

**Exterior Restoration and Interior
Upgradation of
Bombay Natural History Society
VOLUME C (PART 1)
For Items to be tendered : Civil,
Electrical & HVAC items**

GRAND SUMMARY

SUMMARY SHEET		
Name of Work: TENDER FOR BOMBAY NATURAL HISTORY SOCIETY FORT, MUMBAI		
SR.NO.	DESCRIPTION	AMOUNT
1	CIVIL WORKS	- ₹
2	HVAC	- ₹
3	ELECTRICAL	- ₹
	TOTAL	- ₹

CIVIL: SUMMARY

SUMMARY SHEET FOR CIVIL WORKS		
Name of Work: TENDER FOR BOMBAY NATURAL HISTORY SOCIETY FORT, MUMBAI		
SR.NO.	DESCRIPTION	AMOUNT
I	CIVIL WORKS	
	EXTERIOR WORKS	
A	ENABLING AND PROTECTION WORKS	- ₹
B	EXTERIOR RESTOTATION	- ₹
C	STRUCTURAL REPAIR WORK	- ₹
D	SITE UPGRDATION	- ₹
	INTERIOR WORKS	
E	PROTECTION & DISMANTLING WORKS	- ₹
F	FLOORING	- ₹
G	PARITION WALLS & FINISHES	- ₹
H	DOORS, WINDOWS, SOFFITS & RAILINGS	- ₹
I	FALSE CEILING	- ₹
J	ACOUSTIC WORKS	- ₹
K	FIXED FURNITURE	- ₹
L	REFURBISHMENT OF EXISTING FURNITURE	- ₹
M	SIGNAGE	- ₹
N	TOILET UPGRADATION	- ₹
	TOTAL OF CIVIL TENDER	- ₹

CIVIL: ABSTRACT SHEET

ABSTRACT					
Name of Work: BOMBAY NATURAL HISTORY SOCIETY FORT, MUMBAI					
NOTE: All the interior items are inclusive of providing scaffolding and no extra amount shall be paid. Items of shifting furniture from the existing chambers to enable the works in the chamber to be inclusive in the rates and nothing extra shall be paid on labour for shifting of the same piece of furniture upto 3 times within the BNHS premises. The furniture removed from the rooms (fixed or loose) shall be officially handed over to the Client and shall not be considered the property of the Contractor. All Historic furniture which would be reused shall be marked and kept aside carefully wrapped in bubble wrap and stacked carefully on site with numbering and cataloguing. No furniture will leave the BNHS premises without prior permission of the Architect and the Engineer in charge without a challan.					
All items to include preparing and making sheds for material storage, stacking, carpentry workshop etc., and cordoning off areas where works are being undertaken with proper signage. No unauthorised personnel to walk on the premises where work is under progress. All dismantling works to be paid under relevant items. However carting of debris to be inclusive in the rates as quoted and shall not be allowed to stack on the site for more than 2 days. No material to leave the site without the consent of the architect and client's representative. Carting away of debris from the site shall be closely monitored by the client's representative and shall be removed from site with a proper challan.					
Sr. No.	Description of Item	Quantity	Unit	Rate	Amount
1	2	3	4	5	6
EXTERIOR WORKS					
A ENABLING AND PROTECTION WORKS					
1	Providing and erecting two legged mild steel tubular scaffolding, of width 1200 to 1500mm largely free standing, using H frames or mild steel tubular pipes of minimum 40 mm diameter, with base plates, fixed or adjustable with necessary clamps, couplers, brackets for projections, joint pins, pullies and other accessories, including steel angle or tubular pipe bracings at adequate intervals, access platforms of metal or timber planks of span not exceeding 2.5 Metre, including provision of rubber inserts to pipe ends at points of contact with structure to avoid damage, including access ladders with intermediate platforms. The scaffolding is to be suitably braced and anchored to the building using support systems created temporarily at the openings in the walls using vertical and horizontal adjustable steel props. The rate includes provision of Nylon net covering to protect architectural details on the entire building face, required, and safety platforms at ground level covering the entrances to the building.	756	SQ.M		- ₹
	Item to include Providing and erecting Nylon Net covering covering fixed to the exterior face of scaffolding including duck tape with safety signage "work in progress" and "caution" boards at ground level and demarcation of entrances to the building. The measurements will be calculated by multiplying the lengths of the two legged units at the centre line of the 1200-1500mm scaffold unit widths x heights of the individual rows. The rates will include for the cross bracings between the rows of the scaffold units				
2	Providing and erecting for strengthening the distressed structure by using steel adjustable props of required length with connecting pipes and couplers with wooden load distributors at top and bottom etc., complete.	20.9	SQ.M		- ₹
A TOTAL ENABLING AND PROTECTION WORKS					
B EXTERIOR RESTOTATION					
3	Gently cleaning the surface of the stone masonry and piers with Water by gentle brushing with soft nylon brushes as specified. Gentle surface cleaning may include mild pH balanced surfactants as specified for indicated areas to remove surface dirt, grit, sulphate accretions, lime wash etc as indicated by Architect.	783	SQ.M		- ₹
4	Extra over above item for additional treatment of poulticing for desalination of stone, removal of sulphate accretion and gentle stone cleaning using ammoniacal paper poulticing and clay packs cleaning as specified by Architect. This item to include cleaning orifices, removing encrustations for elements such as gargoyles, water troughs etc. with scaffolding if necessary . The item to include covering the ammoniacal paper poultice and clay packs with plastic films sealing it air tight for atleast 24 hrs. or as directed by architects, followed by gently cleaning of surface with water and soft nylon brushes as directed. The item to be repeated upto the satisfaction of the Architects and the measurement should be paid once.	313.2	SQ.M		- ₹

5	Specialised removal of layers of paint and other impervious coatings and cementitious layers on stone surface. Item to include usage of mechanical tapping, chemical surfactant or solvents like 'Unipeel' or equivalent if necessary as directed by the Architect or Engineer in Charge. Test patches would need to be undertaken to assess efficiency of technique prior to work. After removal of chemical surfactant, the surface to be cleaned atleast 2 - 3 times with water and nylon brushes to ensure surfactant free surface to the satisfaction of the Architect, including all necessary tools, hardware, scaffolding etc. required to complete item in all respects.	156.6	SQ.M		- ₹
6	Removal of plant/ficus growth by pulling out root system embedded in masonry, cutting stem and application of hing/gur/lime formulation as specified by the Architect or other patented chemical biocide treatment such as biocide 'Glycel' – (iso propylamine salt of glyphosate) or other chemical as specified by the Architect etc complete	20	NO.		- ₹
7	Dutchman Repair of stone sections that are severely distressed, re-installation of new Porbunder/ Basalt/any stone piece to match existing stone as a fascia upto a required depth in similar colour and texture and size. Item to include cutting out the damaged stone piece from site, making the area good and fixing the new stone with lime mortar grout and anchoring technique after neatly cutting out damaged stone profile using stainless steel pins of 6 mm dia threaded at end. The size of the stone piece would be approximately of 150 mm by 300 mm. Item to include dressing the stone as per the original texture of the stone used on site. Item to include showing samples of Porbunder stone for approval by the Architect/Engineer in charge. Item to include showing samples of stone for approval by the Architect/Engineer in charge. Item to include scaffolding if required etc. complete	0.225	CU.M		- ₹
8	Raking out cement pointing or any other hard material used and careful re-pointing and repair to be carried of the damaged pointing along external facades, and pointing to walls externally and internally above the masonry with poor joints, in lime mortar 1:3 (1 lime, 3 sand, mix to be approved by the Architects before application) and filling in of any holes/ damage areas of stone that may have to be filled in lime mortar. Pointing to be carefully colour matched using additives such as kattha, sand, stone dust and such additives to exactly match surrounding stone. The cost to include preparation of batches of samples upto 20 samples of colour matched lime mortar for approval by the Architect. The Contractor to ensure use of masking tape and sharp specialized spatulae and tools to ensure clear lines and high level of workmanship on site.	QRO	SQ.M		
	OR				
9	Raking out cement pointing or any other hard material used and careful re-pointing and repair to be carried of the damaged pointing along external facades, and providing recessed pointing with cement mortar 1:3 for stone masonry work including scaffolding and curing etc. complete as per the detail approved by the Architects before application. The cost to include preparation of batches of samples upto 20 samples of colour matched mortar for approval by the Architect. The Contractor to ensure use of masking tape and sharp specialized spatulae and tools to ensure clear lines and high level of workmanship on site.	783	SQ.M		- ₹

10	Filling the existing rain water pipe passing through the masonry with ready mix cement of M10 proportion with trap/ granite. quartzite/ /gneiss metal in foundation including necessary form work, compacting and curing etc.complete. concrete to close it from the terrace. This is to be done to stop the water from seeping into the masonry wall.	1.072	cu.m		- ₹
11	Providing and fixing ISI 1729/2002 grade 100 mm dia. Cast Iron Rain Water Pipe with lugs including rain water receiving recess with cast iron grating plug bend, necessary fittings such as offsets, shoe including filling joints with spun yarn soaked in bitumen and cement mortar in 1:2 proportion, fixing on walls by means of Galvanised Mild Steel Bracket 30 x 5 mm plate and 8 mm square rod with Galvanised Iron clam with washer as per design, drawing and as directed to keep pipe 50 mm away from wall including testing, cement concrete 1:2:4 blocks of 30 cm x 30 cm x 30 cm in size including necessary scaffolding and painting the exposed faces with one coat of red lead oil paint and two coats of white oil paint including removing the existing pipe if necessary and conveying and stacking in P.W.D. Chowky or as directed by Engineer-in-Charge.	26.8	R.m		- ₹
12	Providing sand face plaster externally to concrete, stone or brick surfaces using approved screened sand including preparing the base, watering and applying base coat of 15 mm thick in cement mortar 1:4 using water proofing compound at the rate of 1 Kilogramme per cement bag and curing the same for not less than two days and keeping the surface of base coat rough to receive the sand faced treatment not to exceed 8 mm thickness in cement mortar 1:4 and finishing the surface by taking out grains and curing for 14 days and scaffolding etc. complete.	168	sq.m		- ₹
B	TOTAL OF EXTERIOR RESTORATION & TERRACE WORKS				- ₹

C	STRUCTURAL WORKS				
13	Removing cement plaster of any finish from the wall, complete with racking out the joints to a depth of 20 mm.	1300.00	smt		- ₹
14	Proving and applying 6mm thick internal sand faced ceiling plaster in cement mortar 1:3 at all heights and locations in single coat for concrete surfaces including scaffolding, hacking of concrete surface, watering, finishing, curing etc.	60.00	sqm		- ₹
15	Breaking and removing the water proofing layers of I. P. S. with bituminous joints and brick bat concrete over the existing terrace floor including cement vata and exposing R.C.C. slab top complete.	480.00	smt		- ₹
16	Supply, cut, bend and fix in position Corrosion Resistant High Yield strength Deformed bars for all diameters conforming to relevant IS including tying with binding wire (16 SWG Annealed wire) or welding, tested steel reinforcement for all reinforced concrete at all locations and levels, including transporting, handling etc. complete. No separate payment for chairs, laps, wastage and binding wire will be made.				
	Thermo-Mechanically Treated steel bars. (Fe 500 D)	1.00	M.T.		- ₹
17	Chipping /removing loose concrete upto reinforcement bars, without damaging the reinforcement, removing all the loose materials and to make all the exposed surfaces free from oil, dust and all impurities etc complete.	410.00	Sqm		- ₹
18	Removing corrosion of steel reinforcement by mechanical means like wire brushing, chipping to remove loose rust and then applying rust removal solution by using brush application, leaving the surface for at least 15 to 30 minutes, then removing loose materials by scrubbing or with brush and applying polymer bond to the old concrete surface before applying Polymer mortar.	410.00	Sqm		- ₹
19	Providing and applying Ready mix Polymer modified cement mortar of average thickness 15mm using Polymer in one or more layers in proportion 1:5:15 of Polymer Cement Quartz Sand as manufacturer's specifications in specific layers, curing the surface after 72 hours of application with wet gunny bags etc and by finishing the surface with 12mm thick (1:3) Cement sand plaster.	195.00	Sqm		- ₹
	50% of The Total PMM Qty				
20	Providing and applying Ready Mix Polymer modified cement mortar of average thickness 30mm using Polymer in two layers in proportion 1:5:15 of Polymer Cement Quartz Sand as manufacturer's specifications in specific layers, curing the surface after 72 hours of application with wet gunny bags etc and by finishing the surface with 12mm thick (1:3) Cement sand plaster.	195.00	Sqm		- ₹
	50% of The Total PMM Qty				
21	Providing Ready mix Micro Concrete jacketing to walls or beams of thickness upto 75 mm using Polymer modified cement premixed quartz sand aggregate packed in bags of standard manufacture, for high early strength of 40 N /mm sq.cm of approved brand. The dry product is to be mixed with 12.5% water by weight, along with washed and poured into rigid form work moulds & tamped properly, & cured for 3 days. [Payment is to be made by weight premixed of micro concrete product consumed as per site register records. No extra payment shall be made for shuttering or any other material.	8556.90	Kg		- ₹

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22	Providing internal plain faced plaster 12 mm thick in cement sand mortar 1:4 with neeru finish to brick work and concrete surface including curing finishing etc. complete.	1300.00	Sqm		- ₹
23	Providing external sand faced cement plaster 20 mm thick in cement sand mortar (1:3) in two layers including providing water proofing compound to the first coat of plaster as per manufacturers specification, including curing etc. complete.	10.00	Sqm		- ₹
24	Removing or destroying plants etc. growing on walls, drainage pipes, destroying roots by applying approved weedicide & reinstating the wall surface by plaster to the damage surface of the building (When country teak wood is mentioned it is to be first quality)	10.00	Sqm		- ₹
25	Providing waterproofing treatment through specialized agencies as per their specifications to the flooring of water closets, bathrooms, kitchen, nahanies, washing places, sanitary blocks etc. by giving INJECTIONS with cement solution with water proofing compound into the floor slab so as to make it consistent, homogeneous and impervious against leakage, seepage etc. The sunk portion shall then be covered with brickbat waterproof coba in 1:5 c.s. of required thickness with necessary gradient for easy flow of water. Finally the floor shall be covered with joint less waterproof cement plaster in 1:3 c.s. 12 mm to 15 mm thick finished rough for receiving tiles. The average thickness of complete treatment shall not be less than 100 mm. The soil pan area will not be deducted. (After completion of work leakage test shall be carried out after impounding the water for 7 days without any extra cost. The actual treated area will be measured and paid for).	50.00	Sqm		- ₹
26	Extra for providing additional thickness of brickbats over 100 mm in 1:5 c.s. either due to location of rain water pipes or due to increase in the travel length of flow of rain water or brick bats required in the sunk portion of baths, W.C.s nahani etc. The rate includes for fixing brickbats in C.M., with waterproofing compound as per specification as directed.	15.00	Cum		- ₹
27	Water proofing treatment to the chajja after removing old plaster and roughening the surface and finishing the top surface with 20mm thk. 1:2 c.s. plaster with approved water proofing compounds and neat cement finish, the rate also includes for 1:3 c.s. facia of chajja to match the new surface(actual area treated will be paid).	8.72	Sqm		- ₹
28	Providing waterproofing treatment to the existing terrace/top slab at any floor level (including slab portion beneath overhead water tank) by	430.00	Sqm		- ₹
	1. Removing the existing top layer of the terrace/top slab upto the top of existing brick bat coba without causing any damage to any of the structural member and cleaning the same of any loose material etc. complete as directed				
	2. Dividing the total slab area by marking grid at a spacing of 1.2m. c/c in either direction and form square panels of the size 1.2 m. x 1.2 m. and drilling the holes (by using machine) 37 mm. to 50 mm. dia upto required depth in the R.C.C. slab in staggered form at the junction of the above marked grid as specified and directed by an Engineer in charge.				
	3. Filling the holes only at bottom portion with 10 mm size metal, inserting the grouting nozzle in the drilled hole for grouting and making the hole watertight by filling the gap between nozzle and the hole with cement mortar 1:1 or any other suitable material as a sealant.				

	4. Injecting the cement grout admixed with waterproofing compound (one part of cement to 2 parts of water is recommended; initially richer mix which is possible but for further grouting leaner mix is required for filling smaller voids, mix should not be leaner than 1 cement:5 water) with required pressure (as per site conditions) by grout pump so as to seal all inherent holes, honey combs, cavities and voids and making the whole structures consistent and homogeneous solid mass resistant to seepage, dampness, moisture and leakage of water, allowing the grout to overflow from the vent holes (i.e. holes at diagonally opposite corners), to ensure no pockets left.				
	5. Taking holes one by one in the staggered form for grouting purposes and in each case holes at the diagonally opposite end will be acting as vent holes.				
	6. Filling the entire area by 15 cm. deep water for ponding test. The ponding test shall be checked after 7 days by the officer of the rank not below Executive Engineer along with Zonal Executive Engineer to ensure that there is no leakage found. The certificate to this effect shall be given by the concerned engineer.				
	7. Repeating step 4 to 6 until the entire structure is found completely waterproof, if any leakage is found				
	8. Laying the flooring of broken China-mosaic (broken pieces of China glazed tiles) of approved colour set in 25 mm. average bed of C.M. 1:3 with waterproofing compound to correct level and slope (1:100) well compacted and finished; such that minimum coverage of China mosaic chips is about 90% of the total area of slab. The above treatment shall continue along the inner side of parapet or the adjoining wall upto 30 cm. high as per the above specifications regarding cement mortar in shape of round vata with necessary groove etc. complete.				
	9. Curing the flooring continuously for minimum ten days so as to render the surface hard and tough to withstand weather and normal domestic use.				
	10. Cleaning the slab and removing and carting the debris;cleaning the top of all dust, loose material,stains etc. complete as directed.				
	NOTES : 1. No extra payment will be made for brickbat concrete if any, required to fill up the voids which are developed in the process of removing top layer. If there are any such voids; the same shall be filled up with brick bat concrete so that levelled surface is at a correct level and slope is available for laying China mosaic flooring.				
	2. The finished terrace surface shall be paid for the actual area treated including cement vata.				
29	Providing, detailing, fabricating and fixing at desired location using hot rolled sections and MS Plates of grade Fe 250 as per specifications and approved fabrication drawings (which are to be prepared by Contractor and got approved from Engineer), transporting to site and erecting structural steel members for all heights & at all levels including provision of necessary erection bolts, fixing bolts, nuts, washers, cleats, stiffeners, gussets, base plate, and all necessary fixtures and operations like preheating as per specifications, straightening, bending, cutting, drilling, grinding, machining if specified, welding, grinding and removing the welding burr and preparing surface for painting with wire brush cleaning and applying two coats of epoxy red oxide zinc phosphate primer of 30 microns each and two coats of Epoxy Corrosion Resistant Enamel paint of 30 microns after fabrication including touching up with spray painting after erection etc complete as directed by Engineer In Charge. (The qty. for this item shall be measured for gusset plates, base plates, bolts in M.T.)	3.00	MT		- ₹

30	Providing, detailing, fabricating and fixing built up sections at desired location using MS Plates of grade Fe 250 as per specifications and approved fabrication drawings (which are to be prepared by Contractor and got approved from Engineer), erecting structural steel members for all heights & at all levels including provision of necessary erection bolts, fixing bolts, nuts, washers, cleats, stiffeners, gussets, base plate, and all necessary operations like preheating as per specifications, straightening, bending, cutting, drilling, grinding, machining if specified, welding, grinding and removing the welding burr and preparing surface for painting with wire brush cleaning and applying two coats of epoxy red oxide zinc phosphate primer of 30 microns each and two coats of Epoxy Corrosion Resistant Enamel paint of 30 microns after fabrication including touching up with spray painting after erection etc complete as directed by Engineer In Charge.	1.00	MT		- ₹
31	Crack stitching 6mm Helibar: Providing and fixing of Helifix Hi-fin reinforcement Helibars of 6mm dia, single bar in one slot, MOC Austenitic stainless steel, ASTM 304, having cross section area of 8 mm ² , pitch 29/30, with UTS 980 N, shear strength 5.5 kN, along with HeliBond Grout, a special cementitious grout with low expansion, non gassing and injectable with exceptional thixotropic properties. Including chasing of bedjoints for HeliBars, cleaning to achieve good bonding of HeliBar with HeliBond grout in the slot of masonry ensuring that it remains tight at the joint after curing, at locations as per instructions provided by Structure Engineer/ Helifix, excluding Staging & Scaffolding, at various places where there is crack in brick/stone/block masonry as directed by structural engineer / Helifix.	110.00	Rmt		- ₹
32	Crack stitching 8mm Helibar: Providing and fixing of Helifix Hi-fin reinforcement Helibars of 8mm dia, single bar in one slot, MOC Austenitic stainless steel, ASTM 304, having cross section area of 10.5 mm ² , pitch 38/40 with UTS 1370 N, shear strength 7.2 kN, along with HeliBond Grout, a special cementitious grout with low expansion, non gassing and injectable with exceptional thixotropic properties. Including chasing of bedjoints for HeliBars, cleaning to achieve good bonding of HeliBar with HeliBond grout in the slot of masonry ensuring that it remains tight at the joint after curing, at locations as per instructions provided by Structure Engineer/ Helifix, excluding Staging & Scaffolding, at various places where there is crack in brick/stone/block masonry as directed by structural engineer / Helifix.	110.00	Rmt		- ₹
33	Crack stitching 10mm Helibar: Providing and fixing of Helifix Hi-fin reinforcement Helibars of 10mm dia, single bar in one slot, MOC Austenitic stainless steel, ASTM 304, having cross section area of 14.8 mm ² , pitch 45/48 with UTS 1750 N, shear strength 9.5 kN, along with HeliBond Grout, a special cementitious grout with low expansion, non gassing and injectable with exceptional thixotropic properties. Including chasing of bedjoints for HeliBars, cleaning to achieve good bonding of HeliBar with HeliBond grout in the slot of masonry ensuring that it remains tight at the joint after curing, at locations as per instructions provided by Structure Engineer/ Helifix, excluding Staging & Scaffolding, at various places where there is crack in brick/stone/block masonry as directed by structural engineer / Helifix.	10.00	Rmt		- ₹

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34	CrackBond TE 250ml : Providing & fixing of CrackBond TE 250ml an injectable special epoxy resin with the help of manual pressure applicator and nozzle, including opening of crack, cleaning and ensuring sealing of cracks of 3mm - 12mm width upto a maximum depth of 150mm.	10.00	Ltr		- ₹
35	Polyplus SF (300 ml) : Providing and filling of general purpose styrene free resin with the help of manual pressure applicator and nozzle, to be used for anchoring helical bars wherever needed / specified by structure engineer/ Helifix.	10.00	Ltr		- ₹
36	Providing and fixing UV resistant selffit UPVC pipes of approved make for Rainwater downtakes confirming to IS 13592:1992 Type A suitable for 4kg/sqcm pressure for following pipe diameters including rain water receiving recess with pvc plug bend necessary fittings such as offsets shoes, fixing the pipes on wall with clips filling the joints with solvent/cement and necessary scaffolding etc. complete as directed by Engineer In Charge.				
	150mm dia	30.00	Rmt		- ₹
					- ₹

D	SITE UPGRDATION				
37	Dismantling of cement concrete pavement by mechanical means using pneumatic tools, breaking to pieces not exceeding 0.02cum in volume and stock piling at designated locations and disposal of dismantled materials upto a lead of 1000 metres, stacking serviceable and unserviceable materials separately etc. complete.	51.45	CU.M		- ₹
38	Dismantling plain cement concrete work including breaking concrete by chiseling, wedging, etc., stacking the serviceable materials and stacking the debris upto a distance of 50 Metre or spreading etc., complete	5.25	CU.M		- ₹
39	Clearing and grubbing road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned up to a lead of 1000 metres including removal and disposal of top organic soil not exceeding 150 mm in thickness.	35	SQ.M		- ₹
40	Providing and fixing Basalt flagstone of 50 - 75 mm thick paving to be laid in a diagonal/straight pattern as per original design and size and drawing given by the Architect. Damaged stone to be removed carefully without damaging the adjacent stone slab, stacked carefully on site. Item complete with cement mortar 1:4 laid to proper slope and finished with a floating coat of neat cement slurry including watering, curing, cleaning etc. Rate to be inclusive of tile, storage, all duties and taxes applicable, storage, handling, delivery on site, laying as well as cutting required to avoid cutting of main tiles, wastage and subsequent curing, hand polishing or if pre-polished available as directed etc. complete.	343	SQ.M		- ₹
41	Fabrication and installation of Cast Iron gates of approved design below in cast iron of min 12mm gauge weight not less than 70 kgs.& having pre cast base plate of thickness 20mm with provision of grouting for foundation bolts. All cast iron, members painted with anti-corrosion primer and coated with two coats of polyurethane coating and painted in glossy black colour as specified. All vertical upstands to be embedded in concrete block as shown in drawings. Bolts and nuts to be welded after fixing. Rate to be inclusive of base grouting, providing, fixing, nuts, bolts, welding, painting etc. complete.	10	SQ.M		- ₹
42	Fabrication and installation of Cast Iron railing over compound walls of approved design below in cast iron of min 75mm gauge weight not less than 70 kgs.& having pre cast base plate of thickness 20mm with provision of grouting for foundation bolts. All cast iron, members painted with anti-corrosion primer and coated with two coats of polyurethane coating and painted in glossy black colour as specified. All vertical upstands to be embedded in concrete block as shown in drawings. Bolts and nuts to be welded after fixing. Rate to be inclusive of base grouting, providing, fixing, nuts, bolts, welding, painting etc. complete.	52.5	SQ.M		- ₹

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43	Providing and fixing stone coping of required size, type and design to match the original existing compound wall coping found on site as directed by the Architect or Engineer in Charge. Item to include all necessary carving, cutting and dressing of the stone slab to match the original stone coping. The length of the coping stone to also be the same as the original size used and small and uneven size stone slabs should not be used to ensure minimum joints. Item to include procuring larger section of stone slab and carving / cutting to match the original stone design including necessary laying etc. complete. Mode of Measurement: Item to be paid as per the size of the carved stone coping fixed on site and not the larger size stone from which the coping stone is carved.	2.625	cu.m		- ₹
44	Providing & fixing of 75MM thk basalt stone as per shade and texture approved by the client/architect upto a maximum size of 3050 mm height and width as per equal divisions made on site. The cladding to not have any horizontal joints and should be detailed with grooves fixed with cement sand mortar (1:4) done to match colour of stone as directed by Engineer in- charge including transportation, loading/ unloading, providing /supplying /laying /fixinginstalling /fabricating /testing /commissionoing etc. on site. Rate shall also include all taxes such as VAT, excise, sales tax, Octroi etc.	70	sq.m		- ₹
45	Planting "Doob" grass Lawn on Soft/Hard surface: Providing and filling Red Hill Earth & Cow Dung Manure mixing in 2:1 proportion upto 200mm, watering to the depth of 1" three times, weeding after every watering before plantation of the grass, leveling, rolling after proper compaction, planting of good quality lawn suckers by dibbling method in staggered fashion at specified intervals including transport & unloading. Watering and proper mowing etc. maintaining for 1 month after completion of plantation and replacement of casualties till 1 month. In rows 5 cm apart in either direction and making good the damaged surface etc. complete	224	sq.m		- ₹
D	TOTAL FOR SITE UPGRADATION				- ₹

INTEIOR WORKS					
E	PROTECTION & DISMANTLING WORKS				
46	Providing and laying high density plastic sheet on the roof and other areas for monsoon protection and over temporary plaforms during roof restoration works. Item to include nails, nylon rope etc, required to fix the plastic sheet to the required areas. The plastic sheet to be of the best and approved quality available in market and as approved by the Engineer incharge.	174.3	SQ.M		- ₹
47	Plaster of Paris covering of 30mm thickness over the historic floor area with a bottom layer of high density plastic sheet/10 mm commercial ply over existing flooring to ensure that scaffolding/ movement of machine do not damage the historic flooring.	174.3	SQ.M		- ₹
48	Removing the TILED FLOORING / old cement / lime concrete or any type of flooring including levelling the surface, cleaning the site including sorting out serviceable tiles and stacking the same and debris upto a distance of 50 Metre.	316.6153	SQ.M		- ₹
49	Dismantling gysum Sheet ceiling / any kind of false ceiling with frame work including stacking the materials as directed with all leads, lifts etc. complete.	149.55	SQ.M		- ₹
50	Dismantling any kind of partition with frame work including stacking the materials as directed with all leads, lifts etc. complete	95.7	SQ.M		- ₹
51	Careful dismantling of lights and electrical wires etc complete, including stacking the materials as directed with all leads, lifts etc. complete		lumpsum		
52	Lowering down the debris of the existing waterproofing treatment from the terrace by any means without causing dust nuisance and damage to structure, stacking the same as and where directed including cleaning the site complete. (Rate for loose material) Spec: (As directed by Engineer-in-Charge)	56.2	CU.M		- ₹
53	Removing any kind of debris including loading in truck and conveying to approved dumping point, uploading and spreading etc. complete with all lead and lifts.	56.2	CU.M		- ₹
E	TOTAL FOR DISMANTLING WORKS				- ₹
F	FLOORING				
54	Providing and laying vitrified matt finish full body tiles having size 1200mm x 2400mm of 8 to 10 mm thickness of Mirage/ GreswCasa make or equivalent and confirming IS. , shade and pattern for flooring in required position fixed in 1:4 cement mortar including neat cement float, filling joints, curing and cleaning etc. complete. Laying pattern shall be as directed by Architect on site. (Basic rate : Rs.350/sq.ft = Rs.3766/sq.m)	389.44236	sq.m		- ₹

55	Providing and laying 10mm thk stone look alike tile of Nexion, Kalinga make or equivalent make for flooring, treads and risers of staircase over 15mm average thick base laid over and jointed with cement slurry mixed with pigment to match the shade of the slab, including polishing, making grooves complete with base of cement mortar 1:4 (1 cement: 4 coarse sand) 15mm thick, using single piece of length as per site requirement of approved quality, make and size thickness as per design to match the original details on site. Item to be inclusive of providing the nosing, grooves, spacing, details as shown in the drawing and as instructed by the Architect on site. Inclusive of tread length inside wet areas. (Basic rate Rs. 290/sq.ft = Rs. 3120/sq.m	58.32	SQ..M		- ₹
56	Providing and fixing 12mm thick toughened black tinted glass , manufactured like a clear float glass of Saint Gobain or equivalent make for the flooring on the raised MS deck as per the shade approved by the Architect. The deck is to be raised upto 150 to 200mm above the floor level. Item to be inclusive of providing MS frame work below the flooring as suggested by the glass Company. The item to be inclusive of providing a cove light facing the floor as per the detail shown in the drawing and as directed by the Architect on site. (Basic Rate for glass -	19.44	SQ.M		- ₹
57	Providing and fixing 30 mm thick scratch proof Engineered wooden flooring in deep oak/ walnut finish / teak finish or equivalent as per sample approved by the Architect and company specifications. Item to include providing and fixing skirting matching to the flooring as per company details and design. (Basic Rate of the material as per approved company - Rs. 700/Sq. Ft.)	0	SQ.M		- ₹
58	Providing & laying any kind of flooring, either natural stone or vitrified tiles, or cement tiles, or equivalent laid in 1:4 cement & mortar bedding with a float coat of cement slurry on top, including pointing the joints in white cement pigmented to match shade of the marble, machine cutting, cleaning, honing the floor upto 3 coats & maintain proper line level and protection with plastic sheets & POP during work. The flooring shall be sealed with a floor sealant that does not have a sheen, leaves a natural look, and is solvent based with a guarantee of 5 years, of Aquamix or equivalent make, as per company specifications. Cut size of flooring tiles/slabs to be as per drawing and pattern laid either diagonally or in curved designed pattern. Item to be quoted as per the basic rate of the material written under. Mode of Measurement to be as per the laid area on site and all transportation, labour to be inclusive.				
	Basic Rate - Rs. 100 - 200/ Sq. Ft. = 1,076/SQ.M	QRO	sq,m		
	Basic Rate - Rs. 200 - 300/Sq. Ft. = 2,152/SQ.M	QRO	sq,m		
	Basic Rate - Rs. 300 - 400/Sq. Ft. = 3,228/SQ.M	QRO	sq,m		
	Basic Rate - Rs. 400 - 500/Sq. Ft. = 4,304/SQ.M	QRO	sq,m		
	Basic Rate - Rs. 500 - 600/Sq. Ft. = 5,380/SQ.M	QRO	sq,m		
	Basic Rate - Rs. 600 - 700/Sq. Ft. = 6,456/SQ.M	QRO	sq,m		
F	TOTAL FLOORING				- ₹

G	PARTITION WALLS & FINISHES				
59	Providing and fixing unfinsihed TW partition with an internal framework of old C.P Teak Wood members of size 70mm x 30mm at a spacing of 600mm centre to centre in a Square grid. The C.P Teak Wood members must be notched & screwed adequately to give rigidity to the entire framework. The framework shall be covered on both sides by 8mm marine plywood by means of adhesives and screws. The framework must take support wherever desired from the floor & ceiling only & the floor must not be punctured at any spot (unless otherwise approved beforehand by the architect). All internal C.P.teak wood frame members as well as the inner surface of the plywood must be treated with antitermite treatment as well as with wood preservative. All exposed ply to ply joints shall be neat & well finished. Item to include incorporating a door along with necessary hardware within the partition wherever necessary as per drawing and finishing as per design. Item to include spray coating all the surfaces with approved anti termite solution including providing 10 year guarantee for the same as directed by the Architect or Engineer in Charge	218.3	sq.m		- ₹
60	Providing and fixing an unfinsihed TW internal framework on an existing wall . Framework to be made of old C.P Teak Wood members of size 70mm x 30mm at a spacing of 600mm centre to centre in a Square grid. The C.P Teak Wood members must be notched & screwed adequately to give rigidity to the entire framework. The framework shall be covered by 8mm marine plywood on 1 side by means of adhesives and screws. The framework must be fixed to the wall and should not take any support from the floor & the structural members such as beams/ columns should not be punctured at any spot (unless otherwise approved beforehand by the architect). All internal C.P.teak wood frame members must be treated with antitermite treatment as well as with wood preservative. Item to include spray coating all the surfaces with approved anti termite solution including providing 10 year guarantee for the same as directed by the Architect or Engineer in Charge. Item to be inclusive of providing a flushed door in the partition wherever required along with the required hardwares such as hinges, handles, towerbolts, etc complete	45	sq.m		- ₹
61	Providing and fixing in position extruded aluminium partition shaving frame made out of extruded tubular section of size 65mm x 40mm with 12mm thick three layered flat pressed teakwood particle board bonded with BWP type exterior grade phenol formaldehyde synthetic resin conforming to IS1 29231990, laminated on both sides, Novateak or equivalent with aluminium glazing clips of size 12mmx12mm (conical) as per drawing etc. complete.	161.2	SQ.M		- ₹
62	Providing and fixing a fire rated partition of 50 too 100 frame of wood with infill of rockwool of 48kg/m3 or plyof 1000gsm, with fixing of 4mm polyblock membered and 12mm fire rated plywood on both sides. Item to be inclusive of providing all the required harwares such as nails, bolts, etc complete.	99.3	SQ.M		- ₹
63	Providing & fixing motorised roller black out screen of Hunter Douglas make or an equivalent of length 7.3m x height 4.4m, having an openness factor of 3%, material composition of 79% PVC & 21 % Polyester, a thickness of 0.5mm and a weight of 400gms/ Sq.mt. Item is to be inclusive of providing the fabric, motor and remote control. The complete installation shall be as per the manufacturer's specifications.	43	sq.m		- ₹
64	Providing & fixing 12mm thick toughened clear float glass partition / fixed window in a 25mm thk wooden frame in the existing window cills as per drawing and requirement using dorma make spider patch fittings as per their specification and requirement upto a height of 13'. Item to include providing glass doors wherever required complete with hardware. Item to be inclusive of provding a wooden frame Patch fittings (dorma or equivalent) to be used for the glass door as shown in the drawing at all necessary joints and depending on the weight of the glass. Item to include glass door lock in the centre etc. complete	32.43834	SQ.M		- ₹

	FINISHES				
65	Providing and applying 0.8mm Zinc sheet cladding of VM CZinc make or equivalent. Item to be providing the required hardware, etc complete. Base rate = 550Rs./sqft = 5164Rs./sq.m	107.1	SQ.M		- ₹
66	Providing and fixing gypsum cladding of Saint Gobain Gyproc make on the existing wooden partition framework. All exposed joints between gypsum boards shall be neat & well finished with a layer of particle board.	35	SQ.M		- ₹
67	Providing and fixing marine MDF cladding of GreenPly make on the existing wooden partition/ existing masonry wall. All exposed joints between mdf boards shall be neat & well finished with a layer of particle board. Item to be inclusive of executing joinery details , finishes, mouldings, etc as directed by the Architect.	181	SQ.M		- ₹
68	Providing and fixing veneer of GreenPly make on the existing wooden partition framework. All exposed joints between veneers shall be neat & well finished with a layer of particle board. Basic rate of veneers : 120Rs/ sqft	84	SQ.M		- ₹
69	Providing and applying one priming coat to over new/old steel and other metal surfaces including preparing of the surfaces by thoroughly cleaning oil, grease, dirt and other foreign matter with wire brushing, fine fire steel wool, and sand paper, scaffolding etc. complete.	QRO	SQ.M		
70	Providing and applying one priming coat to wood and based surfaces including preparing of the surfaces by thoroughly cleaning oil, grease, dirt and other foreign matter with wire brushing, fine fire steel wool, and sand paper, scaffolding etc. complete	9	SQ.M		- ₹
71	Providing and applying three coats of synthetic enamel paint of approved colour to new structural steel work and wood work in buildings and workshops including scaffolding if necessary, cleaning and preparing surface by solvent, degreasing and derusting by manual scraping/ mechanically by sand blasting/shot blasting, flame cleaning/ by chemical methods complete. (excluding primer coat)	QRO	SQ.M		
72	Providing and applying melamine polish of Asian / berger / Nerolac / Dulux Paint or equivalent make on wooden surfaces. Item to be inclusive of cleaning and preparing the base surface	84	SQ.M		- ₹
73	Providing and applying french polish of Asian / berger / Nerolac / Dulux Paint or equivalent make on wooden surfaces. Item to be inclusive of cleaning and preparing the base surface	QRO	SQ.M		
74	Providing and applying antique satin metal finish of ICA Pidilite make or equivalent. Item to be inclusive of cleaning and preparing the base surface. Base rate = 480Rs./sqft = 5164Rs./sq.m	14.4	SQ.M		- ₹
75	Providing and applying duco paint of Asian / berger / Nerolac / Dulux Paint or equivalent make on wooden surfaces. Item to be inclusive of cleaning and preparing the base surface	20	SQ.M		- ₹
76	Providing and applying PU coat of Asian / berger / Nerolac / Dulux Paint or equivalent make on wooden surfaces. Item to be inclusive of cleaning and preparing the base surface	20	SQ.M		- ₹
77	Providing and applying Royale emulsion paint of Asian / berger / Nerolac / Dulux Paint or equivalent make on wooden surfaces. Item to be inclusive of cleaning and preparing the base surface. Item to be inclusive of scraping off the previous and cleaning the surface.	1134.90398	SQ.M		- ₹

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78	Providing and applying Royale Aspira emulsion paint of Asian / berger / Nerolac / Dulux Paint or equivalent make on wooden surfaces. Item to be inclusive of cleaning and preparing the base surface	QRO	SQ.M		
79	RAFFAELLO - Providing and applying of Raffaello (Marble Finish) vapour permeable polished marble finish for walls/ interiors , formulated with pearlescent material by OIKOS India as directed by the Architect. After the cleaning of surface and removing any loose or flaking materials, apply one coat of quartz primer by OIKOS India followed by three coats of Raffaello base coat and final coat of Raffaello polished marble finish in approved shade of OIKOS India and finish with Cera wax coat to achieve desired finish, excluding the cost of surface preparation and scaffolding, apply by towel and scraper with appropriate tools of OIKOS India, all complete as per manufacturer' specification with the direction of Architect. Approved Make - OIKOS India.	QRO	SQ.M		
G	TOTAL OF PARTITION AND FINISHES				- ₹

H	DOORS, WINDOWS, SOFFITS & RAILINGS				
80	Removing doors and windows of any size and type, with frame,mild steel/wrought iron grill work and stacking the same in the compound	8	NO.		- ₹
81	Removing doors and windows of any size and type, without frame mild steel/wrought iron grill work and stacking the same in the compound	5	NO.		- ₹
82	Providing and fixing a flush single/double shutter door 35mm thick of GreenPly or equivalent make, finished with 0.8mm thick Zinc sheet of VMZinc / Nedzink or equivalent make on both sides as per the shade approved by the Architect. Item to include 10 mm thk wooden edging strip on all sides of the door as approved by the Architect. Item to be inclusive of providing a glass infill as shown in the door elevation. All the required hardware such as heavy duty brass hinges, locks, powder coated full length metal handle, towerbolt, etc. to be part of the item and to be finished as per shade approved. Basic rate 0.8mm thk Zinc sheet of zinc: Rs.550/sq.ft = Rs. 5920/sq.m	19.1381	sq.m		- ₹
83	Providing and fixing a flush single/double shutter door 35mm thick of GreenPly or equivalent make, finished with 6mm thk veneer sheet on both sides as per the shade approved by the Architect. Item to include 10 mm thk wooden edging strip on all sides of the door as approved by the Architect. All the required hardware such as heavy duty brass hinges, locks, powder coated full length metal handle, towerbolt, etc. to be part of the item and to be finished as per shade approved. Basic rate veneer = Rs. 120/sq.ft = Rs.1291/ sq.m	QRO	sq.m		
84	Providing and fixing Corten steel - 0.8mm sheets in VMZinc / Nedzink or equivalent approved shade, fixed in the soffits of the doors and windows as indicated by the Architect. Item to be inclusive of providing a marine plywood frame. Basic rate 0.8mm thk Zinc sheet of zinc: Rs.550/sq.ft = Rs. 5920/sq.m	14.3	sq.m		- ₹
85	Providing and fixing 2 hour fire rated door Hormann make or equivalent doors of 850 to 1000 mm width x 2270 mm height size with GI frame and rockwool infill, shutter finished with honey comb material with powder coated finish , inclusive of all hardware inclusive of hinges, locks, handles etc	3.801	sq.m		- ₹
86	Providing and fixing or replacing damaged teak wood with well seasoned B.T.C. wood for door or window frames or members of decorative frame of the same original design, size and pattern including all mouldings, rebating, holdfasts and any other necessary fittings and finishing with one coat of primer complete.	QRO	cu.m		

87	Restoration of existing " MAIN DOOR " to include scraping of the wood polish, repolishing to be done as per approved shade. Item to include cost of scraping, and doing melamine polish complete. All the hardware to be repaired and replaced as per original if needed and to be polished.	10.5	sq.m		- ₹
88	Providing and fixing a VMZinc sheet finshed RAILING for the main staircase as shown in the reference image. Railing is to be 40mm thk, 900mm high and flushed along the finished floor level and the staircase soffit. Item to be inclusive of providing a wooden frame work of size 30x30mm palced at distance 300 to 450 c/c and packed with 8mm marine plywood. All the wooden members shall be treatd with antitermite treatment. Item to be inclusive of all the required hardware such as adhesives, nails, etc complete. Base rate for zinc sheet = Rs. 550/sq.ft	22.25	SQ.M		- ₹
89	Providing and fixing a powder coated C shaped MS channel; railing as shown in the reference image, 30mm depth and 75 mm in width as a continuous handrail supported from the wall through a rectangular MS sections supplied by Fecuni brand or equivalent. The supporting member to be fixed to the wall with the help of a 75x75 SS plate bolted to the wall before the fixing of the dado tiles. The plate to not ve visible in finished condition. All steel sections to be in 316 grade.	22.25	R.M		- ₹
H	TOTAL OF DOORS, WINDOWS, SOFFITS & RAILINGS				- ₹

I	FALSE CEILING				
90	Providing and fixing in position Gypsum board false ceiling with 12.5 mm thick Gypsum boards of Saint Gobain Gyproc make , screwed/ fixed to the under structure of the suspended G.I. Grid constructed and suspended from the main ceiling consisting of ceiling sections of size 25 x 50 mm maximum centre to centre distance of 600 mm perimeter channel and intermediate channels at maximum centre to centre distance 1200 mm galvanised grid should be fixed to reinforced cement concrete slab. The gypsum board should be fixed to galvanised iron grid with necessary screws. The boards should be taped and filled from underside to give smooth, seamless ceiling. The rate should include necessary additional ceiling sections and intermediate channels. Additional intermediate channels should be fixed to strap hangers for additional support to prevent strapping at every 1200 mm item to be completed in all respect including necessary sleeves for ducts finishing of joints cut outs and including labour, materials, lifts etc., all complete. Spec: (As directed by Engineer-in-Charge)	438.17	sq.m		- ₹
91	Providing and fixing Cove false ceiling of 15 to 20 mm thick boards of fibrous plaster of paris at a height of around 500 - 600 mm from the ceiling with a 75 mm high vertical band at the edge to hide the cove lights. Item to include scaffolding if necessary, all architectural work like mouldings etc. as per detailed drawings and three coats of spray painting to boards etc. complete.	161.82	R.Mt		- ₹
I	TOTAL FALSE CEILING				- ₹
J	ACOUSTIC WORKS				
92	Providing and fixing a sound proof partition of 50 to 100mm thk frame of wood at spacing 600mm c/c with infill of rockwool of 48kg/m ³ or polyof 1000gsm, with fixing of 4mm plyblock membered and 12mm marine plywood on both sides. Item to be inclusive of providing all the required hardware such as nails, bolts, etc complete.	QRO	sq.m		
93	Providing and fixing Knauf Danoline KRAFT - : Tectopanel of equivalent of Size 1200 x 600 x 12.5mm Micro perforation 3.5x3.5mm with 7.1 - 9.8% perforation and 0.85NRC : Regular Square perforation of glass fibre reinforced	28.5	SQ.M		- ₹
94	Providing and fixing a 100 to 120 thk soundproof door , finished in VMCZinc sheet. Item to be inclusive of providing a soundproof frame finished in zinc sheet inclusive of all hardware inclusive of hinges, locks, handles etc	4.41	sq.m		- ₹
J	TOTAL OF ACOUSTIC WORKS				- ₹

K	FIXED FURNITURE				
95	RECEPTION TABLE : Providing and fixing wooden finished reception table of length 2.5m x ht 1.2m x width 750m. in 19mm thick commercial plywood used for top, verticals & internal shelves, 8mm thk commercial plywood used for backing & 19mm thick commercial plywood shutters. The table top shall be finished in veneer and fascia be finished in textured MDF as per the design shown in the drawign and as approved by the Architect. The table shall have a work desk at 750mm from floor and counter top at 1200mm from floor. The storage area to include necessary shelves, drawers with telescopic channels with shutters using concealed hinges and other details as indicated by the Architect. All exposed surfaces of wood to be finished in melamine polish, and internal surfaces to be finished in french polish as per the shade as indicated by the Architect. The rate shall be inclusive of adhesive and all the hardware like nails, screws, telescopics channels, concealed hinges, locks, handles, knobs etc. required to complete the item. All exposed hardware shall be brushed brass finish.	1	No.		- ₹
96	CASH COUNTER : Providing and fixing a zinc finished cash counter for Souvenir shop of length 910mm x width 430mm x 1200mm height. Item to include providing a table top, vertical supports, internal shelves, fascia and 2 drawers to be made of 18mm commerical plywood. All the external surfaces are to be finished in zinc sheet and internal surfaces to be luster painted. Item to be inclusive of providing drawer channels, hinges, locks, nails, adhesives, etc complete. Base rate for zinc sheet = rs.550/ sq.ft	1	No.		- ₹
97	Providing and fixing veneer finish 400 deep display shelves for Souvenir shop of thickness 30 to 50mm. Item to be inclusive of providing 2 cove lights, 1 facing upwards towards the wall and 2nd facing downwards towards the shelf below. All the exposed surfaces are to be melamine polished. Item to be inclusive of providing a plywood frame of 30mm thickness finished in 0.8mm thk zinc sheet at distance 1 to 1.2m c/c. Item to be inclusive of providing all the required hardware such as nails, clamps, brackets, etc complete. Base rate of veneer : Rs. 120 / sq.ft = 1292 Rs/sq.m. Base rate of zinc sheet : Rs. 550/ sq.ft	32	R.Mt		- ₹
98	Providing and fixing brass finished MS foot railing supported from the floor along the perphery of the central display area.The foot railing shall be of 25mm diameter and 300mm above the floor level. Item to be inclusive of providing the required support members and hardwares in brass finish.	29.00	R.Mt		- ₹
99	Providing and fixing a 700mm to 750mm deep duco finish storage unit M2, M3, M4, M5 for mammals. Storage shall be built out of 25mm thick marine MDF used for top, shutters, verticals and internal shelves, 8mm thick marine MDF used for backing. Shutters to be openable of approx. 450mm - 625mm width and the storage base shall be 38mm thick. All exposed surfaces of the storage shall be finished in duco paint asper the shade approved by the Architect. Storage rate shall be inclusive of adhesive and all the hardware like nails, screws, hinges, locks, handles, towerbolts, ball catch etc. required to complete the item. tem to include spray coating all the surfaces with approved anti termite solution including providing 10 year guarantee for the same as directed by the Architect or Engineer in Charge. Item to be inclusive of providing grooves to accommodate the existing drawers of mammals.	69.12	SQ.M		- ₹

100	<p>Providing and fixing a 700mm to 750mm deep duco finish storage unit M2, M3, M4, M5 for mammals. Storage shall be built out of 25mm thick marine MDF used for top, shutters, verticals and internal shelves, 8mm thick marine MDF used for backing. Shutters to be openable of approx. 450mm - 625mm width and the storage base shall be 38mm thick. All exposed surfaces of the storage shall be finished in duco paint as per the shade approved by the Architect. Storage rate shall be inclusive of adhesive and all the hardware like nails, screws, hinges, locks, handles, towerbolts, ball catch etc. required to complete the item. Item to include spray coating all the surfaces with approved anti termite solution including providing 10 year guarantee for the same as directed by the Architect or Engineer in Charge. Item to be inclusive of providing 7 to 10 drawers of 18mm MDF width 1.1m, 300mm height, 700mm depth as per shown in the drawing. All drawers, internal surfaces and external surfaces shall be finished in duco paint. Storage rate shall be inclusive of adhesive and all the hardware like nails, screws, hinges, aluminium C profile handle for drawers, locks, handles for shutters, towerbolts, ball catch etc. required to complete the item. Item to include spray coating all the surfaces with approved anti termite solution including providing 10 year guarantee for the same as directed by the Architect or Engineer in</p>	QRO	SQ.M		
101	<p>Providing and fixing a 700mm to 750mm deep duco finish storage unit M2, M3, M4, M5 for mammals. Storage shall be built out of 25mm thick marine MDF used for top, shutters, verticals and internal shelves, 8mm thick marine MDF used for backing. Shutters to be openable of approx. 450mm - 625mm width and the storage base shall be 38mm thick. All exposed surfaces of the storage shall be finished in duco paint as per the shade approved by the Architect. Storage rate shall be inclusive of adhesive and all the hardware like nails, screws, hinges, locks, handles, towerbolts, ball catch etc. required to complete the item. Item to include spray coating all the surfaces with approved anti termite solution including providing 10 year guarantee for the same as directed by the Architect or Engineer in Charge. Item to be inclusive of providing 15 to 20 drawers of width 1.1m, 150 to 100mm height, 700mm depth as per shown in the drawing. Storage rate shall be inclusive of adhesive and all the hardware like nails, screws, hinges, aluminium C profile handle for drawers, locks, handles for shutters, towerbolts, ball catch etc. required to complete the item. Item to include spray coating all the surfaces with approved anti termite solution including providing 10 year guarantee for the same as directed by the Architect or Engineer in Charge.</p>	QRO	SQ.M		
102	<p>Shifting the existing wall mounted taxidermy from one wall to another wall.</p>	3	NO.		- ₹
103	<p>Providing and fixing 900mm to 1100mm high and 1500 wide centre table with an Indian marble table top. Storage shall be built out of 18mm thick commercial plywood used for top, verticals and internal shelves, 19mm thick commercial block board for shutters. Shutters to be openable of approx. 450mm - 625mm width and shall be raised from the floor by 125 mm and the storage base shall be 38mm thick. Shutters to have a panel design as per design provided in drawing. The internal surfaces shall be finished with french polish and external surfaces shall be finished with MDF and luster paint of approved shade. The rate shall be inclusive of providing wooden skirting, moulding along the top, mouldings on the shutters and all the required hardware like nails, screws, hinges, knobs, required to complete the item. Item to be inclusive of providing grooves in the shelves to accommodate the existing trays of the specimens. (Base price for Italian marble - 600/sq.ft : Rs. 6456/sq.m)</p>	9	sq.m		- ₹

104	Supplying well seasoned burma teak wood 300 to 450 mm deep storage modules (above storage S2). Storage shall be built out of 25mm thk teak wood used for top, verticals, internal shelves and shutters, 8mm thick marine plywood used for backing. Shutters to be openable of approx. 450mm - 625mm width and the storage base shall be 38mm thick. Shutters to have 6mm float glass in panel design as per design provided in drawing. All exposed surfaces of the storage shall be finished melamine polish as per the shade approved by the Architect. All internashall be finished with approved french polish. Storage rate shall be inclusive of adhesive and all the hardware like nails, screws, hinges, locks, handles, towerbolts, ball catch etc. required to complete the item. All the exposed hardware shall be brass finish with a protective lackre coat. (Basic rate of Veneer :- Rs. 120/ sq.ft). Item to include spray coating all the surfaces with approved anti termite solution including providing 10 year guarantee for the same as directed by the Architect or Engineer in Charge	7.92	sq.m		- ₹
105	Providing and fixing well seasoned burma teak wood decorative wall panelling of required size and design as directed by the Architect and Engineer in Charge. Item to include providing additional bands to create offsets and panels, panelling with chamfered edges or any other design, teak wood mouldings, carvings, embosses and any other detail of approved design and size as directed by the Architect. Item to include finishing the entire panel with melamine polish of approved shade including all necessary tools & hardware etc. complete. Mode of Measurement: The entire flat area of the panelling is to be measured only once inclusive of all offsets, panelling, frames, mouldings etc. No Additional factor or area to be measured for any details	4.312	sq.m		- ₹
106	Providing and fixing well seasoned old Burma teak wood skirting of 120 to 150mm x 20 mm thick in required position and of the size shown in the drawings including all mouldings as per drawings, rough grounds, Rawl plugs if necessary and finishing with french polish etc. complete. Item to include spray coating all the surfaces with approved anti termite solution including providing 10 year guarantee for the same as directed by the Architect or Engineer in Charge	51	R.mt		- ₹
107	Providing and fixing well seasoned old Burma teak wood top rail in required position and of the size shown in the drawings including all mouldings as per drawings, rough grounds, Rawl plugs if necessary and finishing with french polish etc. complete. Item to include spray coating all the surfaces with approved anti termite solution including providing 10 year guarantee for the same as directed by the Architect or Engineer in Charge				
	Size : 35x45	51	R.Mt		- ₹
	Size : 65x50	QRO	R.Mt		
	Size : 100x150	QRO	R.Mt		

108	Providing and fixing well seasoned old Burma Teakwood chair rail out of 50 mm x 35 mm thk section in required position and of the profile shown in the drawings including all mouldings, grooves, rough grounds, raw plugs if necessary and finished with approved colour stained matt water based PU coat of ICA or inchem or equivalent make using approved coloured stainers of the same company. Item to include spray coating all the surfaces with approved anti termite solution including providing 10 year guarantee for the same as directed by the Architect or Engineer in Charge	9.5	R.mt		- ₹
109	Providing and fixing framed anitque prints and pictures from Hornbill House as specified by the architect in the specified location complete with all fixing etc., Item to also inculde printing, installation and nothing extra payable in case of any damage till the completion of the site. Item to be inclusive of providing teak wood moulding around the frame as per the design approved by the Architect. (750X 750)	4	no.		- ₹
110	Providing and fixing tag boards with necessary framework and fixing as approved by the architect in the specified location complete with all fixing etc., Item to also inculde installation and nothing extra payable in case of any damage till the completion of the site. Item to be inclusive of providing teak wood moulding around the frame as per the design approved by the Architect. (1.8mX 0.75m)	1.26	sq.m		- ₹
K	TOTAL OF FIXED FURNITURE				- ₹

L	REFURBISHMENT OF EXISTING FURNITURE				
111	Refurbish & modify the existing wooden storage S1 as per the proposed elevation. Item to be inclusive of cutting the storage unit and reassembling it as per the proposed elevation. Item to be inclusive of providing and fixing new teak wood drawers, moulding, frame and top as required to complete the proposed design. Item to be inclusive of scraping and doing french polishing as per the shade approved by the Architect. Item to be inclusive of polishing the existing hardware and providing new hardwares if damaged or required for the new drawers. The new work including the wooden drawer, moulding, hardware,etc should match the historic detail found site.	1	No.		- ₹
112	Providing and fixing an Indian marble top for the existing furniture along the length of the storage unit. Item to be inclusive of doing the edge chamfer as per the design approved by the Architect. Basic rate for marble : Rs.600/sq.ft = Rs. 6456/sq.m	5.04	sq.m		- ₹
113	Refurbish & modify the existing wooden storage S2 as per the proposed elevation. Item to be inclusive of cutting the existing 6 storage units into 2 halves resulting into individual 12 cupboards which shall be reassembled in one continuous row as shown in the elevation. The item to be inclusive of providing and fixing 3 new teak wood cupboards of the same design to achieve the desired elevation. Item to be inclusive of replacing the damaged wood (shutters, moulding, railing, etc) with new teak wood. Item to be inclusive of scraping and doing french polishing as per the shade approved by the Architect. Item to be inclusive of polishing the existing hardware and providing new hardwares such as the handles, hinges, locks, etc if damaged or required for the new cupboards. The new work including the wooden drawer, moulding, hardware,etc should match the historic detail found site. The item to be inclusive of providing a continuous 18mm plywood top with 6mm veneer finish. The veneer is to be finished with french polish as per the shade approved by the Architect.	1	No.		- ₹
114	Restoration of existing " DISPLAY BOX FOR INSECTS " to include scraping of the wood polish, repolishing to be done as per approved shade. Item to include cost of scraping, and doing french polish complete. All the hardware to be repaired and replaced as per original if needed and to be polished.	10	No.		- ₹
115	Providing and fixing of burma teak wood " DISPLAY BOX FOR INSECTS " with a 6mm clear glass top. Item to be inclusive of providing french polish for the box, brass hardware as approved by the Architects.	5	No.		- ₹
116	Refurbish & modify the existing wooden storage S3 as per the proposed elevation. Item to be inclusive of cutting the existing 3 storage units into 2 halves resulting into individual 6 cupboards which shall be reassembled in one continuous row as shown in the elevation. Item to be inclusive of replacing the damaged wood (shutters, moulding, railing, etc) with new teak wood as per the historic detail. Item to be inclusive of scraping and doing french polishing as per the shade approved by the Architect. Item to be inclusive of polishing the existing hardware and providing new hardwares such as the handles, hinges, locks, etc if damaged. The new work including the wooden drawer, moulding, hardware,etc should match the historic detail found site. The item to be inclusive of providing a continuous 18mm plywood top with 6mm veneer finish. The veneer is to be finished with french polish as per the shade approved by the Architect.	2	No.		- ₹

117	Refurbish & modify the existing wooden storage S4 as per the proposed elevation. Item to be inclusive removing the wooden panel, providing and fixing 8mm thk clear glass secured with 10x15mm wooden beading. Item to be inclusive of replacing the damaged wood (shutters, moulding, railing, etc) with new teak wood as per the historic detail. Item to be inclusive of scraping and doing french polishing as per the shade approved by the Architect. Item to be inclusive of polishing the existing hardware and providing new hardwares such as the handles, hinges, locks, etc if damaged. The new work including the shutters, moulding, hardware,etc should match the historic detail found site.	2	No.		- ₹
118	Refurbish & modify the existing wooden storage S5 as per the proposed elevation. Item to be inclusive of removing the wooden panel, providing and fixing 8mm thk clear glass secured with 10x15mm wooden beading. Item to be inclusive of replacing the damaged wood (shutters, moulding, railing, etc) with new teak wood as per the historic detail. Item to be inclusive of scraping and doing french polishing as per the shade approved by the Architect. Item to be inclusive of polishing the existing hardware and providing new hardwares such as the handles, hinges, locks, etc if damaged. The new work including the shutters, moulding, hardware,etc should match the historic detail found site.	1	No.		- ₹
119	Refurbish & modify the existing wooden storage S6 as per the proposed elevation. Item to be inclusive of removing the wooden panel, providing and fixing 8mm thk clear glass secured with 10x15mm wooden beading. Item to be inclusive of replacing the damaged wood (shutters, moulding, railing, etc) with new teak wood as per the historic detail. Item to be inclusive of scraping and doing french polishing as per the shade approved by the Architect. Item to be inclusive of polishing the existing hardware and providing new hardwares such as the handles, hinges, locks, etc if damaged. The new work including the shutters, moulding, hardware,etc should match the historic detail found site.	1	No.		- ₹
120	Restoration of existing wooden storage S7, to include scraping of old paint, repolishing to be done as per approved shade. Item to include cost of scraping and doing french polish complete. All the hardware to be repaired and replaced as per original design if needed and to be polished. item to be inclusive repairing or replacing	1	No.		- ₹
121	Restoration of existing " READING TABLE " to include scraping of the wood polish, repolishing to be done as per approved shade. Item to include cost of scraping, and doing french polish complete. All the hardware to be repaired and replaced as per original if needed and to be polished.	1	No.		- ₹

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122	Restoration of existing " READING TABLE " to include scraping of the wood polish, repolishing to be done as per approved shade. Item to include cost of scraping, and doing french polish complete. All the hardware to be repaired and replaced as per original if needed and to be polished.	1	No.		- ₹
123	Restoration of existing " READING TABLE " to include scraping of the wood polish, repolishing to be done as per approved shade. Item to include cost of scraping, and doing french polish complete. All the hardware to be repaired and replaced as per original if needed and to be polished.	1	No.		- ₹
124	Restoration of existing " CHAIRS " to include scraping of the wood polish, repolishing to be done as per approved shade. Item to include cost of scraping, and doing french polish complete. All the hardware to be repaired and replaced as per original if needed and to be polished.	QRO	No.		
L	TOTAL FOR REFURBISHMENT OF EXISTING FURNITURE				- ₹

M	SIGNAGE				
125	Providing and fixing 125mm -200 mm Individual cut wood letters , to be glued to masonry wall and aligned as indicated by the architect for exterior MAIN SIGNAGE	41	no.		- ₹
126	Providing and fixing laser cut sigange in teak wood finished in melamine polish / PU paint as per the design approved by the Architect. The sigange is to be glued to masonry wall and aligned as indicated by the architect	12	sq.m		- ₹
127	Providing and fixing a full length SIGNAGE of size 650mm x 5.6m in the lobby, finished in 0.8mm VMCzinc sheet . The Item to include providing 24mm thk marine plywood finished in zinc sheet and edge banding for the edges of the board. Item to also include the edging of the metal sheet to smoothen the edges as directed by the Architect. Item to be inclusive of laser cutting the board in shape of logo of size 500 to 550 x 750 to 800 as shown in the drawing and as approved by the Architect. Item to be inclusive of laser cutting the board to highlight 10 to 15 letters of 100mm height. Item to be inclusive of providing all the required hardwares such as nails, adhesives, etc complete. Base rate for zinc sheet = Rs. 550/sq.ft	3.64	sq.m		- ₹
128	Providing and fixing a full length STANDEE SIGNAGE of size 650mm x 3m in the lobby/ in exterior campus, finished in 0.8mm VMCzinc sheet . The Item to include providing 24mm thk metal frame finished in zinc sheet and edges finished in zinc. Item to also include the edging of the metal sheet to smoothen the edges as directed by the Architect. Item to be inclusive of providing and fixing a brass cut logo of size 500 to 550 x 750 to 800 as shown in the drawing and as approved by the Architect. Item to be inclusive of brass cut 10 to 15 letters of height of 100mm. Item to be inclusive of providing all the required hardwares such as nails, adhesives, etc complete. Base rate for zinc sheet = Rs. 550/sq.ft	2.25	sq.m		- ₹
129	Providing and fixing brass cut letters of upto 100mm height of approved font as instructed by Architect. Item to include making samples of the approved fonts, fabricating, fixing on site with all the hardware and finishing complete.	150	No.		- ₹
130	Providing and fixing brass laser cut logos / shapes of size 400 to 500mm x 500 to 550mm of approved design as instructed by Architect. Item to include making samples of the approved design, fabricating, fixing on site with all the hardware and finishing complete.	1.6	SQ.M		- ₹
131	Providing and fixing a brass finshed SS plate of size 200 to 250mm x 100 to 150mm with letters engraved on it as per the font approved by the Architect. Item to include making samples of the approved design, fabricating, fixing on site with all the hardware and finishing complete.	5	No.		- ₹
132	Providing and fixing laser cut MDF letters of upto 100mm height of approved font as instructed by Architect. Item to include making samples of the approved fonts, fabricating, fixing on site with all the hardware and finishing complete. Item to be inclusive of painting MDF with luster paint as per the shade approved by the Architect.	10	No.		- ₹
133	Providing and fixing MDF cut logos / shapes of size 400 to 500mm x 500 to 550mm of approved design as instructed by Architect. Item to include making samples of the approved design, fabricating, fixing on site with all the hardware and finishing complete. Item to be inclusive of painting MDF with luster paint as per the shade approved by the Architect.	0.63	SQ.M		- ₹

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134	Providing and fixing Vinyl / flex printed signages/pictures to be stuck on the painted mdf/gypsum / glass / plastered wall surface of maximum height 10' as indicated by the architect	35.49	SQ.M		- ₹
135	Providing & fixing signage on 12mm forsted toughened glass fixed with brass finish SS studs. Item to be inclusive of printing and pasting a transparent vinyl on the glass as per the design approved by the Architect.	8	SQ.M		- ₹
136	Provision and fixing of cantilevered wooden Signage - well seasoned Burma teakwood Signage plaque to be fixed perpendicular to the wall using brass finished M.S. bracket of design and size as shown in the drawings or as directed by the Architect. Brass cut letters ranging from 25 mm to 75 mm and 8mm thick to be fixed on Teak Wood Plaque on both sides in required language and text style as directed by the Architect including all necessary fitting like screws, nails, etc. Item to include providing mouldings and chamfers as per details shown in drawings, or as directed by the Architect. Sample of the same and cut letters to be approved by the Architect or Engineer - in - charge. Item to include complete finishing of the letters inclusive of buffing and polishing and providing french polish to the wooden plaque as approved by the Architect etc. complete. Mode of Measurement to be as per the area of the wooden plaque inclusive of brass cut letters on both sides and contractor to not to charge twice the area for letters & finishing on both sides.	0.12	sq.m		- ₹
137	Providing and fixing a cantilevered MDF signage made of 12mm marine MDF, finished in paint as per the shade approved by Architect. Item to be inclusive of laser cutting the MDF in the desired shape as directed by the Architect. Item to be inclusive of providing a SS finish cantilevered rod of diameter 15 to 25mm thk. Item to be inclusive providing all the required fixing hardwares such as nails, screws, etc complete.	1.92	sq.m		- ₹
M	TOTAL FOR SIGNAGE				- ₹

N	TOILET UPGRADATION				
138	Removing W.C. pans including disconnecting the sanitary and water supply connections, removing and breaking flooring and bed concrete around pans and removing pan carefully and throwing out the refusal outside etc. complete.	4	NO.		- ₹
139	Removing urinal pans or wash hand basins with frame including disconnecting the sanitary and water supply connections, removing the same carefully and stacking the serviceable materials as and where directed including throwing the unserviceable materials outside.	2	NO.		- ₹
140	Dismantling brick masonry in lime or cement mortar and stacking the materials as directed with all leads, lifts etc.	5.4	CU.M		- ₹
141	Providing second class Burnt Brick masonry with conventional/ I.S. type bricks in cement mortar 1:6 in superstructure including striking joints, raking out joints,watering and scaffolding etc. Complete	QRO	SQ.M		
142	Providing Autoclaved Aerated Concrete Block masonry of conforming to IS:2185 (Part3)-1984 in extra fine jointing mortar off ixoblock of UltraTech or equivalent in Half brick thick wall including striking joints, raking out joints and scaffolding etc.Complete. (The test shall be carried out conforming to IS:6441 (Part I) - 1972)	184.2	SQ.M		- ₹
143	Providing autoclaved aerated concrete block masonry of Ecolite or equivalent make conforming to IS:2185 (Part 3)-1984 in extra fine jointing mortar of fixoblock of ultraTech or equivalent in superstructure including striking joints, raking out joints and scaffolding etc. complete. (The test shall be carried out conforming to IS:6331 (Part I)- 1972)	QRO	CU.M		
144	Drilling and boring through 450 mm thk masonry walls / composite wall (horizontal / angular) as required to create passage for cables, a/c tubing ducts 150-230mm dia as per architectural requirements, all labour, plant , tools , skilled manpower etc. complete including grouting / filling and making good. item to be inclusive of providing a MS sleeve in the core cut.	6	NO.		- ₹
145	Providing waterproofing in W.C. and bath including brick bat coba in all positions including providing and laying 12mm bedding in cement mortar 1:3 on concrete slab with waterproofing compound @ 1kg / per bag of cement laying brick bat coba of required thickness in cm 1:5 with waterproofing compound 1 kg/per bag of cement grouting and finishing the top layer with 20mm thick brick bedding in cm mortar 1:3 with waterproofing compound 1 kg/per bag of cement and testing the treated protion for 48 hrs. by pond test and covering ten years guarantee on requisite stamp paper including all leads, lifts and curing etc. complete	39.02	SQ.M		- ₹
146	Providing waterproof plaster in W.C. and bath 20 mm thick for dado in cement mortar 1:3 with neat finishing, floating using waterproofing compound at the rate of One kg. per bag of cement of approved make and manufacturer etc. complete.	368.4	SQ.M		- ₹
147	Providing lime plaster 20 mm. Thk in two coats having backing coat of 20 mm. thick in 1:3 (one lime: 3 surkhi) and finishing coat of 10 mm. thk in 1:2 lime mortar (1 Lime:2 Quartz sand) for internal plastering including mixing,approved adhesive such as guggal, jaggery etc. and applying to concrete/ brick/ stone masonry surface in all position and finishing the surface even and smooth with lime plugging in 1:1 and curing etc. complete.	QRO	SQ.M		
148	Providing internal cement plaster 12 mm thick in single coat in cement mortar 1:4 without neeru finish to concrete or brick surfaces in all positions including scaffolding, and curing complete.	368.4	SQ.M		- ₹
149	Providing neeru finish to plastered surfaces in all positions including scaffolding and curing complete	QRO	SQ.M		

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150	Providing and applying plaster/wall punning with plaster of paris (with Plaster of paris material of Ambuja/Mor Chap or equivalent make) in 10 to 13 millimeter thickness to previouslt plastered surface/ or on newly brick surface (excluding rough cast plaster) in all position including preparing and finishing the surface scaffolding etc. complete	QRO	SQ.M		
151	Providing and applying one priming coat on concrete/masonry/Asbestos cement/plastered surfaces including scaffolding if necessary, preparing the surface by thoroughly cleaning oil, grease, dirt and other foreign matter and sand paPer oneing, etc. complete.	184.2	SQ.M		- ₹
152	Providing and applying interior wall finish luster of Asian / berger / Nerolac / Dulux Paint or equivalent make on internal wall surface as detailed below. Scraping the surface with emery paper and wiping it clean. Applying Asian / Berger / Nerolac / Dulux or equivalent wall primer with brush with mineral turpentine of 8 to 10% and oil 15 to 20% with roller and allowing to dry for a period 6 to 8 hrs. Applying Asian / Berger / Nerolac / Dulux or equivalent Acrylic wall putty with appropriate proportion of water allowing to dry for period 4 to 6 hrs. Wiping ot scraping with Emery paper 180 and wipe clean. Applying Asian / Berger / Nerolac / Dulux Paints or equivalent wall primer with brush with mineral turpentine 8 to 10% and oil 15 to 20% with roller, scraping with Emery paper 320 and wiping it clean, Applying Asian / Berger / Nerolac / Dulux Paints or equivalent interior wall finish luster 1st coat with brush / rubber / spray with mineral turpentine 7 to 9% and oil with roller 19 to 21%. After 8 hours of activity applying 2nd coat of Asian / Berger / Nerolac / Dulux or equivalent interior wall finish Lustre with mineral turpentine 7 to 9% with brush and Oil with roller 19 to 21% with roller.	184.2	SQ.M		- ₹
153	Providing and laying vitrified matt finish/terrazo look alike tiles having size 1200mm x 600mm of 8 to 10 mm thickness and confirming IS. of Mirage / GresCasa make or equivalent, shade and pattern for flooring in required position fixed in 1:4 cement mortar including neat cement float, filling joints, curing and cleaning etc. complete. Item to be inclusive of preparing the rough texture for the wall with grinding, etc compelete. (Basic rate : Rs.150/sq.ft = Rs.1614/sq.m)	46.824	sq.m		- ₹
154	Providing and laying vitrified matt finish tiles having size 1200mm x 600mm of 8 to 10 mm thickness and confirming IS. of Mirage / GresCasa make or equivalent, shade and pattern for dado in required position fixed in 1:4 cement mortar including neat cement float, filling joints, curing and cleaning etc. complete. Item to be inclusive of preparing the rough texture for the wall with grinding, etc compelete. (Basic rate : Rs.150/sq.ft = Rs.1614/sq.m)	147.36	sq.m		- ₹
155	Providing and fixing 650 to 700 deep Granite/ Quartz Counter size shown on architect's drawing, including cutting holes in the counter for basin and tap, rounding and polishing of edges will be in the scope of civil contractor as per design specified by the architect.	7.2	R.M		- ₹

156	Providing and fixing 650 to 700 deep Italian Marble Counter size shown on architect's drawing, including cutting holes in the counter for basin and tap will be in the scope of civil contractor as per design specified by the architect. (Base price - 800-900/sq.ft)	4.8	R.M		- ₹
157	Providing and fixing 50mm thick flushed door with a frame work of FULL BODY TILE / QUARTZ/granite. The main door frame to be with the required rebate for an overlap between shutter and frame and 6mm grooves between plaster/ pop/ cladding etc. on all 3 sides of the door frame. Shutter should be rated waterproof and shall be finished with 3mm thick laminate on both sides. The rate for the door shall include adhesive and all the hardware like M.S. holdfasts, nails, screws, butt hinges, handles, lock, concealed door closer, door stopper etc. required to complete the item. All the exposed hardware shall be brass finish with a protective lackre coat.(Basic rate of Laminate - Rs. 55/ sq.ft).	21.84	SQ.M		- ₹
158	Providing and fixing Wall-Hung Toilet with PP Seat Cover of Aquant item code 1570 or equivalent make coupled closet syphonic trap with syphonic low level white glazed 10 litres cistern, chromium plated brass hinges including cast iron soil and vent pipes upto the outside face of the wall including 100 mm diameter cast iron plug bend, inlet pipe, stop tap etc. all fittings, cutting and making good walls and floors complete. Basic rate : Rs. 9,990 / no.	8	NO.		- ₹
159	Providing and fixing Urinal with Top Inlet Item Code: 1548 or equivalent make of Size: 630 x 330 x 300 mm with white H.D.P.E. flushing cistern of 5 litres capacity with fittings, inlet pipe and stop tap, brackets for fixing the cistern, 32 mm diameter galvanised iron heavy type flush pipe with fittings and flushing arrangement etc. (Basic rate : Rs. 8,500/-)	2			- ₹
160	Providing and fixing Kohler Concealed Flush Tank Instaflush K 77027IN M NA or equivalent approved make as directed by the Architect with GI line connection and main conceal stop cock with with 32 mm dia C.P. brass waste coupling, C.P. brass flush bend, over flow pipe, fixed on brackets with screws, 15mm dia concealed C.P brass angle stop cock, 10mm dia C.P. brass/PVC connector pipe etc., Item to also include 100 mm dia CI connector pipe from the P or the S trap to the junction of the soil stack or drain and all GI connection complete. Basic rate : Rs. 4,800/ no.	8			- ₹
161	Providing and fixing Bevel Faceplate of Kohler For Instaflush Mechanical Tank K-8857IN-M-CP / approved make and design. Item to include connecting the flush plate to the flush tank etc. complete Basic rate : 2100/ no.	8			- ₹
162	Providing and fixing in position ceramic drop-in semi-counter wah basin ofAquant item code : 1721 or equivalent make of size 610x405x120 as approved by the Architect or the Engineer in Charge, including brackets, rubber plugs and brass chain, stop tap and necessary pipe connection including Aquant waste water coupling and bottle trap and providing waste water pipe upto the outside face of the wall, cutting of walls and making good the damaged surface, testing etc. complete. Basic rate : Rs.7,950/ no.	6			- ₹
163	Providing and fixing Floor Drain with Anti-Cockroach System. 100 x 100 mm Material: 304-Grade Stainless Steel with anti - cockroach and anti foul tap - including C.I. grating bend and piece of C.I. pipe upto the outside face of the wall complete. (Basic rate : 2,000 per piece)	12	Per One Number		- ₹

164	Providing and fixing Brass Health Faucet Set of Aquant make model : 28121 of approved quality including necessary socket / union etc. complete as directed. (Basic Rate - Rs. 2,150/ Number)	4.00	Per One Number		0.00
165	Providing Square Towel Ring og Kohler make K-25067IN-CP of approved design and make with finish in French Gold/ Rose Gold/ Brass/ Chrome or equivalent as per Architect's design or drawings or as required to make the item well and Item to include making holes and necessary hardware like screws etc. and making good the damages etc complete	2.00	Per One Number		0.00
166	Providing and fixing Jaguar Tall Boy Sensor Faucet as approved by Architect or Engineer in Charge, with deluxe knob for Wash Hand Basin or sink etc. complete. ((Basic Rate - Rs.12,100/number)	6.00	Per One Number		0
167	Providing and fixing Wall mounted Automatic Soap Dispensers of Jaguar make Range :Soap Dispensers Code :SDR-BLC-DJO160AS Description :Automatic Soap Dispensers, Capacity : 0.8L, Material: Aluminium/ABS, Finish : Chrome/Black Item to include making holes and necessary hardware like screws etc. and making good the damages etc. complete. Basic rate :6,500.00.	4.00	Per One Number		0
168	Providing and fixing Chromium Plated Toilet Paper Holder of Kohler model : Accent, K-25346IN-AF or Equivalent approved make and design. Item to include making holes and necessary hardware like screws etc. and	5.00	Per One Number		0
169	Providing and fixing ROBE HOOK of Kohler make Model : Complementary Robe Hook K-5635IN-CP of approved quality make and design to hang clothes. Item to include making holes and necessary hardware like screws etc. and making good the damages etc, complete. Basic rate: Rs. 860/ piece	8.00	Per One Number		0
170	Providing and fixing Chrome Finish Concealed Stop Cock of Kohler model K-16087IN-4-CP In-line stop valve trim (both G13mm and G19mm) or equivalent make including all necessary plumbing works required to complete item in all respects . Basic rate : 1250/-	4.00	Per One Number		0
171	Providing and fixing polished Chrome Finish Angel Cock of Kohler model make K-23515-4-CP or equivalent make including all necessary plumbing works required to complete item in all respects. Basic rate : 1980/-	8.00	Per One Number		0
172	Providing and fixing Chrome Finish 2-way Bib Cock model July K-16094IN-4-CP of Kohler of approved quality including all necessary plumbing works required to complete item in all respects. Basic rate : 4,630/-	8.00	Per One Number		0

	PLUMBING WORKS				
1.00	SANITARY FIXTURES & FITTINGS:				
	Detail of Sanitary Fixture are for the information of the Contractor, however Model / Makes of all Sanitary Fixture shall be selected by Architech / Interior Designer / Client and the same shall be binding for execution.				
	Provision of Extention Piece for Final Connection of C.P. Fitting shall be Supplied and Installed by the Contractor accordingly (as required). All sanitary and plumbing fixtures shall be supplied by client.				
173	Unloading, Storing, Safe keeping, shifting, installing, testing & commissioning of wall mounted type White Vitreous Chinaware Water Closet with ('P' / 'S' Trap), complete with all necessary accessories including cutting & the making good the walls & floor wherever required.	8	No		-
174	Unloading, Storing, Safe keeping, shifting, installing, testing & commissioning of concealed type cistern with dual flow facility comprising of actuator button facia assembly including brass / SS screws and washer complete, providing protection cover over cistern, cutting and making good the walls wherever required.	8	No		-
175	Unloading, Storing, Safe keeping, shifting, installing, testing & commissioning of health facucets including necessary wall chases and making good.	8			-
176	Unloading, Storing, Safe keeping, shifting, installing, testing in position white vitreous Chinaware wash basin Under-counter type on supporting brackets including providing and fixing 15mm dia. C.P.brass tap, C.P.brass waste,bottle trap, wall flanges complete.	6	No.		-
177	Unloading, Storing, Safe keeping, shifting, installing, testing & commissioning of White glazedearthware lipped flat back urinal including C.P. brass waste with C.P. cast brass bottle trap with extension piece and wall flanges complete	RO	No.		
178	Unloading, Storing, Safe keeping, shifting, installing, testing & commissioning of Automatic flushing system for Urinal to ensure flushing only immediately after use, comprising of all plumbing, electronic & electrical spreader, C.P. wall flange, infrared photo cells, eyes electrically operated solenoid valve step down transformer/ equipment & any other item required to provide satisfactory functioning	RO	No.		
179	Unloading, Storing, Safe keeping, shifting, installing, testing & commissioning of Stainless Steel sink consisting of single/ double bowl with single/ double drain board with necessary supporting brackets including providing C.P.brass elbow action tap for cold water / hot water, C.P.brass waste bottle trap, PVC waste pipe complete.	2	No.		-
180	Unloading, Storing, Safe keeping, shifting, installing, testing & commissioning of bathing facucets including necessary wall chases and making good				
a.	Wall Mixer with Bath Spout, OH Shower complete with 115mm long bend pipe and wall flanges	RO			
b.	Concealed stop valve with flanges	RO			
c.	Bath Spout	RO			
d.	Overhead shower with arm & wall flanges	RO			
181	Unloading, Storing, Safe keeping, shifting, installing, testing & commissioning of in position Coloured vertical pressure type Water Heaters (Geysers) wall mounting type of following capacities with necessary supporting brackets including providing all inlet,outlet, overflow vent connections with necessary valves /cocks complete.				
a.	Instantaneous geyser	RO	No		
b	35 litres net capacity	RO	No		
182	Unloading, Storing, Safe keeping, shifting, installing, testing & commissioning in position C.P.Angle Valve with Copper Connecting pipe with wall flanges.	15	No		-
183	Unloading, Storing, Safe keeping, shifting, installing, testing & commissioning in position Towel Rod	4	No		-
184	Unloading, Storing, Safe keeping, shifting, installing, testing & commissioning in position 15mm dia C.P. brass bib cock/stop cock/push cock 'ISI' approved brand weighing not less than 400gms.	14	No		-

2.00	(SOIL, WASTE, VENT AND RAIN WATER PIPES & FITTINGS)				
185	Providing and fixing uPVC pipe SWR conforming to IS 13592; type B including injection moulded fittings where required e.g.tees, plumbends, reducers, sockets, plugs, clamps, couplings and screwed, socketed adapters,flanged tail pieces, saddles and jointing with solvent cement or threaded joint for waste pipe connection complete in all respects as required at site.				
a.	32mm OD	4	RM		-
b.	40mm OD	6	RM		-
c.	50mm OD	2	RM		-
a.	75mm OD	25	RM		-
a.	100mm OD	10	RM		-
186	Providing, fixing, jointing, testing & commissioning of Floor PVC cleanout plug with suitable inlet keys for opening, male threaded joint with Socket caulked to soil or waste pipe as required.				
a.	50 mm dia	RO	No		
b.	75 mm dia	2	No		-
c.	100 mm dia	2	No		-
187	Supply, installation, testing & commissioning of Upvc terrace / planter drain with necessary fittings where required saddles and jointing with solvent cement in all respects as required at site.	RO	No		
188	Providing & fixing in position floor traps of self cleansing design with one, two or three inlet connections of following sizes complete and connection with waste pipes including providing & fixing of SS/CP grating fixed over the trap complete.	4	No		-
189	Providing & fixing in position 75mm/110 PVC uPVC Multitrap of self cleaning design. Including 125mm dia brass uPVC grating, jointing, embedding in concrete etc. complete. Rate to include making of opening in floor, marble / tiles for fixing CP gratings etc.	3	No		-
190	Providing, fixing, jointing, testing & commissioning of Upvc rainwater balcony drain with approved quality.	RO	No		
191	Cutting RCC & Brickwork surface if required and making good the same including supply of extra quantities of required materials.	2	Cum		-

3.00	INTERNAL WATER SUPPLY				
192	Providing & fixing CPVC (Chlorinated Poly Vinyl Chloride) water supply pipes inside the toilet with pipe as per CTS SDR - 11 upto 50mm dia and Sch-80 above 50 mm dia at the working pressure of 320 PSI at 23 deg. C & 80 PSI at 82 deg.C using solvent welded CPVC fittings i.e. Tees, Elbows, Couplers, Unions, Reducers, Brushing etc. including transition fittings connection between CPVC & Metal pipe (G.I.) i.e. Brass adaptors (both male & female threaded) conforming to ASTM D- 2846 with only CPVC solvent cement conforming to ASTM F-493 with fabricated and subsequently hot dip galvanized clamps / structural steel supports as required / directed at site including cutting chases and fitting the same with cement concrete / cement mortar as required. All termination points for insulation of faucets shall have brass termination fittings. Installation shall be to satisfaction of project manager/ consultant/ manufacturer of pipes & fittings.				
	Internal Toilet				
a.	15 mm dia	RO	RM		
b.	20 mm dia	10	RM		-
c.	25 mm dia	8	RM		-
d.	32 mm dia	3	RM		-
193	Supply, installation, testing & commissioning of Nitrile rubber insulation for hot water Supply / Return Pipes.				
a.	20mm dia (9mm thickness)	RO	RM		
194	Providing and fixing brass lever operated ball valve of full flow with stainless steel ball (AISI 304 and spindle AISI 410) with settling and gland of superior quality and having minimum working pressure of 10Kg/cm2. (screwed end)				
a.	15 mm dia	RO	No.		
b.	20 mm dia	RO	No.		
c.	25 mm dia	2	No.		-
d.	32 mm dia	1	No.		-
N	TOTAL OF TOILET UPGRADATION WORKS				- ₹

CIVIL: MEASUREMENT SHEET

ABSTRACT									
Name of Work: BOMBAY NATURAL HISTORY SOCIETY FORT, MUMBAI									
SR.NO.	DESCRIPTION	NO.	L	B	H	SUB TOTAL	%	TOTAL	UNIT
	EXTERIOR WORKS								
A	ENABLING AND PROTECTION WORKS								
1	Providing and erecting two legged mild steel tubular scaffolding, of width 1200 to 1500mm largely free standing, using H frames or mild steel tubular pipes of minimum 40 mm diameter, with base plates, fixed or adjustable with necessary clamps, couplers, brackets for projections, joint pins, pullies and other accessories, including steel angle or tubular pipe bracings at adequate intervals, access platforms of metal or timber planks of span not exceeding 2.5 Metre, including provision of rubber inserts to pipe ends at points of contact with structure to avoid damage, including access ladders with intermediate platforms. The scaffolding is to be suitably braced and anchored to the building using support systems created temporarily at the openings in the walls using vertical and horizontal adjustable steel props. The rate includes provision of Nylon net covering to protect architectural details on the entire building face, required, and safety platforms at ground level covering the entrances to the building.								
	Item to include Providing and erecting Nylon Net covering covering fixed to the exterior face of scaffolding including duck tape with safety signage "work in progress" and "caution" boards at ground level and demarcation of entrances to the building. The measurements will be calculated by multiplying the lengths of the two legged units at the centre line of the 1200-1500mm scaffold unit widths x heights of the individual rows. The rates will include for the cross bracings between the rows of the scaffold units .								
	Front elevation	1.0	28.0		13.5	378.0			
	Side elevations	2.0	14.0		13.5	378.0			
						756.0	100%	756	sq.m
2	Providing and erecting for strengthening the distressed structure by using steel adjustable props of required length with connecting pipes and couplers with wooden load distributors at top and bottom etc., complete.								
	Lecture hall		11.6	9.0		104.7	20%	20.93664	sq.m
B	EXTERIOR RESTOTATION								
3	Gently cleaning the surface of the stone masonry and piers with Water by gentle brushing with soft nylon brushes as specified. Gentle surface cleaning may include mild pH balanced surfactants as specified for indicated areas to remove surface dirt, grit, sulphate accretions, lime wash etc as indicated by Architect.								
	Exterior side façade	2	15		13.5	405			
	Exterior front façade	1	28		13.5	378			
	total					783	100%	783.0	sq.m
4	Extra over above item for additional treatment of poulticing for desalination of stone, removal of sulphate accretion and gentle stone cleaning using ammoniacal paper poulticing and clay packs cleaning as specified by Architect. This item to include cleaning orifices, removing encrustations for elements such as gargoyles, water troughs etc. with scaffolding if necessary . The item to include covering the ammoniacal paper poultice and clay packs with plastic films sealing it air tight for atleast 24 hrs. or as directed by architects, followed by gently cleaning of surface with water and soft nylon brushes as directed. The item to be repeated upto the satisfaction of the Architects and the measurement should be paid once.								
	Exterior side façade	2	15		13.5	405			
	Exterior front façade	1	28		13.5	378			
	total					783	40%	313.2	sq.m

5	Specialised removal of layers of paint and other impervious coatings and cementitious layers on stone surface. Item to include usage of mechanical tapping, chemical surfactant or solvents like 'Unipeel' or equivalent if necessary as directed by the Architect or Engineer in Charge. Test patches would need to be undertaken to assess efficiency of technique prior to work. After removal of chemical surfactant, the surface to be cleaned atleast 2 - 3 times with water and nylon brushes to ensure surfactant free surface to the satisfaction of the Architect, including all necessary tools, hardware, scaffolding etc. required to complete item in all respects.								
	Exterior side façade	2	15		13.5	405			
	Exterior front façade	1	28		13.5	378			
	total					783	20%	156.6	sq.m
6	Removal of plant/ficus growth by pulling out root system embedded in masonry, cutting stem and application of hing/gur/lime formulation as specified by the Architect or other patented chemical biocide treatment such as biocide 'Glycel' – (iso propylamine salt of glyphosate) or other chemical as specified by the Architect etc complete								
	Exterior side façade	15				15			
	Exterior front façade	5				5			
	total					20	100%	20.0	no.
7	Dutchman Repair of stone sections that are severely distressed, re-installation of new Porbunder/ Basalt/any stone piece to match existing stone as a fascia upto a required depth in similar colour and texture and size. Item to include cutting out the damaged stone piece from site, making the area good and fixing the new stone with lime mortar grout and anchoring technique after neatly cutting out damaged stone profile using stainless steel pins of 6 mm dia threaded at end. The size of the stone piece would be approximately of 150 mm by 300 mm. Item to include dressing the stone as per the original texture of the stone used on site. Item to include showing samples of Porbunder stone for approval by the Architect/Engineer in charge. Item to include showing samples of stone for approval by the Architect/Engineer in charge. Item to include scaffolding if required etc. complete								
	Exterior side façade	50	0.15	0.2	0.075	0.1125			
	Exterior front façade	50	0.15	0.2	0.075	0.1125			
	total					0.225	100%	0.2	cu.m
8	Raking out cement pointing or any other hard material used and careful re-pointing and repair to be carried of the damaged pointing along external facades, and pointing to walls externally and internally above the masonry with poor joints, in lime mortar 1:3 (1 lime, 3 sand, mix to be approved by the Architects before application) and filling in of any holes/ damage areas of stone that may have to be filled in lime mortar. Pointing to be carefully colour matched using additives such as kattha, sand, stone dust and such additives to exactly match surrounding stone. The cost to include preparation of batches of samples upto 20 samples of colour matched lime mortar for approval by the Architect. The Contractor to ensure use of masking tape and sharp specialized spatulae and tools to ensure clear lines and high level of workmanship on site.								
	Exterior side façade	2	15		13.5	405			
	Exterior front façade	1	28		13.5	378			
	total					783	100%	783.0	sq.m

10	Filling the existing rain water pipe passing through the masonry with ready mix cement of M10 proportion with trap/ granite. quartzite/ /gneiss metal in foundation including necessary form work, compacting and curing etc.complete. concrete to close it from the terrace. This is to be done to stop the water from seeping into the masonry wall.								
	existing pipes from terrace to gr floor	2	0.2	0.2	13.4	1.072	100%	1.1	cu.m
11	Providing and fixing ISI 1729/2002 grade 100 mm dia. Cast Iron Rain Water Pipe with lugs including rain water receiving recess with cast iron grating plug bend, necessary fittings such as offsets, shoe including filling joints with spun yarn soaked in bitumen and cement mortar in 1:2 proportion, fixing on walls by means of Galvanised Mild Steel Bracket 30 x 5 mm plate and 8 mm square rod with Galvanised Iron clam with washer as per design, drawing and as directed to keep pipe 50 mm away from wall including testing, cement concrete 1:2:4 blocks of 30 cm x 30 cm x 30 cm in size including necessary scaffolding and painting the exposed faces with one coat of red lead oil paint and two coats of white oil paint including removing the existing pipe if necessary and conveying and stacking in P.W.D. Chowky or as directed by Engineer-in-Charge.								
	side façade	2			13.4	26.8	100%	26.8	R.M
12	Providing sand face plaster externally to concrete, stone or brick surfaces using approved screened sand including preparing the base, watering and applying base coat of 15 mm thick in cement mortar 1:4 using water proofing compound at the rate of 1 Kilogramme per cement bag and curing the same for not less than two days and keeping the surface of base coat rough to receive the sand faced treatment not to exceed 8 mm thickness in cement mortar 1:4 and finishing the surface by taking out grains and curing for 14 days and scaffolding etc. complete.								
	terrace parapet	1	84		2	168	100%	168.0	sq.m
C	STRUCTURAL WORKS								
13	Removing cement plaster of any finish from the wall, complete with racking out the joints to a depth of 20 mm.								
	External Plaster								
	Column	28.00	0.50		10.63	148.82			
	Beam	6.00	5.85	0.50		17.55			
		6.00	11.95	0.30		21.51			
	Parapet wall	1.00	86.15		1.65	142.15			
						330.03			
	Add 10% Extra				10%	2.15			
	Total External Quantity					332.18		sq mt	
	Internal walls								
	Ground floor	1	6.34		3.55	22.51			
	Mezzanine floor	1	13.79		2.75	37.92			
	First floor	1	13.27		3.40	45.12			
	Second floor	1	32.38		3.70	119.81			
	Terrace floor	1	14.35		2.22	31.86			
	Total Length of external wall					257.21			
	Add 10% Extra				10%	25.72		sq mt	
						282.93			
	Ceiling Plaster								
	Ground Floor	1	2.47	2.28		5.63			
	Mezzanine floor	1	1.27	1.31		1.66			
		1	3.42	4.27		14.60			
	First Floor	1	1.73	1.47		2.54			
		1	3.42	2.11		7.22			
		1	1.90	1.35		2.57			
	Second Floor	1	2.16	2.28		4.92			

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		1	1.68	4.16		6.99		
		1	1.46	1.55		2.26		
		1	1.05	2.05		2.15		
		1	2.45	1.06		2.60		
		1	1.30	1.12		1.46		
	Total Length of external wall					54.61		
	Add 10% Extra				10%	5.46		
						60.07	sq mt	
	Additional plaster to be broken	1	1516.82		15%	227.52		
						<u>902.70</u>	sq mt	
	Total Internal Plaster					<u>910.00</u>	sq mt	
	Internal plaster at PMM portion					<u>390.00</u>		
	Total Internal plaster Qty					<u>1300.00</u>	sq mt	
14	Proving and applying 6mm thick internal sand faced ceiling plaster in cement mortar 1:3 at all heights and locations in single coat for concrete surfaces including scaffolding, hacking of concrete surface, watering, finishing, curing etc.							
	Internal Ceiling plaster							
	Ground Floor	1	2.47	2.28		5.63		
	Mezzanine floor	1	1.27	1.31		1.66		
		1	3.42	4.27		14.60		
	First Floor	1	1.73	1.47		2.54		
		1	3.42	2.11		7.22		
		1	1.90	1.35		2.57		
	Second Floor	1	2.16	2.28		4.92		
		1	1.68	4.16		6.99		
		1	1.46	1.55		2.26		
		1	1.05	2.05		2.15		
		1	2.45	1.06		2.60		
		1	1.30	1.12		1.46		
						<u>54.61</u>		
	Total Internal Plaster					<u>60.00</u>	sq mt	
15	Breaking and removing the water proofing layers of I. P. S. with bituminous joints and brick bat concrete over							
	Total Remove exting water					<u>480.00</u>	sq mt	
16	Supply, cut, bend and fix in position Corrosion Resistant High Yield strength Deformed bars for all diameters confirming to relevant IS including tying with binding wire (16 SWG Annealed wire) or welding, tested steel reinforcement for all reinforced concrete at all locations and levels, including transporting, handling etc. complete. No separate payment for chairs, laps, wastage and binding wire will be made.							
	Thermo-Mechanically Treated steel bars. (Fe 500 D)							
	Steel qty requiried for columns					<u>0.00</u>	MT	
	For PMM Consider 2.5 Kg/ Sqm	1	390.00	2.50	0.001	<u>0.98</u>	MT	
	For New Slabs Anticipated of	1	0.00	0.20		<u>0.00</u>	MT	
						<u>0.98</u>	MT	
	Total of Reinforcement Steel and					<u>1.00</u>	MT	

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17	Chipping /removing loose concrete upto reinforcement bars, without damaging the reinforcement, removing all the loose materials and to make all the exposed surfaces free from oil, dust and all impurities etc complete.							
	PMM for All floors							
	Ground floors							
	PMM qty for Ground floor							
	Column	6	1.38	3.55	29.39			
		2	2.12	3.55	15.05			
	Beams	2	1.32	1.5	3.96			
		1	1.7	1.5	2.55			
		3	2.66	1.5	11.97			
		1	2.45	1.5	3.68			
		1	1.22	1.5	1.83			
		2	1.43	1.5	4.29			
	Ground floor slab	1	0.8	0.75	0.60			
	Mezzanine floors							
	PMM qty for Mezzanine floor							
	Column	1	1.38	2.75	3.80			
		1	1.64	2.75	4.51			
	Lintel	3	1.28	1.37	5.26			
	First floors							
	PMM qty for First floor							
	Column	1	1.38	3.40	4.69			
		1	2.12	3.40	7.21			
	Beams	2	1.32	1.5	3.96			
		4	1.28	1.5	7.68			
		2	1.9	1.5	5.70			
		2	1.4	1.5	4.20			
		1	1.12	1.5	1.68			
		1	2.26	1.5	3.39			
		1	1.21	1.5	1.82			
		1	2.5	1.5	3.75			
		1	2.65	1.5	3.98			
		1	4.1	1.5	6.15			
		1	2.75	1.5	4.13			
		1	2.52	1.5	3.78			
	First floor slab	1	1.12	1.35	1.51			
		1	1.62	1.71	2.77			
		1	4.25	5.05	21.46			
	Second floors							
	PMM qty for Second floor							
	Column	1	1.42	3.70	5.25			
		1	1.84	3.70	6.81			
		1	1.44	3.70	5.33			
	Perimeter of Circle	1	1.57	3.70	5.81			

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	PMM qty for Ground floor							
	Column	6	1.38		2.85	23.60		
		2	2.12		2.85	12.08		
	Beams	2	1.32		1.5	3.96		
		1	1.7		1.5	2.55		
		3	2.66		1.5	11.97		
		1	2.45		1.5	3.68		
		1	1.22		1.5	1.83		
		2	1.43		1.5	4.29		
	Ground floor slab	1	0.8	0.75		0.60		
	Mezzanine floors							
	PMM qty for Mezzanine floor							
	Column	1	1.38		2.55	3.52		
		1	1.64		2.55	4.18		
	Lintel	3	1.28		1.37	5.26		
	First floors							
	PMM qty for First floor							
	Column	1	1.38		2.70	3.73		
		1	2.12		2.70	5.72		
	Beams	2	1.32		1.5	3.96		
		4	1.28		1.5	7.68		
		2	1.9		1.5	5.70		
		2	1.4		1.5	4.20		
		1	1.12		1.5	1.68		
		1	2.26		1.5	3.39		
		1	1.21		1.5	1.82		
		1	2.5		1.5	3.75		
		1	2.65		1.5	3.98		
		1	4.1		1.5	6.15		
		1	2.75		1.5	4.13		
		1	2.52		1.5	3.78		
	First floor slab	1	1.12	1.35		1.51		
		1	1.62	1.71		2.77		
		1	4.25	5.05		21.46		
	Second floors							
	PMM qty for Second floor							
	Column	1	1.42		2.70	3.83		
		1	1.84		2.70	4.97		
		1	1.44		2.70	3.89		
	Perimeter of Circle	1	1.57		2.70	4.24		
	Beams	3	3.35		1.5	15.08		
		1	1.95		1.5	2.93		
		1	2.35		1.5	3.53		
		3	4.96		1.5	22.32		
		3	2.58		1.5	11.61		
		4	4.12		1.5	24.72		
		2	3.8		1.5	11.40		
		1	2.64		1.5	3.96		

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		2	2.78		1.5	8.34			
		1	1.2		1.5	1.80			
		2	2.53		1.5	7.59			
	Second floor slab	1	0.8	0.8		0.64			
	Chajja	1	14.55	0.6		8.73			
	Terrace floors								
	PMM qty for Terrace floor								
	Beams	1	2.83		1.5	4.25			
							<u>306.73</u>		
	Total of PMM Qty								
	5% is considered on Total area of	1	1516.82		5%	75.84			
						75.84			
	Total PMM Quantity						390.00		
	PMM Qty 30 MM Thick				50%		<u>195.00</u>	sq mt	

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20	Providing and applying Ready Mix Polymer modified cement mortar of average thickness 30mm using Polymer in two layers in proportion 1:5:15 of Polymer Cement Quartz Sand as manufacturer's specifications in specific layers, curing the surface after 72 hours of application with wet gunny bags etc and by finishing the surface with 12mm thick (1:3) Cement sand plaster.							
	PMM for All floors							
	Ground floors							
	PMM qty for Ground floor							
	Column	6	1.38	2.85	23.60			
		2	2.12	2.85	12.08			
	Beams	2	1.32	1.5	3.96			
		1	1.7	1.5	2.55			
		3	2.66	1.5	11.97			
		1	2.45	1.5	3.68			
		1	1.22	1.5	1.83			
		2	1.43	1.5	4.29			
	Ground floor slab	1	0.8	0.75	0.60			
	Mezzanine floors							
	PMM qty for Mezzanine floor							
	Column	1	1.38	2.55	3.52			
		1	1.64	2.55	4.18			
	Lintel	3	1.28	1.37	5.26			
	First floors							
	PMM qty for First floor							
	Column	1	1.38	2.70	3.73			
		1	2.12	2.70	5.72			
	Beams	2	1.32	1.5	3.96			
		4	1.28	1.5	7.68			
		2	1.9	1.5	5.70			
		2	1.4	1.5	4.20			
		1	1.12	1.5	1.68			
		1	2.26	1.5	3.39			
		1	1.21	1.5	1.82			
		1	2.5	1.5	3.75			
		1	2.65	1.5	3.98			
		1	4.1	1.5	6.15			
		1	2.75	1.5	4.13			
		1	2.52	1.5	3.78			
	First floor slab	1	1.12	1.35	1.51			
		1	1.62	1.71	2.77			
		1	4.25	5.05	21.46			
	Second floors							
	PMM qty for Second floor							
	Column	1	1.42	2.70	3.83			
		1	1.84	2.70	4.97			
		1	1.44	2.70	3.89			
	Perimeter of Circle	1	1.57	2.70	4.24			
	Beams	3	3.35	1.5	15.08			
		1	1.95	1.5	2.93			

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		1	2.35		1.5	3.53			
		3	4.96		1.5	22.32			
		3	2.58		1.5	11.61			
		4	4.12		1.5	24.72			
		2	3.8		1.5	11.40			
		1	2.64		1.5	3.96			
		2	2.78		1.5	8.34			
		1	1.2		1.5	1.80			
		2	2.53		1.5	7.59			
	Second floor slab	1	0.8	0.8		0.64			
	Chajja	1	14.55	0.6		8.73			
	Terrace floors								
	PMM qty for Terrace floor								
	Beams	1	2.83		1.5	4.25			
							306.73		
	Total of PMM Qty								
	5% is considered on Total area of	1	1516.82		5%	75.84			
							75.84		
	Total PMM Quantity						390.00		
	PMM Qty 30 MM Thick				50%		195.00	sq mt	
21	Providing Ready mix Micro Concrete jacketing to walls or beams of thickness upto 75 mm using Polymer modified cement premixed quartz sand aggregate packed in bags of standard manufacture, for high early strength of 40 N /mm sq.cm of approved brand. The dry product is to be mixed with 12.5% water by weight, along with washed and poured into rigid form work moulds & tamped properly, & cured for 3 days. [Payment is to be made by weight premixed of micro concrete product consumed as per site register records. No extra payment shall be made for shuttering or any other material.								
	Columns	2	0.12		3.00	0.69			
	Beams	1	1.43	0.60	0.3	0.43			
		2	2.52	0.60	0.3	1.51			
		1	1.40	0.60	0.3	0.42			
		1	1.43	0.60	0.3	0.43			
		1	2.20	0.60	0.3	0.66			
		1	1.30	0.60	0.3	0.39			
		1	2.60	0.60	0.3	0.78			
		2	4.12	0.60	0.3	2.47			
	Total quantity					7.78			
	Add 10% Extra				10%	0.78			
						8.56			
	Quantity in Kg					8.56	8556.90	Kg	
22	Providing internal plain faced plaster 12 mm thick in cement sand mortar 1:4 with neeru finish to brick work and concrete surface including curing finishing etc. complete.								
	Total Internal plaster Qty						1300.00	sq mt	
23	Providing external sand faced cement plaster 20 mm thick in cement sand mortar (1:3) in two layers including providing water proofing compound to the first coat of plaster as per manufacturers specification, including curing etc. complete.								
	External Plaster	1.00	9.25		2.70	24.98			
	Total Length of external wall					24.98			
	Consder 25% of the area				25%	6.24			
	Providing External Plaster						10.00	sq mt	
	Remove exting External plaster						10.00	sq mt	

24	Removing or destroying plants etc. growing on walls, drainage pipes, destroying roots by applying approved weedicide & reinstating the wall surface by plaster to the damage surface of the building (When country teak wood is mentioned it is to be first quality)								
	removing Vagitation growth						10.00	Approx.	
25	Providing waterproofing treatment through specialized agencies as per their specifications to the flooring of water closets, bathrooms, kitchen, nahanies, washing places, sanitary blocks etc. by giving INJECTIONS with cement solution with water proofing compound into the floor slab so as to make it consistent, homogeneous and impervious against leakage, seepage etc. The sunk portion shall then be covered with brickbat waterproof coba in 1:5 c.s. of required thickness with necessary gradient for easy flow of water. Finally the floor shall be covered with joint less waterproof cement plaster in 1:3 c.s. 12 mm to 15 mm thick finished rough for receiving tiles. The average thickness of complete treatment shall not be less than 100 mm. The soil pan area will not be deducted. (After completion of work leakage test shall be carried out after impounding the water for 7 days without any extra cost. The actual treated area will be measured and paid for).								
	Water proofing								
	Toilet Waterproofing								
	Bath & WC all Floors	2	5.58	4.22		47.10			
						47.10			
	Total Quantity					50	<u>Sqm</u>		
	Breaking Waterproofing Total					475.50	<u>480.00</u>	sq mt	
26	Extra for providing additional thickness of brickbats over 100 mm in 1:5 c.s. either due to location of rain water pipes or due to increase in the travel length of flow of rain water or brick bats required in the sunk portion of baths, W.C.s nahani etc. The rate includes for fixing brickbats in C.M., with waterproofing compound as per specification as directed.	1	50.00	0.30		15.00	Cum		
27	Water proofing treatment to the chajja after removing old plaster and roughening the surface and finishing the top								
	Peripheral Chajjas	1	8.72			8.72	<u>Sqm</u>		
28	Providing waterproofing treatment to the existing terrace/top slab at any floor level (including slab portion beneath								
	Terrace floor Water proofing	1	370.00		115%	425.50			
						425.50	<u>430.00</u>		
29	Providing, detailing, fabricating and fixing at desired location using hot rolled sections and MS Plates of grade Fe 250 as per specifications and approved fabrication drawings (which are to be prepared by Contractor and got approved from Engineer), transporting to site and erecting structural steel members for all heights & at all levels including provision of necessary erection bolts, fixing bolts, nuts, washers, cleats, stiffeners, gussets, base plate, and all necessary fixtures and operations like preheating as per specifications, straightening, bending, cutting, drilling, grinding, machining if specified, welding, grinding and removing the welding burr and preparing surface for painting with wire brush cleaning and applying two coats of epoxy red oxide zinc phosphate primer of 30 microns each and two coats of Epoxy Corrosion Resistant Enamel paint of 30 microns after fabrication including touching up with spray painting after erection etc complete as directed by Engineer In Charge. (The qty. for this item shall be measured for gusset plates, base plates, bolts in M.T.)								
	Structural Steel members	3	10.71		44.20	1420.15			
	Structural steel on terrace below	4	3.00		44.20	530.40			
	Structural steel on terrace below	6	3.00		14.90	268.20			
						2218.75			
	Add 10% Extra				0.10	221.87			
						2440.62	<u>2450.00</u>	Kg	
						2.44	<u>3.00</u>	MT	

30	Providing, detailing, fabricating and fixing built up sections at desired location using MS Plates of grade Fe 250 as per specifications and approved fabrication drawings (which are to be prepared by Contractor and got approved from Engineer), erecting structural steel members for all heights & at all levels including provision of necessary erection bolts, fixing bolts, nuts, washers, cleats, stiffeners, gussets, base plate, and all necessary operations like preheating as per specifications, straightening, bending, cutting, drilling, grinding, machining if specified, welding, grinding and removing the welding burr and preparing surface for painting with wire brush cleaning and applying two coats of epoxy red oxide zinc phosphate primer of 30 microns each and two coats of Epoxy Corrosion Resistant Enamel paint of 30 microns after fabrication including touching up with spray painting after erection etc complete as directed by Engineer In Charge.								
	5% of above item for MS plate	10%	3.00			0.30	1.00	MT	
31	Crack stitching 8mm Helibar: Providing and fixing of Helifix Hi-fin reinforcement Helibars of 8mm dia, single bar in one slot, MOC Austenitic stainless steel, ASTM 304, having cross section area of 10.5 mm ² , pitch 38/40 with UTS 1370 N, shear strength 7.2 kN, along with HeliBond Grout, a special cementitious grout with low expansion, non gassing and injectable with exceptional thixotropic properties. Including chasing of bedjoints for HeliBars, cleaning to achieve good bonding of HeliBar with HeliBond grout in the slot of masonry ensuring that it remains tight at the joint after curing, at locations as per instructions provided by Structure Engineer/ Helifix, excluding Staging & Scaffolding, at various places where there is crack in brick/stone/block masonry as directed by structural engineer / Helifix.								
	Wall Crack								
	C1	2	5.00	2.61		26.10			
	C2	2	5.00	1.17		11.70			
	C3	2	5.00	0.92		9.20			
	C4	2	5.00	2.18		21.80			
	C5	2	5.00	2.28		22.80			
	C6	2	5.00	0.80		8.00			
						99.60			
	Add 10% Extra				0.10	9.96			
						109.56	110.00	Rmt	
32	one slot, MOC Austenitic stainless steel, ASTM 304, having cross section area of 10.5 mm ² , pitch 38/40 with UTS 1370 N, shear strength 7.2 kN, along with HeliBond Grout, a special cementitious grout with low expansion, non gassing and injectable with exceptional thixotropic properties. Including chasing of bedjoints for HeliBars, cleaning to achieve good bonding of HeliBar with HeliBond grout in the slot of masonry ensuring that it remains tight at the joint after curing, at locations as per instructions provided by Structure Engineer/ Helifix, excluding Staging & Scaffolding, at various places where there is crack in brick/stone/block masonry as directed by structural engineer / Helifix.								
	Wall Crack								
	C1	2	5.00	2.61		26.10			
	C2	2	5.00	1.17		11.70			
	C3	2	5.00	0.92		9.20			
	C4	2	5.00	2.18		21.80			
	C5	2	5.00	2.28		22.80			
	C6	2	5.00	0.80		8.00			
						99.60			
	Add 10% Extra				0.10	9.96			
						109.56	110.00	Rmt	

33	Crack stitching 10mm Helibar: Providing and fixing of Helifix Hi-fin reinforcement Helibars of 10mm dia, single bar in one slot, MOC Austenitic stainless steel, ASTM 304, having cross section area of 14.8 mm ² , pitch 45/48 with UTS 1750 N, shear strength 9.5 kN, along with Helibond Grout, a special cementitious grout with low expansion, non gassing and injectable with exceptional thixotropic properties. Including chasing of bedjoints for HeliBars, cleaning to achieve good bonding of HeliBar with HeliBond grout in the slot of masonry ensuring that it remains tight at the joint after curing, at locations as per instructions provided by Structure Engineer/ Helifix, excluding Staging & Scaffolding, at various places where there is crack in brick/stone/block masonry as directed by structural engineer / Helifix.								
	Wall Crack (Lumsum qty)	1	7.00			7.00			
						7.00			
	Add 10% Extra				0.10	0.70			
						7.70	10.00	Rmt	
34	CrackBond TE 250ml : Providing & fixing of CrackBond TE 250ml an injectable special epoxy resin with the help of manual pressure applicator and nozzle, including opening of crack, cleaning and ensuring sealing of cracks of 3mm - 12mm width upto a maximum depth of 150mm.								
	Wall Crack	1	7.00	15.80		110.60			
	Add 10% Extra				0.10	11.06			
						121.66	<u>130.00</u>		
	The Material used per RMT is				0.04	5.20	10.00	Ltr	
35	Polyplus SF (300 ml) : Providing and filling of general purpose styrene free resin with the help of manual								
	Wall Crack	7	20.00			140.00			
	Add 10% Extra				0.10	14.00			
						154.00	<u>160.00</u>		
	The Material used per RMT is				0.04	6.40	10.00	Ltr	
36	Providing and fixing UV resistant selffit UPVC pipes of approved make for Rainwater downtakes confirming to IS								
	0	2	13.40			26.80			
	Add 10% Extra				0.10	2.68			
						29.48	30.00	Rmt	
D	SITE UPGRDATION								
37	Dismantling of cement concrete pavement by mechanical means using pneumatic tools, breaking to pieces not exceeding 0.02cum in volume and stock piling at designated locations and disposal of dismantled materials upto a lead of 1000 meres, stacking serviceable and unserviceable materials separately etc. complete.								
	front yard	1	35	9.8	0.15	51.45	100%	51.5	CU.M
38	Dismantling plain cement concrete work including breaking concrete by chiseling, wedging, etc., stacking the serviceable materials and stacking the debris upto a distance of 50 Metre or spreading etc., complete								
	planter bed in the front yard	1	14	2.5	0.15	5.25	100%	5.3	CU.M
39	Clearing and grubbing road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned up to a lead of 1000 metres including removal and disposal of top organic soil not exceeding 150 mm in thickness.								
	planter bed in the front yard	1	14	2.5		35	100%	35.0	SQ.M

40	Providing and fixing Basalt flagstone of 50 - 75 mm thick paving to be laid in a diagonal/straight pattern as per original design and size and drawing given by the Architect. Damaged stone to be removed carefully without damaging the adjacent stone slab, stacked carefully on site. Item complete with cement mortar 1:4 laid to proper slope and finished with a floating coat of neat cement slurry including watering, curing, cleaning etc. Rate to be inclusive of tile, storage, all duties and taxes applicable, storage, handling, delivery on site, laying as well as cutting required to avoid cutting of main tiles, wastage and subsequent curing, hand polishing or if pre-polished available as directed etc. complete.								
	front yard	1	35	9.8		343	100%	343.0	SQ.M
41	Fabrication and installation of Cast Iron gates of approved design below in cast iron of min 12mm gauge weight not less than 70 kgs.& having pre cast base plate of thickness 20mm with provision of grouting for foundation bolts. All cast iron, members painted with anti-corrosion primer and coated with two coats of polyurethane coating and painted in glossy black colour as specified. All vertical upstands to be embedded in concrete block as shown in drawings. Bolts and nuts to be welded after fixing. Rate to be inclusive of base grouting, providing, fixing, nuts, bolts, welding, painting etc. complete.								
	along compound wall	2	2.5	2		10	100%	10.0	SQ.M
42	Fabrication and installation of Cast Iron railing over compound walls of approved design below in cast iron of min 75mm gauge weight not less than 70 kgs.& having pre cast base plate of thickness 20mm with provision of grouting for foundation bolts. All cast iron, members painted with anti-corrosion primer and coated with two coats of polyurethane coating and painted in glossy black colour as specified. All vertical upstands to be embedded in concrete block as shown in drawings. Bolts and nuts to be welded after fixing. Rate to be inclusive of base grouting, providing, fixing, nuts, bolts, welding, painting etc. complete.								
	along compound wall	1	35	1.5		52.5	100%	52.5	SQ.M
43	Providing and fixing stone coping of required size, type and design to match the original existing compound wall coping found on site as directed by the Architect or Engineer in Charge. Item to include all necessary carving, cutting and dressing of the stone slab to match the original stone coping. The length of the coping stone to also be the same as the original size used and small and uneven size stone slabs should not be used to ensure minimum joints. Item to include procuring larger section of stone slab and carving / cutting to match the original stone design including necessary laying etc. complete. Mode of Measurement: Item to be paid as per the size of the carved stone coping fixed on site and not the larger size stone from which the coping stone is carved.								
	along compound wall	2	35	0.25	0.15	2.625	100%	2.6	SQ.M
44	Providing & fixing of 75MM thk basalt stone as per shade and texture approved by the client/architect upto a maximum size of 3050 mm height and width as per equal divisions made on site. The cladding to not have any horizontal joints and should be detailed with grooves fixed with cement sand mortar (1:4) done to match colour of stone as directed by Engineer in- charge including transportation, loading/ unloading, providing /supplying /laying /fixing/installing /fabricating /testing /commissioning etc. on site. Rate shall also include all taxes such as VAT, excise, sales tax, Octroi etc.								
	along compound wall	2	35	1		70	100%	70.0	SQ.M
45	Planting "Doob" grass Lawn on Soft/Hard surface: Providing and filling Red Hill Earth & Cow Dung Manure mixing in 2:1 proportion upto 200mm, watering to the depth of 1" three times, weeding after every watering before plantation of the grass, leveling, rolling after proper compaction, planting of good quality lawn suckers by dibbling method in staggered fashion at specified intervals including transport & unloading. Watering and proper mowing etc. maintaining for 1 month after completion of plantation and replacement of casualties till 1 month. In rows 5 cm apart in either direction and making good the damaged surface etc. complete								
	garden area along the side	2	14	8		224	100%	224.0	SQ.M
	INTERIOR WORKS								

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E	PROTECTION & DISMANTLING WORKS							
46	Providing and laying high density plastic sheet on the roof and other areas for monsoon protection and over temporary plaforms during roof restoration works. Item to include nails, nylon rope etc, required to fix the plastic sheet to the required areas. The plastic sheet to be of the best and approved quality available in market and as approved by the Engineer incharge.							
	Lecture hall		11.6	9.0		104.7		
	Gr floor - Display gallery		15.5	7.4		114.9		
	Mezzanine floor - Display gallery		14.29	9.03		129.0		
	total					348.7	50%	174.3 sq.m
47	Plaster of Paris covering of 30mm thickness over the historic floor area with a bottom layer of high density plastic sheet/10 mm commercial ply over existing flooring to ensure that scaffolding/ movement of machine do not damage the historic flooring.							
	Lecture hall		11.6	9.0		104.7		
	Gr floor - Display gallery		15.5	7.4		114.9		
	Mezzanine floor - Display gallery		14.29	9.03		129.0		
	total					348.7	50%	174.3 sq.m
48	Removing the TILED FLOORING / old cement / lime concrete or any type of flooring including levelling the surface, cleaning the site including sorting out serviceable tiles and stacking the same and debris upto a distance of 50 Metre.							
	Lecture hall		11.6	9.0		104.7		
	Gr floor - Display gallery		15.5	7.4		114.9		
	entrance lobby and staircase	3	7.3	4.1		89.8		
	staircase to mezzanine	1	1.2	6		7.2		
	total					316.6	100%	316.6 sq.m
49	Dismantling gysum Sheet ceiling / any kind of false ceiling with frame work including stacking the materials as directed with all leads, lifts etc. complete.							
	Reptile section	1	13.9	4.5		62.6		
	Entrance of collection dept	1	9.0	6.0		54.0		
	toilet	1	5.5	6.0		33.0		
	total					149.6	100%	149.6 sq.m
50	Dismantling any kind of partition with frame work including stacking the materials as directed with all leads, lifts etc. complete							
	Reptile section	1	13.9	3.0		41.7		
	Entrance of collection dept	1	9.0	3.0		27.0		
	toilet	6	1.5	3.0		27.0		
	total					95.7	100%	95.7 sq.m
51	Careful dismantling of lights and electrical wires etc complete, including stacking the materials as directed with all leads, lifts etc. complete							
	Lumpsum							
52	Lowering down the debris of the existing waterproofing treatment from the terrace by any means without causing dust nuisance and damage to structure, stacking the same as and where directed including cleaning the site complete. (Rate for loose material) Spec: (As directed by Engineer-in-Charge)							
	Debris from dismnatled items	561.9		0.1		56.2	100%	56.2 cu.m
53	Removing any kind of debris including loading in truck and conveying to approved dumping point, uploading and spreading etc. complete with all lead and lifts.							
	Debris from dismnatled items					0.0	100%	56.2 sq.m

F	FLOORING								
54	Providing and laying vitrified matt finish full body tiles having size 1200mm x 2400mm of 8 to 10 mm thickness of Mirage/ GreswCasa make or equivalent and confirming IS. , shade and pattern for flooring in required position fixed in 1:4 cement mortar including neat cement float, filling joints, curing and cleaning etc. complete. Laying pattern shall be as directed by Architect on site. (Basic rate : Rs.350/sq.ft = Rs.3766/sq.m)								
	Lecture hall	1	11.6	9.0		104.7			
	Gr floor - Display gallery	1	15.5	7.4		114.9			
	Lobbies	3	7.3	4.1		89.8			
	souvenir shop	1	5.4	2.8		15.1			
	total					324.5	120%	389.4	sq.m
55	Providing and laying 10mm thk stone look alike tile of Nexion, Kalinga make or equivalent make for flooring, treads and risers of staircase over 15mm average thick base laid over and jointed with cement slurry mixed with pigment to match the shade of the slab, including polishing, making grooves complete with base of cement mortar 1:4 (1 cement: 4 coarse sand) 15mm thick, using single piece of length as per site requirement of approved quality, make and size thickness as per design to match the original details on site. item to be inclusive of providing the nosing, grooves, spacing, details as shown in the drawing and as instructed by the Architect on site. Inclusive of tread length inside wet areas. (Basic rate Rs. 290/sq.ft = Rs. 3120/sq.m)								
	Main staircase treads	2	11.5	1.2		27.6			
	Main staircase risers	1	11.5	1.2		13.8			
	Mezzanine staircase	1	1.2	6.0		7.2			
	Mezzanine staircase	0.5	1.2	6.0		3.6			
	total					48.6	120%	58.3	sq.m
56	Providing and fixing 12mm thick toughened black tinted glass, manufactured like a clear float glass of Saint Gobain or equivalent make for the flooring on the raised MS deck as per the shade approved by the Architect. The deck is to be raised upto 150 to 200mm above the floor level. Item to be inclusive of providing MS frame work below the flooring as suggested by the glass Company. The item to be inclusive of providing a cove light facing the floor as per the detail shown in the drawing and as directed by the Architect on site. (Basic Rate for glass -								
	Ground floor -Central Display area	1	27.0	0.6		16.2	120%	19.4	sq.m
57	Providing and fixing 30 mm thick scratch proof Engineered wooden flooring in deep oak/ walnut finish / teak finish or equivalent as per sample approved by the Architect and company specifications. Item to include providing and fixing skirting matching to the flooring as per company details and design. (Basic Rate of the material as per approved company - Rs. 700/Sq. Ft.)								
	Mezzanine floor -Central Display area	1	15.5	9.1		141.1	0%	0.0	sq.m
58	Providing & laying any kind of flooring, either natural stone or vitrified tiles, or cement tiles, or equivalent laid in 1:4 cement & mortar bedding with a float coat of cement slurry on top, including pointing the joints in white cement pigmented to match shade of the marble, machine cutting, cleaning, honing the floor upto 3 coats & maintain proper line level and protection with plastic sheets & POP during work. The flooring shall be sealed with a floor sealant that does not have a sheen, leaves a natural look, and is solvent based with a guarantee of 5 years, of Aquamix or equivalent make, as per company specifications. Cut size of flooring tiles/slabs to be as per drawing and pattern laid either diagonally or in curved designed pattern. Item to be quoted as per the basic rate of the material written under. Mode of Measurement to be as per the laid area on site and all transportation, labour to be inclusive.								
	Basic Rate - Rs. 100 - 200/ Sq. Ft. = 1,076/SQ.M								
	Basic Rate - Rs. 200 - 300/Sq. Ft. = 2,152/SQ.M								
	Basic Rate - Rs. 300 - 400/Sq. Ft. = 3,228/SQ.M								
	Basic Rate - Rs. 400 - 500/Sq. Ft. = 4,304/SQ.M								
	Basic Rate - Rs. 500 - 600/Sq. Ft. = 5,380/SQ.M								
	Basic Rate - Rs. 600 - 700/Sq. Ft. = 6,456/SQ.M								

G	PARITION WALLS & FINISHES								
59	<p>Providing and fixing unfinished TW partition with an internal framework of old C.P Teak Wood members of size 70mm x 30mm at a spacing of 600mm centre to centre in a Square grid. The C.P Teak Wood members must be notched & screwed adequately to give rigidity to the entire framework. The framework shall be covered on both sides by 8mm marine plywood by means of adhesives and screws. The framework must take support wherever desired from the floor & ceiling only & the floor must not be punctured at any spot (unless otherwise approved beforehand by the architect). All internal C.P.teak wood frame members as well as the inner surface of the plywood must be treated with antitermite treatment as well as with wood preservative. All exposed ply to ply joints shall be neat & well finished. Item to include incorporating a door along with ncessary hardware within the partition wherever necessary as per drawing and finishing as per design. Item to include spray coating all the surfaces with approved anti termite solution including providing 10 year guarantee for the same as directed by the Architect or Engineer in Charge</p>								
	Ground floor - Along periphery		15.7	3	47.1				
	Ground floor - Along periphery		17.5	5	87.5				
	Ground floor -near staircase		4.8	5	24.0				
	Mezzanine - HOD cabin		5.9	3	17.7				
	Mezzanine - between display and storage		14	3	42.0				
					218.3	100%	218.3	sq.m	
60	<p>Providing and fixing an unfinished TW internal framework on an existing wall. Framework to be made of old C.P Teak Wood members of size 70mm x 30mm at a spacing of 600mm centre to centre in a Square grid. The C.P Teak Wood members must be notched & screwed adequately to give rigidity to the entire framework. The framework shall be covered by 8mm marine plywood on 1 side by means of adhesives and screws. The framework must be fixed to the wall and should not take any support from the floor & the structural members such as beams/ columns should not be punctured at any spot (unless otherwise approved beforehand by the architect). All internal C.P.teak wood frame members must be treated with antitermite treatment as well as with wood preservative. Item to include spray coating all the surfaces with approved anti termite solution including providing 10 year guarantee for the same as directed by the Architect or Engineer in Charge. Item to be inclusive of providing a flushed door in the partition wherever requirred along with the required hardwares such as hinges, handles, towerbolts, etc complete</p>								
	Ground Floor - TV wall		7.5	3	22.5				
	Mezzanine floor - TV wall		7.5	3	22.5				
	TOTAL				45.0	100%	45.0	sq.m	
61	<p>Providing and fixing in position extruded aluminium partition shaving frame made out of extruded tubular section of size 65mm x 40mm with 12mm thick three layered flat pressed teakwood particle board bonded with BWP type exterior grade phenol formaldehyde synthetic resin conforming to IS129231990, laminated on both sides, Novateak or equivalent with aluminium glazing clips of size12mmx12mm (conical) as per drawing etc. complete.</p>								
	Ground floor - Central display		23.4	3	70.2				
	Ground Floor - lecture hall		18.2	5	91.0				
	TOTAL				161.2	100%	161.2	sq.m	
62	<p>Providing and fixing a fire rated partition of 50 too 100 frame of wood with infill of rockwool of 48kg/m3 or plyof 1000gsm, with fixing of 4mm polyblock membered and 12mm fire rated plywood on both sides. Item to be inclusive of providing all the required harwares such as nails, bolts, etc complete.</p>								
	Ground Floor - Reptile section		19	3	57.0				
	electric panel room		3.1	3	9.3				
	Central display area		11	3	33.0				
	TOTAL				99.3	100%	99.3	sq.m	

63	Providing & fixing motorised roller black out screen of Hunter Douglas make or an equivalent of length 7.3m x height 4.4m, having an openness factor of 3%, material composition of 79% PVC & 21% Polyester, a thickness of 0.5mm and a weight of 400gms/ Sq.mt. Item is to be inclusive of providing the fabric, motor and remote control. The complete installation shall be as per the manufacturer's specifications.							
	Lecture Hall	1	8.6	5	43.0			
	TOTAL				43.0	100%	43.0	sq.m
64	Providing & fixing 12mm thick toughened clear float glass partition / fixed window in a 25mm thk wooden frame in the existing window cills as per drawing and requirement using dorma make spider patch fittings as per their specification and requirement upto a height of 13'. Item to include providing glass doors wherever required complete with hardware. Item to be inclusive of providing a wooden frame Patch fittings (dorma or equivalent) to be used for the glass door as shown in the drawing at all necessary joints and depending on the weight of the glass. Item to include glass door lock in the centre etc. complete							
	Lecture Hall	6	1.2	2.4	17.3			
	Ground floor display area - windows	5	1.26	0.87	5.5			
	Mezzanine floor display area - windows	6	1.26	0.89	6.7			
	TOTAL				29.5	110%	32.4	sq.m
	FINISHES							
65	Providing and applying 0.8mm Zinc sheet cladding of VM Zinc make or equivalent. Item to be providing the required hardware, etc complete. Base rate = 550Rs./sqft = 5164Rs./sq.m							
	Ground floor - Central display		23.4	3	70.2			
	Ground Floor - TV wall		7.5	3	22.5			
	Ground Floor - entrance wall		4.8	3	14.4			
	TOTAL				107.1	110%	117.8	sq.m
66	Providing and fixing gypsum cladding of Saint Gobain Gyproc make on the existing wooden partition framework. All exposed joints between gypsum boards shall be neat & well finished with a layer of particle board.							
	Lecture Hall (wall with Taxidermy)	1	7	5	35.0			
	TOTAL				35.0	100%	35.0	sq.m
67	Providing and fixing marine MDF cladding of GreenPly make on the existing wooden partition/ existing masonry wall. All exposed joints between mdf boards shall be neat & well finished with a layer of particle board. Item to be inclusive of executing joinery details, finishes, mouldings, etc as directed by the Architect.							
	Gr floor - staircase wall		4.5	5	22.5			
	Mezzanine floor - HOD cabin		6	3	18.0			
	Mezzanine floor - Display area		8.5	3	25.5			
	Lecture Hall		23	5	115.0			
	TOTAL				181.0	100%	181.0	sq.m

68	Providing and fixing veneer of GreenPly make on the existing wooden partition framework. All exposed joints between veneers shall be neat & well finished with a layer of particle board. Basic rate of veneers : 120Rs/ sqft								
	mezzanine partition - storage	2	14		3	84.0	100%	84.0	sq.m
	TOTAL								
69	Providing and applying one priming coat to over new/old steel and other metal surfaces including preparing of the surfaces by thoroughly cleaning oil, grease, dirt and other foreign matter with wire brushing, fine fire steel wool, and sand paper, scaffolding etc. complete.								
	QRO								
70	Providing and applying one priming coat to wood and based surfaces including preparing of the surfaces by thoroughly cleaning oil, grease, dirt and other foreign matter with wire brushing, fine fire steel wool, and sand paper, scaffolding etc. complete								
	Mezzanine floor - old furniture	3	1.5		2	9.0	100%	9.0	sq.m
71	Providing and applying three coats of synthetic enamel paint of approved colour to new structural steel work and wood work in buildings and workshops including scaffolding if necessary, cleaning and preparing surface by solvent, degreasing and derusting by manual scraping/ mechanically by sand blasting/shot blasting, flame cleaning/ by chemical methods complete. (excluding primer coat)								
	QRO								
72	Providing and applying melamine polish of Asian / berger / Nerolac / Dulux Paint or equivalent make on wooden surfaces. Item to be inclusive of cleaning and preparing the base surface								
	mezzanine partition - storage	2	14		3	84.0	100%	84.0	sq.m
	TOTAL								
73	Providing and applying french polish of Asian / berger / Nerolac / Dulux Paint or equivalent make on wooden surfaces. Item to be inclusive of cleaning and preparing the base surface								
	QRO								
74	Providing and applying antique satin metal finish of ICA Pidilite make or equivalent. Item to be inclusive of cleaning and preparing the base surface. Base rate = 480Rs./sqft = 5164Rs./sq.m								
	Ground floor - partition wall	2	2.4		3	14.4	100%	14.4	sq.m
75	Providing and applying duco paint of Asian / berger / Nerolac / Dulux Paint or equivalent make on wooden surfaces. Item to be inclusive of cleaning and preparing the base surface								
	Provisional	20				20.0	100%	20.0	sq.m
76	Providing and applying PU coat of Asian / berger / Nerolac / Dulux Paint or equivalent make on wooden surfaces. Item to be inclusive of cleaning and preparing the base surface								
	Provisional	20				20.0	100%	20.0	sq.m

77	Providing and applying Royale emulsion paint of Asian / berger / Nerolac / Dulux Paint or equivalent make on wooden surfaces. Item to be inclusive of cleaning and preparing the base surface. Item to be inclusive of scraping off the previous and cleaning the surface.							
	Ceilings - Ground floor display		15.47	7.43		114.9		
	Ceilings -Lecture Hall (flat)	1	11.58	7.515		87.0		
	Ceilings -Lecture Hall (cove)	6	8.014	0.47		22.6		
	Ceilings - Mezzanine floor display area		14.29	9.03		129.0		
	MDF walls (in lecture hall)					181.0		
	Plastered walls (in toilets)	4	30.7			3 368.4		
	Ground floor - lobby walls		12.5			3 37.5		
	Ground floor reptile section		12.5			3 37.5		
	Ground floor souvenir shop		15.8			3 47.4		
	Ground floor curation room		3			3 9.0		
	Ground floor - lecture hall - window wall		9			5 45.0		
	Mezzanine + staircase walls		18.5			3 55.5		
						1134.9	100%	1134.9 sq.m
78	Providing and applying Royale Aspira emulsion paint of Asian / berger / Nerolac / Dulux Paint or equivalent make on wooden surfaces. Item to be inclusive of cleaning and preparing the base surface							
	QRO							
79	RAFFAELLO - Providing and applying of Raffaello (Marble Finish) vapour permeable polished marble finish for walls/ interiors, formulated with pearlescent material by OIKOS India as directed by the Architect. After the cleaning of surface and removing any loose or flaking materials, apply one coat of quartz primer by OIKOS India followed by three coats of Raffaello base coat and final coat of Raffaello polished marble finish in approved shade of OIKOS India and finish with Cera wax coat to achieve desired finish, excluding the cost of surface preparation and scaffolding, apply by towel and scraper with appropriate tools of OIKOS India, all complete as per manufacturer' specification with the direction of Architect. Approved Make - OIKOS India.							
	QRO							
H	DOORS, WINDOWS, SOFFITS & RAILINGS							
80	Removing doors and windows of any size and type, with frame,mild steel/wrought iron grill work and stacking the same in the compound							
	Total	8				8.0	100%	8.0 no.
81	Removing doors and windows of any size and type, without frame mild steel/wrought iron grill work and stacking the same in the compound							
	Total	5				5.0	100%	5.0 no.

82	Providing and fixing a flush single/double shutter door 35mm thick of GreenPly or equivalent make, finished with 0.8mm thick Zinc sheet of VMZinc / Nedzinc or equivalent make on both sides as per the shade approved by the Architect. Item to include 10 mm thk wooden edging strip on all sides of the door as approved by the Architect. Item to be inclusive of providing a glass infill as shown in the door elevation. All the required hardware such as heavy duty brass hinges, locks, powder coated full length metal handle, towerbolt, etc. to be part of the item and to be finished as per shade approved. Basic rate 0.8mm thk Zinc sheet of zinc: Rs.550/sq.ft = Rs. 5920/sq.m							
1	Entrance Lobby							
	D5	1		1.24	2.1	2.6		
2	Souvenir Shop and Storage							
	D4	1		1.54	2.1	3.2		
	D7	1		0.965	2.27	2.2		
3	Display for Mammals							
	D2	1		1.2	2.27	2.7		
	D7	1		0.965	2.27	2.2		
	D9	1		0.85	2.1	1.8		
4	Lecture Hall							
	D3	1		2.1	2.1	4.4		
	total	20				19.1	100%	19.1 sq.m
83	Providing and fixing a flush single/double shutter door 35mm thick of GreenPly or equivalent make, finished with 6mm thk veneer sheet on both sides as per the shade approved by the Architect. Item to include 10 mm thk wooden edging strip on all sides of the door as approved by the Architect. All the required hardware such as heavy duty brass hinges, locks, powder coated full length metal handle, towerbolt, etc. to be part of the item and to be finished as per shade approved. Basic rate veneer = Rs. 120/sq.ft = Rs.1291/ sq.m							
	QRO							
84	Providing and fixing Corten steel - 0.8mm sheets in VMZinc / Nedzinc or equivalent approved shade, fixed in the soffits of the doors and windows as indicated by the Architect. Item to be inclusive of providing a marine plywood frame. Basic rate 0.8mm thk Zinc sheet of zinc: Rs.550/sq.ft = Rs. 5920/sq.m							
1	Entrance Lobby							
	D5		5.44	0.2		1.088		
2	Souvenir Shop and Storage							
	D4		5.7	0.2		1.14		
	D7		4	0.2		0.8		
	O1 (DISPLAY TO SOUVENIR)		5.7	1.2		6.84		
3	Display for Mammals							
	D2		5.6	0.2		1.12		
	D7		5.3	0.2		1.06		
	D9		5	0.2		1		
4	Lecture Hall							
	D3		6.3	0.2		1.26		
	total	20				14.3	100%	14.3 sq.m
85	Providing and fixing 2 hour fire rated door Hormann make or equivalent doors of 850 to 1000 mm width x 2270 mm height size with GI frame and rockwool infill, shutter finished with honey comb material with powder coated finish , inclusive of all hardware inclusive of hinges, locks, handles etc							
	reptile section - door		0.97	2.1		2.037		
	central storage - door	1	0.84	2.1		1.764		
	TOTAL					3.8	100%	3.8 sq.m
86	Providing and fixing or replacing damaged teak wood with well seasoned B.T.C. wood for door or window frames or members of decorative frame of the same original design, size and pattern including all mouldings, rebating, holdfasts and any other necessary fittings and finishing with one coat of primer complete.							
	QRO							

87	Restoration of existing " MAIN DOOR " to include scraping of the wood polish, repolishing to be done as per approved shade. Item to include cost of scraping, and doing melamine polish complete. All the hardware to be repaired and replaced as per original if needed and to be polished.								
	Main entrance door	1	3.5	3		10.5			
	TOTAL					10.5	100%	10.5	sq.m
88	Providing and fixing a VMCZinc sheet finished RAILING for the main staircase as shown in the reference image. Railing is to be 40mm thk, 900mm high and flushed along the finished floor level and the staircase soffit. Item to be inclusive of providing a wooden frame work of size 30x30mm palced at distance 300 to 450 c/c and packed with 8mm marine plywood. All the wooden members shall be treatd with antitermite treatment. Item to be inclusive of all the required hardware such as adhesives, nails, etc complete. Base rate for zinc sheet = Rs. 550/sq.ft								
	Main Staircase		8.9		2.5	22.25			
	TOTAL					22.3	100%	22.3	sq.m
89	Providing and fixing a powder coated C shaped MS channel; railing as shown in the reference image, 30mm depth and 75 mm in width as a continuous handrail supported from the wall through a rectangular MS sections supplied by Fecuni brand or equivalent. The supporting member to be fixed to the wall with the help of a 75x75 SS plate bolted to the wall before the fixing of the dado tiles. The plate to not ve visible in finished condition. All steel sections to be in 316 grade.								
	Main Staircase		8.9		2.5	22.25			
	TOTAL					22.3	100%	22.3	R.M
I	FALSE CEILING								
90	Providing and fixing in position Gypsum board false ceiling with 12.5 mm thick Gypsum boards of Saint Gobain Gyproc make , screwed/fixd to the under structure of the suspended G.I. Grid constructed and suspended from the main ceiling consisting of ceiling sections of size 25 x 50 mm maximum centre to centre distance of 600 mm perimeter channel and intermediate channels at maximum centre to centre distance 1200 mm galvanised grid should be fixed to reinforced cement concrete slab. The gypsum board should be fixed to galvanised iron grid with necessary screws. The boards should be taped and filled from underside to give smooth, seamless ceiling. The rate should include necessary additional ceiling sections and intermediate channels. Additional intermediate channels should be fixed to strap hangers for additional support to prevent strapping at every 1200 mm item to be completed in all respect including necessary sleeves for ducts finishing of joints cut outs and including labour, materials, lifts etc., all complete. Spec: (As directed by Engineer-in-Charge)								
	Lecture hall		11.5	9.1		104.65			
	Mezzanine - toilet		5.5	4.2		23.1			
	1st floor - toilet		5.5	4.2		23.1			
	Main Staircase soffits :	2	11.5	1.2		27.6			
	Gr floor - Reptile section + storage area	2	14.1	2.4		67.68			
	Souvenir shop	1	5.5	2.8		15.4			
	Ground floor display area	2	3.3	7.4		48.84			
	Mezzanine floor	2	14.2	4.5		127.8			
	TOTAL					438.2	100%	438.2	R.M
91	Providing and fixing Cove false ceiling of 15 to 20 mm thick boards of fibrous plaster of paris at a height of around 500 - 600 mm from the ceiling with a 75 mm high vertical band at the edge to hide the cove lights. Item to include scaffolding if necessary, all architectural work like mouldings etc. as per detailed drawings and three coats of spray painting to boards etc. complete.								
	Lecture hall	10	8.6			86			
	Mezzanine - toilet	1	37.91			37.91			
	1st floor - toilet	1	37.91			37.91			
	TOTAL					161.8	100%	161.8	R.M

J	ACOUSTIC WORKS								
92	Providing and fixing a sound proof partition of 50 to 100mm thk frame of wood at spacing 600mm c/c with infill of rockwool of 48kg/m ³ or polyof 1000gsm, with fixing of 4mm plyblock membered and 12mm marine plywood on both sides. Item to be inclusive of providing all the required hardware such as nails, bolts, etc complete.								
	QRO					0.0	100%	0.0	sq.m
93	Providing and fixing Knauf Danoline KRAFT - : Tectopanel of equivalent of Size 1200 x 600 x 12.5mm Micro perforation 3.5x3.5mm with 7.1 - 9.8% perforation and 0.85NRC : Regular Square perforation of glass fibre reinforced								
	LECTURE HALL : wall adjoining display area and reception lobby	1	11.4		5	57.0	50%	28.5	sq.m
	TOTAL								
94	Providing and fixing a 100 to 120 thk soundproof door , finished in VM Zinc sheet. Item to be inclusive of providing a soundproof frame finished in zinc sheet inclusive of all hardware inclusive of hinges, locks, handles etc								
	lecture hall - entrance door	1	2.1	2.1		4.41			
	TOTAL					4.4	100%	4.4	sq.m
K	FIXED FURNITURE								
95	RECEPTION TABLE : Providing and fixing wooden finished reception table of length 2.5m x ht 1.2m x width 750mm. in 19mm thick commercial plywood used for top, verticals & internal shelves, 8mm thk commercial plywood used for backing & 19mm thick commercial plywood shutters. The table top shall be finished in veneer and fascia be finished in textured MDF as per the design shown in the drawing and as approved by the Architect. The table shall have a work desk at 750mm from floor and counter top at 1200mm from floor. The storage area to include necessary shelves, drawers with telescopic channels with shutters using concealed hinges and other details as indicated by the Architect. All exposed surfaces of wood to be finished in melamine polish, and internal surfaces to be finished in french polish as per the shade as indicated by the Architect. The rate shall be inclusive of adhesive and all the hardware like nails, screws, telescopic channels, concealed hinges, locks, handles, knobs etc. required to complete the item. All exposed hardware shall be brushed brass finish.								
	Entrance lobby	1				1	100%	1.0	no.
96	CASH COUNTER : Providing and fixing a zinc finished cash counter for Souvenir shop of length 910mm x width 430mm x 1200mm height. Item to include providing a table top, vertical supports, internal shelves, fascia and 2 drawers to be made of 18mm commercial plywood. All the external surfaces are to be finished in zinc sheet and internal surfaces to be luster painted. Item to be inclusive of providing drawer channels, hinges, locks, nails, adhesives, etc complete. Base rate for zinc sheet = rs.550/ sq.ft								
	Souvenir shop	1				1	100%	1.0	no.
97	Providing and fixing veneer finish 400 deep display shelves for Souvenir shop of thickness 30 to 50mm. Item to be inclusive of providing 2 cove lights, 1 facing upwards towards the wall and 2nd facing downwards towards the shelf below. All the exposed surfaces are to be melamine polished. Item to be inclusive of providing a plywood frame of 30mm thickness finished in 0.8mm thk zinc sheet at distance 1 to 1.2m c/c. Item to be inclusive of providing all the required hardware such as nails, clamps, brackets, etc complete. Base rate of veneer : Rs. 120 / sq.ft = 1292 Rs/sq.m. Base rate of zinc sheet : Rs. 550/ sq.ft								
	Souvenir shop	8	4			32	100%	32.0	R.M
98	Providing and fixing brass finished MS foot railing supported from the floor along the periphery of the central display area. The foot railing shall be of 25mm diameter and 300mm above the floor level. Item to be inclusive of providing the required support members and hardware in brass finish.								
	Ground floor - central display area	1	29			29	100%	29.0	R.M

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99	Providing and fixing a 700mm to 750mm deep duco finish storage unit M2, M3, M4, M5 for mammals. Storage shall be built out of 25mm thick marine MDF used for top, shutters, verticals and internal shelves, 8mm thick marine MDF used for backing. Shutters to be openable of approx. 450mm - 625mm width and the storage base shall be 38mm thick. All exposed surfaces of the storage shall be finished in duco paint asper the shade approved by the Architect. Storage rate shall be inclusive of adhesive and all the hardware like nails, screws, hinges, locks, handles, towerbolts, ball catch etc. required to complete the item. tem to include spray coating all the surfaces with approved anti termite solution including providing 10 year guarantee for the same as directed by the Architect or Engineer in Charge. Item to be inclusive of providing grooves to accommodate the existing drawers of mammals.								
	Ground floor - storage near souvenir	1	16.8	2.7	45.36				
	Ground floor - central storage area	2	4.4	2.7	23.76				
	total				69.12	100%	69.1	sq.m	
100	Providing and fixing a 700mm to 750mm deep duco finish storage unit M2, M3, M4, M5 for mammals. Storage shall be built out of 25mm thick marine MDF used for top, shutters, verticals and internal shelves, 8mm thick marine MDF used for backing. Shutters to be openable of approx. 450mm - 625mm width and the storage base shall be 38mm thick. All exposed surfaces of the storage shall be finished in duco paint asper the shade approved by the Architect. Storage rate shall be inclusive of adhesive and all the hardware like nails, screws, hinges, locks, handles, towerbolts, ball catch etc. required to complete the item. tem to include spray coating all the surfaces with approved anti termite solution including providing 10 year guarantee for the same as directed by the Architect or Engineer in Charge. Item to be inclusive of providing 7 to 10 drawers of 18mm MDF width 1.1m, 300mm height, 700mm depth as per shown in the drawing. All drawers, internal surfaces and external surfaces shall be finished in duco paint. Storage rate shall be inclusive of adhesive and all the hardware like nails, screws, hinges, aluminium C profile handle for drawers, locks, handles for shutters, towerbolts, ball catch etc. required to complete the item. Item to include spray coating all the surfaces with approved anti termite solution including providing 10 year guarantee for the same as directed by the Architect or Engineer in Charge.								
	QRO				0	100%	0.0	sq.m	
101	Providing and fixing a 700mm to 750mm deep duco finish storage unit M2, M3, M4, M5 for mammals. Storage shall be built out of 25mm thick marine MDF used for top, shutters, verticals and internal shelves, 8mm thick marine MDF used for backing. Shutters to be openable of approx. 450mm - 625mm width and the storage base shall be 38mm thick. All exposed surfaces of the storage shall be finished in duco paint asper the shade approved by the Architect. Storage rate shall be inclusive of adhesive and all the hardware like nails, screws, hinges, locks, handles, towerbolts, ball catch etc. required to complete the item. tem to include spray coating all the surfaces with approved anti termite solution including providing 10 year guarantee for the same as directed by the Architect or Engineer in Charge. Item to be inclusive of providing 15 to 20 drawers of width 1.1m, 150 to 100mm height, 700mm depth as per shown in the drawing. Storage rate shall be inclusive of adhesive and all the hardware like nails, screws, hinges, aluminium C profile handle for drawers, locks, handles for shutters, towerbolts, ball catch etc. required to complete the item. Item to include spray coating all the surfaces with approved anti termite solution including providing 10 year guarantee for the same as directed by the Architect or Engineer in Charge.								
	QRO				0	100%	0.0	sq.m	
102	Shifting the existng wall mounted taxidery from one wall to another wall.								
	Lecture hall	3			3	100%	3.0	no.	
103	Providing and fixing 900mm to 1100mm high and 1500 wide centre table with an Indian marble table top. Storage shall be built out of 18mm thick commercial plywood used for top, verticals and internal shelves, 19mm thick commercial block board for shutters. Shutters to be openable of approx. 450mm - 625mm width and shall be raised from the floor by 125 mm and the storage base shall be 38mm thick. Shutters to have a panel design as per design provided in drawing. The internal surfaces shall be finished with french polish and external surfaces shall be finished								
	Mezzanine floor - display area	1	6	1.5	9	100%	9.0	sq.m	

104	Supplying well seasoned burma teak wood 300 to 450 mm deep storage modules (above storage S2). Storage shall be built out of 25mm thk teak wood used for top, verticals, internal shelves and shutters, 8mm thick marine plywood used for backing. Shutters to be openable of approx. 450mm - 625mm width and the storage base shall be 38mm thick. Shutters to have 6mm float glass in panel design as per design provided in drawing. All exposed surfaces of the storage shall be finished melamine polish as per the shade approved by the Architect. All intern shall be finished with approved french polish. Storage rate shall be inclusive of adhesive and all the hardware like nails, screws, hinges, locks, handles, towerbolts, ball catch etc. required to complete the item. All the exposed hardware shall be brass finish with a protective lackre coat. (Basic rate of Veneer :- Rs. 120/ sq.ft). Item to include spray coating all the surfaces with approved anti termite solution including providing 10 year guarantee for the same as directed by the Architect or Engineer in Charge								
	Mezzanine floor - display area	3	1.1		2.4	7.92	100%	7.9	sq.m
105	Providing and fixing well seasoned burma teak wood decorative wall panelling of required size and design as directed by the Architect and Engineer in Charge. Item to include providing additional bands to create offsets and panels, panelling with chamfered edges or any other design, teak wood mouldings, carvings, embosses and any other detail of approved design and size as directed by the Architect. Item to include finishing the entire panel with melamine polish of approved shade including all necessary tools & hardware etc. complete. Mode of Measurement: The entire flat area of the panelling is to be measured only once inclusive of all offsets, panelling, frames, mouldings etc. No Additional factor or area to be measured for any details								
	Mezzanine floor - panelling	4	0.49		2.2	4.312	100%	4.3	sq.m
106	Providing and fixing well seasoned old Burma teak wood skirting of 120 to 150mm x 20 mm thick in required position and of the size shown in the drawings including all mouldings as per drawings, rough grounds, Rawl plugs if necessary and finishing with french polish etc. complete. Item to include spray coating all the surfaces with approved anti termite solution including providing 10 year guarantee for the same as directed by the Architect or Engineer in Charge								
	Mezzanine floor - periphery	1	51			51	100%	51.0	R.M
107	Providing and fixing well seasoned old Burma teak wood top rail in required position and of the size shown in the drawings including all mouldings as per drawings, rough grounds, Rawl plugs if necessary and finishing with french polish etc. complete. Item to include spray coating all the surfaces with approved anti termite solution including providing 10 year guarantee for the same as directed by the Architect or Engineer in Charge								
	Size : 35x45								
	Mezzanine floor - periphery	1	51			51	100%	51.0	R.M
108	Providing and fixing well seasoned old Burma Teakwood chair rail out of 50 mm x 35 mm thk section in required position and of the profile shown in the drawings including all mouldings, grooves, rough grounds, raw plugs if necessary and finished with approved colour stained matt water based PU coat of ICA or inchem or equivalent make using approved coloured stainers of the same company. Item to include spray coating all the surfaces with approved anti termite solution including providing 10 year guarantee for the same as directed by the Architect or Engineer in Charge								
	Mezzanine floor -for refurbished Display unit	1	9.5			9.5	100%	9.5	R.M
109	Providing and fixing framed anitque prints and pictures from Hornbill House as specified by the architect in the specified location complete with all fixing etc., Item to also include printing, installation and nothing extra payable in case of any damage till the completion of the site. Item to be inclusive of providing teak wood moulding around the frame as per the design approved by the Architect. (750X 750)								
	Mezzanine floor -for refurbished Display unit	1	4			4	100%	4.0	no.

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110	Providing and fixing tag boards with necessary framework and fixing as approved by the architect in the specified location complete with all fixing etc., Item to also include installation and nothing extra payable in case of any damage till the completion of the site. Item to be inclusive of providing teak wood moulding around the frame as per the design approved by the Architect. (1.8mX 0.75m)							
	Mezzanine floor -for refurbished Display unit	1	1.8	4	7.2	100%	7.2	sq.m

REFURBISHMENT OF EXISTING FURNITURE								
111	Refurbish & modify the existing wooden storage S1 as per the proposed elevation. Item to be inclusive of cutting the storage unit and reassembling it as per the proposed elevation. Item to be inclusive of providing and fixing new teak wood drawers, moulding, frame and top as required to complete the proposed design. Item to be inclusive of scraping and doing french polishing as per the shade approved by the Architect. Item to be inclusive of polishing the existing hardware and providing new hardwares if damaged or required for the new drawers. The new work including the wooden drawer, moulding, hardware,etc should match the historic detail found site.							
	Mezzanine floor -	1			1	100%	1.0	no.
112	Providing and fixing an Indian marble top for the existing furniture along the length of the storage unit. Item to be inclusive of doing the edge chamfer as per the design approved by the Architect. Basic rate for marble : Rs.600/sq.ft = Rs. 6456/sq.m							
	Mezzanine floor -	1	4.2	1.2	5.04	100%	5.0	sq.m
113	Refurbish & modify the existing wooden storage S2 as per the proposed elevation. Item to be inclusive of cutting the existing 6 storage units into 2 halves resulting into individual 12 cupboards which shall be reassembled in one continuous row as shown in the elevation. The item to be inclusive of providing and fixing 3 new teak wood cupboards of the same design to achieve the desired elevation. Item to be inclusive of replacing the damaged wood (shutters, moulding, railing, etc) with new teak wood. Item to be inclusive of scraping and doing french polishing as per the shade approved by the Architect. Item to be inclusive of polishing the existing hardware and providing new hardwares such as the handles, hinges, locks, etc if damaged or required for the new cupboards. The new work including the wooden drawer, moulding, hardware,etc should match the historic detail found site. The item to be inclusive of providing a continuous 18mm plywood top with 6mm veneer finish. The veneer is to be finished with french polish as per the shade approved by the Architect.							
	Mezzanine floor -	1			1	100%	1.0	no.
114	Restoration of existing " DISPLAY BOX FOR INSECTS " to include scraping of the wood polish, repolishing to be done as per approved shade. Item to include cost of scraping, and doing french polish complete. All the hardware to be repaired and replaced as per original if needed and to be polished.							
	Mezzanine floor -	10			10	100%	10.0	no.
115	Providing and fixing of burma teak wood " DISPLAY BOX FOR INSECTS " with a 6mm clear glass top. Item to be inclusive of providing french polish for the box, brass hardware as approved by the Architects.							
	Mezzanine floor -	5			5	100%	5.0	no.
116	Refurbish & modify the existing wooden storage S3 as per the proposed elevation. Item to be inclusive of cutting the existing 3 storage units into 2 halves resulting into individual 6 cupboards which shall be reassembled in one continuous row as shown in the elevation. Item to be inclusive of replacing the damaged wood (shutters, moulding, railing, etc) with new teak wood as per the historic detail. Item to be inclusive of scraping and doing french polishing as per the shade approved by the Architect. Item to be inclusive of polishing the existing hardware and providing new hardwares such as the handles, hinges, locks, etc if damaged. The new work including the wooden drawer, moulding, hardware,etc should match the historic detail found site. The item to be inclusive of providing a continuous 18mm plywood top with 6mm veneer finish. The veneer is to be finished with french polish as per the shade approved by the Architect.							
	Mezzanine floor -	2			2	100%	2.0	no.

117	Refurbish & modify the existing wooden storage S4 as per the proposed elevation. Item to be inclusive removing the wooden panel, providing and fixing 8mm thk clear glass secured with 10x15mm wooden beading. Item to be inclusive of replacing the damaged wood (shutters, moulding, railing, etc) with new teak wood as per the historic detail. Item to be inclusive of scraping and doing french polishing as per the shade approved by the Architect. Item to be inclusive of polishing the existing hardware and providing new hardwares such as the handles, hinges, locks, etc if damaged. The new work including the shutters, moulding, hardware,etc should match the historic detail found site.							
	Mezzanine floor -	2			2	100%	2.0	no.
118	Refurbish & modify the existing wooden storage S5 as per the proposed elevation. Item to be inclusive of removing the wooden panel, providing and fixing 8mm thk clear glass secured with 10x15mm wooden beading. Item to be inclusive of replacing the damaged wood (shutters, moulding, railing, etc) with new teak wood as per the historic detail. Item to be inclusive of scraping and doing french polishing as per the shade approved by the Architect. Item to be inclusive of polishing the existing hardware and providing new hardwares such as the handles, hinges, locks, etc if damaged. The new work including the shutters, moulding, hardware,etc should match the historic detail found site.							
	Mezzanine floor -	1			1	100%	1.0	no.
119	Refurbish & modify the existing wooden storage S6 as per the proposed elevation. Item to be inclusive of removing the wooden panel, providing and fixing 8mm thk clear glass secured with 10x15mm wooden beading. Item to be inclusive of replacing the damaged wood (shutters, moulding, railing, etc) with new teak wood as per the historic detail. Item to be inclusive of scraping and doing french polishing as per the shade approved by the Architect. Item to be inclusive of polishing the existing hardware and providing new hardwares such as the handles, hinges, locks, etc if damaged. The new work including the shutters, moulding, hardware,etc should match the historic detail found site.							
	Mezzanine floor -	1			1	100%	1.0	no.
120	Restoration of existing wooden storage S7, to include scraping of old paint, repolishing to be done as per approved shade. Item to include cost of scraping and doing french polish complete. All the hardware to be repaired and replaced as per original design if needed and to be polished. item to be inclusive repairing or replacing							
	Mezzanine floor -	1			1	100%	1.0	no.
121	Restoration of existing " READING TABLE " to include scraping of the wood polish, repolishing to be done as per approved shade. Item to include cost of scraping, and doing french polish complete. All the hardware to be repaired and replaced as per original if needed and to be polished.							
	Mezzanine floor -	1			1	100%	1.0	no.
122	Restoration of existing " READING TABLE " to include scraping of the wood polish, repolishing to be done as per approved shade. Item to include cost of scraping, and doing french polish complete. All the hardware to be repaired and replaced as per original if needed and to be polished.							
	Mezzanine floor -	1			1	100%	1.0	no.
123	Restoration of existing " READING TABLE " to include scraping of the wood polish, repolishing to be done as per approved shade. Item to include cost of scraping, and doing french polish complete. All the hardware to be repaired and replaced as per original if needed and to be polished.							
	Mezzanine floor -	1			1	100%	1.0	no.
124	Restoration of existing " CHAIRS " to include scraping of the wood polish, repolishing to be done as per approved shade. Item to include cost of scraping, and doing french polish complete. All the hardware to be repaired and replaced as per original if needed and to be polished.							
	Mezzanine floor -	qro			0	100%	0.0	no.

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M	SIGNAGE								
125	Providing and fixing 125mm -200 mm Individual cut wood letters, to be glued to masonry wall and aligned as indicated by the architect for exterior MAIN SIGNAGE								
	on exterior wall (Hornbill House)	14				14			
	BNHS(BOMBAY NATURAL HISTORY SOCIETY)	27				27			
						41	100%	41.0	no.
126	Providing and fixing laser cut sigange in teak wood finished in melamine polish / PU paint as per the design approved by the Architect. The sigange is to be glued to masonry wall and aligned as indicated by the architect								
	Exterior	3	2		2	12	100%	12.0	sq.m
127	Providing and fixing a full length SIGNAGE of size 650mm x 5.6m in the lobby, finished in 0.8mm VM Zinc sheet. The Item to include providing 24mm thk marine plywood finished in zinc sheet and edge banding for the edges of the board. Item to also include the edging of the metal sheet to smoothen the edges as directed by the Architect. Item to be inclusive of laser cutting the board in shape of logo of size 500 to 550 x 750 to 800 as shown in the drawing and as approved by the Architect. Item to be inclusive of laser cutting the board to highlight 10 to 15 letters of 100mm height. Item to be inclusive of providing all the required hardwares such as nails, adhesives, etc complete. Base rate for zinc sheet = Rs. 550/sq.ft								
	Ground floor - lobby	4	0.65		5.6	14.56	100%	14.6	sq.m
128	Providing and fixing a full length STANDEE SIGNAGE of size 650mm x 3m in the lobby/ in exterior campus, finished in 0.8mm VM Zinc sheet. The Item to include providing 24mm thk metal frame finished in zinc sheet and edges finished in zinc. Item to also include the edging of the metal sheet to smoothen the edges as directed by the Architect. Item to be inclusive of providing and fixing a brass cut logo of size 500 to 550 x 750 to 800 as shown in the drawing and as approved by the Architect. Item to be inclusive of brass cut 10 to 15 letters of height of 100mm. Item to be inclusive of providing all the required hardwares such as nails, adhesives, etc complete. Base rate for zinc sheet = Rs. 550/sq.ft								
	Exterior standee	1	0.75		2.5	1.875	120%	2.3	sq.m
129	Providing and fixing brass cut letters of upto 100mm height of approved font as instructed by Architect. Item to include making samples of the approved fonts, fabricating, fixing on site with all the hardware and finishing complete.								
	mezzanine main signage	150				150	100%	150.0	no.
130	Providing and fixing brass laser cut logos / shapes of size 400 to 500mm x 500 to 550mm of approved design as instructed by Architect. Item to include making samples of the approved design, fabricating, fixing on site with all the hardware and finishing complete.								
	mezzanine main signage	4	0.5		0.8	1.6	100%	1.6	sq.m
131	Providing and fixing a brass finished SS plate of size 200 to 250mm x 100 to 150mm with letters engraved on it as per the font approved by the Architect. Item to include making samples of the approved design, fabricating, fixing on site with all the hardware and finishing complete.								
	mezzanine display area	5				5	100%	5.0	no.
132	Providing and fixing laser cut MDF letters of upto 100mm height of approved font as instructed by Architect. Item to include making samples of the approved fonts, fabricating, fixing on site with all the hardware and finishing complete. Item to be inclusive of painting MDF with luster paint as per the shade approved by the Architect.								
	gr floor lobby - main signage	10				10	100%	10.0	no.

133	Providing and fixing MDF cut logos / shapes of size 400 to 500mm x 500 to 550mm of approved design as instructed by Architect. Item to include making samples of the approved design, fabricating, fixing on site with all the hardware and finishing complete. Item to be inclusive of painting MDF with luster paint as per the shade approved by the Architect.								
	gr floor lobby - main signage	1	0.7		0.9	0.63	100%	0.6	sq.m
134	Providing and fixing Vinyl / flex printed signages/pictures to be stuck on the painted mdf/gypsum / glass / plastered wall surface of maximum height 10' as indicated by the architect								
	gr floor - information signage	1	3		1.5	4.5			
	gr floor - information signage	2	3		1.5	9			
	mezzanine floor - information signage	1	4		1.7	6.8			
	mezzanine floor - information signage	7	0.8		0.6	3.36			
						23.66	150%	35.5	sq.m
135	Providing & fixing signage on 12mm forsted toughened glass fixed with brass finish SS studs. Item to be inclusive of printing and pasting a transparent vinyl on the glass as per the design approved by the Architect.								
	Mezzanine floor - on wooden panelling	4	1		2	8	100%	8.0	sq.m
136	Provision and fixing of cantilevered wooden Signage - well seasoned Burma teakwood Signage plaque to be fixed perpendicular to the wall using brass finished M.S. bracket of design and size as shown in the drawings or as directed by the Architect. Brass cut letters ranging from 25 mm to 75 mm and 8mm thick to be fixed on Teak Wood Plaque on both sides in required language and text style as directed by the Architect including all necessary fitting like screws, nails, etc. Item to include providing mouldings and chamfers as per details shown in drawings, or as directed by the Architect. Sample of the same and cut letters to be approved by the Architect or Engineer - in - charge. Item to include complete finishing of the letters inclusive of buffing and polishing and providing french polish to the wooden plaque as approved by the Architect etc. complete. Mode of Measurement to be as per the area of the wooden plaque inclusive of brass cut letters on both sides and contractor to not to charge twice the area for letters & finishing on both sides.								
	Mezzanine floor - HOD cabin	1	0.6		0.2	0.12	100%	0.1	sq.m
137	Providing and fixing a cantilevered MDF signage made of 12mm marine MDF, finished in paint as per the shade approved by Architect. Item to be inclusive of laser cutting the MDF in the desired shape as directed by the Architect. Item to be inclusive of providing a SS finish cantilevered rod of diameter 15 to 25mm thk. Item to be inclusive providing all the required fixing hardwares such as nails, screws, etc complete.								
	Toilet	6	0.6		0.2	0.72			
	lobbies	10	0.6		0.2	1.2			
						1.92	100%	1.9	sq.m
N	TOILET UPGRADATION								
138	Removing W.C. pans including disconnecting the sanitary and water supply connections, removing and breaking flooring and bed concrete around pans and removing pan carefully and throwing out the refusal outside etc. complete.								
	Existing toilet	4				4	100%	4.0	no.
139	Removing urinal pans or wash hand basins with frame including disconnecting the sanitary and water supply connections, removing the same carefully and stacking the serviceable materials as and where directed including throwing the unserviceable materials outside.								
	Existing toilet	2				2	100%	2.0	no.
140	Dismantling brick masonry in lime or cement mortar and stacking the materials as directed with all leads, lifts etc.								

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	Existing toilet	8	1.5	0.15	3	5.4	100%	5.4	cu.m
141	Providing second class Burnt Brick masonry with conventional/ I.S. type bricks in cement mortar 1:6 in superstructure including striking joints, raking out joints, watering and scaffolding etc. Complete								
	Existing toilet	8	1.5	0.15	3	5.4	100%	5.4	cu.m
142	Providing Autoclaved Aerated Concrete Block masonry of conforming to IS:2185 (Part3)-1984 in extra fine jointing mortar off ixoblock of UltraTech or equivalent in Half brick thick wall including striking joints, raking out joints and scaffolding etc.Complete. (The test shall be carried out conforming to IS:6441 (Part I) - 1972)								
	Mezzanine floor toilet	1	30.7		3	92.1	100%		
	First floor toilet	1	30.7		3	92.1	100%		
						184.2	100%	184.2	sq.m
143	Providing autoclaved aerated concrete block masonry of Ecolite or equivalent make conforming to IS:2185 (Part 3)-1984 in extra fine jointing mortar of fixoblock of ultraTech or equivalent in superstructure including striking joints, raking out joints and scaffolding etc. complete. (The test shall be carried out conforming to IS:6331 (Part I)- 1972)								
	QRO						100%	0.0	sq.m

144	Drilling and boring through 450 mm thk masonry walls / composite wall (horizontal / angular) as required to create passage for cables, a/c tubing ducts 150-230mm dia as per architectural requirements, all labour, plant , tools , skilled manpower etc. complete including grouting / filling and making good. item to be inclusive of providing a MS sleeve in the core cut.								
	Mezzanine toilet	6				6	100%	6.0	NO.
145	Providing waterproofing in W.C. and bath including brick bat coba in all positions including providing and laying 12mm bedding in cement mortar 1:3 on concrete slab with waterproofing compound @ 1kg / per bag of cement laying brick bat coba of required thickness in cm 1:5 with waterproofing compound 1 kg/per bag of cement grouting and finishing the top layer with 20mm thick brick bedding in cm mortar 1:3 with waterproofing compound 1 kg/per bag of cement and testing the treated protion for 48 hrs. by pond test and covering ten years guarantee on requisite stamp paper including all leads, lifts and curing etc. complete								
	Mezzanine toilet	1	3.1	4.2		13.02			
	Mezzanine pantry	1	2.3	1.5		3.45			
	First floor toilet	1	5.5	4.1		22.55			
	total					39.02	100%	39.0	sq.m
146	Providing waterproof plaster in W.C. and bath 20 mm thick for dado in cement mortar 1:3 with neat finishing, floating using waterproofing compound at the rate of One kg. per bag of cement of approved make and manufacturer etc. complete.								
	Mezzanine toilet	2	30.7		3	184.2			
	First floor toilet	2	30.7		3	184.2			
	total					368.4	100%	368.4	sq.m
147	Providing lime plaster 20 mm. Thk in two coats having backing coat of 20 mm. thick in 1:3 (one lime: 3 surkhi) and finishing coat of 10 mm. thk in 1:2 lime mortar (1 Lime:2 Quartz sand) for internal plastering including mixing, approved adhesive such as guggal, jaggery etc. and applying to concrete/ brick/ stone masonry surface in all position and finishing the surface even and smooth with lime plugging in 1:1 and curing etc. complete.								
	QRO					0	100%	0.0	sq.m
148	Providing internal cement plaster 12 mm thick in single coat in cement mortar 1:4 without neeru finish to concrete or brick surfaces in all positions including scaffolding, and curing complete.								
	Mezzanine toilet	2	30.7		3	184.2			
	First floor toilet	2	30.7		3	184.2			
	total					368.4	100%	368.4	sq.m
149	Providing neeru finish to plastered surfaces in all positions including scaffolding and curing complete								
	QRO					0	100%	0.0	sq.m
150	Providing and applying plaster/wall punning with plaster of paris (with Plaster of paris material of Ambuja/Mor Chap or equivalent make) in 10 to 13 millimeter thickness to previouslt plastered surface/ or on newly brick surface (excluding rough cast plaster) in all position including preparing and finishing the surface scoffilding etc. complete								
	QRO					0	100%	0.0	sq.m
151	Providing and applying one priming coat on concrete/masonry/Asbestos cement/plastered surfaces including scaffolding if necessary, preparing the surface by thoroughly cleaning oil, grease, dirt and other foreign matter and sand paPer oneing, etc. complete.								
	Mezzanine toilet	2	30.7		3	184.2			
	First floor toilet	2	30.7		3	184.2			
	total					368.4	50%	184.2	sq.m

152	Providing and applying interior wall finish luster of Asian / berger / Nerolac / Dulux Paint or equivalent make on internal wall surface as detailed below. Scraping the surface with emery paper and wiping it clean. Applying Asian / Berger / Nerolac / Dulux or equivalent wall primer with brush with mineral turpentine of 8 to 10% and oil 15 to 20% with roller and allowing to dry for a period 6 to 8 hrs. Applying Asian / Berger / Nerolac / Dulux or equivalent Acrylic wall putty with appropriate proportion of water allowing to dry for period 4 to 6 hrs. Wiping or scraping with Emery paper 180 and wipe clean. Applying Asian / Berger / Nerolac / Dulux Paints or equivalent wall primer with brush with mineral turpentine 8 to 10% and oil 15 to 20% with roller, scraping with Emery paper 320 and wiping it clean, Applying Asian / Berger / Nerolac / Dulux Paints or equivalent interior wall finish luster 1st coat with brush / rubber / spray with mineral turpentine 7 to 9% and oil with roller 19 to 21%. After 8 hours of activity applying 2nd coat of Asian / Berger / Nerolac / Dulux or equivalent interior wall finish Lustre with mineral turpentine 7 to 9% with brush and Oil with roller 19 to 21% with roller.								
	Mezzanine toilet	2	30.7		3	184.2			
	First floor toilet	2	30.7		3	184.2			
	total					368.4	50%	184.2	sq.m
153	Providing and laying vitrified matt finish/terrazo look alike tiles having size 1200mm x 600mm of 8 to 10 mm thickness and confirming IS. of Mirage / GresCasa make or equivalent, shade and pattern for flooring in required position fixed in 1:4 cement mortar including neat cement float, filling joints, curing and cleaning etc. complete. Item to be inclusive of preparing the rough texture for the wall with grinding, etc complete. (Basic rate : Rs.150/sq.ft = Rs.1614/sq.m)								
	Mezzanine toilet	1	3.1	4.2		13.02			
	Mezzanine pantry	1	2.3	1.5		3.45			
	First floor toilet	1	5.5	4.1		22.55			
	total					39.02	120%	46.8	sq.m
154	Providing and laying vitrified matt finish tiles having size 1200mm x 600mm of 8 to 10 mm thickness and confirming IS. of Mirage / GresCasa make or equivalent, shade and pattern for dado in required position fixed in 1:4 cement mortar including neat cement float, filling joints, curing and cleaning etc. complete. Item to be inclusive of preparing the rough texture for the wall with grinding, etc complete. (Basic rate : Rs.150/sq.ft = Rs.1614/sq.m)								
	Mezzanine toilet	2	30.7		3	184.2			
	First floor toilet	2	30.7		3	184.2			
	total					368.4	40%	147.4	sq.m
155	Providing and fixing 650 to 700 deep Granite/ Quartz Counter size shown on architect's drawing, including cutting holes in the counter for basin and tap, rounding and polishing of edges will be in the scope of civil contractor as per design specified by the architect.								
	First floor toilet	1	7.2			7.2	100%	7.2	R.M
156	Providing and fixing 650 to 700 deep Italian Marble Counter size shown on architect's drawing, including cutting holes in the counter for basin and tap will be in the scope of civil contractor as per design specified by the architect. (Base price - 800-900/sq.ft)								
	Mezzanine floor toilet	1	4.8			4.8	100%	4.8	R.M

157	Providing and fixing 50mm thick flushed door with a frame work of FULL BODY TILE / QUARTZ/granite. The main door frame to be with the required rebate for an overlap between shutter and frame and 6mm grooves between plaster/ pop/ cladding etc. on all 3 sides of the door frame. Shutter should be rated waterproof and shall be finished with 3mm thick laminate on both sides. The rate for the door shall include adhesive and all the hardware like M.S. holdfasts, nails, screws, butt hinges, handles, lock, concealed door closer, door stopper etc. required to complete the item. All the exposed hardware shall be brass finish with a protective lackre coat.(Basic rate of Laminate - Rs. 55/ sq.ft).								
	Toilets	13	0.8		2.1	21.84	100%	21.8	sq.m
158	Providing and fixing Wall-Hung Toilet with PP Seat Cover of Aquant item code 1570 or equivalent make coupled closet syphonic trap with syphonic low level white glazed 10 litres cistern, chromium plated brass hinges including cast iron soil and vent pipes upto the outside face of the wall including 100 mm diameter cast iron plug bend, inlet pipe, stop tap etc. all fittings, cutting and making good walls and floors complete. Basic rate : Rs. 9,990 / no.								
	Toilets	13				13	100%	13.0	no.
159	Providing and fixing Urinal with Top Inlet Item Code: 1548 or equivalent make of Size: 630 x 330 x 300 mm with white H.D.P.E. flushing cistern of 5 litres capacity with fittings, inlet pipe and stop tap, brackets for fixing the cistern, 32 mm diameter galvanised iron heavy type flush pipe with fittings and flushing arrangement etc. (Basic rate : Rs. 8,500/-)								
	Toilets	2				2	100%	2.0	no.
160	Providing and fixing Kohler Concealed Flush Tank Instaflush K 77027IN M NA or equivalent approved make as directed by the Architect with GI line connection and main conceal stop cock with with 32 mm dia C.P. brass waste coupling, C.P. brass flush bend, over flow pipe, fixed on brackets with screws, 15mm dia concealed C.P brass angle stop cock, 10mm dia C.P. brass/PVC connector pipe etc., Item to also include 100 mm dia CI connector pipe from the P or the S trap to the junction of the soil stack or drain and all GI connection complete. Basic rate : Rs. 4,800/ no.								
	Toilets	8				8	100%	8.0	no.
161	Providing and fixing Bevel Faceplate of Kohler For Instaflush Mechanical Tank K-8857IN-M-CP / approved make and design. Item to include connecting the flush plate to the flush tank etc. complete Basic rate : 2100/ no.								
	Toilets	8				8	100%	8.0	no.
162	Providing and fixing in position ceramic drop-in semi-counter wah basin of Aquant item code : 1721 or equivalent make of size 610x405x120 as approved by the Architect or the Engineer in Charge, including brackets, rubber plugs and brass chain, stop tap and necessary pipe connection including Aquant waste water coupling and bottle trap and providing waste water pipe upto the outside face of the wall, cutting of walls and making good the damaged surface, testing etc. complete. Basic rate : Rs.7,950/ no.								
	Toilets	6				6	100%	6.0	no.
163	Providing and fixing Floor Drain with Anti-Cockroach System. 100 x 100 mm Material: 304-Grade Stainless Steel with anti - cockroach and anti foul tap - including C.I. grating bend and piece of C.I. pipe upto the outside face of the wall complete. (Basic rate : 2,000 per piece)								
	Toilets	12				12	100%	12.0	no.
164	Providing and fixing Brass Health Faucet Set of Aquant make model : 28121 of approved quality including necessary socket / union etc. complete as directed. (Basic Rate - Rs. 2,150/ Number)								
	Toilets	4				4	100%	4.0	no.

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165	Providing Square Towel Ring og Kohler make K-25067IN-CP of approved design and make with finish in French Gold/ Rose Gold/ Brass/ Chrome or equivalent as per Architect's design or drawings or as required to make the item well and Item to include making holes and necessary hardware like screws etc. and making good the damages etc complete Size -							
	Toilets	2			2	100%	2.0	no.
166	Providing and fixing Jaguar Tall Boy Sensor Faucet as approved by Architect or Engineer in Charge, with deluxe knob for Wash Hand Basin or sink etc. complete. ((Basic Rate - Rs.12,100/number)							
	Toilets	6			6	100%	6.0	no.
167	Providing and fixing Wall mounted Automatic Soap Dispensers of Jaguar make Range :Soap Dispensers Code :SDR-BLC-DJ0160AS Description :Automatic Soap Dispensers, Capacity : 0.8L, Material: Aluminium/ABS, Finish : Chrome/Black Item to include making holes and necessary hardware like screws etc. and making good the damages etc. complete. Basic rate :6,500.00.							
	Toilets	4			4	100%	4.0	no.
168	Providing and fixing Chromium Plated Toilet Paper Holder of Kohler model : Accent, K-25346IN-AF or Equivalent approved make and design. Item to include making holes and necessary hardware like screws etc. and making good the damages etc. complete. Basic rate 2,190/ piece							
	Toilets	5			5	100%	5.0	no.
169	Providing and fixing ROBE HOOK of Kohler make Model : Complementary Robe Hook K-5635IN-CP of approved qualtiy make and design to hang clothes. Item to include making holes and necessary hardware like screws etc. and making good the damages etc, complete. Basic rate: Rs. 860/ piece							
	Toilets	8			8	100%	8.0	no.
170	Providing and fixing Chrome Finish Concealed Stop Cock of Kohler model K-16087IN-4-CP In-line stop valve trim (both G13mm and G19mm) or equivalent make including all necessary plumbing works required to complete item in all respects . Basic rate : 1250/-							
	Toilets	4			4	100%	4.0	no.
171	Providing and fixing polished Chrome Finish Angel Cock of Kohler model make K-23515-4-CP or equivalent make including all necessary plumbing works required to complete item in all respects. Basic rate : 1980/-							
	Toilets	8			8	100%	8.0	no.
172	Providing and fixing Chrome Finish 2-way Bib Cock model July K-16094IN-4-CP of Kohler of approved quality including all necessary plumbing works required to complete item in all respects. Basic rate : 4,630/-							
	Toilets	8			8	100%	8.0	no.

ESTIMATE FOR HVAC WORKS

NAME OF PROJECT: ATI RANCHI**HVAC APPROVED MAKES LIST**

Sr. No.	Details of Materials / Equipment	Manufacturer's Name
1	VRF / VRV unit	Daikin / Mitsubishi/Voltas
2	Ductable unit	Daikin / Mitsubishi/Voltas
3	Air Handling Units	Zeco / Edgetech
4	AHU Connection Kit	Daikin / Voltas OR Equivalent Approved
5	CASSETTE /SPLIT AC Units	Voltas / Daikin/ Mitsubishi
6	Flexible Couplings	Victaulic/Resistoflex/Dunlop OR Equivalent Approved
7	Cushy Foot Mounts	Resistoflex/ OR Equivalent Approved
8	Variable Frequency Drive	Danfoss/ ABB OR Equivalent Approved
9	Inline Fans	AIRFLOW/ Kruger / System Air /
10	Motors	Siemens / Crompton/ Bharat Bijlee /ABB OR Equivalent Approved
11	Filters	Dyna / Thermadyne / Spectrum / AAF OR Equivalent Approved
12	Ambiators	HMX / Eq.
13	Expanded Polystyrene Insulation	Cooline / OR Equivalent Approved
14	Cross Linked Polymer Insulation	Armacell / Paramount / Equivalent Approved
15	Fiber Glass Insulation	Uptwiga / OR Equivalent Approved
16	Air Distribution Ducting (Site Fabricated)	Sail / Nippon / OR Equivalent Approved
17	Grilles / Diffusers / Jet Nozzles	Ravistar / Cosmos / Carryaire/ Airflow /Tristar/ Mapro Eq Approved
18	Aero-Foil Dampers	Carryaire / Ravistar OR Equivalent Approved
19	Fresh Air Louvers/Assembly	Ravistar/ OR Equivalent Approved
20	Smoke / Fire Damper	Cosmos /Air Master / Carryaire / Dynacraft / Air Product / Ravistar/Tristar
21	Actuators	Belimo / Siemens
22	Sound Attenuator	Carryaire / Ravistar
23	Flexible Duct Connectors	Klimatch,
24	Anchor Fastener	Hilti
25	Duct Thermal & Acoustic Insulation	Thermobreak / Supreme/ ARMACELL
26	Closed Cell Nitrile Rubber along with adhesive	Armaflex / K-flex/ ARMACELL
27	Under deck Insulation	Thermobreak / Supreme/ ARMACELL
28	UPVC Drain Piping	Prince / Supreme
29	Cables	Polycab / Finolex / Hawells
30	Switchgears- MCB's, MCCB's etc.	Legrand / Indo-Asian / Siemens
31	Protective Coating over Closed Cell Electrometric - Fiberglass Woven Cloth	UP Twiga
32	Factory Made Duct	Alpha duct / Rollastar / Zeco / Nutech
33	Factory Made Spiral Duct	Seven Star
34	Pre-insulated flexible duct	Nutech / Owens Corning / Supaflex
35	Copper Pipes	Maxflow / Yorkshire / Rajco / Mehta tubes
36	Copper Pipe fittings	Conex Banninger/ NIBCO
37	Copper Pipe Insulation	Thermobreak / Supreme
38	Filters	Airtech / DYNA / Pyramid / TROX/ Thermodyne / AAF
39	cable tray	indiatech/era/pasco/venus

NAME OF PROJECT: BNHS					
HVAC VRF WORK ESTIAMTE					
S. No.	Description of Items	Unit	QTY	RATE	Amount
A	EQUIPMENTS				
	VRV/VRF System				
1	Outdoor Units				
	Supply Installation, Testing & Commissioning of modular type Variable Refrigerant Flow/Variable Refrigerant Volume air cooled Outdoor units suitable for cooling and heating, having all hermetically sealed inverter type Scroll Compressor(s), minimum two compressors for above 14 HP modules, microprocessor based Controller, top discharge type condensing unit(s), with R 410 A Refrigerant, vibration isolators, with suitable foundation etc. complete as required. The unit shall deliver the rated capacity at AHRI Conditions and work even at 50°C ambient temperature without tripping. The unit shall be suitable to work on 400V +/- 10%, 3 Phase, 50Hz AC power supply. The unit shall be filled with first charge of the refrigerant and ready for use as required. The COP at AHRI conditions shall not be less than 3.1 and IEER not less than 6.5 .				
1.1	ODU - 56 HP (20+18+18 HP)	Nos.	1		
2	VRV/VRF BASED HI WALL				
	Supply, installation, testing and commissioning of following minimum capacity VRV/VRF High wall type Indoor unit equipped with washable synthetic media pre-filter, fan section with low noise fan/dynamically balanced blower, multispeed motor, coil section with DX copper coil, electronic expansion valve, outer cabinet, cord less remote control, drain pan, necessary accessories etc., suitable for operation on 230 V ± 10%, 50 Hz, single phase AC supply, complete as required. The unit shall have automatic force shut down provision in case of fire on receiving signal from BMS System. The cooling capacity of indoor unit will be at air inlet conditions of 27 Degree C DB and 19 Degree C WB temperature.				
2.1	1.28 TR (424 CFM)	Nos.	1		
2.2	1.59 TR (530 CFM)	Nos.	0		
2.3	2 TR (671 CFM)	Nos.	0		
3.1					

3	VRV/VRF BASED DUCTABLE				
	Supply, installation, testing and commissioning of VRV /VRF based ductable type, high static indoor unit (IDU) having EER as per BEE standards and specifications with evaporator fan with motor, copper tube aluminium fin evaporator coil, washable air filter, insulated drain tray, expansion device, cordless remote control with necessary controls and electrical terminal to receive power supply, etc. having anti-corrosive coating suitable for coastal area, with suitable ceiling suspension arrangement, with an electronic control console and any additional refrigerant and oil charge as per requirement during installation connected with the system complete. including canvas connection.				
3.1	6.36 TR (2295 CFM) HSP	Nos.	1		
3.2	8 TR (2825 CFM) HSP	Nos.	3		
4	Supply, installation, testing and commissioning of VRF/VRV based ceiling suspended 2 Way cassette indoor unit (IDU) having EER as per BEE standards and specifications, suitable as per site requirement with swing louvers and adjustable blades from sides. Indoor Units complete with in-built drainage arrangements, fan, refrigerant liquid and refrigerant piping, cordless remote control, and fresh air port etc. IDU shall have anticorrosive coating suitable for coastal area complete in all respects, to operate on 1-phase, 230V, 50Hz, AC input supply, consisting with any additional refrigerant and oil charge as per requirement during installation and connected to the system complete.				
4.1	2.6 TR CASSETTE UNIT	Nos.	3		
4.2	2 TR CASSETTE UNIT	Nos.	3		
5	SITC of Centralized Controller	Nos.	1		
6	Commission of VRV systems including topping R410A gas per site requirements				
6.1	Gas charging	kg	90		
7	Supply, Installation, testing and commissioning including vaccumiazation and Nitrogen testing of following nominal sizes of soft/hard drawn copper refrigerant piping for VRV/VRF system, complete with fittings, with suitable adjustable ring type hanger supports, jointing/brazing including accessories, insulated with XPLE Class-0 tubular insulation/with Class-0 closed cell elastometric nitrile rubber tubular sleeves sections of specified thickness as given below for Suction and Liquid lines, all accessories as per specifications etc. as required :				
7.1	41.3 mm O.D. (insulation : 19 mm) Tube thickness 1.62mm	Rm	16		
7.2	34.9 mm O.D. (insulation : 19 mm) Tube thickness 1.62mm	Rm	11		
7.3	28.6 mm O.D. (insulation : 19 mm) Tube thickness 1.2mm	Rm	21		
7.4	25.4 mm O.D. (insulation : 19 mm) Tube thickness 1.2mm	Rm	0		
7.5	22.2 mm O.D. (insulation : 19 mm) Tube thickness 1.2mm	Rm	19		
7.6	19.1 mm O.D. (insulation : 19 mm) Tube thickness 1.2mm	Rm	63		
7.7	15.9 mm O.D. (insulation : 19 mm) Tube thickness 1.2mm	Rm	27		
7.8	12.7 mm O.D. (insulation : 19 mm) Tube thickness 1.2mm	Rm	5		

7.9	9.5 mm O.D. (insulation : 19 mm) Tube thickness 1.2mm	Rm	66		
7.10	6.4 mm O.D. (insulation : 19 mm) Tube thickness 1.2mm	Rm	1.5		
8	Refnet Joints/Branch Distributors for Indoor & Outdoor units.				
8.1	1 No Each for suction line , 1 no each for liquid line (= 1 set)	Nos.	10		
9	Providing and fixing rigid PVC piping complete with fittings, supports as per specifications and duly insulated with 6 mm thick closed cell nitrile rubber insulation.				
9.1	25 mm dia	Rm	17		
9.2	32 mm dia	Rm	55		
9.3	50 mm dia	Rm	2		
10	<u>Control & Transmission Wiring</u>				
10.1	Providing & fixing control cum transmission wiring of 2 corex1 sqmm copper in suitable conduits between indoor and outdoor units.	Rm	250		
11	Outdoor Stand With Vibration Isolater V.I. Pad for VRV Outdoor Units.	Nos.	1		

DUCTING, GRILLS, DIFFUSER AND INSULATION					
12	Supply, installation, balancing and commissioning of fabricated at site GSS sheet metal rectangular/round ducting complete with neoprene rubber gaskets, elbows, splitter dampers, vanes,hangers, supports etc. as per approved drawings and specifications of following sheet thickness complete as required.				
12.1	Thickness 0.63 mm (24G) sheet	sq.m	36		
12.2	Thickness 0.80 mm (22G) sheet	sq.m	45		
12.3	Thickness 1.00 mm (20G) sheet	sq.m	0		
12.4	Thickness 1.25 mm (18G) sheet	sq.m	0		
13	Supply, installation, testing and commissioning of GI volume control duct damper complete with neoprene rubber gaskets, nuts, bolts, screws linkages, flanges etc., as per specifications.	sq.m	0		
14	Supplying & fixing of powder coated extruded aluminium Supply Air Jet Nozzles 200mm dia 450 to 500 CFM Flow with aluminium volume control dampers as per specifications.	Nos.	10		
15	Supplying & fixing of powder coated extruded aluminium Supply Air Grills with aluminium volume control dampers as per specifications.	sq.m	1		
15	Supplying & fixing of powder coated extruded aluminium Return Air Grills with louvers but without volume control damperscomplete as required.	sq.m	4		
16	Supplying, Fixing,testing and commissioning of fire dampers in supply air duct/main branch and return air path as and where required of required sizes i/c control wiring,the damper shall be motorized and spring return so as to close the damper in the event of power failure automatically and open the same in case of power being restored. The spring return action shall be inbuilt mechanism and not externally mounted. The damper shall also be closed in the event of fire signal complete as required and as per specifications.				
16.1	Fire damper	sq.m	1		
16.2	Actuator	Each	4		
17	Supply and fixing of acoustic lining of supply air duct and plenum with 25 mm thick resin bonded glass wool having density of 32 kg/m ³ , with 25 mm X 25 mm GI section of 1.25 mm thick, at 600 mm centre to centre covered with Reinforced Plastic tissue paper and 0.5 mm thick perforated aluminum sheet fixed to inside surface of ducts with cadmium plated nuts, bolts, stick pins, CPRX compound etc. complete as required and as per specifications.	sq.m	35		
18	Supplying and fixing of following thickness duly laminated aluminum foil of mat finish closed cell Nitrile rubber (Class "O") insulation on existing duct after applying suitable adhesive for Nitrile rubber. The joints shall be sealed with 50 mm wide and 3 mm thick self adhesive nitrile rubber tape insulation complete as per specifications and as required.				
18.1	19mm	sq.m	50		
18.2	25 mm	sq.m	0		
TOTAL HVAC COST IN RUPEES					

ESTIMATE FOR ELECTRICAL WORKS

INTERNAL ELECTRICAL ESTIMATE					
BOMBAY NATURAL HISTORY SOCIETY, FORT, MUMBAI					
S.No.	DESCRIPTION	UNIT	TOTAL QTY	TOTAL RATE	TOTAL AMOUNT
COST ABSTRACT					
S.No.	DESCRIPTION	ABSTRACT AMOUNT			
1.0	POINT WIRING AND SUBMAIN WIRING				
2.0	MV CABLES & TERMINATION				
3.0	DISTRIBUTION BOARDS				
4.0	WIRING FOR LOW VOLTAGE OUTLETS				
5.0	SUPPLY & MAKING OF EARTHING				
6.0	CCTV & SURVEILLANCE NETWORK				
7.0	DISTRIBUTION PANEL				
8.0	3 KVA INVERTER				
TOTAL ELECTRICAL COST Rs.					
RATE PER SQ.FT.					
ELECTRICAL ITEMS APPROVED MAKES LIST					
S.No	ITEM DESCRIPTION	RECOMMENDED MAKES			
1	Rigid PVC Conduits, junction Box & Bends	Norpack / BEC			
2	Modular Switches, Sockets, RJ-45, RJ-11 Etc.	L&T / Legrand / Schneider / MK			
3	1.1kv Grade PVC Insulated FRLS Wires	Polycab / RR / Finolex / Havells			
4	Telephone Cable	Havells / Polycab			
5	1.1Kv Grade XLPE Power Cables	Polycab / RR / Finolex / Havells			
6	Cable Gland	Jainsons, Dowell's			
7	Cable Lugs	Jainsons, Dowell's			
8	Cat-6/Cat-5 Cables	D-Link			
9	Port Switches/Patch Cords/Patch Panel/Network Rack	Legrand / D-Link			
10	M.S Cable Tray	Veenus, Pasco, Storrax, Skaber, Profab, Pilco, Slotco, Needo			
11	G.I Raceway	Legrand / MK			
12	Distribution Board/MCB/ELCB/RCBO	L&T, Legrand, C&S, Schnieder,Abb			
13	CCTV & Accessories	Hikvision / Honeywell			
14	LED Lights Fixture	Phillips / GM / Syska / Bajaj			
15	Inverter / UPS	Microtek/Luminous/			
16	Lift Elevator	Kone/OTIS/Thyssenkrupp			
17	11kv cable End termination & jointing kits	Polycab / RR / Finolex / Havells			
18	MCCB/MCB/ELCB/RCBO	L&T, Legrand, C&S, Schnieder,Abb			
19	On line UPS, servo stabilizer, inverter CVT.	Microtek, Su-Kam, Luminous			
20	Digital Type Meter	Rishab/L&T/HPL			
21	CURRENT TRANSFORMER	L&T, Siemens, Schneider			
22	Rotary switches, selector switches.	L&T, ABB, C&S, Siemens			
23	Pilot Lamp	BCH/L&T/Siemens			
24	Contactors	L&T/SIEMENS/ ABB/SCHNEIDER			
25	Relays	L&T/SIEMENS/ ABB/SCHNEIDER			
26	Electronic Energy Meter	Secure/ Genus/Powertrac			
27	Capacitors-PF correction MPP-H Type	Siemens/L&T/Neptune			
28	APFC Micro processor based on intelligent relay	L&T/Epcos/Neptune			
29	Bus bar Aluminium	Jindal/ Indalco/century			
30	Bubar Copper	sterline			
31	24V DC Sealed Maintenance Free Lead Acid Battery	Exide/Amron			
32	R.M.U / 11Kv VCB Panel	Lucy / Seimens / L&T			
33	Transformer	Abb / Uttam Bharat			
1	POINT WIRING AND SUBMAIN WIRING				
1.1	Wiring for light point/ exhaust fan point/ call bell point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable in surface / recessed medium class Rigid PVC conduit, with modular switch, modular plate, suitable GI box and earthing the point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable etc. as required.				
1.1.1	One point controlled upto 5 meters	Nos	75		
1.1.2	One point controlled upto 10 meters	Nos	39		

INTERNAL ELECTRICAL ESTIMATE					
BOMBAY NATURAL HISTORY SOCIETY, FORT, MUMBAI					
S.No.	DESCRIPTION	UNIT	TOTAL QTY	TOTAL RATE	TOTAL AMOUNT
1.2	Wiring for twin control light point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable in surface / recessed medium class PVC conduit, 2 way modular switch, modular plate, suitable GI box and earthing the point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable etc. as required.	Nos	0		
1.3	Same as item No. 1.1 above but LOOP POINT i.e. wiring of point looped from first point with 1.5 sq. mm PVC insulated copper conductor FRLS wire (controlling switch in item no. 1.1.1) and earthing with 1.5 sq. mm PVC insulated copper conductor earth wire in concealed (Embedded in walls after cutting chase with cutter and refilling the saw or fixing on walls / cut surface with PVC/GI SADDLES/exposed RIGID PVC Medium Duty Conduits ISI Marked .				
1.3.1	loop point (upto 5 meters)	Nos	169		
1.4	Wiring for the following Fan points with 1.5 sq. mm PVC insulated copper conductor FRLS wires of 650/1100 Volts grade in concealed/exposed RIGID PVC Medium Duty Conduits ISI Marked including providing Hook and Ceiling rose for Fan, 6 amp Modular type switches, 5 Step Fan Speed Controller, approved White Polycarbonate modular cover plate for switch boxes and earthing with 1.5 sq. mm PVC insulated copper conductor earth wire. (Wire Length up to 10Mtr.)	Nos	0		
1.5	Providing & Fixing 6 amp switch and socket On Existing Switch board approved White Polycarbonate modular cover complete as reqd.	Nos	11		
1.6	Wiring for 6 amp light socket outlet with 1.5 sq. mm PVC insulated copper conductor FRLS wires in concealed/exposed RIGID PVC Medium Duty Conduits ISI Marked including providing 6 amp switch and 6 pin socket, MS box for housing switches sockets, approved White Polycarbonate modular cover and earthing with 1.5 sq. mm PVC insulated copper conductor wire . (Wire Length up to 10Mtr.)	Nos	13		
1.7	Wiring for 15/16Amp power plug with 2X4 sq. mm FRLS PVC insulated copper conductor single core cable in surface/ recessed medium class PVC conduit including providing 16 amp switch and 16 pin socket, MS box for housing switches sockets, approved White Polycarbonate modular cover and earthing with 2.5 sq. mm PVC insulated copper conductor wire. (Wire Length up to 10Mtr.)	Set	15		
1.8	WIRING FOR 2 nos. socket outlet Shuttered controlled with one no. 16A switch mounted side by side with 2 x 2.5 sq.mm. PVC insulated single core FR flexible copper conductor in concealed/exposed RIGID PVC Medium Duty Conduits ISI Marked and Earthing With one no. 2.5 sq.mm. insulated green color earth wire.(Max. 3 Points to be looped from one circuit) (Upto 10 Mtrs)	Set	0		

INTERNAL ELECTRICAL ESTIMATE					
BOMBAY NATURAL HISTORY SOCIETY, FORT, MUMBAI					
S.No.	DESCRIPTION	UNIT	TOTAL QTY	TOTAL RATE	TOTAL AMOUNT
1.9	Supplying and drawing following sizes of FRLS PVC insulated copper conductor, single core cable in the existing surface/ recessed steel/ PVC conduit as required.				
1.9.1	2 X 1.5 sq. mm + 1 X 1.5 sq. mm earth wire	RM	2400		
1.9.2	2 X 2.5 sq. mm + 1 X 1.5 sq. mm earth wire (Light & Indoor AC Circuit)	RM	780		
1.9.3	2 X 4 sq. mm + 1 X 2.5 sq. mm earth wire (Power Circuit)	RM	330		
1.9.4	2 x 6.0 Sq. mm copper wire.+ 1 x 4.0 sqmm copper wire	RM	180		
1.9.5	4 X 6 sq. mm + 1 X 4 sq. mm earth wire	RM	180		
1.9.6	4 X 10 sq. mm + 1 X 6 sq. mm earth wire	RM	90		
1.10	Supply and fixing the following sizes of RIGID PVC Medium Duty conduits (ISI Marked) complete with accessories such as bends, junction boxes, pull boxes etc., in recess or on surface including cutting chases in the walls/floors and making good the same complete as required.				
1.10.1	20 mm dia RIGID PVC conduits	RM	200		
1.10.2	25 mm dia RIGID PVC conduits	RM	800		
1.10.3	25 mm dia PVC flexible conduit	RM	500		
1.10.4	32 mm dia RIGID PVC conduits	RM	50		
TOTAL OF POINT WIRING AND ITS ACCESSRIES COST IN Rs.					
2	MV CABLES & TERMINATION				
2.1	Supply,Laying/drawing of XLPE insulated & sheathed cable of 1.1 kV grade with Copper/ Aluminium conductor of approved make on wall / Cable Tray with GI Saddles ,making necessary connections including testing etc. as required				
2.1.1	4.0 Sq.mm 3.0 core armoured Al. Cable	p.Mtr.	0		
2.1.2	10.0 Sq.mm 3.0 core armoured Al. Cable	p.Mtr.	0		
2.1.3	16.00 Sq.mm 4.0 core unarmoured Al. Cable	p.Mtr.	60		
2.1.4	10.00 Sq.mm 4.0 core Unarmoured Al. Cable	p.Mtr.	60		
2.1.5	95.00 Sq.mm 3.5 core armoured Al. Cable	p.Mtr.	100		
2.2	P/Laying P.V.C. / XLPE insulated & P.V.C. sheathed cable of 1.1 KV grade with Copper conductor of IS:1554 P-I / IS :7098 P - I of Group 1 of approved make in ground as per IS:1255 including excavation of 30cmx75cm size trench, 25 cm thick under layer of sand,Ind class bricks covering, refilling earth,compaction of earth, making necessary connection, testing etc. as required of size.				
2.2.1	16 Sq.mm 4.0 core armoured Copper. Cable	p.Mtr.	100		
CABLE TERMINATION					

INTERNAL ELECTRICAL ESTIMATE					
BOMBAY NATURAL HISTORY SOCIETY, FORT, MUMBAI					
S.No.	DESCRIPTION	UNIT	TOTAL QTY	TOTAL RATE	TOTAL AMOUNT
2.3	Supplying and making one end termination with heavy duty single compression brass gland SIBG type, heavy duty Copper lugs duly crimped with crimping tool, PVC tape etc for following size of Armoured PVC insulated & PVC sheathed/ XLPE aluminium conductor cable of 1100 volt grade as required of size.				
2.3.1	4.0 Sq.mm 3.0 core armoured Al. Cable	Nos.	2		
2.3.2	10.0 Sq.mm 3.0 core armoured Al. Cable	Nos.	2		
2.3.3	16.00 Sq.mm 4.0 core unarmoured Al. Cable	Nos.	4		
2.3.4	10.00 Sq.mm 4.0 core armoured Al. Cable	Nos.	4		
2.3.5	95.00 Sq.mm 3.5 core armoured Al. Cable	Nos.	2		
2.3.6	10 Sq.mm 4.0 core armoured Copper. Cable	Nos.	8		
TOTAL OF MV CABLES & TERMINATION COST IN Rs.					
3	DISTRIBUTION BOARDS				
3.1	Supply, Fabrication, installation, testing & commissioning of wall mounted made from 1.6mm thickness CRCA sheet of following way, single/three pole and neutral, sheet steel, MCB distribution board, 240 V, on surface/ recess, complete with tinned copper bus bar, neutral bus bar, earth bar, din bar, interconnections, powder painted including earthing etc. as required. (But without MCB/RCCB/Isolator)				
3.1.1	4 WAY TPN PPI DB INCOMER: - 40Amp FP MCB 10KA BUS BAR:- 50Amp 3-Wire, 50Hz Cu/Al conductor with PVC sleeves indicated with 3 colors PHASE ISOLATION - 3Nos. - 25A DP ELCB 300mA OUTGOINGS - 6-16Amp SP MCB 10KA - 12Nos.	NOS.	0		
3.1.2	6 WAY TPN PPI DB INCOMER: - 63Amp FP MCB 10KA BUS BAR:- 50Amp 3-Wire, 50Hz Cu/Al conductor with PVC sleeves indicated with 3 colors PHASE ISOLATION - 3Nos. - 25A DP ELCB 300mA OUTGOINGS - 25Amp SP MCB 10KA - 18Nos.	NOS.	1		
3.1.3	8 WAY TPN PPI DB INCOMER: - 63Amp FP MCB 10KA BUS BAR:- 50Amp 3-Wire, 50Hz Cu/Al conductor with PVC sleeves indicated with 3 colors PHASE ISOLATION - 3Nos. - 25A DP ELCB 300mA OUTGOINGS - 25Amp SP MCB 10KA - 24Nos.	NOS.	1		
TOTAL OF DISTRIBUTION BOARD COST IN Rs.					
4	WIRING FOR LOW VOLTAGE OUTLETS				
4.1	Supply & fixing ISI marked modular RJ-11 Telephone Outlet made of Unbreakable and Fire Retadent High gloss polycarbonate with Silver Contacts with MS anodised Backbox of suitable size as required. All junctions should be properly numbered & terminated with Krone tool.	Nos.	4		

INTERNAL ELECTRICAL ESTIMATE					
BOMBAY NATURAL HISTORY SOCIETY, FORT, MUMBAI					
S.No.	DESCRIPTION	UNIT	TOTAL QTY	TOTAL RATE	TOTAL AMOUNT
4.2	Supply & fixing ISI marked modular Coaxial TV Outlet made of Unbreakable and Fire Retadent High gloss polycarbonate with Silver Contacts with MS anodised Backbox of suitable size as required	Nos.	0		
4.3	Supply & installation of 4 way / 8 way splitters for cable TV system including making connections with cable sockets, soldering, Supply and fixing of MS backbox of required size complete with fixing flush in wall with white polycarbonate cover etc. complete as required	Nos.	0		
4.4	Supply & laying of RG-6 cable for TV in existing conduit/ raceway complete as required.	P.Mtr.	0		
4.5	Supply, Drawing and Testing of 4 pair ,100 Ohm, 24 AWG UTP Cat 6 Cable as per latest amendments of TIA / EIA 568 B.2 specifications for Data / Telephone points in existing MS /PVC conduits including making connections to Information outlets and patch panels with ferruling at both ends for identification with necessary tools for punching ,stripping crimping and testing as required	P. Mtr.	630		
4.6	Supply & Installation of RJ-45 Information outlets Jack ABS FR grade with spring loaded collapsible shutters in jack recess suitable for Cat 6 application with terminator caps for toolless termination .				
4.6.1	Single Outlet	Nos.	12		
4.7	Supply , Installation and Testing of 4 pair , 100 Ohm, 24 AWG , Cat 6 UTP, flexible , Double ended Patch Cords along with 2 No of RJ 45 connectors with strain relief transparent boots as per TIA /EIA 568 B.2-1 Specifications.				
4.7.1	1 Mtr/3 ft	Nos.	12		
4.8	SITC of 10/100 MBPS Unmanaged Switch				
4.8.1	16 Port	Nos.	1		
4.9	Supply , Installation, Testing and Comissioning of Rack mounted 19", Cat 6 UTP,1.5-1.6 MM CRS chasis , powder coated Modular Patch Panels with collapsible shutters on jacks to support latest ammendments of TIA / EIA Cat 6 Specifications in Existing Communication Rack along with necessary connections of Cat 6 UTP Cables, With Rear Cable management trays and clamps.				
4.9.1	16 Ports Patch Panel	Nos.	1		
4.10	Ceiling Design Access Point 2.4G 450Mbps & 5.8G 1300Mbps Compliant with PoE 802.3 at Centralized management for WI-FI	Nos.	6		

INTERNAL ELECTRICAL ESTIMATE					
BOMBAY NATURAL HISTORY SOCIETY, FORT, MUMBAI					
S.No.	DESCRIPTION	UNIT	TOTAL QTY	TOTAL RATE	TOTAL AMOUNT
4.11	Supply , Installation, Testing and Comissioning of Wall mounted Communication rack with glass doors, handles ,lock , Top and Bottom Cable entries, Supports for mounting rack on wall , Cable managers, one Fan, Equipment mounting hardware, power supply box for supplying power to switches, fans etc along with earth continuity kit, Mcb, indicator, moulded power supply cable .				
4.11.1	9U(44 mm) Wall mounted	Nos.	1		
TOTAL OF WIRING FOR LOW VOLTAGE OUTLETS COST IN Rs.					
5 SUPPLY & MAKING OF EARTHING					
5.1	S & Laying following size earth wire/strip in horizontal or vertical run in ground/surface/recess including riveting, soldering, saddles, making connection etc. as required.				
5.1.1	25mm x 3mm G.I. strip	Mtr.	150		
5.1.2	50mm x 6mm G.I. strip	Mtr.	50		
5.1.3	8 SWG GI WIRE	Mtr.	200		
5.1.4	GI STRIP OF VAROIOUS SIZES	KG	200		
5.2	Gel Earthing with dual pipe Technology ,CPRI tested /Certified having outer inner shell with terminal on the top made of M.S duly hot dipped galvanizing to 80-100 Micron in outer & 250-300mm micron in inner shell. The inner shell shall be filled with highly conducting carbon compound with permanent sealing at both the ends. The overall system shall be covered with back filled compound of minerals (25 kg up to 2 meter-50 kg up to 3 meter depth) duly tested & certified by SAL lab. The terminal shall be placed in cement concrete/ Masonry finished chamber covered with hinged type with locking arrangement CI/ Ferro Cement cover frame of size300x300mm Make: ASHLOK/ JK or Equivalent				
5.2.1	50 mm dia 2 mtr long	Nos.	6		
5.2.2	80 mm dia 3 mtr long	Nos.	2		
GRAND TOTAL OF EARTHING COST IN Rs.					
6 CCTV & SURVEILLANCE NETWORK					
6.1	2 Megapixel Fixed Lens Camera IR Dome Type: 1/2.8"Progressive Scan CMOS, 1920 × 1080 at 25fps, 2.8mm Fixed lens, 0.028 Lux at F1.2, ICR, ONVIF, support H.265, H.264, MJPEG, 120db WDR, 3D Digital Noise Reduction, Three individually configurable stream, 12 VDC & PoE, IR range: 40m, Support on-board storage up to 128 GB (SD card not included), IP67, IK10, Edge Anlytics- Line crossing detection, Intrusion detection, Motion detection, Scene change detection, video tampering, UL, CE, FCC certified.	Nos.	10		

INTERNAL ELECTRICAL ESTIMATE					
BOMBAY NATURAL HISTORY SOCIETY, FORT, MUMBAI					
S.No.	DESCRIPTION	UNIT	TOTAL QTY	TOTAL RATE	TOTAL AMOUNT
6.2	2 Megapixel Fixed Lens Camera IR Bullet Type: 1/2.8"Progressive Scan CMOS, 1920 × 1080 at 25fps, 2.8 mm Fixed lens, 0.01 Lux at F1.2, 0 Lux with IR, ICR, ONVIF (PROFILE S, PROFILE G), support H.265, H.264, MJPEG, 120db WDR, 3D Digital Noise Reduction, Three individually configurable stream, 12 VDC & PoE, IR range: 40m, Support on-board storage up to 128 GB (SD card not included), IP67, Edge Analytics- Line crossing detection, Intrusion detection, Motion detection, Scene change detection, Video tampering, UL, CE, FCC certified.	Nos.	20		
6.3	NVR 16 Channel: Connect Up to 16 IP Cameras, Dual OS, Up to 8 Megapixels Resolution, HDMI output with 4k output and VGA output with 2MP Output , Support H.265,H.264, MJPEG, Incoming Bandwidth 160 Mbps, 4 SATA Hard Disks, ANR Technology, 2 SATA interfaces for 2 HDDs and capacity of each HDD upto 6TB, 2 USB at least 1 × USB with 3.0, Serial interface:1 RS-485, 1 RS-232, Alarm I/O 16/4, 2 RJ-45 10 /100/1000 Mbps self-adaptive Ethernet interface, Multiple network monitoring: Web viewer, CE, FCC, UL certified.	Nos.	2		
	16 Port Network Switch Gigabit POE: 16 × gigabit PoE ports, 1 × gigabit RJ45 port, and 1 × gigabit SFP fiber optical port, IEEE 802.3at/af standard	Nos.	2		
6.4	CAT 6 Connector	Nos.	90		
6.5	Hard Disk 6 TB	Nos.	2		
6.6	Suply & installation of Computer system as required- a. PC Shall have Latest window generation. B. Monitor size shall be at least 32" c. PC shall have 500GB HDD Derive. D. PC shall have intel Processor - Intel(R) Core(TM) i3-10400F CPU @ 2.90GHz 2.90 GHz e. PC Shall have 64Bit operating System f. PC Shall have atleast 4GB RAM	Nos.	1		
6.7	Installation/labour charges	Job	1		
6.8	Supply, Drawing and Testing of 4 pair ,100 Ohm, 24 AWG UTP Cat 6 Cable as per latest amendments of TIA / EIA 568 B.2 specifications for Data / Telephone points in existing MS /PVC conduits including making connections to Information outlets and patch panels with ferruling at both ends for identification with necessary tools for punching ,stripping crimping and testing as required	Mtr	900		
6.9	Supply and laying of HDMI Cabel	Nos.	2		
6.10	Supply and Laying of RIGID PVC Medium Duty Conduits ISI marked conduits complete with accessories such as bends, junction boxes, pull boxes etc., in recess or on surface including cutting chases in the walls/floors and making good the same complete as required.				
6.10.1	32 mm dia	RM	50		
6.10.2	25 mm dia	RM	450		
GRAND TOTAL OF CCTV & SURVEILLANCE NETWORK COST IN Rs.					
7	DISTRIBUTION PANEL				

INTERNAL ELECTRICAL ESTIMATE					
BOMBAY NATURAL HISTORY SOCIETY, FORT, MUMBAI					
S.No.	DESCRIPTION	UNIT	TOTAL QTY	TOTAL RATE	TOTAL AMOUNT
	Supply, Installation, Testing & Commissioning of LT Panel of cold rolled sheet metal construction, floor mounting, free standing, totally enclosed, dust and vermin proof conforming to IP42 degree of enclosure protection with base channel of min ISMC-75N channel. The panel shall be extendable from either side. The panel shall be single front type. Cable entry shall be from bottom. Final paint shade shall be RAL-7035. The sheet steel used for said construction shall have following thickness: a. Load bearing members : 2 mm b. Rest : 1.6 mm c. Gland plate : 3.0 mm				
7.1	MAIN PANEL	Nos	1		
I	GRAND TOTAL COST OF SUPPLY OF LT PANEL				
II	ADD GST AS PER GOVT.			18%	
III	TOTAL COST OF LT PANEL				
	INSTALLATION COST				
	GRAND TOTAL COST OF LT PANELS IN Rs.				
8	3KVA INVERTER				
8.1	SITC of 3KVA (1ph i/p & 1ph o/p) Inverter with inbuilt Isolation transformer having Input supply voltage 200-230 Volts , Output voltage 230 volt +/- 1% ,15MIN battery back up time with battery rack etc. and as per enclosed specification .				
	Rating -3KVA				
	Input supply voltage:- 200-230 Volts				
	Output voltage:-230V+/-1%				
	Voltage Regulation:-Less than or equal to +/- 1%				
	Input frequency :-50 Hz +/- 10%				
	Output frequency :-50 Hz +/- 0.05 Hz				
	Type of cooling :-Forced air cooled				
	Over load capacity :-110 % for 10 min, 400% for 1/2 cycle				
	Inverter Efficiency :-Better than 92%				
	Output Power factor :-0.8				
	Metering :-LCD Display				
	Backup time :-15MIN				
	D.C. Voltage :360VDC				
	SMF Battery :12V-120AH-1NOS				
	Battery VAH :-1440VAH				
	Isolation Transformer required at inverter circuit of UPS	Nos	1		
	GRAND TOTAL OF 3KVA INVERTER COST IN Rs.				