



**PROPOSED CONSTRUCTION OF EXECUTIVE QUARTERS (B + S + 5 FLOORS) AFTER DEMOLITION OF OLD BUILDING AT NO. 75, MUSIRI SUBRAMANIAM SALAI (FORMERLY OLIVER ROAD), MYLAPORE, CHENNAI – 04.**

SI. No	DSR CODE	DESCRIPTION	QTY	UNIT	RATE IN FIGURES	AMOUNT IN FIGURES
<b>STRUCTURAL WORKS</b>						
<b>1</b>		<b>Existing Building Dismantling Works</b>				
1.1	Non DSR	Demolition Of Existing Building : Demolition of existing building includes all kinds of substructure and super structure using Machine/Manually Including all Items Including Foundation, compound wall and sump and rate should include lead, lift, carting away and clearing of the debris from the site, etc., complete, as per drawing.				
		Credit charges for demolition and disposal of old building up to foundation level	-1.00	L.S		
		<b>Charges for Steel Barrication</b>				
1.2	DSR 16.81	Providing, fabricating and erecting at site MS framework comprising vertical members of 2" x 2" square tube of 2.0 mm thickness and horizontal members of 1½" x 1½" square tube of 2.0 mm thickness, including cutting, welding, grinding, fixing, alignment and all incidental works complete. Providing and fixing GI sheet of 0.47 mm thickness, including necessary fasteners, overlaps and finishing, complete as per drawings, specifications and directions of Engineer-in-Charge. including GRIHA Signage	6,130.00	m2		
		<b>Total Demolition works</b>				
<b>STRUCTURAL WORKS</b>						
<b>I</b>		<b>SUB STRUCTURE</b>				
<b>A</b>		<b>Pile Work</b>				
1.00	DSR 20.2A	Boring, providing and installation bored cast-in-situ reinforced cement concrete piles of garde M-30 of specified diameter and length below pile cap, to carry a safe working load not less than specified, excluding the cost of steel reinforcement but including the cost of boring with bentonite solution and temporary casing of appropriate length for setting out and removal of same and the length of the pile to be embedded in the pile cap etc. by Crawler mounted, telescopic boom hydraulic pilling Rig all complete, including removal of excavated earth with all its lifts and leads (length of pile for payment shall be measured up to bottom of pile cap). Note: Truck Mounted rotary/TMR/Tube well boring machine shall not be used.				
		Sump area Piles - @ 27.5m Depth	742.50	m		
		Drive Way area - @ 30m Depth	450.00	m		
2.00	DSR 20.6.3.1	Vertical load testing of piles in accordance with IS 2911 (Part IV) including installation of loading platform by Kentledge/Anchor piles method and preparation of pile head or construction of test cap and dismantling of test cap after test etc. (1 initial and 1 routine load test)	1.00	nos		
a	DSR 20.6.2.2	Vertical load testing of piles (Routine Test) in accordance with IS 2911 (Part IV) including installation of loading arrangement by kentledge or anchor pile method, preparation of pile head or construction of test cap, providing and fixing loading platform, dial gauges, reference beams, loading and unloading arrangements, recording of observations, dismantling of test setup and test cap after completion of test, complete as per specifications and directions of the Engineer-in-Charge."	1.00	nos		
3.00	DSR 20.8.2	Lateral load testing of single pile in accordance with IS Code of practice IS : 2911 (Part IV) for determining safe allowable lateral load on pile	QRO	nos		
4.00	DSR 20.9	Integrity testing of Pile using Low Strain/ Sonic Integrity Test/ Sonic Echo Test method in accordance with IS 14893 including surface preparation of pile top by removing soil, mud, dust & chipping lean concrete lumps etc. and use of computerised equipment and high skill trained personal for conducting the test & submission of results, all complete as per direction of Engineer-in-charge.	41.00	nos		



		<b>Total for Reinforcement works</b>				
<b>B</b>		<b>EXCAVATION AND FILLING</b>				
1.00	NON DSR	Earthwork in excavation for foundations, plinth beams, cess pits, trenches, drains etc. in all kinds of soil including medium dense clay and medium stiff clay up to the required depth from the existing ground level to the required line, level and grades in both dry and wet conditions including dewatering, shoring, strutting, bailing, pumping out water from all sources, dressing of sides, ramming of bottom and disposal of excavated materials up to a lead of 1.50 KM including spreading, dewatering, levelling and compacting, as directed by Engineer-in-Charge.				
		From average ground level to 1.5m depth	408.45	m3		
		1.50 m to 3.00 m depth	408.45	m3		
		3.00 m to 4.50 m depth	54.46	m3		
2.00		Filling with selected, suitable excavated earth (excluding rock) already available at site in plinths. in layers each not exceeding 200mm in depth, breaking clods, watering, compacting each layer with vibratory compactor and at inaccessible places with wooden/steel rammers to achieve 95% proctor density at optimum moisture content; dressing up embankments; if required, bailing/pumping out of water to keep site dry while back filling; costs includes transportation of all materials, labour, machinery etc. complete as per direction and entire satisfaction to the Engineer-in-charge.				
a		Available at Site	190.00	m3		
a	NON DSR	Providing and filling in foundation and plinth and under floors and in trenches etc., with Brought out Earth, layers of 150mm thick including watering, ramming with power rammers and consolidating dressing etc., with all leads complete. Measurement shall be as per consolidated depth. l x b x h.	95.04	m3		
3.00		Providing and injecting chemical emulsion for Pre-construction anti-termite treatment (should be carried out in accordance to I.S No.6313 (Part II) 1981) and create a chemical barrier under and around the column pits, wall trenches, basement excavation, top surfaces of plinth filling, junction of wall and floor, along the external perimeter of building, expansion joints, surrounding of pipes, conduits etc. with all leads complete (plinth area of the building at Ground floor only shall be measured). The treatment is to be guaranteed for a period of 10 years by PCI approved/ listed operator from date of completion and is to be executed by an approved specialised agency. with aqueous emulsion having concentration 1:499 with Premise 350 SC (Imidachloprid 30.5% SC) solution and water i.e. 0.07% solution.	528.00	m2		
4.00	NON DSR	Sheet Shoring:-Providing and fixing ISMB 350 beams (vertical) shall be inserted up to required depth of 6.00 m at a regular interval of 3m c/c at the earmarked place of work. Below the 6m depth level, the beam section to be inserted by making 500mm dia pit and after inserting the beam section, the pit gaps to be filled with M15 grade of Concrete. On the outer surface (Horizontal) channel of ISMC 175 to be fixed at 1.2m spacing perpendicular to the ISMB beams all along the boundary of about 6.00 m deep. Further this channel sections should be braced with ISA 60*60*6mm (Diagonal support system) and finally Corrugated sheets of 6mm thk to be inserted to the required depth of 3.5 m in order to preventing the soil from collapsing for a max excavation depth of 3.5m, Corner support system ISMB 200 beam sections at interval of 6m may be installed by anchoring with dedicated concrete block of size 600*600*450 at 5m level depth etc., all complete. The specifications is not limited to, but the entire shoring / strutting system shall be carried out as per the detailed drawings and Vendor shall hold responsibility in execution, adopting standard safety norms for entire works, men & materials & Equipments etc, complete to the satisfaction of Engineer - In charge. Vendor shall submit the shop drawing for sheet pile shoring system and obtain the necessary approvals from structural consultant prior to kick start the execution at site. This rate includes all material, labour cost, equipments, lead, lift, transportation / intercarting, lifting arrangements etc, all complete as per the instruction of Engineer incharge.	58.70	m		
		<b>Total for Excavation and Filling works</b>				
<b>C</b>		<b>CEMENT CONCRETE WORKS</b>				



1.00	DSR 4.20.1.1	Providing and laying in position ready mixed or site batched design mix cement concrete for plain cement concrete work; using coarse aggregate and fine aggregate derived from natural sources, Portland Pozzolana/Ordinary Portland /Portland Slag cement, proportions as per IS: 9103 to accelerate / retard setting of concrete, to admixtures in recommended improve durability and workability without impairing strength; including pumping of concrete to site of laying, curing, carriage for all leads; but excluding of the engineer-in-charge; for the following grades of concrete, the cost of centering, shuttering and finishing as per direction. Concrete of M10 grade with minimum cement content of 220 kg /cum .				
		Footings, Plinth Beams & Below the Grade Slab	19.00	m3		
		<b>Total for Cement Concrete works</b>				
<b>D</b>		<b>REINFORCED CONCRETE WORKS</b>				
2.0	DSR 5.33.1.2	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, recommended proportions as per IS: 9103 to accelerate / retard setting admixtures in 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 reinforcement as per direction of the engineer-in-charge, for the following centering, shuttering, finishing and grades of concrete.: Concrete of M30 grade with minimum cement content of 350 kg /cum.				
2.1		Pile Cap	136.00	m3		
2.2		Column Stump	12.11	m3		
2.3		Basement Column	12.11	m3		
2.4		Basement Wall	32.55	m3		
2.5		Stilt Floor Slab	18.41	m3		
2.6		Stilt Floor Beam	13.32	m3		
2.7		Staircase	2.63	m3		
		<b>Total for Reinforced Concrete works - Substructure</b>				



<b>E</b>		<b>FORMWORK</b>				
1.0	NON DSR	Providing, fabricating, erecting form work and deshuttering at all levels and places wherever needed/specified as per drawing including striking with 12mm thk Plastic coated, marine resistant waterproof ply with adjustable steel props of acceptable Staging system and with sufficient bracing as approved by consultant. Cost to include designing of proper form work and staging system to suit the requirements, Submission of design calculations and shop drawings for approval, sealing the joints with heavy duty brown self adhesive tape, aligning to line and levels including M.S. Ties, PVC Spacer, Providing openings / cutouts / pockets, applying deshuttering chemical, Deshuttering as approved by the consultant etc., complete at all levels, double floor heights and profiles. ( casting,curing,deshuttering & all related items)				
1.1		Pile Cap	77.00	m2		
1.2		Column Stump	128.13	m2		
1.3		Basement Column	96.10	m2		
1.4		Basement Wall	325.49	m2		
1.5		Stilt Floor Slab	122.73	m2		
1.6		Stilt Floor Beam	124.54	m2		
1.7		Staircase	17.55	m2		
		<b>Total for Formworks - SubStructure</b>				
<b>F</b>		<b>REINFORCEMENT WORKS</b>				
1.0	DSR 5.22.6	Providing,supplying, collecting, fabricating & fixing in position reinforcement for RCC work with high yield strength ribbed cold twisted tor steel (HYSD-Fe550-D) bar of various diameters and grade of steel at all levels conforming to IS specification including transporting from yard, decoiling, straightening, cutting, bending, hoisting/Lifting, fabricating, and placing in position according to drawings and binding the reinforcement with GI annealed binding wire of double fold of 18 gauge and providing PVC/Concrete cover blocks, for placing the reinforcements in position and for maintaining the cover specified and/or according to relevant IS codes. The quantities including of dowels reinforcement,				
		<b>Grade of reinforced steel - Fe 550-D Grade</b>				
1.1		Raft & Pile Cap (including chipping , carting & disposal)	16,320.00	Kg		
1.2		Column Stump	2,724.57	Kg		
1.3		Basement Column	2,724.57	Kg		
1.4		Basement Wall	3,906.00	Kg		
1.5		Stilt Floor Slab	1,840.95	Kg		
1.6		Stilt Floor Beam	2,664.00	Kg		
1.7		Staircase	394.95	Kg		
1.8		Pile	23,878.15	Kg		
		<b>Total for Reinforcement works - SubStructure</b>				
		<b>Total for Structural works Sub Structure</b>				
		<b>SUPER STRUCTURE</b>				
<b>II</b>		<b>REINFORCED CONCRETE WORKS - Super Structure</b>				
<b>A</b>		Providing and laying in position ready mixed M-30 grade concrete for reinforced cement concrete work, using cement content as per approved design mix, manufactured in fully automatic batching plant and transported to site of work in transit mixer for all leads, having continuous agitated mixer, manufactured as per mix design of specified grade for reinforced cement concrete work, including pumping of R.M.C. from transit mixer to site of laying , excluding the cost of centering, shuttering finishing and reinforcement, including cost of admixtures in recommended proportions as per IS : 9103 to accelerate/ retard setting of concrete, improve workability without impairing strength and durability as per direction of the Engineer-in-charge. Concrete of M30 grade with minimum cement content of 350 kg /cum				
		<b>M30 Grade Concrete</b>				



		<b>Columns &amp; Lift Wall &amp; Shear Wall</b>				
1	DSR 5.33.2.2	Ground floor to Terrace Floor -Column	91.90	m3		
		<b>Roof Beam</b>				
2		Ground floor to Terrace Floor	135.14	m3		
		<b>Roof Slab</b>				
3		Terrace Floor	178.26	m3		
		<b>Staircase</b>				
4		Flights and Steps	18.43	m3		
		<b>Lintels</b>				
5		Beam	18.00	m3		
		<b>OHT &amp; HEADROOM</b>				
6		Slab, wall & beam	19.09	m3		
		<b>Total for Reinforced Concrete works</b>				
<b>B</b>		<b>FORMWORK</b>				
<b>1.00</b>		Supplying and erecting steel centering including necessary supports for plane surfaces for Reinforced Cement Concrete works such as column footings, column pedestals, plinth beams, grade beams, staircase steps, etc. which require only nominal strutting using mild steel sheets of size 90cm x 60cm and 10 BG stiffened with welded mild steel angles of size 25mm x 25mm x 3 mm for boarding, laid over silver oak joists of size 10cm x 6.5cm spaced at about 75cm centre to centre or at suitable intervals etc. complete in all floors complying with standard specification.				
		Providing, fabricating, erecting form work and deshuttering at all levels and places wherever needed/specified as per drawing including striking with 12mm Plastic coated, marine resistant waterproof ply with adjustable steel props of acceptable Staging system and with sufficient bracing as approved by consultant. Cost to include designing of proper form work and staging system to suit the requirements, Submission of design calculations and shop drawings for approval, sealing the joints with heavy duty brown self adhesive tape, aligning to line and levels including M.S. Ties, PVC Spacer, Providing openings / cutouts / pockets, applying deshuttering chemical, Deshuttering as approved by the consultant etc., complete at all levels, double floor heights and profiles.				
		<b>Columns &amp; Lift Wall &amp; Shear Wall</b>				
1.1		Ground floor to Terrace Floor - Column	976.99	m2		
		<b>Roof Beam</b>				
1.2		Ground floor to Terrace Floor	1,227.80	m2		
		<b>Roof Slab</b>				
1.3		Ground floor to Terrace Floor	1,188.38	m2		
		<b>Staircase</b>				
1.4		Flights and Steps	122.87	m2		
		<b>Lintels</b>				
1.5		Beam	80.00	m2		
		<b>OHT &amp; HEADROOM</b>				
1.6		Slab, wall & beam	185.30	m2		
		<b>Total for Formworks</b>				
<b>C</b>		<b>REINFORCEMENT WORKS</b>				
	DSR 5.22.6	Providing, supplying, collecting, fabricating & fixing in position reinforcement for RCC work with high yield strength ribbed cold twisted tor steel (HYSD-Fe550-D) bar of various diameters and grade of steel at all levels conforming to IS specification including transporting from yard, decoiling, straightening, cutting, bending, hoisting/Lifting, fabricating, and placing in position according to drawings and binding the reinforcement with GI annealed binding wire of double fold of 18 gauge and providing PVC/Concrete cover blocks, for placing the reinforcements in position and for maintaining the cover specified and/or according to relevant IS codes. The quantities including of dowels reinforcement				



1.00		Grade of reinforcement steel - Fe 550-D Grade	86,301.67	Kg		
<b>D</b>		<b>WATERPROOFING WORKS</b>				
<b>1</b>		<b>W/P membrane system-Basement Positive Side Waterproofing Horizontal Surface Below Raft Slab Area (HDPE Membrane)</b>				
1.1	NON DSR	<p>Supplying and installing waterproofing treatment by using 1.2mm thick fully bonded Preapplied HDPE using Fosroc Membrane HDPE-P Standard with a film of pressure sensitive adhesive and allows poured concrete to bond fully with the membrane on Raft Slab/Stitch Slab/footing/Grade slab as shown in drawing. The waterproofing membrane shall comply with BS 8102 - 2009 for grades 1, 2 and 3 and Indian Standard 16471 : 2017 for Protection of structures against water from the Ground.</p> <p>Waterproofing membrane shall be supplied with side overlaps of 75mm provided on the self adhesive selvedge and end laps using HDPE P Sealed tape of 100mm wide. Membrane shall be installed in strict accordance with the manufacturer's instructions with and shall provide an intimate bond to resist water migration. The fully bonded HDPE membrane is loosely-laid on the PCC before casting of the RCC raft slab / Footings/Stitch Slab/as shown in drawings or wherever applicable etc. The membrane waterproofing shall taken to the height of grade slab concrete in aid of shuttering sheets or block work over and above lapping with Retaining wall waterproofing system</p> <p>The fully bonded Preapplied HDPE sheet waterproofing membrane shall have following typical properties :</p> <ol style="list-style-type: none"> <li>1) Membrane thickness : 1.2mm</li> <li>2) Tensile strength (film) : &gt;21 Mpa (ASTM D412)</li> <li>3) Elongation &gt;400% (ASTM D412)</li> <li>4) Peel adhesion to concrete: &gt; 880N/m (ASTM D 903 Modified)</li> <li>5) Puncture Resistance: &gt;700N (as per ASTM E154)</li> <li>6) Resistance to hydrostatic pressure : &gt;70m (ASTM D5385)</li> <li>7) Low temperature flexibility : &lt;-25°C, no crack (ASTM D1970)</li> <li>8) Linear Dimensional change : 0.1% (ASTM D1204)</li> </ol>	182	m2		
		<p>Side overlaps shall be a minimum of 100 mm on the selvedge and end overlaps of minimum 100 mm.</p> <p>The item rate shall include base preparation which include wire- brushing the Concrete/Masonry surface &amp; cleaning with air jet , treating all joints, cracks, honeycombs on the RCC members as per manufactures specification and approved methodology. Item rate also include cost of all materials, miscellaneous consumables,labors,transportation of material to all required locations by approved means ,Curing , tools, plant and machinery, hire and fuel charges and all other incidental charges etc., all required as per specifications, drawings and as directed by EIC.</p>				
<b>2</b>		<b>Retaining Wall Waterproofing</b>				



2.1	NON DSR	<p>Supplying and installing waterproofing treatment by using 1.2mm thick fully bonded Preapplied HDPE sheet membrane Fosroc Membrane HDPE P Standard for the Retaining wall as shown in drawing. Membrane shall be installed in strict accordance with the manufacturer's instructions and shall provide an intimate bond to resist water migration. The fully bonded HDPE sheet membrane shall consist of a multi layer composite film which consists of highly resilient HDPE film, self adhesive polymer layer and trafficable. The fully bonded HDPE membrane is loosely-laid before casting of the RCC Retaining wall as shown in drawings or wherever applicable etc.</p> <p>The fully bonded Preapplied HDPE sheet waterproofing membrane shall have following typical properties :</p> <ol style="list-style-type: none"> <li>1) Membrane thickness : 1.2mm</li> <li>2) Tensile strength (film) : &gt;21 Mpa (ASTM D412)</li> <li>3) Elongation &gt;400% (ASTM D412)</li> <li>4) Peel adhesion to concrete: &gt; 880N/m (ASTM D 903 Modified)</li> <li>5) Puncture Resistance: &gt;700N (as per ASTM E154)</li> <li>6) Resistance to hydrostatic pressure : &gt;70m (ASTM D5385)</li> <li>7) Low temperature flexibility : &lt;-25°C, no crack (ASTM D1970)</li> <li>8) Linear Dimensional change : 0.1% (ASTM D1204)</li> </ol>	325	m2		
		<p>Side overlaps shall be a minimum of 100 mm on the selvedge and end overlaps of minimum 100 mm. The item rate shall include base preparation which include wire- brushing the Concrete/Masonry surface &amp; cleaning with air jet , treating all joints, cracks, honeycombs on the RCC members as per manufactures specification and approved methodology. Item rate also include cost of all materials, miscellaneous consumables,labors,transportation of material to all required locations by approved means ,Curing , tools, plant and machinery, hire and fuel charges and all other incidental charges etc., all required as per specifications, drawings and as directed by EIC.</p>				
3		<b>UG Sump,OHT Tank waterproofing</b>				
3.1	NON DSR	<p>Providing and applying flexible polymer modified elastomeric waterproof coating using Brushbond Ultraflex of Fosroc or equivalent Chemicals at 1mm thick in 2 coats at a coverage rate of 16 sqm per 25 kg bag with interval period of 6 hours over a substrate with Saturated Surface Dry condition. Termination to be done on wall extending the coating to min. 300mm height above the finished floor level and sealed in the termination groove of 20mm wide and 10mm deep flushed with polymer modified mortar as per vendor recommendation . Coating shall be applied to the entire surface of floor and wall. The waterproofing system shall include necessary surface preparation, injection grouting of construction joints and honey combs with cementitious pressure grouting with 40 psi pump using Cebex 100 @ 225gms mixed to 50 kg bag of cement including joints packing using polymer modified mortar. Chamfering the floor wall junctions with cement mortar 1:4 admixed with Nitobond SBR @ 2 litres per 50 kg bag of cement. Down take pipe annular gaps shall be properly packed using Conbextra GP2 mixed with water in ratio 0.16.</p> <p>The applied material of Brushbond Ultraflex should have a Tensile strength as per ASTM D638 is 1.5 N/mm², elongation &gt;175%, Adhesion to concrete is greater than 1.0N/mm², Hardness&gt; 79 Shore A and crack bridging ability (ASTM C1305 Modified) - &gt;1.5 mm ,Migration test (CFR 175-300 of UD FDA) etc.,</p>	185	m2		
3.2		<p>The second part consists of waterproofing to internal surfaces by 12mm thick In CM 1:4 for walls with waterproofing admixtures Conplast WL Xtra or equivalent @ 200ml per bag of cement as per manufacturer's specifications and consultants approval, curing etc. complete. Cost to include necessary grouting of porous areas, watta at the junction of floor and walls, termination at the ends etc, complete.</p>	24	m2		
3.3		<b>Grade Epoxy Coating for OHT</b>				



	Non DSR	Providing, supplying and spray applying solvent free food grade epoxy resin system using Fosroc or equivalent Nitocote EP 405. The vertical surface/ horizontal surface of the concrete shall be taken up for thorough surface preparation with compressed air blowing and mechanical removal of debris, laitance, etc. It shall be waterproofed with a mechanical spray application to achieve a minimum DFT as specified below, of approved make, a solvent free, Food grade eco-friendly, epoxy resin system applied as per manufacturer recommendation etc. complete. Providing and applying of first coat of solvent free epoxy resin at 0.1 litre /sqm for achieving 100 microns, after 8 hours Apply a second coat of solvent free epoxy resin @ 0.1 litre /sqm and allow to cure. The product shall have volume of solids : 100% , Specific gravity / Mixed density : 1.85 g/cc , Adhesive bond strength with concrete : > 1 N/mm <sup>2</sup>	235	m2		
4		<b>Roof Slab Waterproofing</b>				
	Non DSR	Preparation of the concrete surface by mechanical means (mechanical grinding) to ensure a good bond between the coating and the substrate. Supplying and applying High Build Elastomeric waterproofing membrane Nitoproof 600PF or equivalent based on pitch free polyurethane, cold applied of spray / brush applied single component membrane which is root resistant with minimum elongation of 400% as per ASTM D 412 and the system includes final base preparation, applying Nitoproof 600 PF in two coats with solid content not less than 85% applied at 2.25 kgs / sqm over the primed surface using Nitoproof WB primer on prepared concrete surface as per manufacturer's specification. The required thickness of 1.2mm DFT and the mixing, composition, proposition etc shall be as per manufacturer specifications and approved by consultants. The cracks / construction joints / honey combs / leaking spots in the slab shall be provided with pressure grouting using cementitious system by admixing Cebex 100 - 225 grams to 50 kg bag of cement. The junctions shall be chamfered using Nitobond SBR admixed polymer mortar prior to application of waterproof coating. In addition treatment for Cut-outs, pipes/cables penetrations, Bore packing, sleeves, drainage etc.				
		Termination to be done above the FFL to a height of 300mm after taking U groove of 10mm wide x 10mm thick flushed with polymer modified mortar as per vendor recommendation. The exposed portion of waterproof coating over integral pedestal, parapet wall shall be applied with aliphatic polyurethane coating using Dekguard PU at 90 microns. The material shall comply to – ASTM C 836.Elongation (ASTM D412) : 500 to 700 % , Specific gravity : 1.5, Solid content : 85% ,Tensile strength (ASTM D412): 2 N/mm <sup>2</sup> , Tear resistance (ASTM D624) : 15 N, Water vapour transmission(ASTM E96) : 0.6 g/m <sup>2</sup> /hr., Water permeability @ 5 bar : Nil,Crack bridging (ASTM C836/ASTM C1305 modified): 2 mm, Shore A hardness (ASTM D2240) : 60				
4.1		Roof Slab	235	m2		
4.2		Parapet wall	96	m2		
4.3		<b>Protection Layer</b>				
	Non DSR	On completion of waterproofing application, providing and fix 200gsm non woven Polypropylene geo textile membrane with over lap of minimum 50mm as protective medium before screed concrete or landscaping works				
		Roof Slab	235	m2		
5		<b>Screed Concrete</b>				





	Non DSR	Fixing 3mm diameter, 75mm square weld mesh over the geo textile surface followed by providing and laying screed concrete of M20 grade of average 75mm thickness with a minimum thickness of 50mm at drain points and a slope of 1:150 or required as per the site condition at all levels by admixing necessary admixtures Conplast WL Xtra @ 200ml per bag of cement of Fosroc Chemicals or approved equivalent and mixing Graded fibrillated 100% virgin poly propylene fibres in concrete at the rate of 0.90 kg/cum as per manufacturers specifications. Treatment to continue along the vertical surface for 300mm height in shape of round Chamfering, curing etc. The concrete shall be provided with groove cutting of 6mm x 10mm at every 5m x 5m area, the joints shall be treated with elastomeric sealants Nitoseal PU 50.				
		Roof Slab	235	m2		
6		<b>Wet Area Waterproofing</b>				
6.1		Surface Preparation				
		The cleaning and preparation of the substrate to which the waterproofing barrier applied must be carried out thoroughly to leave a sound base for the application. Any laitance present on the surface must be removed mechanically. Release oil and other contaminants which may impair adhesion must be removed prior to the application. Surface shall be maintained in dry condition before applying waterproof coating.				
		Coving at Right Angle Junctions				
		All the right angle junctions between floor and wall shall be provided with coving of size 75mm x 75mm minimum 15mm thickness in cement mortar 1:4 admixed with Nitobond SBR or Equivalent @ 2 litres per 50 kg bag of cement after saturating the surface with water and applying a slurry primer coat with Nitobond SBR. For non sunken slabs / composite deck / precast slabs, Nitoband Corner Tapes shall be used as per manufacturer specification				
		Down Take Pipe Packing				
	Non DSR	The pipes to be fixed should be filled in order to provided a proper bond and the same to be aligned by the respective agency. The annular space around the Rain water pipe shall be packed using Conbextra GP2 or Equivalent, a high strength free flow non shrink grout mixed water in ratio 0.16 The surface shall be suitably prepared using wire brush, primed with Nitobond SBR on the core surface fixing leak free form work followed by fixing Nitoband Collars sandwiched with waterproof coating as per manufacturer's specification.				
		Pressure Grouting at Leaking points				
		Water ponding for minimum 48 hours and 50mm height shall be done to observe weak points in the concrete. Providing cementitious based injection grouting at construction joints, leaking spots and honey combs with 40 psi pump using Cebex 100 @ 225gms mixed to 50 kg bag of cement including joints packing using polymer modified mortar. Fixing of nozzles and chipped portions of nozzles shall be reinstated using Renderoc Plug as per manufacturer's specification				
		Waterproof coating				
		Providing and applying flexible polymer modified elastomeric waterproof coating using Brushbond Ultraflex of Fosroc or equivalent Chemicals at 1mm thick in 2 coats at a coverage rate of 16 sqm per 25 kg bag with interval period of 6 hours over a substrate with Saturated Surface Dry condition. Termination to be done on wall extending the coating to min.400mm height above the finished floor level and sealed in the termination groove of 20mm wide and 10mm deep flushed with polymer modified mortar as per vendor recommendation.The applied material of Brushbond Ultraflex should have a Tensile strength as per ASTM D638 is 1.5 N/mm², elongation >175%, Adhesion to concrete is greater than 1.0N/mm², Hardness> 79 Shore A and crack bridging ability (ASTM C1305 Modified) - >1.5 mm ,Migration test (CFR 175-300 of UD FDA) etc.,(Location - Toilet, Balcony)	327	m2		
6.2		Sunken Filling				



	Non DSR	Fine sand shall be sprinkled while the coating is in tacky condition. Providing and laying plastering of 12mm thickness in CM 1:4 mixed with integral waterproofing compound Conplast WL Xtra @ 200ml per bag of cement. System include necessary preparation, curing with water, chemicals used, labour, etc as per specification complete before providing screed concrete / brick bat coba / cinder filling.	215	m2		
		<b>Total for Waterproofing works</b>				
		<b>Total for Structural works Super Structure</b>				
<b>TOTAL STRUCTURAL WORKS (A)</b>						



## EXTERNAL WORKS

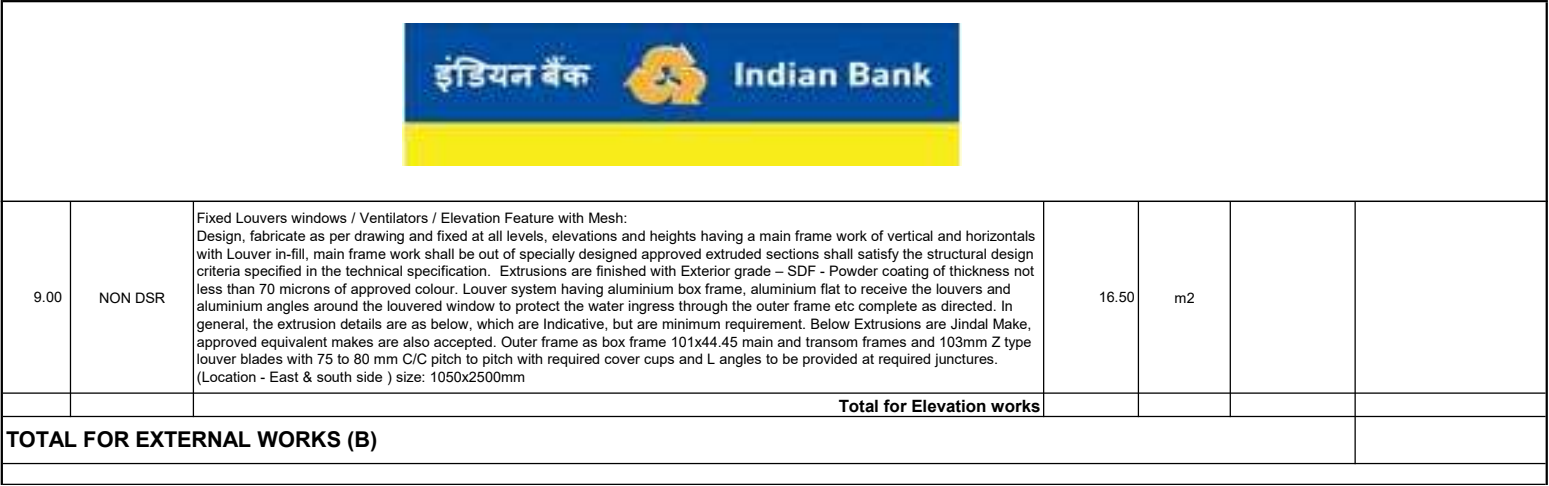
		<b>STRUCTURAL WORKS</b>				
<b>I</b>		<b>SUB STRUCTURE</b>				
<b>A</b>		<b>CEMENT CONCRETE WORKS</b>				
	DSR 4.20.1.1	Providing, machine mixing and laying Plain Cement Concrete (PCC) of M10 grade of required thickness for foundations, rafts, plinth beams, levelling course and at all locations, with minimum cement content of 220 kg per cubic metre (or as specified in relevant IS Codes and approved); including compaction, mechanical vibration, curing, providing and removing necessary shuttering, dewatering wherever required, surface preparation, cleaning of junctions, leads and lifts, etc., complete in all respects as per drawings, specifications and directions of the Engineer-in-Charge. Footings, Plinth Beams & Below the Grade Slab	3.80	m3		
		<b>Total for Cement Concrete works</b>				
<b>B</b>		<b>REINFORCED CONCRETE WORKS</b>				
	DSR 5.33.1.2	Providing, transporting, pumping and laying batched design mixed, controlled concrete of M30 (as specified in the Structural drawings) conforming to (IS 456) with minimum cement content and maximum water cement ratio as per IS or as specified by Structural Consultant including using approved quality admixtures and placed either with pump/manual/lift for following grades of concrete including compacting, vibrating, curing and protecting against excess etc. complete at all lead, lift & heights as per the drawing and to entire satisfaction of the Engineer-in-charge. <b>M30 Grade Concrete</b>				
	1.1	Column	2.03	m3		
	1.2	Beam	8.62	m3		
		<b>Total for Reinforced Concrete works - Substructure</b>				
<b>C</b>		<b>FORMWORK</b>				
	NON DSR	Providing, fabricating, erecting form work and deshuttering at all levels and places wherever needed/specified as per drawing including striking with 12mm Plastic coated, marine resistant waterproof ply with adjustable steel props of acceptable Staging system and with sufficient bracing as approved by consultant. Cost to include designing of proper form work and staging system to suit the requirements, Submission of design calculations and shop drawings for approval, sealing the joints with heavy duty brown self adhesive tape, aligning to line and levels including M.S. Ties, PVC Spacer, Providing openings / cutouts / pockets, applying deshuttering chemical, Deshuttering as approved by the consultant etc., complete at all levels, double floor heights and profiles.				
	1.1	Column	40.51	m2		
	1.2	Beam	86.16	m2		
		<b>Total for Formworks - SubStructure</b>				
<b>D</b>		<b>REINFORCEMENT WORKS</b>				
	DSR 5.22.6	Providing, supplying, collecting, fabricating & fixing in position reinforcement for RCC work with high yield strength ribbed cold twisted tor steel (HYSD-Fe550-D) bar of various diameters and grade of steel at all levels conforming to IS specification including transporting from yard, decoiling, straightening, cutting, bending, hoisting/Lifting, fabricating, and placing in position according to drawings and binding the reinforcement with GI annealed binding wire of double fold of 18 gauge and providing PVC/Concrete cover blocks, for placing the reinforcements in position and for maintaining the cover specified and/or according to relevant IS codes. The quantities including of dowels reinforcement, Grade of reinforced steel - Fe 550-D Grade				
	1.1	Column	506.40	Kg		
	1.2	Beam	2,155.00	Kg		
	1.3	Beam				
	1.4	Pile	14,103.96	Kg		
		<b>Total for Reinforcement works - SubStructure</b>				
<b>E</b>		<b>Pile Work</b>				
	1.00 DSR 20.3.1	Boring with hydraulic piling rigs with power units, providing and installing cast in situ single under reamed piles of specified diameter and length below pile cap in M-30 cement concrete, to carry a safe working load not less than specified, excluding the cost of steel reinforcement but including the cost of boring with bentonite solution and the length of the pile to be embedded in pile cap etc. all complete.	103.20	m		
		<b>Total for Pile works</b>				
<b>F</b>		<b>MASONRY WORKS</b>				



1.00	NON DSR	Providing and fixing of M15 Solid Concrete 200mm thick block work using 20mm ISS HBG stone Cement Concrete in straight or curved walls, piers and architectural features at all levels using approved solid blocks of density not less than 1,800Kgs/cum, minimum average compressive strength of 4-5 N/mm2 as per IS 2185 (Part 1) : 2005 in cement mortar 1:6 including curing, scaffolding, staging, packing the residual space between masonry & other structural members like columns, beams, slabs etc., providing openings as directed and finishing neatly around the same, the cost of all materials, labour, equipment and machinery, work at all leads and lifts, loading and unloading, transportation, and all other incidental charges etc., complete.	40.51	m³		
------	---------	--	-------	----	--	--



2.00	13.11	Providing and applying minimum 18mm thick double coat cement sand plaster; first coat to be 12mm thick cement sand mortar of mix ratio CM 1:5 (1 cement : 5 sand) including adding 2% by weight of cement approved waterproofing compound of approved manufacturer, second coat to be 6mm thick in cement sand mortar of mix ratio CM 1:6 (1 cement : 6 sand), finished sand face or as required to receive specified architectural external finish to correct line, plumb and level to external faces of walls, soffits/ceiling if any, including hacking concrete surfaces then applying chemical adhesive coating and a scratch/dash coat as a positive bond, curing the same, racking out junctions of masonry and concrete, then pointing and grouting using non-shrinking compound, joints grouted by pressing square crushed stone, doing independent double legged scaffolding etc.	405.12	m2		
3.00	NON DSR	Providing and laying 18mm thick (+/-1mm) approved machine-cut, machine-honed (matt finish) granite stone flooring of specified size and shade, with all exposed edges machine-polished (honed), treads in single piece as per drawing with rounded nosing and 2 nos. of 5mm x 5mm deep anti-skid grooves on top front edge; laid over a minimum 20mm thick cement mortar bed (1:6 mix – 1 part cement: 6 parts M-sand), with cement slurry @ 2 kg/sqm on prepared base and 4.5 kg/sqm on back of stone, joints to be filled with approved colour-matched readymade grout, including curing, cleaning, and final surface polishing to matt finish, complete in all respects as per drawing and instruction at all heights (Basic price of granite Rs.120/Sft excluding GST)."	254.00	m2		
<b>Total for Masonry Works</b>						
<b>G</b>	NON DSR	<b>PAINTING / SUNDRISE/ ELEVATION WORKS</b>				
1.00		Providing and applying two coats of Acrylic Texture Application over one coat of Primer and Two Coats of Ultima Protek Apply One Coat of Exterior Primer + One Coat of Apex Duracast Cross Texture + Two Coats of Ultima Protek	405.12	m2		
2.00	NON DSR	Supply and Install Motorised MS Telescopic Gate CE Certified As Per European Standard EN 13241-1:2003+A1.2011 Single Side - 2 Leaf Avians Std Design Surface Finish - Enamel Paint Automation System Push Button - 1 No. and specified in the Drawings	1.00	Nos		
3.00	NON DSR	Supply and laying of 60mm thk paver block laid over 50mm thick M sand filling with necessary compaction to the level satisfaction to the engineer - in- charge	257.00	m2		
4.00	NON DSR	Supply and Backfilling of M Sand/Dust and as specified by Engineer - in - Charge	115.65	m³		
5.00	NON DSR	Security Cabin -The prefabricated security cabin shall be of trapezium shape with floor dimensions of 2.00 m, 2.50 m, 3.40 m, and 2.90 m, and an internal clear height of 2.40 m, constructed with a robust MS structural frame using 50x50x3 mm square tubes treated with anti-corrosive paint. The floor shall consist of a steel frame base with 18 mm BWP-grade marine plywood topped with anti-skid vinyl flooring. Wall panels shall be sandwich type with 0.6 mm powder-coated GI external sheet, 50 mm PUF insulation (density ≥ 40 kg/m³), and a pre-laminated internal board finish. The roof shall be slightly sloped, insulated with PUF, and covered with GI sheeting, while the ceiling shall be pre-laminated board or PVC panel. The unit shall include a flush door with powder-coated frame, sliding aluminium or UPVC windows with 4 mm clear glass, and provision for electrical points including LED lighting, fan, MCB panel, and modular switches with concealed FRLS wiring. The cabin shall be suitable for crane or forklift relocation, delivered either fully assembled or in knock-down form, with optional provisions for AC, counter, and external branding.	1.00	Nos		
6.00	NON DSR	Elevation Balcony planter box- Size 300x300x300mm as specified in the drawings	145.00	Nos		
7.00	NON DSR	Landscape Work Specification for Roof Garden - The work includes the complete development of a roof garden, including waterproofing, soil filling, drainage arrangement, planting, and irrigation systems as per the drawing layout.	272.22	L.S		
8.00	NON DSR	Fixed Louvers windows / Ventilators / Elevation Feature with Mesh: Design, fabricate as per drawing and fixed at all levels, elevations and heights having a main frame work of vertical and horizontals with Louver in-fill, main frame work shall be out of specially designed approved extruded sections shall satisfy the structural design criteria specified in the technical specification. Extrusions are finished with Exterior grade – SDF - Powder coating of thickness not less than 70 microns of approved colour. Louver system having aluminium box frame, aluminium flat to receive the louvers and aluminium angles around the louvered window to protect the water ingress through the outer frame etc complete as directed. In general, the extrusion details are as below, which are Indicative, but are minimum requirement. Below Extrusions are Jindal Make, approved equivalent makes are also accepted. Outer frame as box frame 101x44.45 main and transom frames and 103mm Z type louver blades with 75 to 80 mm C/C pitch to pitch with required cover cups and L angles to be provided at required junctures. (Location - East & south side ) size: 1250x1500mm	151.80	m2		





## ARCHITECTURAL WORKS

A		Masonry Works				
1.00	NON DSR	Providing and fixing of 200mm thick solid block work in straight or curved walls, piers and architectural features at all levels using approved solid blocks of density not less than 1,800Kgs/cum, minimum average compressive strength of 4-5 N/mm <sup>2</sup> as per IS 2185 (Part 1) : 2005 in cement mortar 1:6 including curing, scaffolding, staging, packing the residual space between masonry & other structural members like columns, beams, slabs etc., providing openings as directed and finishing neatly around the same, the cost of all materials, labour, equipment and machinery, work at all leads and lifts, loading and unloading, transportation, and all other incidental charges etc., complete. (Location -parapet wall)	20.11	m <sup>3</sup>		
2.00	6.47	Providing and laying autoclaved aerated cement (AAC) block masonry with 200 mm thick Grade-I AAC blocks of density 551 to 650 kg/m <sup>3</sup> , using approved polymer modified block-laying adhesive mortar of the same manufacturer/brand as the AAC blocks, including cutting, shaping, alignment, curing, scaffolding and all incidental works complete, as per the direction of the Engineer-in-Charge. (Payment for RCC bands and reinforcement shall be made separately.)				
		200mm AAC Block	158.17	m <sup>3</sup>		
2.10	NON DSR	Providing and laying Autoclaved Aerated Concrete (AAC) blocks masonry 100 mm/230 mm/300 mm thick with Grade-1 blocks of density 551-650 kg/m <sup>3</sup> , conforming to IS 2185 (Part 3), in superstructure above plinth level up to floor V level with RCC bands at sill and lintel levels, using approved polymer-modified adhesive of the same manufacturer/brand as the AAC blocks, including cutting, shaping, alignment, curing, scaffolding and all incidental works complete, all complete as per the direction of the Engineer-in-Charge.				
		100mm AAC Block	840.24	m <sup>2</sup>		
3.00	13.4.1	Providing and applying 12 mm thick plaster in cement mortar mix ratio CM 1:4 (1 cement : 4 sand) mixed with approved Recron fibre as per manufacturer's specifications, to internal surfaces of concrete and masonry work; including raking out joints, hacking concrete surfaces and applying approved chemical bonding agent and applying a scratch coat over concrete surfaces by bonding / adhesive chemical coat as directed by approved manufacturer to create a key, cleaning / grooving deep junctions of concrete & masonry, grouting then back by mortar mixed with non-shrinking compound along with packing of clean, fresh square cut aggregate; also providing and fixing 20 gauge GI chicken mesh @ 150 mm wide to junctions of concrete and masonry, preparing jambs, sills, grooves, bands, wattas, rounding of corners, etc., all complete as per architectural drawings and specifications, finished smooth with wooden rundha, at all leads, depth and lifts, including independent double-legged scaffolding, cleaning of surfaces, curing, etc., complete. (Internal Wall)	4,084.94	m <sup>2</sup>		
4.00	13.11	Providing and applying minimum 18 mm thick double coat cement sand plaster; first coat 12 mm thick cement sand mortar CM 1:5 (1 cement : 5 sand) including 2% by weight of cement approved waterproofing compound, second coat 6 mm thick cement sand mortar CM 1:3 (1 cement : 3 sand), finished sand face or with grooves as specified / ready to receive architectural external finish to correct line, plumb and level to external faces of walls, soffits/ceiling if any, including hacking of concrete surfaces, applying approved chemical bonding agent and scratch/dash coat as a positive bond, curing, raking out junctions of masonry and concrete, forming grooves, pointing and grouting using non-shrinking compound, joints grouted by pressing square crushed stone, doing independent double-legged scaffolding, all complete as per specifications and direction of Engineer-in-Charge. (External Wall)	1,058.69	m <sup>2</sup>		
5.00	13.7.1	Providing and applying 10mm thick ceiling plaster in slab & Beam in cement mortar mix ratio CM 1:3 (1 cement : 3 sand), to internal surfaces of concrete work; including hacking concrete surfaces then applying approved chemical bonding agent and applying a scratch coat over concrete surfaces by bonding / adhesive chemical coat as directed by approved manufacturer to create a key, cleaning / grooving deep junctions of concrete & masonry, grouting then back by mortar mixed with non-shrinking compound along with packing of clean, fresh square cut aggregate, preparing grooves, pattas, wattas, rounding of corners, etc. all complete as per architectural drawings, specifications and finished smooth with wooden rundha etc. or as specified; at all leads, depth and lifts, doing independent double-legged scaffolding, cleaning of surfaces, curing, etc. complete as per specification.	564.82	m <sup>2</sup>		
		Total for Masonry Works				
B		FLOORING FINISHES				
1.00	NON DSR	Providing and laying approved first quality full body vitrified tiles 600 mm × 1200 mm (±5 mm Tolerance) of approved colour, design and shade, conforming to IS 15622, with water absorption less than 0.05%, flooring laid in pattern as detailed in drawings, using tiles of ±9 mm thickness tolerance, bedded over minimum 20 mm thick cement sand mortar CM 1:6 (1 cement : 6 coarse sand) including cleaning and preparing the surface, spreading neat cement slurry using minimum 2 kg cement per sqm over cleaned surface and spreading neat cement paste using minimum 4.5 kg cement per sqm over cement mortar bed. Joints shall be cleaned and grouted with matching colour approved quality epoxy based ready-made grout, including curing, cleaning, laying to correct line and level, and protection till handing over, all complete as per specifications and direction of Engineer-in-Charge. (Basic price Rs. 80/Sft, Excluding GST) (Make: Kajaria / RAK / Johnson or equivalent)	779.16	m <sup>2</sup>		



2.00	NON DSR	Providing and laying approved first quality, colour, design and shade Full body Vitrified Tiles 600 x 1200 mm of approved make (confirming to IS 15622, water absorption less than 0.05%) flooring in pattern as detailed in drawing, using tiles of ±9 mm thickness tolerance, Tile to be bedded over minimum 20mm thick cement sand mortar mix ratio 1:6 (1 cement : 6 coarse sand) including cleaning and preparing the surface for bedding, spreading neat cement slurry by using minimum cement about 2 Kg/Sqm over cleaned surface and spreading neat cement paste using minimum cement about 4.5 Kg/Sqm over cement mortar bed, joints to be cleaned and grouted with matching colour approved quality ploymer based readymade grout, curing, cleaning, to required line, level, protecting till handing over.( Basic Price Rs.80/Sft Excluding GST ) (Make: Kajaria Marfil Rock) (Epoxy Grout ) (Toilet & Balcony)	224.11	m2		
3.00	NON DSR	Providing and laying 18 mm (±1 mm) thick approved machine cut, machine polished Granite stone flooring as per drawing. Treads in one piece or as directed to full length of step to be rounded at front and all exposed edges machine polished. Further treads to have 2 nos of 5mm x 5mm deep grooves on top at front or as detailed in drawing. Treads & Riser to be bedded in cement mortar minimum 20 mm thick mix ratio 1:6 (1 cement : 6 M-sand) including preparing and cleaning surfaces, spreading cement slurry using minimum cement 2 kg/sqm over prepared surface and 4.5 kg/sq m over bedding, joints to be cleaned and grouted with matching colour approved readymade grout, curing, cleaning, polishing all complete at all heights ( Basic Price Rs.160/Sft Excluding GST ) (Location - Staircase)	136.83	m2		
4.00	NON DSR	Providing and laying 18 mm (±1 mm) thick approved machine-cut, machine-polished granite stone flooring in Lift Lobby, as per approved drawings, including machine polishing of all exposed edges and providing 2 nos. of 5 mm x 5 mm grooves where detailed. Granite shall be laid over minimum 20 mm thick cement mortar CM 1:6 (1 cement : 6 M-sand), including preparing and cleaning the base surface, spreading neat cement slurry using minimum 2 kg of cement per sqm over prepared surface and 4.5 kg per sqm over bedding. Joints shall be cleaned and grouted with approved matching colour ready-made grout, including curing, cleaning and final polishing, complete in all respects at all levels, as per specifications and directions of Engineer-in-Charge. (Basic Price: Rs. 160 / Sft, excluding GST — Location: Lift Lobby)	121.63	m2		
5.00	NON DSR	Providing and laying 60 mm thick cement concrete flooring with mix of Grade M20 using vacuum dewatering technique and power trowelling to obtain anti-skid finish. This includes cost of cement slurry, including cutting 4 mm wide and 20 mm deep grooves on the finished floor at the spacing of 1.40 m x 1.40 m (panel size not more than 2 sqm in area and not more than 2.00 m in length) and filling the grooves with pavement grade PU sealant etc., all complete including the cost of masking tape all complete as per direction of Engineer-in-Charge. Finally finished with anti-static flooring / PVC flooring of min 2 mm thickness at the time of commissioning of the building. (Location: UG Sump area / STP)	78.00	m2		
6.00	NON DSR	Polishing Concrete Car Parking - Abrasion Resistance AR3 Layer : Charges for Supply and Installation of Abrasion resistance layer (AR class 3) of 1 to 2 mm thickness using nonmetallic colored floor hardeners at the recommended dosage of 4 kgs / sq.m using dry shake application Colour: Cement Grey. MATT POLISHING: Charges for grinding the concrete floor surface with 200 Grits then cleaning the surface for the densification process. then apply our @ KONGRIT HARD - MAX LIQUID Sprinkle Lithium Silicate denifier by mechanical Sprayer, spread by Micro Fiber Wet tool and leave the floor for a minimum 12-24 hours without any physical touch. After that Honing the surface by 400 Grits to finish the floor ( Process : KONGRIT Wet on Wet Polishing System.)(Location: Basement & Parking)	78.00	m2		
7.00	NON DSR	Screed Concrete: Minimum 50 mm thick concrete pavement of design mixed concrete. The concrete shall be laid and finished with screed board vibrator and finally finished by floating, brooming with wire brush etc. complete as per specifications and directions of Engineer-in- charge.	1,072.10	m2		
8.00	NON DSR	Supply and fixing Nano white Marble counter top and counter top shall be finished with polishing and full noising at all exposed egdes. Finished with necessary adhesives.(Pooja )	11.50	m2		
9.00	NON DSR	supply and fixing table top and counter top shall be finished with 18mm thick approved granite with all side full bull noising at all exposed egdes of the granite.( Dinning crockery storage, wash basin counter, Kitchen island counter top and kitchen slab)	75.00	m2		
10.00	NON DSR	Providing and laying Screed flooring 1:1.5:3 (1cement, 1.5 M.sand ,3 aggregate) average 75mm thk using 12mm and down graded granite aggregate laid in panels not exceeding 2.5sqm in area laid to proper level , slope or fall including curing by ponding water . top to be finished with power trowel to required finish etc., complete in all levels .(Electrical panel room)	9.68	m2		
		Total for Flooring Finishes				
C		WALL CLADDING				
1.00	NON DSR	Providing and laying Full body Vitrified Tile cladding of size 600mm x 600mm (±9 mm thickness) as detailed in drawing. Tile to be laid using the approved adhesive and to required line, level; joints to be cleaned and grouted with matching colour approved quality readymade grout, curing, cleaning, polishing, protecting etc. all complete at all heights and leads to the entire satisfaction of the Engineer-in-charge ( Basic Price Rs.80/Sft Excluding GST ) (Location - Kitchen /Utility) (Make: Kajaria / RAK / Johnson or equivalent)	231.91	m2		





2.00	NON DSR	Providing and laying Full body Vitrified Tile cladding of size 600mm x 1200mm as detailed in drawing. Tile to be laid using the approved adhesive and to required line, level; joints to be cleaned and grouted with matching colour approved quality readymade grout, curing, cleaning, polishing, protecting etc. all complete at all heights and leads to the entire satisfaction of the Engineer-in-charge ( Basic Price Rs.60/Sft Excluding GST) (Location - Toilet) (Make: Kajaria / RAK / Johnson or equivalent)	583.93	m2		
3.00	NON DSR	Providing, supplying and fixing granite cladding using 18 mm thick approved quality granite, machine cut and machine polished, in required sizes and patterns as per approved drawings. The granite cladding shall be finished with full bull-nosing on all exposed edges, neatly machine polished. Cladding shall be fixed using approved high-strength adhesive / polymer-modified mortar, including surface preparation, cleaning, alignment, levelling, provision of necessary mechanical supports / cramps where required, and maintaining true lines and plumb.  The item includes cutting, shaping, edge finishing, fixing, jointing, filling of joints with approved matching colour grout / sealant, cleaning, protection and final finishing complete, at all heights and locations, as per architectural drawings, specifications and directions of Engineer-in-Charge. (Location: Lift Lobby) ( Basic Price Rs.160/Sft Excluding GST)	23.04	m2		
1.00		LIVING				
(i)		Wall paneling				
a	NON DSR	Providing and fixing wall paneling as per drawing, in general it shall be made of Aluminium extruded sections of size 50x25mmx1.5mm thick in both horizontal and vertical direction at 600 mm c/c spacing, frame shall be fixed at required depth as per drawing. The framework shall be covered with single layer 12mm thick BWP-710 grade plywood and the second layer covered with 6mm thick Waterproofing plywood and all the area finished with 1mm thick laminate and with 5mm Mira luxurious glass design (Saint Gobain Mirror) the cost including of necessary hardware's and adhesive etc.				
		Sofa back wall & Near wash basin	70	m2		
b	NON DSR	Providing and fixing wall paneling as per drawing, in general it shall be made of Aluminium extruded sections of size 50x25mmx1.5mm thick in both horizontal and vertical direction at 600 mm c/c spacing, frame shall be fixed at required depth as per drawing. The framework shall be covered with single layer 12mm thick BWP-710 grade plywood finished with fluted panel design cost including of necessary hardware's and adhesive etc.				
		dinning	55	m2		
c	NON DSR	Providing and fixing wall paneling as per drawing, in general it shall be made of Aluminium extruded sections of size 50x25mmx1.5mm thick in both horizontal and vertical direction at 600 mm c/c spacing, frame shall be fixed at required depth as per drawing. The framework shall be covered with single layer 12mm thick BWP-710 grade plywood finished with 1mm laminate and partly finished with fluted panel design cost including of necessary hardware's and adhesive etc.				
		tv wall back drop	50	m2		
d	NON DSR	Providing and fixing wall paneling as per drawing, in general it shall be made of Aluminium extruded sections of size 50x25mmx1.5mm thick in both horizontal and vertical direction at 600 mm c/c spacing, frame shall be fixed at required depth as per drawing. The framework shall be covered with single layer 12mm thick BWP-710 grade plywood and the second layer covered with 6mm thick Waterproofing plywood and all the area finished with 1mm thick laminate and with 5mm Mira luxurious glass design (Saint Gobain Mirror) and T profile. the cost including of necessary hardware's and adhesive etc.				
		Pooja room outer wall	55	m2		
(ii)		Storages				
a	NON DSR	Providing and fixing of TV Display carcass made out of 19mm thick BWP-710 ply, finished with 1mm lamination on exposed sides. The edges shall be finished with edge binding or lipping. such as soft closing hinges, soft drawer channels, SS handles, locks etc. The rate shall be inclusive of all hardwares.Size: (0.6mx1.9m)	5.70	m2		
b	NON DSR	Providing and fixing of TV Unit, Bottom unit made out of 19mm thick BWP-710 ply, finished inside with 0.8mm lamination and with 1mm lamination on exposed sides. The edges shall be finished with edge binding or lipping. the unit has drawer unit . such as soft closing hinges, soft drawer channels, SS handles, locks etc. The rate shall be inclusive of all hardwares.Size: (2.95mx0.26 m)	3.84	m2		
c	NON DSR	Providing and fixing of window seating with storage made out of 19mm thick BWP-710 ply, finished inside with 0.8mm lamination and with 1mm lamination on exposed sides. The edges shall be finished with edge binding or lipping. the unit top has seating with PU foam finished with Velvet fabric such as soft closing hinges, soft drawer channels, SS handles, locks etc. . The rate shall be inclusive of all hardwares .Size: (2.4mx0.45 m)	5.40	L.s		
d	NON DSR	Providing and fixing of Crockery unit at dinning. Bottom carcass made out of 19mm thick BWP-710 ply, finished inside with 0.8mm lamination and with 1mm lamination on exposed sides. with drawer and intermediate shelf. The edges shall be finished with edge binding or lipping. the shutter is made out of 19mm thick BWP-710 ply, finished with 1mm lamination with hinges and handles. The rate shall be inclusive of all hardwares.	9.80	m2		
e	NON DSR	Providing and fixing of wash basin under cabinet made out of 19mm thick BWP-710 ply, finished inside with 0.8mm lamination and with 1mm lamination on exposed sides. The edges shall be finished with edge binding or lipping. the shutter is made out of 19mm thick BWP-710 ply, finished with 1mm lamination with hinges and handles. such as soft closing hinges, soft drawer channels, SS handles, locks etc. The rate shall be inclusive of all hardwares.	10.24	m2		



(iii)		Room divider				
	NON DSR	Providing and fixing of Room divider as per the design made out of 19mm/12mm Ply boxing vertical fixed from flooring to the ceiling inbetween providing 25mm SS rod with PU coating .and all the boxing finished with lamination with necessary adhesives and harwares.	35.00	m2		
2.00		pooja				
(i)		Wall panneling				
a	NON DSR	Providing and fixing wall paneling (pooja main wall ) as per drawing, in general it shall be made of Aluminium extruded sections of size 50x25mmx1.5mm thick in both horizontal and vertical direction at 600 mm c/c spacing, frame shall be fixed at required depth as per drawing. The framework shall be covered with single layer 12mm thick BWP-710 grade plywood finished with 1mm laminate finish cost including of necessary hardware's . CNC Cutting, hardware's such as soft closing hinges, drawer channels, SS handles, locks etc.	21.50	m2		
b	NON DSR	Providing and fixing Ganapathy Backdrop CNC cutting panel made out of 12 mm thick HDMR board and coverd with 4.5mm thick teakwood veneer and all the edges with teakwood frame as per the drawing with CNC cutting and finished with PU Polish and fixing the same above the wall panneling with necessary hardwares and screws.Size:(0.8mx1.7m)	6.80	L.s		
(ii)		Storage				
	NON DSR	Providing and fixing of Bottom unit made out of 19mm thick BWP-710 ply, finished inside with 0.8mm lamination and with 1mm lamination on exposed sides. The edges shall be finished with edge binding or lipping. the unit has drawer unit The rate shall be inclusive of all hardwares. CNC Cutting, hardware's such as soft closing hinges, drawer channels, SS handles, locks etc.Size: (1.8mx0.72 m)	6.50	m2		
(iii)		pooja door				
	NON DSR	Providing and fixing the Pooja door and door frame. the frame made out of 100x75mm I st quality teak wood with necessary rebates and fixed to the wall and necessary anchor fastner and frame finished with PU polish.the shutter made out of 25mm thick HDMR board both side finished with 1 mm thick laminate and all the edges of the shutter fixed with teakwood beading.the shutter area designed and with CNC cutting as per the drawing and all exposed edges including CNC cutting area are finished with polish finish to match the lamination colour .the door contain with necessary SS hinges hardwares, soft drawer channels, bell and handles etc.	21.00	m2		
3.00		Kitchen				
(i)	NON DSR	Providing and fixing of Kitchen lower carcass and shutter of 600mm depth made out of 19mm thick BWP-710 ply, finished with 1mm thick Glossy lamination on all exposed surfaces and 0.8mm on all inner surfaces. The edges shall be finished with edge binding or lipping. The rate shall be inclusive of soft closing hinges, soft drawer channels, Profile handle etc.	30.00	m2		
(ii)	NON DSR	Providing and fixing High level carcass and shutter made out of 19mm carcass of 300 mm depth made out of 19mm thick BWP-710 ply, finished with 1mm thick Glossy lamination on all exposed surfaces and 0.8mm on all inner surfaces. The edges shall be finished with edge binding or lipping. and also other shutters made out of aluminium slim profile powder coated sections work with 6mm thick fluted glass with necessary hardwares,soft closing hinges ,and profile handle and also where ever required profile light provision according to the size as per the drawing.	15.00	m2		
(iii)	NON DSR	Providing and fixing Tall storage made out of 19mm carcass of 300 mm depth made out of 19mm thick BWP-710 ply, finished with 1mm thick Glossy lamination on all exposed surfaces and 0.8mm on all inner surfaces. The edges shall be finished with edge binding or lipping. and also shutters made out of aluminium slim profile powder coated sections work with 6mm thick fluted glass with necessary hardwares,soft closing hinges ,and profile handle as per the drawing.	6.00	m2		
(iv)	NON DSR	Providing and fixing of island to be made out of 19mm/12mm bwp-710 ply, according to the shape and design given in the drawing with necessary shutters and louvers providing. all the exposed portion finished with 1mm thick lamination and fluted design and inner portion finshed with 0.8mm lamination. The edges shall be finished with edge binding or lipping. Rate to be inclusive of all necessary fittings, soft closing hinges, Hardware , profile handle, soft drawer channels and accessories. size: ( 0.9m x 1.5m x 0.75m Ht)	6.75	L.s		
4.00		Master bedroom				
(i)		Wall panneling				
a	NON DSR	Providing and fixing wall paneling (Bed back wall) as per drawing, in general it shall be made of Aluminium extruded sections of size 50x25mmx1.5mm thick in both horizontal and vertical direction at 600 mm c/c spacing, frame shall be fixed at required depth as per drawing. The framework shall be covered with single layer 12mm thick BWP-710 grade plywood finished with fluted pannel design cost including of necessary hardware's and adhesive etc.	40.00	m2		
b	NON DSR	Providing and fixing bed Head board is made out of 12mm ply and coverd with PU foam finished with velvet fabric as per the design given in the drawing. cost of including of necessary hardware's etc.	20.00	m2		
c	NON DSR	Providing and fixing wall paneling as per drawing, in general it shall be made of Aluminium extruded sections of size 50x25mmx1.2mm thick in both horizontal and vertical direction at 600 mm c/c spacing, frame shall be fixed at required depth as per drawing. The framework shall be covered with single layer 12mm thick BWP-710 grade plywood finished with 1mm laminate with -T profile design.cost of including of necessary hardware's etc. (Tv wall & study table wall)	50.00	m2		



d	NON DSR	Providing and fixing wall paneling (Tv wall ) as per drawing, in general it shall be made of Aluminium extruded sections of size 50x25mmx1.2mm thick in both horizontal and vertical direction at 600 mm c/c spacing, frame shall be fixed at required depth as per drawing. The framework shall be covered with single layer 19mm thick BWP-710 grade plywood finished with fluted panel design. cost of including of necessary hardware's etc.	7.50	m2		
(ii)		Storage				
	NON DSR	Providing and fixing of TV Unit, Bottom unit made out of 19mm thick BWP-710 ply, finished inside with 0.8mm lamination and with 1mm lamination on exposed sides. The edges shall be finished with edge binding or lipping. the unit has drawer unit such as soft closing hinges, soft drawer channels, SS handles, locks etc. The rate shall be inclusive of all hardwares. Size: (2.4mx0.26 m)	3.12	m2		
(iii)	NON DSR	Wardrobe				
		Providing and fixing Walk in wardrobe carcass and openable shutter to be made of 19mm BWP-710 ply finished with all inner side finished with 0.8mm lamination and exposed portion finished with 1mm Glossy lamination .all exposed surface and edges shall be finished with lipping or edge binding as directed . and the carcass contains drawers and light provision as per the drawing, and the openable type shutter made out of aluminum slim profile frame work fixed with 6mm thick lacqured glass with 3mm thick aluminum long profile handle The unit has necessary pullout drawers and shelves. drawers shall have soft close telescopic channels. the rate shall include all hardwares such as soft closing hinges, soft drawer channels, SS long handles, locks etc handle etc. ( As per design)	42.00	m2		
(iv)	NON DSR	Providing and fixing Study Table -made out of 19mm BWP Plywood with Draw & shutter all inner portion finished with 0.8mm inner laminate and outer portion finished with 1mm laminate. With necessary Hardwares all hardwares such as soft closing hinges, soft drawer channels, SS long handles, locks etc. (Size:1.18mx0.6m)	5.00	Nos		
(v)	NON DSR	Providing and fixing open book shelf -made out of 19mm BWP Plywood and outer portion finished with 1mm laminate. With necessary Hardwares (Size:1.2mx0.3m)	1.80	m2		
(vi)	NON DSR	Providing and fixing wardrobe carcass and openable shutter to be made of 19mm BWP-710 ply finished with all inner side finished with 0.8mm lamination and exposed portion finished with 1mm Glossy lamination .all exposed surface and edges shall be finished with lipping or edge binding as directed . and the carcass contains drawers and light provision as per the drawing, and the openable type shutter made out of aluminum slim profile frame work fixed with 6mm thick lacqured glass with 3mm thick aluminum long profile handle The unit has necessary pullout drawers and shelves. drawers shall have soft close telescopic channels. the rate shall include handle ,draws ,hinges and other hardware. ( As per design)-(Near study table)	20.40	m2		
(vii)	NON DSR	Providing and fixing Dressing Mirror panneling as per drawing, made out of 12mm thick BWP-710 grade plywood top covered with 6 mm thick mirror and providing required LED profile light provision and bottom portion panneling with 12mm plywood finished with 1mm lamination. cost of including of necessary hardware's etc.	5.00	Nos		
5.00		Bed room-1				
(i)		Wall panneling				
	NON DSR	Providing and fixing wall paneling (bed back wall ) as per drawing, in general it shall be made of Aluminium extruded sections of size 50x25mmx1.5mm thick in both horizontal and vertical direction at 600 mm c/c spacing, frame shall be fixed at required depth as per drawing. The framework shall be covered with single layer 12mm thick BWP-710 grade plywood finished with fluted panel design. cost of including of necessary hardware's etc.	11.70	m2		
(ii)	NON DSR	Providing and fixing wall paneling (Tv wall & Wardrobe near wall) as per drawing, in general it shall be made of Aluminium extruded sections of size 50x25mmx1.5mm thick in both horizontal and vertical direction at 600 mm c/c spacing, frame shall be fixed at required depth as per drawing. The framework shall be covered with single layer 12mm thick BWP-710 grade plywood finished with 1mm laminate with T profile design. cost of including of necessary hardware's etc.	42.25	m2		
(iii)	NON DSR	Providing and fixing of TV Unit, Bottom unit made out of 19mm thick BWP-710 ply, finished inside with 0.8mm lamination and with 1mm lamination on exposed sides. The edges shall be finished with edge binding or lipping. the unit has drawer unit The rate shall be inclusive of all hardwares, such as soft closing hinges, soft drawer channels, SS handles, locks etc. Size: (2.3mx0.26 m)	2.99	m2		
(iv)	NON DSR	Providing and fixing of TV Display unit made out of 19mm thick BWP-710 ply, finished inside with 0.8mm lamination and with 1mm lamination on exposed sides. The edges shall be finished with edge binding or lipping. the unit has partly with shutter and partly with open shelf. The rate shall be inclusive of all hardwares.	7.00	m2		
(v)	NON DSR	Providing and fixing wardrobe carcass and openable shutter to be made of 19mm/16mm BWP-710 ply with 1mm laminate of all sides and 0.8mm on all inner surfaces. and exposed portion finished with 1mm lamination The unit has necessary pullout drawers and shelves. drawers shall have soft close telescopic channels. all exposed surface and edges shall be finished with lipping or edge binding as directed. the rate shall include handle ,draws ,hinges and other hardware.	21.60	m2		
6.00		Bed room-2				
(i)		wall panneling				



	NON DSR	Providing and fixing wall paneling (bed back wall ) as per drawing, in general it shall be made of Aluminium extruded sections of size 50x25mmx1.5mm thick in both horizontal and vertical direction at 600 mm c/c spacing, frame shall be fixed at required depth as per drawing. The framework shall be covered with single layer 12mm thick BWP-710 grade plywood finished with 1mm laminate with-T profile design. The rate shall be inclusive of all hardware's.	24.50	m2		
a	NON DSR	Providing and fixing bed Head board is made out of 12mm ply and covered with PU foam finished with velvet fabric as per the design given in the drawing. cost of including of necessary hardware's etc.	11.25	m2		
(ii)	NON DSR	Providing and fixing wall paneling (Tv wall ) as per drawing, in general it shall be made of Aluminium extruded sections of size 50x25mmx1.5mm thick in both horizontal and vertical direction at 600 mm c/c spacing, frame shall be fixed at required depth as per drawing. The framework shall be covered with single layer 12mm thick BWP-710 grade plywood finished with 1mm laminate with-T profile design The rate shall be inclusive of all hardware's.	33.80	m2		
(iii)	NON DSR	Providing and fixing of TV Unit, Bottom unit made out of 19mm thick BWP-710 ply, finished inside with 0.8mm lamination and with 1mm lamination on exposed sides. The edges shall be finished with edge binding or lipping. the unit has drawer unit The rate shall be inclusive of all hardware's, such as soft closing hinges, soft drawer channels, SS handles, locks etc. Size: (2.5mx0.26 m)	3.25	l.s		
(iv)	NON DSR	Providing and fixing wardrobe carcass and openable shutter to be made of 19mm/16mm BWP-710 ply with 1mm laminate of all sides and 0.8mm on all inner surfaces. and exposed portion finished with 1mm lamination The unit has necessary pullout drawers and shelves. drawers shall have soft close telescopic channels. all exposed surface and edges shall be finished with lipping or edge binding as directed. the rate shall include handle ,draws ,hinges and other hardware.	21.60	m2		
7.00		Bed room-3				
(i)		wall panneling				
	NON DSR	Providing and fixing wall paneling as per drawing, in general it shall be made of Aluminium extruded sections of size 50x25mmx1.5mm thick in both horizontal and vertical direction at 600 mm c/c spacing, frame shall be fixed at required depth as per drawing. The framework shall be covered with single layer 12mm thick BWP-710 grade plywood finished with fluted pannel design cost including of necessary hardware's and adhesive etc.	26.65	m2		
(ii)	NON DSR	Providing and fixing wall paneling (Tv wall ) as per drawing, in general it shall be made of Aluminium extruded sections of size 50x25mmx1.5mm thick in both horizontal and vertical direction at 600 mm c/c spacing, frame shall be fixed at required depth as per drawing. The framework shall be covered with single layer 12mm thick BWP-710 grade plywood finished with 1mm laminate cost including of necessary hardware's and adhesive etc.	25.00	m2		
(ii)	NON DSR	Providing and fixing wall paneling (Tv wall ) as per drawing, in general it shall be made of Aluminium extruded sections of size 50x25mmx1.5mm thick in both horizontal and vertical direction at 600 mm c/c spacing, frame shall be fixed at required depth as per drawing. The framework shall be covered with single layer 12mm thick BWP-710 grade plywood finished with fluted pannel design. cost including of necessary hardware, such as soft closing hinges, soft drawer channels, SS handles, locks and adhesive etc.	6.50	m2		
(iii)	NON DSR	Providing and fixing of TV Unit, Bottom unit made out of 19mm thick BWP-710 ply, finished inside with 0.8mm lamination and with 1mm lamination on exposed sides. The edges shall be finished with edge binding or lipping. the unit has drawer unit The rate shall be inclusive of all hardware's. Size: (2.4mx0.26 m)	3.12	L.s		
(iv)	NON DSR	Providing and fixing wardrobe carcass and openable shutter to be made of 19mm BWP-710 ply finished with all inner side finished with 0.8mm lamination and exposed portion finished with 1mm lamination and shutter covered with Mirror The unit has necessary pullout drawers and shelves. drawers shall have soft close telescopic channels. all exposed surface and edges shall be finished with lipping or edge binding as directed. the rate shall include handle ,draws ,hinges and other hardware. ( As per design)	16.80	m2		
(v)	NON DSR	Providing and fixing Study Table -made out of 19mm BWP Plywood with Draw & shutter all inner portion finished with 0.8mm inner laminate and outer portion finished with 1mm laminate. With necessary Hardware's & Handles included . (Size:0.9mx0.6m)	2.70	m2		
(vii)	NON DSR	Providing and fixing Plank above the study table -made out of 19mm BWP Plywood with all outer portion finished with 1mm laminate. With necessary Hardware's & Handles included . such as soft closing hinges, soft drawer channels, SS handles, locks etc (Size:0.9mx0.0.3m)	1.35	m2		



8.00		Office				
(i)		wall panneling				
	NON DSR	Providing and fixing wall paneling ( back wall ) as per drawing, in general it shall be made of Aluminium extruded sections of size 50x25mmx1.2mm thick in both horizontal and vertical direction at 600 mm c/c spacing, frame shall be fixed at required depth as per drawing. The framework shall be covered with single layer 12mm thick BWP-710 grade plywood finished with 1mm laminate with-100 mm T profile design. cost including of necessary hardware's and adhesive etc.	49.40	m2		
(ii)	NON DSR	Providing and fixing of Open book shelf with necessary powder coated MS frame structurewith all intermediate shelf made out of 19mm thick BWP-710 ply, finished with 1mm thick lamination with necessary cutouts for the profile light provision and the bottom area have a closed shutter with necessary intermediate channel The rate shall be inclusive of hinges, handles etc.	5.00	L.s		
9.00		Toilets				
(i)	NON DSR	Providing and fixing Drawer unit under the wash basin made out of 19mm/12mm BWP-710 Plywood finished with 1mm lamination with necessary hardwares such as soft closing hinges/ soft drawer channels, SS handles				
		Master bedroom-size: (1mx0.3m)	1.5	L.s		
		Common toilet-size: (0.72mx0.3m)	1.08	L.s		
		Bedroom 1-size: (1.2mx0.3m)	1.8	L.s		
		Bedroom 2-size: (0.7mx0.3m)	1.05	L.s		
		Bedroom 3-size: (1.0mx0.3m)	1.5	L.s		
(ii)	NON DSR	Providing and fixing mirror Back ply made out of 12mm BWP-710 ply with 6mm clear mirror and all the edges finished edge polish with necessary hardwares .	16.1	m2		
(iii)	NON DSR	Providing and fixing cupboard -made out of 19mm BWP Plywood with shutter all inner portion finished with 0.8mm inner laminate and outer portion finished with 1mm laminate. With necessary Hardwares & Handles included . (common toilet)	7.2	m2		
G		Accessories (SS 304)				
(i)	NON DSR	Cutlery tray-24"x24"x6"	5	Nos		
(ii)	NON DSR	Bowl tray- 24"x24"x6"	5	Nos		
(iii)	NON DSR	plate tray-24"x24"x6"	5	Nos		
(iv)	NON DSR	Oil Pullout 1 nos- 8"x2"x2'9"	10	Nos		
(v)	NON DSR	Cutlery tray-34"x24"x6"	5	Nos		
(vi)	NON DSR	Bowl tray- 24"x24"x11"	5	Nos		
(vii)	NON DSR	plate tray-24"x24"x15"	5	Nos		
(viii)	NON DSR	Blind corner unit-17"x2"x2'9"	5	Nos		
(viii)	NON DSR	Telescopic channel approx. 45mm and as per Drawing or Engineer - in - charge	45	set		
		Total for Wall Cladding				
D		JOINERIES				
		Window				
1.00	NON DSR	Supply and Install of UPVC Sliding Window with 8 mm Clear Toughened , Profiles system - Dark oak wenge Color bothsides, Two Track Slider, Handle black color, Lingel uPVC Premium Series, upto 80kg Roller,Cylinder inside key, Brown Silicon Delta Hardware. All complete as per the drawing and to the satisfaction of Engineer-in-charge / Architect / Client .SD1 - Size 1.800 x 2.400mm (Location - Balcony) (Make: Fenesta/ NCL VEKA/ Saint Gobain)	10.00	Nos		



2.00	NON DSR	Supply and Install of UPVC Sliding Window with 6 mm Clear Toughened , Profiles system - Dark oak wenge Color othsides, Three Track Slider, Handle black color, With Sliding Mesh, with Super Fabric Screen (USA), Sliding SS Hardware with Multipoint Locking Systems & Popup Handle Inside,Sliding SS Hardware with Multipoint Locking Systems & Handle Inside, Lingel uPVC Premium Series, Brown Silicon. All complete as per the drawing and to the satisfaction of Engineer-in-charge / Architect / Client . W1 - Size 2.100 x 1.950 mm (Location - Bedroom) (Make: Fenesta/ NCL VEKA/ Saint Gobain)	34.00	Nos		
3.00	NON DSR	Supply and Install of UPVC Casment Window with 6mm Clear Toughened , Outside Openable Sash , Handle black color, Casement Window SS Hardware Friction Hinges With Multipoint Locking Systems,Profiles system - Dark oak wenge Color bothsides, Lingel uPVC Premium Series,Brown Silicon. All complete as per the drawing and to the satisfaction of Engineer-in-charge / Architect / Client . W2 - Size 0.900 x 1.950 mm (Location - Bedroom) (Make: Fenesta/ NCL VEKA/ Saint Gobain)	15.00	Nos		
4.00	NON DSR	Supply and Install of UPVC Casment Window with 6 mm Clear Toughened , Outside Openable Sash , Handle black color, Casement Window SS Hardware Friction Hinges With Multipoint Locking Systems, Profiles system - Dark oak wenge Color bothsides, Lingel uPVC Premium Series, Brown Silicon. All complete as per the drawing and to the satisfaction of Engineer-in-charge / Architect / Client . KW1 - Size 1.400 x 1.100 mm (Location - Kitchen). (Make: Fenesta/ NCL VEKA/ Saint Gobain)	10.00	Nos		
	NON DSR	Louver				
5.00		Fabricating, supplying, assembling and installing in UPVC louversProfiles system - Dark oak wenge Color bothsides, Louver Adjustable - 4mm Frosted Non Toughned , Lingel uPVC Premium Series, Brown Silicon. All complete as per the drawing and to the satisfaction of Engineer-in-charge / Architect / Client . (Make: Fenesta/ NCL VEKA/ Saint Gobain)				
a		V1 - 0.6 x 0.6 m. (Location - Toilet)	26.00	Nos		
b		V2 - 0.4 x 0.6m (Location - Toilet )	1.00	Nos		
c		V3 - 1.3 x 0.45 m (Location - Toilet )	5.00	Nos		
6.00	NON DSR	Fabricating, supplying, assembling and installing in UPVC louvers Louver - uPVC , Static Bar 30/50 Provision, Profiles system - Dark oak wenge Color bothsides, Lingel uPVC Premium Series,Brown Silicon. All complete as per the drawing and to the satisfaction of Engineer-in-charge / Architect / Client . LV - Size 1.10 x 2.400 mm (Location - LV Shaft ) (Make: Fenesta/ NCL VEKA/ Saint Gobain)	5.00	Nos		
		VEKA (SHUTTER,FRAME,ARC 1 & 2)				
7.00	NON DSR	Providing and Fixing of 35 mm Thick factory made ABS Moulded flush door shutter made of Acrylonitrile Butadie Ne Styrene (ABS) with fully sealed construction suitable for specified locations. Complete as per SS 304 Hardwares, waterproof, termite proof including all fittings fixing and finishing as per drawing and direction of engineer in-charge.				
		MAKE: CENTURY / GODREJ PLAIN DOOR or Equivalent				
a		ABS Door - ABS - 1.2m x 2.4m	4.00	Nos		
b		ABS Door - ABS1 - 1.0m x 2.1m	3.00	Nos		
c		ABS Door - ABS2 - 0.8m x 2.4m	40.00	Nos		
8.00		FIRE DOORS				
a	NON DSR	Metal Door - SD Steeldoor Set 600.00X1,500.00 mm Single leaf door Material Specifications: Frame : GI 1.20 mm Shutter : GI 0.80 mm Shutter Width / Active Shutter Width : 908.00 mm Frame Profile (D X H): 100.00 mm X57.00 mm Frame Profile type : Normal Frame Joint Type: Miter Joint Frame Rebate : Single Under Cut: 9.00 mm Door type : Single leaf door Infill Material : Honey Comb Handing : Fixing Shield: Universal Anchor(Size - 0.6m x 1.5m) (Location: Shafts )	28.00	Nos		



b	NON DSR	Fire Shaft Door - FSD: Shaft Steeldoor Set NA 1,200.00X1,400.00 mm Single leaf door Wall Opening (W X H) : 1,200.00 mm X 1,400.00 mm Material Specifications: Frame : GI 1.20 mm Shutter : GI 0.80 mm Shutter Width / Active Shutter Width : 401.00 mm Inactive Shutter Width: 401.00 mm Frame Profile (D X H): 100.00 mm X57.00 mm Frame Profile type : Normal Frame Joint Type: Miter Joint Frame Rebate : Single Under Cut: 5.00 mm Sill: Reverse Head Member Door type : Double leaf door Leaf type : Equal Infill Material : Honey Comb Kerb : NO Handing : Finish Type: STD RAL SHADES Shutter Color :Ral 9002 Frame Color : Ral 9002 Fixing Shield: Universal Anchor (Location: Shafts)	6.00	Nos		
9.00	NON DSR	The shaft service door for toilets and kitchens shall be of size 0.45m x 1.4m, fabricated from 18-gauge (1.2mm thick) GI sheet with a powder-coated finish, flush type single-leaf shutter, mounted in a matching GI frame with concealed hinges, lockable with a key-operated cam lock or latch, and designed to allow easy access to services while ensuring fire resistance, durability, and aesthetic integration with the shaft wall; the installation shall be as per approved shop drawings and specifications.				
		Toilet , kitchen - size -0.45x1.4m	10.00	Nos		
10.00		Handrail				
a	NON DSR	Supplying and Fixing of SS304 stainless railing using top 50x30mm rectangular section for leg 40mmx4mm thick flat as per the approved drawings including necessary accessories and all complete (Location - Staircase)	49.60	m		
b		Balcony Handrail -(Location - typical 1 to 5 th floor)	35.85	m		
11.00	NON DSR	Supply and fixing of Hafele Smart / Digital Door lock complete with multi access authentication (Finger Print Pin Code) auto locking emergency power, wifi, bluetooth connectivity, suitable Main Entrance door, Include Mortise Lock body, strike plate, screws, user manual and installation accessories, as per manufacturer specification and direction of Engineer-in-charge (hafele or equivalent)	6.00	Nos		
		Total for Joineries				
E		FALSE CEILING WORKS				
1.00	NON DSR	This includes USG Knauf ST-50™ fully knurled Perimeter Channel (0.50mm thick having one flange of 20mm and another flange of 30mm and a web of 28mm) screw fixed to brick wall/partition with the help of Nylon sleeves with steel screws at 600mm centers. Then suspending USG Knauf ST-50™ fully knurled intermediate section (45mm x 0.90mm thick with two flanges of 15mm each) from the soffit at 1220mm centers with USG Knauf ST-50™ fully knurled Ceiling L Angle (25x10mmx0.50mm thick) fixed to RCC Slab with USG Knauf 27x25x37x1.6mm, Soffit Cleat and 8mm Dia 35mm long Fasteners @ 1200mm Centers respectively. USG Knauf ST-50™ fully knurled Ceiling Section (51mm x 0.50mm thick with two flanges of 27mm each) are then fixed to the USG Knauf Intermediate channel with the help of 2.64mm Dia wire connecting in perpendicular direction to the intermediate channel at 457mm centers. USG Knauf ST-50™ profiles are rolled with GI Steel (120 GSM & 230 MPa Yield Strength) conforming to IS 277). 12.5mm thick USG Knauf Sheetrock Std™ Plasterboard is screw fixed with Metal Framing with the help of 25mm long Drywall screws at 230 mm centers. The screw fixing of gypsum boards to the metal framing at the periphery, openings and cut edges should be at 150mm centers. All the Standard boards must be staggered. All joints to be taped & finished with 50mm wide USG Knauf Paper tape & APJC Joint compound. The ceiling fixing should adhere to the manufacturers instructions. (Gypsum Ceiling)	770.86	m2		
(ii)	NON DSR	Metal ceiling				
		The metal false ceiling shall consist of modular pre-coated galvanized steel or powder-coated aluminum panels of size 600mm x 600mm and minimum thickness 0.5 mm, installed on a hot-dip galvanized steel T-grid suspension system using GI wires or adjustable rods fixed to the slab with cleats and expansion fasteners, including all necessary perimeter trims, access panels, cutouts for lighting and HVAC, and completed as per manufacturer's specifications and approved drawings, measured in square meters, with the make approved by the engineer	115.40	m2		
(iii)		Wooden false ceiling				
		Providing wooden false ceiling using 12mm commercial plywood over the aluminium frame work laid to levels as directed with edge finishing, 1mm laminate top on all exposed surfaces using jointing compound to make a uniform plain ceiling or design ceiling as per the drawing .the rate includes for providing openings vertical and drops etc.	90.00	m2		
(iv)		Carnish				



		Providing and fixing POP camish 100/75mm Ht according to the design as per selection.	60.00	RM		
(v)		cove light				
		Providing and fixing gypboard cove light provision using 12.5mm thick gypboards finished as per the drawing. The supports using 50mmx25mm aluminium extrusions with necessary countersunk heavy duty screws, hardware etc.	390.00	RM		





(vi)		pelmet				
		Providing and fixing Pelmet made out of 12mm thick plywood finishing with 1mm lamination with necessary supports & hardwares.	95.00	RM		
4.00		Supplying and fixing baffle ceiling system from approved make and installer. The baffle ceiling system fixed to the sizes of baffle pannels as per drawing, is to comprise of 150mm (h) x 50mm (w), extruded aluminium section baffles, spaced at 100mm (clear spacing) and hanging from primary 'C' channel section of aluminium material of size 40x40 with 9.5mm return flanges designed to interlock with panel hanger brackets. The primary hanger bracket is fixed by means of 6mm dia galvanised steel threaded rods spaced equally at 1.2m c/c suspended from roof soffit slab. The entire baffle ceiling system is to also include provision for cove lighting arrangement shown as per drawing, VAC arrangement all complete including acoustics as per vendors drawing approved by Engineer, technical specification and as per direction of the Engineer/ Architect. Solid Colour Fininsh.(Location - parking)	254.00	m2		
		Total for False Ceiling works				
F		PAINTING WORKS				
1.00	NON DSR	Providing and applying Royal emulsion paint of approved make and colour conforming to IS in two coats (surface and finish acceptable to the EC/Client must be achieved by the contractor and any additional coats if required shall be at the cost of the contractor); over 2 coats of suitable 1mm thick putty of approved manufacturer including preparing surfaces, filling up with white cement based putty, binder; cleaning and making the surface dust-free, applying a sealer or primer coat of paint as recommended by approved paint manufacturer, applying two coats of paint (of approved make and shade), required scaffolding, cleaning and protecting till the handing over of site to the Client all complete to entire satisfaction of the EC/Client with required scaffolding, leads and lifts at all levels. (Internal Wall)	4,321.72	m2		
2.00		Providing and applying Exterior Emulsion Paint of approved make and colour conforming to IS in two coats (surface and finish acceptable to the EC/Client must be achieved by the contractor and any additional coats if required shall be at the cost of the contractor) of newly plastered wall surface with ready mixed paint of first class quality and approved colour over a priming coat with over textured finish including thorough scrapping, clean removal of dirt, and including necessary plaster of paris putty, wherever required etc., required scaffolding, leads and lifts at all levels. ( Ultima Protek - Weather Shield ) (External Wall)	1,058.69	m2		
3.00		Providing and applying Royal emulsion paint of approved make and colour conforming to IS in two coats (surface and finish acceptable to the EC/Client must be achieved by the contractor and any additional coats if required shall be at the cost of the contractor); over 2 coats of suitable 1mm thick putty of approved manufacturer including preparing surfaces, filling up with white cement based putty, binder; cleaning and making the surface dust-free, applying a sealer or primer coat of paint as recommended by approved paint manufacturer, applying two coats of paint (of approved make and shade), required scaffolding, cleaning and protecting till the handing over of site to the Client all complete to entire satisfaction of the EC/Client with required scaffolding, leads and lifts at all levels(Ceiling)	1,674.88	m2		
		Total for Painting Works				
		Elevation works				
1.00	NON DSR	Providing & fixing 20 mm thick exterior wall cladding tiles ( +5 mm) size 230 x 75 x 20, colour Country Cream, laid with Type 2 tile adhesive grey, conforming to category IS 15477: 2019 Type 2T, over 6mm to 15mm thick rough cement plaster (cement mortar 1:4 , 1 Cement: 4 Coarse sand), as cladding on external walls upto all heights, as per drawings, laid with grooves as specified. The gooves / joints between the tiles will be grouted with similar tile adhesive cementitious grout in concave (recessed) pattern, as directed by Architect, and tiles will be finished clean of all dirt, cement dropping etc. The joints between the tiles will be in one line both in horizontal & vertical direction as per drawing or directed by Engineer-in-Charge. Note : Cost / expenditure towards scaffolding, shuttering shall deemed to be included in the quoted rates.	215.00	m2		
2.00		Design, Supply, Installation, Slanting Brick Cladding including (specification as above) .	23.23	m2		
		Elevation design vertical (M.S)				
1.00	NON DSR	The vertical members shall be fabricated from M.S. square hollow sections (SHS) of size 100x100x3mm, conforming to IS 4923, with a unit weight of approximately 8.55 kg/m, cut to required lengths, welded or bolted in position as per approved elevation drawings, surface-prepared with one coat of zinc chromate primer and finished with two coats of synthetic enamel paint, including all materials, labor, scaffolding, tools, equipment, and necessary fittings, complete in all respects as directed by the engineer-in-charge.				
		M.S work - (Location -balcony ) size- (100x100x3mm)	17.15	Rmt		
		Total for Elevation works				
		LIFT WORKS				
1.00	NON DSR	Provide and install a machine-room-less passenger elevator with a capacity of 8–13 persons (630–1000 kg), door opening size 1100 mm (W) × 2100–2400 mm (H), stainless steel (SS304) cabin and doors, with a travel range suitable for G+ 5 floors, operating at a speed of up to 1.5 m/s, featuring energy-efficient hoisting, digital connectivity for smart building integration, granit flooring and a premium cabin interior as per project design requirements.' Make Kone, OTIS, Schindlier.	L.S.	1.00		
		Total for Lift works				



TOTAL FOR ARCHITECTURAL WORKS (C )	
------------------------------------	--



## PLUMBING WORKS

		<b>A) INTERNAL WATER SUPPLY PIPES AND FITTINGS</b>				
		<b>EXPOSED ABOVE FALSECELLING AND TERRACE FLOOR(HOT,COLD,FLUSHING)</b>				
1		Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes conforming to <b>ASTM D-2846, SDR11 upto 50mm dia</b> for above 50mm dia, having thermal stability for hot & cold water supply, including all CPVC plain & brass threaded fittings that is Tees, Elbows, Couplers, Unions, Reducers, brushings etc. including transition fittings connection between CPVC & metal pipe/GI) ie. Brass Adaptors (both Male & Female threaded), including fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step CPVC solvent cement conforming to ASTM F493 and testing of joints complete as per direction of Engineer in Charge. Rate Quoted shall be inclusive of cost of other consumables like hacksaw blade, solvent for CPVC pipe, etc.				
a		65 mm dia.SDR 11	QRO	Rmt		
b		50 mm dia.SDR 11	148	Rmt		
c		40 mm dia.SDR 11	105	Rmt		
d		32 mm dia.SDR 11	45	Rmt		
e		25 mm dia.SDR 11	40	Rmt		
f		<b>including concealed line 20 mm dia.SDR 11</b>	790	Rmt		
		<b>EXPOSED SHAFT</b>				
2		Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes conforming to <b>ASTM D-2846, SDR11 upto 50mm dia</b> for above 50mm dia, having thermal stability for hot & cold water supply, including all CPVC plain & brass threaded fittings that is Tees, Elbows, Couplers, Unions, Reducers, brushings etc. including transition fittings connection between CPVC & metal pipe/GI) ie. Brass Adaptors (both Male & Female threaded), including fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step CPVC solvent cement conforming to ASTM F493 and testing of joints complete as per direction of Engineer in Charge. Rate Quoted shall be inclusive of cost of other consumables like hacksaw blade, solvent for CPVC pipe, etc.including supporting channel				
a		50 mm dia.SDR 11	85	Rmt		
b		40 mm dia.SDR 11	120	Rmt		
c		32 mm dia.SDR 11	120	Rmt		
d		25 mm dia.SDR 11	95	Rmt		
3		<b>BALL ISOLATION Valve - Providing and fixing cpvc ball valve</b>				
a		(BUTTER FLY VALVE)65 mm dia	QRO	Nos		
b		50 mm dia	35	Nos		
c		40 mm dia	15	Nos		
d		32 mm dia	10	Nos		
e		25 mm dia	15	Nos		
f		20 mm dia	85	Nos		
4		Providing and fixing of of approved make automatic <b>air release valve15mm ball valve</b> as directed by Engineer-Incharge.	QRO	Nos		
		<b>Sub-Total - Part -'B'.</b>				
		<b>C) INTERNAL DRAINAGE (SOIL &amp; WASTE )</b>				
		<b>CONCEALED AND EXPOSED ABOVE FALSECELLING</b>				
5		Providing and fixing of <b>UPVC as per IS-13592, Type B</b> with selfit type joints together UPVC pipes with necessary reducers if required, together uPVC pipe specials, vent cowl, of approved make, The pipes shall be duly fixed at site, with necessary cutting & jointing of pipe with approved quality fix . The pipe shall be fixed properly aligned vertical with suitable MS pipe clamps. Work to include making necessary holes in the masonary walls etc.. and making good the damaged portions with mortar filling with 1:4 mix. Before handing over, leak test shall be carried out and any defects found shall be rectified. The work shall include Providing and fixing of necessary angles/ channels for supports, chasing of walls, grouting of supports, painting of supports etc., complete.				
a		50 mm O.D pipe Type - B	105	Rmt		
b		75 mm O.D pipe Type - B	230	Rmt		
c		110 mm O.D pipe Type - B	195	Rmt		
		<b>INTERNAL DRAINAGE (SOIL, WASTE &amp; VENT)</b>				
		<b>EXPOSED IN SHAFT</b>				



6		Providing and fixing of <b>UPVC as per IS-13592, Type B</b> with selfit type joints together UPVC pipes with necessary reducers if required, together uPVC pipe specials, vent cowls, of approved make, The pipes shall be duly fixed at site, with necessary cutting & jointing of pipe with approved quality fix . The pipe shall be fixed properly aligned vertical with suitable MS pipe clamps. Work to include making necessary holes in the masonry walls etc.. and making good the damaged portions with mortar filling with 1:4 mix. Before handing over, leak test shall be carried out and any defects found shall be rectified. The work shall include Providing and fixing of necessary angles/ channels for supports, chasing of walls, grouting of supports, painting of supports etc., complete.				
a		80 mm-vent pipe	85	Rmt		
b		75 mm O.D pipe Type - B	130	Rmt		
c		110 mm O.D pipe Type - B	105	Rmt		
7		<b>Floor Trap with Boss 'T'</b>				
		Providing & fixing in position deep seal multiway PVC floor Trap with cockroach trap and PVC extension piece of required length depth of following size to suit site conditions and multiple inlets, to suit site conditions with inlet sizes ranging from 40 mm to 75 mm. The bottom of the sump shall be dummied water tight. Wherever, sumps are shown to have water seal, the seal depth shall be minimum 40 mm. The sump shall be laid in cement concrete bed with 1:3:6 mix with 20 mm brick jelly bed all around. Providing and fixing heavy class C.P. brass mosquito proof grating with frame of approved design including setting in floor with cement mortar to match with floor finish.	105	Nos		
		<b>ROOF DRAINAGE ( RAIN WATER DRAINAGE )</b>				
7		Providing and fixing of <b>UPVC as per IS-13592, Type B</b> with selfit type joints together UPVC pipes with necessary reducers if required, together uPVC pipe specials, vent cowls, of approved make, The pipes shall be duly fixed at site, with necessary cutting & jointing of pipe with approved quality fix . The pipe shall be fixed properly aligned vertical with suitable MS pipe clamps. Work to include making necessary holes in the masonry walls etc.. and making good the damaged portions with mortar filling with 1:4 mix. Before handing over, leak test shall be carried out and any defects found shall be rectified. The work shall include Providing and fixing of necessary angles/ channels for supports, chasing of walls, grouting of supports, painting of supports etc., complete.				
a		160 mm OD pipes	95	Rmt		
b		110 mm O.D pipe Type - B	48	Rmt		
8		Providing and fixing of Approved 'make or Equivalent make <b>ROOF DRAIN</b> , CI body with aluminium ring, with SS flat grate and screws including making necessary sleeve arrangement in the slab, core packings, water leak arrests, etc., chasing in the floor, fixing the grating support in the concrete, fixing the grating in the support and making connection to the rain water down coming pipe without any leak, painting the grating with one coat of primer and two coats of black enamel paint.				
		Roof drains outlet 160mm Dia	4	Nos		
		Roof drains outlet 110mm Dia	2	Nos		
		<b>Sub-Total - Part 'C'.</b>				
		<b>D) EXTERNAL AND BASEMENT PUMP ROOM WATER /SEWER / STORM DRAINAGE</b>				
		<b>EXTERNAL AND BASEMENT DOMESTIC, FLUSHING WATER SUPPLY TO BUILDING</b>				
9		Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes conforming to <b>ASTM D-2846, SDR11 upto 50mm dia &amp; Sch 40</b> for above 50mm dia, having thermal stability for hot & cold water supply, including all CPVC plain & brass threaded fittings that is Tees, Elbows, Couplers, Unions, Reducers, brushings etc. including transition fittings connection between CPVC & metal pipe/GI) ie. Brass Adaptors (both Male & Female threaded), including fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step CPVC solvent cement conforming to ASTM F493 and testing of joints complete as per direction of Engineer in Charge. Rate Quoted shall be inclusive of cost of other consumables like hacksaw blade, solvent for CPVC pipe, etc.(NOTE:including of EXCAVATION WORKS UPTO 400 to 600mm.)				
a		50 mm dia (COLD AND FLUSHING ,MUNICIPAL )	70	RMT		
b		50 DI-PLUNGED TYPE-(METRO WATER INLET)	QRO	RMT		
		<b>EXTERNAL AND BASEMENT /STILT DRAINAGE -(SEWER LINE )</b>				
10		Providing and fixing of <b>UPVC as per IS-10124, 10 kgf/cm2</b> with selfit type joints together UPVC pipes with necessary reducers if required, together uPVC pipe specials, vent cowls, of approved make, The pipes shall be duly fixed at site, with necessary cutting & jointing of pipe with approved quality fix . The pipe shall be fixed properly aligned vertical with suitable MS pipe clamps. Work to include making necessary holes in the masonry walls etc.. and making good the damaged portions with mortar filling with 1:4 mix. Before handing over, leak test shall be carried out and any defects found shall be rectified. The work shall include Providing and fixing of necessary angles/ channels for supports, chasing of walls, grouting of supports, painting of supports etc., complete. including excavation work upto 600mm depth				
a		160 mm O.D pipe(SEWER LINE AND RAWIN WATER )	165	RMT		
b		110 mm O.D pipe Type B(SEWER LINE AND RAWIN WATER )	45	RMT		
c		75 mm O.D pipe Type B	35	RMT		
11		Supply, Erection, Testing and Commissioning of <b>Cast Iron Body Butterfly Isolation Valves (PN:16)</b> with necessary fittings and accessories like flanges, GI bolts, nuts & washers, painting etc. The Valves shall be of Lever operated valves for 150NB and below and gear operated valves for 200NB and above				



a		65 mm dia	QRO	Nos		
b		50 mm dia	4	Nos		
12		Providing and fixing of approved make of <b>Non return valve (screwed)</b> , suitable for both horizontal & vertical application conforming to BS 1982 tested to a pressure of 15 Kg/sqcm. threaded joints) complete as required and as complete, as directed by Engineer-Incharge.				
a		65 mm dia	QRO	Nos		
b		50 mm dia	4			
13		Supply, Installation, Testing and Commissioning of C.I body & cover, PN-16, SS304 strainer & carbon steel bolts & nuts. - Pot type <b>Strainer.</b>				
a		65 mm NB.	QRO			
b		50 mm dia	2	Nos		
		<b>GRAY AND BLACK WATER CHAMBER</b>				
14		Construction of sewer chambers of required internal dimension of 600X600mm depth upto 0.8 Mtr depth with brick masonry in cement mortar 1:5 thickness of masonry 225 mm, 1:3:6 cement concrete foundation 150 mm thick over 150 mm sand bed, channelling in 1:2:4 cement concrete, plastering in 1:3 cement mortar for internal and external surface finished with floating coat of neat cement. Neco make Heavy duty ductile iron manhole cover with hinged frame C-250. fixed over 100 mm P.C.C. including painting of the frame, cover with 2 coats of anti-corrosive bitumastic paint over a coat of primer all as per specifications. The work shall include necessary excavation and backfilling.	9	Nos		
15		Supply of <b>Glazed stoneware gully trap of size 150 x 100 mm with 100 mm outlet</b> , CI grating to suit the size of the gully mouth, CI cover & frame of 300 x 300 mm clear opening of 7 kg weight, complete. Laying in position the above glazed stone ware gully trap including embedding trap in cement concrete 1:3:6 and constructing chamber of size 300 x 300 mm inside clear in brick masonry, 15 mm thick plaster with cement mortar (1:3) on both internal and external surfaces, inside finished with floating coat of neat cement. Fixing C.I frame and cover 300 x 300 mmX7 kgs wt (clear opening), cover painted with 2 coats of anti-corrosive black bitumastic paint etc., complete. The work shall include necessary excavation and backfilling. ( Air tight heavy duty covers for gully traps which falls in parking area )	3	Nos		
16		Supply and fixing of 1200 mm dia rain water harvesting pit to depth of 1200 mm with incluid exsavation ,pcc,fixing of rcc ring filling with 40 mm blue metal,fine sand ,cover slab,necessary bore with sloted pvc pipe 1.8mt as per drawing. <b>SOAP PIT</b>	9			
		<b>Sub-Total - Part -'D'.</b>		Nos		



		UTILITY PUMPS		Nos		
17		Supply and installation of <b>DOMSATIC</b> Water supply <b>Hydro Pneumatic System Pumps</b> , of approved make Variable flow 1 Pump system, 1 working + 1 stand by. <b>For pumping the UG water from sump to kitchen area.</b> The cost shall include necessary Control Valves, pressure vessel, pressure switch, Non-Return Valves, interconnecting pipes in the system, foot valves, etc., <b>5m3/Hr@ not less than 40mtr Head</b> , Each Pumps shall deliver 5m3/hr @ head of 40 mtr with necessary starter, starter panel and cabling With required Pressure vessel tank-100 ltr of welmet make impeller SS304. The electrical contractor will leave the cable near the pump room with MCB or MCCB. The PHE contractor shall consider the cabling from the MCB or MCCB to individual pumps and starters. apprx length of cable shall be 20 RMT.(KITCHEN LINE THROUGH MUNICIPIAL LINE)	1	Nos		
18		Supply & Fixing of Water supply <b>SUBMERSIBLE FLUSHING WATER TRANSFER PUMP, one working and one stand by</b> , 10000 litres per hour (LPH) , <b>5 m3/hr@ 40mtr Head</b> with The cost shall include necessary Control Valves, pressure vessel, pressure switch, Non-Return Valves, interconnecting pipes in the system, foot valves, etc.( <b>COLD AND FLUSHING WATER</b> )	2	Nos		
19		Supply and installation of approved make, submersible Dewatering non clog pump (1working + 1 stand by), <b>5m3/Hr vertical height of 15 mtr</b> , with complete connections, float switches, drain points, required couplings, valves, non return valves, stater panel, required cabling between panel and motors, required pump supports and pulling threads, etc., - <b>Inside Pump Room - collection pit.</b>	1	Nos		
20		Supply, installation, testing & commissioning of Water level controller for <b>OHT &amp; SUMP, Pump must On/Off</b> based on with high/low level singals on OHT, with neccessary float switch. The scope of work includes, fixing of float switch, termination of sensor cable terminations, starter provision for 1w+1s pump of capacity 3 phase, . auto/manual selector.float control system wire upto pump to sump	2	Set		
21		Supply & Fixing of Water supply <b>Terrace Booster Pump</b> , approved make Variable flow Terrace Booster, 1 working + 1 stand by, For pumping the water from oht to proposed campus.,Horizontal multistage pumps mounted on a common base frame, with common galvanized suction & delivery manifold 2no.s of isolation valve and 2nos of non return valves.Control panel – Voltmeter, ammeter, Three phase preventer, with dry run control provision.impeller SS304 Pressure vessel 100 ltrs Each Pumps shall deliver <b>5m3/hr @ head of 30 mtr</b> with necessary starter,The electrical contractor will leave the cable near the pump room with MCB or MCCB. The PHE contractor shall consider the cabling from the MCB or MCCB to individual pumps and starters. apprx length of cable shall be 20 RMT.	1	Nos		
22		Aquamet-w woltmann type bulk <b>water meter</b> (up to 50 deg/c),removable mechanism type ,magnetically sealed totaliser ,retorofittable for pulse output and conforming to iso-4064 class-b,with flange end connections,with flanged end connection ,with pulse wire and rs-485 totalizer and ms box.NOTE:CONSIDER TYPICAL FLOOR COLD &FLUSHING SUPPLY				
		50 MM	3	NOS		
23		<b>Borewell</b> - Digging of Pilot hole of 200 mm dia to a <b>depth of 130 mts with 4M3/Hr submersible pumpset</b> , supply of required materials by the firm including 2" G.I delivery pipe and erection of pumpset including accessories, testing and commissioning of pumpsets. The scope of work includes supply and erection of class 3 PVC casing pipe of 150 mm dia including slotting covered with nylon Mesh to a length of 110 mtrs. Supply and installation of submersible pump set with necessary cables, control boards, protective devices etc. Laying of 2" dia G.I Pipeline from pump delivery at ground level to HLR – 5 meters length. Pipes required for suction and delivery will be provided by the contractor.Drilling of Borewells anywhere in TamilNadu including transportation from one place to another with in TamilNadu in alluvial soil sedimentary strata of clay and sand stone shale pennles boulders etc. By first taking a pilot bore of 140mm/150mm dia and then enlarging to required dia direct or reverse rotary mud circulation method using rotary rigs fuel, labour and drilling bentonite and water required for drilling at site.- Up to 60m depth ending below ground level. ( borewells each 120 RM),(INCLUDING OF BORE WELL WORKS AND BORE WELL PUMPS AND PIPES AND FITINGS WORK UPTO UG SUMP AND HYDROGEOLOGICAL INVESTIGATION 5 POINTS)	1	set		
		<b>Sub-Total - Part -E'</b>				
24		UG SUMP-FRP TANK (6KLD -3 NOS)	3	Nos		



		The work includes the supply, installation, testing, and commissioning of 3 numbers of modular panel-type FRP (Fiber Reinforced Plastic) water storage tanks, each having a dimension of 1.2 m (width) × 2.5 m (length) × 2.3 m (height), with a total volume of approximately 6.9 kilolitres (KL) including freeboard, as per approved drawings. The tanks shall be constructed using high-strength, food-grade, UV-stabilized FRP/GRP panels suitable for potable or process water storage. The panel-based construction method shall ensure ease of installation, structural rigidity, and long service life. The standard tank wall thickness shall be as follows: bottom panels 8 mm to 10 mm, side wall panels 5 mm to 8 mm, top cover panels 4 mm to 6 mm, and corner/reinforcement areas shall be strengthened up to 10 mm or more as required. All panels shall be bolted together using stainless steel hardware (SS 304/316) with EPDM rubber gaskets to ensure a leak-proof and corrosion-resistant seal. The tanks shall be mounted on a leveled RCC or steel foundation, and installation shall include all necessary accessories such as inlet, outlet, overflow, drain, air vent, internal bracing, access manhole, and external support if needed. Hydrostatic testing shall be carried out after installation to verify performance and structural integrity. The entire installation must conform to relevant IS standards and industry norms				
25		GRAY WATER TREATMENT PLANT-5KLD	1	Nos		
		a)MECHANICAL EQUIPMENT				
		b)GTP -FRP TANKS-INCLUDING				
		The work includes the supply, installation, testing, and commissioning of a fully functional Grey Water Treatment Plant (GWTP) of suitable capacity, designed to treat wastewater from non-toilet sources (e.g., bathrooms, sinks, laundries) to a quality that meets or exceeds the effluent discharge norms prescribed by the State Pollution Control Board (PCB). The system shall be based on a compact, modular design and use advanced physical, chemical, and biological treatment processes such as sedimentation, filtration, equalization, biological treatment (MBBR or FAB), disinfection, and tertiary treatment. The treatment plant shall be of Ion Exchange make or equivalent with proven performance and must incorporate FRP tanks of required sizes and numbers for various process stages like collection, equalization, aeration/biological treatment, clarified water, and treated water storage. Each FRP tank shall be constructed using UV-stabilized, corrosion-resistant, food-grade fiberglass-reinforced plastic panels with minimum standard wall thickness of 8 mm to 10 mm (bottom), 5 mm to 8 mm (side walls), 4 mm to 6 mm (top panels), and reinforced corners up to 10 mm+, assembled using stainless steel bolts, nuts, and EPDM gaskets. The plant shall include all associated piping (UPVC/HDPE), valves, air blowers, submersible pumps, dosing systems (if required), control panel with necessary sensors and automation, and treated water recirculation or discharge arrangements. The system must ensure treated water meets pH, BOD, COD, TSS, and coliform limits per PCB standards, suitable for non-potable reuse (e.g., flushing, gardening). The entire setup shall be tested under operating conditions, and performance certification must be provided post-commissioning. The supplier shall provide documentation including process flow diagram (PFD), P&ID, O&M manual, and test reports, with the complete installation supervised and approved by the Engineer-in-Charge (EC)				
26		WATER TREATMENT PLANT-6 KLD-1000 LPH WITH SOFTNER	1	Nos		
		The work includes the supply, installation, testing, and commissioning of a complete skid-mounted Water Treatment Plant (WTP) with a capacity of 6 KLD (1000 Litres Per Hour), designed to deliver treated water that meets applicable quality standards and complies with Pollution Control Board (PCB) norms for potable or process use. The system shall be of Ion Exchange make or equivalent, and incorporate pre-treatment, filtration, and softening units, engineered to handle input water with typical turbidity, hardness, and TDS values as per site conditions. The treatment train shall include a raw water feed pump, multi-grade filter (MGF) for turbidity and suspended solids removal, an activated carbon filter (ACF) for organic contaminants and odor removal, and a high-efficiency water softener unit for hardness reduction, all housed in FRP or MSRL pressure vessels. The softener shall use food-grade ion-exchange resin with adequate capacity and include an automatic or semi-automatic regeneration system using industrial-grade salt (NaCl), complete with brine tank and accessories. The plant shall include all necessary valves (multiport/ball type), flow meters, pressure gauges, and piping in UPVC or CPVC, with a common skid frame and suitable electrical control panel for plant automation. Provision for backwash, rinse, and regeneration shall be incorporated with appropriate drainage piping. The treated water shall comply with BIS 10500 standards for potable applications or IS 4985/10500 standards for process use, with TDS, hardness, iron, and turbidity within permissible limits. All materials used shall be corrosion-resistant and suitable for continuous operation. After installation, the system shall be tested under live conditions and commissioned, with performance testing, O&M manual, and water quality report submitted to the Engineer-in-Charge (EC) for approval.				
27		GAS PLANT	1	Nos		



		<p>The work involves the supply, installation, testing, and commissioning of an 8-cylinder LPG gas manifold system, complete with all associated fittings, valves, and safety equipment, along with copper pipeline work extending from the ground-level cylinder bank up to a kitchen located on the 5th floor. The LPG manifold system will consist of 8 nos. LPG cylinders (4 working + 4 standby or as required), connected via heavy-duty high-pressure rubber hoses with brass end fittings, mounted on a powder-coated MS manifold frame. A changeover valve will be included to allow automatic or manual switching between working and standby cylinders. The pipeline from the manifold to the kitchen shall be constructed using Type-L or heavy-duty ISI-marked copper pipes of appropriate diameter (typically 15mm to 25mm OD), brazed using silver brazing rods to ensure leak-proof joints. The piping will be securely clamped along the building structure using heavy-duty saddles or clamps at regular intervals and laid with suitable slope for drainage. The installation shall include a pressure regulator (high-pressure or low-pressure, depending on burner type), isolation ball valves at strategic points and at the kitchen inlet, flame arrestors, and pressure gauges for monitoring. All work shall be done in accordance with IS 6044 and PESO norms, ensuring proper ventilation and safety clearance. Necessary wall sleeves, fire-sealed penetrations, and labeling will be provided. The system shall be leak-tested with nitrogen or soap solution and commissioned in the presence of a certified gas technician. A completion report and safety certificate shall be furnished post-installation.</p>				
28		SOLAR WATER HEATER-1000 LPD	1	Nos		
		<p>Supply and installation of the Solar Water Heater system with a capacity of 1000 Litres Per Day (LPD), including a 500-litre stainless steel (SS) storage tank (Make: Venus or equivalent), is designed for efficient and reliable domestic or commercial hot water supply. The system typically consists of either Flat Plate Collectors (FPC) made of copper with selective coating or Evacuated Tube Collectors (ETC) made of borosilicate glass tubes, both mounted on a durable powder-coated MS or aluminum frame with optimal tilt and south-facing orientation. The collector area ranges between 10 to 15 square meters depending on the type and efficiency. The system includes a 500-litre inner tank made of food-grade stainless steel (SS304/SS316) with 1.5–2 mm thickness, insulated with 50–75 mm thick high-density PUF and encased in an outer powder-coated GI or aluminum shell, capable of withstanding pressures up to 2.5 bar in pressurized configurations. Hot water output reaches temperatures of up to 60°C under standard solar radiation. The system comes equipped with essential plumbing such as insulated piping, valves (ball valve, non-return valve, air vent, and pressure relief valve), and an optional electric backup heater of 2–3 kW with thermostat control. It is suitable for installation on RCC or metal roofs and occupies approximately 12–20 square meters of space. The system is MNRE approved, BIS certified, has a life expectancy of 15–20 years, and typically comes with a 5-year warranty on the tank and collectors.</p>				
<b>TOTAL FOR PLUMBING WORKS (D)</b>						





## SANITARY FITTINGS

		<b>B) SANITARY FIXTURES &amp; FITTINGS INCLUDING (Providing and fixing)</b>				
1		Supplying and fixing in position White / Colour Glazed Model WALL MOUNTED European Water Closet of best quality and approved make with 100mm "P" or "S" trap connecting with CI pipe of 100mm dia / PVC pipe of 110mm dia, double flapped rigid PVC black seat and seat cover with CP brass hinges including cost of white cement, cement for packing, spun yarn, teak wood plugs, brass screws, etc., including supplying and fixing low level flushing tank with a pair of CI brackets, etc., complete with all fittings, such as, 15mm brass ball valve with polythene float with brass handle, union coupling connected by means of 40mm white PVC flush hand using indian adopter joint including all internal fittings, suc as, 15mm bras connections, 15mm GM wheel valve, 15mm brass nipple (2 Nos.), 15mm nylon connection, TW plugs, screws and also giving necessary connection to the PVC pipe and painting the CI brackets with 2 coats of approved paint over one coat of red oxide primer, dismantling the masonry and re-doing the dismantled masonry to original condition, etc., complete complying with standard specifications. (The EWC and flushing tank with all accessories should be got approved by the Executive Engineer before use on works) Floor Fitting	5	Nos		
		<b>EWC: LAS-WHT-91953BIUFMS-JAQUAR</b>				
		<b>DROPLET FACEPLATE POLISHED CHROME -JCP-CHR-152415-JAQUAR</b>				
		<b>CONNECTOR ACCESSORY PACK -JAQUAR</b>				
		<b>M12 RACK BOLTS FOR WH INSTALLATION -JAQUAR</b>				
		<b>INSTA FLUSH MECH. JCS-WHT-2400WS-JAQUAR</b>				
2		Supplying and fixing in position White / Colour Glazed Model WALL MOUNTED European Water Closet of best quality and approved make with 100mm "P" or "S" trap connecting with CI pipe of 100mm dia / PVC pipe of 110mm dia, double flapped rigid PVC black seat and seat cover with CP brass hinges including cost of white cement, cement for packing, spun yarn, teak wood plugs, brass screws, etc., including supplying and fixing low level flushing tank with a pair of CI brackets, etc., complete with all fittings, such as, 15mm brass ball valve with polythene float with brass handle, union coupling connected by means of 40mm white PVC flush hand using indian adopter joint including all internal fittings, suc as, 15mm bras connections, 15mm GM wheel valve, 15mm brass nipple (2 Nos.), 15mm nylon connection, TW plugs, screws and also giving necessary connection to the PVC pipe and painting the CI brackets with 2 coats of approved paint over one coat of red oxide primer, dismantling the masonry and re-doing the dismantled masonry to original condition, etc., complete complying with standard specifications. (The EWC and flushing tank with all accessories should be got approved by the Executive Engineer before use on works) Floor Fitting	25	Nos		
		<b>EWC: ONS-WHT-10953BIUFMS-JAQUAR</b>				
		<b>DROPLET FACEPLATE POLISHED CHROME -JCP-CHR-152415-JAQUAR</b>				
		<b>CONNECTOR ACCESSORY PACK -JAQUAR</b>				
		<b>M12 RACK BOLTS FOR WH INSTALLATION -JAQUAR</b>				
		<b>INSTA FLUSH MECH. JCS-WHT-2400WS-JAQUAR</b>				
3		Supply & installation of JAQUAR ESSCO make Squating Pan with rubber buffers, complete with internal syphon fittings and finish, together with connection pipe to the squatting pan. Including cutting & making good the walls & floors wherever required.	2	Nos		
		<b>SQUATING- ECS-WHT-455LEJAQUAR</b>				
		Fixing of the above squatting pan complete with supply of CPVC connectors, & necessary fasteners, fixing of the angle cock connection pipe to the pan. Providing water to the squatting, together with cutting and making good the walls and floors wherever required				
4		Supply & installation of approved make wall mounting taller type European water closet Cistern with elbow operated knob, C.P. bolts, nuts, toilet seat and cover complete with all accessories. Including cutting & making good the walls & floors wherever required.	5	Nos		
		<b>EWC -FLS-WHT-5353PPZ-JAQUAR</b>				
		<b>CONNECTOR ACCESSORY PACK AND CONNECTING HOSE(ANGEL COCK TO EWC)</b>				
		<b>Angle Stop Valve:AQT-CHR-3057P-JAQUAR</b>				
		Fixing of the above closet complete with supply of PVC / Brass Pan connectors, & necessary fasteners, fixing of the angle cock & CP brass connection pipe to the cistern. Providing water & Soil connections to the closet, together with cutting and making good the walls and floors wherever required.				
5		Wash Hand Basin of size with all accessories such as Cast Iron Brackets, 32mm dia CP Waste Coupling, Rubber Plug and Chain, 32mm dia 'B' Class GI Waste Pipe, 15mm dia GM Wheel Valve, 15mm dia Nylon Connection, 15mm dia Brass Nipples, 15mm CP Pillar Tap etc	30	Nos		
		<b>ABOVE COUNTER WASH BASIN-JDS-WHT-25907N-JAQUAR</b>				
		<b>PILLAR COAK:KUP-CHR-35441KPM-JAQUAR</b>				
		<b>CONCEALED:ALD-CHR-441-JAQUAR</b>				
		<b>Grid Drain With Over Flow Hole - ALD-CHR-727L130-JAQUAR</b>				
		<b>Standard Bottle Trap -ALD-CHR-769L300X190-JAQUAR</b>				



6	Wash Hand Basin of size with all accessories such as Cast Iron Brackets, 32mm dia CP Waste Coupling, Rubber Plug and Chain, 32mm dia 'B' Class GI Waste Pipe, 15mm dia GM Wheel Valve, 15mm dia Nylon Connection, 15mm dia Brass Nipples, 15mm CP Pillar Tap etc	5	Nos		
	<b>ABOVE COUNTER WASH BASIN-OPS-WHT-15931PM-JAQUAR</b>				
	<b>PILLAR COAK:FLP-CHR-5011PM- JAQUAR</b>				
	<b>CONNECTING HOSE</b>				
	<b>Grid Drain With Over Flow Hole - ALD-CHR-727L130-JAQUAR</b>				
	<b>Standard Bottle Trap -ALD-CHR-769L300X190-JAQUAR</b>				
	<b>Angle Stop Valve-AQT-CHR-3057P-JJAQUAR</b>				
7	Wall Mounted -Wash Hand Basin of size with all accessories such as Cast Iron Brackets, 32mm dia CP Waste Coupling, Rubber Plug and Chain, 32mm dia 'B' Class GI Waste Pipe, 15mm dia GM Wheel Valve, 15mm dia Nylon Connection, 15mm dia Brass Nipples, 15mm CP Pillar Tap etc	2	Nos		
	<b>Wall MOUNTED- WASH BASIN-CNS-WHT-801-JAQUAR</b>				
	<b>PILLAR COAK:FLP-CHR-5011PM- JAQUAR</b>				
	<b>CONNECTING HOSE</b>				
	<b>Grid Drain With Over Flow Hole - ALD-CHR-705 -JAQUAR</b>				
	<b>Standard Bottle Trap -ALD-CHR-769L300X190-JAQUAR</b>				
	<b>Angle Stop Valve-AQT-CHR-3057P-JJAQUAR</b>				
8	Providing and fixing Hand Spray / with Button control (Health Faucet) with pressure including flexible hose 1m/1.2m long connection and holder for hand spray ,making good the same, complete of Engineer-in-charge. Polished Chrome Finish Brass 15 mm dia bore angle valve Note : Rate should be inclusive of lifting charges.	30	Nos		
	<b>Health Faucet -ALD-CHR-573 ,HOSE-SHA-CHR-549D8-JAQUAR</b>				
	<b>Angle Stop Valve-AQT-CHR-3057P-JJAQUAR</b>				
9	supply and fixing of shower set including mixer and round shower arm.with all necessary screw fitting to complete of Engineer-in-charge	5	Nos		
	<b>DIVERTORALD-CHR-681N -JAQUAR-THERMOSAT</b>				
	<b>CP COVER-KUP-CHR-35681NKPM-JAQUAR</b>				
	<b>HAND SHOWER-HSH-CHR-1731 WITH HOSE-SHA-CHR-549D8</b>				
	<b>ANGEL HOLDER HAND SHOWER-SHA-CHR-566S-JAQUAR</b>				
	<b>RAIN JOY-OHS-CHR-1619-JAQUAR</b>				
	<b>SHOWER HARM-SHA-CHR-455L600-JAQUAR</b>				
10	supply and fixing of shower set including mixer and round shower arm.with all necessary screw fitting to complete of Engineer-in-charge	15	Nos		
	<b>DIVERTORALD-ALD-CHR-065M-JAQUAR</b>				
	<b>CP COVER-LAG-CHR-91065MK-JAQUAR</b>				
	<b>HAND SHOWER-HSH-CHR-1937 WITH HOSE-</b>				
	<b>ANGEL HOLDER HAND SHOWER-SHA-CHR-555JAQUAR</b>				
	<b>OUTELT TAP- SPJ-CHR-15463PM-JAQUAR</b>				
	<b>SHOWER HARM-SHA-CHR-479L450-JAQUAR AND ROUND -OHS-CHR-1789</b>				
11	supply and fixing of shower set including mixer and round shower arm.with all necessary screw fitting to complete of Engineer-in-charge	5	Nos		
	<b>DIVERTORALD-ALD-CHR-065M-JAQUAR</b>				
	<b>CP COVER-FLP-CHR-5065MKPM-JAQUAR</b>				
	<b>OUTELT TAP- SHA-CHR-477-JAQUAR</b>				
	<b>SHOWER HARM-SHA-CHR-4770-JAQUAR AND ROUND -OHS-CHR-1789</b>				
12	supply and fixing 25 ltrs gyser-VRM-WHT-HD035-JAQUAR work shoud inclusive of 2 number of angel cock and connect hose and asseries with all necessary screw fitting to complete of Engineer-in-charge	5	Nos		
13	supply and fixing 25 ltrs gyser-MET-WHT-PV025-JAQUAR work shoud inclusive of 2 number of angel cock and connect hose and asseries with all necessary screw fitting to complete of Engineer-in-charge	20	Nos		
14	Providing and fixing of Polished Chrome Finish Brass Single Coat Hook with all necessary screw fitting to complete of Engineer-in-charge. Note : Rate should be inclusive of lifting charges:AKP-CHR-35761P	50	Nos		
15	Providing and fixing of Polished Chrome Finish Brass Single towel bar with all necessary screw fitting to complete of Engineer-in-charge. Note : Rate should be inclusive of lifting charges:AKP-CHR-35711P	25	Nos		



16		Supplying and fixing of SS Sink of size-sink MARINO 36*19*9-singel liver outlet-FLP-CHR-5179BPM,angel cock-AQT-CHR-3057P and connecting hose - Providing and fixing of Approved 'make single bowl sink with drain points for connect the waste couplers, with necessary supports, brackets, bolts, nuts, at equal intervals, etc,Fixing of Single bowl sink, wall hook and angle valve, including wall chasing, making good the same, complete.of Engineer-in-charge. Note : Rate should be inclusive of lifting charges(KITCHEN AREA)	5	Nos		
17		Providing and fixing Polished Chrome Finish Brass Wall Mounted Single Toilet Paper Holder with cover. with CP brackets fixed to wooden cleats with CP brass screws.of Engineer-in-charge. Note : Rate should be inclusive of lifting charges:ACN-CHR-1153S	30	Nos		
18		Providing and fixing of approved make, matt finish Cockroach trap 125 x 125 mm SS floor grating with Hinge of Engineer-in-charge.Note : 7275IN-CP	98	Nos		
		Providing and fixing of approved make, chrome finish stop cock of Engineer-in-charge.	45	Nos		
		<b>OPP-CHR-15083KPM-stope cock</b>				
		<b>ALD-CHR-089FT-conceled</b>				
19		supply installtion of tap-FLP-CHR-5037PM-jaquarof Engineer-in-charge.	2	Nos		
19-A		supply and instillation of shower booster pump not less than 1 HP its includeds of all the assessorsries fittings as directed by Engineer-in-charge.	5	Nos		
<b>TOTAL SANITARY (E)</b>						



## ELECTRICAL WORKS

### PART-A : MEDIUM VOLTAGE INSTALLATION LIKE M.V. SWITCHBOARDS, DISTRIBUTION BOARDS, EARTHING, ETC.

S.No.	Description	Unit	Qty.	Supply		Erection		Total
				Rate	Amount	Rate	Amount	
1	Supply of 3 way RMU,with configuration of Two LBS and VCB R-R-L (M+CCT2) as per TANGEDCO Specifications.(Provisional)	Nos	1					
	Supply and Erection of other materials except RMU as per attached annexure.(Provisional)	Nos	1					
	Charges of coordinating with TNEB MRT/O&M(Provisional)	Nos	1					
	<b>TOTAL OF PART-A(i) C/o TO SUMMARY:</b>							
1a.	Supply, erection, testing & commissioning of floor mounting type Cubicle pattern,front operated M.V. Switchboard fabricated from 16 SWG sheet steel with adequate reinforcement, foundation bolts, 40 x 6mm. Aluminium flat earthing enamel coat paint finished with Opaline green or Powder coated paint (RAL 7032) equipped with the following:							
	<b>INCOMER:</b>							
	1 No. 320A TPN isolator.							
	1 Set of 400A TP cutouts including neutral link with rewirable type fuses. (sealable type).							
	1 set SMC mounted disconnectable neutral link made out of 40x6mmmm tinned copper mounted on 2nos. of 25 mm dia SMC spout.							
	(The incoming/outgoing switch shall have locking/sealing arrangement by Electricity Board.							
	<b>Note:</b> Neutral wires/busbars and interconnecting wires/busbars shall be same size as phase wires/busbars.							
	<b>OUTGOING:-</b>							
	6 Nos. 63A 4P 10KA MCB.							
	6 Sets (6 sets of 160A rewirable cutouts (3 Nos. for each set for R,Y & B phases) with 6 sets of neutral links made out of 25 X 3 mm tinned copper mounted on 2nos. 25mm dia SMC spout as control.							
	6 Sets (6 sets of 63A rewirable cutouts (3 Nos. for each set for R,Y & B phases) with 10 sets of neutral links made out of 12 X 3 mm tinned copper mounted on 2nos. 25mm dia SMC spout as control.							
	6 Sets of 100A 4P ATS (Motor operated Auto transfer switch of Socomec/ Havels make) complete with control wiring, protection circuit, indicating lamps, provision for manual operation, 2sets of separete R,Y,B & ON LED status indication, etc.							
	The board shall have provision for KWH meter of 30 or 100A (To be supplied and sealed by Electricity Board) Rate shall be for the complete board with danger caution board, interconnections, etc.							
	The board shall be equipped with 40 X 6mm aluminium busbars duly colour sleeved by heat shrink type sleeves for phase & neutral duly supported at regular intervals not exceeding 450mm with 10mm thick SMC sheet, removable cut out fuses to match the rating of the incoming/outgoing fuse switches with provision for sealing by electricity board, a KWH meter chambber with 5mm thick transparent perpex sheet at the front for reading purpose with sealing provision by TNEB.							
	All incoming and outgoing cables shall have top/bottom entry. Rate shall be for the complete board with danger caution borads, feeder identification marks, rigid interconnections, cadmium plated bolts and nuts, etc.							
	<b>Note 1:</b> The meter board shall be economical and semi cubicle type with separate chamber for busbars, meters, MCB, etc. It shall be simple in design and as per relevant of TANGEDCO & CEIG.							
	2) The meter board to be erected from the ground with min 450-600mm clearance. To achieve this the meter board to be fabricated with single outgoing in each vertical with M.S. pedestral to obtain the required ground clearance.							
	(Refer Meter Panel)	Set	1					
2.	Same as above but switchboard meant for common services with following combinations							
	<b>INCOMER:</b>							
	1 No. 160A 4P 16KA MCCB.							
	1 Set of R,Y,B indicating lamps							
	<b>OUTGOING:</b>							
	VTPN 8 way MCB DB fitted with:							
	1 No. 100A 10KA 4P MCCB.							
	7 Nos. 32A 10KA 4P MCCB.							
	(Refer SB-C of schematic diagram).	Set	1					
3.	Same as above but with the following.							
	<b>INCOMER:</b>							
	1 No. 400A 4P 25KA MCCB.							
	1 Set of ON & OFF LED indicating lamps							
	1 Set of R,Y,B indicating lamps							
	<b>OUTGOING:</b>							
	VTPN 8 way MCB DB fitted with							



		10Nos. 63A 4P 10KA MCB and 2Nos. (Refer SB-DG of schematic diagram).	Set	1					
4		Same as above but with the following: <b>INCOMER:</b> 1 No. 40A TP+N 30mA MCB. <b>OUTGOING:</b> TPN 6 way MCB DB fitted with 3 N1os. 40A DP RCBO for phase control & 18 Nos. 6-10A SP MCB							
		(Refer LPDB-C).	Set	1					
5.		Supply and installation of earth electrode as per IS-3043 with cast iron earth electrode complete with excavation of earth, blasting if necessary, re-filling with soil treating media like charcoal, salt, etc. The earth electrode shall be of 100mm dia 6.5mm thick 3.0mtrs. long complete with funnel etc. Rate shall be inclusive of brick work, cast iron or RCC heavy duty cover slab, identification mark of earth electrode, testing, furnishing test reports, etc. as per G.A. drawing.	Each	2					
		Meter Panel - 2#							
6.		Supply and installation of earth electrode with 3/4" dia, 10 feet long, UL listed, min 254 micron copper coating over mild steel. Each earth electrode shall be supported with RoHS certified, low resistivity ( $\leq 0.2$ ohm mtr) Ground Enhancement Material (min 22.6 Kg), performs in all soil condition, increases the contact area with earth electrode, A suitable clamps shall be used for termination of down conductors to earth electrode. The resistance shall be $\leq 10 \Omega$ . Rate shall be inclusive of brick work, cast iron or RCC heavy duty cover slab, identification mark of earth electrode, testing, furnishing test reports, etc. (The earth electrode along with other materials shall be of OBO/DHEN/INDEC make only) For Lifts : 1 (2# for lifts)	Each	2					
7a.		Supply and laying of 25 x 6 mm. G.I. flat with M.S spacer clamp, etc. for body earth. (For main grid earthing from building to ground).	Mtr	100					
b.		Same as above but 25 x 3mm G.I. flat (For secondary earthing like meter boards, vertical riser, etc.).	Mtr	75					
c.		No. 8 SWG G.I.wire.	Mtr	75					
d.		No. 10 SWG G.I. wire.	Mtr	30					
e.		No. 8 SWG copper wire for lift control panel earthing.	Mtr	100					
8a.		Supply and installation of 63A TPN 10KA MCCB mounted on a suitable size cubicle type M.S.box with floor/wall mounting frame work complete with cable adaptor boxes, R, Y & B LED type indicating lamps, etc. (Provisional)	Set	QRO					
b.		Same as above but 32A TPN 10KA MCB.	Set	QRO					
c.		Same as above but 63A TPN fuse switches with HRC fuses.	Set	QRO					
d.		Same as above but 32A TPN fuse switches with HRC fuses.	Set	QRO					
9.		Supply & installation of heavy duty low loss capacitor bank suitable for operation 415 volts 3 phase 4 wire system mounted above the switchboard for P.F improvement with 32A TPN contactor with control circuit, etc to trip the contactor during DG running with the following.							
		1 Set of 5 KVAR Capacitor Bank (Provisional item & to be installed if TANGEDCO insisted)	Set	1					
		<b>TOTAL OF PART-A C/o TO SUMMARY:</b>							
		<b>NOTE: QRO - Quote rate only : This may be required or not and will be decided during execution.</b>							

**PART-B: MAINS FROM METER BOARD, DISTRIBUTION BORADS, WIRING, TO APARTMENTS INCLUDING WIRING TO CAR PARK, STAIR CASE, LOBBY, PROVISION OF CABLE TRAYS, ETC.**

S.No.		Description	Unit	Qty.	Supply		Erection		Total
					Rate	Amount	Rate	Amount	
1.		Supply, erection, testing and commissioning of wall/floor mounting type cubicle pattern Medium voltage switchboards/ distribution boards for power and lighting comprising TPN busbars							
		with of equal size in all phases and neutral made out of 16 SWG sheet steel, reinforced angle iron frame work with adequate rated tinned copper busbars to handle full load and short time rating. The switchboard and distribution board shall be equipped with incoming fuse switch / MCB / MCCB and outgoing Switch fuses or MCB as per requirement. It shall be complete with earthing, feeder identification markers, inter-connections, cable identifications, danger caution boards, incoming and outgoing cable chamber, mounting angles, channels, etc.							
		All MCCB/MCB type switchboards/ distribution boards shall be erected on wall with minimum projection from the wall. All incoming and outgoing cables/ conduits shall be taken in surface / concealed.							



		The entire board shall be of originally manufactured by the respective and approved supplier and local fabrication shall not be allowed. The board shall be complete in all respect and shall meet the requirement of local CEIG and other relevant authorities. The rate shall be for the complete board including supply and fixing of all components, hardwares, etc. including all connected civil works as per the following combinations at different locations.							
a		<b>INCOMING:</b>							
		1 No. 63A 4P 30mA MCB							
		<b>OUTGOING :</b>							
		TPN 12 way MCB DB fitted with 3 Nos. 63A DP RCBO & 36 Nos. 6-20A 4P MCB control individual phase and outgoing and rest with dummy plates.							
		The DB shall have exclusive neutral & earth bar mounted on SMC spout with 20 x 6 mm tinned copper flat or as per the manufacturer standard.(Include Surge Protection Devices(SPD).							
		(Refer typical PDB meant for apartments)	Set	5					
b		<b>INCOMING:</b>							
		1 No. 63A 4P 30mA RCBO							
		<b>OUTGOING :</b>							
		TPN 8 way MCB DB fitted with 3 Nos. 63A DP MCB to control individual phase and 18 Nos. 6A 10KA SP MCB as outgoing and rest with dummy plates.							
		The DB shall have exclusive neutral & earth bar mounted on SMC spout with 20 x 6 mm tinned copper flat or as per the manufacturer standard.(Include Surge Protection Devices(SPD).							
		(Refer typical LPDB meant for apartments)	Set	5					
2.		Supply, laying and dressing of the following sizes of 1.1 KV grade PVC/XLPE insulated flat / round armoured cable with aluminium conductor or copper conductor as specified on wall/ceiling/trench/cable rack with proper clamping, cable identification tags, etc.							
a.		3 1/2C 120 sqmm Al. Armoured.	Mtr	QRO					
b.		4C 25 Sqmm Al. Armoured.	Mtr	50					
c.		4C 16 Sqmm Al. Armoured.	Mtr	250					
d.		4C 10 Sqmm Al. Armoured. (Provisional)	Mtr	30					
e.		4C 6Sqmm Cu. Armoured.	Mtr	300					
3.		End termination to the above cable with single compression type cable gland and heavy duty tinned copper cable sockets. Rate shall be inclusive of all sundry materials like adhesive Tapes, PVC sleeves, bolts and nuts, washers, etc. including plugging unused hole.							
a.		3 1/2C 120 sqmm Al. Armoured.	Each	QRO					
b.		4C 25 Sqmm Al. Armoured.	Each	4					
c.		4C 16 Sqmm Al. Armoured.	Each	30					
d.		4C 10 Sqmm Al. Armoured.	Each	2					
e.		4C 6Sqmm Cu. Armoured.	Each	14					
4.		Supply and laying of following sizes of PVC insulated 660 volts grade multistrand copper conductor wire in a suitable size PVC conduit pipe complete with all accessories, clamps, etc.							
a.		4 runs of 10 Sqmm + 2 runs 6 Sqmm in 1 run 32/38 mm dia 1.8 mm thick PVC rigid conduit pipe.	Mtr	230					
b.		4 runs of 6 Sqmm + 2 runs 4 Sqmm in 1 run 25/32 mm dia 1.8 mm thick PVC rigid conduit pipe.(For common area LDB)	Mtr	40					
c.		4 runs 4 Sqmm + 2 runs of 2.5 Sqmm in one run 25 mm dia 1.8 mm thick PVC rigid conduit pipe. (Provisional)	Mtr	5					
5.		End termination to the above with suitable size PVC couplers and crimping type copper sockets							
a.		4 runs of 10 Sqmm + 2 runs 6 Sqmm.	Each	10					
b.		4 runs of 6 Sqmm + 2 runs 4 Sqmm.	Each	4					
c.		4 runs 4 Sqmm. + 2 run 2.5 Sqmm.	Each	2					
		<b>INTERNAL &amp; EXTERNAL AREA LIGHT FITTINGS</b>							
		Unloading, Storage, Handling and providing necessary mounting supports with accessories, installation, testing & commissioning of light fixtures complete as required as per site condition.							
		Supplying, Erecting, connecting & commissioning of 40W, LED PRIDE WEATHER PROOF FITTING, IP65 (6500K)	Nos	55					
		Supplying, Erecting, connecting & commissioning of 20W LED GLAZE TUBE LIGHT COOL WHITE	Nos	56					
		Supplying, Erecting, connecting & commissioning of LED AREVA PRIME ROUND 12W CW-xc	Nos	8					
		Supplying, Erecting, connecting & commissioning of LED AREVA PRIME ROUND 12W CW-xc	Nos	175					
		Supplying, Erecting, connecting & commissioning of LED NERO SURFACE ROUND 12W COOL WHITE	Nos	25					
		Supplying, Erecting, connecting & commissioning of 1 LT CLEAR GLOBE GLASS WITH ROSE GOLD FINISHING PENDANT	Nos	40					
		Supplying, Erecting, connecting & commissioning of 6 LT CLEAR GLASS WITH BRUSHED BRASS FINISHING CHANDELIER	Nos	QRO					
		Supplying, Erecting, connecting & commissioning of LED INDOOR 15W STRIP LIGHT WARM WHITE	Nos	250					
		Supplying, Erecting, connecting & commissioning of POWER SUPPLY 96W INDOOR 24V, 4A	Nos	50					
		Supplying, Erecting, connecting & commissioning of RECESS BARE PROFILE 3000X16X12MM ANODIZED FINISH	Nos	5					
		Supplying, Erecting, connecting & commissioning of LED ERIS ROUND TILTABLE 7W NW	Nos	45					
		Supplying, Erecting, connecting & commissioning of OTC ERIS SURFACE ROUND 10W COB DOWNLIGHT WW	Nos	125					



	Supplying, Erecting, connecting & commissioning of 2 LT OPAL GLASS WITH CHROME FINISHING WALL LAMP	Nos	25					
	Supplying, Erecting, connecting & commissioning of LED AREVA PRIME ROUND 12W CW sc	Nos	5					
	Supplying, Erecting, connecting & commissioning of LED ALUMINIUM PROFILE LIGHT SUSPENDED 50X70MM 36W NEUTRAL WHITE	Nos	250					
	Supplying, Erecting, connecting & commissioning of 8 LT CLEAR GLASS WITH BRUSHED BRASS FINISHING CHANDELIER	Nos	QRO					
	Supplying, Erecting, connecting & commissioning of 6 LT FROSTED GLASS WITH CHROME FINISHING CHANDELIER WITH LED BULB	Nos	QRO					
	Supplying, Erecting, connecting & commissioning of EMINA: RECESSED COB DOWNLIGHT 15W NEUTRAL WHITE	Nos	25					
	Supplying, Erecting, connecting & commissioning of HANGING RING LIGHT 36W NW DIA 600MM	Nos	3					
	Supplying, Erecting, connecting & commissioning of WALL UP LIGHT	Nos	10					
	Supplying, Erecting, connecting & commissioning of LED LUCENT SLIM DOWNLIGHT 9W CW	Nos	2					
	Supplying, Erecting, connecting & commissioning of 1 LT CLEAR GLOBE GLASS WITH ROSE GOLD FINISHING PENDANT	Nos	5					
	Supplying, Erecting, connecting & commissioning of 3 TIER CIRCLULAR 60 WATT CHROME WITH AS FOUR CRYSTAL	Nos	5					
	Supplying, Erecting, connecting & commissioning of WALL LIGHT	Nos	65					
	Supplying, Erecting, connecting & commissioning of LED RING GATE TOP 40W WW 400MM	Nos	4					
	Supplying, Erecting, connecting & commissioning of LED STREET LIGHT 45W 100LM/W 1-3WLED POTTED DRIVER	Nos	12					
	Supplying, Erecting, connecting & commissioning of LED ALUMINIUM PROFILE LIGHT SUSPENDED 50X70MM, 36W COOL WHITE	Nos	5					
	Supplying, Erecting, connecting & commissioning of EMINA: RECESSED COB DOWNLIGHT 15W WARM WHITE	Nos	2					
	Supplying, Erecting, connecting & commissioning of EMPHA: RECESSED EXTENDED COB FOCUS LIGHT 7W WARM WHITE	Nos	5					
	Supplying, Erecting, connecting & commissioning of LED AREVA PRIME ROUND 15W CW	Nos	26					
	Supplying, Erecting, connecting & commissioning of LED AREVA PRIME ROUND 15W CW	Nos	120					
	Supplying, Erecting, connecting & commissioning of LED BULKHEAD 10W CW	Nos	33					
	Supply, Installation, Testing and commissioning of 1200mm Decorative Ceiling fan with suspended rod bolt nut with all accessories. Etc.	Nos	10					
	Supply, Installation, Testing and commissioning of 900mm ceiling fan with suspended rod bolt nut with all accessories. Etc.	Nos	25					
	Supply, Installation, Testing and commissioning of Wall Mount fan with bolt nut with all accessories. Etc.	Nos	3					
6.	Wiring to light/Fan/Exhaust Fan/ Call Bell/6A plug points with 2.5 Sqmm. multistranded copper conductor wire as circuit mains and 1.5 Sqmm. multi-strand copper conductor wire as group/ individual control wiring in a suitable size 20mm. or 25 mm. medium class rigid PVC conduit pipe concealed to the ceiling, floor, wall column, etc. The conduit drop or riser shall be embedded in the wall with chase cutting and rough plastering. The rates shall be inclusive of all materials like switches, wires, pipes and accessories like bends, M.S. junction boxes, switch boxes, concealed type fan hooks, 1.0 sqmm. multistranded PVC insulated copper conductor (green colour) as earth continuity wire separately for each. Wiring shall be carried out from distribution boards to various points, etc. The rate shall be for the complete work including all civil works connected with the installation. (Note: No. circuit mains primary and secondary points, staircase point, etc. shall be counted separately and the rate quoted shall be inclusive of all per point).							
a.	Light points, 6A plug points away from switch boxes, exhaust fan points, etc. (20+148+81+83+1+14+20+5+15) + 23 Nos provisional 6A for Lobby, misc works, etc.	Pt	410					
b.	Fan points with fan hook junction box, modular step type fan regulator.	Pt	52					
c.	6A switched socket (on board 6A) counted as half point.	Pt	25					
d.	Same as above but wiring for Bell point with 1.5sqmm instead of 2.5sqmm as circuit mains.	Pt	5					
e.	Same as above but 2 way light points inside the apartment with 2 way switches, etc.( 4# each in apartments)	Pt	20					
7.	Wiring to common areas (like parking, staircase, etc) without local control switches. Group control of lights shall be controlled directly from the MCB in DB. (MCB & MCB DB covered separately)							
a.	One to Two lights controlled by one MCB.	Set	5					
b.	Three to Four lights controlled by one MCB.	Set	5					
c.	Five to Eight lights controlled by one MCB.	Set	2					
8.	Supply & fixing of 6/16 Amps 6 pin combined DP switch and socket with indicating lamp mounted in a suitable size M.S. Box concealed to wall /partition, etc. Rate shall be inclusive of wiring to the above with 2 runs of 2.5 Sqmm. multistrand copper conductor wire with single run of 1.5 Sqmm. multistranded copper conductor wire as earth from DB to the 16A Power socket in a suitable size concealed 20/25 mm. 1.8m. thick rigid PVC conduit pipe complete with all accessories, all connected civil works, etc.(For geyser points the control swiches shall be of 16A DP at switch box level & socket shall be at 2400mm/as per Architect near to geyser. 16A DP switch shall be with builtin indicating LED lamp). For other power points in kitchen, wash area, etc it shall be with DP indicating type switch mounted along with socket outlets.	Set	60					



9a.		Supply & fixing of 20A DP switch (modular cover plate type) mounted in a suitable size M.S. box concealed/ surface mounted to wall/ column, etc. Rate shall be inclusive of wiring with 2 runs of 4 sqmm. multistrand copper conductor wire with single run of 2.5 sqmm. multistrand copper conductor wire for power outlets in a suitable size concealed 20/25 mm. 1.8mm. thick rigid PVC conduit pipe complete with all accessories, all connected civil works, etc. (For A.C points the control switches shall be of 20A DP at bed side level & socket shall be at 2400mm/as per Architect near to A.C. (For AIR Conditioner points, etc.)	Set	28				
b.		Same as above but only empty conduit pipe and empty M.S. Box concealed to wall (without outlets & wiring) suitable for mounting the 16A/ 20A outlets and MCB & wiring, if required, in future, complete with all accessories.	Set	QRO				
10a.		Supply and laying of 20mm dia 1.6mm thick PVC conduit pipe for Telephones and T.V. outlets concealed to wall/ceiling / column, etc.(For Telephone)	Mtr	250				
b.		Same as above but 25mm dia 1.8mm PVC pipe. (For T.V)	Mtr	250				
c.		Same as above but 32mm 1.8mm dia PVC pipe. (For Misc. at car park)	Mtr	25				
11.		Supply and laying of PVC insulated 0.51mm dia twisted 1 Pair Telephone cable in the above conduit pipe.	Mtr	200				
12.		Supply and Installation of Data point in a suitable size M.S. box concealed to wall.	Set	10				
13.		Supply and installation of TV jack plug in a suitable size M.S. box concealed to wall.	Set	10				
14a.		Supply & installation of ladder type cable tray made out of 50mm x 50mm x 6mm M.S. angles as main runners and 2 Nos. of 25 x 25x 6 mm. M.S. Angles welded close to each other with 6mm gap as rugs, complete with suspension arrangement (maximum upto 800mm from ceiling) with rawl bolt and nut, etc. The rack system to be painted with enamel paint, etc. The width of the rack shall be 450mm.	Mtr	10				
b		Same as above but 150 mm. width tray (25 x 25 x 6 mm runners and rugs of 25x25x3mm).	Mtr	10				
15.		Supply and installation of M.S. junction boxes made out of 16 SWG M.S. sheet Steel with adequate knock-outs on all sides, openable cover plate, etc., for looping the PVC conduit pipes. It should be fixed on the cable tray, ceiling, wall, etc., with adequate supports. The rate shall be inclusive of all sundry materials bolts and nuts, two coats of painting over base primer, etc., of following sizes.						
a		450mm x 250 to 450 mmx25-65mm depth M.S.boxes.	Each	2				
b		300mm x 150 to 300mm x 25-65 mm depth M.S. boxes.	Each	2				
c.		150mm x150mm x 25-65mm depth M.S. boxes.	Each	2				
16		Supply & installation of 75mm X 75mm X 40-50mm depth M.S.Junction boxes (as empty junction boxes) for Telephone, TV outlets, etc. covered with plain powder coated/porspex cover plate.	Each	2				
17		<b>UPS</b>						
a		Supply and Erection of 2 KVA UPS Systems with Single-phase input and Single phase output. Maintanance free batteies suitable for backup system should have Half an hour continous rating.The scope includes providing necessary battery stand , inter connecting cables from UPS battery.The scope also includes providing necessary by-pass arrangement and all other requirements. The capacity of the battery shall be of 12V DC with a minimum of Suitable ampere hour and as per specification. 120 Minutes	Nos	6				
18		<b>ETPN DB ( UPS )</b>						
a		Fabrication, Supply, Installation, Testing and Commissioning of ETPN 4 WAY TP & N MCB Distribution Board and double door, dust & vermin proof and copper bus bar comprising of the following : Incoming : 1No 63 A, 4P MCB Outgoing : 8Nos 10-32 A, TP MCB	Nos	6				
b		Supply and laying of PVC insulated FRLS unsheathed multistranded copper conductor wire with 3 runs of 4sq.mm (P,N) and 1 run of 2.5Sq.mm(E) complete with wiring terminations etc as per standards.The rate shall include supply of wires, termination etc., for ups db	Mtr	2200				
		<b>LIFT:</b>						
19		Supply & installation of lift control and wiring system with the following:						
		<b>INCOMER:</b>						
		1 No. 40A TPN (MCB).						
		1 set R,Y & B LED Type indicating lamp connected through series resistor and surge suppressors.						
		<b>OUTGOING:</b>						
		2 No. 32A TPN MCB to control lift.						
		1 No. 20A DP MCB for lift pit power.						
		1 No. 10A DP MCB for lift pit light control.						
		1 No. 10A DP MCB for lift car light.						
		1 No. 16A concealed / surface mounted plug & socket controlled by 1 No. 16A SP switch with wiring by 3 runs of 2.5 Sqmm in a suitable size ERW conduit pipe/ concealed PVC conduit pipe with all accessories.						
		5 Sets of bulk head light fitting 5 Sets of 6A switched socket with 1no. 6A SP switch to control bulk head light in M.S box with wiring from the above MCB with 3runs of 1.5Sqmm PVC copper wire in concealed PVC conduit pipe with all accessories.	Set	1				
		Rate shall be inclusive of all materials, wiring, light fitting, DB, etc						





20		Supply and laying of 2 core 0.5sqmm. Copper flexible for lift work.	Mtr	QRO					
21		Supply, installation, testing & commissioning of the following rated MCB / ELCB wherever required. (Provisional)							
a.		63A 4P MCB	Set	7					
b.		63A 4P RCBO	Set	1					
c.		32-63A DP RCBO	Set	1					
d.		6-10A SP MCB	Set	1					
e.		10-20A SP MCB	Set	1					
f.		10-20A DP MCB	Set	1					
g.		20-63A 4P MCB	Set	1					
h.		40KA Surge Suppressor (TVSS) with 1 set of 20A 4P MCB complete with interconnection, earthing, etc.	Set	QRO					
		<b>TOTAL OF PART-B C/o TO SUMMARY</b>							
		<b>NOTE: QRO - Quote rate only : This may be required or not and will be decided during execution.</b>							



**PART-C:- ADDITIONAL ELECTRICAL INSTALLATION RELATING TO OTHER SERVICES LIKE , EB, DG, LIGHTNING, ETC.**

**INSTALLATION NOT RELATED WITH APARTMENT ELECTRICAL WORKS.**

S.No.	Description of work	Unit	Qty.	Supply		Erection		Total
				Rate	Amount	Rate	Amount	
<b>I</b>	<b>INCOMING EB &amp; DG INCOMING CABLE &amp; RELATED WORKS:</b>							
1a.	Supply and laying 3 1/2 C120 Sqmm 1.1 KV grade XLPE insulated armoured cable with aluminium conductor for incoming of metering panels & common area switchboard. (For EB Cable)	Mtr	75					
b.	Same as above but 240Sqmm. (For DG Cable)	Mtr	25					
c.	Same as above 4C 25Sqmm. (Provisional)	Mtr	10					
d.	Same as above 4C 2.5 Sqmm copper (Provisional For Misc works)	Mtr	50					
2.	End termination to the above cable with single compression type cable gland and crimping type aluminium sockets.							
a.	3 1/2 C 120 Sqmm.	Each	2					
b.	3 1/2 C 240 Sqmm.	Each	2					
c.	4C 25 Sqmm.	Each	2					
d.	4C 2.5 Sqmm Cu.	Each	6					
	<b>EB FEEDER PILLAR</b>							
3.	Supply & Installation of 300A 4 way floor mounting weather proof type feeder pillar with 300A rewirable cutouts, sealing type door, tinned copper busbars for phases & neutral, cadmium plated bolts & nuts with spring washers, etc. as per TANGEDCO norms.	Each	1					
	<b>TOTAL OF SECTION I C/o TO SUMMARY</b>							
<b>II</b>	<b>BMS RELATED WORKS:</b>							
1	Towards labour charges for concrete chipping of BMS conduit pipes in the floor.	Mtr	30					
1A	Supply and laying of 20mm dia 1.6mm thick PVC conduit pipe for BMS concealed to floor/ shaft, etc.	Mtr	225					
1B	Same as above but 25mm dia PVC pipe.	Mtr	30					
1C	Same as above but 32mm dia PVC pipe.	Mtr	10					
	<b>TOTAL OF SECTION II C/o TO SUMMARY</b>							
<b>III</b>	<b>PUMP DB'S &amp; RELATED WORKS:</b>							
1	Supply and installation of DB as described in Part-B but with the following:							
	<b>INCOMER:</b>							
	1 No. 40A 4P 10KA MCB.							
	1 set R,Y & B LED Type indicating lamps							
	<b>OUTGOING:</b>							
	VTPN 12 way MCB DB fitted with 12 Nos. 10-20A TPN MCB.	Set	1					
	(Refer PDB-PUMP).							
4	Supply, laying and dressing of the following sizes of 1.1 KV grade PVC/XLPE insulated flat / round armoured cable with aluminium conductor or copper conductor as specified on wall/ceiling/trench/cable rack with proper clamping, cable identification tags, etc.							
4A	4C 16 Sqmm Al. Armoured.	Mtr	30					
4B	4C 6Sqmm Al. Armoured.	Mtr	280					
5	End termination to the above cable with single compression type cable gland and crimping type aluminium sockets.							
5A	4C 16 Sqmm Al. Armoured.	Each	2					
5B	4C 6Sqmm Al. Armoured.	Each	12					
6A	Supply and laying of 25 x 3 mm. G.I. flat with M.S spacer clamp, etc. for body earth. (From main grid earthing to pump DB).	Mtr	30					
6B	No. 10 SWG G.I. wire for body earth. (For pumps).	Mtr	500					
	<b>TOTAL OF SECTION III C/o TO SUMMARY</b>							
<b>IV</b>	<b>YARD AND STREET LIGHTING:</b>							
7	Supply and laying of 3 core 2.5sqmm. PVC (1 core for earth) insulated armoured cable with aluminium conductor for periphery and gate lights.	Mtr	150					
8	End termination to the above cable with single compression type cable gland and crimping type sockets.	Each	10					
9A	Labour charges for installation of 3 to 3.5 Mtrs high 80mm. dia MS powder coated ground mounted street lights (Poles will be supplied by the client. The rate shall be inclusive of suitable foundation, coil type(8SWG GI 200dia 0f 115 turns) earth, wiring from connector block to fitting with 3C 1.5 Sqmm insulated PVC sheathed wire, etc)	Set	10					
9B	Same as above but 1 to 1.5 mtrs light poles for Post Top lanterns, Landscape lights, etc.	Set	QRO					
10	Supply and Installation of G.I. Bracket of suitable size for post top lantern on compound wall, in and out gates, etc.	Each	QRO					
11	Towards Labour charges for fixing of the following light fittings supplied by the client. Rate shall be inclusive of mounting accessories likes, bolts & nuts /screws, etc.							
a.	20 to 40 watts LED Street light fittings.	Each	10					



b.	10 to 25 watts LED Post top lanterns, Landscape lights, etc.	Each	QRO						
c.	Ornamental Bulk head, Ground mounted Landscapae lights, Compound wall lights, etc.	Each	14						
12	Labour charges only for installation only of 10 to 25 watts LED GateLights.	Each	4						
	<b>TOTAL OF SECTION IV C/o TO SUMMARY</b>								
<b>V)</b>	<b>LIGHTNING INSTALLATION:</b>								
13	Supply installation,testing & commissioning of the following lightning protection system. The lightning protection system shall be of conventional type as per the latest NBC & norms. Material selection shall be according to this conventional system.Shop drawing to be prepared & components to be shown with respect to locations, mounting system, etc. All components, screws, bolts & nuts to be included wherever required to make all the items as complete.								
a.	3 Mtr Vertical Air terminal with accessories. Providing air terminal as per standard & 16mm rod tapered to 10mm aluminium rod or without tapering.	Nos	1						
b.	Fixing clamp for air terminal ,Tested as per Standard: EN 62561. This device is meant for erecting Air terminal to the building & looping the horizontal conductors.(Air terminal of 8mm aluminium rod conductor covered seperately)	Nos	1						
c.	Aluminum Round Conductor (Ø 8mm).Tested as per Standard: EN 62561. This is 8mm conductor being used to loop all vertical Air terminations,horizantol & down conductors upto bottom of the building.	Mtr	135						
d.	Round Conductor and Down conductor holder made out stainless steel ( appx at every 1 mtr interval ) for 8 mm aluminium round conductor laid at parapet wall. The conductor holder shall have all accessories like screws, bolts & nuts, etc.	Nos	175						
e.	Universal Clamp,Tested as per Standard: EN 62561. This device is meant for cross connection, T connection etc.	Nos	25						
f.	GI Strip for Down Conductor (25x6 mm). (This conductor will be connecting the 8mm conductor and link to the earth electrode)	Mtr	100						
g.	<b>Earth Electrode</b> : Earth electrode shall be 3/4" dia, 10 feet long, UL listed, min 254 micron copper coating over mild steel, -Each earth electrode shall be supported with RoHS certified, low resistivity (≤0.2 ohm mtr) Ground Enhancement Material (min 22.6 Kg), performs in all soil condition, increases the contact area with earth electrode, A suitable clamps shall be used for termination of down conductors to earth electrode. The resistance shall be ≤ 5 Ω.	Nos	4						
h.	GI Strip (25x6 mm), for interconnecting earth pits.	Mtr	50						
i	Test Joint for earthpit for disconnections & connections.	Nos	4						
	<b>TOTAL OF SECTION V C/o TO SUMMARY</b>								
<b>VI)</b>	<b>MISCELLANEOUS INSTALLATION:</b>								
14	Supply and laying of 50mm. dia 2mm. thick PVC conduit pipe from ground floor telephone tag block to the upper floors concealed to wall.	Mtr	25						
	Rate shall also be inclusive of chase cutting of wall, rough plastering, etc., for intercom.								
b.	Supply and laying of the following Finolex, Havels, Polycab make telephone cable. Telephone cables shall be of 0.51mm dia twisted, sheathed PVC insulated cable.								
	i) 5 pair Telephone cable.	Mtr	QRO						
	ii) 10 pair -do-	Mtr	QRO						
	iii) 50 pair -do-	Mtr	QRO						
c.	Supply and Installation Krone or equivalent make of 100 pair telephone tag block in ground floor in a suitable size concealed lockable type M.S. box.	Each	QRO						
d.	Same as above but of 50 pair telephone tag block.	Each	QRO						
e.	Same as above but 25 pair telephone tag block.	Each	1						
15	Supply and fixing of heavy duty ball and socket (2Nos) for suspension of fluorescent fittings.	Set	QRO						
16	Supply and Installation of 19 mm. 16 gauge ERW conduit as down rod to fittings wherever required including two coats of approved colour paint.	Mtr	QRO						
17	Towards labour charges for installtion of TNEB KWH Meter in all meter panels with necessary inter connection as per EB requirement.	Each	6						
18	Supply and laying of the following sizes PVC pipe inserts for incoming power cable. Rate shall be inclusive of all miscellaneous items like bends, couplers, etc.								
a.	100mm diameter heavy duty PVC pipe.	Mtr	35						
b.	75 mm. diameter heavy duty PVC pipe.	Mtr	35						
c.	50 mm. diameter heavy duty PVC pipe.	Mtr	35						
19	Excavation of earth & laying cable in outdoor upto 750mm from the finished ground level, three side brick covering, sand cushioning / quarry dust covering, back filling,ramming,consolidation of the earth,etc.,including identification markers,etc.	Mtr	75						
	Note:- (This is a common trench for group/multiple runs of power cables/street light cables/controls cables to be laid in this trench)								
20	Toward charges for providing RCC Access manhole with heavy duty RCC top conver. The size of the manhole shall be 600mm wide x 600mm length with a depth of 750mm. It shall be placed at regular intervals (not exceeding 20mtrs) and to be used for pulling the cable. The route to be decided to suit site conditions.	Each	6						
21	Supply and installation of weather proof M.S. box made out of 16 SWG sheet steel with hinged door equipped with the following:								
	a) 1 No. DOL starter suitable for 2 to 5 HP motor.								
	b) 63A TPN MCB load break isolator.								



	c) R,Y & B LED type indicating lamp.	Set	QRO				
	Rate shall be inclusive of all connected civil works, M.S. angle iron frame work suitable for wall/floor mounting, cable adopter boxes, etc.						
22	Supply and installation of M.S. sheet steel fabrication boxes meant for junction boxes for DB, junction boxes for floor crossing, etc., complete with all hardwares, paint, etc. The thickness of sheet steel, type of cover, etc., will be decided to suit site condition.	Kg	35				
23	Supply and installation of M.S. angle iron frame work for cable rack, cable supporting clamps, etc. It shall be manufactured from M.S. angles/flats or channels as per site requirement complete with grouting, painting, etc. (For cable supports in Electrical duct)	Kg	300				
24	Supply, installation, testing & commissioning of the following rated DOL starters.(with Solinoid Coils)						
a.	DOL starter suitable for 1 to 3HP three phase motor.	Each	QRO				
b.	DOL starter suitable for 1 to 3HP single phase motor.	Each	QRO				
c.	4 to 7.5HP suitable for three phase motor.	Each	QRO				
	<b>TOTAL OF PART-C:- C/o TO SUMMARY</b>						
<b>VII)</b>	<b>HUME PIPES</b>						
25.00	Providing, laying and fixing following dia RCC pipe NP2 class (light duty) in ground complete with RCC collars, jointing with cement mortar 1:2 (1 cement : 2 fine sand) including trenching and refilling etc. as required.						
a	150mm dia	Mtr	55				
b	200mm dia	Mtr	QRO				
c	300mm dia	Mtr	QRO				





ELECTRICAL WORKS									
Sl. No		Description	Unit	Qty	Rate	Amount	Rate	Amount	TOTAL
						Supply		Installation	
1		ROOFTOP SOLAR POWER PLANT							
1		Engineering, Procurement & Commissioning (EPC) Turnkey basis, preparation of detail BOQ, Design, Engineering, manufacturing, testing at works, delivery to site of installation; storage and handling including unloading and shifting as required; cleaning and assembly as required, Installation inclusive of all kind of Civil, Electrical and structural works, Testing, Commissioning, Synchronizing, Operation and Maintenance of Roof top Solar PV Systems for approximate capacity of minimum 380 KWp (Generation capacity shall be decided by the CONTRACTOR as per roof top layout area), which includes solar panels, structures, cables, string monitoring cum junction boxes ,Inverters, panels, Circuit breakers, other required instruments, safety systems etc., Equipments required for interfacing with grid sub station, material storage and other auxiliaries, complete system erection testing and commissioning. The scope also includes supply, installation, testing, commissioning of Solar panel Incomer feeder in main PCC including extension of this existing main PCC (Refer SLD) and Sub DBs/Feeder Pillar, cabling system etc. up to main PCC. This also includes the cost of power evacuation system and metering system (s) as required up to the point of inter connection with the grid. Comprehensive operation & Maintenance of solar PV plant upto five years from the date of commissioning shall also be included in the same scope for completion of solar power plant in all respects.	kWp	1					
2		SITC OF 11KW solar panel							
3		SITC for the cabling							
4		SITC of Ms structural works for the above							
		SOLAR PANEL SUB TOTALS							
		ADDITIONAL COST(EB SCOPE)	lot	1					
		TRANSFORMER+EB CHARGES							
TOTAL ELECTRICAL WORKS (F)									



## ELV WORKS

SNO		DESCRIPTION	ACTUAL QUANTITY						MAKE
			UNITS	QTY	UNIT RATE		AMOUNT		
					SUPPLY	ERECTION	SUPPLY	ERECTION	
1		<b>CCTV SYSTEM</b>							
1		Supply, Installation, Testing and Commissioning of 24" Flat VA Panel FHD @ 60 Hz, 250 nits, sRGB 83%, 5ms, VGA, HDMI, Monitor	No	1					LG/Samsung or Equivalent
2		Supply, Installation, Testing and Commissioning of 32 channel NVR	Nos	1					HIK/Honeywell or Equivalent
3		Supply and Installation, 24 Port PoE	Nos	2					HIK/D-Link or Equivalent
4		8TB Storage Media (Minum 30days Motion recording)	Nos	4					HIK-SEGATE or Equivalent
5		Supply, Installation, Testing and Commissioning of 5 MP 1/2.7 inch Progressive Scan Varifocal	Nos	12					HIK/Honeywell or Equivalent
6		Supply, Installation, Testing and Commissioning of 5 MP 1/2.7 inch Progressive Scan Varifocal Bullet Camera.	Nos	7					HIK/Honeywell or Equivalent
7		Supply & Installation Wall Mount 6 U x 500 W x 450 D , Front Glass Door with required accessories for NVR	Nos	2					D-Link/Legrand or Equivalent
8		CAT-6 cable - CCTV,ITERCOM	MTR	845					D-Link/Legrand or Equivalent
9		Supply, Installation, Testing & commissioning of 25 mm PVC Conduit with necessary junctin boxes, bends, clamps, etc., for both concealed or open laying.	MTR	845					Precision/Javeri or Equivalent
		<b>SUB TOTAL</b>							
2		<b>WIFI SYSTEM</b>							
1		WIFI access point with router & connected accerssones - DAP-2682	Nos	25					D-Link/Netgear or Equivalent
2		WIFI Router with OFC Cable from Ground floor with required Faceplate & Accessories.Consider 15 Mtr OFC Single Mode	No	1					D-Link/Netgear or Equivalent
3		CAT-6 cable - WIFI	MTR	900					D-Link/Legrand or Equivalent
4		Supply, Installation, Testing & commissioning of 25 mm PVC Conduit with necessary junctin boxes, bends, clamps, etc., for both concealed or open laying.	MTR	450					Precision/Javeri or Equivalent
		<b>SUB TOTAL</b>							
3		<b>INTERCOM SYSTEM</b>							
1		7 " VDP TOUCH SCREEN	Nos	5					HIK/Godrej or Equivalent
2		MASTER CONTROL	Nos	1					HIK/Godrej or Equivalent
		<b>SUB TOTAL</b>							
4		<b>TV DISH SYSTEM</b>							
1		Supply, Installation, Testing & commissioning of 25 mm PVC Conduit with necessary junctin boxes, bends, clamps, etc., for both concealed or open laying.	MTR	900					Precision/VIP or Equivalent
		<b>SUB TOTAL</b>							
<b>TOTAL ELV WORKS (G)</b>									
<b>GRAND TOTAL (A+B+C+D+E+F+G) *</b>									
<b>* GST EXTRA AS APPLICABLE</b>									