

पनवेल महानगरपालिका
जाहीर निविदा दरपत्रक

आयुक्त, पनवेल महानगरपालिका नवीन पनवेल (पश्चिम) येथील सेक्टर - १८, भुखंड क्र. ०८ अ + ०८ ब येथे माता व बालसंगोपन केंद्र उभारणे. या कामाचे अंदाजपत्रक बनविण्याकरीता खाली नमूद केलेल्या बाबींकरीता खालील नमूण्यात दर मागविण्यात येत आहे.

अ.क्र.	कामाचे नाव	मुदत
१	पनवेल महानगरपालिका नवीन पनवेल (पश्चिम) येथील सेक्टर - १८, भुखंड क्र. ०८ अ + ०८ ब येथे माता व बालसंगोपन केंद्र उभारणे	१२/०६/२०२५ ते १८/०६/२०२५ (७ दिवस)

Specification

Sr. No	DESCRIPTION	Unit	Quantity
(1) PLUMBING WORK			
	Part I : Sanitary fixtures and fittings		
1	SPECIAL NEED FOR DISABLED TOILET Providing and Fixing EWC wall hung, Wash basin, Grab bar, Hinged rail & special faucet with spachula including seat cover, and flush valve, fittings, nuts, bolts and gasket etc complete for disabled toilet of approved make and conforming to IS Standards. Wash basin with one pair mounting brackets, Waste coupling 32 mm size full thread with 80 mm heightJaquar make with 7 years warranty: Chrome plated, Bottle trap Jaquar make with 7 years warranty: Chrome plated etc., EWC S Trap & Cistern complete with fittings & seat cover, one no. hinged rail 750 mm & Two nos of grab rails 600 mm ,etc. complete. Refer following product wise details, EWC : Jaquar : DIS-WHT-93955P180UF Wash Basin : Cera : S2040166 Cat. No. F9030453 Single lever clinical faucet Cat. No. B2210106 Wall mounted Grab Bar 600 mm Long Cat. No. B2210108 wall mounted Hinged Hand Rail 750 x 100 Make : Cera- Cruset Set	Set	28
2	HEALTH FAUCET Providing and fixing 8 mm dia. C.P/ S.S Jet with flexible tube up to 1.2 metre long with S.S. triangular plate to European type W.C. Of quality and make as approved by Engineer-in-charge. Make : Jaqua: ALD-CHR-565 CERA:F8030105AB Hindware:F160110CP	Each	306
3	BRAIDED HOSE PIPE Providing and fixing C.P. copper connecting pipe 450 mm long and nuts, washer and brass flange complete, including cutting and making good the wall where required. Make : Jaqua: ALD-CHR-805B CERA:F8070402	Each	306
4	TOILET PAPER HOLDER Providing & fixing in position following approved quality toilet paper holder with ISI mark / approved make and fixing on the wall using C.P. brass screws, rawl plugs etc. as per manufacturer's requirement all complete at the locations shown and as directed by the E-in-C. Make : Jaqua:ACN-CHR-1153S CERA:K-5633IN-CP Hindware:F880003CP	Each	306
5	ROBE HOOK Providing, fitting and fixing Chrome Plated robe hook complete as directed and specified. Make : Jaqua:ACN-CHR-1161N CERA:F5003108 Hindware:F880004CP	Each	306

6	LIQUID SOAP CONTAINER Providing & fixing in position following approved quality liquid soap container with ISI mark / approved make and fixing on the wall using C.P. brass screws, rawl plugs etc. as per manufacturer's requirement all complete at the locations shown and as directed by the E-in-C. Make : Jaqua:ACN-1137N CERA:F5003111 Hindware:F102018CP	Each	364
7	Electrical hand dryer Providing and fixing of fully automatic type , cover shall be fabricated in extra heavy duty 18 gauge type 304 SS with exposed surfaces satin finished, the unit shall deliver not less than 30 l/sec of hot air and electrical rating shall be 230 V / 1 phase. Jaqua:HDR-SSF-AK2807	NOS.	12
8	URINAL PARTITION Providing and fixing Rectangular shaped urinal partition with frosted glass approx. size 900 MM (H) X 450 MM (W) having 10 MM of glass thickness, including fixing to wall with suitable brackets all as per manufacturers specification and direction of Engineer-in-charge. Make : Jaqua:JSE-CHR-110US450X CERA:S4090104 Hindware:SU110SC(S)-STD-CR	Each	104
9	TOWEL RACK Providing and fixing the following C.P. Brass Towel Rack with Lower Hangers of following make and fixing on the wall using C.P. brass screws, rawl plugs etc. as per manufacturer's requirement all complete at the locations shown and as directed by the E-in-C. C.P. brass single Towel Rack 600mm long with Lower Hangers of approved make. Make : Jaqua:ACN- 1181S CERA:F5013121CH Hindware:F102008CP	Each	118
10	Soap Dish Providing & fixing Soap Dish of best quality including fixed into wall with C.P. Brass screws and rawlplugs etc. complete including cutting and making good the wall where required. Make : Jaqua:AKP-35731P CERA:F5013116CH Hindware:F580004CP	Each	118
Total of Part I : Sanitary fixtures and fittings			
PART II : Internal & Extnal drainage work			
11	Providing fixing, testing and commissioning in position polypropylene pipe ring fit conforming to EN: 1329, including all fittings such as bends, junctions, inspection doors, offsets, cowl, access pieces/plugs etc. including cutting holes in walls, slab and beam and making good the same. Make: HULIOT/ASTRAL SILENCO For Soil & waste and Rain water pipe lines. (Vertical Shaft, Basement Ceiling Level & Each Floor Suspended Plumbing Line)		
11.1	250 mm dia.	Mtr	670
11.2	200 mm dia.	Mtr	900
11.3	160 mm dia.	Mtr	860
11.4	110 mm dia.	Mtr	2196
11.5	75 mm dia.	Mtr	3035
11.6	65 mm dia.	Mtr	45
11.7	50 mm dia.	Mtr	23

12	Providing fixing, testing and commissioning in position polypropylene pipe ring fit conforming to EN: 1329, including all fittings such as bends, junctions, inspection doors, offsets, cowl, access pieces/plugs etc. including cutting holes in walls, slab and beam and making good the same. Make: HULIOT/ASTRAL SILENCO For Urinal & Basin drain lines.		
12.1	50 mm OD	Mtr	215
12.2	40 mm OD	Mtr	3180
13	Providing & fixing uPVC Floor P-Trap of following size having not less than 55mm effective water seal, fixing the trap in position and connecting with waste water pipe by cement solvent/ as per manufacturer's recommendation, embedding the trap in cement concrete 1:2:4 to correct level and gradient, providing and fixing 150 x 150 mm size top tile with central strainer & flat cover/ flush strainer, closing the side inlets with plugs if required etc. complete all as per specification and as directed by the Engineer in charge. Make : Astral, Supreme, Ashirvad.	Each	640
14	Providing and fixing stainless steel (SS304) Perforated grating 'of 18 gauge thick, with 'circular perforation including Cockroach trap of 'approved pattern over CI/PVC 'traps. The grating shall be of size 153mm x 153mm or circular of 100mm dia '(as directed) and shall 'be set in cement, sand mortar 1:3 etc. complete. (Euronics/ Chilly Makes) MAKE: Dolphy, Euronics, Chilly	Each	640
15	Providing & fixing floor clean out square cut of approved Make with making necessary slab/ wall/ beam holes and cutting walls, etc. complete. (Birla/Supreme/ Ashirvad/ Astral Makes) a, 110mm OD. Make : Astral, Supreme, Ashirvad.	Each	21
16	Making Khurras 45x45cm with average minimum thickness of 50 mm. cement concrete 1:2:4 (1 cement:2 coarse sand :4 graded stone aggregate of 20mm nominal size) over P.V.C. sheet 1mx1mx400micron, finished with 12mm cement plaster 1:3 (1 cement: 3 coarse sand) and a QUOTE of neat cement rounding the edge sand making and finishing the outlet complete depth as per site requirement.	Each	12
17	Providing , Laying and fixing, jointing Eco Drain 450 mm SN-04 Nu-Drain Upvc pipe or of equivalent make, manufacture as per EN 13476 or equivalent as per I.S.15328 & 16098 with fittings such a bends, tees, coupler, etc. jointing with rubber lubricant, including necessary excavation, trench refilling with selective excavated material etc. complete.	Mtr	80
18	Construction of Storm water chamber of size 600x600x900 mm (internal clear) making of RCC including excavation, backfilling, watering, soling, compaction, Reinforcement etc. complete. It includes M 30 RCC work for walls , top slab and bottom slab as per the drawing, having Rubble soiling and 100mm thick PCC in M-15 at bottom level. It shall be plastered with 20mm thick Plaster with neat coat in CM 1:3 on internal and outside of chamber with adequate goliya at all sides. Top shall be covered with FRP recessed Heavy Duty cover with Frame(600MMX600MM Clear Opening). It shall be completed with all respect in ture line level, plumb with neat & clean surface as per coordinated infrastructure detail drawing up to the level of satisfaction	Each	26
19	Construction of Inspection chamber of size 900x800x900 mm (internal clear) making of RCC including excavation, backfilling, watering, soling, compaction, Reinforcement etc. complete. It includes M 30 RCC work for walls , top slab and bottom slab as per the drawing, having Rubble soiling and 100mm thick PCC in M-15 at bottom level. It shall be plastered with 20mm thick Plaster with neat coat in CM 1:3 on internal and outside of chamber with adequate goliya at all sides. Top shall be covered with FRP recessed Heavy Duty cover with Frame(600MMX600MM Clear Opening). It shall be completed with all respect in ture line level, plumb with neat & clean surface as per coordinated infrastructure detail drawing up to the level of satisfaction.	Each	5
20	RWH - Recharge Pit Providing and constructing recharge pit of 3.0 mtr x 6.0 mtr x 3.0 mtr Deep of pre-cast RCC rings with 60 mtr deep borewell at the floor of recharge pit including installation of combination of solid/perforated PVC casing pipe wrapped around with netlon mesh including 300mm thick sidefilling around outside of RCC rings (annular space) with 40mm size boulders including filling of recharge pit up to 0.5m depth with 25-75mm clean washed gravels from bottom up followed by 0.5m depth of 10- 25mm of clean washed stones followed by 0.5m of washed river fine aggregate (natural sand/crushed sand VSI grade finely washed etc.) including netlon mesh between each gravel/fine aggregate (natural sand/crushed sand VSI grade finely washed etc.) media layer including covering with RCC slab, manhole frame & cover, PVC rungs, PVC endcaps, fittings etc. including arrangement for inlet & outlet pipe excavation & backfilling as shown in the drawing. The rate shall be inclusive of all labour, material, wastage, scaffolding, transportation, taxes, including all leads, lifts at all levels. All material should be of approved make. All works complete as per the drawing, technical specification and direction of the Engineer in charge.	Each	2

	Total of Part II : Internal & External drainage work		
	PART III : Internal & External Water supply work		
21	<p>Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes with all the engineered support as per detail technical specification, having thermal stability for hot and cold water supply including all CPVC plain and brass threaded fitting. This includes jointing of pipes and fittings with one step CPVC solvent cement and testing of joints complete as per direction of engineer in charge. Scope shall also including cutting, chasing the wall/beam by grinder cutter and making good the same.</p> <p>Pipe Dia upto 50MM: CPVC SDR11. Pipe Diameter above 50MM: CPVC SCH 80</p> <p>The rate shall be including all the engineered support (support, hanger, nuts/bolts, anchor fasteners, fixing clamp/channels with U-bolts, etc) as per detail technical specification etc. complete the job.</p> <p>Product to compliance with occupational safety standards. (For Cold & Hot water pipes in Chased Walls for toilets & Kitchen OR Pantry) :-</p>		
21.1	65 mm dia.	Mtr	650
21.2	80 mm dia.	Mtr	1195
21.3	100 mm dia.	Mtr	915
22	<p>Hot Water piping Insulation Within the Building - Providing & Fixing thermal insulation with 'Class 0' Closed cell nitrile rubber, having density 40-60 kg/m³ & thickness as per the specifications. Material shall have flamability class V-0 as per UL 94 & it shall be FM Approved. It shall pass anti-bacteria test as per ASTM E2180. Thermal Conductivity shall be 0.035 w/m.k at 10°C mean temperature and having μ value $\geq 7,000$ without any covering. (25 - 50 mm dia : 32 mm thick single layer) , (65 - 100 mm dia : 38 mm thick single layer)</p>		
22.1	20 mm dia.	Mtr	530
22.2	25 mm dia.	Mtr	540
22.3	32 mm dia.	Mtr	310
22.4	40 mm dia.	Mtr	310
22.5	50 mm dia.	Mtr	455
22.6	65 mm dia.	Mtr	145
23	<p>Hot Water piping Insulation (Exposed to Atmosphere) - Providing & Fixing thermal insulation with 'Class 0' Closed cell nitrile rubber, having density 40-60 kg/m³ & thickness as per the specifications. Material shall have flamability class V-0 as per UL 94 & it shall be FM Approved. It shall pass anti-bacteria test as per ASTM E2180. Thermal Conductivity shall be 0.035 w/m.k at 10°C mean temperature and having μ value $\geq 7,000$ without any covering. It shall be covered with a separate layer of GC with 214-235GSM. (25 - 50 mm dia : 32 mm thick single layer) , (65 - 100 mm dia : 38 mm thick single layer)</p>		
23.1	40 mm dia.	Mtr	90
23.2	50 mm dia.	Mtr	90
23.3	65 mm dia.	Mtr	390
24	<p>Insulation shall be covered with self-adhesive fibber glass cloth which is Acrylic based woven fiberglass fabric made from E glass(self adhesive) and has total thickness 0.19\pm0.02 mm. It shall have GSM 280 (\pm5%). Material should be Rodent Residence and it shall supply with Colour As per Design - Red / Blue / Green / Black / Gray / other as per requirement. (Insulation Protecting Cover within building)</p>	Mtr	2519
25	<p>Insulation shall be covered with Aluminum Cladding for mechanical protetion. It shall be silver cladding of 26G thickness sheet. Item should be fixed with joints & Rivets. Joints for Elbow & Valve shall be considered. (Insulation Protecting Cover for Exposed to Atmosphere pipes)</p>	Mtr	611
26	<p>Providing and fixing male/ female screw ended full way lever operated forged ISI marked brass ball valves with brass body with forged brass hard chrome plated ball / stem, union.Rated to temperature of 85 Deg C, The valves to be PN 10 kgm class on CPVC or GI pipe lines. (For cold and hot water supply lines)</p>		
26.1	20 mm dia.	Nos.	36
26.2	25 mm dia.	Nos.	64
26.3	32 mm dia.	Nos.	75

26.4	40 mm dia.	Nos.	66
27	Supply and installation, testing and commissioning of CI Butterfly valves conforming to BS 5155 ,PN 10 tested to 1.5 times working pressure with necessary companion flanges, bolts, nuts, gasket packing and any other spares, including indicator for open and shut position as per fire practice etc. complete.		
27.1	50 mm dia.	Nos.	77
27.2	65 mm dia.	Nos.	32
27.3	80 mm dia.	Nos.	16
27.4	100 mm dia.	Nos.	3
28	Providing Gun metal Pressure Reducing Valves as per IS:9739 of approved make with ISI mark and fixing the same on the Down take pipe line using white Zinc, hemp yarn etc. including testing the system for leakproofness all complete as shown & directed by EIC. Note: 1) Wherever required union joint shall be provided in pipe to facilitate removal of valve. 2) Threaded fittings of CPVC/UPVC shall be of Brass Threaded only.		
28.1	25 mm dia.	Nos.	1
28.2	32 mm dia.	Nos.	4
28.3	40 mm dia.	Nos.	1
28.4	50 mm dia.	Nos.	3
28.5	65 mm dia.	Nos.	1
28.6	80 mm dia.	Nos.	8
29	Construction of Water Meter Valve chamber of size 900x800x900 mm (internal clear) making of RCC including excavation, backfilling, watering, soling, compaction, Reinforcement etc. complete. It includes M 30 RCC work for walls , top slab and bottom slab as per the drawing, having Rubble soiling and 100mm thick PCC in M-15 at bottom level. It shall be plastered with 20mm thick Plaster with neat coat in CM 1:3 on internal and outside of chamber with adequate goliya at all sides. Top shall be covered with FRP recessed Heavy Duty cover with Frame(600MMX600MM Clear Opening). It shall be completed with all respect in ture line level, plumb with neat & clean surface as per coordinated infrastructure detail drawing up to the level of satisfaction.	Nos.	1
30	Providing & fixing CI 'Y' Strainer (screwed/ flanged) with stainless steel fine wire mesh perforated sheet basket with necessary flange/ unions nuts, bolts and washers complete as required.		
30.1	100 dia	Nos.	3
30.2	65 dia	Nos.	2
31	Supplying and erecting Cast iron double flange NRV complete with PN16 pressure rating.		
31.1	100 dia	Nos.	2
31.2	65 dia	Nos.	4
31.3	50 dia	Nos.	15
Total of Part III : Internal & External Water supply work			
PART IV : Pump And Equipment			
32	Supply . Installation, Testing and Comissioning of ISO certified company made self contained Drinking Water Cooler with BEE Rated energy efficient hermetic sealed type compressor,non CFC refrigerent suitable for operation on 230V/1pH/50Hz ac supply,Full stainless steel (S304)body and tank , stainless steel water tray,minimum two nos faucets and suitable drainage system complete in all respect with 300mm height MS fabricated and painted plateform. complete in all respect of the following capacity. NABL accredeated / CPRI/ ERDA lab testing reports with OEM certificate must submitted to engineer in charge. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR . Cooling capacity 150 Ltr./Hr. and storage capacity 150 Ltrs	Each	20
33	DOMESTIC WATER TREATMENT PLANT Supply installation, testing and commissioning of dometic water treatment plant comprising of Pressure sand filter, and softner Plant according to input water quality/analysis. Water treatment plant consisting of FRP tank, filter media, resins, brine tank, CPVC SCH 80 piping, isolation valves, instruments supports. The scope shall include CPVC SCH 80 interconnection	Each	1

	<p>pipng, Butterfly Cast Iron valves, NRV, instruments, autoback wash arrangement, Brine preparation tank & agitator platform, 1 nos Agitator require capacity and Ventury etc.complete the job .Scope shall also includes one month operation including consumable and training for operation of staff.</p> <p>Inlet Flow Range : 45 m3/hour.</p> <p>Input Water Parameters: - As per Site</p> <p>Output Water Hardness : < 50 PPM</p>		
34	<p>WTP FEED PUMP.</p> <p>Centrifugal Monoblock Transfer pump</p> <p>Supplying, installing, testing and commissioning of centrifugal pumps Complete with SS-316 casing, S.S 316 impeller and SS-316 shaft, C.I. Base CED (Cathode Electrode Deposition) coating & head TEFC motor (with mechanical seal) driven by 415 V AC, 3 phase, 50HZ., motor running at 2900 rpm speed , dry run protection, antivibration paid, 2 pole Motor & IE3 Efficiency, shall be supplied with all accessories viz., base plate, coupling, motor etc. complete. Contractor to submit performance curves and technical catalogue of the proposed model for review and information.</p> <p>Panel mounted microprocessor based multi pump controller with large graphical display with VGA 240 x 320 pixels and IP 55 enclosure, diodes to indicate pump ready, earthing, pump running and fault condition, Cascade Operation. Each incomer and Outgoing feeder should be capable for protection against Overload, Short Circuit and Phase reversal condition and shall be capable to communicate with other controllers following. The PLC shall support MODBUS-IP communication for its compatability to intergrate with 3rd party BAS system. Controller shall authorise Read/Write command via BMS.All alarms should be displayed in the controller. System should be equipped with dry running protection. Indication of all type of faults / on-off status / electrical parameters shall be available on panel and central IBMS monitors. On-off operation for all pumps shall be available on BMS system. SITC of electronic type low water level controler with LED panel to operate pump (necessary contacts along with minium one PLC operated spare contacts required), shall prevent the pump from dry running Mounting Height : 500mm from the bottom of Raw Water tank.</p> <p>Electronic type low, Medium & High water level controller with LED panel to operate pump (necessary contacts along with minimum one PLC operated spare contacts required),level controller with operational mode as one pump working at Medium level and cut off at High level complete the job.</p> <p>Mounting Height (Medium Level) : (Domestic Treated water Tank)</p> <p>Mounting Height (Hight Level) : (Domestic Treated water Tank) with probe & all control wiring from Pump room Panel to operate the system automatic/manual & shall prevent the pump from dry running.</p> <p>Scope shall also include power and control cable of required size, termination, cable tray from Pump to Control panel, control cable as whereever required etc. complete the job.</p> <p>Capacity per pump - 45.0 m3/hour, Head - 30 mt, 1 Set = 2 Nos. Pump (1 Working + 1 Standby - cascade operation).</p>	Set	1
35	<p>DOMESTIC WATER SUPPLY PUMP:</p> <p>Centrifugal Monoblock Transfer pump From Domestic Water UGT to Domesitc Water OHT</p> <p>Supplying, installing, testing and commissioning of centrifugal pumps Complete with SS-316 casing, S.S 316 impeller and SS-316 shaft, C.I. Base CED (Cathode Electrode Deposition) coating & head TEFC motor (with mechanical seal) driven by 415 V AC, 3 phase, 50HZ., motor running at 2900 rpm speed , dry run protection, antivibration paid, 2 pole Motor & IE3 Efficiency, shall be supplied with all accessories viz., base plate, coupling, motor etc. complete. Contractor to submit performance curves and technical catalogue of the proposed model for review and information.</p> <p>Panel mounted microprocessor based multi pump controller with large graphical display with VGA 240 x 320 pixels and IP 55 enclosure, diodes to indicate pump ready, earthing, pump running and fault condition, Cascade Operation. Each incomer and Outgoing feeder should be capable for protection against Overload, Short Circuit and Phase reversal condition and shall be capable to communicate with other controllers following. The PLC shall support MODBUS-IP communication for its compatability to intergrate with 3rd party BAS system. Controller shall authorise Read/Write command via BMS.All alarms should be displayed in the controller. System should be equipped with dry running protection. Indication of all type of faults / on-off status / electrical parameters shall be available on panel and central IBMS monitors. On-off operation for all pumps shall be available on BMS system. SITC of electronic type low water level controler with LED panel to operate pump (necessary contacts along with minium one PLC operated spare contacts required), shall prevent the pump from dry running Mounting Height : 500mm from the bottom of Domestic Treated Water Under ground Water tank.</p>	Set	1

	<p>Electronic type low, Medium & High water level controller with LED panel to operate pump (necessary contacts along with minimum one PLC operated spare contacts required), level controller with operational mode as one pump working at Medium level and cut off at High level complete the job.</p> <p>Mounting Height (Medium Level) : (Domestic Overhead water Tank)</p> <p>Mounting Height (High Level) : (Domestic Overhead water Tank) with probe & all control wiring from Pump room Panel to operate the system automatic/manual & shall prevent the pump from dry running.</p> <p>Scope shall also include power and control cable of required size, termination, cable tray from Pump to Control panel, control cable as wherever required etc. complete the job.</p> <p>Capacity per pump - 27.0 m3/hour, Head - 65 mt, 1 Set = 3 Nos. Pump (2 Working + 1 Standby - cascade operation).</p>		
36	<p>FLUSHING WATER SUPPLY PUMP:</p> <p>Centrifugal Monoblock Transfer pump From Flushing Water UGT to Flushing Water OHT</p> <p>Supplying, installing, testing and commissioning of centrifugal pumps Complete with SS-316 casing, S.S 316 impeller and SS-316 shaft, C.I. Base CED (Cathode Electrode Deposition) coating & head TEFC motor (with mechanical seal) driven by 415 V AC, 3 phase, 50HZ., motor running at 2900 rpm speed, dry run protection, antivibration paid, 2 pole Motor & IE3 Efficiency, shall be supplied with all accessories viz., base plate, coupling, motor etc. complete. Contractor to submit performance curves and technical catalogue of the proposed model for review and information.</p> <p>Panel mounted microprocessor based multi pump controller with large graphical display with VGA 240 x 320 pixels and IP 55 enclosure, diodes to indicate pump ready, earthing, pump running and fault condition, Cascade Operation. Each incomer and Outgoing feeder should be capable for protection against Overload, Short Circuit and Phase reversal condition and shall be capable to communicate with other controllers following. The PLC shall support MODBUS-IP communication for its compatability to intergrate with 3rd party BAS system. Controller shall authorise Read/Write command via BMS. All alarms should be displayed in the controller. System should be equipped with dry running protection. Indication of all type of faults / on-off status / electrical parameters shall be available on panel and central IBMS monitors. On-off operation for all pumps shall be available on BMS system. SITC of electronic type low water level controller with LED panel to operate pump (necessary contacts along with minimum one PLC operated spare contacts required), shall prevent the pump from dry running</p> <p>Mounting Height : 500mm from the bottom of Flushing Water Under ground Water tank.</p> <p>Electronic type low, Medium & High water level controller with LED panel to operate pump (necessary contacts along with minimum one PLC operated spare contacts required), level controller with operational mode as one pump working at Medium level and cut off at High level complete the job.</p> <p>Mounting Height (Medium Level) : (Flushing Overhead water Tank)</p> <p>Mounting Height (High Level) : (Flushing Overhead water Tank) with probe & all control wiring from Pump room Panel to operate the system automatic/manual & shall prevent the pump from dry running.</p> <p>Scope shall also include power and control cable of required size, termination, cable tray from Pump to Control panel, control cable as wherever required etc. complete the job.</p> <p>Capacity per pump - 18.0 m3/hour, Head - 65 mt, 1 Set = 3 Nos. Pump (2 Working + 1 Standby - cascade operation).</p>	Set	1
37	<p>HYDRO PNEUMATIC SYSTEM FOR Domestic Water Distribution, Location : Terrace Variable Speed Hydro-booster System</p> <p>Compact self contained Hydro-booster system comprising of following</p> <p>SITC of In-line, vertical multistage, centrifugal clear water pumps with SS-304 casing, S.S 304 impeller and SS-304 shaft, C.I. Base CED (Cathode Electrode Deposition) coating & head TEFC motor (with mechanical seal), dry run protection, antivibration paid, 2 pole Motor & IE3 Efficiency. Vendor to submit performance curves and technical catalogue of the proposed model for review and information.</p> <p>Panel mounted microprocessor based multi pump controller with large graphical display with VGA 240 x 320 pixels and variable frequency drive (VFD) integrated in a single body, pressure sensor transmitter, IP 55 enclosure, diodes to indicate pump ready, earthing, pump running and fault condition, Cascade Operation. Each incomer and Outgoing feeder should be capable for protection against Overload, Short Circuit and Phase reversal condition and shall be capable to communicate with other controllers following. The PLC shall support MODBUS-IP communication for its compatability to intergrate with 3rd party BAS system. Controller shall authorise Read/Write command via BMS. System should be capable to compensate for frictional losses at lower flows. All alarms should be displayed in the</p>	Set	1

	<p>controller. System should be equipped with dry running protection. Indication of all type of faults / on-off status / electrical parameters shall be available on panel and central IBMS monitors. On-off operation for all pumps shall be available on BMS system.</p> <p>Electronic type low water level controller with LED panel to operate pump (necessary contacts along with minimum one PLC operated spare contacts required), with probe & all control wiring from Panel to tank to operate the system automatic/manual & shall prevent the pump from dry running.</p> <p>Scope shall also include power and control cable of required size, termination, cable tray from Pump to Control panel, control cable as wherever required etc. complete the job.</p> <p>Pre-charged diaphragm pressure vessel with interchangeable membrane, charging connection, connected to outlet header with necessary flanges, gaskets, isolating valves, nuts/bolts etc. complete (size of pressure vessel shall be as per manufacturer recommendation).</p> <p>Capacity per pump - 15.0 m3/hour, Head -30 mt, 1 Set = 3 Nos. Pump (2 Working + 1 Standby - cascade operation), Location -Terrace, Suction head - flooded positive suction</p>		
38	<p>HOT WATER RECIRCULATION PUMP</p> <p>Supply, installation, testing & commissioning of online Thermostat with Timer based circulation booster pumps at Terrace Level with Require head directly coupled with the motor with SS casing, SS impeller, SS shaft and driven by 415 V AC, 3 phase, 50 Hz. motor running at 2900 RPM speed and shall be supplied with all accessories viz., base plate, coupling, motor etc. complete.</p> <p>Panel mounted PLC based pump controller, IP 55 enclosure, shall include the thermostat, required sensors and the timer control panel, ON-OFF and Trip Indicating lamps in each incomer and outgoing feeders, adequate NO NC contacts for integrating with Building Automation System, interlocking arrangement, dry running protection, cascade operation, working / standby selection, with provision of remote on/off operation complete as require.</p> <p>The on/off operations for all pumps shall be available on central BMS system. Each incomer and Outgoing feeder should be capable for protection against Overload, Short Circuit and Phase reversal condition and shall be capable to communicate with BMS. Scope shall also include supply, laying, termination of power cables of adequate size, and arrangement of cable tray from Pump to Control panel etc. to complete the job.</p> <p>Capacity per pump - 10m3/hour, Head - 30mt, 1Set = 3Nos. Pump (2Working + 1Standby - cascade operation),</p>	Set	1
39	<p>WATER TREATMENT R.O. PLANT FOR DRINKING WATER (600 LPH) : Supply installation, testing and commissioning of Reverse-osmosis Automatic, water treatment plant comprising of RO plant etc. according to input water quality/analysis The scope shall include interconnection piping, valves, instruments, back wash arrangement, Including Raw water inlet pumps a 1 working + 1stand by pump set, micron fliter, High pressure pump(1W+1S), and all other required pump the pump set is auto operation, including dry run protection,RO Module, all valve controls, SS 316 interconnecting piping of suction and discharge header, control pannel and other necessary cabeling works, 2 pole Motor & IE3 Efficiency etc. complete the job. Panel mounted PLC based pump controller, IP 55 enclosure, ON-OFF and Trip Indicating lamps in each incomer and outgoing feeders, The PLC shall support MODBUS-IP communication for its compatability to intergrate with 3rd party BAS system. PLC shall authorise Read/Write command via BMS. earthing, interlocking arrangement, dry run protection, cascade operation, working / standby selection, with provision of remote on/off operation complete as require. The on/off operations for all pumps shall be available on central BMS system. Each incomer and Outgoing feeder should be capable for protection against Overload, Short Circuit and Phase reversal condition and shall be capable to communicate with BMS. Scope shall also include supply, laying, termination of control and power cables of adequate size, and arrangement of cable tray from Pump to Control panel etc. to complete the job. SITC of electronic type low water level controller with LED panel to operate pump (necessary contacts along with minium one spare contacts required), with probe & all control wiring to operate the system automatic/manual & shall prevent the pump from dry running. Mounting Height : 500mm from the bottom of tank (OHWT Tank) SITC of electronic type low & high water level controller with LED panel to operate pump (necessary contacts along with minium one spare contacts required), level controller with operational mode as one pump working at low level, both pumps at high level with a hooter alarm and cut off at dry level with probe & all control wiring to operate the system automatic/manual & shall prevent the pump from dry running.</p> <p>Mounting Height (Low Level) : 500mm from the bottom of tank (Drinking water tank)</p> <p>Mounting Height (Hight Level) : 3000 mm from the bottom of tank (Drinking water tank). All Automatic valve to be Electronic operated.</p>	Set	1

40	<p>WATER TREATMENT R.O. PLANT FOR MEDICAL WATER (650 LPH) : Supply installation, testing and commissioning of Reverse-osmosis Automatic, water treatment plant comprising of RO plant etc. according to input water quality/analysis The scope shall include interconnection piping, valves, instruments, back wash arrangement, Including Raw water inlet pumps a 1 working + 1 stand by pump set, micron filter, High pressure pump(1W+1S), and all other required pump the pump set is auto operation, including dry run protection,RO Module, all valve controls, SS 316 interconnecting piping of suction and discharge header, control pannel and other necessary cabeling works, 2 pole Motor & IE3 Efficiency etc. complete the job. Panel mounted PLC based pump controller, IP 55 enclosure, ON-OFF and Trip Indicating lamps in each incomer and outgoing feeders, The PLC shall support MODBUS-IP communication for its compatability to intergrate with 3rd party BAS system. PLC shall authorise Read/Write command via BMS. earthing, interlocking arrangement, dry run protection, cascade operation, working / standby selection, with provision of remote on/off operation complete as require. The on/off operations for all pumps shall be available on central BMS system. Each incomer and Outgoing feeder should be capable for protection against Overload, Short Circuit and Phase reversal condition and shall be capable to communicate with BMS. Scope shall also include supply, laying, termination of control and power cables of adequate size, and arrangement of cable tray from Pump to Control panel etc. to complete the job. SITC of electronic type low water level controller with LED panel to operate pump (necessary contacts along with minium one spare contacts required), with probe & all control wiring to operate the system automatic/manual & shall prevent the pump from dry running. Mounting Height : 500mm from the bottom of tank (OHWT Tank) SITC of electronic type low & high water level controller with LED panel to operate pump (necessary contacts along with minium one spare contacts required), level controller with operational mode as one pump working at low level, both pumps at high level with a hooter alarm and cut off at dry level with probe & all control wiring to operate the system automatic/manual & shall prevent the pump from dry running.</p> <p>Mounting Height (Low Level) : 500mm from the bottom of tank (Drinking water tank)</p> <p>Mounting Height (Hight Level) : 3000 mm from the bottom of tank (Drinking water tank). All Automatic valve to be Electronic operated.</p>	Set	1
41	<p>RO WATER STORAGE TANK Supply, Installation, Testing & Commissioning of 1000LTR SS 316 Drinking Water & Medical Water storage tank Working Pressre - 6 Bar, test pressure shall be 1.5 time with flanged connection as required, capable of storing Cold water insulated with 50 mm thick PUF Insulation with 26 swg aluminium cladding. Shell shall be fabricated with 10 mm thick plate and dished ends with 12 mm thick plates complete with man hole cover, safety valve drain, nozzle, inlet and outlet nozzles industrial type temperature indicator. The storage tank shall be provided with Manhole Cover. item including of necessary supporting stand etc. complete the job.</p> <p>Location: Terrace</p>	Nos.	2
42	<p>Basement Sump Drain Pump (Car Parking Area, Laundry Drain, Body Wash Drain, Pump Room Drain) Supply, installation, testing & commissioning of Submersible Non Clog, single stage, single entry pumps connected to TEFC submersible motor for 415 + 10% volts, 3 phase, 50 cycles A.C. power supply with mechanical seal, pump connector unit with rubber diaphragm and bend, vertical discharge pipe. The pump shall be provided with a lifting devise of pull chain/guide rail.</p> <p>(Pumps suitable to handle solids upto 20 mm size with C.I. body, SS304 shaft, SS impeller). Panel mounted microprocessor based multi pump controller with large graphical display with VGA 240 x 320 pixels and IP 55 enclosure, diodes to indicate pump ready, earthing, pump running and fault condition, Cascade Operation. Each incomer and Outgoing feeder should be capable for protection against Overload, Short Circuit and Phase reversal condition and shall be capable to communicate with other controllers following. The PLC shall support MODBUS-IP communication for its compatability to intergrate with 3rd party BAS system. Controller shall authorise Read/Write command via BMS.All alarms should be displayed in the controller. System should be equipped with dry running protection. Indication of all type of faults / on-off status / electrical parameters shall be available on panel and central IBMS monitors. On-off operation for all pumps shall be available on BMS system.Scope shall also include supply, laying, termination of control and power cables of adequate size and arrangemnt of cable trayfrom pump to control panel etc. to complete the job.</p> <p>Electronic type low, Medium & High water level controller with LED panel to operate pump (necessary contacts along with minimum one PLC operated spare contacts required),level controller with operational mode as one pump working at Medium level, both pumps at High level with a hooter alarm and cut off at Low level complete the job.</p> <p>Mounting Height (Low Level) : (Sump)</p> <p>Mounting Height (Medium Level) : (Sump)</p>	Set	11

	<p>Mounting Height (Hight Level): (Sump) with probe & all control wiring from Pump room Panel to Sump to operate the system automatic/manual & shall prevent the pump from dry running.</p> <p>Scope shall also include power and control cable of required size, termination, cable tray from Pump to Control panel, control cable as whereever required etc. complete the job.</p> <p>Capacity per pump - 10.0 m3/hour, Head -10 mt, 1 Set = 2 Nos. Pump (1 Working + 1 Standby - cascade operation).</p>		
43	<p>Basment Sewerage Sump Drain Pump</p> <p>Supply, installation, testing & commissioning of Submersible Non Clog, single stage, single entry pumps connected to TEFC submersible motor for 415 + 10% volts, 3 phase, 50 cycles A.C. power supply with mechanical seal, pump connector unit with rubber diaphragm and bend, vertical discharge pipe. The pump shall be provided with a lifting devise of pull chain/guide rail.</p> <p>(Pumps suitable to handle solids upto 20 mm size with C.I. body, SS304 shaft, SS impeller).</p> <p>Panel mounted microprocessor based multi pump controller with large graphical display with VGA 240 x 320 pixels and IP 55 enclosure, diodes to indicate pump ready, earthing, pump running and fault condition, Cascade Operation. Each incomer and Outgoing feeder should be capable for protection against Overload, Short Circuit and Phase reversal condition and shall be capable to communicate with other controllers following. The PLC shall support MODBUS-IP communication for its compatability to intergrate with 3rd party BAS system. Controller shall authorise Read/Write command via BMS. All alarms should be displayed in the controller. System should be equipped with dry running protection. Indication of all type of faults / on-off status / electrical parameters shall be available on panel and central IBMS monitors. On-off operation for all pumps shall be available on BMS system. Scope shall also include supply, laying, termination of control and power cables of adequate size and arrangemnt of cable tray from pump to control panel etc. to complete the job.</p> <p>Electronic type low, Medium & High water level controller with LED panel to operate pump (necessary contacts along with minimum one PLC operated spare contacts required), level controller with operational mode as one pump working at Medium level, both pumps at High level with a hooter alarm and cut off at Low level complete the job.</p> <p>Mounting Height (Low Level): (Sump)</p> <p>Mounting Height (Medium Level): (Sump)</p> <p>Mounting Height (Hight Level): (Sump) with probe & all control wiring from Pump room Panel to Sump to operate the system automatic/manual & shall prevent the pump from dry running.</p> <p>Scope shall also include power and control cable of required size, termination, cable tray from Pump to Control panel, control cable as whereever required etc. complete the job.</p> <p>Capacity per pump - 10.0 m3/hour, Head -10 mt, 1 Set = 2 Nos. Pump (1 Working + 1 Standby - cascade operation).</p>	Set	3
44	<p>Sewage treatment plant- 265 KLD</p> <p>Design, Supplying, installing, testing & commissioning of Sewage Treatment Plant of 265 KLD (excluding excavation, back filling & disposal of surplus earth Civil construction work) for the following duty: (a.) Screen chambers followed by O&G trap with SS Screen and Oil skimmer unit (b.) Equalization Tank with coarse bubble aeration, (c.) Anoxic mixer with anoxi tank and MBBR aeration tank with media protection screens with MBBR media (d.) Air Blowers (e). Recirculation pump (f.) filter feed pump, (g.) Multimedia filter (h.) activated carbon filter (i.) chlorine Dosing system, (j.) fully automatic out to in type UF system, (k). Dewatering system (l.) Electrical Panel, Cabling (Power & Control), Earthing (m.) electromagnetic flow meters. The treated water shall be reused for Flushing & irrigation etc.. The detailed specification as mentioned in tender document to be strickly followed by vendor for major scope of STP. The Contractor shall ensure submission of detailed GA drawings (Plan & Section), P&I diagram, schematic diagram for the above said component and additional component if so required for the complete working of the STP for the full capacity.</p> <p>INLET SEWAGE CHARACTERSTICS in mg/L except pH (ASSUMED), pH 6.5 to 8.5, Total Suspended Solids 200, BOD 250-350, COD 350-500, Oil & Grease up to 50, NH4N 25 to 30, TN 90 to 100, Coliform ≤100000 and</p> <p>Outlet Treated water quality in mg/L except pH required pH 6.5-9.0 Total Suspended Solids (mg/l) <05.</p>	Set	1

	BOD (mg/l) <10, COD <50, Oil & Grease <10, NH4N <5 TN <10, Coliform (MPL/100ml)<1000.		
45	Design, Supply, installation, testing & commissioning of Effluent Treatment Plant of 55 KLD for Luandry Waste Water, Kitchen Waste Water & Bio Medical Liquid waste with SS screen, collection tank, primary, secondary & tertiary treatment, netralization,sludge recirculation pump, air blower & diffuser, centrifuge and centrifuge feed pump, dosing pump, Media, required all accessories, etc complete the job. also with all electromechanical equipments, interconnected UPVC SCH 80 piping for water, SS piping for air, valves, pumps, instruments, gauges, electrification like panel, starter, cabling, earthing, etc. complete. The sizing of tank/equipment shall take care of average as well as peak flow. All pump and blower shall be (1W+1S) except dosing pump. The outlet parameters shall be as per ISO standard	Set	1
(2) WATER PROOFING WORK			
	HDPE membrane		
1.0	<p>Supplying and installing waterproofing treatment for "Raft Slab" using fully bonded Weldable HDPE 1.5 mm thickness sheet membrane on the Raft slab. Membrane shall be installed in strict accordance with the Technical Instructions from EIC 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 a trafficable particulate layer.</p> <p>The fully bonded HDPE sheet waterproofing membrane shall have following typical properties:</p> <ol style="list-style-type: none"> 1) Hydrostatic Resistance (ASTM D 5385) - 80 m head of water 2) Peel adhesion to concrete (ASTM D903): $\geq 880\text{N/m}$ 3) Puncture Resistance (ASTM E154): $\geq 1000\text{N}$ 4) Elongation (ASTM D412) : $\geq 500\%$ 5) Tensile Strength (ASTM D412) : $27\text{ N/mm}^2 (\pm 5)$ 6) UV exposure Test (ASTM G154) : No cracks, No bleeding 7) Dimensional Stabity (ASTM D 836) : $\leq 0.5\%$ 8) Lap Peel Adhesion: 1400 N/m 	Sq.mt	6,297.00
2.0	Bore Packing:		
	Cleaning the surface area to ensure that it is free from oil, grease, dirt and contaminants, all loose materials to be removed and roughen the pipe with wire brush. Hydrophillic paste- Hydro-expansive, rubber-based hydrophilic sealant paste in tubes, applied using an extrusion pistol for pipe and the bore for better adhesion between the pipe and concrete member and fill the bore as per manufacturer's specification. Rate to include for packing the underside of core cut. After 24 hours, remove the backer rod from below and pack the gap using polymer modified mortar & including finishing properly including testing for 24 hours and making good the defects if any, etc. Hydrophilic Paste need to have Shore A hardness (DIN 53505): 32 Elongation (DIN 53504): $> 700\%$ Load at break (DIN 53504): 2.5 N/mm^2 Modulus of elasticity at 100% elongation DIN 53504: 0.55 N/mm^2 Tear strength ISO 34-1: 10 N/mm Sealing of water: 1 ATM and For cement mortar filling with Medium-strength (40 MPa), compensated-shrinkage fibre-reinforced thixotropic mortar for repairing concrete.. (100 to 150mm size)	Nos	250.00
4.0	Cementatious coating for retaining walls with higher water table		
	Cementatious coating for retaining walls with higher water table Supply and application of 2mm thick with coverage of 3.2kg/sqm - two-component, high flexible, elastic cementitious mortar made from cementitious binders, fine-grained selected aggregates, special admixtures and synthetic polymers in water dispersion with an elongation of 120% (DIN 53504), Static crack bridging ability of $>2.5\text{mm}$ (EN 1062-7), Permeability to water vapour $sD = 3.6\text{ m}$, $\mu = 1800$ (EN ISO 7783-1), Impermeability to water $< 0.05\text{kg/m}^2\cdot\text{h}0.5$ (EN 1062-3), Permeability to CO_2 $s\text{DCO}_2 > 50\text{m}$ (EN 1062-6), Reaction to fire (Euroclass): E (EN 13501-1), adhesion to concrete after 28 days: 1.3N/mm^2 (EN 1542) when applied @ 2mm thickness (in 2 coats) on the surface prepared for waterproofing to be carried out to ensure the mechanical properties of the product. The application of the product shall be carried out after the thorough preparation of the surface which includes cleaning, crack treatment, corner joint treatment, grouting. Consumption should be 3.2 kg/sqm for 2mm of thickness, Additionally apply fiber net for reinforcing the waterproofing membrane and with Mapenet 150 tensile strength should be complied minimum 3.2 MPa after curing.	Sq.mt	2,181.00

	1. Tensile Strength : 3.2 Mpa 2. Crack Bridging: 2.8 mm		
5.0	Protection Board: Providing and fixing HDPE protection having dimple height of 6 to 8mm thk, as a protection board, over the waterproofing membrane for vertical surface stuck to the membrane by spot bonding method, using suitable Double side tape / glue with butt joints etc. complete. Necessary back filling to be done by the main civil contractor within 2-3 days time progressively after installation of the membrane and protection board, taking care not to cause damage to the waterproofing treatment.	Sq.mt	2,181.00
6.0	Supply and application of 2mm thick with a coverage of 3.2kg/sqm in 2 coats two-component, high flexible, elastic cementitious mortar made from cementitious binders, fine-grained selected aggregates, special admixtures and synthetic polymers in water dispersion with an elongation of 120% (DIN 53504), Static crack bridging ability of >2.5mm (EN 1062-7), Permeability to water vapour $sD = 3.6 \text{ m}$, $\mu = 1800$ (EN ISO 7783-1), Impermeability to water $< 0.05 \text{ kg/m}^2 \cdot \text{h} \cdot 0.5$ (EN 1062-3), Permeability to CO_2 $s\text{DCO}_2 > 50 \text{ m}$ (EN 1062-6), Reaction to fire (Euroclass): E (EN 13501-1), adhesion to concrete after 28 days: 1.3 N/mm^2 (EN 1542) when applied @ 2mm thickness (in 2 coats) on the surface prepared for waterproofing to be carried out to ensure the mechanical properties of the product with Mapenet 150. The application of the product shall be carried out after the thorough preparation of the surface which includes cleaning, crack treatment, corner joint treatment, grouting and priming primer having Colour: opalescent Specific gravity (kg/l): 1.01 Dry solids content (%): 15 Brook field Viscosity # 1, rpm 10 (mPa.s): 20 in dilution with water {1:1}. Additionally apply fiber net for reinforcing the waterproofing membrane and with Mapenet 150 tensile strength should be complied minimum 3.2 MPa after curing. 1. Tensile Strength : 3.2 Mpa 2. Crack Bridging: 2.8 mm	Sq.mt	4356.00
7.0	Plaster Over Waterproofing Membrane: Before application of food grade epoxy supply & application of concrete plaster on avg thickness of 15-20mm by adding water proofing compound @200 ml per bag of cement. Food Grade Epoxy: Supply and application of two-component epoxy paint made from epoxy resins and special pigments with high covering capacity for anti-acid and non-toxic coatings on concrete surfaces. Apply two coats of the product on a solid, clean substrate treated with primer (not included) with a brush, roller or by airless spray. Wait between 6 and 24 hours between each coat, according to surrounding conditions. The product must comply with the principles defined in EN 1504-2/-9 and have the following characteristics like, Abrasion resistance:(EN ISO 5470-1) <600 mg, Permeability to CO_2 : (EN 1062-6) > 900 m, Permeability to water vapour: (EN ISO 7783-1-2) Class III, Resistance to thermal shock (1x): (EN 13687-5) 3.5 MPa, Taber abrasion resistance (g): 0.1; viscosity - rotor 5.	Sq.mt	945.00
8.0	Supply and application of Epoxy paint with consumption of 1kg/sqm of two-component epoxy paint made from epoxy resins and special pigments with high covering capacity having anti-acid coatings on concrete surfaces. Apply two coats of the product in compliance to comply with the principles defined in EN 1504-2/-9 on a solid, clean substrate treated with primer with a brush, roller or by airless spray with a waiting time of 6 and 24 hours between each coat. The product must exhibit, abrasion resistance (EN ISO 5470-1) of 900 mg, permeability to CO_2 (EN 1062-6) of SD 1255 m, permeability to water vapour (EN ISO 7783-1-2) should be class III, capillary absorption and permeability to water (EN 1062-3) of $0.02 \text{ kg/m}^2 \cdot \text{h} \cdot 0.5$, resistance to thermal shock (EN 13687-5) of 3.5 MPa, resistance to severe chemical attack (EN 13529) should have no alteration, impact strength (EN ISO 6272-1) should be class I, direct traction adherence (EN 1542) of 3.89 MPa & reaction to fire complying to Euro class Efl. The product shall be applied after the application of an epoxy primer with is in nature of moisture insensitive	Sq.mt	590.00
9.0	Pure Polyurea Waterproofing Supplying and installalling of 2mm thick Pure Polyurea two-component CE Certified, solvent-free, spray applied, Pure-polyurea membrane applied in situ using a high-pressure, bi-mixer type pump to form 2mm thick waterproofing layer. The waterproofing membrane system, a multi-layered system comprising of a series of primers, waterproofing membranes. The cleaning and preparation of the substrate to which the pure polyurea is applied must be carried out thoroughly to leave a sound base for the application. Concrete and other cementitious substrates must have a minimum pull off strength of 2 N/mm2. 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 of the primer, the system shall consist of filler epoxy based primer consumption of 350 grams with quartz sand broadcast for mechanical grip having density 1500 kg/m^3 , viscosity - 1100 MPa.s); pure polyurea as waterproofing coat exhibits a Elongation of >300% ,Tensile strength not less 20 N/mm2 and Tear resistance of 80 N/mm, Shore Hardness (A) of 90 and	Sq.mt	4354.00

	quick reaction of product when applied by spray: gel time at +70°C < 6 seconds;		
10.00	PUF Insulation Providing and Spray applying of average minimum 60 mm thick CFC & HCFC free spray applied polyurethane foam insulation, with a core density of 50-55kg /m3, thermal conductivity of 0.021±0.003 W/mK at 25°C mean temperature (as per ASTM C518/91), compressive strength =450+50 KPa (as per ASTM D-1621), closed cell content having apparent vol of >94+2%(as per DN EN 4590), Water absorption - ASTM D2842 <1.5+1% and fire resistance property conforming to Class B2 as per DIN 4102. (Mode of measurement will be actual area treated)	Sq.mt	3,948.00
11.00	Waterproofing on thermal insulation :Supply and installation of single component pure polyurethane on the surface after surface preparation.After carefully preparing and priming the substrate, apply at least single even coats of Pure ployurethane with a trowel or by spray to form a total thickness 0.6 mm for cosumption of 1 kg/sqm Solid Content: >89% Elongation at break: >500% Tensile Strength: > 3 Mpa; Tear Strength: > 15 Mpa Adhesion Strength: > 1.5 Mpa Watertightness: 0.3 Mpa, 120 Minutes, Impermeable	Sq.mt	3948.00
12.00	Supplying & laying 150 gsm Geotextile (non woven polyester) over the entire membrane maintaining proper overlaps.	Sq.mt	3948.00
13.00	<u>Horizontal protection with sloping screed:</u> Laying concrete screed of average 50-75 mm THK, by adding water proofing compound @200 ml per bag of cement, in desired thickness on the surfaces and extend it up to the height of 300 mm over the side walls – cure the screed as per standard method. Supplying and applying an avg of 75 mm thick M20 fibrated (polypropylene fibres) grade concrete screed including control joints of 3M X 4M sizen and filling the groove with PU Sealant and making angle fillet of 75mmX75mm using M20 grade concrete at the corners. The width of sealant fill shall not exceed 10mm.	Sq.mt	4354.00

DOOR WORK

1	Double Equal Leaf 'Z' Profile Louvers Shutter Door- FIRE RATED DOOR(2hrs)		
	Providing and fixing hollow metal Insulated fire-rated doors, compliant with IS 3614:2021 standards, offering 120 min integrity and 30 min insulation. Crafted from pressed galvanized steel confirming to IS 277/ IS 513, The doors undergo rigorous testing according to IS 17518-1: 2022/ ISO 3008-1: 2019, ensuring top-notch performance. tested by CBRI (IIT Roorkee) Labs for fire rating or any NABL & BIS Approved LAB. Door frames feature a double rebate profile measuring 143 x 58 mm, constructed from a minimum 1.6 mm (16 gauge) thick galvanized steel sheet. Employing butted assembly with self-tabs, frames should be equipped with fire-rated EPDM gaskets/Smoke Seals as standard, facilitating seamless installation on finished plastered masonry wall openings. Additionally, all frames are provisioned with mortises, drills, and taps for receiving appropriate hardware, accompanied by back plate brackets and anchor fasteners. Provision of a hole to be provided in the frame to fill mortar mixture in it. The door leaf boasts a fully flush double skin step design, offering insulation with the option for a vision lite. Manufactured from a minimum 1.2 mm (18 gauge) thick galvanized steel sheet, our doors feature rigid reinforcement pads for hardware accommodation and are internally insulated with 96 kg/m3 high-density mineral wool insulation material. Doors are factory prepped for hardware installation and reinforced for hinges, locks, and door closers. Interlocked edges with a bending radius of 1.4 mm ensure enhanced security. For paired doors, integrated astragals are provided on the meeting stile for both active and inactive leaves, while vision lites are installed as per manufacturer's recommendations. Incorporating 6 mm clear borosilicate fire-rated glass of relevant door rating, our vision glass adheres to stringent standards. The maximum glass size permitted is 0.06 sq.mt. All doors and frames receive a Pure Polyester Powder coating, ranging between 70-90 microns, ensuring durability and aesthetic appeal.	Sq.mt	5.88

	<p>Product have manufacturing warranty minimum 1 year. Product comply with minimum 500 hr salt spray testing.</p> <p>Hardware's -</p> <ol style="list-style-type: none"> 1). Hinges - 100X75X3 mm 2). concealed Door Closer 3). Touch Panic bar 4). External Trim bar 5). Mortise sash lock 6). Dead Lock 7). WC lock 8). Automatic Drop-down seal 9). Smoke/ Periphery seal 10). Door handles 11). Kick plate 12). Signage Plate 13). Master key cylinder 		
2	Single Leaf Shutter Door		
	<p>Providing and fixing solid core flush door shutter in single leaf 32 mm thick decorative type of exterior grade approved face Laminate 1 mm thick on both faces with Ghana teak wood frame of size (125mm x 75mm) with melamine polish, Aluminium Louvered of size (0.5 M X 0.15 M) fixed at bottom for ventilation purpose. all included necessary beads, mouldings lipping patti , iron hold fast, SS Hinges chromium plated fixer fastening with Half Cylinder Half 60mm(40mm)-One Side Key lock, SS handles on both side and Aluminium Extruded Door Closer Over Head Hold Open up fittings etc. completed Aasper detailed design and drawings. and with all fittings etc. completed.</p>	Sq.mt	27.56
3	Single Leaf Glass Vision Shutter Door		
	<p>Providing and fixing hollow metal Insulated fire-rated doors, compliant with IS 3614:2021 standards, offering 120 min integrity and 30 min insulation. Crafted from pressed galvanized steel conforming to IS 277/ IS 513, The doors undergo rigorous testing according to IS 17518-1: 2022/ ISO 3008-1: 2019, ensuring top-notch performance. tested by CBRI (IIT Roorkee) Labs for fire rating or any NABL & BIS Approved LAB. Door frames feature a double rebate profile measuring 143 x 58 mm, constructed from a minimum 1.6 mm (16 gauge) thick galvanized steel sheet. Employing butted assembly with self-tabs, frames should be equipped with fire-rated EPDM gaskets/Smoke Seals as standard, facilitating seamless installation on finished plastered masonry wall openings. Additionally, all frames are provisioned with mortises, drills, and taps for receiving appropriate hardware, accompanied by back plate brackets and anchor fasteners. Provision of a hole to be provided in the frame to fill mortar mixture in it. The door leaf boasts a fully flush double skin step design, offering insulation with the option for a vision lite. Manufactured from a minimum 1.2 mm (18 gauge) thick galvanized steel sheet, our doors feature rigid reinforcement pads for hardware accommodation and are internally insulated with 96 kg/m3 high-density mineral wool insulation material. Doors are factory prepped for hardware installation and reinforced for hinges, locks, and door closers. Interlocked edges with a bending radius of 1.4 mm ensure enhanced security. For paired doors, integrated astragals are provided on the meeting stile for both active and inactive leaves, while vision lites are installed as per manufacturer's recommendations. Incorporating 6 mm clear borosilicate fire-rated glass of relevant door rating, our vision glass adheres to stringent standards. The maximum glass size permitted is 0.06 sq.mt. All doors and frames receive a Pure Polyester Powder coating, ranging between 70-90 microns, ensuring durability and aesthetic appeal.</p> <p>Product have manufacturing warranty minimum 1 year. Product comply with minimum 500 hr salt spray testing.</p> <p>Hardware's -</p> <ol style="list-style-type: none"> 1). Hinges - 100X75X3 mm 2). concealed Door Closer 3). Touch Panic bar 4). External Trim bar 	Sq.mt	156.19

	5). Mortise sash lock 6). Dead Lock 7). WC lock 8). Automatic Drop downseal 9). Smoke/ Periphery seal 10). Door handles 11). Kick plate 12). Signage Plate 13). Master key cylinder		
4	Single Leaf Acoustically Treated (Lead Shielded) Shutter Door		
	<p>Providing and fixing hollow metal lead line doors, compliant with IS 4351 & IS 16074 standards, crafted from pressed galvanized steel conforming to IS 277. door frames feature a double rebate profile 150X57 mm, constructed from a minimum 1.6 mm (16 gauge) thick galvanized steel sheet. Employing butted assembly with self-tabs, facilitating seamless installation on finished plastered masonry wall openings. The inside face of the frame face trim to rebate height should be protected with 2.0 mm thick lead line. Additionally, all frames are provisioned with mortises, drills, and taps for receiving appropriate hardware. accompanied by back plate brackets and anchor fasteners and also, providing provision for cement grouting by doing hole on frame but grouting with cement and slurry necessary for doors will be on client scope only. The door boasts a fully flush double skin step design, offering without option for a vision lite. Manufactured from a minimum 1.2 mm (18 gauge) thick galvanized steel sheet, the internal construction of the door should be rigid with lead line of 2.0 mm thick all across the inside of the exposed surface. our doors feature rigid reinforcement pads for hardware accommodation and are internally infill with Mineral wool of (Density - 96kg/m3) as a core material. Doors are factory prepped for hardware installation and reinforced for hinges, locks, and door closers as per standards. Interlocked edges with a bending radius of 1.4 mm ensure enhanced security. For paired doors, integrated astragals are provided on the meeting stile for both active and inactive leaves, while vision lites are installed as per manufacturer's recommendations. All doors and frames receive a Pure Polyester Powder coating, ranging between 70 90 microns, ensuring durability and aesthetic appeal. Product have manufacturing warranty minimum 1 year. Product comply with minimum 500 hr salt spray testing.</p> <p>Hardware's -</p> 1). Hinges - 100X75X3 mm 2). concealed Door Closer 3). Touch Panic bar 4). External Trim bar 5). Mortise sash lock 6). Dead Lock 7). WC lock 8). Automatic Drop downseal 9). Smoke/ Periphery seal 10). Door handles 11). Kick plate 12). Signage Plate 13). Master key cylinder	Sq.mt	15.44
5	Single Leaf Glass Vision Shutter Door		
	<p>Providing and fixing hollow metal Insulated fire-rated doors, compliant with IS 3614:2021 standards, offering 120 min integrity and 30 min insulation. Crafted from pressed galvanized steel conforming to IS 277/ IS 513. The doors undergo rigorous testing according to IS 17518-1: 2022/ ISO 3008-1: 2019, ensuring top-notch performance. tested by CBRI (IIT Roorkee) Labs for fire rating or any NABL & BIS Approved LAB. Door frames feature a double rebate profile measuring 143 x 58 mm, constructed from a minimum 1.6 mm (16 gauge) thick galvanized steel sheet. Employing butted assembly with self-tabs, frames should be equipped with fire-rated EPDM gaskets/Smoke Seals as standard, facilitating seamless installation on finished plastered masonry wall openings. Additionally, all frames are provisioned with mortises, drills, and taps for receiving appropriate</p>	Sq.mt	92.61

	<p>hardware, accompanied by back plate brackets and anchor fasteners. Provision of a hole to be provided in the frame to fill mortar mixture in it. The door leaf boasts a fully flush double skin step design, offering insulation with the option for a vision lite. Manufactured from a minimum 1.2 mm (18 gauge) thick galvanized steel sheet, our doors feature rigid reinforcement pads for hardware accommodation and are internally insulated with 96 kg/m3 high-density mineral wool insulation material. Doors are factory prepped for hardware installation and reinforced for hinges, locks, and door closers. Interlocked edges with a bending radius of 1.4 mm ensure enhanced security. For paired doors, integrated astragals are provided on the meeting stile for both active and inactive leaves, while vision lites are installed as per manufacturer's recommendations. Incorporating 6 mm clear borosilicate fire-rated glass of relevant door rating, our vision glass adheres to stringent standards. The maximum glass size permitted is 0.06 sq.mt. All doors and frames receive a Pure Polyester Powder coating, ranging between 70-90 microns, ensuring durability and aesthetic appeal. Product have manufacturing warranty minimum 1 year. Product comply with minimum 500 hr salt spray testing.</p> <p>Hardware's -</p> <ol style="list-style-type: none"> 1). Hinges - 100X75X3 mm 2). concealed Door Closer 3). Touch Panic bar 4). External Trim bar 5). Mortise sash lock 6). Dead Lock 7). WC lock 8). Automatic Drop downseal 9). Smoke/ Periphery seal 10). Door handles 11). Kick plate 12). Signage Plate 13). Master key cylinder 		
6	Single Leaf Shutter Door		
	<p>Providing and fixing solid core flush door shutter in single leaf 32 mm thick decorative type of exterior grade approved face Laminate 1 mm thick on both faces with Ghana teak wood frame of size (125mm x 75mm) with melamine polish , all included necessary beads, mouldings lipping patti , iron hold fast, SS Hinges chromium plated fixer fastening with Half Cylinder Half 60mm(40mm)-One Side Key lock, SS handles on both side and Aluminium Extruded Door Closer Over Head Hold Open up fittings etc. completed As per detailed design and drawings. and with all fittings etc. completed.</p>	Sq.mt	385.88
7	Single Leaf Shutter Door with louver (Open Inside)		
	<p>Providing and fixing hollow metal non fire rated residential doors. Crafted from pressed galvanized steel confirming to IS 277. Our door frames feature a Single rebate profile 105 x 57 mm or double rebate profile measuring 150 x 57 mm, constructed from a minimum 1.2 mm (18 gauge) thick galvanized steel sheet. Employing butted assembly with self-tabs, our frames come equipped with Seals as standard, facilitating seamless installation on finished plastered masonry wall openings. Additionally, all frames are provisioned with mortises, drills, and taps for receiving appropriate hardware, accompanied by back plate brackets and anchor fasteners. The door leaf, 46 mm thick, boasts a fully flush double skin step design, offering insulation with the option for a vision lite. Manufactured from a minimum 0.8 mm (22 gauge) thick galvanized steel sheet, our doors feature rigid reinforcement pads for hardware accommodation and are internally sandwich with resin bonded honeycomb material. Doors are factory prepped for hardware installation and reinforced for hinges, locks, and door closers. Interlocked edges with a bending radius of 1.4 mm ensure enhanced security. For paired doors, integrated astragals are provided on the meeting stile for both active and inactive leaves, while vision lites are installed as per manufacturer's recommendations. Metal louver of standard size 450 X 200 mm grilles used constructed from Zintec</p>	Sq.mt	159.50

	<p>mild steel 0.65 mm with matching clips. It is optional if client needed not compulsory for any residential category. All doors and frames receive a Pure Polyester Powder coating, ranging between 70-90 microns, ensuring durability and aesthetic appeal.</p> <p>Product have manufacturing warranty minimum 1 year. Product comply with minimum 500 hr salt spray testing.</p> <ol style="list-style-type: none"> 1). Hinges - 100X75X3 mm 2). concealed Door Closer 3). Touch Panic bar 4). External Trim bar 5). Mortise sash lock 6). Dead Lock 7). WC lock 8). Automatic Drop downseal 9). Smoke/ Periphery seal 10). Door handles 11). Kick plate 12). Signage Plate 13). Master key cylinder 		
8	Single Leaf Glass Vision Shutter Door		
	<p>Providing and fixing hollow metal Insulated fire-rated doors, compliant with IS 3614:2021 standards, offering 120 min integrity and 30 min insulation. Crafted from pressed galvanized steel conforming to IS 277/ IS 513, The doors undergo rigorous testing according to IS 17518-1: 2022/ ISO 3008-1: 2019, ensuring top-notch performance. tested by CBRI (IIT Roorkee) Labs for fire rating or any NABL & BIS Approved LAB. Door frames feature a double rebate profile measuring 143 x 58 mm, constructed from a minimum 1.6 mm (16 gauge) thick galvanized steel sheet. Employing butted assembly with self-tabs, frames should be equipped with fire-rated EPDM gaskets/Smoke Seals as standard, facilitating seamless installation on finished plastered masonry wall openings. Additionally, all frames are provisioned with mortises, drills, and taps for receiving appropriate hardware, accompanied by back plate brackets and anchor fasteners.</p> <p>Provision of a hole to be provided in the frame to fill mortar mixture in it. The door leaf boasts a fully flush double skin step design, offering insulation with the option for a vision lite. Manufactured from a minimum 1.2 mm (18 gauge) thick galvanized steel sheet, our doors feature rigid reinforcement pads for hardware accommodation and are internally insulated with 96 kg/m3 high-density mineral wool insulation material. Doors are factory prepped for hardware installation and reinforced for hinges, locks, and door closers. Interlocked edges with a bending radius of 1.4 mm ensure enhanced security. For paired doors, integrated astragals are provided on the meeting stile for both active and inactive leaves, while vision lites are installed as per manufacturer's recommendations.</p> <p>Incorporating 6 mm clear borosilicate fire-rated glass of relevant door rating, our vision glass adheres to stringent standards. The maximum glass size permitted is 0.06 sq.mt. All doors and frames receive a Pure Polyester Powder coating, ranging between 70-90 microns, ensuring durability and aesthetic appeal.</p> <p>Product have manufacturing warranty minimum 1 year. Product comply with minimum 500 hr salt spray testing.</p> <ol style="list-style-type: none"> 1). Hinges - 100X75X3 mm 2). concealed Door Closer 3). Touch Panic bar 4). External Trim bar 5). Mortise sash lock 6). Dead Lock 7). WC lock 8). Automatic Drop downseal 9). Smoke/ Periphery seal 10). Door handles 11). Kick plate 12). Signage Plate 13). Master key cylinder 	Sq.mt	87.47

9	Single Leaf Shutter Door with louver		
	<p>Providing and fixing hollow metal non fire rated residential doors. Crafted from pressed galvanized steel conforming to IS 277. Our door frames feature a Single rebate profile 105 x 57 mm or double rebate profile measuring 150 x 57 mm, constructed from a minimum 1.2 mm (18 gauge) thick galvanized steel sheet. Employing butted assembly with self-tabs, our frames come equipped with Seals as standard, facilitating seamless installation on finished plastered masonry wall openings. Additionally, all frames are provisioned with mortises, drills, and taps for receiving appropriate hardware, accompanied by back plate brackets and anchor fasteners. The door leaf, 46 mm thick, boasts a fully flush double skin step design, offering insulation with the option for a vision lite. Manufactured from a minimum 0.8 mm (22 gauge) thick galvanized steel sheet, our doors feature rigid reinforcement pads for hardware accommodation and are internally sandwich with resin bonded honeycomb material. Doors are factory prepped for hardware installation and reinforced for hinges, locks, and door closers. Interlocked edges with a bending radius of 1.4 mm ensure enhanced security. For paired doors, integrated astragals are provided on the meeting stile for both active and inactive leaves, while vision lites are installed as per manufacturer's recommendations. Metal louver of standard size 450 X 200 mm grilles used constructed from Zintec mild steel 0.65 mm with matching clips. It is optional if client needed not compulsory for any residential category. All doors and frames receive a Pure Polyester Powder coating, ranging between 70-90 microns, ensuring durability and aesthetic appeal.</p> <p>Product have manufacturing warranty minimum 1 year. Product comply with minimum 500 hr salt spray testing.</p> <ol style="list-style-type: none"> 1). Hinges - 100X75X3 mm 2). concealed Door Closer 3). Touch Panic bar 4). External Trim bar 5). Mortise sash lock 6). Dead Lock 7). WC lock 8). Automatic Drop downseal 9). Smoke/ Periphery seal 10). Door handles 11). Kick plate 12). Signage Plate 13). Master key cylinder 	Sq.mt	154.11
10	Double Equal Leaf Fire Rated Glass Vision Shutter Door- FIRE RATED DOOR(2hrs)		
	<p>Hollow metal Insulated fire rated glazed doors as per IS 16947: 2018, for stability, integrity and insulation satisfying the test criteria of ISO 834-1 or ISO 3009 for doors for E120 for 120 minutes fire rating and EI 30 for 30minutes insulation. Pressed galvanized steel conforming to IS 277 with the following specification. Door frames and partitions shall be single rebate frame profile of size 105 x 57 mm made out of 1.60 mm (16 gauge) minimum thick galvanized steel sheet employing butted assembly with self-tabs, our frames come equipped with fire-rated EPDM gaskets/Smoke Seals as standard, facilitating seamless installation on finished plastered masonry wall openings. For partitions, the glass should be held in its place with the help of minimum 1.2 mm GI beading with 20 mm height, which can be clamped to the profile by 7 mm x 32 mm steel screws and a ceramic tape of the cross section of 10X3 mm. All provision should be mortised, drilled and tapped for receiving appropriate hardware. Door frames shall be with back plate bracket and anchor fasteners for installation on a finished plastered masonry wall opening. Door leaf shall be fully glazed Type with minimum 50 x 100 mm profile step box section for taking glass elements. Door leaf shall be manufactured from 1.2 mm (18 gauge) minimum thick galvanized steel sheet. For doors, the glass should be held in its place with the help of minimum 1.2 mm GI beading with 20 mm height, which can be clamped to the profile by 7 mm x 32 mm steel screws and a ceramic tape of the cross section of 10X3 mm. The internal</p>	Sq.mt	305.76

	<p>construction of the door should be rigid reinforcement pads for stability of profile. The infill material shall be mineral wool minimum density of 96 kg/m³. Intumescent seal shall be provided on all around the door leaf of minimum size 10 x 2 mm thick. All doors shall be 50 mm thick prepped with necessary reinforcement for hinges, locks, and door closers. For pair of doors integral astragals has to be provided on the meeting stile for both active and inactive leaf. Glazing kit to be provided along with steel beading for concealed site fixing, without any visible screws. The Glass should be CONTRAFLAM LITE (11mm) clear, non-wired, toughened, interlayer, 120 minutes fire-rated glass for integrity and radiation control (EW 120) and Insulation (EI 20) with light transmission of 86% and a sound reduction of 38 dB and manufactured in UL & TUV audited facility and including UL-EU certification (File Number R38101) and compliant to class 1(B) category of impact Resistance as per EN 12600. The glass shall be tested 5000 hours of UV resistance as per EN ISO 12543-4. The glass shall be EPD (Environmental Production Declaration) verified in accordance to EN 15804 and ISO 14025 in which its life cycle assessment is performed considering cradle to Gate system boundaries. The glass must produce a recycled content declaration committing to a pre-consumer cullet of up to 1% and post-consumer cullet less than 1%. The glass shall provide bi-directional (symmetrical) fire protection. All doors and frames receive a Pure Polyester Powder coating, ranging between 70-90 microns, ensuring durability and aesthetic appeal.</p> <p>Product have manufacturing warranty minimum 1 year. Product comply with minimum 500 hr salt spray testing.</p> <ol style="list-style-type: none"> 1). Hinges - 100X75X3 mm 2). concealed Door Closer 3). Touch Panic bar 4). External Trim bar 5). Mortise sash lock 6). Dead Lock 7). WC lock 8). Automatic Drop downseal 9). Smoke/ Periphery seal 10). Door handles 11). Kick plate 12). Signage Plate 13). Master key cylinder 		
11	Double Equal Leaf Fire Rated Glass Vision Shutter Door- FIRE RATED DOOR(2hrs)		
	<p>Hollow metal Insulated fire rated glazed doors as per IS 16947: 2018, for stability, integrity and insulation satisfying the test criteria of ISO 834-1 or ISO 3009 for doors for E120 for 120 minutes fire rating and EI 30 for 30minutes insulation. Pressed galvanized steel confirming to IS 277 with the following specification. Door frames and partitions shall be single rebate frame profile of size 105 x 57 mm made out of 1.60 mm (16 gauge) minimum thick galvanized steel sheet employing butted assembly with self-tabs, our frames come equipped with fire-rated EPDM gaskets/Smoke Seals as standard, facilitating seamless installation on finished plastered masonry wall openings. For partitions, the glass should be held in its place with the help of minimum 1.2 mm GI beading with 20 mm height, which can be clamped to the profile by 7 mm x 32 mm steel screws and a ceramic tape of the cross section of 10X3 mm. All provision should be mortised, drilled and tapped for receiving appropriate hardware. Door frames shall be with back plate bracket and anchor fasteners for installation on a finished plastered masonry wall opening. Door leaf shall be fully glazed Type with minimum 50 x 100 mm profile step box section for taking glass elements. Door leaf shall be manufactured from 1.2 mm (18 gauge) minimum thick galvanized steel sheet. For doors, the glass should be held in its place with the help of minimum 1.2 mm GI beading with 20 mm height, which can be clamped to the profile by 7 mm x 32 mm steel screws and a ceramic tape of the cross section of 10X3 mm. The internal construction of the door should be rigid reinforcement pads for stability of profile. The infill material shall be mineral wool minimum density of 96 kg/m³. Intumescent seal shall be provided on all around the door leaf of</p>	Sq.mt	174.69

	<p>minimum size 10 x 2 mm thick. All doors shall be 50 mm thick prepped with necessary reinforcement for hinges, locks, and door closers. For pair of doors integral astragals has to be provided on the meeting stile for both active and inactive leaf. Glazing kit to be provided along with steel beading for concealed site fixing, without any visible screws. The Glass should be CONTRAFLAM LITE (11mm) clear, non-wired, toughened, interlayer, 120 minutes fire- rated glass for integrity and radiation control (EW 120) and Insulation (EI 20) with light transmission of 86% and a sound reduction of 38 dB and manufactured in UL & TUV audited facility and including UL-EU certification (File Number R38101) and compliant to class 1(B) category of impact Resistance as per EN 12600. The glass shall be tested 5000 hours of UV resistance as per EN ISO 12543-4. The glass shall be EPD (Environmental Production Declaration) verified in accordance to EN 15804 and ISO 14025 in which its life cycle assessment is performed considering cradle to Gate system boundaries. The glass must produce a recycled content declaration committing to a pre-consumer cullet of up to 1% and post-consumer cullet less than 1%. The glass shall provide bi-directional (symmetrical) fire protection. All doors and frames receive a Pure Polyester Powder coating, ranging between 70-90 microns, ensuring durability and aesthetic appeal.</p> <p>Product have manufacturing warranty minimum 1 year. Product comply with minimum 500 hr salt spray testing.</p> <ol style="list-style-type: none"> 1). Hinges - 100X75X3 mm 2). concealed Door Closer 3). Touch Panic bar 4). External Trim bar 5). Mortise sash lock 6). Dead Lock 7). WC lock 8). Automatic Drop downseal 9). Smoke/ Periphery seal 10). Door handles 11). Kick plate 12). Signage Plate 13). Master key cylinder 		
12	Hermetically Sealed Sensor Operated Sliding Door- FIRE RATED DOOR(2hrs)		
	<p>Providing and fixing 4mm thick HPCL (High Pressure Compact Laminate) skin at both sides of the door to provide better strength and rigidity. CFC-free, high density polyurethane puff (density 40 kg/m3), thickness 52mm to provide better insulation. Door core is surrounded by 2.5 mm thick high grade aluminium extrusion profiles with natural anodizing of 15 microns finish. The aerodynamic design of profiles makes the door ROBUST in its segment league. Door blade is made with 3-tier specially designed 3 sides heavy duty replaceable EPDM gasket against wall frame. Bottom sealing with 2-tier heavy duty EPDM gasket to flush with the finished floor. Stainless Steel Domed lever handle on both side of the door blade for smooth and easy door opening and closing OR for small door outside D grip handle and inside flush grip. High Quality double glazed flush vision window of 350mm X 350mm view size. Both sides flush with the door blade. High grade Aluminium extrusion with natural anodized 15-micron finish wall frame profile. This wall frame profile is a 3-sided blind fixed with cladding on the wall cut-out section from inside and outside of the room. Complete door blade weight is 60 Kg approx. and track assembly is 20 Kg. Door can be open to Right Hand Slide OR Left Hand Slide.</p>	Sq.mt	62.72
13	Double Unequal Leaf Hollow Metal & Glass Shutter Door		
	<p>Hollow metal Insulated fire rated glazed doors as per IS 16947: 2018, for stability, integrity and insulation satisfying the test criteria of ISO 834-1 or ISO 3009 for doors for E120 for 120 minutes fire rating and EI 30 for 30minutes insulation. Pressed galvanized steel conforming to IS 277 with the following specification. Door frames and partitions shall be single rebate frame profile of size 105 x 57 mm made out of 1.60 mm (16 gauge) minimum thick galvanized steel sheet employing butted assembly with self-tabs, our frames come equipped with fire-rated EPDM gaskets/Smoke</p>	Sq.mt	4.53

	<p>Seals as standard, facilitating seamless installation on finished plastered masonry wall openings. For partitions, the glass should be held in its place with the help of minimum 1.2 mm GI beading with 20 mm height, which can be clamped to the profile by 7 mm x 32 mm steel screws and a ceramic tape of the cross section of 10X3 mm. All provision should be mortised, drilled and tapped for receiving appropriate hardware. Door frames shall be with back plate bracket and anchor fasteners for installation on a finished plastered masonry wall opening. Door leaf shall be fully glazed Type with minimum 50 x 100 mm profile step box section for taking glass elements. Door leaf shall be manufactured from 1.2 mm (18 gauge) minimum thick galvanized steel sheet. For doors, the glass should be held in its place with the help of minimum 1.2 mm GI beading with 20 mm height, which can be clamped to the profile by 7 mm x 32 mm steel screws and a ceramic tape of the cross section of 10X3 mm. The internal construction of the door should be rigid reinforcement pads for stability of profile. The infill material shall be mineral wool minimum density of 96 kg/m3. Intumescent seal shall be provided on all around the door leaf of minimum size 10 x 2 mm thick. All doors shall be 50 mm thick prepped with necessary reinforcement for hinges, locks, and door closers. For pair of doors integral astragals has to be provided on the meeting stile for both active and inactive leaf. Glazing kit to be provided along with steel beading for concealed site fixing, without any visible screws. The Glass should be CONTRAFLAM LITE (11mm) clear, non-wired, toughened, interlayer, 120 minutes fire-rated glass for integrity and radiation control (EW 120) and Insulation (EI 20) with light transmission of 86% and a sound reduction of 38 dB and manufactured in UL & TUV audited facility and including UL-EU certification (File Number R38101) and compliant to class I(B) category of impact Resistance as per EN 12600. The glass shall be tested 5000 hours of UV resistance as per EN ISO 12543-4. The glass shall be EPD (Environmental Production Declaration) verified in accordance to EN 15804 and ISO 14025 in which its life cycle assessment is performed considering cradle to Gate system boundaries. The glass must produce a recycled content declaration committing to a pre-consumer cullet of up to 1% and post-consumer cullet less than 1%. The glass shall provide bi-directional (symmetrical) fire protection. All doors and frames receive a Pure Polyester Powder coating, ranging between 70-90 microns, ensuring durability and aesthetic appeal. Product have manufacturing warranty minimum 1 year. Product comply with minimum 500 hr salt spray testing.</p> <ol style="list-style-type: none"> 1). Hinges - 100X75X3 mm 2). concealed Door Closer 3). Touch Panic bar 4). External Trim bar 5). Mortise sash lock 6). Dead Lock 7). WC lock 8). Automatic Drop downseal 9). Smoke/ Periphery seal 10). Door handles 11). Kick plate 12). Signage Plate 13). Master key cylinder 		
14	Double Equal Leaf Fire Rated Glass Vision Shutter Door- FIRE RATED DOOR(2hrs)		
	Hollow metal Insulated fire rated glazed doors as per IS 16947: 2018, for stability, integrity and insulation satisfying the test criteria of ISO 834-1 or ISO 3009 for doors for E120 for 120 minutes fire rating and EI 30 for 30minutes insulation. Pressed galvanized steel conforming to IS 277 with the following specification. Door frames and partitions shall be single rebate frame profile of size 105 x 57 mm made out of 1.60 mm (16 gauge)	Sq.mt	68.36

	<p>minimum thick galvanized steel sheet employing butted assembly with self-tabs, our frames come equipped with fire-rated EPDM gaskets/Smoke Seals as standard, facilitating seamless installation on finished plastered masonry wall openings. For partitions, the glass should be held in its place with the help of minimum 1.2 mm GI beading with 20 mm height, which can be clamped to the profile by 7 mm x 32 mm steel screws and a ceramic tape of the cross section of 10X3 mm. All provision should be mortised, drilled and tapped for receiving appropriate hardware. Door frames shall be with back plate bracket and anchor fasteners for installation on a finished plastered masonry wall opening. Door leaf shall be fully glazed Type with minimum 50 x 100 mm profile step box section for taking glass elements. Door leaf shall be manufactured from 1.2 mm (18 gauge) minimum thick galvanized steel sheet. For doors, the glass should be held in its place with the help of minimum 1.2 mm GI beading with 20 mm height, which can be clamped to the profile by 7 mm x 32 mm steel screws and a ceramic tape of the cross section of 10X3 mm. The internal construction of the door should be rigid reinforcement pads for stability of profile. The infill material shall be mineral wool minimum density of 96 kg/m3. Intumescent seal shall be provided on all around the door leaf of minimum size 10 x 2 mm thick. All doors shall be 50 mm thick prepped with necessary reinforcement for hinges, locks, and door closers. For pair of doors integral astragals has to be provided on the meeting stile for both active and inactive leaf. Glazing kit to be provided along with steel beading for concealed site fixing, without any visible screws. The Glass should be CONTRAFLAM LITE (11mm) clear, non-wired, toughened, interlayer, 120 minutes fire- rated glass for integrity and radiation control (EW 120) and Insulation (EI 20) with light transmission of 86% and a sound reduction of 38 dB and manufactured in UL & TUV audited facility and including UL-EU certification (File Number R38101) and compliant to class 1(B) category of impact Resistance as per EN 12600. The glass shall be tested 5000 hours of UV resistance as per EN ISO 12543-4. The glass shall be EPD (Environmental Production Declaration) verified in accordance to EN 15804 and ISO 14025 in which its life cycle assessment is performed considering cradle to Gate system boundaries. The glass must produce a recycled content declaration committing to a pre-consumer cullet of up to 1% and post-consumer cullet less than 1%. The glass shall provide bi-directional (symmetrical) fire protection. All doors and frames receive a Pure Polyester Powder coating, ranging between 70-90 microns, ensuring durability and aesthetic appeal. Product have manufacturing warranty minimum 1 year. Product comply with minimum 500 hr salt spray testing.</p> <ol style="list-style-type: none"> 1). Hinges - 100X75X3 mm 2). concealed Door Closer 3). Touch Panic bar 4). External Trim bar 5). Mortise sash lock 6). Dead Lock 7). WC lock 8). Automatic Drop downseal 9). Smoke/ Periphery seal 10). Door handles 11). Kick plate 12). Signage Plate 13). Master key cylinder 		
15	Double Equal Leaf Glass Vision Shutter Door		
	<p>Providing and fixing hollow metal Insulated fire-rated doors, compliant with IS 3614:2021 standards, offering 120 min integrity and 30 min insulation. Crafted from pressed galvanized steel conforming to IS 277/ IS 513, The doors undergo rigorous testing according to IS 17518-1: 2022/ ISO 3008-1: 2019, ensuring top-notch performance. tested by CBRI (IIT Roorkee) Labs for fire rating or any NABL & BIS Approved LAB. Door frames feature a double rebate profile measuring 143 x 58 mm, constructed from a minimum 1.6 mm (16 gauge) thick galvanized steel sheet. Employing butted assembly with self-tabs, frames should be equipped with fire-rated</p>	Sq.mt	22.79

	<p>EPDM gaskets/Smoke Seals as standard, facilitating seamless installation on finished plastered masonry wall openings. Additionally, all frames are provisioned with mortises, drills, and taps for receiving appropriate hardware, accompanied by back plate brackets and anchor fasteners. Provision of a hole to be provided in the frame to fill mortar mixture in it. The door leaf boasts a fully flush double skin step design, offering insulation with the option for a vision lite. Manufactured from a minimum 1.2 mm (18 gauge) thick galvanized steel sheet, our doors feature rigid reinforcement pads for hardware accommodation and are internally insulated with 96 kg/m3 high-density mineral wool insulation material. Doors are factory prepped for hardware installation and reinforced for hinges, locks, and door closers. Interlocked edges with a bending radius of 1.4 mm ensure enhanced security. For paired doors, integrated astragals are provided on the meeting stile for both active and inactive leaves, while vision lites are installed as per manufacturer's recommendations. Incorporating 6 mm clear borosilicate fire-rated glass of relevant door rating, our vision glass adheres to stringent standards. The maximum glass size permitted is 0.06 sq.mt. All doors and frames receive a Pure Polyester Powder coating, ranging between 70-90 microns, ensuring durability and aesthetic appeal. Product have manufacturing warranty minimum 1 year. Product comply with minimum 500 hr salt spray testing.</p> <ol style="list-style-type: none"> 1). Hinges - 100X75X3 mm 2). concealed Door Closer 3). Touch Panic bar 4). External Trim bar 5). Mortise sash lock 6). Dead Lock 7). WC lock 8). Automatic Drop downseal 9). Smoke/ Periphery seal 10). Door handles 11). Kick plate 12). Signage Plate 13). Master key cylinder 		
16	Double Equal Leaf Fire Rated Glass Shutter Door- FIRE RATED DOOR(2hrs)		
	<p>Providing and fixing hollow metal Insulated fire-rated doors, compliant with IS 3614:2021 standards, offering 120 min integrity and 30 min insulation. Crafted from pressed galvanized steel conforming to IS 277/ IS 513, The doors undergo rigorous testing according to IS 17518-1: 2022/ ISO 3008-1: 2019, ensuring top-notch performance. tested by CBRI (IIT Roorkee) Labs for fire rating or any NABL & BIS Approved LAB. Door frames feature a double rebate profile measuring 143 x 58 mm, constructed from a minimum 1.6 mm (16 gauge) thick galvanized steel sheet. Employing butted assembly with self-tabs, frames should be equipped with fire-rated EPDM gaskets/Smoke Seals as standard, facilitating seamless installation on finished plastered masonry wall openings. Additionally, all frames are provisioned with mortises, drills, and taps for receiving appropriate hardware, accompanied by back plate brackets and anchor fasteners. Provision of a hole to be provided in the frame to fill mortar mixture in it. The door leaf boasts a fully flush double skin step design, offering insulation with the option for a vision lite. Manufactured from a minimum 1.2 mm (18 gauge) thick galvanized steel sheet, our doors feature rigid reinforcement pads for hardware accommodation and are internally insulated with 96 kg/m3 high-density mineral wool insulation material. Doors are factory prepped for hardware installation and reinforced for hinges, locks, and door closers. Interlocked edges with a bending radius of 1.4 mm ensure enhanced security. For paired doors, integrated astragals are provided on the meeting stile for both active and inactive leaves, while vision lites are installed as per manufacturer's recommendations. Incorporating 6 mm clear borosilicate fire-rated glass of relevant door rating, our vision glass adheres to stringent standards. The maximum glass size permitted is 0.06 sq.mt. All doors and frames receive a Pure Polyester Powder coating, ranging between 70-90 microns, ensuring durability and</p>	Sq.mt	34.18

	<p>aesthetic appeal.</p> <p>Product have manufacturing warranty minimum 1 year. Product comply with minimum 500 hr salt spray testing.</p> <p>Hardware's -</p> <ol style="list-style-type: none"> 1). Hinges - 100X75X3 mm 2). concealed Door Closer 3). Touch Panic bar 4). External Trim bar 5). Mortise sash lock 6). Dead Lock 7). WC lock 8). Automatic Drop downseal 9). Smoke/ Periphery seal 10). Door handles 11). Kick plate 12). Signage Plate 13). Master key cylinder. 		
17	Double Equal Leaf Shutter Door		
	<p>Providing and fixing solid core flush door shutter in single leaf 32 mm thick decorative type of exterior grade approved face Laminate 1 mm thick on both faces with Ghana teak wood frame of size (125mm x 75mm) with melamine polish. all included necessary beads, mouldings lipping patti, iron hold fast, SS Hinges chromium plated fixer fastening with Half Cylinder Half 60mm(40mm)-One Side Key lock, SS handles on both side and Aluminium Extruded Door Closer Over Head Hold Open up fittings etc. completed Aasper detailed design and drawings. and with all fittings etc. completed.</p>	Sq.mt	34.18
18	Double Unequal Leaf Shutter Door		
	<p>Providing and fixing solid core flush door shutter in double leaf 32 mm thick decorative type of exterior grade approved face Laminate 1 mm thick on both faces with Ghana teak wood frame of size (125mm x 75mm) with melamine polish. all included necessary beads, mouldings lipping patti, iron hold fast, SS Hinges chromium plated fixer fastening with Half Cylinder Half 60mm(40mm)-One Side Key lock, SS handles on both side and Aluminium Extruded Door Closer Over Head Hold Open up fittings etc. completed Aasper detailed design and drawings. and with all fittings etc. completed.</p>	Sq.mt	29.77
19	Double Equal Leaf Fire Rated Acoustically treated- FIRE RATED DOOR(2hrs)		
	<p>Supply of Wooden Fire Cum Acoustic Door of 77mm thick Non-metallic, Asbestos Free Acoustic cum fire/smoke door of 120 minutes fire rating, suitable to achieve approx. 38db, sound reducing properties suitable for fixing in wooden door frame of suitable section 140X70mm made out of Hardwood (Red Mirandi) and the shutter comprising of 2 non -combustible boards sandwiching 41 mm thick fire resistant & acoustic insulation filler. The shutter is faced with 6mm thick commercial ply and 1mm thick Laminate (as per approved shade) on both faces and Hard wooden lipping all around the shutter. The frame shall be fitted with fire & smoke intumescent seal of size 10 x 4mm on all the three sides except bottom and shutter shall be fitted with fire & smoke intumescent seal of size 20 x 4mm on all the three sides except bottom. The door shall have suitable arrangement for Acoustic seals for sound reduction properties. The shutter to be fitted with the frame with the help of ss ball bearing hinges of size 100x75x3mm & fasteners including all type of acoustic seal. The door is fitted with Acoustic Seals as per the details given below. Rates are included Corner & P Type seal & Acoustic Seals.</p>	Sq.mt	178.36

20	Lead Lined Fixed Glass Panel Window		
	<p>Providing and fixing hollow metal lead line doors, compliant with IS 4351 & IS 16074 standards, crafted from pressed galvanized steel confirming to IS 277. door frames feature a double rebate profile 150X57 mm, constructed from a minimum 1.6 mm (16 gauge) thick galvanized steel sheet. Employing butted assembly with self-tabs, facilitating seamless installation on finished plastered masonry wall openings. The inside face of the frame face trim to rebate height should be protected with 2.0 mm thick lead line. Additionally, all frames are provisioned with mortises, drills, and taps for receiving appropriate hardware, accompanied by back plate brackets and anchor fasteners and also, providing provision for cement grouting by doing hole on frame but grouting with cement and slurry necessary for doors will be on client scope only. The door boasts a fully flush double skin step design, offering without option for a vision lite. Manufactured from a minimum 1.2 mm (18 gauge) thick galvanized steel sheet, the internal construction of the door should be rigid with lead line of 2.0 mm thick all across the inside of the exposed surface. our doors feature rigid reinforcement pads for hardware accommodation and are internally infill with Mineral wool of (Density - 96kg/m3) as a core material. Doors are factory prepped for hardware installation and reinforced for hinges, locks, and door closers as per standards. Interlocked edges with a bending radius of 1.4 mm ensure enhanced security. For paired doors, integrated astragals are provided on the meeting stile for both active and inactive leaves, while vision lites are installed as per manufacturer's recommendations. All doors and frames receive a Pure Polyester Powder coating, ranging between 70 90 microns, ensuring durability and aesthetic appeal. Product have manufacturing warranty minimum 1 year. Product comply with minimum 500 hr salt spray testing.</p> <p>Hardware's -</p> <ol style="list-style-type: none"> 1). Hinges - 100X75X3 mm 2). concealed Door Closer 3). Touch Panic bar 4). External Trim bar 5). Mortise sash lock 6). Dead Lock 7). WC lock 8). Automatic Drop downseal 9). Smoke/ Periphery seal 10). Door handles 11). Kick plate 12). Signage Plate 13). Master key cylinder 	Sq.mt	3.48
21	Double Equal Leaf Fire Rated Glass Vision Shutter Door		
	<p>Providing and fixing hollow metal Insulated fire-rated doors, compliant with IS 3614:2021 standards, offering 120 min integrity and 30 min insulation. Crafted from pressed galvanized steel confirming to IS 277/ IS 513, The doors undergo rigorous testing according to IS 17518-1: 2022/ ISO 3008-1: 2019, ensuring top-notch performance. tested by CBRI (IIT Roorkee) Labs for fire rating or any NABL & BIS Approved LAB. Door frames feature a double rebate profile measuring 143 x 58 mm, constructed from a minimum 1.6 mm (16 gauge) thick galvanized steel sheet. Employing butted assembly with self-tabs, frames should be equipped with fire-rated EPDM gaskets/Smoke Seals as standard, facilitating seamless installation on finished plastered masonry wall openings. Additionally, all frames are provisioned with mortises, drills, and taps for receiving appropriate hardware, accompanied by back plate brackets and anchor fasteners. Provision of a hole to be provided in the frame to fill mortar mixture in it. The door leaf boasts a fully flush double skin step design, offering insulation with the option for a vision lite. Manufactured from a minimum 1.2 mm (18 gauge) thick galvanized steel sheet, our doors feature rigid reinforcement pads for hardware accommodation and are internally insulated with 96 kg/m3 high-density mineral wool insulation material. Doors are factory prepped for hardware installation and reinforced for</p>	Sq.mt	34.30

	<p>hinges, locks, and door closers. Interlocked edges with a bending radius of 1.4 mm ensure enhanced security. For paired doors, integrated astragals are provided on the meeting stile for both active and inactive leaves, while vision lites are installed as per manufacturer's recommendations.</p> <p>Incorporating 6 mm clear borosilicate fire-rated glass of relevant door rating, our vision glass adheres to stringent standards. The maximum glass size permitted is 0.06 sq.mt. All doors and frames receive a Pure Polyester Powder coating, ranging between 70-90 microns, ensuring durability and aesthetic appeal.</p> <p>Product have manufacturing warranty minimum 1 year. Product comply with minimum 500 hr salt spray testing.</p> <p>1). Hinges - 100X75X3 mm 2). concealed Door Closer 3). Touch Panic bar 4). External Trim bar 5). Mortise sash lock 6). Dead Lock 7). WC lock 8). Automatic Drop downseal 9). Smoke/ Periphery seal 10). Door handles 11). Kick plate 12). Signage Plate 13). Master key cylinder</p>		
22	<p>Double Equal Leaf Glass Vision Shutter Door- FIRE RATED DOOR(2hrs)</p>		
	<p>Providing and fixing hollow metal Insulated fire-rated doors, compliant with IS 3614:2021 standards, offering 120 min integrity and 30 min insulation. Crafted from pressed galvanized steel conforming to IS 277/ IS 513, The doors undergo rigorous testing according to IS 17518-1: 2022/ ISO 3008-1: 2019, ensuring top-notch performance. tested by CBRI (IIT Roorkee) Labs for fire rating or any NABL & BIS Approved LAB. Door frames feature a double rebate profile measuring 143 x 58 mm, constructed from a minimum 1.6 mm (16 gauge) thick galvanized steel sheet. Employing butted assembly with self-tabs, frames should be equipped with fire-rated EPDM gaskets/Smoke Seals as standard, facilitating seamless installation on finished plastered masonry wall openings. Additionally, all frames are provisioned with mortises, drills, and taps for receiving appropriate hardware, accompanied by back plate brackets and anchor fasteners. Provision of a hole to be provided in the frame to fill mortar mixture in it. The door leaf boasts a fully flush double skin step design, offering insulation with the option for a vision lite. Manufactured from a minimum 1.2 mm (18 gauge) thick galvanized steel sheet, our doors feature rigid reinforcement pads for hardware accommodation and are internally insulated with 96 kg/m3 high-density mineral wool insulation material. Doors are factory prepped for hardware installation and reinforced for hinges, locks, and door closers. Interlocked edges with a bending radius of 1.4 mm ensure enhanced security. For paired doors, integrated astragals are provided on the meeting stile for both active and inactive leaves, while vision lites are installed as per manufacturer's recommendations.</p> <p>Incorporating 6 mm clear borosilicate fire-rated glass of relevant door rating, our vision glass adheres to stringent standards. The maximum glass size permitted is 0.06 sq.mt. All doors and frames receive a Pure Polyester Powder coating, ranging between 70-90 microns, ensuring durability and aesthetic appeal.</p> <p>Product have manufacturing warranty minimum 1 year. Product comply with minimum 500 hr salt spray testing.</p> <p>Hardware's - 1). Hinges - 100X75X3 mm 2). concealed Door Closer 3). Touch Panic bar 4). External Trim bar 5). Mortise sash lock 6). Dead Lock 7). WC lock</p>	Sq.mt	9.80

	8). Automatic Drop downseal 9). Smoke/ Periphery seal 10). Door handles 11). Kick plate 12). Signage Plate 13). Master key cylinder		
23	Double Equal Leaf Non-Ferrous Door- FIRE RATED DOOR(2hrs) Providing and fixing hollow metal lead line doors, compliant with IS 4351 & IS 16074 standards, crafted from pressed galvanized steel confirming to IS 277. door frames feature a double rebate profile 150X57 mm, constructed from a minimum 1.6 mm (16 gauge) thick galvanized steel sheet. Employing butted assembly with self-tabs, facilitating seamless installation on finished plastered masonry wall openings. The inside face of the frame face trim to rebate height should be protected with 2.0 mm thick lead line. Additionally, all frames are provisioned with mortises, drills, and taps for receiving appropriate hardware, accompanied by back plate brackets and anchor fasteners and also, providing provision for cement grouting by doing hole on frame but grouting with cement and slurry necessary for doors will be on client scope only. The door boasts a fully flush double skin step design, offering without option for a vision lite. Manufactured from a minimum 1.2 mm (18 gauge) thick galvanized steel sheet, the internal construction of the door should be rigid with lead line of 2.0 mm thick all across the inside of the exposed surface. our doors feature rigid reinforcement pads for hardware accommodation and are internally infill with Mineral wool of (Density - 96kg/m3) as a core material. Doors are factory prepped for hardware installation and reinforced for hinges, locks, and door closers as per standards. nterlocked edges with a bending radius of 1.4 mm ensure enhanced security. For paired dors, integrated astragals are provided on the meeting stile for both active and inactive leaves, while vision lites are installed as per manufacturer's recommendations. All doors and frames receive a Pure Polyester Powder coating, ranging between 70-90 microns, ensuring durability and aesthetic appeal.Product have manufacturing warranty minimum 1 year. Product comply with minimum 500 hr salt spray testing.ardware's - 1). Hinges - 100X75X3 mm 2). concealed Door Closer 3). Touch Panic bar 4). External Trim bar 5). Mortise sash lock 6). Dead Lock 3.80 Sq.mt 53500 203166.25 Yes Provided 7). WC lock 8). Automatic Drop downseal 9). Smoke/ Periphery seal 10). Door handles 11). Kick plate 12). Signage Plate 13). Master key cylinder (x	Sq.mt	8.33
24	Double Equal Leaf(Lead Shielded) Shutter Door Providing and fixing hollow metal non fire rated residential doors. Crafted from pressed galvanized steel confirming to IS 277. Our door frames feature a Single rebate profile 105 x 57 mm or double rebate profile measuring 150 x 57 mm, constructed from a minimum 1.2 mm (18 gauge) thick galvanized steel sheet. Employing butted assembly with self-tabs, our frames come equipped with Seals as standard, facilitating seamless installation on finished plastered masonry wall openings. Additionally, all frames are provisioned with mortises, drills, and taps for receiving appropriate hardware, accompanied by back plate brackets and anchor fasteners. The door leaf, 46 mm thick, boasts a fully flush double skin step design, offering insulation with the option for a vision lite. Manufactured from a minimum 0.8 mm (22 gauge) thick galvanized steel sheet, our doors feature rigid reinforcement pads for hardware accommodation and are internally sandwich with resin bonded honeycomb material. Doors are factory prepped for hardware installation and reinforced for hinges, locks, and door closers. Interlocked edges with a bending radius of 1.4 mm ensure enhanced security. For paired doors, integrated astragals are provided on the meeting stile for both active and inactive leaves, while vision lites are installed as per manufacturer's recommendations. Metal louver of standard size 450 X 200 mm grilles used constructed from Zintec mild steel 0.65 mm with matching clips. It is optional if client needed not compulsory for any residential category. All doors and frames receive a Pure Polyester Powder coating, ranging between 70-90 microns, ensuring durability and aesthetic	Sq.mt	3.80

	<p>appeal.Product have manufacturing warranty minimum 1 year. Product comply with minimum 500 hr salt spray testing.</p> <p>1 Hinges - 100X75X3 mm</p> <p>2). concealed Door Closer</p> <p>3). Touch Panic bar</p> <p>4). External Trim bar</p> <p>5). Mortise sash lock</p> <p>6). Dead Lock</p> <p>7). WC lock</p> <p>8). Automatic Drop downseal</p> <p>9). Smoke/ Periphery seal</p> <p>10). Door handles</p> <p>11). Kick plate</p> <p>12). Signage Plate</p> <p>13). Master key cylinder</p>		
25	Single Leaf Shutter Hollow Metal Door with louver(Open Outside)	Sq.mt	334.18
26	Radio Frequency Shielded Fixed Glass Panel Window	Sq.mt	1.74
27	Double Equal Leaf Wooden Panel Door with Glass Vision Panel-S1	Sq.mt	82.74
28	<p>Single Leaf Wooden Panel Door</p> <p>Providing and fixing single leaf panelled door shutter without fanlight and shutter 35mm thick as per drawing consisting of T.W. top rail size 100mmx35mm and bottom and lock rail 200mmx35mm insert panel 12mm thick commercial ply faced T.W.particle board with phenol formaldehyde synthetic resin (Generally confirming to ISI3097) excluding frame, including stainless steel fixture sfastening and T.W.beading at junction of panels inserts and as in structed by the Engineering charge including 3 coats of oil painting etc. complete.</p>	Sq.mt	301.87
(3) CIVIL			
1	<p>Conductive Vinyl Flooring</p> <p>Providing & laying fully flexible 2mm thick Permanently Static Conductive Pressed Homogeneous Vinyl Floor Covering for 621.3 sq.mt of make or approved equivalent, of approved colour over Kota stone base flooring, with non-directional design and even colour throughout the thickness, providing excellent resistance to wear & tear and minimum use area Class 34 as per ISO 10874 / complied with respective EN standard. The homogenous sheet top surface shall have a Polyurethane treatment by UV laser cross-linking. The floor covering shall achieve fire rating of class Bfl-s1, static electrical propensity <2 KV, low TVOC emissions after 28 days as per ISO 16000-6. The covering shall be compatible to hot-welding and bent up skirting, have anti-bacterial & anti-fungal properties, resistance to stains, and shall have minimum 5% recycled content to comply with GRIHA Environmental Product Description.</p>		
	(conductive vinly flooring)	Sq.mt	627
	<p>Providing and laying fully flexible 2mm Thick Antistatic Homogeneous Vinyl Floor Covering of make or approved equivalent,of approved colour over Base Flooring , with non- directional design and even colour throughout the Thickness ,providing excellent resistance to wear & tear(Abrasion group T) & minimum use area class 34 as per ISO 10874 / EN 685. The homogeneous sheet Top surface shall have a Polyurethane treatment by UV laser cross-Linking. The floor covering shall achieve Fire rating of class Bfl-S1 ,static electrical prosperity <KV ,low TVOC emissions after 28 days as per ISO 16000-6.The covering shall be compatible to hot -welding and bent up skirting ,have anti-bacterial & anti-fungal properties,resistance to stains, and shall have minimum 5% recycled content to comply with GRIHA Environmental Product Description.</p>		
	(Non-conductive vinly flooring)	Sq.mt	4865
2	<p>Providing and applying seamless, jointless epoxy flooring and precast skirting (75 m wide)system of a total system thickness of 12 mm, ground to 10 mm average over the prepared floor surface including cleaning, moisture testing and scarifying or other suitable surface preparation techniques. The system comprise of application of 100% solids epoxy primer of 200 microns followed by, solvent-free Epoxy screed @ 11800 microns of approved brand including cutting,grinding, polishing up to specified / acceptable finish and finishing with sealer coat. The floor topping will be as per colour and design approved by the Architect.</p>	Sq.mt	1406
	Skirting	Rmt	412

3	Mechanical Stack/puzzle parking in basements		
	Providing and Installing mechanised stacked parking accomodating Car size & Two wheelers with capacity 2.0 ton each. It should be having lifting power pack of 2.2 kw with speed of approx. 2.1 m / min. Power factor of motor should be no less than 0.8 having total electrical load of 3.4 kw including motor start up inrush current. Rate should include all tools, tackles , machineries, steel strcutural work , fixing detail shop drawings , electrical devises , cables , complete in all respect.		
	Four wheeler stacked parking (45nos x 3cars) = 135 cars	Nos.	45
	Two wheeler stacked parking (144nos x 3cars) = 432 cars	Nos.	144
4	Providing & Fixing Elevator with Basic Elevator requirement ; Capacity :- 2000 kg , Control :- Selective Collective, Drive Type :- Variable Voltage Variable Frequency, Platform :- Gearless-MRL, Rated Load (kG) :- 2000, Rated speed (m/s) :- 1 m/s, Door Type :- Power, Landing Door Type :- Center Opening power door, Railing Type :- Standard, Landing Door Finish :- SS-hairline(Standard), Fire Rating :- 1 Hr Fire rated. Vendor must also consider other standard specifications as per latest code and respective authorities requisitions for hospital/ public building.		
	Patient, Staff & Visitor elevators		
	Lift 1 ; Shaft size 3125 x 3175 Opening size 1400 x 2400 (B + G + 10 floors)	Nos.	2
	Lift 2 ; Shaft size 2550 x 3100 Opening size 1400 x 2400 (B + G + 10 floors)	Nos.	8
	Lift 3 ; Shaft size 2600 x 3100 Opening size 1400 x 2400 (B + G + 10 floors)	Nos.	2
	Dumwaiters ; Shaft size 1500 x 1500 Opening size 600 x 500 (2nd floor till 5th floor)	Nos.	2
5	LAUNDRY @ BASEMENT Providing layout & Design for optimal Workflow, safety and efficiency packing, loading, freight, unloading, placement, installation for Laundry Department for a 450 bedded mother & Child hospital with area of 195.94 sq.mt. Providing list of recommended equipment and ensure the laundry facility complies with health, safety, and environmental standards, including infection control protocols, mentioning the Delivery Period.	Nos.	1
6	KITCHEN @5TH FLOOR Providing a detailed outline of Layout ensuring workflow from food delivery, storage, preparation, cooking, and distribution with specifications of equipment's of Kitchen with area of 461.52 sq. m for a 450 bedded Mother & Child Hospital, with 675 relatives ,675 staff and 2000 OPD patients count. The design and equipment comply with the Food and Drug Administration (FDA) and Hazard Analysis and Critical Control Points (HACCP) regulations for food safety and health standards.	Nos.	1
7	CSSD @5TH FLOOR Providing an optimal Layout and design for efficiency design, infection control, and regulatory compliance. Installation and commissioning of Equipment for Central Sterile Supply Department with area of 327.46 sq.m for a 450 bedded mother & Child hospital, supporting 8 no.s OT with provisions of 2 Dumbwaiters(clean & dirty). Providing clear and accurate pricing for each item, including any applicable taxes or discounts. Clearly outing any warranties or guarantees offered also mentioning the Delivery Timeframe.	Nos.	1
8	Providing and installing Aluminum Boom Barrier with (maximum clear passage of 6000 mm single boom) 24V DC brushless motor, protection level of IP 54, controller frequency 50 - 60 Hz, netweight 43 kgs app. , It should be having security features of CE marking according to the EEC directives : 2014 /30 / EU, 20114 / 53 / EU. Passage opening time - 3 sec (75 deg.) and 7 sec opening time (90 deg.). Eergency manual release system with key operation . Rate should include corrosion free mountings complete in all respect.	Nos.	4
9	Supply and Installation of rubber corner guard of 800mm x 100mm x 100mm to protect the edges of columns in strcutrue. In black colour and yellow reflective sheeting. Rate should include all necessary tools, tackles required to fix complete in all respect.	Nos.	104
10	Cat Eye/ Road Stud/ RPM: Providing & fixing of Molded Twin Shanks Raised Pavement Markers made of polycarbonate and ABS moulded body and reflective panels with micro prismatic lens (No glass bed lens) capable of providing total internal reflection of the light entering the lens face and shall support a load of 13635 kgs .tested in accordance to ASTM D 4280 Type Hand complying to Specifications of Category A of MORTH Circular No RW/NH/33023/10-97-DO III Dt 11.06.1997 .The height, width and length shall not exceed 20 mm, 130 mm and 130 mm and with minimum reflective area of 13 Sqcm on each side and the slope to the base shall be 35 +/- 5 degree. The strength of detachment of the integrated	nos.	147

	cylindrical shanks, (of diameter not less than 19 +/- 2mm and height not less than 30 +/-2 mm) from the body is to be a minimum value of 500 Kgf. Fixing will be by drilling holes on the road for the shanks to go inside, without nails and using epoxy resin based adhesive as per manufacturers recommendation and The color of the marker should be as per the IRC35-2015 and as directed by Engineer-in-charge.		
11	Speed Breaker : Providing & installing speed breaker of pvc material size of 250mm x 350mm x 50mm on cement concrete surface of road with all the necessary accessories and labour complete in all respect.	nos.	10
12	Convex polycarbonate traffic mirror orange colour , dia-100 Cms	nos.	10
13	Providing broken Autoclaved Aerated Concrete Block Providing and Supplying Autoclaved Aerated Concrete Block Filling work of Ecolite or equivalent	Cu.Mt	68.42
(4) Façade Work			
A	Conventional Toggle Curtainwall Continuous Glazing System		
	Design, Fabrication, Supply, Installation, Testing, protection, cleaning & handover of Conventional toggle curtainwall continuous glazing by SCHUCO / Technal / Reynaers / Façade-One / ALU-K / Eternia system designed to withstand the wind pressure of conforming to IS-875 part III. (The system must pass the proof test at 1.5 times design wind pressure without any failure). The profile system is based on curtainwall design and glass is held all around by mechanical pressure Aluminium toggle in all four sides of glazing, with necessary brackets of MS with HDG with three dimensional adjustment with washers to arrest the wind load movement, Anchor Fasteners(IS, screws and fasteners with non staining weather sealant and Aluminium flashing sealed all around parameter inside and outside to seal the gaps between curtain wall and the building structure all complete required to perform as per specification and drawing in conjunction with BOQ.		
	The system design shall be based on close joint system. Transom shall be overlap with mullion to have proper drainage to mullion. The design to accommodate building movements, thermal expansions & the seismic movements. The system shall be designed considering surface temperatures of 80-90 deg Cel & temperature differential of 25 deg cel without creating excess stress in the system. All metal joints in the wet area shall be small joint sealant applied to ensure water tightness.		
	The system shall be designed of floor height units spanning between the floors with Dead load & wind load brackets with provision to accommodate movement at all floor levels and at every grid panels horizontally. The system shall be designed to accommodate DGU in vision / spandrel panel. System shall accommodate openable panel as per architectural requirement in the system. Aluminium Edge Guard with black Anodized shall be fixed at all vertical & Horizontal grooves. Each glass panel shall be supported for dead load at the bottom of glass with black anodised glass retainers two per panel.		
	EPDM gaskets to achieve the required compression & seal in the system. EPDM Gaskets shall be of micro cured (Online Curing) with shore A hardness of 60-65.		
	Flashing / Trim / Floor Closure at Parapet level, floor level, beam bottom level and required flashings shall be provided continuously with required GI / Aluminium sheet. Internal & External concealed Flashings shall be 1.0mm thk GI sheet. External exposed flashing shall be 1.5mm thk. Aluminium sheet with SDF coated matching with external Aluminium profiles. Internal exposed flashing shall be 1.5mm thk. Aluminium sheet with powder coated matching with internal aluminium profiles.		
	The extruded aluminium sections of Alloy 6063 T5 / T6 & tolerances confirming to DIN / EN standard from approved extruder. All the visible surfaces shall have high Durability (Akzonobel) / Super durable (Jotun) Powder coating of 60 - 80 micron confirming to AAMA 2604. The non visible aluminium surfaces shall have minimum chromatizing treatment.		
	All Material Make / Vendor list / Supplier list shall be as per tender specification. .		
	All shade approval shall be as per Architect's Approval.		
	The quote rate shall include all design & shop drawing approval from architect & consultant.		
	Conventional Toggle Curtain wall Continuous Glazing system		
	Quote rate for complete system as mentioned above under (A).	m ²	1,633

	Vision Glass:- 24mm DGU: Providing and fixing vision glass:-		
	Glass:-24mm DGU:- (6mm Thk Reflective (ST/ET Series) HS Glass + 12mm Thk. Air Gap + 6mm Thk. Clear HS Glass) (As per Client / Architect Approval sample)	m ²	1,404
	Spandrel Glass: 6mm SGU: Providing and fixing Spandrel glass:-		
	Glass:-6mm SGU:- (6mm Thk Reflective (ST/ET Series) HS Glass) (As per Client / Architect Approval sample)	m ²	229
	Spandrel panel :- Extra over a.1		
	Quote extra over on item (a.1):- for providing and fixing the spandrel panel with the Glass wool insulation of 50mm thick 48 kg/m ³ density slab to be 33% compressed with inbuilt black veil of 0.65mm firmly held on the GI tray Backing of 0.8 mm thk. all assembly is kept at least Min. 50mm away from the glass surface.	m ²	258
	Fire Stop (Smoke seal): Extra over a.1 (Floor to Floor & Office to Office & End Façade closed)		
	Quote extra over on item (a.1) Providing and fixing the fire stop for 2 hr Fire rating with smoke seal & Acoustic Seals at all floor slab levels & office to office wall required as per local fire authority with Tested to EN 1364-4 Std. 120mm thk. and 25dB(RW) density of Siderise CW-FS & Siderise-AB slab with required GI flashings to hold the assembly shall be fixed in 25% compressed form between the gap of Building RCC and Curtain wall system. The floor closure shall be provided continuously at floor top level with 1mm thk. GI flashing closing gap between curtain wall and building line. (Note- Internal partition closed out qty. may increase subject to final Qty.)	Rmt	328
	Parallel Operable vent (Parallel Pop up Windows) :- Extra over a.1		
	Quote extra over on item (a.1) Providing and fixing Parallel operable vent, accessories with heavy duty self balancing stainless steel friction hinges with provision to hold open at 250 mm. Vent locking accessories with cremone lock and horizontal openable bar handle with Min. 10-12 point locking mechanism to keep the vent weather tight. The vent shall comprise of Aluminium outer frame with drainage provisions and crimped corner and shutter frame with Euro grooves and crimped corners, all joints shall be sealed with small joint sealant. The outer frame fixed to the unitized profile system with necessary SS screws and weather sealant. All the visible surfaces shall have Super Durable Powder coating finish of 60-80 micron thickness as per Approved shade by Architect. The stepped glass design vent shall have ceramic frit in black / colour to match the glass at the portion of the stepped unit in case of high light transmission glass to reduce banding effect in the glazing. (Parallel Pop up windows counts:-106)	m ²	259
	Quote rate for 'C' Type Decorative (Channel) Horizontal Features complete system as mentioned above under (A) : Extra over a.1		
	Quote extra over on item (a.1) Providing and fixing Aluminium C-Type Decorative Horizontal features 200mm (W) x 100mm (Depth x 10mm Thk) in line with tender drawings. The extruded aluminium sections of Alloy 6063 T5 / T6 & tolerances conforming to DIN / EN standard from an approved extruder. The structural profiles shall have a minimum 2 mm wall thickness. All the visible surfaces shall have high Durability (Akzonobel) / Super durable (Jotun) Powder coating of 60 - 80 micron confirming. The non-visible aluminium surfaces shall have a minimum chromatizing treatment. "C" Type Horizontal Features. Location:- Elevation 1 and Elevation 4, 200mm(W) x 90mm (Depth) (As per Client / Architect Approval sample)	Rmt	328
	System testing certificates with following test results shall be provided : 1) Performance Laboratory Test for Air Leakage Test (-50pa to - 300pa) & (+50pa to +300pa) as per ASTM E-283-04 testing method for a range of testing limit 1 to 200 mVhr 2) Static Water Penetration Test. (50pa to 1500pa) as per ASTM E- 331-09 testing method for a range up to 2000 ml. 3) Dynamic Water Penetration (50pa to 1500pa) as per AAMA 501.01- 05 testing method for a range upto 2000 ml 4) Structural Performance Deflection and deformation by static air pressure test (1.5 times design wind pressure without any failure) as per ASTM E-330-10 testing method for a range upto 50 mm 5) Seismic Movement Test (upto 30 mm) as per AAMA 501.4-09 testing method for Qualitative test.	No	1
	On-site water test for workmanship verification shall be carried out for water penetration hose test as per AAMA 501.2 by an Independent test agency at 8-10 locations as desired by the Façade consultant / Client. the final test shall be carried out after 20% project completion. The	No	6

	initial installation of 10 units by three (30 Nos panel) floor heights will be tested to check the workmanship in line with the design intent and performance.		
B	Conventional toggle curtainwall Strip Glazing system		
	Design, Fabrication, Supply, Installation, Testing, protection, cleaning & handover of Conventional toggle curtainwall Strip glazing by SCHUCO / Technal / Reynaers / Facade-One / ALU-K / Eternia system designed to withstand the wind pressure of conforming to IS-875 part III. (The system must pass the proof test at 1.5 times the design wind pressure without any failure). The profile system is based on curtainwall design and glass is held all around by mechanical pressure Aluminium toggle in all four sides of glazing, with necessary brackets of MS with HDG with three dimensional adjustment with washers to arrest the wind load movement, Anchor Fasteners, screws and fasteners with non staining weather sealant and Aluminium flashing sealed all around parameter inside and outside to seal the gaps between curtain wall and the building structure all complete required to perform as per specification and drawing in conjunction with BOQ.		
	The system design shall be based on close joint system. Transom shall be overlap with mullion to have proper drainage to mullion. The design to accommodate building movements, thermal expansions & the seismic movements. The system shall be designed considering surface temperatures of 80-90 deg Cel & temperature differential of 25 deg cel without creating excess stress in the system. All metal joints in the wet area shall be small joint sealant applied to ensure water tightness.		
	The system shall be designed of floor height units spanning between the floors with Dead load & wind load brackets with provision to accommodate movement at all floor levels and at every grid panels horizontally. The system shall be designed to accommodate DGU in vision / spandrel panel. System shall accommodate openable panel as per architectural requirement in the system. Aluminium Edge Guard with black Anodized shall be fixed at all vertical & Horizontal grooves. Each glass panel shall be supported for dead load at the bottom of glass with black anodised glass retainers two per panel.		
	EPDM gaskets to achieve the required compression & seal in the system. EPDM Gaskets shall be of micro cured (Online Curing) with shore A hardness of 60-65.		
	Flashing / Trim / Floor Closure at Parapet level, floor level, beam bottom level and required flashings shall be provided continuously with required GI / Aluminium sheet. Internal & External concealed Flashings shall be 1.0mm thk GI sheet. External exposed flashing shall be 1.5mm thk. Aluminium sheet with SDF coated matching with external Aluminium profiles. Internal exposed flashing shall be 1.5mm thk. Aluminium sheet with powder coated matching with internal aluminium profiles.		
	The extruded aluminium sections of Alloy 6063 T5 / T6 & tolerances confirming to DIN / EN standard from approved extruder. All the visible surfaces shall have high Durability (Akzonobel) / Super durable (Jotun) Powder coating of 60 - 80 micron confirming to AAMA 2604. The non visible aluminium surfaces shall have minimum chromatizing treatment.		
	All Material Make / Vendor list / Supplier list shall be as per tender specification. .		
	All shade approval shall be as per Architect's Approval.		
	The quote rate shall include all design & shop drawing approval from architect & consultant.		
	Conventional Toggle Curtain wall Strip Glazing system		
	Quote rate for complete system as mentioned above under (B).	m ²	1,702
	Vision Glass:- 24mm DGU: Providing and fixing vision glass:-		
	Glass:-24mm DGU:- (6mm Thk Reflective (ST/ET Series) HS Glass + 12mm Thk. Air Gap + 6mm Thk. Clear HS Glass) (As per Client / Architect Approval sample)	m ²	1,702
	Spandrel panel :- Extra over b.1		
	Quote extra over on item (b.1):- for providing and fixing the spandrel panel with the Glass wool insulation of 50mm thick 48 kg/m3 density slab to be 33% compressed with inbuilt black veil of 0.65mm firmly held on the GI tray Backing of 0.8 mm thk. all assembly is kept at least Min. 50mm away from the glass surface.	m ²	1,058
	Parallel Operable vent (Parallel Pop up Windows) :- Extra over b.1		
	Quote extra over on item (b.1) Providing and fixing Parallel operable vent, accessories with heavy duty self-balancing stainless steel friction hinges with provision to hold open at 250 mm. Vent locking accessories with cremone lock and horizontal openable bar handle with Min. 10-12 point locking mechanism to keep the vent weather-tight. The vent shall comprise of	m ²	23

	Aluminium outer frame with drainage provisions and crimped corners and shutter frame with Euro grooves and crimped corners, all joints shall be sealed with small joint sealant. The outer frame fixed to the unitized profile system with necessary SS screws and weather sealant. All the visible surfaces shall have Super Durable Powder coating finish of 60-80 micron thickness as per the Approved shade by the Architect. The stepped glass design vent shall have ceramic frit in black / colour to match the glass at the portion of the stepped unit in case of high light transmission glass to reduce banding effect in the glazing. (Parallel Pop-up windows No:- 9)		
	Aluminium Sliding Windows :- Extra over b.1		
	Design, Fabrication, Supply, Installation, Protection, Cleaning, and Handover Sliding Windows of 2 Track / 2 Shutter. This window system of by SCHUCO / Technal / Reynaers / Facade-One / ALU-K / Eternia system designed to withstand the wind pressure of conforming to IS-875 part II. The sliding shutter will slide on the track with approved nylon rollers (single adjustable roller for the window and double adjustable roller for the door). All Sliding Shutter shall have an interlocking Profile all in line with the Tender Drawing. The Window accessories include a Flush Lock, 6.9mm Wool Pile with 2 Silent fins, an Anticapillary Pad, Shutter guide, Cover Cap, and Corner Cleat of approved make. The System and Glass shall be designed to withstand wind pressure at all levels, elevations & heights. All screws, washers used shall be only stainless steel of 304 grade. Provide EPDM Gasket, exterior and Interior perimeter sealants with Dow Corning DC / GE, where the glazing abuts other adjacent materials such as concrete shear walls. The contractor must design the system as per the prevalent site conditions and building elevation profiles.		
	The extruded aluminium sections of Alloy 6063 T5 / T6 & tolerances confirming to DIN / EN standard from approved extruder. The structural profiles shall have minimum 1.8mm wall thickness. All the internal visible surfaces shall have high Durability (Akzonobel) / Super durable (Jotun) Powder coating of 60 - 80 micron confirming to AAMA 2604 & The non visible aluminium surfaces shall have minimum chromatizing treatment.		
	All Material Make / Vendor list / Supplier list shall be as per tender BOQ specification.		
	All shade approval shall be as per Architect's Approval.		
	The quote rate shall include all Design & shop drawing approval from architect & consultant.		
	Quote rate for complete sliding system as mentioned above under (B)		
	2 Track 2 Shutter Sliding Window:- 2100mm (W) x 2400mm (H), with With SS Grade Mosquito Net Shutter Panel :-1050mm (W) x 2400mm (H):- Location:- From Ground Floor (Elevation-1 ,2 & 3)	No	8
	2 Track 2 Shutter Sliding Window:- 2000mm (W) x 2400mm (H), with With SS-304 Grade Mosquito Net Shutter Panel :-1000mm (W) x 2400mm (H):- Location:- From Ground Floor (Elevation-3)	No	2
	Vision Glass:- 22mm DGU: Providing and fixing vision glass:-		
	Glass:-22mm DGU:- (6mm Thk Reflective (ST/ET Series) HS Glass + 10mm Thk. Air Gap + 6mm Thk. Clear HS Glass) (As per Client / Architect Approval sample)	m ²	50
C	Conventional toggle curtainwall Strip Glazing system (At Vertical Fin location)		
	Design, Fabrication, Supply, Installation, Testing, protection, cleaning & handover of Conventional toggle curtainwall Strip glazing by SCHUCO / Technal / Reynaers / Facade-One / ALU-K / Eternia system designed to withstand the wind pressure of conforming to IS-875 part III. (The system must pass the proof test at 1.5 times the design wind pressure without any failure). The profile system is based on curtainwall design and glass is held all around by mechanical pressure Aluminium toggle in all four sides of glazing, with necessary brackets of MS with HDG with three dimensional adjustment with washers to arrest the wind load movement, Anchor Fasteners, screws and fasteners with non staining weather sealant and Aluminium flashing sealed all around parameter inside and outside to seal the gaps between curtain wall and the building structure all complete required to perform as per specification and drawing in conjunction with BOQ.		
	The system design shall be based on close joint system. Transom shall be overlap with mullion to have proper drainage to mullion. The design to accommodate building movements, thermal expansions & the seismic movements. The system shall be designed considering surface temperatures of 80-90 deg Cel & temperature differential of 25 deg cel without creating excess stress in the system. All metal joints in the wet area shall be small joint sealant applied to ensure water tightness.		
	The system shall be designed of floor height units spanning between the floors with Dead load & wind load brackets with provision to accommodate movement at all floor levels and at every		

	grid panels horizontally. The system shall be designed to accommodate DGU in vision / spandrel panel. System shall accommodate openable panel as per architectural requirement in the system. Aluminium Edge Guard with black Anodized shall be fixed at all vertical & Horizontal grooves. Each glass panel shall be supported for dead load at the bottom of glass with black anodised glass retainers two per panel.		
	EPDM gaskets to achieve the required compression & seal in the system. EPDM Gaskets shall be of micro cured (Online Curing) with shore A hardness of 60-65.		
	Flashing / Trim / Floor Closure at Parapet level, floor level, beam bottom level and required flashings shall be provided continuously with required GI / Aluminium sheet. Internal & External concealed Flashings shall be 1.0mm thk GI sheet. External exposed flashing shall be 1.5mm thk. Aluminium sheet with SDF coated matching with external Aluminium profiles. Internal exposed flashing shall be 1.5mm thk. Aluminium sheet with powder coated matching with internal aluminium profiles.		
	The extruded aluminium sections of Alloy 6063 T5 / T6 & tolerances confirming to DIN / EN standard from approved extruder. All the visible surfaces shall have high Durability (Akzonobel) / Super durable (Jotun) Powder coating of 60 - 80 micron confirming to AAMA 2604. The non visible aluminium surfaces shall have minimum chromatizing treatment.		
	The system shall have SDF Coating as per Architect's Approval.		
	All Material Make / Vendor list / Supplier list shall be as per tender specification. .		
	All shade approval shall be as per Architect's Approval.		
	The quote rate shall include all design & shop drawing approval from architect & consultant.		
	Conventional Toggle Curtain wall Strip Glazing system		
	Quote rate for complete system as mentioned above under (C).	m ²	1,236.19
	Vision Glass:- 24mm DGU: Providing and fixing vision glass:-		
	Glass:-24mm DGU:- (6mm Thk Reflective (ST/ET Series) HS Glass + 12mm Thk. Air Gap + 6mm Thk. Clear HS Glass) (As per Client / Architect Approval sample)	m ²	1,059
	Vision Glass:- 24mm DGU: (Frit Glass) Providing and fixing vision glass:-		
	Glass:-24mm DGU:- (6mm Thk Reflective (ST/ET Series) HS Glass + 12mm Thk. Air Gap + 6mm Thk. Clear HS Frit 100% Glass) (As per Client / Architect Approval sample), Location:- Changing Room, Toilet Areas	m ²	24
	Spandrel panel :- Extra over c.1		
	Quote extra over on item (c.1):- for providing and fixing the spandrel panel with the Glass wool insulation of 50mm thick 48 kg/m3 density slab to be 33% compressed with inbuilt black veil of 0.65mm firmly held on the GI tray Backing of 0.8 mm thk. all assembly is kept at least Min. 50mm away from the glass surface.	m ²	153
D	Aluminium Sliding Windows		
	Design, Fabrication, Supply, Installation, Protection, Cleaning, and Handover Sliding Windows of 2 Track / 2 Shutter. This window system of by SCHUCO / Technal / Reynaers / Facade-One / ALU-K / Eternia system designed to withstand the wind pressure of conforming to IS-875 part II. The sliding shutter will slide on the track with approved nylon rollers (single adjustable roller for the window and double adjustable roller for the door). All Sliding Shutter shall have an interlocking Profile all in line with the Tender Drawing. The Window accessories include a Flush Lock, 6.9mm Wool Pile with 2 Silent fins, an Anticapillary Pad, Shutter guide, Cover Cap, and Corner Cleat of approved make. The System and Glass shall be designed to withstand wind pressure at all levels, elevations & heights. All screws, washers used shall be only stainless steel of 304 grade. Provide EPDM Gasket, exterior and Interior perimeter sealants with Dow Corning DC / GE, where the glazing abuts other adjacent materials such as concrete shear walls. The contractor must design the system as per the prevalent site conditions and building elevation profiles.		
	The extruded aluminium sections of Alloy 6063 T5 / T6 & tolerances confirming to DIN / EN standard from approved extruder. The structural profiles shall have minimum 1.8mm wall thickness. All the internal visible surfaces shall have high Durability (Akzonobel) / Super durable (Jotun) Powder coating of 60 - 80 micron confirming to AAMA 2604 & The non visible aluminium surfaces shall have minimum chromatizing treatment.		

	Design, Fabrication, Supply and install the required structural steel framework in line with the design drawings made out of MS pipe sections & Plates of approved make, of first quality, conforming to IS standard. The steel design shall accommodate thermal stresses from thermal expansion due to surface temperatures. The steel structure shall be finished with the following: i. Surface Preparation – Blast cleaned to Sa 2.5, confirming to BS EN ISO 8501-1 ii. Primer : Zinc Rich Epoxy 75 micron iii. Barrier : Epoxy Mio 125 micron		
	All Material Make / Vendor list / Supplier list shall be as per tender BOQ specification.		
	All shade approval shall be as per Architect's Approval.		
	The quote rate shall include all Design & shop drawing approval from architect & consultant.		
	Quote rate for complete sliding system as mentioned above under (D)		
	2 Track 2 Shutter Sliding Window:- 2100mm (W) x 2450mm (H), with With SS Grade Mosquito Net Shutter Panel:- 1050mm (W) x 2450mm (H):- Location:- From 1st Floor to 5th Floor (Elevation-1 To 4)	No	80
	2 Track 2 Shutter Sliding Window:- 2100mm (W) x 2150mm (H), with With SS-304 Grade Mosquito Net Shutter Panel:- 1050mm (W) x 2150mm (H):- Location:- From 6th Floor to 10th Floor (Elevation-1 To 4)	No	96
	2 Track 2 Shutter Sliding Window:- 2000mm (W) x 2450mm (H), with With SS-304 Grade Mosquito Net Shutter Panel:- 1000mm (W) x 2450mm (H):- Location:- From 1st Floor & 2nd Floor (Elevation-2 & 3)	No	5
	Vision Glass:- 22mm DGU: Providing and fixing vision glass:-		
	Glass:-22mm DGU:- (6mm Thk Reflective (ST/ET Series) HS Glass + 10mm Thk. Air Gap + 6mm Thk. Clear HS Glass) (As per Client / Architect Approval sample)	m ²	870
	2 Track 2 Shutter Sliding Window :- 2000mm (W) x 2150mm (H), with provision for Mosquito Net Shutter Panel:- 1000mm (W) x 2150mm (H):- Location:- Elevation-2 & 3, 10th Floor, Male, Female Changing Room	No	2
	Vision Glass:- 22mm DGU: (Frit Glass) Providing and fixing vision glass:-		
	Glass:-22mm DGU:- (6mm Thk (Frit Glass) Reflective (ST/ET Series) HS Glass + 10mm Thk. Air Gap + 6mm Thk. Clear HS Frit 100% Glass) (As per Client / Architect Approval sample)	m ²	9
E	12mm Thk. External solid acrylic polymer cladding for (Fin)		
	Design, Fabrication, Supply, Installation, Testing, Protection, Cleaning & Handover of 12mm Thk. External solid acrylic polymer cladding for Fin by Dupont-Corlan/ Merino-Hanex / Durlax-Luxor or approved equivalent. The system shall be close joint principle. Using grid work of prefabricated aluminium extruded sections of Alloy 6063 T6 in black anodized finish to with stand the design wind pressure confirming to IS -875 part III. The fastening brackets of Aluminium alloy 6065 T6 with washers to arrest the wind load movement with SS 316 Pins, fasteners and anchor bolts of approved make. Nylon separators to prevent bi-metallic contacts all complete required to perform as per specification and tender drawing in conjunction with BOQ.		
	12mm Solid cladding shall be resistant to humidity ; salt fog ; sulphur dioxide (So ²) ; environmental pollutants & bacteria. Solid cladding shall not delaminate nor decompose. Fire performance shall not melt or not create burning droplets. Solid cladding shall be UV stable colour & colour run through the entire thickness so edge are the same colour as the rest of the sheet. all joint shall closed with supplier specific adhesive not normal facade silicon. others close by Non staining sealant GE / Dow. complet 10 year		
	The design shall accommodate the building movements, thermal expansion and seismic movements. Also shall accommodate thermal expansion resulting from surface temperature of 60 deg cel on acrylic polymer cladding outer skin without creating any additional stress. design shall considered molding as per architect design.		
	All Material Make / Vendor list / Supplier list shall be as per tender specification.		
	All shade approval shall be as per Architect's Approval.		
	The quote rate shall include all design & shop drawing approval from architect & consultant.		
	Quote rate for complete 12mm Thk. External solid acrylic polymer cladding for Fin	m ²	5,165
	Quote rate for complete MS support as mentioned in item (E) For 12mm Thk. Cladding (Note- As per site condition qty. may increase subject to finalised approved Shop Drawings)	Ton	69.0

	Quote rate for 'C' Type Decorative (Channel) Horizontal Features complete system as mentioned above under (E) : Extra over e.1		
	Quote extra over on item (e.1) Providing and fixing Aluminium C-Type Decorative Horizontal features 200mm (W) x 90mm (Depth x 6mm Thk) in line with tender drawings. The extruded aluminium sections of Alloy 6063 T5 / T6 & tolerances conforming to DIN / EN standard from an approved extruder. The structural profiles shall have a minimum 2 mm wall thickness. All the visible surfaces shall have high Durability (Akzonobel) / Super durable (Jotun) Powder coating of 60 - 80 micron confirming. The non-visible aluminium surfaces shall have a minimum chromating treatment. "C" Type Horizontal Features @ Elevation-1 To 4, 200mm(W) x 90mm (Depth x 6mm Thk.) (As per Client / Architect Approval sample)	Rmt	737
F	"U" Channel glazing system		
	Design, Fabrication, Supply, Installation, Protection, Cleaning & Handover of Frameless glazing system with Aluminium "U" Channel custom designed to with stand the design wind pressure confirming to IS -875 part III.		
	The system shall support the glass at bottom and wind resistance at top by means of continuous Aluminium U-channel at the finished floor level and vertically butt glazed with non staining sealant joint between glass to glass. The weather sealant of approved make, baker rod, SS 304 grade fasteners & hard setting blocks of EPDM, all in complete required to perform as per specification and drawing in conjunction with BOQ. Complete system shall be warrantee for minimum 10 yrs against design & workmanship defects.		
	The extruded aluminium sections of Alloy 6063 T5 / T6 & tolerances confirming to DIN / EN standard from approved extruder. All the visible surfaces shall have high Durability (Akzonobel) / Super durable (Jotun) Powder coating of 60 - 80 micron.		
	All Material Make / Vendor list / Supplier list shall be as per tender specification.		
	All shade approval shall be as per Architect's Approval.		
	The quote rate shall include all design & shop drawing approval from architect & consultant.		
	Quote rate for complete system as mentioned above under.(F)		
	Quote rate for complete system as mentioned above under. (F) Providing & Fixing the U-Channel System with Glass:-17.52mm Thk Sentry Laminated Glass:- (8mm Clear HS Glass + 1.52mm SGP + 8mm Clear HS Glass.) Location:- Elevation-1, Ground Floor	m²	31
G	Frameless Patch Fitting Doors (Swing Doors)		
	Design, Fabrication, Supply, Installation, Protection, Cleaning & Handover Single & Double leaf double swing patch fitting door made out 12mm thick fully tempered (FT) glass with Dorma make stainless steel patch fittings for external facade application (PT Series). Complete with 38mm dia SS handle 1000mm long , PT series patch fittings, US 10 Door lock at bottom of each shutter and BTS 80, 90 deg with EN 1-4 spring capacity floor spring. Floor spring covers shall be SS satin finish. as per Architect's approved shop drawings.		
	Door glass of 12 mm thk clear float fully tempered with holes and notches as per patch fitting requirement. Edges Machine ground mirror polished. The door glass shall have silicon gasket at bottom to act as weather seal.		
	All Material Make / Vendor list / Supplier list shall be as per tender specification.		
	The quote rate shall include all design & shop drawing approval from architect & consultant.		
	Door Glass -12mm Thk. Clear FT Glass. (As per Client / Architect Approval sample).		
	Quote rate for complete system for Frame Less Patch Fitted Door as mentioned above under (G)		
	Double Shutter (Swing Doors):- (Size : 1600mm x 2400mm) Location:- Elevation-1, Ground Floor	Nos	1
H	120 minutes integrity fire rated - Non-load bearing Curtainwall System		
	Design, Testing, Fabrication, Supply, Installation, protection, cleaning & handover of 120 minutes integrity fire rated - fully glazed non-load-bearing curtain wall system. The glass should be as per system vendor-approved make and minimum 8 mm thick insulated, non-wired, insulated and thermally toughened with 120 minutes stability and integrity and light transmission of 91% in accordance to EN 1363 and EN 1364. The glass should be compliant to Class A category of Impact Resistance as per BS 6206: 1981 and 1(C)1 category as per EN 12600 and meet the requirements of statutory accident insurance as well as the Health and Safety at Work Act. The glass should remain completely transparent in fire and non-fire		

	conditions and should be easily breakable by the fire authorities in case of rescue operations. The glass should be held in place with the help of steel framing and pressure plates as per the test evidence. The maximum glazing size should not be more than the maximum tested size as per the test certificate. The glass should be tested from CBRI Roorkee/ Warrington's Fire Research Laboratory/ IFCA with CE certification/ approved NABL accredited lab or by any other accreditation body that operates in accordance with ISO/ IEC 17011 and accredits labs as per ISO/ IEC 17025 for testing and calibration scope shall be eligible for glass as per BS-EN 1364-1:1999/BS476 Part 2/EN 13501-2: 2003 & IS 3614 Part II.		
	The curtain wall system shall be manufactured with steel profiles, to withstand a wind load & 120min. Fire-rated. The glass shall be held in place with GI pressure plate and an outer cap minimum of 1.50 mm thick. The glass shall be insulated from the steel profiles and pressure plate with Kerafix 2000 15 X 4 mm glazing tapes of Rolf Kuhn (Germany). The profiles shall be fixed to the supporting construction SS 316 grade fasteners and anchor bolts as per the approved design calculation. All gaps between the supporting structure and the curtain wall system shall be sealed with backer rods and fire-rated silicone. The vendor shall submit a comprehensive design calculation to conform to the required wind load resistance. The system shall be super durable powder coated having 60-80 micron thickness in the required color shade. Facade vendor to provide 2-hour fire-rated overall test system certificate from approved test laboratory. The system design shall include pressure equalization with gaskets for improved weather performance. The system shall be designed considering surface temperatures of 80-90 degrees Cel & a temperature differential of 25 degrees cel without creating excess stress in the system. All metal joints in the wet area shall be small joint sealant applied to ensure water tightness.		
	Note: The above mentioned makes in the item description have been used to set the base standard of the product. Any other international manufacturer with 120minute fire rating with third party testing certifications shall be reviewed and approved by client, consultant		
	All the internal & External (IN/Out Side) visible surfaces shall have high Durability (AkzoNobel) / Super durable (Jotun) Powder coating of 60 - 80 micron confirming to AAMA 2604		
	All Material Make / Vendor list / Supplier list shall be as per tender specification.		
	All shade approval shall be as per Architect's Approval.		
	The quote rate shall include all design & shop drawing approval from architect & consultant.		
	Quote rate for complete system as mentioned above under (H) with Glass:-26mm DGU Glass:- (6mm Thk Reflective (ST/ET Series) HS Glass + 12mm Thk. Air Gap + 8mm Thk Special Glass as per above Fire rated specification) (As per Client / Architect Approval sample)	m ²	91
I	120 minutes integrity fire rated - Non-load bearing Double Leaf / Single Leaf Fire Rated Door System.		
	Design, Fabrication, Supply, Installation, protection, cleaning & handover of 120 minutes integrity fire rated - fully glazed non-load bearing Double Leaf / Single Leaf Fire Rated Door System with all Hinges / panic devices / Locking Accessories. The glass should be of approved make , non-wired, borosilicate and thermally toughened with 120 minutes stability and integrity and light transmission of 91% in accordance to EN 1363 and EN 1364. The glass should be compliant to Class A category of Impact Resistance as per BS 6206: 1981 and I(C)1 category as per EN 12600 and meet the requirements of statutory accident insurance as well as the Health and Safety at Work Act. The glass should remain completely transparent in fire and non-fire conditions and should be easily breakable by the fire-authorities in case of rescue operations. The glass should be held in place with the help of steel beading as per the test evidence. The maximum glazing size should not be more than the maximum tested size as per the test certificate. The glass should be tested from CBRI Roorkee/Warrington's Fire Research.		
	Laboratory/IFCA with CE certification/approved NABL accredited lab or by any other accreditation body which operates in accordance with ISO/IEC 17011 and accredits labs as per ISO/IEC 17025 for testing and calibration scope shall be eligible for glass as per BS-EN 1364-1:1999/BS476 Part 2/EN 13501-2: 2003 & IS 3614 Part II. The profiles are manufactured from galvanized steel sheets pressed formed to a profile of dimension of 50mm X 90mm as per test evidence. The profile has to be fixed to the supporting construction by means of M10 X 120 or bigger steel bolts at every 150mm from the edges and every 400mm (approximately) c/c. The glass should be held in its place with the help of steel beading of minimum 1.50 mm thickness which can be clamped or bolted to the profile by 4 mm X 35mm steel screws at every 250 mm c/c and as special intumescent ceramic tape from Rolf Kuhn (Germany) of the cross section of 2 mm X 15 mm as per the test evidence. The glass panes are to be supported on non-combustible 5 mm calcium silicate setting blocks. The maximum glazing size cannot be more than 1400 mm X 2520 mm or the maximum tested size as per the test report.		

	Note: The above mentioned makes in the item description have been used to set the base standard of the product. Any other international manufacturer with 120minute fire rating with third party testing certifications shall be reviewed and approved by client, consultant		
	All shade approval shall be as per Client & Consultant Approval. The quoted rate shall include all design & shop drawing approval from the consultant.		
	Approved Make -Shakti hormon, IHMS i-clean, Schott-FG ; Saint Gobain Vetrotech		
	Quote rate for complete system as mentioned above under item (I):- 120 minutes integrity fire rated - Non-load bearing Single Leaf Fire Rated Door System.		
	Glass:-26mm DGU Glass:- (6mm Thk Reflective (ST/ET Series) HS Glass + 12mm Thk. Air Gap + 8mm Thk Special Glass as per above Fire rated specification) (As per Client / Architect Approval sample)		
	Fire Rated Single Shutter Doors:- (Size : 1050mm x 2400mm), Location:- Elevation-1, Ground Floor	No	4
	Fire Rated Double Shutter Doors:- (Size : 2100mm x 2400mm), Location:- Elevation-1, Fifth Floor	No	2
J	Aluminium Framed Doors		
	Design, Fabrication, Supply, Installation, Testing, Protection, Cleaning & Handover Single & Double shutter aluminium framed door opening outward custom designed to with stand the design wind pressure. The system shall have two barrier gasket system for weather sealing at bottom. The profile system in line with tender drawing & minimum of 1.8 mm thickness.		
	The system shall have necessary arrangement for Three leaf projected type hinges ; Locking Cylinder ; SS 316 grade H-Type Handle; Door Closer ; tower bolt (for Double Shutter) of approved make. Microwave cured EPDM gaskets. Door shutter profile to accommodate the DGU glass and SGU glass, weather sealants, SS 316 grade screws and fasteners of approved make,		
	The extruded aluminium sections of Alloy 6063 T5 / T6 & tolerances confirming to DIN / EN standard from approved extruder. The structural profiles shall have minimum 1.8mm wall thickness. All the visible surfaces shall have high Durability (Akzonobel) / Super durable (Jotun) Powder coating of 60 - 80 micron confirming to AAMA 2604. The non visible aluminium surfaces shall have minimum chromatizing treatment.		
	All Material Make / Vendor list / Supplier list shall be as per tender specification.		
	All shade approval shall be as per Architect's Approval.		
	The quote rate shall include all Design & shop drawing approval from architect & consultant.		
	Aluminium framed door system with glass		
	Quote rate for complete system as mentioned above under item (J)		
	Double Shutter (Size :- 2100 mm (W) x 2400mm (H)) Location:- Elevation-2 & 3, First Floor to Tenth Floor	Nos	40
	Vision Glass: 24mm Thk. DGU:- Providing and fixing vision glass:-		
	24mm Thk. DGU:- (6mm Thk Reflective (ST/ET Series) HS Glass + 12mm Thk. Air Gap + 6mm Thk. Clear HS Glass) (As per Client / Architect Approval sample)	m ²	202
K	Seamless Glass Railing		
	Design, Fabrication, Supply, Installation, Testing, Protection, Cleaning & Handover of 950mm height & 1150mm Height glass (Above RCC Bund) Railing designed to with stand the wind pressure confirming IS 875 Part III and Live load of 105 Kg/ m uniformly distributed load as per IS 875 Part II.		
	The system shall be support the glass at bottom continuous U-channel fixed on the finished floor level and vertical glass to glass open joint with top Alum. Rail. 100mm Min. Glass In-build in the U-Channel. The weather sealant of approved make, baker rod, SS 316 grade fasteners & hard setting blocks of EPDM, all in complete required to perform as per specification and drawing in conjunction with BOQ. Complete system shall be warranted for minimum 10 yrs against design & workmanship defects.		
	The extruded aluminium sections of Alloy 6063 T5 / T6 & tolerances confirming to DIN / EN standard from approved extruder. All visible surfaces shall have Anodized finish with minimum 22 micron.		
	All Material Make / Vendor list / Supplier list shall be as per tender specification.		

	All shade approval shall be as per Architect's Approval.		
	The quote rate shall include all design, Design & shop drawing approval from architect & consultant.		
	Quote rate for complete system as mentioned above under (K).		
	Seamless Railing System:- (Railing Height:- 950mm Above 300 RCC Bund (Up Stand)) Location:- Elevation-1, First Floor		
	Railing Glass:- 17.52mm Thk Sentry Laminated Glass:- (8mm Clear HS Glass + 1.52mm SGP + 8mm Clear HS Glass)	Rmt	34
	Seamless Railing System:- (Railing Height:- 1150mm form FFL Location:- Elevation-1, Elevation-2, Elevation-3		
	Railing Glass:- 17.52mm Thk Sentry Laminated Glass:- (8mm Clear HS Glass + 1.52mm SGP + 8mm Clear HS Glass)	Rmt	690
L	Pergola- 20mm Polycarbonate Sheet With pressure plate system fixed on Ms Support frame		
	Design, Fabrication, Supply, Installation, Testing, Protection, Cleaning & Handover of 20mm Thk. Polycarbonate multiwall Sheet with pressure plate system fixed on MS Support frame custom designed to with stand the design wind pressure confirming to IS -875 part III. (The system must pass the proof test at 1.5 times design wind pressure without any failure) weather sealants, Bracketing system with MS hot dip galvanized brackets designed to accommodate three dimensional movements with serrated plate and serrated washers, SS 316 grade fasteners & Anchor Fasteners, nylon separators to prevent bi-metallic contacts, Aluminium trims and flashings to seal the gaps between skylight and the building structure all complete required to perform as per specification and drawing in conjunction with BOQ.		
	Flashing / Trim / Floor Closure at Parapet level, floor level, beam bottom level and required flashings shall be provided continuously with required GI / Aluminium sheet. Internal & External concealed Flashings shall be 1.0mm thk GI sheet. External exposed flashing shall be 1.5mm thk. Aluminium sheet with SDF coated matching with external finish. Internal exposed flashing shall be 1.5mm thk. Aluminium sheet with powder coated matching with internal finish.		
	Design, Fabrication, Supply and install required structural steel frame work in line with design drawings made out of MS pipe sections / I Beams / Channels / Plates of approved make make of first quality confirming to IS standard. The steel design shall accommodate thermal stresses resulting from thermal expansion due to surface temperatures. The steel structure shall be finish with the following, i. Surface Preparation – Blast cleaned to Sa 2.5 confirming to BS EN ISO 8501-1 ii. Primer : Zinc Rich Epoxy 75 micron iii. Barrier : Epoxy Mio 125 micron iv. Finish : Polyurethane – 50 Micron (Only for exposed steel)		
	All Material Make / Vendor list / Supplier list shall be as per tender specification.		
	All shade approval shall be as per Architect's Approval.		
	The quote rate shall include all design, engineering & shop drawing approval from architect & consultant.		
	Quote rate for complete system as mentioned above under (L) 20mm Thk. Polycarbonate multiwall Sheet with pressure plate system. Sheet Size:- (10701mm (W) x 13010mm (H) Location:- Elevation-1, Second Floor	m²	140
	Quote rate for complete system as mentioned above under (L) 20mm Thk. Polycarbonate multiwall Sheet with pressure plate system. Sheet Size:- (9700mm W x 7300mm (H) Location:- Elevation-2, Second Floor	m²	70
	Quote rate for complete MS works as mentioned in item (L)	Ton	26.0
M	4mm Thk ACP Cladding (Fr Grade Class B as per EN)		
	Design, Fabrication, Supply, installation, Testing, protection, cleaning & handover of Aluminium composite cladding of approved make in solid or metallic or wooden finish colours as per architect's approval Using grid work of prefabricated aluminium extruded sections to withstand the design wind pressure conforming to IS -875 part III. The fastening brackets of Aluminium alloy 6005 T5 / MS with HDG with serrations and serrated washers to arrest the wind load movement, fasteners and anchor bolts of approved make in SS 316, Nylon separators to prevent bi-metallic contacts all complete required to perform as per specification and drawing in conjunction with BOQ.		

	The 4mm thk ACP consists of 0.5mm outer skin of Aluminium with Lumiflon based fluorocarbon paint or kynar 500 based PVDF paint confirming to AAMA 2605 + 3mm FR Grade mineral core material (Fr Grade Class B) + 0.5 mm aluminium skin with service coat. The panel shall be designed for 15mm groove in horizontal & 15mm groove in verticals with close joint system. Vertical & Horizontal groove shall be filled by non staining high performance weather sealant. ACP panel shall have subframe all around panel and aluminium stiffeners profile as per structural requirements.		
	Prefabricated grid mullions are fixed on to the RCC and concrete masonry walls with SS 316 anchor bolts as recommended by approved supplier to support given design loads. The brackets shall have provision movement to accommodate the construction tolerances with + 35mm plumb in case of RCC structure and + 20mm plumb in case of steel structure . Use of aluminium brackets with serration and serrated washers to prevent wind direction movement after final position. Use of Hot Dipped galvanised brackets with serrations and serrated washers on to Steel structures.		
	The design shall accommodate the building movements, thermal expansion and seismic movements. Also shall accommodate thermal expansion resulting from surface temperature of 80-90 deg cel on ACP outer skin without creating any additional stress. The non visible aluminium surfaces shall have mill Finish.		
	The extruded aluminium sections of Alloy 6063 T5 / T6 & tolerances confirming to DIN / EN standard from approved extruder. The non visible aluminium surfaces shall have mill Finish.		
	All Material Make / Vendor list / Supplier list shall be as per tender specification.		
	All shade approval shall be as per Architect's Approval.		
	The quote rate shall include all engineering & shop drawing approval from architect & consultant.		
	Quote extra over on item for providing & fixing of 4mm Thick ACP as mentioned above under (M) Wooden Finish ACP for Soffit Cladding, (MS Support By Client) Location @ Elevation-2, Elevation-3, Elevation-4	m ²	3,171
	Quote extra over on item for providing & fixing of 4mm Thick ACP as mentioned above under (M) ACP (Band) for Terrace Floor Cladding, (MS Support By Client) Location @ Terrace Floor.	m ²	407
	Quote extra over on item for providing & fixing of 4mm Thick ACP as mentioned above under (M) ACP Pergola at Terrace Area, (MS Support By Client) Location:- Elevation 4, at Terrace Floor .	m ²	1,436
N	Aluminium Performance Louvers -RD407 Alufom CS Louvers System		
	Design, Fabrication, Supply, Installation, Protection, Cleaning & Handover of Deep Storm Resistant Fixed horizontal Louver Model RD407 Alufom or Equivalent approved make list Material with withstand the design wind pressure, conforming to IS -875 part III.		
	Top, sills, Jambs and Mullions to be one piece structural aluminium member. Louver consist of 4" deep system. Louver to be consist of a Horizontal blade in a drainable frame. Louvers to be supplied with 4" (101.6mm) high by full depth sill flashing formed from minimum 0.050" (1.27mm) thick aluminium. Sill flashings to have welded side panels. Louvers and sill flashing to be installed in accordance with the manufacturer recommended procedure to ensure complete water integrity performance of the louver system. Nominal minimum material thickness to be as follows. Heads, sills, jambs and mullions : 0.080 (2.06mm), fixed blade 0.60 (1.52mm)		
	The extruded aluminium sections of Alloy 6063 T5 / T6 & tolerances confirming to DIN / EN standard from approved extruder. The structural profiles shall have minimum 2 mm wall thickness. All the visible surfaces shall have Super Durable Powder coating finish of 60-80 micron thickness as per Approved shade by Architect. The non visible aluminium surfaces shall have mill Finish.		
	The louver system must be tested to and classified in accordance with AMCA Call "A" (99%) effectiveness standard - "Laboratory testing and rating of weather louvers when subjected to simulated rain" for rain defence and must have the following classification: The louver test was based on a 39.370" (1.00 m) x 39.370" (1.00 m) core area unit tested at a rainfall rate of 3" per hour (75 mm/hr) and with a wind directed to the face of the louver at a velocity 29.1 mph (13 m/s) as well as a rainfall rate of 8" per hour (203 mm) and a wind of 50 mph (23.3 m/s). The test data shall show the water penetration effectiveness rating at each corresponding ventilation rate.		
	All Material Make / Vendor list / Supplier list shall be as per tender specification.		
	All shade approval shall be as per Architect's Approval.		
	The quote rate shall include all design & shop drawing approval from architect & consultant.		

	Quote rate for complete Aluminium Louvers system as mentioned above under (N), Location:- Elevation -1, Elevation -2, Elevation-3, Elevation-4	m ²	353
O	Skylight with laminated Glass @ First Floor (Inside)		
	Design, Fabrication, Supply, Installation, Site & Material Testing, protection, cleaning & handover of Conventional capped Skylight system designed to with stand the wind pressure of confirming to IS -875 part III. (The system must pass the proof test at 1.5 times design wind pressure without any failure) & Live load of 125Kg/m uniformly distributed load as per IS 875 Part II. The profile system is based on capped curtainwall design and glass is held two Side by mechanical pressure plate and cap with microwave cured EPDM gaskets, with necessary screws and fasteners & slope sides of glazing close joint with non-staining weather sealant. Aluminium flashing sealed all around parameter inside and outside to seal the gaps between skylight and the building structure all complete required as per drawing in conjunction with BOQ.		
	The system design shall include pressure equalization with minimum 2 barrier gaskets for improved weather performance. The system shall be designed considering surface temperatures of 80-90 deg Cel & temperature differential of 25 deg cel without creating excess stress in the system. All metal joints in the wet area shall be small joint sealant applied to ensure water tightness.		
	Design, Fabrication, Supply and install required structural steel framework in line with design drawings made out of MS box pipe sections / End Fixing Plates of approved make make of first quality confirming to IS standard. The steel design shall accommodate thermal stresses resulting from thermal expansion due to surface temperatures. The steel structure shall be finished with the following OR as per the supplier's method approval from the Client & consultant. i. Surface Preparation – Blast cleaned to Sa 2.5, confirming to BS EN ISO 8501-1 ii. Primer: Zinc Rich Epoxy 75 micron iii. Barrier : Epoxy Mio 125 micron		
	The extruded aluminium sections of Alloy 6063 T5 / T6 & tolerances conforming to DIN / EN standard from the approved extruder. The structural profiles shall have a minimum 2 mm wall thickness. All the internal & External (IN/outside) visible surfaces shall have high Durability (Akzonobel) / Super durable (Jotun) Powder coating of 60 - 80 micron conforming to AAMA 2604 & non-visible aluminium surfaces shall have minimum chromatizing treatment.		
	The system shall have Anodised finish Vertical & Horizontal capping of 15-12mm in the elevation		
	All Material Make / Vendor list / Supplier list shall be as per tender specification.		
	All shade approval shall be as per Architect's Approval.		
	The quote rate shall include all design & shop drawing approval from architect & consultant.		
	Quote rate for Conventional capped Skylight complete system as mentioned above under (O)		
	Skylight Glass : 17.52mm Thk Sentry Laminated Glass:- (8mm Clear HS Glass + 1.52mm SGP + 8mm Clear HS Glass.) with frit 80% as per architect approved design.	m ²	52
	Quote rate for complete MS works as mentioned in item (o)	Ton	1.53
P	Metal Roofing Sheet @ Terrace Floor		
	Design, Fabrication, Supply, Installation, Protection, Cleaning & Handover of Metal Roofing Sheet Panel 0.8mm Thk. with galvanized steel, confirming to DIN / EN standard. System shall withstand the design wind pressure conforming to IS-875 Part III. Panel fixed on MS self-supported back system with, fasteners and nut-bolts of approved make in SS 304 grade. Nylon separators to prevent bi-metallic contacts, all complete required to perform as per specification and drawing in conjunction with BOQ.		
	Flashing / Trim/roof closure at Parapet level, beam bottom level, and required flashings shall be provided continuously Metal Roofing sheet. Internal & External concealed Flashings shall be 1.5mm thk.		
	The design shall accommodate the building movements, thermal expansion and seismic movements. Also shall accommodate thermal expansion resulting from surface temperature of 80-90 deg cel on Sheet outer skin without creating any additional stress.		
	All the internal & External (IN/outside) visible surfaces shall have high Durability (Akzonobel) / Super durable (Jotun) Powder coating of 60 - 80 micron conforming to AAMA 2604		
	All Material Make / Vendor list / Supplier list shall be as per tender specification.		
	All shade approval shall be as per Architect's Approval.		

	The quote rate shall include all design, engineering & shop drawing approval from architect & consultant.		
	Quote rate as mentioned above under item (P) :- Metal Roofing Sheet @ Terrace Floor	m²	1,950
Q	Auto Sliding Door		
	Design, Fabrication, Supply, Installation, Protection, Cleaning & Handover of Auto Sliding Door Top motor make by DORMAKABA/ OZONE / PORTALP / GEZE, including Hardware & accessories fitting for door as per supplier requirement with 12mm thick fully tempered (FT) glass.		
	Door glass of 12 mm thk clear float fully tempered with holes and notches as per fitting requirement. Edges Machine ground mirror polished. With side fix glass fixed in Alum. U-Channel.		
	All Material Make / Vendor list / Supplier list shall be as per tender specification.		
	All shade approval shall be as per Architect's Approval.		
	The quote rate shall include all Design & shop drawing approval from architect & consultant.		
	Quote rate for complete system for Auto Sliding Door as mentioned above under (Q)		
	Providing and Fixing of Automatic Sliding Double Door , Door Opening Size:- 3000mm x 2400mm, Door Expansion Size:- 6000mm X 2400mm, Location:- Elevation-1, Ground Floor, Nos:- 1 (Main Entrance)	Nos	1
	Providing and Fixing of Automatic Sliding Double Door , Door Opening Size:- 1860mm x 2400mm, Door Expansion Size:- 3720mm X 2400mm, Location:- Elevation-2, Ground Floor, Nos:- 1	Nos	1
R	Cleaning System For External Façade		
	The proposed cleaning system use only for cleaning the facade consists of pedestals jibs mounted on special holding down units. The jibs shall be portable & shall be prepared from Aluminium alloy. The holding down units bolted to MS bracket at min. 2mtr. provided onto the RCC pedestals cradle shall be suspended on jibs for the purpose of facade cleaning. Provision of MS brackets shall form a part of cleaning system vendor scope.		
	Cradle of 2 mtr wide, two men swivelling type made out of MS hot dip galvanised & powder coated sections aluminium alloy sections with powder coating finish with antibanging cushion pads. The cradle winch capacity shall be to support 4 men with 100 kg glass DGU in case of servicing of broken glass. The hoisting control arrangements built inside the cradle.		
	Safety arrangement system encase of motorised winch failure, cushion pads to be provided to resist the impact of cradle onto the facade glass in windy conditions. Also provision of manual arrangement to come down slowly. The rope capacity shall be 1.5 times higher than the working load capacity including system dead load.		
	Approved system suppliers shall be JKB Equipment Ltd, Cradle Runways System, Tractel system, FLE Access system.		
	The quote rate shall include all Design & shop drawing approval from architect & consultant.		
	Quote rate for providing complete pedestals mounted davit jib system holding down units with MS insert plates @ 2m c/c : 2 Nos davit jib system ; two men power cradle along with necessary safety features as mentioned under (R) Quote rate for complete testing & commissioning the system up to the satisfaction of client / PMC.	No	1

वर नमूद सुचित दर्शविलेल्या बाबींचे पुरवठा करणारे पुरवठादार/दुकानदार/उत्पादक/विक्रेते यांनी नमूद केलेल्या बाबींकरिता असलेले दर स्वतःच्या लेटरहेडवर महापालिकेच्या कार्यालयात अथवा ई-मेल द्वारे pmcbandhkamdept01@gmail.com यावर दिनांक १८/०६/२०२५ पर्यंत पाठवावे ही विनंती, सदर दर हे अंदाजपत्रक तयार करणेसाठी गृहित धरणेत येणार आहेत.

Shah

शहर अभियंता

पनवेल महानगरपालिका

जा.क्र पमपा/बांधकाम/२३२३/प्र.क्र. २३/ २०१४ /२०२५, दि. ११/०६/२०२५

प्रत माहितीस्वरूप — १. माहिती फलक करिता