pipe and making long screws etc. complete : 25mm nominal bore	No	4		
8	Supply , laying , Testing and commissioing of 4 sqmm 3 core copper armoured LT XLPE insulated PVC sheathed FRLS armoured cable 1.1 KV grade confirming to extruded PVC Type ST2 Sheathed, 650/1100 V grade as per IS7098 (part-I) 1988.The scope of work includes dressing of the cable and termination of cable with suitable glands.	Meter	50		
C	TOTAL OF SOLAR WATER HEATER				
	CCTV INSTALLATION				
1	NETWORK VIDEO RECORDER				
	Supply, installation testing and commissioning of 16 channel NVR supported with 4K real-time live view on HDMI Outout Resolution H.265/H.265+/H.264/H.264+/ MJPEG4 decoding format for IP Network CCTV Cameras. NVR should support 2 SATA interface for HDD connection with each slot supporting minimum 6 TB Hard Disk (Cost of Hard Disk will be extra). It should have incoming and outgoing bandwith of 160 Mbps and should support POE for reduced cabling and third part cameras. NVR should be FCC and CE certified and should provide secure transmission services. (Brand - HIKVISION)	No	1		
2	HARD DISK				
	Supply, installation, testing and commissioning of 6TB Hard Disk Surveillance Grade with minimum 2 year warranty. (Brand - Seagate / WD or Equivalent)	No	1		
3	POE SWITCH				

	Supply, installation, testing and commissioning of 8 PORT POE Switch having layer 2 gigabit Ethernet switch, providing 8x1000M Ethernet ports to upload data via the convergence switch. Port Type - RJ45 port, Full duplex, MDI/MDI-X adaptive. Exchange capacity - 32 Gbps ; Standard- IEEE 802.3, IEEE 802.3u, IEEE 802.3x. (Brand - HIKVISION, D-LINK)	No	2		
4	COLOUR MONITOR				
	Supply, installation, testing and commissioning of 32" inch Full HD LED Monitor with wall mounted stand.(Brand - LG / ACER / HP / SAMSUNG / DELL or equivalent)	No	1		
5	WIRELESS MOUSE				
	Supply, installation, testing and commissioning of Wireless Mouse (Brand - DELL / HP / LOGITECH or equivalent)	No	1		
5	CCTV RACK				
	Supply, installation, testing and commissioning of 4U Wall Mounted Rack specially designed for keeping CCTV Equipments having enclosures which are fabricated out of CRCA steel, CNC programmed, punched, bended, welded and powder coated with highest quality standards. It should have lockable toughened glass door and conforms to DIN 41494 OR equivalent ISO Standards. The top and bottom Panel should have ventilation andcable entry facility. It should have 4 Power Plug Socket with cable. (Brand - D-LINK)	No	1		
6	CAMERAS				
6.1	Supply, Installation, Testing and Commissioning of IP Bullet Camera – HD IR Verifocal Lens Bullet Camera 2 MP – To be set to15 Frames Per Second (FPS) 2MP :: 1/2.8" Progressive CMOS, ICR, 0lux with IR, 1920x1080:25fps(P)/30fps(N), H.265+/H.265/H.264/MJPEG, DC12V & PoE, 3D DNR, BLC, IR range: up to 50m, Support on- boardcard slot -S: Audio/Alarm IO connectors & Conform to all other specifications mentioned above. (Brand - HIKVISION)	No	6		
6.2	Supply, Installation, Testing and Commissioning of IP Dome camera –HD IR Fixed Lens Dome Camera 2 MP – To be set to 15Frames Per Second (FPS) 2MP :: 1/2.8" Progressive CMOS, ICR, 0lux with IR, Effective Pixels:1920x1080: with video frame rate 25fps(P)/30fps(N), H.265+/H.265/H.264/MJPEG, DC12V & PoE, 3D DNR, BLC, IR range:up to 50m, Support on-board card slot -S: Audio/Alarm IO connectors and conform to all other specifications mentioned above. (Brand - HIKVISION)	No	9		

7	CABLING				
	Supplying and drawing of UTP 4 pair CAT 6 LAN Cable in the existing surface/ recessed Steel/ PVC conduit as required at the site. (D-LINK / DIGISOL)	METER	900		
D	TOTAL OF CCTV INSTALLATION				
Y	TOTAL OF ELECTRICAL (A+B+C+D)				
	TOTAL OF (X+Y)				
	Amount in words				
	Signature of Contractor with seal				