

PROJECT : VICTOR MENEZES CONVENTION CENTRE, IIT MUMBAI

BOQ : Interior renovation works of new proposed cafeteria & atrium, auditorium, lecture halls/classrooms, common Lobbies & corridors, staircase, board rooms etc

SR.NO.	BOQ Specifications	Unit	QTY	Rate	Total Amount
			Total		
	General Notes				
1	Building is within IIT campus . All govt & IIT rules & regulations to be followed.				
2	Contractor to refer BOQ & preamble as part of tender documents before quote the rates.				
3	Contractor to follow all the safety & stability precaution for existing structure.				
4	The quoted rate should account for all the expenditure such as loading, unloading, transport, wastage etc.				
5	Contractor to work in coordination with all services vendors before concluding finishes.				
6	Building is operational. Contractor to train labours accordingly. Dedicated safety officer require at site.				
7	The dimensions shown in the drawings shall have to be verified by the contractor at site before execution of the items and necessary allowance's) have to be made as per the actual dimensions available at site.				
8	For the items of works having Basic rate of material, price adjustment will be made only on the actual quantity measured. Wastage shall be to Contractors account. Basic rate indicates landed cost at site including transportation charges, loading-unloading and all other levies/taxes as applicable.				
9	Preparation of shop drawings , making mockups , arranging samples for Architect approvals are part of item description.				
10	Dismantled material such as Signages, doors, door frames, Plumbing Accessories, CP fittings, false ceiling, modular furniture etc. shall be property of IITB.				
A	Demolition Work				
1	Demolition / Removal of Existing Stone flooring -	SQMT	1,958.00	254.86	4,99,019.18
	Dismantling stone slab flooring laid in cement mortar including stacking of serviceable material and disposal of unserviceable material within 50 metres lead.				
2	Demolition / Removal of Existing Tile Flooring -	SQMT	399.00	70.21	28,012.88
	Dismantling tile work in floors and roofs laid in cement mortar including stacking material within 50 metres lead.				
	For thickness of tiles 10 mm to 25 mm				
3	Demolition / Removal of Existing Carpet / Vinyl Flooring -	SQMT	3,102.00	54.00	1,67,508.00
	Dismantling & Removing existing carpet from flooring including backing mortar from required area etc. removing & bringing the debries to ground floor from all floors including scaffolding wherever required and area should be cleaned properly with fair brush. Debries to be disposed outside on regular basis & proper housekeeping to be done as per instruction of EIC.				
4	Demolition / Removal of Existing Granite / Marble / Tile Cladding -	SQMT	1,882.00	93.72	1,76,381.04
	Dismantling & Removing existing Granite / Marble / Vitrified Tiles from dado / cladding including backing mortar from specified area etc. removing the debries with all lifts & leads including scaffolding wherever required and area should be cleaned properly with fair brush. Debries to be disposed outside the campus on regular basis & proper housekeeping to be done as per instruction of EIC.				
5	Removal of Existing False ceiling		-		

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	Dismantling, Demolishing, Cutting, Breaking, Removing & disposing of existing finishes including removing carefully and handing over existing MEP Items like light fixtures, grills, speaker etc (Stacking the Materials at site within building as instructed by incharge). The rate shall include all necessary requisite scaffolding, carting away debris from site time to time & disposing the material outside the campus, cleaning the wall and floor properly to receive new finishes. Note : The vendor shall consider all the safety & stability precaution for existing structure as per preamble to BOQ & Vendor to access the full dismantling works by visiting the site before quoting. (The rate shall include all leads, lift and height). All waste materials to be disposed outside the campus.				
5.1	Double height - Lobby, auditorium	SQMT	597.00	55.75	33,282.75
5.2	Single height - Other areas	SQMT	7,973.00	55.75	4,44,494.75
6	Demolition / Removal of Platform	RMT	4.50	715.00	3,217.50
	Dismantling & Removing existing platforms to be removed up to the walls and floor. Care to be taken so as not to damage the existing masonry/structural members. Removing of existing counter from the specified location inclusive of removal of top, verticals, base support, fascia, sink, with laminate shutters below & above counter etc.				
7	Demolition / Removal of PCC	CUMT	129.90	2,328.38	3,02,456.66
	Demolishing cement concrete manually/ by mechanical means including disposal of material within 50 metres lead as per direction of Engineer - in - charge.				
	Nominal concrete 1:3:6 or richer mix (i/c equivalent design mix)				
8	Demolition / Removal of Plumbing fittings & Accessories				
	Demolition / Removal of existing plumbing fittings & Accessories to be removed from the existing premises. During the process all required precautions to be taken to salvage the Fittings & fixtures & the same shall be covered & stacked on site at allocated space with no additional cost (Only selected). Appropriate dismantling tools to be strictly maintained. Care to be taken so as not to rupture electrical & water lines. Extreme precautions to be taken so as not to damage the existing wall & RCC members.				
8.1	Gents Toilet - 3 WC, Urinal 5, Washbasin 4 & Accessories	LS	6.00	6,221.00	37,326.00
8.2	Ladies Toilet - 4 WC, Washbasin 4 & Accessories	LS	6.00	6,221.00	37,326.00
8.3	Single Toilets - 1 WC, 1 Washbasin & Accessories	LS	3.00	1,656.00	4,968.00
9	Demolition / Removal of Mirror	SQMT	96.00	308.00	29,568.00
	Demolition / Removal of existing mirror to be dismantled, removing the debris with all lifts & leads including scaffolding wherever required and area should be cleaned properly. Debris to be disposed outside the campus on regular basis & proper housekeeping to be done as per instruction of EIC.				
10	Removal of Existing Doors Shutters along with frame				
	Dismantling doors, windows and clerestory windows (steel or wood) shutter including chowkhats, architrave, holdfasts etc. complete and stacking within 50 metres lead :				
	Of area 3 sq. metres and below	NOS	121.00	351.23	42,498.82
	Of area beyond 3 sq. metres	NOS	51.00	480.88	24,525.12
11	Removing & Refixing Of Existing Modular Furniture				

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	Existing Modular Furniture to be dismantled & Refixing as per the proposed layout & instructed by Designer & PMC, during the process all required precaution to be taken to salvage the Modular Furniture & the same shall be covered & stacked on site at allocated space with no additional cost to it, all safety measure to be followed. Dismantling , packing & Handover to Client of Attick stock of Modular furniture.				
11.1	Auditorium Chairs	NOS	389.00	103.00	40,067.00
11.2	lecture halls/classrooms student Chairs	NOS	1,600.00	97.00	1,55,200.00
11.3	Cabin/Classroom Table	NOS	18.00	103.00	1,854.00
11.4	Single seater sofa	NOS	2.00	130.00	260.00
11.5	Linear Workstation	NOS	10.00	154.00	1,540.00
11.6	full Ht./Low Ht./slotted angle Storages	NOS	50.00	33.00	1,650.00
11.7	Teacher classroom chairs, Office chair, Board room chair etc	NOS	45.00	97.00	4,365.00
12	Removing Of Existing Roller Blinds	SQMT	240.00	73.00	17,520.00
	Existing Roller Blinds to be dismantled, during the process all required precaution to be taken to salvage the Roller Blinds & the same shall be covered & stacked on site at allocated space with no additional cost to it, all safety measure to be followed.				
13	Demolition / Removal of Laminate Finished Plywood Boxing/Paneling	SQMT	1,112.00	354.00	3,93,648.00
	Dismantling & Removing existing laminate and plywood including backback framing without damaging existing paneling with all lifts & leads including scaffolding wherever required and area should be cleaned properly . Scrap to be disposed outside the campus on regular basis & proper housekeeping to be done as per instruction of EIC.				
14	Demolition / Removal of Slat Paneling	SQMT	40.00	308.00	12,320.00
	Dismantling & Removing existing laminate and plywood including backback framing without damaging existing paneling with all lifts & leads including scaffolding wherever required and area should be cleaned properly . Scrap to be disposed outside the campus on regular basis & proper housekeeping to be done as per instruction of EIC.				
15	Demolition / Removal of Existing wall plaster / Gypsum plaster -	SQMT	665.00	52.27	34,761.67
	Dismantling & Removing existing plaster / Gypsum from wall / cladding including backing mortar form specified/required area etc. removing the debries with all lifts & leads including scaffolding wherever required and area should be cleaned properly with fair brush. Debries to be disposed outside the campus on regular basis & proper housekeeping to be done as per instruction of EIC.				
17	Demolition / Removal of walls				
	Demolishing existing masonry work for following thickness inclusive of RCC Patlis, cutting reinforcement bars etc complete as directed. Walls denoted in the drawing to be demolished, starting from top and progressively coming down, care to be taken so as not to damage the floor slab, beams, columns, adjacent walls, doors & windows. In any given area, walls to be demolished prior to breaking the existing floor. Demolition of existing wall inclusive of removal of plasters, wall dado, other finishes & cleaning etc.		47.35	1,970.60	93,307.85
18	Demolition / Removal of Coba & / or Waterproofing / PCC	SQMT	558.00	405.00	2,25,990.00
	Dismantling & Removing existing coba/filling works to be carefully removed up to the bare slab . Care to be taken so as not to damage the existing structural members. Raw slab to be subsequently washed/cleaned using moderate amount of water, in order to prevent seepage into the lower floor. Under no circumstances shall there be any water spillage in bare sections of slab and any damages arising out of negligence shall be made good by the Contractor at no extra cost.				

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19	Demolition / Removal of Existing Fabric Paneling	SQMT	545.00	335.00	1,82,575.00
	Dismantling & Removing existing Fabric Paneling including backback framing without damaging existing paneling with all lifts & leads including scaffolding wherever required and area should be cleaned properly . Scrap to be disposed outside the campus on regular basis & proper housekeeping to be done as per instruction of EIC.				
20	Demolition of Solid Partition With Framework	SQMT	50.00	53.90	2,694.96
	Dismantling & Removing of existing Solid partition & frame to be dismantled, denoted in the drawing, starting from the top & progressively coming down, all safety measure to be followed. Extreme precautions to be taken so as not to damage the adjacent wall & RCC members . Any damages arising out of negligence shall be made good by the Contractor at no extra cost. Demolition of existing partition shall be inclusive of removal of framework above & below false ceiling, skirtings, supports & other finishes & cleaning etc.				
Sub-Total for Demolition works					29,98,338.18
B	Misc. Civil works				
21	Aerated Block/Brick Filling				
	Providing and Laying in line and level up to specified thickness, Lightweight Aerated Block filling to raise the specified area in steps with Aerated blocks & Cement Mortar in CM 1 : 5 as directed with watering, cleaning, curing and finishing in one level etc Complete.				
	Up to 300 mm high	CUMT	374.00	7,992.00	29,89,008.00
22	PCC				
	Providing and laying in position ready mixed or site batched design mix cement concrete for plain cement concrete work; using coarse aggregate and fine aggregate derived from natural sources, Portland Pozzolana/Ordinary Portland /Portland Slag cement, admixtures in recommended proportions as per IS: 9103 to accelerate / retard setting of concrete, to improve durability and workability without impairing strength; including pumping of concrete to site of laying, curing, carriage for all leads; but excluding the cost of centering, shuttering and finishing as per direction of the engineer-in-charge; for the following grades of concrete. Note: Extra cement up to 10% of the minimum specified cement content in design mix shall be payable separately. In case the cement content in design mix is more than 110% of the minimum specified cement content, the contractor shall have discretion to either re-design the mix or bear the cost of extra cement.				
	All works upto plinth level :				
	Concrete of M15 grade with minimum cement content of 240 kg /cum	CUMT	90.00	8,595.33	7,73,579.58
	All works above plinth and upto floor V level		-		-
	Concrete of M15 grade with minimum cement content of 240 kg /cum	CUMT	115.10	8,935.51	10,28,477.30
23	IPS (Indian Patent Stone) Flooring	SQMT	3,786.00	376.74	14,26,337.64
	52 mm thick cement concrete flooring with concrete hardener topping, under layer 40 mm thick cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) and top layer 12 mm thick cement hardener consisting of mix 1:2 (1 cement hardener mix : 2 graded stone aggregate 6 mm nominal size) by volume, hardening compound mixed @ 2 litre per 50 kg of cement or as per manufacturer's specifications. This includes cost of cement slurry, but excluding the cost of nosing of steps etc. complete.				
24	Chemical waterproofing	SQMT	1,180.00	590.21	6,96,451.99

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	Providing and laying water proofing treatment in sunken portion of WCs, bathroom etc., by applying cement slurry mixed with waterproofing cement compound consisting of applying :				
	(a) First layer of slurry of cement @ 0.488 kg/sqm mixed with water proofing cement compound @ 0.253 kg/ sqm. This layer will be allowed to air cure for 4 hours.				
	(b) Second layer of slurry of cement @ 0.242 kg/sqm mixed with water proofing cement compound @ 0.126 kg/sqm. This layer will be allowed to air cure for 4 hours followed with water curing for 48 hours.				
	The rate includes preparation of surface, treatment and sealing of all joints, corners, junctions of pipes and masonry with polymer mixed slurry.				
25	Crack Filling Treatment	SQMT	215.00	654.00	1,40,610.00
	Providing and filling crack filling joint treatment to existing RCC or masonry surface with cleaning and remove existing loose portion, Cleaning of reinforcement bars from rust, Removal of rusted Steel reinforcement and replacing with new ones, wherever necessary, Applying bonding coat to chipped RCC surfaces, Polymer modified cement mortar in various thicknesses, Injection grouting into cracks area of concrete / RCC work wherever required. All complete as per manufacturer's specifications and as directed by architects.				
	Sub-Total for Misc. Civil works				70,54,464.51
C	Allied Works				
Note :					
	Rate to include all scaffolding, staging, curing, all lifts, raking of joints, all labour, hire and fuel charges for all tools and plants employed etc. complete and as directed by Project Managers.				
	The rate to be inclusive of cost of reinforcement and formwork, cover blocks for reinforcement and all other incidental charges etc., all complete.				
	The rate to also include closing the gap between the masonry and RCC beam / slab finished to required slope as directed by the Project-in-charge. Note:- The width of the joints not to exceed 10mm.				
	Rate should be including cost of curing as per IS norms, necessary cut-outs as required etc.				
26	POP PUNNING	SQMT	2,057.00	335.00	6,89,095.00
	Providing and applying Plaster of Paris punning (Anhydrous Gypsum) up to 12-15mm thick over the newly/ existing plastered surface or wherever specified to prepare the surface even and smooth including all leads and lifts, Edge protection for corners etc complete as directed by the Project Manager. Rate to be inclusive of surface preparation by hacking, sand papering & applying a coat of cement slurry (if required) including all incidentals. The rate shall be inclusive of making 6 mm groove as per design requirements. For punning thickness more than 12mm, chicken/PVC mesh (approved by Project manager- Paid separately) to be used. The surface punned to be kept ready to take on paint/wall paper. All complete as per instruction of Project Managers.				
27	Aerated Block Masonry				
	Providing and laying Autoclaved Aerated concrete (AAC) blocks masonry with 150mm/230mm/300 mm thick with Grade-I AAC blocks of density 551 to 650 kg/ cum conforming to IS: 2185 (Part 3) in super structure above plinth level up to floor V level with RCC band at sill level and lintel level with approved block laying polymer modified adhesive mortar all complete as per direction of Engineer-in-Charge.	CUMT	28.95	7,971.21	2,30,766.44
28	Light weight Block Masonry Works for Steps / Planters as per approved / Curved shape design pattern.	RMT	175.00	1,050.00	1,83,750.00
	Providing & Laying 150 mm thick Solid block masonry (min crushing strength @ 35Kg/Sqm in CM 1:6 , for construction of steps / Planters upto height @ 600mm in various curve or approved design pattern.				

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29	Internal Cement Plastering	SQMT	2,017.00	379.00	7,64,443.00
	Providing and applying 12mm thick Plaster with ready mix mortar of approved make to internal surfaces of concrete and masonry work; including raking out joints, hacking concrete surfaces and applying approved chemical bonding agent and applying a scratch coat over concrete surfaces by bonding / adhesive chemical coat as directed by approved manufacturer to create a key, cleaning / grooving deep junctions of concrete & masonry, grouting them back by mortar mixed with non shrinking compound along with packing of clean, fresh square cut aggregate; also providing and fixing 20 gauge GI chicken mesh @ 150 mm wide to junctions of concrete and masonry, including preparing and finishing jambs, sills, grooves, pattas, wattas, rounding of corners, etc. all complete as per architectural drawings, specifications and finished smooth with wooden rundha etc. or as specified by the Engineer in charge at all leads, depth and lifts, doing independent double-legged scaffolding, cleaning of surfaces, curing, etc. complete as per specification and to the approval of the Engineer in charge.				
30	Gypsum Plastering	SQMT	300.00	448.51	1,34,552.05
	Providing and applying 12 mm thick (average) premixed formulated one coat gypsum lightweight plaster having additives and light weight aggregates as vermiculite/ perlite respectively conforming to IS: 2547 (Part - 1 & II) 1976, applied on hacked / uneven background such as bare brick/ block/ RCC work on walls & ceiling at all floors and locations, finished in smooth line and level etc. complete.				
C	Sub-Total for Allied Works				20,02,606.49
D	Flooring & Skirting & Jambs Works				
Note :					
	The sample of tiles/slabs to be submitted to the Architect/Engineer for approval prior to procurement and execution.				
	For floor tiles, all edges to be sorted for straight edges before laying. The tile will be laid after approval from the Architect / Engineer at site				
	The rate to include all mirror machine polishing for granite and wax mirror polishing or Titanium polishing for Kota stone. The final decision will be as per Architects instructions.				
	The cost of tile/stone mentioned below is the maximum cost and is the delivered cost at site. In no circumstances it should exceed the one mentioned in the respective items and is inclusive of all material cost, transportation, if applicable, loading-unloading and all taxes, statutory as applicable.				
	For staircase treads and risers, the stone shall be in one piece. The contractor to measure the dimensions at site before ordering the materials.				
	All bull nosing, polishing etc for sills, frames and staircase treads should be factory finished.				
	All the flooring material shall be free from any cracks / deformities / damages colour variations.				
	Tile Should be of the first Quality				
	Tiles should be cut with diamond type blades only, any cut tiles having chipping will be rejected				
	Prior fixing the floor tiles / stone, on site by-products such as Plaster of Paris dust & particles, Saw-dust, brick & aerated block particles, etc mixing with sand bed shall strictly not be permitted				
	After laying the floor, thoroughfare shall be restricted for a period of 24 hours after which the floor shall be protected by spreading POP on 6 micron plastic sheet.				
	The Cost of Flooring/ skirting shall be inclusive of grouting with matching colour of grout or as specified.				
	Cost should be inclusive of Breaking the plaster on existing walls to flush the skirting it should also include the cost of jad filling & making 6 mm groove				
	The Cost should be inclusive of wastage, cartage & hauling stone slab/ Floor Tiles up to the desired floor.				
	Granite / Marble / Kota / Tiles shall be free from colour variation				

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	Given Basic cost excluding loading & unloading, octroi, Taxes, handling charges & transportation				

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31	Granite Flooring Providing and laying Polished Granite stone flooring in required design and patterns, in linear as well as curvilinear portions of the building all complete as per the architectural drawings with 18 mm thick stone slab over 20 mm (average) thick base of cement mortar 1:4 (1 cement : 4 coarse sand) laid and jointed with cement slurry and pointing with white cement slurry admixed with pigment of matching shade including rubbing, curing and polishing etc. all complete as specified and as directed by the Engineer-in-Charge.				
	Internal Granite - Basic rate 200/- Rs Per Sft	SQMT	174.00	4,286.40	7,45,833.85
32	Granite Strips on Ramp Flooring Same as above granite fixing at ramp/Sloped flooring area as per selected or required sizes etc.				
	External Granite - Basic rate 200/- Rs Per Sft	SQMT	188.00	4,286.40	8,05,843.47
33	Granite Ledge/Coping For Planters/Staircase/Border/Bench etc Providing & fixing 300 mm - 900 mm wide ledge in proper line & level, made out of 19 mm thick machine cut & polished granite slab of required size of approved shade, colour & texture laid over up to 20 mm thick bed of CM 1:4, including surface preparation, cement float, joints treated with white cement mixed with matching pigment, curing, polishing & final cleaning of finished ledge etc. as directed. Rate shall be inclusive of moulding & nosing. Basic rate 200/- Rs Per Sft	SQMT	8.00	4,912.91	39,303.32
34	Engineered Marble Ledge/Coping Providing & fixing 600 mm - 900 mm wide ledge in proper line & level, made out of 19 mm thick machine cut & polished Marble slab of required size, of approved shade, colour & texture laid over up to 50 mm thick bed of CM 1:4, including surface preparation, cement float, joints treated with white cement mixed with matching pigment, curing, polishing & final cleaning of finished ledge etc. as directed. Rate shall be inclusive of moulding & nosing. Basic rate 300/- Rs Per Sft	SQMT	14.00	5,773.00	80,822.00
35	Granite Tread Providing & fixing 300 mm wide tread in proper line & level, made out of 19 mm thick machine cut & polished Granite slab of required size, of approved shade, colour & texture laid over up to 20 mm thick bed of CM 1:4, including surface preparation, cement float, joints treated with white cement mixed with matching pigment, curing, polishing & final cleaning of finished tread etc. as directed. Rate shall be inclusive of half round moulding & nosing & making 3 mm deep anti - skid groove. Basic rate 200/- Rs Per Sft	RMT	560.00	2,293.00	12,84,080.00
36	Granite Riser Providing & fixing 150 mm high riser in proper line & level, made out of 19 mm thick machine cut & polished Granite slab of required size, of approved shade, colour & texture laid over up to 12 mm thick bed of CM 1:3, including surface preparation, cement float, joints treated with white cement mixed with matching pigment, curing, polishing & final cleaning of finished tread etc. as directed. Basic rate 200/- Rs Per Sft	RMT	531.00	835.00	4,43,385.00
37	Artificial Marble door/Window Jambs				

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	Providing & Fixing 19 mm thick gang saw cut mirror polished (Pre molded & pre polished) machine cut Artificial Marble for Jambs of required size of approved shade, colour & texture laid over up to 50 mm thick base cement mortar 1: 4 (1 Cement : 4 Coarse Sand) with joints treated with white cement mixed with matching pigment, epoxy touch ups, including rubbing, curing, molding & polishing to edge to give high gloss finish etc. complete at all levels. The rate should also be inclusive of applying temporary supports to the jamb stone as directed by site in charge. Basic rate 300/- Rs Per Sft				
	75 mm wide Artificial marble door frame	SQMT	9.00	5,773.00	51,957.00
	100 mm wide Artificial Marble door frame	SQMT	29.00	5,773.00	1,67,417.00
38	Polish Kota Flooring				
	Kota stone slab flooring over 20 mm (average) thick base laid over and jointed with grey cement slurry mixed with pigment to match the shade of the slab, including rubbing and polishing complete with base of cement mortar 1 : 4 (1 cement : 4 coarse sand)				
	25mm thick	SQMT	294.00	1,863.52	5,47,874.18
39	Vitrified tile flooring				
	Providing and laying Vitrified tiles in floor in different sizes with water absorption less than 0.08% and conforming to IS:15622, of approved brand & manufacturer, in all colours and shade, laid on 20 mm thick cement mortar 1:4 (1 cement: 4 coarse sand) jointing with grey cement slurry @3.3 kg/sqm including grouting the joints with white cement and matching pigments etc. The tiles must be cut with the zero chipping diamond cutter only . Laying of tiles will be done with the notch trowel, plier, wedge, clips of required thickness, leveling system and rubber mallet for placing the tiles gently and easily.				
	Basic rate - 75/- Rs per Sft	SQMT	752.00	1,690.00	12,70,880.00
	Basic rate - 75/- Rs per Sft	SQMT	378.00	1,690.00	6,38,820.00
	Basic rate - 75/- Rs per Sft For washroom (600mmx600mm) & (600x1200mm)	SQMT	373.00	1,690.00	6,30,370.00
	Basic rate - 75/- Rs per Sft For washroom (600mmx600mm)	SQMT	316.00	1,690.00	5,34,040.00
	Size :- 600x1200mm	SQMT	15.00	1,690.00	25,350.00
	Basic rate - 75/- Rs per Sft With Wooden Look	SQMT	68.00	1,690.00	1,14,920.00
40	Repairing Existing Granite Flooring & Cladding & Skirting & Tread & Riser	SQMT	3,330.00	1,005.00	33,46,650.00
	Filling existing granite all cracks with tenax, replacing damaged granite with matching to existing granite and polishing all flooring and cladding etc. Rate included sealer coating with buffing, Rates also included Grooves/moulding/Edges/Edge treatment etc as per architect & PM instructions.				
41	Repairing Existing Engineered Marble Flooring & Cladding & Tread & Riser	SQMT	499.00	1,139.00	5,68,361.00
	Filling existing Engineered Marble all cracks with tenax, replacing damaged marble with matching to existing marble and polishing all flooring and cladding etc. Rate included sealer coating with buffing as per architect & PM instructions etc.				
42	Repairing Existing Kota Flooring & Cladding & Skirting & Tread & Riser	SQMT	4.00	871.00	3,484.00
	Filling existing kota all cracks with tenax, replacing damaged kota with matching to existing kota and polishing all flooring and cladding etc. Rate included sealer coating with buffing as per architect & PM instructions etc.				
43	Granite Skirting up to 100mm	Rmt	140.00	475.00	66,500.00

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	Providing and cladding granite skirting of approved sample in pattern as per detailed drawings in cement paste on a backing coat of cement mortar in ratio of 1 : 3. The rate should be inclusive of cleaning joints and grouting them with neat white cement paste with pigmented additives to match shade of the granite. Skirting to be fixed flush with finished surface of wall in line and level and 6 mm wide groove to be made in wall at the junction of skirting and finished surface of wall etc. complete matching to flooring. Basic rate 200/- Rs Per Sft				
44	Engineered Skirting up to 100mm	Rmt	172.00	561.00	96,492.00
	Providing and cladding engineered marble skirting of approved sample in pattern as per detailed drawings in cement paste on a backing coat of cement mortar in ratio of 1 : 3. The rate should be inclusive of cleaning joints and grouting them with neat white cement paste with pigmented additives to match shade of the granite. Skirting to be fixed flush with finished surface of wall in line and level and 6 mm wide groove to be made in wall at the junction of skirting and finished surface of wall etc. complete matching to flooring. Basic rate 300/- Rs Per Sft				

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45	Vitrified Tile Skirting				
	Providing and cladding Vitrified tiles for skirting of approved make and sample in pattern as per detailed drawings in cement paste on a backing coat of cement mortar in ratio of 1 : 3. The rate should be inclusive of cleaning joints and grouting them with neat white cement paste with pigmented additives to match shade of the tile. Skirting to be fixed flush with finished surface of wall in line and level and 6 mm wide groove to be made in wall at the junction of skirting and finished surface of wall etc. complete matching to flooring.				
	Basic rate - 75/- Rs per Sft	Rmt	140.00	176.00	24,640.00
46	Cobble Stone Flooring - Footpath	SQMT	376.00	2,547.00	9,57,672.00
	Providing & Fixing cobble stone flooring of specified size (thickness to be specified by the manufacturer) & approved make, colour & shade etc. as directed by the Architect / PM. The tiles to be laid over 50 mm thick bed of CM 1:4, including surface preparation, cement float, providing necessary slopes, cleaning & grouting joints with neat white cement slurry mixed with matching pigments. Proper joints to be maintained as per the site requirements. Basic rate 80/- Rs Per Sft				
47	LVT Flooring For Classrooms	SQMT	1,609.00	3,473.00	55,88,057.00
	Providing and installation of Acczent Excellence Compact+ Vinyl Sheet Flooring manufactured by Tarkett with a nominal thickness of 2.15mm as per EN ISO 24346 and width of 2m as per EN ISO 24341. The nominal thickness of the wear layer shall be 0.8mm. The wear surface shall be reinforced with a UV photo-crosslinked with Tektanium treatment. The product does not contain Pthalate based plasticizer and emission rate of VOC is very low, measured after 28 days. Product come mixed with EPD and fit to be used in Green Buildings. Product should have Slip Resistance of R10 as per DIN 51130. Acczent Excellence Compact+ shall conform to EN ISO 10582. Acczent Excellence Compact+ shall have Reaction to Fire as per Class Bfl-S1 as per EN 13501-1, castor chair test qualified according to ISO 4918, dimensional stability ≤0.10% according to EN ISO 23999, Curl resultant to heat ≤ 8 mm as per EN ISO 23999, Indentation average measured value .03mm within ≤0.2mm as per ISO 24343-1. The product should provide Impact Sound insulation of Lw = 8 dB in accordance with NF EN ISO 717 / 2 and acoustical improvement of Ln,e,w < 75 dB - Class B as per NF S31-074. The static electrical discharge shall be less than 2kV as per EN 1815. TVOC and formaldehyde emissions are below 10µg/m3 as per ISO 16000-9 & ISO 16000-3. It is 100% Recyclable with 27% recycled content. The product is fit to be used in Class 34 in Commercial as per EN ISO 10874.. Basic rate 200/- Rs Per Sft				
48	Carpet Flooring For Auditorium, Board Rooms, Conference Room, Lounge				
	Providing and laying on IPS, The 8/10 mm thick carpet flooring in roll/Tile form of approved make, Colour and shade in flooring and skirting including fixing with adhesives, all necessary equipments etc. complete as per manufacturer's specifications & as directed. Self leveling is included.				
	Carpet Role Form - Basic Cost - 200/- Sft	SQMT	2,386.00	3,473.00	82,86,578.00
49	Ex. Stage Finished with Wooden Flooring	SQMT	109.00	7,303.00	7,96,027.00
	Providing & fixing of 19 mm thk ply fixed on Existing stage frame work finished with Wooden Flooring as approved by Architect including scaffolding, machine screw, etc complete. Work will be carried out as per drg & instruction of Acoustic consultant / Site Engineer /Architect. Basic rate 450/- Rs Per Sft				
50	New Stage Flooring	SQMT	131.00	14,020.00	18,36,620.00

SR.NO.	BOQ Specifications	Unit	QTY	Rate	Total Amount
			Total		
	Providing & construction of the new stage for 389 auditorium hall foam in 19 mm thk ply made in 50 x 50 mm hardwood frame at 600 mm c/c in both direction complete with necessary wooden stud of 50 x 50 at 600 mm c/c ht. around 300 mm as per architect design. Stage shall be finished with 10 mm thk pre-laminated wooden flooring as approved by the architect, including 50 mm thk 48 kg/m3 Rockwool including necessary chicken mesh complete. Basic rate 450/- Rs Per Sft				
D	Sub-Total for FLOORING & SKIRTING & JAMBS WORKS				2,89,51,976.82
E	Cladding Work				
51	Wet Engineered Marble Cladding				
	Providing and fixing in position 18-19 mm thick approved, pre polished engineered marbles stone cladding to walls, columns and other vertical faces etc, as called for fixed over a plastered surface. Marble to be fixed by using approved polymer base adhesive as per detail drawings. The joints shall be pointed with the matching epoxy grout with polished surfaces of the marble slabs shall be finished with sealer coats as recommended by approved manufacturers etc complete. This also includes providing necessary cut-outs/ notches in marble slab to receive metal fixing clamps as required to hold in position electronic accessories as per the detail drawings. The rate shall also includes necessary scaffolding, staging, curing, etc., complete as per the instructions of the project consultants/Engineer in charge. Required mirror polishing of edges is part of scope of work. The rate shall include approved groove including polishing as indicated in the detail drawing or as directed by Project design consultants/PM. Make of adhesive & grout shall be considered as Ardex endura/ MYK Laticrete or equivalent. Backing plaster will be measured & paid separately in respective items. Basic rate of marble = Rs 350 /- per Sft				
53.1	Same as item above but for Double Height marble cladding rate included MS framing (As per required size) with 19mm thick cement board cladding.	SQMT	188.00	15,057.00	28,30,716.00
53.2	Same as item above but for single Height marble cladding rate included Al raised framing 50mm X 25mm X 1.6mm with 12mm thick cement board cladding as per Lift lobby pattern.	SQMT	34.00	14,238.00	4,84,092.00
53.3	Same as item above but for SINGLE Height marble cladding - Direct on wall	SQMT	50.00	9,815.00	4,90,750.00
52	Vitrified Tile Cladding				
	Providing and laying Vitrified tiles in different sizes (thickness to be specified by the manufacturer), with water absorption less than 0.08% and conforming to IS: 15622, of approved brand & manufacturer, in all colours and shade, in skirting, riser of steps, laid with cement based high polymer modified quick set tile adhesive (water based) conforming to IS: 15477, in average 6 mm thickness, including grouting of joints (Payment for grouting of joints to be made separately).				
	Basic rate - 75/- Rs per Sft - Pantry Area	SQMT	88.00	2,396.00	2,10,848.00
	Basic rate - 75/- Rs per Sft - Washroom area Size- (600x1200mm)	SQMT	1,780.00	2,396.00	42,64,880.00
53	Grouting				
	Grouting the joints of flooring tiles having joints of 3 mm width, using epoxy grout mix of 0.70 kg of organic coated filler of desired shade (0.10 kg of hardener and 0.20 kg of resin per kg), including filling / grouting and finishing complete as per direction of Engineer-in-charge	SQMT	1,868.00	247.40	4,62,144.91
E	Sub-Total for Cladding Work				87,43,430.91
F	Counter Work				
54	Hand wash basin counter in Granite	RMT	53.00	12,237.00	6,48,561.00

SR.NO.	BOQ Specifications	Unit	QTY	Rate	Total Amount
			Total		
	Providing and constructing 600 mm wide & 300 mm high wash basin counter with top fabricated from 19 mm thick approved sample of granite laid on 19 mm thick commercial ply backing, supported on 19 mm thick commercial ply verticals as directed, inclusive of 100 mm high Corian Band (Splash Guard) above the counter top. All exposed surfaces of counter to be finished in same Corian slab. Necessary cut outs for wash basin to be provided & all cut-outs, exposed edges to be all nosed with mirror polish. The Corian slab to be stuck to ply backing by means of approved adhesive. Basic rate of Granite 200/- Rs Per Sft				

SR.NO.	BOQ Specifications	Unit	QTY	Rate	Total Amount
			Total		
55	Dish wash/Pantry counter in Granite	RMT	13.00	13,426.00	1,74,538.00
	Providing and constructing 600 mm wide & 750 mm high dish wash counter with top fabricated from 19 mm thick approved sample of pre polished granite laid on 25 mm thick one side polished Cuddapah backing with C.M. 1:4 in between, supported on 19 mm thick both side polished Cuddapah verticals as directed, inclusive of 50 mm high Granite Band (Splash Guard) above the counter top. All exposed surfaces of counter to be finished in same granite slab. Necessary cut outs for sink to be provided & all cut-outs, exposed edges to be all nosed with mirror polish. Basic rate of Granite 200/- Rs Per Sft				
56	Vanity Counter	RMT	59.00	10,850.00	6,40,150.00
	Providing & fixing of Vanity counter consist of shelf & close lockable shutter made up of 19mm thick 710 Marine ply wood finished with Laminate from inside & Engineered Marble from outside as per detail given the drawings, with required hardware, hinges complete with all respect as per approved sample & shop dwg.				
F	Sub-Total for Counter Work				14,63,249.00
G	Carpentry Work				
57	Aluminium Framework				
	Providing and fixing Aluminum frame which includes box section of below mentioned sizes forming a grid of not more than 600mm c/c both directions. Rate shall be also inclusive of additional members to be provided at the junction of skirting / cut outs etc. All complete as per instruction of Engineer in charge. Cost inclusive of 100 to 150mm wide 19mm thk. MDF with 6mm groove for installation of glass partition				
59.1	Section size - 100mm x 100mm x 1.62mm (thickness)	SQMT	50.00	3,718.00	1,85,900.00
59.2	Section size - 50mm x 50mm x 1.62mm (thickness)	SQMT	534.00	2,227.00	11,89,218.00
59.3	Section size - 50mm x 25mm x 1.62mm (thickness)	SQMT	50.00	1,854.00	92,700.00
	SKINNING / FINISHING				
58	12.5mm thick Gyp Board	SQMT	100.00	479.00	47,900.00
	Providing and fixing Skin of Standard Plasterboard (Conforming to IS 2095 Part 1 & BSEN 520) having density of >570 kg/cum, screw fixed vertically on either side of existing framework studs with 25mm long Drywall Screws at 300mm centres. The screw fixing of the Standard Plasterboard to the metal framing at the periphery, openings and cut edges should be at 150mm centres. The horizontal & vertical joints of the Standard Plasterboard on both sides of the metal framework must be staggered to avoid through and through joints. All joints to be taped & finished with 50mm wide Paper tape & All-Purpose Joint compound (Confirming to ASTM C475). Necessary cut-outs shall be provided for taking of supply and return air ducts/openings which shall be neatly finished after fixing of ducts thereby leaving no gaps. The layer should be finished so as to take on second skin in Gyp/Ply/MDF or Paint/wall paper directly. (Mode of measurement - Length x height).				
	The surface should be finished so as to take on wall paper/paint directly by applying suitable base coats, prime coats, etc. complete. Necessary cut-outs shall be provided for M&E services which shall be neatly finished leaving no gaps. Rate should be including cost of groove mentioned in detailed drawing.				
59	HDHMR Cladding				
	Providing and fixing Second Skin of MDF which includes of desired thick exterior grade screw fixed with wooden screws to Existing first skin of Partition. Care should be taken that the joint should be staggered to avoid leakage. Necessary cut-outs shall be provided for taking of supply and return air ducts / openings which shall be neatly finished after fixing of ducts thereby leaving no gaps. Rate should be including cost of grooves mentioned in detailed drawing. (Mode of measurement - Length x height up to false ceiling).				

SR.NO.	BOQ Specifications	Unit	QTY	Rate	Total Amount
			Total		
61.1	4 mm thick MDF	SQMT	50.00	908.00	45,400.00
61.2	6 mm thick MDF	SQMT	50.00	1,058.00	52,900.00
61.3	8 mm thick MDF	SQMT	50.00	1,144.00	57,200.00
61.4	12 mm thick MDF	SQMT	50.00	1,345.00	67,250.00
61.5	18 mm thick MDF	SQMT	50.00	1,717.00	85,850.00
60	Marine Ply Cladding				
	Providing and fixing Skin of marine ply which includes marine ply of below thickness screw fixed with wooden screws at 300mm c/c to existing framework. Necessary cut-outs shall be provided for taking of supply and return air ducts/openings which shall be neatly finished after fixing of ducts thereby leaving no gaps. The layer should be finished so as to take on second skin in Gyp/Ply/MDF or Paint directly. (Mode of measurement - Length x height up to false ceiling).				
62.1	6 mm thick	SQMT	50.00	1,288.00	64,400.00
62.2	9 mm thick	SQMT	50.00	1,431.00	71,550.00
62.3	12 mm thick	SQMT	888.00	1,674.00	14,86,512.00
62.4	19 mm thick	SQMT	50.00	2,176.00	1,08,800.00
62.5	12 mm thick flexi ply	SQMT	50.00	2,436.00	1,21,800.00
61	1.5 mm thick Laminate	SQMT	99.00	1,876.00	1,85,724.00
	Providing and replacing damaged laminate skin cladded to Existing skin of Partition/ply/MDF. The laminate to be pasted with approved shade and sample 1.5mm thick laminate. Mode of measurement to be actual Laminate area. (laminate basic cost - 80/- Sft)				
62	4 mm thick Veneer	SQMT	390.00	8,653.00	33,74,670.00
	Providing and fixing Finishing Skin of veneer cladded to Existing skin of Partion. The veneer to be pasted with approved shade and sample 4 mm thick veneer finished in 3 coats of PU polish . Mode of measurement to be actual Veneer area. (Veneer basic rate - 300/- Sft)				
63	Cleaning existing paneling	SQMT	500.00	307.00	1,53,500.00
	Cleaning existing any paneling with approved alakline based chemical (Contractor to submit TDS of chemical to be used for cleaning with prior approval from PM).				
64	Refixing Of New Slate Patti	SQMT	96.00	5,163.00	4,95,648.00
	Providing & fixing of 8 mm thk ply fixed on Existing frame work finished with Slate patty (Match with Existing Patty) as approved by Architect including scaffolding, machine screw, etc complete.Work will be carried out as per prg & instruction of Acoustic consultant / Site Engineer /Architect.				
65	Sound panel (Acoustic Paneling System)				
	Supply & Installation of Felt Top Printed Acoustic Panels make 11mm(thk) for reducing and controlling Reverberated noise with a NRC of 0.5 mm , Panel Composition 100% PET to be minimum 50% Recycled PET with LOW VOC which addresses life cycle impacts such as Toxicity. Size of Panel as per design with thickness of 11mm , weight 1600 gsm, Density 195 kg/m3. Acoustic NRC 0.30 for Direct Fixing on Wall, 0.45 with a 14 mm AirGap, 0.50 with a 24 mm Air Gap. To be used for Wall Panelling, Wall Screens and Ceiling Panels.				
67.1	Plain Panel - BC - 1500/- Sqm	SQMT	150.00	2,987.00	4,48,050.00
67.2	Grooved Panel - BC - 2500/- Sqm	SQMT	190.00	4,320.00	8,20,800.00
66	Fluted/Grooved Panels	SQMT	145.00	7,244.00	10,50,380.00

SR.NO.	BOQ Specifications	Unit	QTY	Rate	Total Amount
			Total		
	Providing and replacing existing damaged MDF based fluted/Grooved panel of approved make as per required size and shape. Necessary cut-outs shall be provided for taking of switches thereby leaving no gaps. Basic rate - 4500/- Sqmt				
67	Charcoal Panels	SQMT	20.00	8,576.00	1,71,520.00
	Providing and fixing ready to fix fluted charcoal panel of approved make & design with required adhesive. Necessary cut-outs shall be provided for taking of switches thereby leaving no gaps. Basic rate - 5500/- Sqmt				
68	Pin Perforated Laminate Paneling	SQMT	236.00	5,657.00	13,35,052.00
	Providing & fixing 15 mm thk Pre Laminated Pin Perforated Laminated panel screwed on G.I frame work as per drawing. FRAME - G.I.frame fabricated with 50 x 37.5 x 0.5 G.I 'C' section @ 1220 mm c/c in horizontal direction fixed to or away from wall surface on necessary '50 x 50 mm wooden 'T' dutta support with 50 mm Air gap,above 'C' section have 'Ceiling sections of 80 x 26 x 0.5 @ 400 mm c/c in vertical direction with 50 mm thk 1000 gsm density mikron in between 'C' section frame fixed with chicken mesh backing of G.I 12 x 12 mm square of 24 guage (as per approved sample), including scaffolding, machine screw, etc complete.Work will be carried out as per drg & instruction of Acoustic consultant/ Site Engineer /Architect. NOTE :All the wood shall be used will be coated with Fire painting & necessary Anti-termite treatment & All the frame work to be considered of Gypsum India company & All the Wooden dutta will have 100 x 100 x 12 mm thk (Insu Sound-Bcap rubber of Supreme) behind between wall & wooden stud. Basic rate - 250/- Sft				
69	FINS (On Wall)	RMT	595.00	763.00	4,53,985.00
	Providing & fixing Of 12 mm thk MDF board fixed on 50 mm x 50 mm H.W frame work @ 600 c/c in both direction finished with White PU finished as approved by architect with 50 mm thk 1000 gsm density Mikron between frame work. including scaffolding, machine screw, etc complete.Work will be carried out as per drg & instruction of Acoustic consultant/ Site Engineer /Architect.				
70	FULL HT DRY WALL PARTITION (230 mm Thk)	SQMT	295.00	14,441.00	42,60,095.00
	Providing & fixing 12 mm thk Perforated 'E' Board + 4 mm thk MLV + 12.5 mm Gypsum board screwed on G.I frame work from both side finished as per approved by Architect. FRAME - G.I.frame fabricated with 150 x 50 x 0.5 G.I 'C' section @ 600 mm c/c in both direction fixed on necessary support with 50mm Air gap above 'C' section 'with 2 Layer of 50 mm thk 1000 gsm density mikron in between 'C' section frame fixed with chicken mesh backing of G.I 12 x 12 mm square of 24 guage (as per approved sample), including scaffolding, machine screw, etc complete.Work will be carried out as per drg & instruction of Acoustic consultant/ Engineer / Architect				
71	SOUND LOCK LOBBY FABRIC WALL PANELING	SQMT	105.00	5,681.00	5,96,505.00
	Providing & fixing 8 mm thk Perforated 'E' Board screwed on G.I frame work finished with fabric on gripper system as per drawing. FRAME - 'Ceiling sections of 80 x 26 x 0.5 @ 600 mm c/c in Horizontal direction with 50 mm thk 1000 gsm density mikron in between 'C' section frame fixed with welded mesh backing of G.I 12 x 12 mm square of 24 guage (as per approved sample), including scaffolding, machine screw, etc complete.Work will be carried 'out as per drg & instruction of Acoustic consultant t/ Site Engineer / Architect. FINISH - Fabric fixed on 75 x 12 mm ply patty on Gripper system with 25 mm thk 'U' foam as per specification design, drw & acoustic consultant instruction.				
72	A.H.U ROOM WALL LINING	SQMT	90.00	2,607.00	2,34,630.00

SR.NO.	BOQ Specifications	Unit	QTY	Rate	Total Amount
			Total		
	Providing & fixing of 20% perforated aluminum sheet on walls and ceiling as stated below: Providing & fixing perforated aluminum sheet screwed to G. I. Frame with screws @ 200 c/c in both directions G.I frame with 72 x 32 x 0.55 floor and ceiling channel at top and bottom edges, fabricated with 50 x 37.5 x 0.5 G.I 'C' sections at 900 c/c, and ceiling sections 80 x 26 x 0.5 at 400 c/c with 50 mm thk mikron of density 1000 gsm fixed with welded mesh of G.I 12mm x 12mm square of 24 guage (as per approved sample) including scaffolding. JOINTS - All joints, and panels in the paneling must be in perfect line & level. Joint locations and '+' shall not be visible in finish work. Complete as per design, drawings and acoustic consultants instruction.				
73	Fabric Paneling On Real Wall	SQMT	448.00	5,681.00	25,45,088.00
	Providing & fixing 595 x 595 x 12.5 mm thk Perforated Gypsum tile screwed on G.I frame work finished with fabric on gripper system as per drawing. FRAME - G.I.frame fabricated with 50 x 37.5 x 0.5 G.I 'C' section @ 1220 mm c/c in horizontal direction fixed to or away from wall surface on necessary '50 x 50 mm wooden 'T' dutta support with 50 mm Air gap, above 'C' section have 'Ceiling sections of 80 x 26 x 0.5 @ 400 mm c/c in vertical direction with 50 mm thk 1000 gsm density mikron in between 'C' section frame fixed with chicken mesh backing of G.I 12 x 12 mm square of 24 guage (as per approved sample), including scaffolding, machine screw, etc complete. Work will be carried out as per drg & 'instruction of Acoustic consultant/ Site Engineer /Architect. FINISH - Fabric fixed on 75 x 12 mm ply patty on Gripper system with 25 mm thk 'U' foam as per specification design, drw & acoustic consultant instruction. NOTE : All the wood shall be used will be coated with Fire painting & necessary Anti-termite treatment & All the frame work to be considered of Gypsum India company & All the Wooden dutta will have 100x100x12mm thk (Insu Sound-Bcap rubber of Supreme) behind between wall and wooden dutta. Fabric basic cost - 1200/- RMT				
74	Fabric Paneling	SQMT	94.00	4,693.00	4,41,142.00
	Providing and fixing Fabric with soft wool to be mounted on placed on approved size and profile mounted on 6mm thk ply board backing. The rate should include approved fabric & gripper . The softboard to be fixed on existing partition. Note - The fabric shall be stretched uniformly along the direction of weave and shall be wrinkle free and shall be fixed on grippers. All complete as per approval of designer & instruction of Project Manager. Fabric basic cost - 1200/- RMT				
75	Writable Lacquered Glass for Cladding on Double adhesive tape / silicon	SQMT	100.00	8,777.00	8,77,700.00

SR.NO.	BOQ Specifications	Unit	QTY	Rate	Total Amount
			Total		
	<p>Providing and fixing of 6 mm thick annealed SGG Planilaque Evolution (premium GRIHA rated lacquered glass from Saint-Gobain) or equivalent manufactured industrially by curtain coating process with PU lacquer (50 micron thick), conforming to EN 16477 standards for back painted glass, of approved color by Architect/ Client fixed with compatible SGG Glassmate Ultrafix or equivalent - Neutral Alkoxy based Silicone having Shear Bond Strength (Dry, 24 hours), greater than 450 kpa and tack free time of 10 to 30 mins compatible for installation of mirror and lacquered glass / SGG Glassmate Mirror mounting tape MIRROR MOUNTING TAPE - 1.5mm(thk) / 2mm(thk) Double Adhesive VLC Ultra High Performance (UHP) Adhesive tape of 3M Tapes for instantaneous adhesion, compatible with mirror and lacquered glass having Shear bond strength (Dry, 15 mins) of 250 to 350 kpa) on a perfectly leveled 12mm thick water proof marine plywood / MDF / Mineral fibre board which is mounted on the RCC wall/any other structure.</p> <p>The contractor should submit test reports for backpainted glass from manufacturer - High humidity Resistance (conforms to BS EN 1036 1999); Color fastness ISO 105B02 standard & Mechanical Resistance ISO 7784 (Taber Abrasion test) ISO 2409 (Cross Hatch Test) standard The manufactured backpainted glass should be environmentally friendly (no lead, no arsenic, no copper, no formaldehyde); appropriate recycled content (12% post industrial / 6% post consumer); compressive strength (1000 MPa) & tensile strength (40 MPa), same as float glass</p>				
76	Pelmet	RMT	260.00	2,210.00	5,74,600.00
	<p>Providing and fixing pelmets of size 200mm x 300mm, with verticals upto 1mtr. high & made of 19mm thk marine ply finished with 1.5mm thick approved laminate along walls and partitions, or glazing with necessary aluminium support. The rate to be inclusive of all accessories, such as anchor fasteners etc. complete. Kindly note if framework ht. for fixing pelmet is more than 500 mm then paint finished MS Framework to be used.</p>				
77	Projector screen housing	RMT	10.00	2,709.00	27,090.00
	<p>Providing and fixing pelmets to house projection screen made of 19mm thick commercial plywood of approved make, having clear internal dimensions as 150 x 250mm, finished in approved shade of 1.5 mm thk laminate, supported from RCC ceiling slab by necessary framework, giving additional supports in aluminium angles, inclusive of cutting to required sizes etc. complete.</p>				
78	Step Seating With Fixed Upholstery	SQMT	15.00	18,134.00	2,72,010.00
	<p>Providing and fixing step seating in adequate MS framework with square bars 50 mm x 50 mm and 3mm thick which can resist specified weight up to 350 kg /smt covered with 25mm thick exterior grade Block board. MS framework to be painted in Two coats of anti-rust paint and finally finished in Two coats Enamel Paint as per the approved shade as directed. Finishing the block board over approved rubber wood as per the design, Rate also including fabric cushion and fixed upholstery sitting etc all complete.</p> 				
79	Trap door	SQMT	110.00	9,847.00	10,83,170.00

SR.NO.	BOQ Specifications	Unit	QTY	Rate	Total Amount
			Total		
	Providing and fixing wooden trap door ceiling with framework in 50mm x 25mm x 1.62mm thick. aluminium box section framework @ 600mm c/c both ways suspended from RCC slab. Panels consisting of TW framework of size 50mm x 50mm in section fixed for holding 19mm thick commercial plywood shutters finished with 1.5mm thick laminate of approved shade and sample as per drawings. Top of the panel to be treated with anti-termite treatment and finished with 1 coat of approved colour polish. Rate to be inclusive of all kinds of profiles and cut outs required for light fixtures, Speakers, Smoke detector in the ceiling. Door shutters should be complete with necessary hardware such as brass hinges, locking system, hanging SS chain etc. all exposed surface should be finished with TW lipping & matching colour polish. All complete as per detailed drawing / instruction of Architect / Construction Manager.				
80	Bison/Sheraboard Board Paneling				
	Providing and fixing 10 mm thick bison board Panel to Existing 12 mm thk commercial ply. The partition should be finished so as to take on wall paper/paint directly by applying suitable base coats, primer coats, etc. complete. Necessary cut-outs shall be provided for taking of supply and return air ducts/openings which shall be neatly finished after fixing of ducts thereby leaving no gaps. Rate should be including cost of grooves mentioned in detailed drawing. (Mode of measurement - Length x height up to false ceiling).				
82.1	9 mm thick	SQMT	90.00	1,173.00	1,05,570.00
82.2	12 mm thick	SQMT	260.00	1,288.00	3,34,880.00
81	ACP Panel With Brush Finish	SQMT	100.00	5,656.00	5,65,600.00
	Providing and fixing ACP Panels of approved colour and shade having metal brush finish, fixed on aluminium framework with help of 3M tape and approved adhesive. All grooves and joints filled with approved clear silicon sealent complete all necessary hardware and accesories.				
G	Sub-Total for Carpentry Work				2,40,84,789.00
H	FALSE CEILING.				
82	P & F GYPSUM BOARD FALSE CEILING.				
	Providing and fixing false ceiling at all height including providing and fixing of frame work made of special sections, power pressed from M.S. sheets and galvanized with zinc coating of 120 gms/sqm (both side inclusive) as per IS : 277 and consisting of angle cleats of size 25 mm wide x 1.6 mm thick with flanges of 27 mm and 37mm, at 1200 mm centre to centre, one flange fixed to the ceiling with dash fastener 12.5 mm dia x 50mm long with 6mm dia bolts, other flange of cleat fixed to the angle hangers of 25x10x0.50 mm of required length with nuts & bolts of required size and other end of angle hanger fixed with intermediate G.I. channels 45x15x0.9 mm running at the spacing of 1200 mm centre to centre, to which the ceiling section 0.5 mm thick bottom wedge of 80 mm with tapered flanges of 26 mm each having lips of 10.5 mm, at 450 mm centre to centre, shall be fixed in a direction perpendicular to G.I. termediate channel with connecting clips made out of 2.64 mm dia x 230 mm long G.I. wire at every junction, including fixing perimeter channels 0.5 mm thick 27 mm high having flanges of 20 mm and 30 mm long, the perimeter of ceiling fixed to wall/partition with the help of rawl plugs at 450 mm centre, with 25mm long dry wall screws @ 230 mm interval, including fixing of gypsum board to ceiling section and perimeter channel with the help of dry wall screws of size 3.5 x 25 mm at 230 mm c/c, including jointing and finishing to a flush finish of tapered and square edges of the board with recommended jointing compound , jointing tapes , finishing with jointing compound in 3 layers covering upto 150 mm on both sides of joint and two coats of primer suitable for board, all as per manufacturer's specification and also including the cost of making openings for light fittings, grills, diffusers, cutouts made with frame of perimeter channels suitably fixed, all complete as per drawings, specification and direction of the Engineer in Charge but excluding the cost of painting with :				
84.1	12.5 mm thick tapered edge gypsum plain board conforming to IS: 2095- (Part I) :2011 (Board with BIS certification marks)	SQMT	1,564.00	1,296.83	20,28,248.67

SR.NO.	BOQ Specifications	Unit	QTY	Rate	Total Amount
			Total		
83	Calcium Silicate Ceiling	SQMT	443.00	2,064.29	9,14,479.92
	Providing and Fixing 15 mm thick densified tegular edged eco friendly light weight calcium silicate false ceiling tiles of approved texture of size 595 x 595 mm in true horizontal level, suspended on inter locking metal grid of hot dipped galvanised steel sections (galvanising @ 120 grams per sqm including both side) consisting of main 'T' runner suitably spaced at joints to get required length and of size 24x38 mm made from 0.33 mm thick (minimum) sheet, spaced 1200 mm centre to centre, and cross "T" of size 24x28 mm made out of 0.33 mm (Minimum) sheet, 1200 mm long spaced between main 'T' at 600 mm centre to centre to form a grid of 1200x600 mm and secondary cross 'T' of length 600 mm and size 24 x28 mm made of 0.33 mm thick (Minimum) sheet to be inter locked at middle of the 1200x 600 mm panel to form grid of size 600x600 mm, resting on periphery walls /partitions on a Perimeter wall angle pre-coated steel of size(24x24X3000 mm made of 0.40 mm thick (minimum) sheet with the help of rawl plugs at 450 mm centre to centre with 25 mm long dry wall screws @ 230 mm interval and laying 15 mm thick densified edges calicum silicate ceiling tiles of approved texture in the grid, including, cutting/ making opening for services like diffusers, grills, light fittings, fixtures, smoke detectors etc., wherever required. Main 'T' runners to be suspended from ceiling using G.I. slotted cleats of size 25x35x1.6 mm fixed to ceiling with 12.5 mm dia and 50 mm long dash fasteners, 4 mm G.I. adjustable rods with galvanised steel level clips of size 85 x 30 x 0.8 mm, spaced at 1200 mm centre to centre along main 'T', bottom exposed with 24 mm of all Tsections shall be pre-painted with polyster baked paint, for all heights, as per specifications, drawings and as directed by Engineer-in-Charge.				
	Note :- Only calcium silicate false ceiling area will be measured from wall to wall. No deduction shall be made for exposed frames/opening (cut outs) having area less than 0.30 sqm.The calcium silicate ceiling tile shall have NRC value of 0.50 (Minimum), light reflection > 85%, non- combustible as per B.S. 476 part IV, 100% humidity resistance and also having thermal conductivity <0.043 w/mK.				
84	Laminate Ceiling above Stage area & Side Band	SQMT	368.00	4,011.00	14,76,048.00
	Providing & fixing 12 mm thk Marine ply screwed to G.I frame work @ 300 c/c finished with Laminate (match with Ex.Laminate) as approved by Architect. FRAME - G.I frame fabricated with 80 x 26 x 0.5 ceiling sections @ 450 mm c/c with perimetre channel as required 15 x 45 x 0.9 intermediate 'C' channel @1200 mm c/c, 25 x 25 x 0.55 ceiling angle securely fixed to structural sofit hangers @ 1220 mm c/c, last ceiling angle not more then 610 mm from adjacent wall,connecting clips etc as required.Complete as per manufacturer specification with 50 mm thk 1000 gsm density Mikron including scaffolding cutting of sopt light & return a.c grill & providing necessary support & redoing the same in good finish complete. Basic cost of laminate - 60/- Sft				
85	LAMINATE BOX CEILING (300 mm x 300 mm Box)	SQMT	26.00	4,749.00	1,23,474.00
	Providing & fixing 12 mm thk Marine ply screwed to G.I frame work @ 300 c/c finished with Laminate as approved by Architect. FRAME - G.I frame fabricated with 80 x 26 x 0.5 ceiling sections @ 450 mm c/c with perimetre channel as required 15 x 45 x 0.9 intermediate 'C' channel @1200 mm c/c, 25 x 25 x 0.55 ceiling angle securely fixed to structural sofit hangers @ 1220 mm c/c, last ceiling angle not more then 610 mm from adjacent wall,connecting clips etc as required.Complete as per manufacturer specification with 50 mm thk 1000 gsm density Mikron including scaffolding cutting of spot light & return a.c grill & providing necessary support & redoing the same in good finish complete. Basic cost of laminate - 60/- Sft				
86	P & F BAFFLE CEILLING of 100 mm x 50mm X 0.8mm thick @ spacing 125 mm c/c as per approved design	SQMT	478.00	11,530.00	55,11,340.00

SR.NO.	BOQ Specifications	Unit	QTY	Rate	Total Amount
			Total		
	<p>ALUMINIUM POWDER COATED RAFTER CEILING - Wood finish or equivalent. Providing, fabricating and fixing in position Aluminum powder coated Rafter ceiling (wooden finish) suspended from true slab using properately make supportitng system as indicated in the detailed drawing. The Rafter of size : 100 x 50 x 0.8mm thick placed at 125 mm c/c as indicated in the detailed drawing. All the exposed MS section shall be finished with powder coated to shade (wooden finish) minimum 60microns as per manufacture specification. Rate is inclusive of gypsum India ceiling as backing support for the aluminium rafter ceiling with approved gypsum India make frame works. Works to be carried as per manufacturers specifications and under their supervision.</p> <p>Note: Rates are including preparation of shop drawings, arranging various samples, making mock up & taking Architect / EIC approval is in contractors scope.</p>				
87	Factory Finished Pine Wood Rafter Ceiling (75 mm x 50 mm)	RMT	866.00	1,086.00	9,40,476.00
	<p>Providing & fixing of 75 mm x 50 mm Pine wood rafter finished with Clear PU Polish approved with necessary G.I hanger for support system. as per 3D and drawing.</p> <p>Note: Rates are including preparation of shop drawings, arranging various samples, making mock up & taking Architect / EIC approval is in contractors scope.</p> 				
88	Factory Finished Modular Hexagonal Shape Ceiling Rafter - 150 Seater Classroom	RMT	2,139.00	1,216.00	26,01,024.00
	<p>Providing & fixing of 100 mm x 50 mm thk Wooden Rafter finished with White Core Laminate as approved by Architect.</p> <p>FRAME - Wooden Rafter Hang with 25 x 25 x 0.55 ceiling angle securely fixed fixed to structural sofit hangers @ 1220 mm c/c, last ceiling angle not more then than 610 mm from adjacent wall,connecting clips etc as required including scaffolding cutting of LED Profile Light cutting & providing necessary support & redoing the same in good finish complete.</p> <p>Note: Rates are including preparation of shop drawings, arranging various samples, making mock up & taking Architect / EIC approval is in contractors scope.</p> 				
89	Factory Finished Modular Pre Laminated Hexagon Ceiling - 150 Seater Classroom	SQMT	365.00	4,581.00	16,72,065.00

SR.NO.	BOQ Specifications	Unit	QTY	Rate	Total Amount
			Total		
	<p>Providing & fixing 12 mm thk Pre Laminated Perforated Board fixed on 25 mm x 25 mm H.W frame work @ Center & periphery. FRAME - 25 x 25 mm H.W frame @ Center & periphery, 25 x 25 x 0.55 ceiling angle securely fixed to structural soffit hangers @ 1220 mm c/c, last ceiling angle not more than 610 mm from adjacent wall, connecting clips etc as required. Complete as per manufacturer specification with 25 mm thk 1000 gsm density Mikron including scaffolding cutting of soffit light & return A.C grill & providing necessary support & redoing the same in good finish complete.</p> 				
90	Pet Panel Ceiling On Open Slab	SQMT	585.00	4,267.00	24,96,195.00
	<p>Providing & fixing false ceiling 600 x 600 x 12.5 mm thk Perforated Gypsum tile fixed on G.I Frame@ 200mm c/c finished with 12 mm thk Pet panel as approved FRAME-G.I frame fabricated with 80 x 26 x 0.5 ceiling sections @ 450 mm c/c with perimetre channel as required 15 x 45 x 0.9 intermediate 'C' channel @ 1200 mm c/c, 25 x 25 x 0.55 ceiling angle securely fixed to structural soffit hangers @ 1220 mm c/c, last ceiling angle not more than 610 mm from adjacent wall, connecting clips etc as required. Complete as per manufacturer specification with 50 mm thk 1000 gsm density Mikron including scaffolding cutting of soffit light & return a.c grill & providing necessary support & redoing the same in good finish complete. JOINTS - All joints of panels filled and finished with India Gypsum jointing compound, jointing tapes etc. complete. TOP COAT - Entire face of ceiling finished with 12 mm thk pet panel as per manufacturers specifications & colour as approved by Architect including scaffolding etc, work will be carried out as per drg & instruction of acoustic consultant / Site Engineer / Architect. Basic cost - 200/- Sft</p>				
91	Factory Finished Modular Decorative Ceiling - Auditorium	RMT	254.00	1,864.00	4,73,456.00
	<p>Providing & fixing of 150 mm x 50 mm Pine wood rafter finished with clear PU Polish approved with necessary G.I hanger for support system or ply base.</p> <p>Note: Rates are including preparation of shop drawings, arranging various samples, making mock up & taking Architect / EIC approval is in contractors scope.</p> 				
92	ARMSTRONG SOUNDSCAPES SHAPES - INDIVIDUAL SUSPENSION				

SR.NO.	BOQ Specifications	Unit	QTY	Rate	Total Amount
			Total		
	Providing and Fixing Armstrong SoundScapes - Acoustical clouds which are 30 mm thick, flat glass fiber panels with Humidity Resistance RH 90% & Recycled Content of minimum 30%, come in various shape options like Square / Convex / Concave / Circle / Hexagon / Trapezoid / Parallelogram (Left & Right) / Rectangle (Small & Large) and in standard Traffic White color with LR 90% or in the color specified by the Architect / Engineer in charge (Shell / Tangerine / Cranberry / Moss / Kiwi / Reef / Lagoon). The size and sound absorption details are as below: Basic cost - 350/- Sft				
94.1	70 Seater Classroom - Providing & fixing of 6 mm thk marine ply on 18 mm thk Double marine Ply ring with 25 mm thk 1000 gsm density Mikron finished with 12 mm thk pet panel with necessary G.I hanger for support system. 	SQMT	94.00	5,330.00	5,01,020.00
94.2	Providing & fixing of 40mm thk White cloud of Ecophon, Knauf panel 12.5 mm thk plain gypsum ceiling on G.I frame work with necessary support. A- size panel = 30 sq.m B- size panel = 20 sq.m C- size panel = 25 sq.m D- size panel = 22 sq.m E- size panel = 21sq.m F- size panel = 21 sq.m G - size panel = 20 sq.m cut panel = 10 sq.m. 	SQMT	236.00	5,330.00	12,57,880.00
94.3	Lobby - Providing & fixing of 18 mm thk marine ply on 18 mm thk Double marine Ply ring with 25 mm thk 1000 gsm density Mikron finished with 12 mm thk pet panel with necessary G.I Pipe hanger for support system. 	SQMT	287.00	6,217.00	17,84,279.00
93	Underdeck Ceiling On Roof	SQMT	408.00	1,161.00	4,73,688.00
	FRAME - G.I frame fabricated with 45 x 15 x 0.8 mm thk Intermediate channel @1200 mm c/c in one Direction & Ceiling sections 80 x 26 x 0.5 @ 300 mm c/c in 1200 mm c/c in one Direction & Ceiling sections 80 x 26 x 0.5 @ 300 mm c/c in other direction including perimeter channel as required with 50 mm thk 1000 gsm density Mikron & Black RP Tissue.Entire frame / Mikron shall be covered with welded mesh back of g.i 19x19 mm square of 14 gauge (as per approved sample) including machine screw & levelling & scaffolding etc complete. Work will be 'carried out as per drg & instruction of Acoustic consultant/Site Engineer/Architect. NOTE : All the frame work to be considered of Gypsum India company				
94	PET PANEL CEILING (Between Two Fins)	SQMT	500.00	3,941.00	19,70,500.00

SR.NO.	BOQ Specifications	Unit	QTY	Rate	Total Amount
			Total		
	<p>Providing & fixing false ceiling 600 x 600 x 12.5 mm thk Perforated Gypsum tile fixed on G.I Frame@ 200mm c/c finished with 12 mm thk Pet panel as approved</p> <p>FRAME- G.I frame fabricated with 80 x 26 x 0.5 ceiling sections @ 450 mm c/c with perimetre channel as required 15 x 45 x 0.9 intermediate 'C' channel @1200 mm c/c, 25 x 25 x 0.55 ceiling angle securely fixed to structural soffit hangers @ 1220 mm c/c, last ceiling angle not more then 610 mm from adjacent wall,connecting clips etc as required.Complete as per manufacturer specification with 50 mm thk 1000 gsm density Mikron including scaffolding cutting of sopt light & return a.c grill & providing necessary support & redoing the same in good finish complete.</p> <p>JOINTS - All joints of panels filled and finished with India Gypsum jointing compound, jointing tapes etc.complete.</p> <p>TOP COAT - Entire face of ceiling finished with 12 mm thk pet panel as per manufacturers specifications & colour as approved by Architect including scaffolding etc.work will be carried out as per drg & instruction of acoustic consultant / Site Engineer /Architect.</p>				
95	FINS (On Ceiling)	RMT	509.00	763.00	3,88,367.00
	<p>Providing & fixing Of 12 mm thk MDF board fixed on 50 mm x 50 mm H.W frame work @ 600 c/c in both direction finished with White PU finished as approved by architect with 50 mm thk 1000 gsm density Mikron between frame work.Work including scaffolding, machine screw, etc complete.Work will be carried out as per drg & instruction of Acoustic consultant/ Site Engineer /Architect.</p>				
96	Illuminated Stretch ceiling panels on framework / ply boxing - Customised shape	SQMT	161.00	19,892.00	32,02,612.00
	<p>Supply & Installation of Stretch Ceiling</p> <p>The ceiling shall be supplied with demountable translucent stretch ceiling membrane with harpoon, corners ready to install. Membrane shall transmit 76.60% light and absorb 23.40% of light. CE Certified & fire rated to European standards BS2D0 with long life of membrane seam. LED driver specification fabric ceiling</p> <p>a. Surge Protection - 3 KV</p> <p>b. Total Harmonic Distortion - Less than 10% on full load</p> <p>c. Galvanic isolation - Leakage current should not be more than 2 mA.</p> <p>The LED Modules (colour shall be confirmed) shall be supplied with appropriate drivers. Light box to have LED modules of approved colour to ensure approximately 800 lux @ 1 Mtr height from FFL. LED strips shall be installed using custom aluminum extrusions to ensure longevity of the installation. The Flexible membrane must be ASTM E 84 class A certified, necessary test report to be enclosed with the bid.</p> <p>The ceiling shall have following features and properties: -</p> <p>Simple and maintenance friendly: Installed in a few hours and finished product shall not require any taping, spackling, or painting, and shall be easily cleanable.</p> <p>Durable: The systems shall resist shocks and shall not crack with movement or under stretch conditions.</p> <p>Safe: The membranes and profiles shall have passed the stringent fire and safety tests. The membrane must have been classified as non-toxic upon burning. Green: Membranes must be 100% recyclable. There should not be any welding defect on Membranes for years to come on the perimeter edging or in the seams. (Ceiling to be in any Customised shape)</p>				
					

SR.NO.	BOQ Specifications	Unit	QTY	Rate	Total Amount
			Total		
97	Fixing & Installation of KNAUF make readymade trap door of following sizes.				
99.1	300 x 300mm	NOS	5.00	3,020.00	15,100.00
99.2	450 x 450mm	NOS	5.00	3,774.00	18,870.00
99.3	600 x 600mm	NOS	5.00	4,352.00	21,760.00
98	Axiom Trim				
	<p>Providing and fixing Axiom Trim Channel of 50mm wide Aluminium trim of extruded aluminium section in straight/curved length, finished powder coated in approved shade, installed complete with splice connector clips at the junction of two Axioms except for the right angle junctions. The axiom section shall be secured with aluminium or G.I- L cleat, main runner at the right angles. Cross Tee @ 600 mm c/c shall be secure with T - Bar connector adjustable aluminium clip . One end of clip to be fitted onto the inner side of Axiom and other end to be fixed to the cross or main tee with fastening screws. Rate to be inclusive of all fixing accessories as per manufacturer's installation guide.</p> 				
100.1	100mm ht. in Golden/ Any other RAL colour	RMT	15.00	1,862.00	27,930.00
99	2nd Floor Corridor	Sqm	511.00	6,009.00	30,70,599.00
	Providing & fixing of Rhombus shape hanging acoustical ceiling made up of 6mm Thk ply fixed on 18mm Thk ply, 1000 GSM density micron finished with 9mm Thk pet panel from both side as per approved sample & shop drawing.				
100	Modular False Ceiling Works	Sqm	210.00	2,414.00	5,06,940.00
	Providing & Making of the Modular ceiling of 600 x 600 x 15mm on 'T' Grid of Armstrong or Equivalent in the Class Room Complete. NRC - 0.9				
101	Grid Ceiling				

SR.NO.	BOQ Specifications	Unit	QTY	Rate	Total Amount
			Total		
	Providing and fixing tiled false ceiling of specified materials of size 595x595 mm in true horizontal level, suspended on inter locking metal grid of hot dipped galvanized steel sections (galvanized @ 120 grams/ sqm, both side inclusive) consisting of main "T" runner with suitably spaced joints to get required length and of size 24x38 mm made from 0.30 mm thick (minimum) sheet, spaced at 1200 mm center to center and cross "T" of size 24x25 mm made of 0.30 mm thick (minimum) sheet, 1200 mm long spaced between main "T" at 600 mm center to center to form a grid of 1200x600 mm and secondary cross "T" of length 600 mm and size 24x25 mm made of 0.30 mm thick (minimum) sheet to be interlocked at middle of the 1200x600 mm panel to form grids of 600x600 mm and wall angle of size 24x24x0.3 mm and laying false ceiling tiles of approved texture in the grid including, required cutting/making, opening for services like diffusers, grills, light fittings, fixtures, smoke detectors etc. Main "T" runners to be suspended from ceiling using GI slotted cleats of size 27 x 37 x 25 x1.6 mm fixed to ceiling with 12.5 mm dia and 50 mm long dash fasteners, 4 mm GI adjustable rods with galvanised butterfly level clips of size 85 x 30 x 0.8 mm spaced at 1200 mm center to center along main T, bottom exposed width of 24 mm of all T-sections shall be pre-painted with polyester paint, all complete for all heights as per specifications, drawings and as directed by Engineer-in-charge.				-
103.1	12.5 mm thick square edge PVC Laminated Gypsum Tile of size 595x595 mm, made of Gypsum plasterboard, manufactured from natural gypsum as per IS 2095 part I and laminated with white 0.16mm thick fire retardant PVC film on the face side and 12micron metalized polyester on the back side with all edges sealed with the face side PVC film which goes around and wraps the edges and is bonded to the edges and the back side metalized polyester film so as to make the tile a completely sealed unit.	Sqm	1,599.00	2,118.81	33,87,976.79
Toatl of False Ceiling work					3,48,64,328.38
I	Painting Work				
102	Lustre paint	SQMT	6,004.00	211.00	12,66,844.00
	Providing and applying three coats of Lustre enamel paint of desired shade, of approved or equivalent make on internal wall / Partition surfaces, wherever required at all heights to give an even and uniform shade, after thoroughly sand papering existing surfaces to remove dust, dirt etc. and repairing dents, cracks, holes with POP to achieve level surface and applied over a coat of primer and putty "Altek" or "Wall care" or approved equivalent as per manufacturer specification fully to give a smooth and even surface including thoroughly brushing the surface free from water / mortar dropping and other foreign matter and sand papered smooth, complete per manufacturers specifications and as directed.				
103	Plastic Emulsion Paint				
	Providing and applying three coats of Plastic Emulsion paint of desired shade, of approved or equivalent make on internal false ceiling surfaces, wherever required at all heights to give an even and uniform shade, after thoroughly sand papering existing surfaces to remove dust, dirt etc. and repairing dents, cracks, holes with POP to achieve level surface and applied over a coat of primer and putty "Altek" or "Wall care" or approved equivalent as per manufacturer specification fully to give a smooth and even surface including thoroughly brushing the surface free from water / mortar dropping and other foreign matter and sand papered smooth, complete per manufacturers specifications and as directed.				
103.1	For Gypsum ceilings	SQMT	2,653.00	220.00	5,83,660.00

SR.NO.	BOQ Specifications	Unit	QTY	Rate	Total Amount
			Total		
103.2	Open Ceiling (The cost will be including surface preaparation with required slab grinding, Patra POP Punning/scrapping etc)	SQMT	6,412.00	220.00	14,10,640.00
104	Epoxy Paint - For HVAC Ducts	SQMT	1,780.00	231.24	4,11,599.94
	Finishing with Epoxy paint (two or more coats) at all locations prepared and applied as per manufacturer's specifications including appropriate priming coat, preparation of surface, etc. complete.				
105	Surface preparation to receive wallpaper or Graphics	SQMT	690.00	272.00	1,87,680.00
	Providing and applying Primer, of approved or equivalent make on internal wall / Partition surfaces, wherever required at all heights to give an even and uniform level, after thoroughly sand papering existing surfaces to remove dust, dirt etc. and repairing dents, cracks, holes with POP to achieve level surface and applied over a coat of primer and putty "Altek" or "Wall care" or approved equivalent as per manufacturer specification fully to give a smooth and even surface including thoroughly brushing the surface free from water / mortar dropping and other foreign matter and sand papered smooth, complete per manufacturers specifications and as directed.				
106	Texture paint	SQMT	305.00	2,862.00	8,72,910.00
	Providing and applying two coats pigmented surface texture paint of approved make & desired shade at all heights to give an even and uniform shade as per manufacturers specification from approved or equivalent make. Rate shall include preparation of base surface, watering before and after application, scaffolding, tools and plants etc., complete as directed. Basic rate is Rs.220/- per. Sft				
107	Concrete Paint	SQMT	100.00	4,163.00	4,16,300.00
	Providing and applying Concrete Texture paint of desired shade, of approved or equivalent make on surfaces, wherever required at all heights to give an even and uniform shade, after thoroughly sand papering existing surfaces to remove dust, dirt etc. and repairing dents, cracks, holes with POP to achieve level surface and applied over a coat of primer and putty "Altek" or "Wall care" or approved equivalent as per manufacturer specification fully to give a smooth and even surface including thoroughly brushing the surface free from water / mortar dropping and other foreign matter and sand papered smooth, complete per manufacturers specifications and as directed. Basic rate is Rs.320/- per. Sft				
108	Synthetic Enamel Paint on structural steel	SQMT	500.00	145.00	72,500.00
	Providing and applying three coats of Synthetic Enamel Paint of approved manufacturer and of required shade on surfaces to give an even shade including two coats of anti-corrosive Metal primer on ferrous surfaces of approved make as per manufacturer's specification to give a smooth surface including thoroughly brushing the surface free from water / mortar dropping and other foreign matter and sand papered smooth all materials and labour complete.				
I	Sub-TOTAL for Painting				52,22,133.94
J	Wallpaper / Graphics				
109	Wall paper	SQMT	739.00	4,699.00	34,72,561.00

SR.NO.	BOQ Specifications	Unit	QTY	Rate	Total Amount
			Total		
	Providing and fixing vinyl backing commercial grade wall paper of approved shade with recommended adhesive of approved make which have 100% washable, scratch resistance, peel proof, and fire retardant properties. Cost to include preparation on the panned surface for receiving the wall paper as per the manufacturer specification. Basic rate is Rs. 300/- per. Sft				
110	Vinyl Graphic	SQMT	150.00	5,814.00	8,72,100.00
	Providing and fixing Vinyl Posters of approved make, shade with recommended adhesive of approved make and sample as per manufacturer's specifications . Cost to include preparation on the panned surface for receiving the Poster as per the manufacturer specification. Basic rate is Rs. 450/- per. Sft				
111	Exterior Grade Vinyl Poster	SQMT	50.00	6,111.00	3,05,550.00
	Same as above but exterior grade. Basic rate is Rs. 500/- per. Sft				
J	Sub-TOTAL for Wallpaper/Graphics				46,50,211.00
K	Partition Works				
112	Full Height Toughened Double Glass partition -12mm +12mm thick clear tougheneded Glass	SQMT	343.00	13,211.00	45,31,373.00
	Providing & Fixing of GEZE DELA System Segmented GD-105W+ SEG i.e.. Double glazed modular system consists of Aluminium section of 30x105x1.5mm thick ,With adaptable profile for 6 mm Groove system to accommodate the carpet & the uneven surfaces. All sections duly anodised up to 20-25 microns with 6063-T6 grade and required accessories i.e. glass to glass aluminium Vertical section of 105 X 35mm sections, Horizontal section of 105X35mm sections & Glass packing to adjust the floor level. Ceiling profile, Floor profile and wall profile are 30 mm visible face and 105 mm wide with 10/12 mm toughened glass & insertion of Thermoplastic gasket to adhere the glass firm & airtight. The sound reduction Value is from 42 to 45 Db.				
113	Full Height Toughened Double curved Glass partition -12mm +12mm thick clear tougheneded Glass	SQMT	153.00	26,631.00	40,74,543.00
	Providing & Fixing of Curved GEZE DELA System Segmented GD-105W+ SEG i.e.. Double glazed modular system consists of Aluminium section of 30x105x1.5mm thick ,With adaptable profile for 6 mm Groove system to accommodate the carpet & the uneven surfaces. All sections duly anodised up to 20-25 microns with 6063-T6 grade and required accessories i.e. glass to glass aluminium Vertical section of 105 X 35mm sections, Horizontal section of 105X35mm sections & Glass packing to adjust the floor level. Ceiling profile, Floor profile and wall profile are 30 mm visible face and 105 mm wide with 10/12 mm toughened glass & insertion of Thermoplastic gasket to adhere the glass firm & airtight. The sound reduction Value is from 42 to 45 Db.				
K	Sub-TOTAL for Partition Work				86,05,916.00
L	Door Works				
Note :	1. The item should read as providing and fixing single/double shutter door with construction, framework, finishes, hardware, architrave and iron mongery all as per attached sheet. 2. The size mentioned is the overall size all doors to be factory finished and brought at site. 3. Cost of laminate/veneer mentioned is the maximum cost.				

SR.NO.	BOQ Specifications	Unit	QTY	Rate	Total Amount
			Total		
	4. Cost should be inclusive of pre-finished door jamb/ frame as per drawing / specification, profile to the full width of the partition thickness made out of either veneer wood or rough wood wrap with laminate with all edges sealed with matching wood				
	5. For all fire doors should be Fire rating certificate should be provided.				
	6. All internal wooden framework to be treated with 1 coat of anti-termite coat/paint of approved make as per manufacturer's specifications				
	7. The rate for doors to include shutter, finishes, all hardware like exposed / concealed door closer or floorspring, locks, hinges 4 nos., vision panel (if applicable), door stopper etc. all as per drawings. Each door shutter to be inclusive of fire / acoustic seal at bottom & sides.				
	8. All the hardware for the doors to be as per the manufacturers recommendation for the size and application of the door. Patches and floor spring to be as per manufacturers specs. for the type, size and location of door.				
	9. Door Frame for solid flush doors in laminate finish				
	10. Providing and fixing in position seasoned Teak Wood Frames of section 100 x 75mm for doors including double grooves on both sides and two rebates for shutters /grills, shaping, jointing, sand papering, applying a coat of bituminous paint on concealed surface, necessary primer on exposed surfaces,frames finished with 1.0 mm thk. Laminate & balance area finished with three coats of colour polish finishing etc including all materials and labour charges complete.				
114	EX.ACOUSTICAL ENTRY DOOR WITH FRAME AND PORTAL - Door size = (1500 W x 2400 Ht & 900/1200 W x 2400 Ht)	SQMT	271.00	10,712.00	29,02,952.00
	Refinishing of the Existing Door finished with Laminate from both side as per pattern approved by Architect including 'O' seal,drop seal complete with 'H' handle 'of 900 mm height with 32 mm Dia in S.S finish complete including all accerries like Hinges,Stopper complete.				
	ACCESSORIES : HINGES - 150 x 50 x 6mm stainless steel Hinges 4no's per shutter.				
	DOOR CLOSER - IR - LCN - 3133 Concealed heavy-duty door closer, 1 no per shutter.,hold open type door closure as per approved make list.				
	HANDLE - Handle shall be fabricated as per design, 1no's per shutter, stainless steel (304 grade) hairline finish,40 mm diameter, 750 mm long on pull side of both side doors. 2 Sets per door.				
115	Same as above but venner finished door frame and shutter, finished with clear PU. (Veneer Basic cost - 300/- Sft)	SQMT	8.00	10,712.00	85,696.00
116	ACOUSTICAL DOOR SHUTTER (75 mm thk) - Door Size = 1200 x 3000 x 2 Nos & 1800 x 3000 x 4 Nos	SQMT	31.00	22,953.00	7,11,543.00
a	Providing & making 75 mm thk Double shutter Acoustical Door in hard wood frame of 75 x 40 mm @ all round shutter & 50 x 40 mm at 600 c/c in both direction& keep 50 mm thk 1000 GSM Mikron in between frame with 3 mm Tec sound memebrane in one side with 12 mm thk marine ply on both side finished with 1 mm thk laminate as per pattern complete.All the edges of the Door shall be finished with T.W lapping patty as per detail.Door shall have a drop down D-Seal and "O" seal rubber lining on all three sides of the frame rebate as per design, drawings and acoustic consultant instruction complete. Including 200 x 300 mm height peep hole as per design with 12 mm thk glass fixed with rubber linng all round as per detail drawing.				
	ACCESSORIES : HINGES - 150 x 50 x 6mm stainless steel Hinges 4no's per shutter.				
	DOOR CLOSER - IR - LCN - 3133 Concealed heavy-duty door closer, 1 no per shutter.,hold open type door closure as per approved make list.				
	HANDLE - Handle shall be fabricated as per design, 1no's per shutter, stainless steel (304 grade) hairline finish,40 mm diameter, 750 mm long on pull side of both side doors. 2 Sets per door.				

SR.NO.	BOQ Specifications	Unit	QTY	Rate	Total Amount
			Total		

SR.NO.	BOQ Specifications	Unit	QTY	Rate	Total Amount
			Total		
117	WC / TOILET DOORS WITH ABOVE PORTAL IN LAMINATE WITHOUT FRAME	Nos	45.00	12,445.00	5,60,025.00
	Single Leaf Flush Door D2 : 750 mm/ 900mm x 2100 mm				
	DOOR SHUTTER : 38mm thk Solid Core BWP flush door with wooden edging . Door to be clad in LAMINATE on both sides. Door to be fixed on marble door frame / jamb (counted separately and not to be included in cost)				
	HINGES: Hafele / Dorma Flush Hinges				
	HANDLE : Kich make PH Handle 250 mm ht. SS finish on both sides				
	LOCK : Kich make IB106S Indicator bolt				
	Robe Hook				
	All complete as per the manufacturers specifications / as approved by Architect . Refer Detail Drawing .				
118	Single Glazed Double Leaf Swing Door Size: 1900 x 2400m	Nos	2.00	1,28,125.00	2,56,250.00
	Providing & Fixing of Geze Dela Partition System Double Glazed Stile Door having size of 75x55mm with door profile GD-105W ie. 6063-T6 Virgin grade duly Anodized Aluminium Door Sections having sizes of 105x30x1.5mm thick,, 10 mm toughened Glass including GEZE make Concealed Door Closer Boxer 2-4, 8nos Flush Hinges, SS Offset D type Pull Handle 25 x 450mm with narrow Stile mortise Dead lock, Door Seal & Gaskets				
119	Fixed / Openable Glass Window	SQMT	20.00	8,877.00	1,77,540.00
	(Al : 4.0 kg/sm) Supplying & fixing Aluminium framed 6mm clear toughened glass fixed window,63mm x 38mm x 2mm thick aluminium box profile, glazing beads, all necessary hardware, labour etc, complete. Window of size: 600mm x 750mm / 900mm				
120	Single Glazed Double Leaf Swing Door Size: 1900 x 2400m	Nos	1.00	1,88,923.00	1,88,923.00
	Providing & Fixing of Geze Dela Partition System Double Glazed Stile Door having size of 75x55mm with door profile GD-105W ie. 6063-T6 Virgin grade duly Anodized Aluminium Door Sections having sizes of 105x30x1.5mm thick,, 10 mm toughened Glass including GEZE make Concealed Door Closer Boxer 2-4, 8nos Flush Hinges, SS Offset D type Pull Handle 25 x 450mm with narrow Stile mortise Dead lock, Door Seal & Gaskets				
L	Sub-TOTAL of Door				48,82,929.00
M	Roller Blinds				
121	ROLLER BLINDS	Sqm	110.00	1,203.00	1,32,330.00
	Providing & fixing ROLLER BLINDS comprising of polymer coated fibre fabric with minimum openness factor of 8% and max. of 14% as per AS standards. The fabric shall be fire retardant and have high heat reflection ratios. The roller mechanism shall be a moulded unit made from engineering grade plastic polymer with steel spring support. The fabric shall be finished on the sides with edge tape duly welded for waviness control. The fabric shall be attached to the roller tube with high quality self adhesive tape. Average width of blinds shall be 2000mm and fall of 3500mm with manual operation. Operational action shall be smooth and upto the satisfaction of the Architects.				
	Sub-TOTAL of Roller Blinds				1,32,330.00
N	Miscellaneous Work				
122	AL Skirting	RMT	100.00	447.00	44,700.00

SR.NO.	BOQ Specifications	Unit	QTY	Rate	Total Amount
			Total		
	Providing and fixing 50mm high anodized modular ALUMINIUM SKIRTING from specialised vendor as per sample approved from architect's office Approved make (Aluminium or black anodized colour)				
123	Ply with laminate Skirting (150 mm Ht) Providing & fixing of 150 mm Ht ply skirting in 12 mm thk ply fixed on Existing frame work finished with 1.5 mm thk Laminate (Match with Existing Laminate) as approved by Architect including scaffolding, machine screw, etc complete. Work will be carried out as per drg & instruction of Acoustic consultant / Site.	RMT	367.00	495.00	1,81,665.00
124	Step Light backing Providing & fixing of the 125mm wide ply batten fabricated from 8 mm ply fixed on the edge of the step for supporting the step light. Edge of the ply shall be well projected during the construction of the Theatre.work will be carried out as per drg & instruction of acoustic consultant /Carnival site incharge.	RMT	651.00	449.00	2,92,299.00
125	New Observation Window Providing & fixing Observation window (AV room window, size: 1.8 m x 1.2m) 230 x50 mm salwood window framehavingh 12 mm the clear toughen glass on AV room side as per drawing. 12 mm thk clear toughen glass fixed in 6 mm thk 'U' channel rubber gasket lining all around the glass to make air tight necessary beading patti o 37.5 x 25 to be fixed all round on the glass from AV room side. Window frame to be melamine polish and have one coat of Anti-termite paint. All exposed surface have one caot of wool presevative paint including errecting, fixing, leveling etc. Work will be carried out as per drg and instruction of Acoustic consultant / Engineer ,Architect	NOS	2.00	31,718.00	63,436.00
126	SURROUND SPEAKER ISOLATION Providing & fixing of the speaker on the 19 mm thk com. ply with 100 x 100 X 19 mm thk Rubber 04 nos behind ply fix on wall or frame 19 mm thk rubber for avoid vibrational sound as per detail.Work will be carried out as per drw & instruction of acoustic consultant / Site Engineer / Architect.	NOS	18.00	3,172.00	57,096.00
127	Urinal Partition Providing and fixing full ht 10mm thick frosted toughned glass unrrinal partition with required bracket and hardware etc.	NOS	30.00	7,821.00	2,34,630.00
128	Aluminium Profile P/F Aluminium profile T / Z Transition Beading Channels for Carpet - tile junction as per details & instruction of Architects Kubik / Otic / BottomLine make (Aluminium or black anodized colour)	RMT	154.00	447.00	68,838.00
129	SS Profile Providing and fixing 12mm thick. Stainless steel beading along the carpet / wooden flooring periphery and hard floor of approved section. The rate shall be inclusive of necessary hardware and fitting for completion. All complete as per approval of designer & instruction of Engineer in charge.	RMT	504.00	731.00	3,68,424.00
130	Cassette AC Closing Acoustical Box (Cassate AC box size : 1200mm L x 1200mm W x 600mm Ht.) Providing & fixing of 12 mm thk ply box fixed on slab finished with 12 mm thk pet panel as approved by Architect including scaffolding, machine screw etc complete.Work will be carried out as per drg & instruction of Acoustic consultant Site Engineer /Architect.	NOS	40.00	3,172.00	1,26,880.00
131	SS With Glass Railing	RMT	189.00	4,658.00	8,80,362.00

SR.NO.	BOQ Specifications	Unit	QTY	Rate	Total Amount
			Total		
	Removing, re-fixing and extend SS glass existing railing as per site requirement etc.				
132	New SS With Glass Railing Providing & fabricating new railing same existing railing.	RMT	55.00	14,565.00	8,01,075.00
133	Providing & fixing CNC cut wooden Jali as per interior design intent & as per approved sample & shop drawing.	Sqm	24.00	12,752.00	3,06,048.00
	Sub-TOTAL of MISCELLANEOUS ITEMS				34,25,453.00
	SUB TOTAL	Rs.			13,70,82,156.23

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BOQ FOR INTERNAL PLUMBING SERVICES - INTERNAL					
S. NO.	PARTICULARS	UNIT	TOTAL	SSR Rate - 2022-23/M.R. Rate	Amount
			QUANTITY		
SECTION - I SANITARY WARE and CP FITTINGS					
1	Supply ,instalation,testing & commissioning of European type white glazed earthenware water closet pan with UPVC seat and lid with chromium plated brass hinges and rubber buffers including UPVC and vent pipe upto the outside face of wall 10litre enameled low level flushing cistern with fitting pipe stop tap brackets for fixing cistern 32mm dia.UPVC flush pipe with fittings & clamps,20mm dia.UPVC overflow pipe,mosquito proof coupling G.I. chain and pulley,with water jet & fitting including cutting and making good to the walls & floors testing etc.complete.(prior approval of sample and brand by Ex.Engineer is necessary before use) (Model/Make-TOTO water closet Roundy wall hung toilet flush system:Washdown CW182M#NW1)	No.	45.00	13,716.00	6,17,220.00
3	Supply ,instalation,testing & commissioning of White glazed with bottle trap earthenware Wash Hand Basin of 55x40 cm size including cold water piller taps , brackets, rubber plugs and brass chain, angular stop tap , chromium plate bottle trap and necessary pipe connections including UPAC waste pipe and trap upto the outside face of the wall, making good the damaged surface, testing etc. complete. (Model/Make:TOTO console washbasin faucet W/O POP-Up waste MM TLS03302B)	No.	63.00	8,307.00	5,23,341.00
4	Supply ,instalation,testing & commissioning of C.P.Handshower (health faucet) 1m.PVC tube with wall hook jaquar make (Cat. No. ALD 563) (Model/Make-Jaquar allied health faucet ALD-CHR-577)	No.	45.00	900.00	40,500.00
5	Supply ,instalation,testing & commissioning of C.P. 2 Way BIB cock with wall flange of approved make including ecessary sockets/ union nut etc. complete as directed by Engineer in charge. (Model/make-JaquarARIA 2way bib cock with wall flange ARI-CHR-39041)	No	45.00	2,399.00	1,07,955.00
6	Supply ,instalation,testing & commissioning of C.P. BIB cock with wall flange of approved make including necessary sockets/ union nut etc. complete as directed by Engineer in charge. (For AHU room).	No	24.00	1,406.00	33,744.00

S. NO.	PARTICULARS	UNIT	TOTAL	SSR Rate - 2022-23/M.R. Rate	Amount
			QUANTITY		
7	Supply ,instalation,testing & commissioning of C.P. Angular stop cock with wall flange of approved make continental ncluding necessary sockets/union nut etc. complete. (Model/Make-Jaquar opal prime angle valve with wall flange OPP-CHR-15053PM)	No.	107.00	2,925.00	3,12,975.00
8	Supply ,instalation,testing & commissioning of white glazed earthenware full stall type urinal with PVC flushing cistern of 5 liters capacity with fittings,inlet pipes and stop tap,brackets for fixing the cistern,32mm dia PVC flush pipe with fitting & flushing arrangments including lead soil pipe,lead trap,soil pipe connection up to the outside face of wall (Make/model-TOTOwall hung urinal (Top inlet)U104#W INLET SPUD T62-16,Wall flange W/seal gasket T64BW#W,Hanger & screws(1piece T9RA#W)	No.	30.00	11,025.00	3,30,750.00
9	Supply ,instalation,testing & commissioning of white glazed earthenware sink 600mm x 200mm x 450mm including all connection of G.I. supply and PVC waste pipes upto the otside face of the wall,cold water chromium plated screw down bib tap, rolled steel or CI brackets,rubber plug with chain & stop tap complete	No.	22.00	7,509.00	1,65,198.00
10	Supply ,instalation,testing & commissioning of automatic soap dispenser including all fittings complete as required. (Make/model-Jaquar automatic sop dispenser HDR-SSF-AK2807)	No.	27.00	7,398.00	1,99,746.00
11	Supply ,instalation,testing & commissioning of Hand Dryer including all necessary accessories etc. complete as per directions of the engineer-in-charge. (Make/model-Jaquar flash touch-free infrared hand dryer HDR-SSF-AK2807)	No.	27.00	10,975.00	2,96,325.00
12	Supply ,instalation,testing & commissioning of CP Toilet Paper Holder with Cover including all necessary accessories etc. complete as per directions of the engineer-in-charge. (Make/Model-Jaquar cubix prime toilet paper holder AKP-CHR-35751P)	No.	33.00	1,568.00	51,744.00
TOTAL SANITARY WARE & CP FITTINGS- SECTION-I					26,79,498.00
SECTION II - INTERNAL WATER SUPPLY					

S. NO.	PARTICULARS	UNIT	TOTAL	SSR Rate - 2022-23/M.R. Rate	Amount
			QUANTITY		
1	Supply, installation, testing & commissioning of ISI mark G.I. pipe of following class and dia. excluding GST levied by GOI & GOM in all respect, inspection charges, transportation to stores,etc..complete as per IS-1239/2004.Note :One coupler shall be provided with each full length of pipe cost of which is included in rates below. (Rising main,Terrace looping & downtake)				
1.1	65 mm dia(8.02 kg/m)	Rmtr	Rate only	630.00	
1.2	50 mm dia(6.24 kg/m)	Rmtr	312.00	490.00	1,52,880.00
1.3	40 mm dia(4.47 kg/m)	Rmtr	332.00	354.00	1,17,528.00
1.4	32 mm dia(3.97 kg/m)	Rmtr	40.00	305.00	12,200.00
2	Supply, installation, testing & commissioning onwalls/ceiling/floor following dia CPVC pipe with necessary fittings, remaking good the demolished portion etc. complete. Including removing existing pipeline if necessary and conveying and stacking the same in PWD chowky or as directed etc. complete. (Inside toilet)				
2.1	25 mm dia	Rmtr	40.00	375.00	15,000.00
2.2	20 mm dia	Rmtr	200.00	310.00	62,000.00
2.3	15 mm dia	Rmtr	1,700.00	266.00	4,52,200.00
3	Supply, installation, testing & commissioning of forged brass ball valve with forged brass ball suitable for operating pressure of not less than 16 kg / sq.cm of the following size (Cost shall be inclusive of providing necessary union/flange connection) Providing and fixing screw down for 20 mm dia. wheeled stop tap of brass including necessary sockets/union nut complete. @ Water supply downtake				
3.1	50 mm dia	No.	2.00	1,993.00	3,986.00
3.2	40 mm dia	No.	4.00	1,171.00	4,684.00
3.3	32 mm dia	No.	10.00	981.00	9,810.00
3.4	25 mm dia	No.	25.00	878.00	21,950.00
3.5	20 mm dia	No.	3.00	640.00	1,920.00
3.6	15 mm dia	No.	23.00	516.00	11,868.00

S. NO.	PARTICULARS	UNIT	TOTAL	SSR Rate - 2022-23/M.R. Rate	Amount
			QUANTITY		
4	Supply, installation, testing & commissioning of Air Release Valve of 15mm dia on top of downtake with forged brass ball valve complete with all accessories as required.	No.	16.00	6,020.00	96,320.00
5	Supplying, installing testing and commissioning of CI flanged "Y" type strainer with SS mesh, suitable flanges, nuts, bolts, gaskets etc. complete as per technical specifications. (OHT Outlet)				
5.1	50 mm dia	No.	1.00	11,573	11,573.00
5.2	40 mm dia	No.	1.00	11,027	11,027.00
6	Supply, installation, testing & commissioning of Differential Float Valves with valve opening through robe suspended in water tank, the level can be adjusted through robe length, suitable for the working pressure of the feeding line not less than 5 kg, complete as directed by engineer-in-charge.				
6.1	40mm nominal dia	Nos.	1.00	7,648	7,648.00
6.2	50mm nominal dia	Nos.	1.00	9,782	9,782.00
TOTAL FOR INTERNAL WATER SUPPLY -SECTION - II					10,02,376.00
SECTION III - INTERNAL DRAINAGE (SOIL, WASTE & VENT)					

S. NO.	PARTICULARS	UNIT	TOTAL	SSR Rate - 2022-23/M.R. Rate	Amount
			QUANTITY		
1	Supply, installation , testing commissioning of Polypropylene pipes with push fit joints, The Pipe & fittings shall be Mineral Reinforced, the door access fittings (elbow, tee) & P-Traps also making proper connections to equipments including all necessary fittings such as bends, tees, reducers, vent cowl, at top, rodign eye, clean out plugs, expansion bellows for pipes crossing expansion joints,nuts, bolts, gasket, plug, supports and plugs etc. Fixing at wall/ ceiling level supported by clamps, fire collars, expansion joints branches, Rodding Eye, thrust blocks, velocity breakers, hangers etc. as per the specification, drawings and schematics. G.I. pipe sleeve of suitable higher size shall be provided wherever the pipes are crossing the walls/floors and cutting holes and chases in brick, R.C.C work and making good the same to original conditions complete in all respects. All hangers, clamps, brackets, anchor/fixed support, guides, rollers etc. shall be of galvanized iron unless specified otherwise and then supply and installation of the same shall also be included for rates under this head. Welding of any kind on the galvanized support / hanger shall not be permitted. (For Soil & Waste Inside toilet,)				
1.1	32mm dia	Rmtr	160.00	262	41,920.00
1.2	50mm dia	Rmtr	160.00	531	84,960.00
1.3	75 mm dia	Rmtr	400.00	1,102	4,40,800.00
1.4	110 mm dia	Rmtr	70.00	2,201	1,54,070.00
2	Supply, installation , testing commissioning of Polypropylene pipes with push fit joints, The Pipe & fittings shall be Mineral Reinforced the door access fittings (elbow, tee) & P-Traps also making proper connections to equipments including all necessary fittings such as bends, tees, reducers, vent cowl, at top, rodign eye, clean out plugs, expansion bellows for pipes crossing expansion joints,nuts, bolts, gasket, plug, supports and plugs etc. Fixing at wall/ ceiling level supported by clamps, fire collars, expansion joints branches, Rodding Eye, thrust blocks, velocity breakers, hangers etc. as per the specification, drawings and schematics. G.I. pipe sleeve of suitable higher size shall be provided wherever the pipes are crossing the walls/floors and cutting holes and chases in brick, R.C.C work and making good the same to original conditions complete in all respects. All hangers, clamps, brackets, anchor/fixed support, guides, rollers etc. shall be of galvanized iron unless specified otherwise and then supply and installation of the same shall also be included for rates under this head. Welding of any kind on the galvanized support / hanger shall not be permitted. (For Soil & Waste,Vent, Vertical in Shaft)				
2.1	75 mm dia	Rmtr	220.00	1,066	2,34,520.00
2.2	110 mm dia	Rmtr	160.00	2,125	3,40,000.00

S. NO.	PARTICULARS	UNIT	TOTAL	SSR Rate - 2022-23/M.R. Rate	Amount
			QUANTITY		
2.3	160 mm dia	Rmtr	Rate only		
3	Supply, installation, testing & commissioning of PVC SWR (Grade A) pipe as per IS 13592 , on exposed faces of duct walls with necessary cutting to be done to the required length including short pieces, assorted fittings such as plug/plain tee, bend, single/double Y, offsets etc. as per IS 14735, jointing with lubricant & rubber rings, clamping on wall using GI Z Bracket supports and giving water-tightness test for the pipes along with making holes in walls/ floor grooving and redoing the same etc. complete as per directions of engineer-in-charge.				
3.1	75 mm dia (For Antisyphonage)	Rmtr	140.00	252	35,280.00
4	Supply, installation, testing & commissioning of PP Multi-Floor Trap of approved make of 110mm dia inlet and 50 mm and 75mm dia outlets including cutting/grooving floor and making good the damages of the same all complete as per drawings, specifications and direction of the engineer-in-charge.				
4.1	75 mm	Nos.	72.00	766	55,152.00
5	Supply, installation, testing & commissioning of PP Nahani-Floor Trap of approved make of 75mm dia outlets including cutting/grooving floor and making good the damages of the same all complete as per drawings, specifications and direction of the engineer-in-charge.				
5.1	75 mm	Nos.	48.00	446	21,408.00
6	Supply, installation, testing & commissioning of Stainless Steel Grating for floor trap square including frame(150mmX150mm) & provision of cockroach trap and fixing on tiles, including water proofing of the trap etc.complete as per direction of engineer-in-charge.	Nos.	120.00	1,728	2,07,360.00
TOTAL FOR INTERNAL DRAINAGE (SOIL, WASTE & VENT) SECTION - III					16,15,470
SECTION IV - INTERNAL STORM WATER					

S. NO.	PARTICULARS	UNIT	TOTAL	SSR Rate - 2022-23/M.R. Rate	Amount
			QUANTITY		
1	Supply, installation, testing & commissioning P.V.C. Rain water pipes of following diameter and having wall thickness of 2.2 to 2.7 mm confirming to I.S.13592-1992 including proper rain water receiving recess with P.V.C. plug, bend, necessary fittings, such as, offsets, shoes, including fixing the pipe on wall using approved wooden cleats projecting 25 mm to 40 mm from face of wall a fixing with clips of approved quality and One Number, filing the joint using rubber gasket with solvent cement and properly resting the shoe of pipes on C.C. or masonry blocks, including necessary scaffolding and maintenance for 3 yrs for any leakages or dislocations of pipes. All the P.V.C. fittings and additional 2 piece socket clips shall be got approved from engineer in charge etc. complete.				
1.1	160 mm dia	Rmtr	180.00	1,720.00	3,09,600.00
1.2	110 mm dia	Rmtr		728.00	-
TOTAL FOR SECTION IV - INTERNAL STORM WATER					3,09,600.00
			Total Section I+II+III+IV		56,06,944.00

IIT VMCC POWAI MUMBAI**BILL OF QUANTITIES FOR INTERNAL POINT WIRING**

Sr.No.	ITEM DESCRIPTION	UNIT	RATE-DSR 22 /NON DSR	TOTAL	AMOUNT
				QUANTIT Y	
	Note:				
	1. All fixture control circuits will be fed from the existing distribution board.				
	2. Only internal point wiring is considered.				
	3. The provision for additional power points and power supply has not been considered.				
	4. The supply cost of light fixture is not included in the prices mentioned.				
A	WIRING IN PVC CONDUIT				
i	Wiring for light point/ fan point/ exhaust fan point/ call bell point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable in surface / recessed medium class 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.				
ii	Group A	Point	1,015.00	256.00	2,59,840.00
B	Wiring for circuit/ submain wiring alongwith earth wire with the following sizes of FRLS PVC insulated copper conductor, single core cable in surface/ recessed medium class PVC conduit as required.				
i	2 X 1.5 sq. mm + 1 X 1.5 sq. mm earth wire	Meter	233.00	100.00	23,300.00

Sr.No.	ITEM DESCRIPTION	UNIT	RATE-DSR 22 /NON DSR	TOTAL	AMOUNT
				QUANTIT Y	
ii	2 X 2.5 sq. mm + 1 X 2.5 sq. mm earth wire	Meter	275.00	100.00	27,500.00
iii	2 X 4 sq. mm + 1 X 4 sq. mm earth wire	Meter	334.00	150.00	50,100.00
iv	4 X 4 sq. mm + 2 X 4 sq. mm earth wire	Meter	537.00	50.00	26,850.00
C	Rewiring for light point/ fan point/ exhaust fan point/ call bell point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable and 1.5 sq.mm FRLS PVC insulated copper conductor single core cable as earth wire in existing surface/ recessed steel/PVC conduit including dismantling as required.				
i	Group A	Point	574.00	100.00	57,400.00
D	Supplying and drawing following sizes of FRLS PVC insulated copper conductor, single core cable in the existing surface/ recessed steel/ PVC conduit as required.				

Sr.No.	ITEM DESCRIPTION	UNIT	RATE-DSR 22 /NON DSR	TOTAL	AMOUNT
				QUANTIT Y	
i	1 x 1.5 sq. Mm	Meter	45.00	250.00	11,250.00
ii	2 x 1.5 sq. Mm	Meter	70.00	100.00	7,000.00
iii	3 x 1.5 sq. Mm	Meter	95.00	100.00	9,500.00
iv	2 x 2.5 sq. mm	Meter	98.00	50.00	4,900.00
v	3 x 2.5 sq. mm	Meter	137.00	50.00	6,850.00
E	Supplying and fixing of following sizes of medium class PVC conduit along with accessories in surface/recess including cutting the wall and making good the same in case of recessed conduit as required.				
i	20 mm	Metre	128.00	200.00	25,600.00
ii	25 mm	Metre	145.00	100.00	14,500.00
iii	32 mm	Metre	184.00	150.00	27,600.00

Sr.No.	ITEM DESCRIPTION	UNIT	RATE-DSR 22 /NON DSR	TOTAL	AMOUNT
				QUANTIT Y	
F	Wiring for group controlled (looped) light point/fan point/exhaust fan point/call bell point (without independent switch etc.) with 1.5 sq.mmFRLS PVC insulated copper conductor single core cable in surface/recessed PVC conduit, and earthing the point with 1.5 sq.mmFRLS PVC insulated copper conductor single core cable etc. as required.				
i	Group A	Point	649.00	2,898.00	18,80,802.00
G	Supplying and fixing suitable size GI box with modular plate and cover in front on surface or in recess, including providing and fixing 3 pin 5/6 A modular socket outlet and 5/6 A modular switch, connections etc. as required.	Each	477.00	3.00	1,431.00
H	Supplying and fixing suitable size GI box with modular plate and cover in front on surface or in recess, including providing and fixing 6 pin 5/6 & 15/16 A modular socket outlet and 15/16 A modular switch, connections etc. as required.	Each	586.00	13.00	7,618.00
I	Supplying and fixing suitable size GI box with modular plate and cover in front on surface or in recess, including providing and fixing 2 nos. 3 pin 5/6 A modular socket outlet and 2 nos. 5/6 A modular switch, connections etc. as required. (For light plugs to be used in non residential buildings).	Each	676.00	32.00	21,632.00
J	Supplying and fixing following way, horizontal type three pole and neutral, sheet steel, MCB distribution board, 415 V, on surface/recess, complete with tinned copper bus bar, neutral bus bar, earth bar, din bar, interconnections, powder painted including earthing etc. as required. (But without MCB/RCCB/Isolator)				

Sr.No.	ITEM DESCRIPTION	UNIT	RATE-DSR 22 /NON DSR	TOTAL	AMOUNT
				QUANTIT Y	
i	4 way (4 + 12), Double door	Each	4,091.00		0.00
ii	8 way (4 + 24), Double door	Each	4,974.00	1.00	4,974.00
iii	12 way (4 + 36), Double door	Each	5,967.00	2.00	11,934.00
K	Supplying and fixing of following ways surface/ recess mounting, vertical type, 415 V, TPN MCB distribution board of sheet steel, dust protected, duly powder painted, inclusive of 200 A tinned copper bus bar, common neutral link, earth bar, din bar for mounting MCBs (but without MCBs and incomer) as required . (Note : Vertical type MCB TPDB is normally used where 3 phase outlets are required.)				
i	4 way (4 + 12), Double door	Each	7,512.00		0.00
ii	8 way (4 + 24), Double door	Each	10,165.00	1.00	10,165.00

Sr.No.	ITEM DESCRIPTION	UNIT	RATE-DSR 22 /NON DSR	TOTAL	AMOUNT
				QUANTIT Y	
iii	12 way (4 + 36), Double door	Each	12,833.00	1.00	12,833.00
L	Supplying and fixing 5 A to 32 A rating, 240/415 V, 10 kA, "C" curve, miniature circuit breaker suitable for inductive load of following poles in the existing MCB DB complete with connections, testing and commissioning etc. as required.				
i	Single pole	Each	256.00	102.00	26,112.00
ii	Double pole	Each	656.00	1.00	656.00
iii	Triple pole	Each	1,007.00	20.00	20,140.00
iv	Triple pole and neutral	Each	1,228.00	1.00	1,228.00

Sr.No.	ITEM DESCRIPTION	UNIT	RATE-DSR 22 /NON DSR	TOTAL	AMOUNT
				QUANTIT Y	
M	Supplying and fixing single pole blanking plate in the existing MCB DB complete etc. as required.	Each	13.00		
N	Supplying and fixing following rating, double pole, (single phase and neutral), 240 V, residual current circuit breaker (RCCB), having a sensitivity current 30 mA in the existing MCB DB complete with connections, testing and commissioning etc. as required.				
i	25A	Each	2,028.00	1.00	2,028.00
ii	40A	Each	2,642.00		0.00
iii	63A	Each	2,722.00	2.00	5,444.00
O	Supplying and fixing following rating, four pole, (three phase and neutral), 415 volts, residual current circuit breaker (RCCB), having a sensitivity current 30 mA in the existing MCB DB complete with connections, testing and commissioning etc. as required.				

Sr.No.	ITEM DESCRIPTION	UNIT	RATE-DSR 22 /NON DSR	TOTAL	AMOUNT
				QUANTIT Y	
i	25A	Each	2,586.00	1.00	2,586.00
ii	40A	Each	3,188.00		0.00
iii	63A	Each	2,872.00	2.00	5,744.00
	Providing and fixing following rating and breaking capacity and pole MCCB with thermomagnetic release and terminal spreaders in existing cubicle panel board including drilling holes in cubicle panel, making connection etc. as required.				
	125 A, 16 KA,TPMCCB	Each	4,821.00	2.00	9,642.00
P	Supplying and fixing DP sheet steel enclosure on surface/ recess along with 25/32 A 240 V "C" curve DP MCB complete with connections, testing and commissioning etc. as required.	Each	1,169.00	1.00	1,169.00

Sr.No.	ITEM DESCRIPTION	UNIT	RATE-DSR 22 /NON DSR	TOTAL	AMOUNT
				QUANTIT Y	
Q	Supplying and fixing 20 A, 240 V, SPN Industrial type socket outlet, with 2 pole and earth, metal enclosed plug top alongwith 20 A "C" curve, SP, MCB, in sheet steel enclosure, on surface or in recess, with chained metal cover for the socket out let and complete with connections, testing and commissioning etc. as required.	Each	1,621.00	1.00	1,621.00
R	Supplying and fixing 20 A, 415 V, TPN Industrial type socket outlet, with 4 pole and earth, metal enclosed plug top alongwith 20 A "C" curve, TPMCB, in sheet steel enclosure, on surface or in recess, with chained metal cover for the socket out let and complete with connections, testing and commissioning etc. as required.	Each	2,590.00	1.00	2,590.00
S	Supplying and fixing 32 A, 415 V, TPN Industrial type socket outlet, with 4 pole and earth, metal enclosed plug top alongwith 32 A "C" curve, FPMCB, in sheet steel enclosure, on surface or in recess, with chained metal cover for the socket out let and complete with connections, testing and commissioning etc. as required.	Each	7,508.00	1.00	7,508.00
T	CABLES, MAINS, SUB MAINS AND CABLE TRAYS				
i	Supplying & laying of following 1100 volt grade XLPE insulated PVC inner sheathed and FRLS PVC outer sheathed aluminium conductor armoured cables as per specification in existing trenches, cable trays, ducts, clamped to wall with suitable clamps including, saddles fixing bolts, connecting testing and commissioning.				
i	3.1/2 core 240 sq. Mm (From the panel room and DG set location to the pump room in the basement for the Fire Pump Panel)	Meter	2,909.00	300.00	8,72,700.00

Sr.No.	ITEM DESCRIPTION	UNIT	RATE-DSR 22 /NON DSR	TOTAL	AMOUNT
				QUANTIT Y	
ii	3.1/2 core 70 sq. Mm (From the panel room to the HVAC panel at terrace floor)	Meter	982.00	150.00	1,47,300.00
iii	3.1/2 core 25 sq. mm	Meter	447.00	RO	
	Supplying & laying of following 1100 volt grade XLPE insulated FRLS PVC outer sheathed copper conductor armoured cable as per specification in existing trenches, cable trays ducts , clamped to wall with suitable clamps, including fixing bolts, connecting testing and commissioning.				
iv	4 core 16 sq. Mm	Meter	1,964.00	50.00	98,200.00
v	4 core 6 sq.mm	Meter	819.00	10.00	8,190.00

Sr.No.	ITEM DESCRIPTION	UNIT	RATE-DSR 22 /NON DSR	TOTAL	AMOUNT
				QUANTIT Y	
vi	4 core 4 sq.mm	Meter	557.00	10.00	5,570.00
vii	3 core 4 sq.mm	Meter	436.00	10.00	4,360.00
viii	3 core 2.5 sq.mm	Meter	300.00	2,288.00	6,86,400.00
ix	12 core 2.5 sq.mm control cable (As per DG supplier)	Meter	1,029.00	80.00	82,320.00
	Cable end termination of the following XLPE insulated FRLS PVC outer sheathed aluminium/copper conductor armoured cables of 1100 volt grade including supplying and fixing of bimettalic crimping lugs, double compression glands with earthing.				

Sr.No.	ITEM DESCRIPTION	UNIT	RATE-DSR 22 /NON DSR	TOTAL	AMOUNT
				QUANTIT Y	
x	3.1/2 core 240 sq. mm.Aluminium Cable	Nos.	3,150.00	8.00	25,200.00
xi	3.1/2 core 70 sq. mm	Nos.	1,418.00	2.00	2,836.00
xii	3.5 core 25 sq. mm Aluminium Cable	Nos.	788.00	RO	
xiii	4 core 16 sq. mm copper cable	Nos.	630.00	8.00	5,040.00
xiv	4 core 4 sq.mm copper cable	Nos.	525.00	2.00	1,050.00

Sr.No.	ITEM DESCRIPTION	UNIT	RATE-DSR 22 /NON DSR	TOTAL	AMOUNT
				QUANTIT Y	
xv	3 core 4 sq.mm copper cable	Nos.	420.00	2.00	840.00
xvi	3 core 2.5 sq.mm copper cable	Nos.	420.00	572.00	2,40,240.00
xvii	12 core 2.5 sq.mm control cable (As per DG supplier)	Nos.	630.00	2.00	1,260.00
U	Hot Dipped Galvanized Iron Cable Tray				
i	Supplying and installing following size of perforated Hot dipped galvanised iron cable tray (Galvanization thickness not less than 50 microns) with perforation not more than 17.5% in convenient sections, joined with connectors, suspended from the ceiling with G.I. suspenders including G.I. bolts & nuts, etc. as required.				
a	100 mm width X 50 mm depth X 1.6 mm thickness		669.00	50.00	33,450.00

Sr.No.	ITEM DESCRIPTION	UNIT	RATE-DSR 22 /NON DSR	TOTAL	AMOUNT
				QUANTIT Y	
b	150 mm width X 50 mm depth X 1.6 mm thickness		716.00	100.00	71,600.00
c	300 mm width X 50 mm depth X 1.6 mm thickness		963.00	50.00	48,150.00
ii	Supplying and installing following size of perforated Hot dipped galvanised iron cable tray "bends" (Galvanization thickness not less than 50 microns) with perforation not more than 17.5% in convenient sections, joined with connectors, suspended from the ceiling with G.I. suspenders including G.I. bolts & nuts, etc. as required.				
a	100 mm width X 50 mm depth X 1.6 mm thickness		1,159.00	1.00	1,159.00
b	150 mm width X 50 mm depth X 1.6 mm thickness		1,270.00	1.00	1,270.00
c	300 mm width X 50 mm depth X 1.6 mm thickness		1,852.00	1.00	1,852.00

Sr.No.	ITEM DESCRIPTION	UNIT	RATE-DSR 22 /NON DSR	TOTAL	AMOUNT
				QUANTIT Y	
iii	Supplying and installing following size of perforated Hot dipped galvanised iron cable tray "Tee" (Galvanization thickness not less than 50 microns) with perforation not more than 17.5% in convenient sections, joined with connectors, suspended from the ceiling with G.I. suspenders including G.I. bolts & nuts, etc. as required.				
a	100 mm width X 50 mm depth X 1.6 mm thickness		1,327.00	1.00	1,327.00
b	150 mm width X 50 mm depth X 1.6 mm thickness		1,383.00	1.00	1,383.00
c	300 mm width X 50 mm depth X 1.6 mm thickness		2,156.00	1.00	2,156.00
iv	Supplying and installing following size of perforated Hot dipped galvanised iron cable tray "Reducer" (Galvanization thickness not less than 50 microns) with perforation not more than 17.5% in convenient sections, joined with connectors, suspended from the ceiling with G.I. suspenders including G.I. bolts & nuts, etc. as required.				
a	100 mm width X 50 mm depth X 1.6 mm thickness		1,655.00	1.00	1,655.00

Sr.No.	ITEM DESCRIPTION	UNIT	RATE-DSR 22 /NON DSR	TOTAL	AMOUNT
				QUANTIT Y	
b	150 mm width X 50 mm depth X 1.6 mm thickness		1,921.00	1.00	1,921.00
c	300 mm width X 50 mm depth X 1.6 mm thickness		2,823.00	1.00	2,823.00
V SUPPLY AND INSTALLATION OF DG SET WITH ACCESSORIES					
	Supply, installation, testing & commissioning of 320 KVA Prime Rating diesel generating set radiator type along with day oil fuel tank including first fill of diesel with fuel piping to and from DG set including vibration mounts, base frame, hardware Batteries, Engine control panel with accessories first fill of lube oil residential silencer, flexible connection bellow / expansion joints etc.. complete and with all associated equipment / work as per specifications.	Nos.	-	1.00	0.00
W SITC OF EARTHING					
i	Plate earthing: Providing material and labour for plate earthing with 600x600x3mm tinned copper plate earthing as per IS 3043 with chamber inner size 300x300mm and connecting with 2nos, tinned copper strips of 25x3mm from plate to joint in the earth chamber with excavation in any soil salt, charcoal, earth chamber watering arrangement etc. and re-filling with excavated earth all as specified. (Note: All joints should be provided with Brazing)	No.	31,500.00	8.00	2,52,000.00
ii	Providing and fixing 25 mm X 5 mm G.I. strip on surface or in recess for connections etc. as required.	Meter	244.00	150.00	36,600.00

Sr.No.	ITEM DESCRIPTION	UNIT	RATE-DSR 22 /NON DSR	TOTAL	AMOUNT
				QUANTIT Y	
iii	Providing and fixing earth bus of 50 mm X 5 mm tinned copper strip on surface for connections etc. as required.	Meter	2,993.00	80.00	2,39,440.00
iv	Providing and fixing earth bus of 25 mm X 3 mm tinned copper strip on surface for connections etc. as required.	Meter	998.00	30.00	29,940.00
v	Supplying and erecting GI pipe 32 mm dia. 'C' class at position with accessories complete.	Meter	247.00	60.00	14,820.00
X	SITC Of Electrical Indoor fittings				
	Supplying and erecting LED square / circular Max. 7W down lighter/ Panel Light having pressure die-cast aluminium housing, polystyrene diffuser having system lumens output of Min. 770 Lumens, min. efficacy of 110 lumen/W, CRI>80, CCT upto 6500K, Beam Angle of 120 deg., max. ripple of 5%, THD<10%, p.f. >0.95, operating range of 120-270V, surge protection of 2.5 kV, Life class of 50,000 Hrs. at L70B50, including driver, having mounting arrangement with board for surface type or spring loaded mounting clips complete with 3 years warranty.				

Sr.No.	ITEM DESCRIPTION	UNIT	RATE-DSR 22 /NON DSR	TOTAL	AMOUNT
				QUANTIT Y	
1	Ceiling surface mount 12w led downlight	No.	8,010.00	639.00	51,18,390.00
2	Ceiling recessed 10w led downlight(ip44)	No.	1,247.00	167.00	2,08,249.00
3	Ceiling surface mount in slot 10w led downlight (ip44)	No.	8,010.00	84.00	6,72,840.00
4	Ceiling surface mount in metal baffle 12w led downlight	No.	8,010.00	60.00	4,80,600.00
5	Ceiling recessed in acoustic ceiling 10w led downlight	No.	3,008.00	230.00	6,91,840.00
6	Ceiling recessed 12w led downlight	No.	4,581.00	860.00	39,39,660.00
7	Ceiling suspended 25w led downlight	No.	2,655.00	28.00	74,340.00
8	Ceiling recessed 20w led downlight	No.	6,867.00	60.00	4,12,020.00

Sr.No.	ITEM DESCRIPTION	UNIT	RATE-DSR 22 /NON DSR	TOTAL	AMOUNT
				QUANTIT Y	
9	Ceiling surface mount 12w led downlight	No.	8,010.00	18.00	1,44,180.00
10	Ceiling surface mount 30w led downlight	No.	16,290.00	106.00	17,26,740.00
11	Ceiling suspended 10w led downlight	No.	1,710.00	320.00	5,47,200.00
12	Linear ceiling recessed 20w/m led profile light	Meter	3,416.00	4.00	13,664.00
13	Linear ceiling suspended 20w/m curve profile light	Meter	5,747.00	1.00	5,747.00

Sr.No.	ITEM DESCRIPTION	UNIT	RATE-DSR 22 /NON DSR	TOTAL	AMOUNT
				QUANTIT Y	
14	Linear built in cove 10w/m led strip light with profile	Meter	2,066.00	185.00	3,82,210.00
15	Linear built in cove 10w/m led strip light with profile (ip44)	Meter	2,066.00	340.00	7,02,440.00
16	Linear built in cove 20w/m led strip light with profile	Meter	2,336.00	52.00	1,21,472.00
17	Linear ceiling surface mount 20w/m led profile light	Meter	2,372.00	50.00	1,18,600.00
18	Linear ceiling suspended 25w/m led profile light	Meter	2,102.00	410.00	8,61,820.00

Sr.No.	ITEM DESCRIPTION	UNIT	RATE-DSR 22 /NON DSR	TOTAL	AMOUNT
				QUANTIT Y	
19	Linear ceiling recessed 15w/m led profile light	Meter	2,372.00	150.00	3,55,800.00
20	Linear built in detail 7w/m led profile light	Meter	2,336.00	48.00	1,12,128.00
21	Linear ceiling recessed 20w/m led curve profile light	No.	2,529.00	135.00	3,41,415.00
22	Ceiling recessed track for tc1	No.	5,004.00	3.00	15,012.00
23	Track mount 15w led spot light	No.	7,128.00	9.00	64,152.00

Sr.No.	ITEM DESCRIPTION	UNIT	RATE-DSR 22 /NON DSR	TOTAL	AMOUNT
				QUANTIT Y	
24	Track mount 10w led spot light	No.	7,128.00	6.00	42,768.00
25	Track mount 10w/0.6m led diffuser light	No.	7,128.00	4.00	28,512.00
26	Floor recessed 15w led narrow beam downlight	No.	8,865.00	32.00	2,83,680.00
27	Wall mount 18w t5 light	No.	3,249.00	12.00	38,988.00
28	Decorative pendent light(dia 2000mm)	No.	31,158.00	35.00	10,90,530.00

Sr.No.	ITEM DESCRIPTION	UNIT	RATE-DSR 22 /NON DSR	TOTAL	AMOUNT
				QUANTIT Y	
29	Decorative pendent light(dia 1500mm)	No.	28,017.00	6.00	1,68,102.00
30	Decorative pendent light(dia 1200mm)	No.	24,084.00	13.00	3,13,092.00
31	Decorative pendent light(dia 1000mm)	No.	20,358.00	6.00	1,22,148.00
32	Decorative pendent light(dia 750mm)	No.	17,118.00	6.00	1,02,708.00
33	Decorative pendent light	No.	16,965.00	2.00	33,930.00

Sr.No.	ITEM DESCRIPTION	UNIT	RATE-DSR 22 /NON DSR	TOTAL	AMOUNT
				QUANTIT Y	
34	Stretch ceiling light	No.	2,48,310.00	1.00	2,48,310.00
35	Decorative pendent light	No.	17,415.00	2.00	34,830.00
36	Decorative surface mount light	No.	4,500.00	59.00	2,65,500.00
Y	SITC Of Electrical Outdoor fittings				
	Supplying and erecting integrated LED street light fitting 18 to 22W IP65 & IK08 class having single piece pressure die-cast aluminium housing, having system lumens output of Min. 1800 Lumens, min. efficacy of 100 lumen/W, CRI>70, CCT upto 6500K, THD<10%, p.f. >0.95, operating range of 140-270V, inbuilt surge protection of 10 kV, Life class of 50,000 Hrs. at L70B50, including driver complete with 3 Years warranty as per specification No FGODF/FLS2.				

Sr.No.	ITEM DESCRIPTION	UNIT	RATE-DSR 22 /NON DSR	TOTAL	AMOUNT
				QUANTIT Y	
37	Exterior ceiling surface mounted 20w led medium beam downlight	No.	5,355.00	115.00	6,15,825.00
38	Exterior floor surface mounted 6w led adjustable uplight with spike, honeycomb louver & snoot	No.	8,757.00	11.00	96,327.00
39	Exterior linear surface 10w/m dotless led strip light with flexible profile	No.	3,467.00	14.00	48,538.00
40	Exterior linear built in bench 7w/m strip with profile & diffuser	No.	3,656.00	7.00	25,592.00
41	Exterior column surface mount 39w led uplight	No.	12,555.00	22.00	2,76,210.00

Sr.No.	ITEM DESCRIPTION	UNIT	RATE-DSR 22 /NON DSR	TOTAL	AMOUNT
				QUANTIT Y	
42	Exterior surface mount 6w led light	No.	8,888.00	31.00	2,75,528.00
43	Exterior surface mount 11w led light	No.	8,888.00	14.00	1,24,432.00
44	Exterior linear surface 10w/m dotless led strip light with flexible profile	No.	3,061.00	57.00	1,74,477.00
45	Exterior wall surface mounted 30w led narrow beam uplight	No.	3,821.00	15.00	57,315.00
Z	Supply, Installation Testing & Commissioning Of G.I. Trunking/ Raceway & all other accessories				

Sr.No.	ITEM DESCRIPTION	UNIT	RATE-DSR 22 /NON DSR	TOTAL	AMOUNT
				QUANTIT Y	
1	G.I. Trunking / Duct / Raceway & all other accessories - 50 x 40mm (W x H) - (16 SWG - 1.6 mm) with cover without partition		788.00	70.00	55,160.00
2	G.I. Trunking / Duct / Raceway & all other accessories - 100 x 40mm (W x H) - (14 SWG - 2mm) with cover without partition		998.00	65.00	64,870.00
				TOTAL	2,72,10,990.00

IIT VMCC - ELV SYSTEM

Sr. No.	Description	Qty	Unit	Rate	Amount
1.0	Addressable Fire Alarm System				
A	Control Panel				
1	Supplying, installation, testing and commissioning of micro processor based intelligent addressable main fire alarm panel, central processing unit with the 4 loop capacity and capable of supporting upto 250 devices and detectors per loop, with on-board LCD display with min 16 lines of text, operating at 230 V 50HZ - AC with inbuilt Battery Backup of a minimum 24 hours in normal condition and 30 min in alarm condition, suitable provision for network connectivity, interfacing with third party equipment via a MODBUS/ OPC/ L-ON interface etc. conforming to IS 15908:2021, IS 2189: 2008, EN 54 & VDS / FM/ UL 864 (10th edition) with 3 years replacement warranty FF-AFAS/CP.	1	No.	2,78,140.00	2,78,140.00
	Vendor to confirm no. of loops as per total no. of devices in the BOQ with 20% spare capacity for devices below false ceiling.				
2	Supplying, installing, testing and commissioning of repeater panel with suitable battery backup of a minimum of 24 hours in normal condition and 30 min in alarm condition, 80 backlit alphanumeric LCD display with inbuilt buzzer to indicate fault/fire alarm, manual control keys for silence/mute and to reset the FACP from the repeater station. Panel size shall not more than 175 x 275 x 65 mm conforming to EN 54 or UL approved with 3 years equipment replacement warranty FF-AFAS/RP	1	No.	74,501.00	74,501.00
B	Software & Gateways				
1	Supplying, installation, testing & commissioning of intelligent interface unit BACnet/ Modbus protocol i.e. supplying communication links between building management system and fire alarm control panel complete as required.	1	No.	1,98,560.00	1,98,560.00
C	Detectors				
1	Supplying, installing, testing and commissioning of addressable optical smoke detector, single/twin LED's with 360 degree view, suitable for low voltage 15 to 32 V DC two wires supply, in-built locking mechanism to check the removal and pilferage of the detector, in built isolation mode, start up current 300µA and alarm condition current shall be maximum 6.5 mA, operating temperature 0°C to 50°C, humidity 0-95% RH, IP 41, conforming to IS 2189: 2008, 11360 1985_Reff2020 EN 54 or UL Approved with 3 years equipment replacement warranty FFAFAS/SD .	424	No.	2,371.00	10,05,304.00
2	Supply, installation, testing & commissioning of Intelligent addressable Multicriteria detector with two integrated light-scattering smoke sensors using 2 LEDs - blue & infrared along with a heat sensor including mounting base.	26	No.	4,469.00	1,16,194.00

Sr. No.	Description	Qty	Unit	Rate	Amount
3	Supplying, installing, testing and commissioning of intelligent addressable thermal/ heat detector with rate of rise cum fixed temperature thermistor complete with base as required, suitable for temperature variations from - 20°C to 38 °C for fixed-heat and rate-of-rise type detectors whereas 0°C to 90°C for high heat type detectors, in built isolation mode, suitable for industrial/ kitchen/ boiler room etc. with 3 years equipment replacement warranty, IS : 2175-1988 reaffirmed 2000, IS 15908:2021 standards FF-AFAS/SD.	1	No.	2,705.00	2,705.00
4	Supplying, erecting testing and commissioning beam smoke detector four wire single ended reflected type with 8 " receiver having digital display for easy alignment, adjustable sensitivity & heater kit for transmitter/receiver and reflector with necessary connections on suitable back box. The protection range of beam detector is 5 to 70 m.	0	No.	58,300.00	-
5	Supplying, installing, testing and commissioning remote response indicators suitable to operate on 5 - 28 V dc supply having FR Polymer ABS Housing complete as per specification no. FF-FAAS/RRI	6	No.	207.00	1,242.00
D Alarm Initiating Devices					
1	Supplying, installing, testing and commissioning of addressable manual call points (break glass type/pull station type), made of addressable break glass plastic square in shape surface/flush mounted with "Break Glass" message embedded on the glass, complete erected with mounting base and required accessories conforming to EN 54 or UL listed with 3 years equipment replacement warranty FF-AFAS/MCP.	13	No.	3,575.00	46,475.00
E Notification Appliance					
1	Supplying, installing, testing and commissioning of addressable horn cum strobe sound/ hooter, output frequency 500 to 1000 Hz with dB as per Chart given in IS 15908:2021, with flashing at 1 Hz over the strobe's entire operating voltage range EN 54, conforming to IS 2189: 2008, IS 15908:2021 standards with 3 years equipment replacement warranty FF-AFAS/SSH.	13	No.	7,828.00	1,01,764.00
F I/O Modules					
1	Supplying, installing, testing and commissioning of addressable fire control/relay module complete as required, with 3 years equipment replacement warranty conforming to IS 5051Part 2 (Sec 1 to 3) : 1982 reed relays, EN 54 or UL Listed FF-AFAS/CRM	11	No.	3,775.00	41,525.00
2	Supplying, installing, testing and commissioning of addressable fire monitor module complete as required. EN 54 or UL Listed with 3 years equipment replacement warranty conforming to IS 5051Part 2 (Sec 1 to 3) : 1982 Reed relays FF-AFAS/MM	6	No.	3,720.00	22,320.00
3	Supply, installation, testing & commissioning of Addressable Telephone Module with Surface/wall mounting box & required accessories.	12	No.	3,775.00	45,300.00

Sr. No.	Description	Qty	Unit	Rate	Amount
4	Supplying, installing, testing and commissioning of addressable fire isolator module complete as required. EN 54 /FM or UL Listed with 3 years equipment replacement warranty conforming to IS 5051Part 2 (Sec 1 to 3) : 1982 Reed relays FF-AFAS/ISM	26	Nos	3,051.00	78,105.60
G	Cables & Conduit				
1	Supply & laying of 2 Core x 1.5 Sq.mm, Multistrand Annealed Bare Copper Conductor- Class 5, Overall Shielding, Twisted pair, XLPE insulated, FRLSH Armoured cable, RED in colour, laid on cable tray / wall / slab or structure with necessary GI saddles & spacer at 0.4 meters interval. complete with Lugs, Cable Compression Glands, Cable tags and ferruling. scope shall also include required end termination using gland, lugs & required accessories. Note- Refer cable technical specification (Red in Colour)	5385	Rmt.	215.00	11,57,775.00
2	Supply & laying of 4 Core x 1.5 Sq.mm, Multistrand Annealed Bare Copper Conductor- Class 5, Overall Shielding, Twisted pair, XLPE insulated, FRLSH Armoured cable, RED in colour, laid on cable tray / wall / slab or structure with necessary GI saddles & spacer at 0.4 meters interval. complete with Lugs, Cable Compression Glands, Cable tags and ferruling. scope shall also include required end termination using gland, lugs & required accessories. Note- Refer cable technical specification (For Repeater Panel Connection)	100	Rmt.	275.00	27,500.00
3	Optical Fiber Cable 06F Outdoor - Armoured Unitube SM (50/125um) OM2 - HDPE 06 core armored fiber cable type is a Matched Cladding Single mode OM2 OFC and have Central Loose tube with jelly compound.Fiber dual coated with acryl ate coating.Fiber cable shall have Glass yarns in between Steel tape & loose tube.Fiber cable is Corrugated Steel tape armoured.The fiber is optimized for operation at 850 nm and at 1300 nm.Should fulfill the requirements of:ISO 11801IEC 60793-1/60794-1-2ITU-T REC G.652DTelcordia GR-20-core	0	Rmt.		-
4	Supplying and fixing 25 mm dia MS flexible pipe with PVC coating along with all ancillaries and accessories like coupler etc. as required.	39	Rmt.	56.00	2,184.00
5	GI Perforated cable tray (for verticle use only)				-
	300mmX50mmX2mm	50	Rmt.	55.00	2,750.00
	600mmX50mmX2mm	0	Rmt.		-
Total Amount for Addressable Fire Alarm System					32,02,344.60
2.0	Fire Fighting Telephone System				
A	Equipment				
1	Integrated two way 8 Zone addressable Fire Fighter Telephone System of same make, Complete with Battery Charger, Power supply and Battery backup for 24 hrs.in standby mode in case of power failure & 30 minutes in full alarm condition mode including cabinet & required accessories complete. The panel shall have the facility to be networked with other panel in the premises. Vendor to provide battery calculation sheet.	1	No.	1,32,000.00	1,32,000.00
2	Supplying, installation, testing & commissioning of fire fighter phone jack complete as required.	12	No.	2,688.00	32,256.00
3	Supplying, installation, testing & commissioning of fire fighter telephone handset complete as required.	1	No.	3,465.00	3,465.00

Sr. No.	Description	Qty	Unit	Rate	Amount
B	Cables & Conduit				
1	Supplying & laying of 2x1.5 sqmm fire survival armoured cable, 600/1000V rated with annealed copper conductor having glass mica fire barrier tape covered by an extruded layer of Cross Linkable Ethylene Propylene Rubber (EPR) insulation and LSZH inner bedding, steel wire armouring & LSZH outer sheath complete as required.	803	Rmt.	285.00	2,28,712.50
2	Supplying and fixing 25 mm dia MS flexible pipe with PVC coating along with all ancillaries and accessories like coupler etc. as required.	36	Rmt.	55.00	1,980.00
3	GI Perforated cable tray (for verticle use only) 300mmX50mmX2mm	50	Rmt.	1,155.00	57,750.00
Total Amount for Fire Fighting Telephone System					4,56,163.50
3.0	Public Address System				
A	Speakers				
1	Supplying, installation, testing & commissioning of 1.5/3/6W metal box ceiling/wall speakers complete as required. Note - Vendor to consider backbox if mounted on non false ceiling or surface area.	309	No.	1,611.00	4,97,799.00
2	Supply, installation, testing & commissioning of 12 Watt Mini Horn / Box type Column / Wall Mounted Speakers with line matching transformer, ABS or metal body, Power tapping: 15/10W & required accessories.	4	No.	2,655.00	10,620.00
B	Switcher Console And Hardware				
1	Supplying, installation, testing & commissioning of 6 zone, voice alarm controller with USB, MP3 player (including 6 zone button paging station) with seamless integration facility with main fire alarm panel for voice evacuation complete as required.	1	No.	2,18,955.00	2,18,955.00
2	Supply, installation, testing & commissioning of EN-54 Certified Digital EVAC Router for adding 24 zones in the system and to route 4 channels into 8 100V audio inputs to 24 loudspeaker line outputs. 2-in-6 matrix. 20 Control Inputs, 26 Control Outputs, Fire trigger inputs for each zone, Shall support single line switching or redundant group A/B switching, amplifier redundancy. Impedance measurement and Pilot Tone supervision for speaker line monitoring. Shall be able to handle up to 4000Watt load with cords, connectors, power supply & required accessories.	0	No.		-
3	Supplying, installation, testing & commissioning of Voice command keypad 6 zone, with microphone assembly complete as required.	1	No.	15,660.00	15,660.00
4	Supply, installation, testing & commissioning of Audio Music Player with built in CD drive, USB port, SD card slot, PC audio inputs, support MP3 & other audio formats, complete with cable, cords & required accessories.	1	No.	7,896.00	7,896.00
C	Amplifiers				
1	Supply, installation, testing & commissioning of EN-54 certified Digital 1 x 500W Class D, high efficiency amplifier. 70/100V loudspeaker output voltages, galvanically separated, 4 automatic selectable audio inputs on RJ45, local input, Audio input level limiter, RMS output power limiter, high temperature, DC, short circuit, mains undervoltage protection, DC supply undervoltage protection, inrush current limiter with cords, connectors, power supply & required accessories.	4	No.	47,865.00	1,91,460.00
D	Cables And Conduits				

Sr. No.	Description	Qty	Unit	Rate	Amount
1	Supply & laying of 2 Core x 1.5 Sq.mm, Multistrand Annealed Bare Copper Conductor- Class 5, Overall Shielding, Twisted pair, XLPE insulated, FRLSH Armoured cable laid on cable tray / wall / slab or structure with necessary GI saddles & spacer at 0.4 meters interval. complete with Lugs, Cable Compression Glands, Cable tags and ferruling. scope shall also include required end termination using gland, lugs & required accessories. Note- Refer cable technical specification (Colour- Grey)	4785	Rmt.	285.00	13,63,725.00
2	Supply, laying & testing of Cat 6 UTP cable including labelling and end termination with connectors both end. (For call station & controller connectivity)	50	Rmt.	69.00	3,450.00
3	Supplying and fixing 25 mm dia MS flexible pipe with PVC coating along with all ancillaries and accessories like coupler etc. as required.	50	Rmt.	55.00	2,750.00
Total Amount for Public Address System					23,12,315.00
4.0 IP CCTV Surveillance System					
A IP Cameras					
1	Supply Installation, testing & commissioning of Indoor/outdoor type 4MP Fixed Lens Network Dome Camera with 1/2.5" progressive scan CMOS, integrated 2.8mm Fixed Lens, Resolution-2688 x1520@30fps, Minimum Triple Stream Support, Inbuilt Smart IR LED upto 20m distance, 0.01 lux color/0 lux with IR LEDs on, H.264 and H.265 encoding support, 120dB True WDR, True Day/Night, BLC, Built in Power over Ethernet (PoE), & 12VDC operated, in-built features-motion detection, tampering alarm, IP66 & IK10 protection, ONVIF Profile S & G compliant, with Junction box & required accessories.	41	No.	16,582.00	6,79,862.00
2	Supply Installation, testing & commissioning of Indoor type 4MP Network Mini Dome Camera with 1/2" 4 Mega Pixel progressive CMOS Sensor, integrated 2.8mm Fixed Lens, Resolution-2688 x1520@30fps, Minimum Triple Stream Support, Inbuilt Smart IR LED upto 10m distance, 0.02 lux color/0 lux with IR LEDs on, H.264 and H.265 encoding support, 120dB True WDR, True Day/Night, BLC, Built in Power over Ethernet (PoE), & 12VDC operated, Inbuilt motion detection, tampering alarm, IP66 & IK10 protection, ONVIF Profile S & G compliant, with Junction box & required accessories. (Location- inside all Lift cabin)	3	No.	28,544.00	85,632.00
2.1	Supply, installation, testing & commissioning of 1 set of Module (Transmitter & Receiver) for wireless communication for above camera (Wi-Fi / IP Based system) with power supply & required accessories. (for Lift camera integration)	3	No.	633.00	1,899.00
3	Supply Installation, testing & commissioning of Indoor/outdoor type 6MP 360 Degree Fisheye Camera with 1/1.6" progressive scan CMOS, integrated 2.8mm Fixed Lens, Resolution- 2048 x2048@30fps, Minimum Triple Stream Support, Inbuilt Smart IR LED upto 15m distance, 0.01 lux color/0 lux with IR LEDs on, H.264 and H.265 encoding support, 120dB True WDR, True Day/Night, BLC, Built in Power over Ethernet (PoE), & 12VDC operated, in-built features-motion detection, tampering alarm, IP66 & IK10 protection, ONVIF Profile S & G compliant, with Junction box & required accessories.	0	No.		-
4	Supply Installation, testing & commissioning of Indoor/outdoor type 4/6 MP Fixed Lens Network Bullet Camera with 1/2.5" progressive scan CMOS, integrated 2.8-12 mm Lens, Resolution-2688 x1520@30fps, Minimum Triple Stream Support, Inbuilt Smart IR LED upto 50m distance, 0.01 lux color/0 lux with IR LEDs on, H.264 and H.265 encoding support, 120dB True WDR, True Day/Night, BLC, Built in Power over Ethernet (PoE), & 12VDC operated, in-built features-motion detection, tampering alarm, IP66 & IK10 protection, ONVIF Profile S & G compliant, with Junction box & required accessories. (Driveway)	4	No.	22,655.00	90,620.00

Sr. No.	Description	Qty	Unit	Rate	Amount
5	Supply Installation, testing & commissioning of Indoor/outdoor type 4 MP Varifocal Network Bullet Camera with 1/2.5" Progressive Scan CMOS, integrated 2.8 to 12 mm motorized varifocal lens, Resolution- 2688 ×1520@30fps, Minimum Triple Stream Support, Inbuilt Smart IR LED IR range: up to 50m, Color: 0.02 lux @(F1.2, AGC ON), 0.001 lux @(F1.4, AGC ON), 0 lux with IR, 120dB True WDR, True Day/Night, BLC, Built in Power over Ethernet (PoE), & 12VDC operated, H.264 and H.265 encoding support, built in features- motion detection, tempering alarm, IP67 & IK10 protection, ONVIF Profile S & G compliant, with Wall/Pole/Column mount brackets, junction Box & required accessories. Colour- Black/White (Note- Vendor to consider Pendant mount pole of suitable size as per site requirement wherever applicable)	9	No.		-
6	Supply Installation, testing & commissioning of ANPR Camera, outdoor type (able to capture vehicle and recognize vehicle number plate in dim light environment) 2 MP Auto-zoom, Varifocal Network Bullet Camera with Progressive Scan CMOS sensor, integrated 2.8 to 12mm automatic focusing and motorized varifocal lens, Resolution- 1920 ×1080@30fps, Minimum Triple Stream Support, Inbuilt Smart IR LED IR range: up to 50m, Color: 0.02 lux @(F1.2, AGC ON), 0.001 lux @(F1.4, AGC ON), 0 lux with IR, 120dB WDR, True Day/Night, BLC, Built in Power over Ethernet (PoE), & 12VDC operated, H.264 and H.265 encoding support, built in features- motion detection, tempering alarm, IP67 & IK10 protection, ONVIF Profile S & G compliant, with Pole mount brackets, junction Box & required accessories. (Note- Camera to be utilized for ANPR purpose & mounted on Pole)	0	No.		-
B Servers, Hardware and Software					
1	Supply, installation, testing & commissioning of 64 Camera Licence Server & hardware based Network Video Recorder Server (NVR Server) with 5 client monitoring licence software, Windows OR Linux based Embedded OS & Pre-Loaded video recording software with basic analytics, Built-in Management Server, Recording Server, Recording Failover Server, Minimum 300Mbps incoming bandwidth and 300Mbps outgoing bandwidth throughput support, Hot-swappable with configurable RAID 5 Redundancy support, Redundant Power Supply, Compliance & support with ONVIF profiles G & S compatible, Camera multiple stream support, Multiple codec support : H.265, H.264, MJPEG, MPEG4 and MxPEG, 2 x Gigabit LAN Port, 2 x HDMI output for monitor, 1 X VGA output, Upto 96TB Internal storage capacity, minimum 8 SATA interface, Upto 12TB capacity for each SATA Drive (Hard Disk) including RAID 5 redundancy. Vendor to consider recording resolution of 25fps @ 1080P and H.265 compression for 30 days continuous recording with RAID 5 redundancy. Vendor to submit Bandwidth & storage calculation sheet.	1	No.	1,58,200.00	1,58,200.00
2	Supply, installation, testing & commissioning of Client PC for 3 Monitor outputs (Workstation for CCTV Monitoring & ETU Operations) having minimum configuration: Processor - Intel i7 core processor, OS- Windows 10 Professional (64-bit), 16GB RAM, Graphics Card- 2GB or more, Hard Disk - 1TB, 3 Display port (3 HDMI output for Monitors), 4 USB port, CD Drive, LAN Port, Preloaded Antivirus, Keyboard & Mouse with standard accessories. (Vendor to submit PC configuration as per finalized system requirements)	1	No.	79,120.00	79,120.00
2.1	Supply, installation, testing & commissioning of 4 Port USB Cable KVM Switch (4 x USB input & 2 x USB output) with USB KVM Extender on cat 6 cable @100m length for mouse & keyboard control at remote location, complete with power supply, connectors & required accessories.	1	No.	7,522.00	7,522.00

Sr. No.	Description	Qty	Unit	Rate	Amount
3	Supply, installation, testing & commissioning of 55" Ultra Thin Bezel Video Wall Panel with 1.8mm bezel-to-bezel - 500 nits brightness, 3 years warranty. 2X2 Matrix Video Wall with all accessories matrix controller, switcher for connecting to the work station and NVR.	2	No.	62,545.00	1,25,090.00
C Cables & Conduit					
1	Supplying and installing cat-6 LSZH cable suitable for networking as per specification no. WG-COC/NC	1868	Rmt.	75.00	1,40,062.50
2	Supplying and installing cat-6 armoured cable with ECCS tape suitable for networking as per specification No. WG-COC/NC	150	Rmt.	145.00	21,750.00
3	Supplying and erecting LSZH armoured multimode optical fibre cable with 6 fibres, core dia 50/125 µm (OM3), suitable upto 10 GBPS, ethernet distance at 850 nm of wavelength, on wall/ceiling or laid in provided pipe/trench as per specification no. WG-COC/OFC LSZH	660	Rmt.	185.00	1,22,100.00
4	Fiber optic media converter - 10/100Mbps N-Way Auto-negotiation, 100Mbps, Full-Duplex / Half-Duple N-Way Auto-negotiation, 0~2 Kms, 1300 (nm)	0	No.	-	-
5	Miscellenius hardware	1	Lot.	2,985.00	2,985.00
6	Supply & Installation of MMS 25 mm dia, 2 mm thick FRPVC conduit of following sizes including all accessories e.g. deep junction box, bends etc. for concealing in slab / wall & spacer saddles for open on slab / wall. Colour - Grey	2678	Rmt.	120.00	3,21,300.00
Total Amount for IP CCTV Surveillance System					18,36,142.50
5.0 NETWORKING SYSTEM (FOR CCTV ONLY)					
A ACTIVE COMPONENTS					
	Note- Following configuration & details to be provided by Vendor during Network switch configuration & Handing Over. Vlan configuration on L3 switch and L2/edge switches, Identifying application wise port requirement on L2/edge switches, Port wise Vlan assignment on L2/edge switches, Inter Vlan restrictions / Access rules to be configured, Apply QoS for Voice Vlan, Configuring IP address for each switch, Configuration Information/ training, IP address details, configuration and backup of each switch. Mapping, Numbering, tagging details etc. 1 nos of VLAN to be created on same network as below a) CCTV separate VLAN network				
1	SITC of Basic L2 features 24 Port PoE (350W) auto-sensing 10/100/1000 Manageble Network Switch with 2 SFP Port and 2 X 1G Uplink Ethernet Ports. including standard connectivity & required accessories. (For Camera)	4	No.	31,450.00	1,25,800.00
2	SITC of Basic L2 features 8 Port PoE auto-sensing 10/100/1000 Manageble Network Switch 1 X 1G Uplink Ethernet Ports. including standard connectivity & required accessories. (For Camera)	1	No.	12,850.00	12,850.00
3	SITC of Basic L2 features 24 Port Non PoE auto-sensing 10/100/1000 Manageble Network Switch with 2 X 1G Uplink Ethernet Ports including standard connectivity & required accessories. (For data & Voice)	1	No.	22,650.00	22,650.00

Sr. No.	Description	Qty	Unit	Rate	Amount
B PASSIVE COMPONENTS					
1	SITC of CAT 6, 24 port Loaded Patch Panel with accessories.	6	No.	5,280.00	31,680.00
2	SITC of CAT-6 Patch Cord - 1 meter (at n/w rack side)	144	No.	285.00	41,040.00
C NETWORK RACK & ACCESSORIES					
1	Supply & installation of 15U 800 X 1000mm (D) Floor mount Rack with Front Glass Door, Fan Tray on Top (4nos.), Perforated Rear Doors, Openable Entry at the Bottom for the Cable entry, Casters, 5 nos. Fixed shelf, Cable Basket for Cable Dressing & 3 Nos Horizontal Power Strip with 5/15 A Universal Sockets (having both flat and round pin), hardware & accessories to mount the passive & active equipments.	1	No.	32,600.00	32,600.00
2	Supply & installation of 4U 600mm X 450mm(D) Compact size, Wall mount Rack with Front Glass Door, Fan Tray on Top, Openable Entry at the Bottom for the Cable entry, shelf, Cable Basket for Cable Dressing & Vertical Power Strip with 5/15 A Universal Sockets, all necessary accessories & hardware.	4	No.	7,956.00	31,824.00
3	Supply & installation of 6U 600mm X 450mm(D) Compact size, Wall mount Rack with Front Glass Door, Fan Tray on Top, Openable Entry at the Bottom for the Cable entry, shelf, Cable Basket for Cable Dressing & Vertical Power Strip with 5/15 A Universal Sockets, all necessary accessories & hardware.	0	No.	10,250.00	-
Total Amount for Networking System					2,98,444.00
Total Amount for ELV System					81,05,409.60

Sr.No.	ITEM DESCRIPTION	UNIT	TOTAL	RATE-CSR 22-23 / MR NO	AMOUNT
			QUANTITY		
SECTION I -FIRE HYDRANT INSTALLATION (WET RISERS)					
1	Supplying, installation, testing and commissioning of G.I. pipe above ground of 'C' class ERW of sizes pipe with necessary fittings complete as per specification no. FF-PP. Above Ground				
1.1	25 mm dia	Rmt	28.00	348.00	9,744.00
1.2	50 mm dia	Rmt	-	705.00	0
1.3	65 mm dia	Rmt	-	893.00	0.00
1.4	80 mm dia	Rmt	402.00	1,116.00	4,48,632.00
1.5	100 mm dia	Rmt	77.00	1,588.00	1,22,276.00
1.6	150 mm dia	Rmt	120.00	2,409.00	2,89,080.00
1.7	200 mm dia	Rmt	-	3,572.00	0.00
2	Supplying, installation, testing and commissioning of two coats of synthetic enamel paint of approved shade over a coat of primer . Prior to application of primer the surface should be cleaned for any dirt, rusts, rough substance etc.	Sq. m		773.00	0.00
3	Supplying, installation, testing and commissioning of supporting/fixing the pipe on floor / wall /ceiling with structural supports through C-channel/L-Angle, clamps, hangers (using anchor fastners) as per specification. All hangers, clamps, brackets etc. shall be of galvanized iron unless specified otherwise Welding of any kind on the galvanized support / hanger shall not be permitted.	Kg		177.00	0.00
4	Supplying, installation, testing and commissioning of below listed sizes of cast iron double flange butterfly valve of size complete with PN16 pressure rating, as per specification no. FF-VL/BFV				0.00
4.1	150 mm dia (At header)	No	1.00	6,327.00	6,327.00
5	Supplying, installation, testing and commissioning of full way lever operated forged brass ball valve of brass body with forged brass tested to a pressure not less than 25 Kg / sq.cm with threaded joints complete with nuts, bolts, gaskets, washers etc.				
5.1	25 mm dia	No	25.00	1,689.00	42,225.00
6	Supplying, installation, testing and commissioning of Landing Hydrants comprising of the following in the Fire duct, All the hydrant accessories shall be given serial number for identification, numbers shall be written in the white paint				
6.1	Supplying, installation, testing and commissioning of stainless steel single outlet hydrant valve fitted with necessary accessories complete as per specification no. FF-VL/HV	Nos.	25.00	5,799.00	1,44,975.00
6.2	Supplying, installation, testing and commissioning of wall mounting swinging hose reel drum fitted with 19 mm dia. 30m long high pressure polypropylene (Polyhose) along with necessary accessories complete as per specification no. FF-FFA/HV	Set.	25.00	6,921.00	1,73,025.00
7	Supplying, installation, testing and commissioning of 63mm dia, reinforced rubber lined (R.R.L.) hose pipe, 15m in length, fitted with necessary accessories complete as per specification no. FF-FFA/RRL	Nos.	25.00	5,229.00	1,30,725.00
8	Supplying, installation, testing and commissioning of stainless steel branch pipe 63 mm dia fitted with 20 mm dia detachable hexagonal nozzle complete as per specifications no. FFFFA/ NZ	Set.	25.00	1,963.00	49,075.00
9	Supplying, installation, testing and commissioning of M.S./CRCA cabinet for housing Floor Hydrant valve , hose pipe, hose reel and branch pipe (size 1000 x 736 x 736 mm.) made from 16 SWG sheet and angle iron 25 x 25 x 4 mm. having front doors with viewing glass (8"x6") and locking arrangement with necessary fixing material such as rubber bidding etc. duly painted in post box red colour(Code 538 of IS 5)	Nos.	25.00	15,886.00	3,97,150.00
10	Supplying, installation, testing and commissioning of 20/25mm dia gun metal air release cock , with necessary G.I. coupling to be fitted on top of air vessel or on wet riser complete as per specification no. FF-FFA/ARV	Nos	1.00	840.00	840.00
11	Supplying, installation, testing and commissioning of brass orifice plate having 6 mm. thickness, 140 mm outer dia with required diameter of inner hole at every single outlet hydrant valve as per specification no. FF-FFA/OP	Nos	25.00	1,009.00	25,225.00
TOTAL FOR FIRE HYDRANT INSTALLATION (WET RISERS)				5,799.00	18,39,299.00

Sr.No.	ITEM DESCRIPTION	UNIT	TOTAL	RATE-CSR 22-23 / MR NO	AMOUNT
			QUANTITY		
SECTION II -FIRE PUMP ROOM EQUIPMENT					
1	Supplying, installation, testing and commissioning of main fire pump(Sprinkler) (MFP/ EP) suitable for water discharge of 1800 to 2280 LPM at 80 m head driven by electric motor 415 volts, 3 phase 50 Hz, AC supply of 50kW or of suitable kW capacity for manual/automatic operation and consisting of following	No.	1.00	2,07,756.00	2,07,756.00
	(a) Horizontal type, single stage, centrifugal/split casing pump of cast iron body & bronze impeller with stainless steel shaft (SS410 grade), mechanical seal conforming to IS 1520.				
	(b) Squirrel cage induction motor, TEFC, synchronous speed 1450 RPM, suitable for operation with IP 55 protection for enclosure, horizontal foot mounted type with Class-'P' insulation, conforming to is IS 325.				
	(c) MS. fabricated Common base plate, coupling, coupling guard, foundation bolts etc. as required.				
	(d) Erected on provided suitable size cement concrete foundation duly plastered with anti vibration pads with perfect aligng, proper levelling complete pump set With accessories duly painted with two coats of synthetic enamel paint of fire red colour over a coat of primer (ISC code 536 as per IS 2932 of 2003) complete, as per specification no. FF-MFP/SSC/EP				
2	Supplying, installation, testing and commissioning of(sprinkler) jockey fire pump (JP) suitable for water discharge of 180 to 240 LPM at 80 m head driven by electric motor 415 volts, 3 phase 50 Hz, AC supply of 5 kW or of suitable kW capacity for manual/automatic operation and consisting of following:	No.	1.00	93,048.00	93,048.00
	(a) Horizontal/vertical type, multi stage, centrifugal casing pump of cast iron body & bronze impeller with stainless steel shaft(SS410 grade), mechanical seal conforming to IS 1520.				
	(b) Squirrel cage induction motor, TEFC, synchronous speed 3000 RPM, suitable for operation with IP 55 protection for enclosure, horizontal foot mounted type with Class-'F' insulation, conforming to IS-325.				
	(c) M.S. fabricated common base plate, coupling, coupling guard, foundation bolts etc. as required.				
	(d) Erected on provided suitable size cement concrete foundation duly plastered with anti vibration pads with perfect aligning, proper levelling complete pump set with accessories duly painted with two coats of synthetic enamel paint of fire red colour over a coat of primer (ISC code 536 as per IS 2932 of 2003) complete, as per specification no. FF-MFP/JP				
3	Design, fabrication, assembling, wiring, supply, installation, testing and commissioning of fire electrical soft stater / motor control centre shall be fabricated out of 14 gauge CRCA sheet steel in form in 3b formation with reinforcement of suitable size angle iron, channel 'T' sections irons and/or flats wherever necessary. Cable gland plates shall be provided on top as well as at the bottom of the panels. Panels shall be treated with all anticorrosive process before painting as per specifications with 2 coats of red oxide primer and final approved shade of powder coated paint. 2 Nos. earthing terminals shall be provided for 3 phase, 4 wire, 50 Hz supply system. Lifting hooks shall also be provided in case of large panels. Approval shall be taken for each panel before fabrication. Cadmium Plated hardware shall be used in fabrication of panels. Quoted rates shall inclusive of cables, cable trays, control cabling and wiring and trays (in accordance to specification) with earthing from panel to each motor / equipment.	Nos.	1.00	5,05,836.00	5,05,836.00
	Panel shall have suitable interlocking for pump operation through pressure switches.				
	Incoming				
a.	2 Nos. 500 amps 4 pole mechanical interlocked incoming MCCB complete with the following				
i.	0-500 volts 96 x 96mm square voltmeter with selector switch shall be protected by 2 amps TP MCB 1 Set				

Sr.No.	ITEM DESCRIPTION	UNIT	TOTAL	RATE-CSR 22-23 / MR NO	AMOUNT
			QUANTITY		
ii.	0-500 amps 96 x 96 mm square ammeter with 500/5 amps 15 VA CL:1 CT's and selector switch	1 Set			
iii.	Phase indicating lamps shall be protected by 2 amps SP MCB	6 Sets			
b.	Aluminium bus bar sleeves type, rated at 630 amps for three phase & neutral phase bus bar shall have maximum current density of 1 amps per sq.cm. and the neutral bus bar of not less than 50% capacity.				
	Outgoing:				
a.	FOR SPRINKLER PUMP - 50 KW S/D Starter Suitable for Rating of Pumps. Contactor to submit Coordination chart of the proposed make.				
b.	FOR SPRINKLER JOCKEY PUMP - 5 KW S/D Starter Suitable for Rating of Pumps. Contactor to submit Coordination chart of the proposed make.				
c.	FOR HYDRANT PUMP - 50KW S/D Starter Suitable for Rating of Pumps. Contactor to submit Coordination chart of the proposed make.				
d.	FOR HYDRANT JOCKEY PUMP - 10 KW S/D Starter Suitable for Rating of Pumps. Contactor to submit Coordination chart of the proposed make.				
e.	Necessary cable alleys space for spare switches, internal wiring and copper earthing of all equipment shall also be included. All switch gears/control gears shall be motor duty rating.				
	Note:				
	All MCCB's to be suitable for motor duty and shall be of 16 KA breaking capacity.				
	Provision shall be made for providing potential free contacts to all pumps starters for connection to building automation system.				
4	Cable & Accessories -				
	Supplying, erecting & terminating FR XLPE insulated, galvanised steel formed wire armoured (strip) cable 1100 V, 3½core 240 sq. mm. aluminium conductor complete erected with glands & lugs, on wall/ trusses/pole or laid in provided trench/ pipe as per specification no. CB-LT/AL	m	150.00	1,369.00	2,05,350.00
	Supplying, erecting & terminating FR XLPE insulated, galvanised steel formed wire armoured (strip) cable 1100 V, 2 core 2.5 sq. mm. copper conductor complete erected with glands & lugs, on wall/ trusses/ pole or laid in provided trench/ pipe as per specification no. CB-LT/CU	m	100.00	144.00	14,400.00
	Supplying, erecting & terminating FR XLPE insulated, galvanised steel formed wire armoured (strip) cable 1100 V, 3 core 10 sq. mm. copper conductor complete erected with glands & lugs, on wall/ trusses/ pole or laid in provided trench/ pipe as per specification no. CB-LT/CU	m	80.00	476.00	38,080.00
	Supplying, erecting & terminating FR XLPE insulated, galvanised steel formed wire armoured (strip) cable 1100 V, 3 core 2.5 sq. mm. copper conductor complete erected with glands & lugs, on wall/ trusses/ pole or laid in provided trench/ pipe as per specification no. CB-LT/CU	m	Rate only	173.00	0.00
	Providing & erecting hot dipped galvanised ladder type cable tray manufactured from 16 SWG (1.6 mm thick) GI sheet of 300 mm width & 100 mm height comprising all required standard accessories.	m	50.00	854.00	42,700.00
	Providing & erecting hot dipped galvanised ladder type cable tray manufactured from 16 SWG (1.6 mm thick) GI sheet of 500 mm width & 100 mm height comprising all required standard accessories.	m	Rate only	965.00	0.00
	Providing & erecting hot dipped galvanised cover suitable for perforated type Cable tray manufactured from 18 SWG (1.2 mm thick) GI sheet of 150 mm width & 20 mm height complete with necessary hardware.	m	60.00	369.00	22,140.00
	Providing & erecting hot dipped galvanised cover suitable for perforated type Cable tray manufactured from 18 SWG (1.2 mm thick) GI sheet of 300 mm width & 20 mm height complete with necessary hardware.	m	Rate only	626.00	0.00
5	Supplying and erecting 150mm dia cast iron double flange NRVcomplete with PN 16 pressure rating as per specification no.FF-VL/NRV	Nos.	1.00	13,491.00	13,491.00
	Supplying and erecting 200mm dia cast iron double flange NRVcomplete with PN 16 pressure rating as per specification no.FF-VL/NRV	Nos.	1.00	21,297.00	21,297.00
	Supplying and erecting 65mm dia cast iron double flange NRVcomplete with PN 16 pressure rating.	Nos.	1.00	4,640.00	4,640.00

Sr.No.	ITEM DESCRIPTION	UNIT	TOTAL	RATE-CSR 22-23 / MR NO	AMOUNT
			QUANTITY		
6	Supplying, installation, testing and commissioning of below listed sizes of cast iron double flange butterfly valve of size complete with PN16 pressure rating, as per specification no. FF-VL/BFV				
6.1	200 mm dia	No	1.00	9,812.00	9,812.00
6.2	150 mm dia	No	1.00	6,327.00	6,327.00
6.3	100 mm dia	No	1.00	4,121.00	4,121.00
6.4	80 mm dia	No	1.00	3,183.00	3,183.00
6.5	65 mm dia	No	1.00	2,585.00	2,585.00
6.6	50 mm dia	No	-	2,393.00	0.00
10	Supplying and erecting of below listed sizes of cast iron double flange butterfly valve of size complete with PN25 pressure rating, as per specification no. FF-VL/BFV				
10.1	200 mm dia	No		13,800.00	0.00
10.2	150 mm dia	No		6,280.00	0.00
10.3	100 mm dia	No		4,200.00	0.00
10.4	80 mm dia	No		2,850.00	0.00
10.5	65 mm dia	No		2,500.00	0.00
10.6	50 mm dia	No		2,400.00	0.00
7	Supplying, installation, testing and commissioning of below listed sizes of cast iron double flange sluice valve complete with PN pressure rating given below, as per specification no. FF-VL/SV				
	PN 25				
7.1	200 mm dia	No			0.00
7.2	150 mm dia	No			0.00
7.3	100 mm dia	No			0.00
7.4	80 mm dia	No			0.00
7.5	65 mm dia	No			0.00
7.6	50 mm dia	No			0.00
7.7	40 mm dia	No			0.00
7.8	32 mm dia	No			0.00
7.9	25 mm dia	No			0.00
	PN 16				0.00
7.10	250 mm dia	No	2.00	65,330.00	1,30,660.00
0.10	200 mm dia	No	Rate only	23,265.00	0.00
7.20	150 mm dia	No	Rate only	13,645.00	0.00
7.30	100 mm dia	No	Rate only	8,753.00	0.00
7.40	80 mm dia	No	Rate only	5,944.00	0.00
13	Supplying and erecting 200 mm dia Cast Iron end line strainer of T-Pot type flanged end pattern, PN 25 pressure rating, screen of SS and end connection with flanged, for positive suction complete	No		27,000.00	0.00
8	Supplying, installation, testing and commissioning of Cast Iron end line strainer of Y-type flanged end pattern, PN16 pressure rating, screen of SS end connection with Flanged / Screwed / Socket Weld / Butt Weld End etc with standard OAR (open area Ratio) for positive suction complete as per specification no. FF-VL/ELS				
	250 mm dia	No	2.00	33,784.00	67,568.00

Sr.No.	ITEM DESCRIPTION	UNIT	TOTAL	RATE-CSR 22-23 / MR NO	AMOUNT
			QUANTITY		
	200 mm dia	No	Rate only	21,035.00	0.00
	150 mm dia	No	Rate only	11,102.00	0.00
	100 mm dia	No	Rate only	6,349.00	0.00
	80 mm dia	No	Rate only	4,373.00	0.00
9	Supplying, installation, testing and commissioning of 12/15 mm dia pressure switch with provided isolation valve , G.I. nipple, elbow, etc complete as per specification no. FF-FFA/PS	No	3.00	1,763.00	5,289.00
10	Supplying, installing, testing and commissioning of forged brass body Ball valves as per IS : 17292 with seat PTFE and Flanged /Screwed/Socket weld end with fittings and accessories like teflon,hardware,etc.				
	The rate should be quoted with all below metiond sizes -				
	PN25/20				
10.1	25 mm dia (pressure switch)	Nos.	3.00	1,689.00	5,067.00
10.2	25 mm dia (pressure guage)	Nos.	2.00	1,689.00	3,378.00
18	Supplying, installation, testing and commissioning of 100 mm dia. pressure gauge , 0-300 PSI or 0-14 kg per cm square fitted with 12/15 mm dia. pad cock valve, erected with provided G.I. pipe, elbow etc. complete as per specification no. FF-FFA/PG	No	2.00	772.00	1,544.00
20	Supplying, installation, testing and commissioning of GI Class 'C' size 100 NB diesel engine exhaust pipe (including all fittings, clamps, steel support and canopee at the termination point) of suitable dia for the engine as per manufacturer's instruction. The pipe shall be provided with fibre glass rockwool insulation with 50/100mm thickness or 48/84kg/cm2 density covered with 22 guage aluminium cladding with required fitting accesories like screw,etc.	Rmt	50.00	5,509.00	2,75,450.00
21	Supplying, installation, testing and commissioning of 300 mm dia 1.5m in height air vessel / tank fabricated from min 5mm thick M.S. sheet complete as per specification no. FF-FFA/ACT	Nos.	1.00	12,472.00	12,472.00
22	Supplying installation testing and commissioning of Heavy Duty Rubber/Metal expansion bellow with double flanged(Floating Type) end with single/double arch suitable for PN 25 for suitable temperature range -20 to 70 deg C as per ASTM F 1123-87 (2004) with required necessary accessories for following pipe sizes				
22.1	300mm nominal dia	Nos.		50,360.00	
22.2	200mm nominal dia	Nos.	1.00	29,632.00	29,632.00
22.3	150mm nominal dia	Nos.	1.00	21,830.00	21,830.00
22.4	100mm nominal dia	Nos.	-	14,816.00	0.00
22.5	80mm nominal dia	Nos.	1.00	12,247.00	12,247.00
22.6	65mm nominal dia	Nos.	1.00	10,814.00	10,814.00
22.7	50mm nominal dia	Nos.	-	9,379.00	0.00
23	Supply, Installation,Testing and commisioning of approved make size 150mm dia suitable Flow meter of electromagnetic type with digital display (with accuracy +-0.2) for Suitable pressure range and flow with Flanged End suitable for Bi-directional flow measuring application located at fire test line for pump performance check purpose, Flow meter shall be suitable for a pump 2850 lpm, the installation should be as per direction of engineer in charge	Nos.	1.00	1,19,665.00	1,19,665.00
24	Dismantling, re-installation Testing and commisioning of existing fire pumps & piping as per latest pump room layout as per direction of engineer incharge				
TOTAL FOR FIRE PUMPS & EQUIPMENTS					18,90,382.00
SECTION III -AUTOMATIC SPRINKLERS SYSTEM					

Sr.No.	ITEM DESCRIPTION	UNIT	TOTAL	RATE-CSR 22-23 / MR NO	AMOUNT
			QUANTITY		
1	Supplying, erecting, testing and commissioning of quartzoid bulb sprinkler , 15 mm (½") dia. NBCM Body chrome finished, 68° C fixed temperature rating with deflector disc of conventional construction complete as per specification no. FFSPR.				
	Upright sprinkler	No	211.00	427.00	90,097.00
	Sidewall sprinkler	No	-	427.00	0.00
	Pendant sprinkler	No	1,125.00	427.00	4,80,375.00
	Supplying, erecting, testing and commissioning of quartzoid bulb sprinkler , 15 mm (½") dia. NBCM Body chrome finished, 79° C fixed temperature rating with deflector disc of conventional construction complete as per specification no. FFSPR.-Pendant sprinkler	No	5.00	344.00	1,720.00
2	Supplying, installation, testing and commissioning of G.I. pipe above ground of 'C' class ERW of sizes pipe with necessary fittings complete as per specification no. FF-PP. (Above ground piping)				
2.1	25 mm dia	Rmt	2,260.00	348.00	7,86,480.00
2.2	32 mm dia	Rmt	450.00	730.00	3,28,500.00
2.3	40 mm dia	Rmt	320.00	875.00	2,80,000.00
2.4	50 mm dia	Rmt	620.00	705.00	4,37,100.00
2.5	65 mm dia	Rmt	260.00	893.00	2,32,180.00
2.6	80 mm dia	Rmt	40.00	1,116.00	44,640.00
2.7	100 mm dia	Rmt	170.00	1,588.00	2,69,960.00
2.8	150 mm dia	Rmt	60.00	2,409.00	1,44,540.00
2.9	200 mm dia	Rmt	-	3,572.00	0.00
3	Providing & erection of two coats of synthetic enamel paint of approved shade over a coat of primer . Prior to application of primer the surface should be cleaned for any dirt, rusts, rough substance etc.	Sq. m		773.00	0.00
4	Supplying, installation, testing and commissioning of supporting/fixing the pipe on floor / wall / ceiling with structural supports through C-channel/L-Angle, clamps, hangers (using anchor fasteners) as per specification. All hangers, clamps, brackets etc. shall be of galvanized iron unless specified otherwise Welding of any kind on the galvanized support / hanger shall not be permitted.	Kg		177.00	0.00
5	Supplying and erecting fire resistant mortar (20 kg) with fire resistance class S90 as per National Electrical Code (NEC) SP30-2011 suitable to seal the openings of all kinds of cables, pipes and cable support system in steel, aluminium and plastic profiles (except hollow core conductors). The residual openings shall be closed with filler, as per specification no FF-FRM.	Job		9,566.00	0.00
	Note For estimating purpose consider 1 bag of 20kg to cover 300mm x 400mm area 150mm thick or 0.018 m3				
9	Supplying, installation, testing and commissioning of vane type water flow detector of below sizes with 1) Visual switch activation 2) Rugged switch assembly 3) Heavy duty aluminium pipe saddles 4)Durable metal enclosure 5) Steel U bolts for secure mounting 6) Two SPDT (Single pole double track) synchronised switches 7) serviceable without draining pipes.				
	150 mm dia	No	6.00	10,234.00	61,404.00
	100 mm dia	No	-	8,408.00	0.00
	80 mm dia	No	-	7,362.00	0.00
10	Supply, installation, testing & commissioning of 1500mm Stainless steel corrugated braided flexible pipe (hose) for dropping sprinklers below false ceiling, pipe shall be 14-30 bar pressure rating and with supports, connectors, union / reducer collar, clamps etc. as required length mentioned below (UL/FM Approved)	No		2,105.00	
11	Supplying, installation, testing and commissioning of below listed sizes of cast iron double flange butterfly valve of size complete with PN16 pressure rating, as per specification no. FF-VL/BFV				
11.1	200 mm dia	No		9,812.00	0.00
11.2	150 mm dia	No	7.00	6,327.00	44,289.00

Sr.No.	ITEM DESCRIPTION	UNIT	TOTAL	RATE-CSR 22-23 / MR NO	AMOUNT
			QUANTITY		
11.3	100 mm dia	No	-	4,121.00	0.00
11.4	80 mm dia	No	-	3,183.00	0.00
12	Supplying, installation, testing and commissioning of tamper switch on butterfly valve / sluice valve / isolation valve for remote mointing of the valve open / close position. The tamper switch shall be provided with potential free contact with 2 nos. NONC. The valve shall also be provided with manual lock & chain arrangement.	No	7.00	15,220.00	1,06,540.00
13	Supplying, installation, testing and commissioning of 20/25mm dia gun metal air release cock , with necessary G.I. coupling to be fitted on wet riser complete as per specification no. FF-FFA/ARV	Nos	1.00	840.00	840.00
14	Supplying, installation, testing and commissioning of 100 mm dia. pressure gauge , 0-300 PSI or 0-14 kg per cm square fitted with 12/15 mm dia. pad cock valve, erected with provided G.I. pipe, elbow etc. complete as per specification no. FF-FFA/PG	No	-	772.00	0.00
15	Supplying, installation, testing and commissioning of Installation Control Valve with turbine type automatic Alarm Gong to be connected with control valve, drain & test valve and all other necessary components as per manufacturer's specifications complete as required and shall be suitable for test pressure 25 Kg/ cm2.				
15.1	150mm nominal dia	No	1.00	60,211.00	60,211.00
16	Supply,Installation , Testing , Commissioning of Test drain assembly valve compile with NFPA 13 brass body with sight glass and valve for working pressure of 300/175 PSI threaded end for suitable K factor sprinkler size and required necessary fitting and accessories as per direction of the engineer in-charge. (UL/FM Approved)				
16.1	50mm	No	6.00	13,930.00	83,580.00
17	Supplying, installing, testing and commissioning of forged brass body Ball valves (PN25) as per IS : 17292 with seat PTFE and Flanged /Screwed/Socket weld end with fittings and accessories like teflon,hardware,etc.				
	The rate should be quoted with all below metiond sizes -				
17.1	25 mm dia	Nos.	Rate only	1,689.00	0.00
17.2	32 mm dia	Nos.	Rate only	2,530.00	0.00
TOTAL FOR AUTOMATIC SPRINKLER SYSTEM					34,52,456.00
SECTION IV - FIRE EXTINGUISHERS					
1	Supplying, installation, testing and commissioning of ISI marked (IS:15683:2006) 6 litre Water mist type , with initial filling in brand new cylinder with powder coated finish, fitted with Gun metal union, discharge hose, wall mounting bracket/Floor tralley and suitable sinages etc. complete, confirming to IS	Nos.	25.00	25,000.00	6,25,000.00
TOTAL FOR FIRE EXTINGUISHERS					6,25,000.00
Total Firefighting Works					78,07,137.00

BOQ FOR HVAC SERVICES - INTERNAL

S. NO.	PARTICULARS	UNIT	TOTAL	Rate	Amount
			QUANTITY		
A	SECTION-01- CHW HIGH SIDE EQUIPMENT				
	CHW SYSTEM				
	Variable Primary Chilled water Pumps (Insulated)(2W+1S)				
	SITC OF Primary Variable pumps - Design Envelope Split long coupled vertical Inline pumps with Flow display Capabilities				
	Design Envelope, Vertical split long Coupled Single Stage, Single Suction type Inline Centrifugal Pumps suitable for variable Flow Chilled Water recirculation system, complete with C.I. Casing, Suction and Discharge connections shall be of same size and shall be supplied with matching flanges. Impellers shall be made of Bronze/SS and shall be fully closed type. Pumps shall be dynamically balanced and two plane balancing is required for the pumps if impeller diameter is less than 6 times the width of the impeller. Pump Shaft shall be made of Staineless Steel, Coupling shall be rigid spacer type made of high tensile aluminium alloy, shall be designed for easy removal on site.The pump design shall meet the requirements of easy removal of mechanical seal components for servicing, replacement without disturbing the pump or motor. TEFC Sq.Cage non overloading type Motor with efficiency level of IE5. Mechanical Seal shall be Stainless Steel multi-spring with secondary seal, carbon rotating face and silicon carbide stationary seat. Gland plate shall be made of 316 Stainless Steel. Facotry fitted flush line to the mechanical seal with maintenance free sediment separator. It should not require to disturb the motor and pump to replace the Mech Seal.Pumps should be with 5-10% redudancy in flow and head. Pumps shoud be PN16 rating.				
1.1	Flow: 210 USgpm Head: 30 Mtr. (To be verified as per the site conditions) Motor Rating: As per the Vendor's selection.	Nos	3.00	4,00,000.00	12,00,000.00
	Suction Guide Cum strainer Insulated				
1.2	Supply, installation, testing and commissioning of Insulated (Cast iron body) suction guide cum stariner to install on pump suction side shall have flow cast iron stabilizing guiding vanes, Permanent stainless-steel strainer & Disposable fine-mesh filter; removes particles up-to 1200µm, with high pressure connecting flanges of PN 16. Sutaible for 210 GPM flow rate and 100 mm pipe size.	Nos	3.00	23,589.00	70,767.00
	Flo-Trex Valve Insulated				
1.3	Supply, installation, testing and commissioning of insulated flow trex / tripple duty valve of Cast iron or ductile valve body with hard flanges, or ductile iron valve body with standard grooved ends, Bronze disk , stainless steel stem & spring EPDM Type seat and O-Ring ,shall have stut off valve, check / non return valve and water flow controlling/ throttling capabilities. Temperature and pressure measurement facility, Suitable for PN 16, and temperatures up to 150°c (300°f).Sutaible for 210 GPM flow rate and 100 mm pipe size.	Nos	3.00	17,661.00	52,983.00
#REF!	PUMP VENDOR TO PROVIDE SOFTWARE SELECTIONFOR THE SELECTED PUMP FOR CONSULTANTS REVIEW. Pump head mentioned above is indicative, the Contractor shall carry out pump head calculations and obtain Consultant's approval before procuring the pumps.				
B	SECTION-II VRV SYSTEM EQUIPMENTS				
	AIR CONDITIONING & PIPING				
	OUDOOR UNIT				

S. NO.	PARTICULARS	UNIT	TOTAL	Rate	Amount
1	SITC of Outdoor machines for air conditioning system, based on variable refrigerant flow, comprising of one or more variable output compressors (Inverter Scroll type), condenser coil & fins provided with anti-corrosive treatment, necessary accessories for oil separation, moisture removal, flow control, interconnecting piping, condenser air fan, electrical and microprocessor based panel, interconnecting cabling, all housed inside a weather-proof cabinet suitable for exposed installation on terrace. The panel must be 100% compatible with BMS. The unit/s must also be provided with self addressable control system for control of indoor & other outdoor machines. The capacity & power consumption curves, deration / correction factor curves / charts for indoor temperature and piping derations must be submitted with offer, along with duly filled up datasheet in the attached format. The combination of ODUs should be made in a way to achieve minimum EER of 12 at ARI conditions, and maximum 3 ODU / compressor models. Coated price shall include cost for the ODU stand.				
	FOR VRV SYSTEM				
1.1	Outdoor capacity 60 HP VRV System	Set	2.00	11,96,685.00	23,93,370.00
1.2	Outdoor capacity 40 HP VRV System	Set	2.00	7,95,310.00	15,90,620.00
1.3	Outdoor capacity 30 HP	Set	QR		
1.4	Outdoor capacity 30 HP	Set	QR		
1.5	Outdoor capacity 24 HP	Set	QR		
1.6	Outdoor capacity 22 HP	Set	QR		
	FOR DX TYPE TREATED FRESH AIR UNITS				
1.7	Outdoor capacity 60 HP For TFA Unit System-01	Set	1.00	11,96,685.00	11,96,685.00
1.8	Outdoor capacity 34 HP For TFA Unit System-02	Set	1.00	6,89,628.00	6,89,628.00
1.1	Outdoor capacity 14 HP	Set	QR		
1.11	Outdoor capacity 10 HP	Set	QR		
1.12	Outdoor capacity 10 HP	Set	QR		
1.13	Outdoor capacity 8 HP	Set	QR		
1.14	Outdoor capacity 8 HP	Set	QR		
	FOR DX TYPE AIR HANDLING UNIT (HALL AREA AT SECOND FLOOR)				
1.13	Outdoor capacity 42 HP	Set	2.00	8,74,058.00	17,48,116.00
	INDOOR UNITS :-				
	VRV/VRF BASED DUCTABLE TYPE, HIGH/MID STATIC ROOM INDOOR UNIT				
2	SITC of Indoor machines for air conditioning system, based on variable refrigerant flow of following capacities, quoted price to include all controls, valves & necessary accessories required to connet the IDU to the copper piping. Also unloading, lifting, shifting, rigging to respective locations, installation, top up of refrigerant and oil, testing, commissioning of indoor units, supply of mounting arrangement to be considered in the rate.				
	HIGH STATIC ROOM INDOOR UNIT				
2.1	8.0 TR -2825 CFM	Nos	12.00	97,573.00	11,70,876.00
2.2	6.4 TR -2400 CFM	Nos	8.00	92,395.00	7,39,160.00
2.3	5.5 TR -2047 CFM	Nos	1.00	87,518.00	87,518.00
2.4	4.5 TR -1624 CFM	Nos	QR		
2.5	4.0 TR -1377 CFM	Nos	QR		
2.6	3.18 TR -1130 CFM	Nos	QR		
2.7	2.56 TR -883 CFM	Nos	QR		

S. NO.	PARTICULARS	UNIT	TOTAL	Rate	Amount
	MID STATIC TYPE INDOOR UNIT				
2.8	2.0 TR -848 CFM	Nos	1.00	52,117.00	52,117.00
	Note:- Ceiling mounted duct type (High Static Pressure) Vendor shall work out actual static pressure requirement based on the layout and select the suitable static pressure and shall obtain consultant's approval before procurement.				
	Accessories (Supply, Installation, Testing & Commissioning)				
3	Corded remotes for Indoor units with sensor kit.	Nos	QR		
4	Cordless remotes for Indoor units with sensor kit.	Nos	1.00	2,220.00	2,220.00
5	Centralised remote control unit for scheduling, monitoring, fault indication and setting of all indoor machines (Suitable for max 64 nos of IDU'S)	Nos.	QR		
6	Centralized Remote Controller unit capable of controlling all indoor as well as outdoor units with necessary Backnet / Lonworks Interface for 3rd party BMS Intergration thru LON Protocol OR PC type unit.	Set	1.00	80,000.00	80,000.00
7	Refrigerant "Y" / "T" joints with insulation, as recommended by manufacturer, suitable for the indoor machines quoted.	Each	24.00	6,968.00	1,67,232.00
8	Supplying, installation, testing and commissioning of electronic expansion valve kit with control box suitable for required cooling capacity of AHUs/TFA as mentioned below and suitable for operation in cooling mode.				
8.1	27.6 TR For Hall area AHU	Nos	2.00	55,000.00	1,10,000.00
8.2	19.5 TR For Ground floor TFA Unit	Nos	1.00	55,000.00	55,000.00
8.3	19.4 TR For First floor TFA Unit	Nos	1.00	55,000.00	55,000.00
8.4	5.8 TR For Second floor TFA Unit	Nos	1.00	29,283.00	29,283.00
8.5	5.8 TR For Third floor TFA Unit	Nos	1.00	29,283.00	29,283.00
8.6	4.6 TR For Fourth floor TFA Unit	Nos	1.00	29,283.00	29,283.00
8.7	4.1 TR For Fifth Floor TFA Unit	Nos	1.00	29,283.00	29,283.00
9	Supplying, installation, testing and commissioning of wired controller to integrate electronic expansion valve kit with coil off temperature transmitter	Nos	8.00	4,782.00	38,256.00
10	Supply, installation, testing and commissioning of refrigerant gas piping using eddy current free Copper pipes and fittings like elbows, couplers, tee joints, brass fittings, "U" loops, expansion loops etc. Supports consisting of GI box / "C" sections & female anchor fasteners with full threaded GI rods, insulation of suction / liquid pipes using 19 mm thick elastomeric closed cell Nitrile Rubber insulation material having class "O" for fire properties along with glass cloth protective coating as per specifications, structural clamps with hard PVC pipe sleeves under the clamps to protect insulation at supports, tagging to enable tracing connectivity to respective units as per shop drawings to be generated by contractor and approved by consultant. Submission of test reports in approved format forms a part of this item scope.				
10.1	41.3 mm	Rmt	230.00	1,300.00	2,99,000.00
10.2	34.9 mm	Rmt	80.00	1,150.00	92,000.00
10.3	28.6 mm	Rmt	90.00	1,000.00	90,000.00
10.4	22.2 mm	Rmt	70.00	950.00	66,500.00
10.5	19.1 mm	Rmt	70.00	900.00	63,000.00
10.6	15.9 mm	Rmt	50.00	750.00	37,500.00
10.7	12.7 mm	Rmt	RO	600.00	

S. NO.	PARTICULARS	UNIT	TOTAL	Rate	Amount
11	Supply, installation, testing and commissioning of refrigerant liquid piping using eddy current free Copper pipes and fittings like elbows, couplers, tee joints, brass fittings, "U" loops, expansion loops etc. Supports consisting of GI box / "C" sections & female anchor fasteners with full threaded GI rods, insulation of pipes using 13 mm thick elastomeric closed cell Nitrile Rubber insulation material having class "O" for fire properties along with glass cloth protective coating as per specifications, structural clamps with hard PVC pipe sleeves under the clamps to protect insulation at supports, tagging to enable tracing connectivity to respective units as per shop drawings to be generated by contractor and approved by consultant. Submission of test reports in approved format forms a part of this item scope.				
11.1	19.1 mm	Rmt	200.00	900.00	1,80,000.00
11.2	15.9 mm	Rmt	190.00	750.00	1,42,500.00
11.3	12.7 mm	Rmt	80.00	600.00	48,000.00
11.4	9.5 mm	Rmt	120.00	500.00	60,000.00
11.5	6.4 mm	Rmt	RO	450.00	
	Copper piping quantities mentioned above are indicative. Contractor to work out actual lengths required based on the final approved layout.				
12	Supply, installation, testing and commissioning of drain piping with U-PVC pipe (PN-10) & insulated with 9 mm thick Nitrile Rubber. Condensate drain piping quantities mentioned below are indicative. Contractor to work out actual lengths required based on the final approved layout.				
12.1	Dia 25 mm	Mt	150.00	250.00	37,500.00
12.2	Dia 50 mm	Mt	210.00	400.00	84,000.00
	Cable Tray for refrigerent piping				
13	Cable Tray				
	SITC of GI perforated type cable tray of 16G thickness (Galvanising of 86 microns min.) ,following width for supporting refrigerant piping in IDU /shafts / terrace, complete with supports.				
13.1	500 mm x 75 mm	Rmt	530.00	900.00	4,77,000.00
13.2	300 mm x 75 mm	Rmt	90.00	750.00	67,500.00
13.3	200 mm x 75 mm	Rmt	180.00	500.00	90,000.00
13.4	150mm x 75mm	Rmt	QR		
13.5	100mm x 75mm	Rmt	QR		
	Quantities are indicative, Vendor shall provide as per the actual requirement based on the approved layout.				
	Cable Tray Cover				
14	SITC of GI Cover made out of 20 G GI sheet with minimum 86 Micron Glavanizing thickness to protect refrigerant pipe insulation. (Cover for perforated type cable tray).				
14.1	500 mm x 10 mm	Rmt	530.00	400.00	2,12,000.00
14.2	300 mm x 10 mm	Rmt	90.00	300.00	27,000.00
14.3	200 mm x 10 mm	Rmt	180.00	250.00	45,000.00
14.4	150mm x 10 mm	Rmt	QR		
14.5	100mm x 10 mm	Rmt	QR		

S. NO.	PARTICULARS	UNIT	TOTAL	Rate	Amount
	<p>Note:- 1) Standard accessories shall typically include :-</p> <p>a) 'Z' section support - 30 x 35 mm in size - 312 mm in length - 6 nos. support for one piece ladder of 2.5 m in length each.</p> <p>b) Anchor fastener & nut bolts of adequate size - 16 nos. (2 nos. per support)</p> <p>c) Coupler plates with hardware - 70 x 200 x 3 mm thick - 2 nos. for each piece of 2.5 m ladder complete with necessary accessories such as reducer, horizontal elbow & tee, up & down vertical elbow & bends, cross piece complete.</p> <p>2) Provision for resting arrangement or support for perforated type cable tray shall be made separately as per required iron work.</p> <p>3) Provision of cover for perforated type cable tray shall be made only where it is absolutely necessary and make sure for locking arrangement.</p> <p>4) Both type of cable trays shall be earthed properly.</p>				
15	Supply, installation, testing and commissioning of 2 core x minimum 1 sq mm shielded Copper control/communication cabling with saddles/ supports/fittings & hard PVC conduits to connect outdoor units with respective indoor units & remote controller units. Shield to be grounded on both ends for each circuit.	Rmt	600.00	150.00	90,000.00
	CABLES FOR ODU / IDU				
16	Supply, Installation, Testing & Commissioning of the XLPE insulated armoured cable, to suit ODUs of VRF	Rmt	120.00	1,572.00	1,88,640.00
17	Supply, Installation, Testing & Commissioning of the Cable & FRLS conduit for providing power supply to the indoor unit. Cable rating to be as recommended by the unit manufacturer.	Rmt	110.00	264.00	29,040.00
18	SITC Of g modular type 3 pin 6 / 16A multi socket with safety shutter, duly erected on provided plate and box with wiring connections complete.	Each	22.00	176.00	3,872.00
	Note :- Copper piping , cabling , drain piping qty shall be as per final approved shop drawing.				
B	SECTION-II TFA /AHU (FLOOR MOUNTED/CEILING SUSPENDED)				
	AIR HANDING UNITS				
1	<p>Supply, installation, loading, unloading testing and commissioning of 50mm thick sandwiched Rockwool Insulation Of 48 kg/m³ density with outer skin 0.80mm (Pre Coated GSS) & Inner Skin as 0.80mm Aluzinc sheet with draw thru type EUROVENT CERTIFIED (FLOOR MOUNTED) AIR HANDLING UNITS WITH EC FAN with Thermal Break Profile as per specification & All AHU to have EC fans each complete with air mixing chamber, MERV 8 pre-filter, refrigerent coil (R410a/R407c) min 6 Row Deep DX coil for AHU as per computerized coil selection. The coil to be of copper tube & aluminium fins construction. The unit shall also consists IE-5 rating DC Motor , EC fan, and vibration isolators, coil size shall be selected for a maximum face velocity of 500 feet/minute and total static pressure shall be as indicated. Each EC fan shall be with DC motor, insulation class 'F', motor shall be suitable for 415±10% volts, 50 cycles, 3 phase AC supply. Fan motor assembly (as whole) shall be statically and dynamically balanced to grade G 6.3 as per ISO-1940/AMCA 2 or 3. All units shall be complete with opposed blade AMCA Certified 500D volume control dampers at outlet, return air damper and fresh air connections with volume control damper. The panel and insulation thickness of the units to be as per tender specifications.</p> <p>Exposed units shall be supplied with all weather proof protection with G.I. Canopy and 2 layers of anti corrosive red oxide paint.</p>				
	nel shall be capable to integrate with BMS for Auto / Manual / ON / OFF and TRIP status.along with Auto and Manual operations from BMS.				

S. NO.	PARTICULARS	UNIT	TOTAL	Rate	Amount
	All the motors of fans shall be of class IE5				
	AHU Coil Selection ADP : As mentioned Below				
	Maximum fan outlet velocity : 550 m/min				
	Maximum velocity of air across cooling coils and filter : 2.5 m/s				
	Motor speed : 1450 rpm				
	AIR HANDLING UNITS (Motor Static mentioned below are indicative. Contractor to carry out static pressure calculations, select motor accordingly and submit for Consultant's review before procurement)				
1.1	AHU (Floor mounted)	Nos	2.00	6,48,000.00	12,96,000.00
	Type :AIR HANDLING UNIT (2ND FLOOR HALL/TRIUM AREA)				
	Capacity : 27.6 TR				
	Total Air Qty : 8100 CFM				
	Fresh air Qty:- 2100 CFM				
	ESP : 75 mm Wg (Contractor to carry out static pressure calculations and submit for Consultant's approval before procurement)				
	No of Rows : Minimum 6 Row DX coil or as per coil selection software				
	Entering air condition: DB 79.5 deg f / WB 66.3 deg f				
	Leaving air condition : DB 53.4 deg f / WB 52.3 deg f				
	Outdoor Air condition: DB 95.2 deg f / WB 73.9 deg f				
	Filters : MERV 8				
	(Air mixing chamber With FA & RA Volume control dampers) & Thermal Brake : YES				
	Complete with EC fan controller and compatible with BMS.				
	AHU Outlet shall have Fire retardant canvass connection, GI Volume control damper and Motorised Fire Damper				
2	Supply, installation, loading, unloading testing and commissioning of 50mm thick sandwiched Rockwool Insulation Of 48 kg/m ³ density with outer skin 0.80mm (Pre Coated GSS) & Inner Skin as 0.80mm Aluzinc sheet with draw thru type EUROVENT CERTIFIED (CEILING SUSPENDED/FLOOR MOUNTED) TREATED FRESH AIR HANDLING UNITS WITH EC FAN with Thermal Break Profile as per specification & All TFA to have EC fans each complete with air intake chamber, MERV 8 pre-filter, refrigerent coil (R410a/R407c) min 6 Row Deep DX coil for TFA as per computerized coil selection. The coil to be of copper tube & aluminium fins construction. The unit shall also consists IE-5 rating DC Motor , EC fan, and vibration isolators, coil size shall be selected for a maximum face velocity of 500 feet/minute and total static pressure shall be as indicated. Each EC fan shall be with DC motor, insulation class 'F', motor shall be suitable for 415±10% volts, 50 cycles, 3 phase AC supply. Fan motor assembly (as whole) shall be statically and dynamically balanced to grade G 6.3 as per ISO-1940/AMCA 2 or 3. All units shall be complete with opposed blade AMCA Certified 500D volume control dampers at outlet. Each TFA to have motorized volume control damper to regulate the fresh air intake based on the demand.				
	All the motors of fans shall be of class IE5				
	AHU/TFA Coil Selection ADP : As mentioned Below				
	Maximum fan outlet velocity : 550 m/min				
	Maximum velocity of air across cooling coils and filter : 2.5 m/s				
	Motor speed : 1450 rpm				

S. NO.	PARTICULARS	UNIT	TOTAL	Rate	Amount
	TREATED FRESH AIR UNITS (Motor Static mentioned below are indicative. Contractor to carry out static pressure calculations, select motor accordingly and submit for Consultant's review before procurement)				
2.1	TREATED FRESH AIR UNIT (Ceiling suspended)	Nos	2.00	2,56,000.00	5,12,000.00
	Type :TREATED FRESH AIR UNIT-GROUND & FIRST FLOOR				
	Total Air Qty : 3200 CFM				
	ESP : 50 mm Wg (Contractor to carry out static pressure calculations and submit for Consultant's approval before procurement)				
	No of Rows : Minimum 6 Row DX coil or as per coil selection software				
	Entering air condition: DB 95.2 deg f / WB 73.9 deg f				
	Leaving air condition : DB 52 deg f / WB 51.0 deg f				
	Filters : MERV 8				
	(Air intake chamber, With FA Volume control dampers) & Thermal Brake : YES				
	Complete with EC fan controller and compatible with BMS.				
	AHU/TFA Outlet shall have Fire retardant canvass connection, GI Volume control damper and Motorised Fire Damper				
2.2	TREATED FRESH AIR UNIT (Ceiling suspended)	Nos	2.00	1,20,000.00	2,40,000.00
	Type :TREATED FRESH AIR UNIT-SECOND AND THIRD FLOOR				
	Total Air Qty : 1000 CFM				
	ESP : 50 mm Wg (Contractor to carry out static pressure calculations and submit for Consultant's approval before procurement)				
	No of Rows : Minimum 6 Row DX coil or as per coil selection software				
	Entering air condition: DB 95.2 deg f / WB 73.9 deg f				
	Leaving air condition : DB 52 deg f / WB 51.0 deg f				
	Filters : MERV 8				
	(Air intake chamber, With FA Volume control dampers) & Thermal Brake : YES				
	Complete with EC fan controller and compatible with BMS.				
	AHU/TFA Outlet shall have Fire retardant canvass connection, GI Volume control damper and Motorised Fire Damper				
2.3	TREATED FRESH AIR UNIT (Ceiling suspended)	Nos	1.00	1,20,000.00	1,20,000.00
	Type :TREATED FRESH AIR UNIT-FOURTH FLOOR				
	Total Air Qty : 800 CFM				
	ESP : 50 mm Wg (Contractor to carry out static pressure calculations and submit for Consultant's approval before procurement)				
	No of Rows : Minimum 6 Row DX coil or as per coil selection software				
	Entering air condition: DB 95.2 deg f / WB 73.9 deg f				
	Leaving air condition : DB 52 deg f / WB 51.0 deg f				
	Filters : MERV 8				

S. NO.	PARTICULARS	UNIT	TOTAL	Rate	Amount
	(Air intake chamber, With FA Volume control dampers) & Thermal Brake : YES				
	Complete with EC fan controller and compatible with BMS.				
	AHU/TFA Outlet shall have Fire retardant canvas connection, GI Volume control damper and Motorised Fire Damper				
2.4	TREATED FRESH AIR UNIT (Ceiling suspended)	Nos	1.00	1,20,000.00	1,20,000.00
	Type :TREATED FRESH AIR UNIT-FIFTH FLOOR				
	Total Air Qty : 700 CFM				
	ESP : 50 mm Wg (Contractor to carry out static pressure calculations and submit for Consultant's approval before procurement)				
	No of Rows : Minimum 6 Row DX coil or as per coil selection software				
	Entering air condition: DB 95.2 deg f / WB 73.9 deg f				
	Leaving air condition : DB 52 deg f / WB 51.0 deg f				
	Filters : MERV 8				
	(Air intake chamber, With FA Volume control dampers) & Thermal Brake : YES				
	Complete with EC fan controller and compatible with BMS.				
	AHU/TFA Outlet shall have Fire retardant canvas connection, GI Volume control damper and Motorised Fire Damper				
C	SECTION-III CHW PIPING AND VALVES				
	INSULATED CHILLED WATER PIPING (NITRILE RUBBER INSULATION):				
	Supply, installation, testing & commissioning of exposed on wall faces, floor, shaft & Terrace following sizes of Lead Free polyfusion welded Polypropylene Random Pipes SDR-7.4 (PN16) conforming to IS 15801 suitable for chilled water supply of Temperature ranges from 7 to 12 deg C. including provision of all fittings rating of SDR-7.4 (PN16) such as elbows, Tees, unions, reducers, supports etc. as per IS 15801, cutting of pipes, jointing with polyfusion welding Arrangments and equipments as per manufacturers specifications & Instructions , hydraulic testing, including holes in walls, slabs etc. provision of GI Brackets & Clamps with rubber seal and making good the damages by bringing them to good original condition, etc. complete as directed by the engineer-in-charge. Properties of Pipe material (PPR) material shall be as follows. 1. Density at 23 deg C:- 0.909 g/cm ³ 2. Coefficient of thermal conductivity : 0.21W/m °C 3. Coeff. of linear thermal expansion : 0.12 mm/m °C Insulated with Closed Cell Elastomeric Nitrile Rubber (NBR) laminated with UV resistant polymeric based non-metallic covering. The Covering material shall be of 380 ± 20 GSM as per ASTM D 646 and 380 - 400 microns as per ASTM E 252. The thermal conductivity of insulation material shall not exceed 0.035 W/(m.K) at mean temperature of 0 deg C as per EN 12667. The insulation material shall be fire rated Class O as per BS 476 Part 6:1989 for fire propagation test and Class 1 as per BS 476 Part 7, 1987 for surface spread of flame. Density of insulation material shall be between 40 to 55 Kg/m ³ . The Insulation material shall be Moisture Diffusion Resistance Factor or 'μ' value of insulation material shall be minimum 7,000 without any external barrier as per EN 12086. Adhesives to be GRIHA/IGBC compliant. Installation should be as per manufacturers SOP.				
1	160 mm dia (25 mm thick insulation)	Meter	QR		
1.1	110mm dia (25 mm thick insulation)	Meter	150.00	5,080.00	7,62,000.00
1.2	90 mm dia (25 mm thick insulation)	Meter	50.00	4,205.00	2,10,250.00

S. NO.	PARTICULARS	UNIT	TOTAL	Rate	Amount
	75 mm dia (25 mm thick insulation)	Meter	20.00	4,000.00	
	63 mm dia (25 mm thick insulation)	Meter	QR		
	50 mm dia (19 mm thick insulation)	Meter	QR		
	40 mm dia (19 mm thick insulation)	Meter	QR		
	32 mm dia (19 mm thick insulation)	Meter	QR		
	25 mm dia (19 mm thick insulation)	Meter	QR		
	20 mm dia (19 mm thick insulation)	Meter	QR		
	All insulated CHW piping to have 26 G aluminium cladding with all the supports and above rates shall be inclusive of cost of cladding.				
	support with PUF gutti at every 1 meter for 75mm and less dia pipe and 1.5 meter for higher than 75 mm dia				
	Supplying, laying/ fixing, testing and commissioning of following nominal sizes of M.S. chilled water piping inside the building (with necessary clamps, vibration isolators and fittings but excluding valves, strainers, gauges etc.) Insulated with Closed Cell Elastomeric Nitrile Rubber (NBR) laminated with UV resistant polymeric based non-metallic covering. The Covering material shall be of 380 ± 20 GSM as per ASTM D 646 and 380 - 400 microns as per ASTM E 252. The thermal conductivity of insulation material shall not exceed 0.035 W/(m.K) at mean temperature of 0 deg C as per EN 12667. The insulation material shall be fire rated Class O as per BS 476 Part 6:1989 for fire propagation test and Class 1 as per BS 476 Part 7, 1987 for surface spread of flame. Density of insulation material shall be between 40 to 55 Kg/m ³ . The Insulation material shall be Moisture Diffusion Resistance Factor or 'μ' value of insulation material shall be minimum 7,000 without any external barrier as per EN 12086. Adhesives to be GRIHA/IGBC compliant. Installation should be as per manufacturers SOP.				
	Note:-The Pipes of sizes 150 mm & below shall be M.S. class as per IS : 1239 and pipes size above 150 mm shall be welded black steel pipe heavy class as per IS: 3589, from minimum 6.35 mm thick M.S. Sheet for pipes upto 350 mm dia. and from minimum 7mm thick MS sheet for pipes of 400 mm dia and above.				
	400 mm dia. (44 mm thick insulation)	Meter	QR		
	300 mm dia. (44 mm thick insulation)	Meter	QR		
	250 mm dia. (44 mm thick insulation)	Meter	QR		
	200 mm dia. (42 mm thick insulation)	Meter	QR		
	150 mm dia (42 mm thick insulation)	Meter	QR		
	125 mm dia (42 mm thick insulation)	Meter	QR		
	100 mm dia (38 mm thick insulation)	Meter	QR		
	80 mm dia (38 mm thick insulation)	Meter	QR		
	65 mm dia. (32 mm thick insulation)	Meter	QR		
	50 mm dia. (32 mm thick insulation)	Meter	QR		
	40 mm dia. (32 mm thick insulation)	Meter	QR		
	32 mm dia. (32 mm thick insulation)	Meter	QR		
	25 mm dia. (25 mm thick insulation)	Meter	QR		
	20 mm dia. (25 mm thick insulation)	Meter	QR		
	All insulated CHW piping to have 26 G aluminium cladding with all the supports and above rates shall be inclusive of cost of cladding.				

S. NO.	PARTICULARS	UNIT	TOTAL	Rate	Amount
	Supply, installation, testing and commissioning of flexible connections of PN 16 pressure rating to be installed at chiller inlet & outlet, pump suction & discharge and AHU/CSU/TFA inlet & outlet CHW pipes and at pipes crossing building expansion joints.				
	250 mm Dia	Nos	QR		
	200 mm Dia	Nos	QR		
	150 mm Dia	Nos	QR		
	125 mm Dia	Nos	QR		
1.3	100 mm Dia	Nos	7.00	8,102.00	56,714.00
1.4	80 mm Dia	Nos	7.00	6,670.00	46,690.00
	50 mm Dia	Nos	QR		
2	INSULATED VALVES				
	Supplying, fixing, testing and commissioning of following valves, strainers, gauges in the chilled water plumbing duly insulated to the same specifications as the connected piping and adequately supported as per specifications				
	SITC of Fully Lugged Insulated BUTTERFLY VALVE (MANUAL) with C.I body SS Disc, Nitrile Rubber Seal & O-Ring PN 16 pressure rating for chilled water/hot water circulation as specified				
	250 mm dia	Nos	QR		
2.1	100 mm dia	Nos	8.00	6,645.00	53,160.00
2.2	80 mm dia	Nos	6.00	5,390.00	32,340.00
	65 mm dia	Nos	QR		
3	BALL VALVES : (INSULATED)				
	Supply, installation, testing and commissioning of S S Ball Valves of approved make (PN16 rating) complete as per technical specifications.				
	Ball valves related to FCUs and AHUs shall be considered with strainers only. AHU shall have Isolation valve, Strainer, thermowell with Temp. Gauge, Pressure Gauge with Syphon at Supply line and Isolation valve with Actuator with bypass line, thermowell with Temp. Gauge, Pressure Gauge with Syphon at Return line.				
	50 mm Dia	Nos	QR		
3.1	40 mm Dia	Nos	5.00	3,000.00	
3.2	32 mm Dia	Nos	5.00	2,800.00	
	25 mm Dia	Nos	QR		
	20 mm Dia	Nos	QR		
	BALL VALVES WITH STRAINER : (INSULATED)				
	Supply, installation, testing and commissioning of S S Ball Valves with Strainer of approved make (PN16 rating) complete as per technical specifications.				

S. NO.	PARTICULARS	UNIT	TOTAL	Rate	Amount
	Ball valves related to FCUs and AHUs shall be considered with strainers only. AHU shall have Isolation valve, Strainer, thermowell with Temp. Gauge, Pressure Gauge with Syphon at Supply line and Isolation valve with Actuator with bypass line, thermowell with Temp. Gauge, Pressure Gauge with Syphon at Return line.				
	50 mm Dia	Nos	QR		
	40 mm Dia	Nos	QR		
	32 mm Dia	Nos	QR		
	25 mm Dia	Nos	QR		
	20 mm Dia	Nos	QR		
	SITC Of Y - STRAINER of Ductile CI Body flanged ends with stainless steel strainer for chilled water circulation including insulation as specified				
4					
	250 mm dia	Nos	QR		
	150 mm dia	Nos	QR		
	125 mm dia	Nos	QR		
	100 mm dia	Nos	QR		
	80 mm dia	Nos	QR		
	65 mm dia	Nos	QR		
	FULLY LUGGED MOTORISED BUTTERFLY VALVES WITH ACTUATOR : (INSULATED)				
	Supply, installation, testing and commissioning of Fully Lugged Butterfly Valves of approved make (PN16 rating) complete with mating flanges, gaskets, flow control and accessories require to complete the installation. All chilled water butterfly valves to have an extended stem.HVAC contractor to carry out all the electrical wiring required for the valve.				
	250 mm dia	Nos	QR		
	125 mm dia	Nos	QR		
4.1	80 mm dia	Nos	3.00	38,286.00	1,14,858.00
	SITC Of BALANCING VALVE WITH BUILT IN MEASURING FACILITY with C I body flanged construction with EPDM coated disc with long pitch with protected out pipe insulation & PN 16 pressure rating for chilled / hot water circulation as specified.				
	250 mm dia	Nos	QR		
	125 mm dia	Nos	QR		
	80 mm dia	Nos	QR		
	BALL VALVES (FOR DRAIN) : (INSULATED)				
	Supply, installation, testing and commissioning of Ball Valves of approved make (PN16 rating) complete as per technical specifications.				
	32 mm Dia	Nos	QR		
	25 mm dia	Nos	QR		

S. NO.	PARTICULARS	UNIT	TOTAL	Rate	Amount
	SITC Of NON - RETURN VALVE /SWING CHECK VALVE with duel plate of C I body SS plates vulcanized NBR seal flanged end & PN 16 pressure rating for chilled / hot water circulation including insulation as specified.				
	250 mm dia	Nos	QR		
	125 mm dia	Nos	QR		
	PIBCV VALVES WITH ACTUATOR (INSULATED)				
	Supply, Installation, testing and commissioning of Pressure independent type 2 way Balancing and modulating Control valves in a single Unit of Valve as per specifications. The PICV valve for the AHU / CSU shall be suitable for 24V AC power supply, valve price to include 240/24V transformer, complete with installation and interconnecting copper piping along with actuator, controller and transformer for the valves. The valves shall be PN16 Rating. DN 15 to DN 32 Brass Body Ext. Threaded. DN 40 & DN 50 Cast Iron Body, Ext. Threaded. DN 65 to DN 250 Cast Iron body, flanged connection. Duly mounted with Spring Return Modulating actuator IP42/54 Accordingly type suitable for 24V AC. Quoted price to include power supply panel (with IP 44 Enclosure) consisting of 230V Incomer, 230V/24V AC supply for PICV Valve and thermostat, along with supply & installation of 10mtr of power cabling and earthing from the transformer to the valve actuator. BMS connectivity shall be there for Actuator set point from BMS system.				
	80 mm Dia	Nos	QR		
	65 mm Dia	Nos	QR		
	50 mm Dia	Nos	QR		
	40 mm Dia	Nos	QR		
	32 mm Dia	Nos	QR		
	25 mm Dia	Nos	QR		
	20 mm Dia	Nos	QR		
	CONDENSER WATER PIPING :				
	SITC Of Chilled water piping with M.S. Class 'C' pipe as per IS code: 1239 (upto 6") & IS: 3589 (above 6") & pipe thickness should not be less than 6 mm, complete with all accessories such as bends, elbows, flanges, nutbolts, air purging valves, descaling tee, M.S. channel angle, rod supporting work & suitable sizes of PUF pipe saddle, support to be provided at pipe hangers and supports. Piping + supports to have two coats of primer. Quoted rate to include pedestal support for outdoor installations.				
	450 mm	Rmt	QR		
	400 mm	Rmt	QR		
	350 mm	Rmt	QR		
	300 mm	Rmt	QR		
	250 mm	Rmt	QR		
	200 mm	Rmt	QR		
	150 mm	Rmt	QR		
	125 mm	Rmt	QR		
	100 mm	Rmt	QR		
	50mm	Rmt	QR		
	FULLY LUGGED BUTTERFLY VALVES				
	Supply, installation, testing and commissioning of Fully Lugged Butterfly Valves of approved make (PN16 rating) complete with matching flanges, gaskets, flow control and accessories require to complete the installation. (Butterfly valve to have S.S spindle, rubber seat, bronze disc and M.S. flange.)				

S. NO.	PARTICULARS	UNIT	TOTAL	Rate	Amount
	Butterfly valves upto 6" dia. -- Lever Operated				
	8" and above -- Gear operated.				
	400 mm Dia	Nos	QR		
	350 mm Dia	Nos	QR		
	250 mm Dia	Nos	QR		
	200 mm Dia	Nos	QR		
	150 mm Dia	Nos	QR		
	100 mm Dia	Nos	QR		
	80 mm Dia	Nos	QR		
	65 mm Dia	Nos	QR		
	50 mm Dia	Nos	QR		
	SITC Of Y - STRAINER of Ductile CI Body flanged ends with stainless steel strainer for condenser water circulation				
	250 mm Dia	Nos	QR		
	200 mm Dia	Nos	QR		
	150 mm Dia	Nos	QR		
	FULLY LUGGED MOTORISED BUTTERFLY VALVES WITH ACTUATOR (ON-OFF TYPE)				
	Supply, installation, testing and commissioning of Fully Lugged Butterfly Valves of approved make (PN16 rating) complete with matching flanges, gaskets, flow control and accessories require to complete the installation. All chilled water butterfly valves to have an extended stem.				
	HVAC contractor to carry out all the electrical wiring required for the valve.				
	250 mm Dia	Nos	QR		
	200 mm Dia	Nos	QR		
	150 mm Dia	Nos	QR		
	MANUAL BALANCING VALVES				
	Supply, installation, testing and commissioning of Manual Balancing Valves of approved make (PN16 rating) complete with all accessories require to complete the installation.				
	250 mm Dia	Nos	QR		
	200 mm Dia	Nos	QR		
	150 mm Dia	Nos	QR		
	SITC Of NON RETURN VALVE (PN 16 rating)				
	250 mm Dia	Nos	QR		
	200 mm Dia	Nos	QR		
	BALL VALVES (FOR DRAIN) :				
	Supply, installation, testing and commissioning of Ball Valves of approved make (PN16 rating) complete as per technical specifications.				
	32 mm Dia	Nos	QR		
	25 mm dia	Nos	QR		

S. NO.	PARTICULARS	UNIT	TOTAL	Rate	Amount	
5	PRESSURE GUAGES WITH BALL VALVE					
	SITC Of Pressure gauges with plastic coated syphon tube & ball valve 1/2" dia., range 0 to 10 Kg/cm2, Stainless steel or Brass stem. (SS syphon tube, liquid filled gauge)					
5.1	4" dia	Nos	12.00	4,508.00	54,096.00	
6	TEMPERATURE GUAGES					
	SITC Of 4" Dia Stainless Steel bulb with thermowell and other accessories for chiller inlet & outlet					
6.1	Temp. Range 0 to 50° C	Nos	6.00	2,964.00	17,784.00	
7	SITC Of 4" Dia Stainless Steel bulb with thermowell and other accessories for Chilled water Header					
7.1	Temp. Range 0 to 50° C	Nos	2.00	2,964.00	5,928.00	
8	Supplying, installing, testing and commissioning of PVC open type chilled water expansion tank suitable for total volume of water in chilled water circuits along with necessary accessories etc. Suitable for 1000 Liter capacity. Tank to be insulated with 25mm thick nitrile rubber and aluminum cladding of 24 G. Note:- Contactor to workout the expansion tank capacity as per final shop drawing, and needs to submit calculation and TDS of the same before ordering.	No	1.00	50,000.00	50,000.00	
D	SECTION-III VENTILATION FANS					
1	CABINET TYPE FANS FOR EXHAUST AIR(TOILET EXHAUST)					
	Supply, installation, testing & commissioning of single skin Cabinet type Inline fans for Exhaust Air suitable for installing in any position in the vertical or horizontal ducts. The casing shall be constructed of galvanised steel . The fan shall be DIDW with forward/Backward curved impeller fitted with maintenance free external rotor motor. The motor shall be suitable for 415+10% volts, 50 cycles , 3 phase AC supply or 220 + 10% volt single phase 50 cycles AC supply. In addition all fresh air fans shall be provided with prefilters & necessary accessories to mount the filters. All exposed fan shall be provided with 20 Gauge GI canopy weather proof anti corrosion protection with two layer of epoxy paint.					
1.1	Toilet Exhaust Air Fan for Toilet	2400 CFM @ mm wg Static Pr.20	Nos	6.00	38,995.00	2,33,970.00
	PRESSURIZATION FANS					
2	TUBE AXIAL FANS FOR STAIRCASE PRESSURIZATION					
	Supplying, installing, testing and commissioning of axial fans. Motors shall be suitable for 415+10% volts, 50 cycles , 3 phase AC supply with IP 55 protection, static pressure shall be as indicated. Each fan shall be with TEFC squirrel cage induction motors, all fan shall be with flexible fire proof connection & safety wire mesh (factory fitted) at inlet and outlet. Suitable spring isolators to provided along with the fans. Spring mount Isolater to have Efficiency of above 90%. Quoted price to include MS structural work required for mounting the fans as indicated in the drawing. All fans to have IE 3 motors.					
	TUBE AXIAL FANS (STAIRCASE-01 PRESSURIZATION FAN)					
2.1	CFM : 15500 CFM @ 10 mmWG		Nos.	1.00	1,05,060.00	1,05,060.00
	Mode :-Fire					
	Dia :-1000 mm					
	RPM :-1450					

S. NO.	PARTICULARS	UNIT	TOTAL	Rate	Amount
	Power :-4.0 Kw				
	Noise Level @ 3 MTR :- 79 dB(A)				
	Efficiency :- 65%				
	Note-Contractor shall check out static Pressure calculation based on actual site conditions and submit to consultant approval before procurement.				
E	SECTION-IV AIR DISTRIBUTION				
1	Rectangular / Round Ducting				
	SITC Of Air distribution rectangular ducting made out of G.S. sheet including collars, conforming to IS 277 including bracing, flanges, turning vanes, fastners, rivets, gaskets, nuts & bolts, etc. as per specifications. All exposed ducting shall have 2 finish coats of approved color, conforming to relevant BIS Codes.				
1.1	Duct Size 0 - 750 mm : 24 Gauge	sqm	400.00	800.00	3,20,000.00
1.2	Duct Size 751 - 1500 mm : 22 Gauge	sqm	200.00	950.00	1,90,000.00
1.3	Duct Size 1501-2250 mm : 20 Gauge	sqm	20.00	1,350.00	27,000.00
	2251 mm & Above : 18 Gauge	sqm	QR	2,005.00	
	Flat Oval Ducting				
	SITC Of Factory fabricated, Air distribution ducting made out of G.S. sheet including collars, classVIII conforming to IS 655 including supports, bracing, flanges, turning vanes, fasteners, rivets, gaskets, nuts & bolts, etc. complete at every 2.4 m c/c & at bends etc. as per specifications. All exposed to view Flat oval ducts to be painted externally as per approved colour shade, as per the interior design. With internal Thermal insulation of thickness 19 mm for ducting shall be Closed Cell Elastomeric Nitrile Rubber (NBR) laminated with 7 mils/200 GSM Glass Cloth. The thermal conductivity of insulation material shall not exceed 0.035 W/(m.K) at mean temperature of 0 deg C as per EN 12667. The insulation material shall be fire rated Class O as per BS 476 Part 6:1989 for fire propagation test and Class 1 as per BS 476 Part 7, 1987 for surface spread of flame. Density of insulation material shall be between 40 to 55 Kg/m ³ . The Insulation material shall be Moisture Diffusion Resistance Factor or 'μ' value of insulation material shall be minimum 7,000 without any external barrier as per EN 12086. Adhesives to be GRIHA/IGBC compliant.				
2	Installation should be as per manufacturers SOP.				
	Major axis				
2.1	0 - 600 mm : 24 Gauge	sqm	500.00	2,000.00	10,00,000.00
2.2	601 - 1200 mm : 22 Gauge	sqm	350.00	2,200.00	7,70,000.00
	All insulated ducting exposed to ambient to have 26 G aluminum cladding with supporting structure.	sqm	QR		
	Supply, Installation, testing and commissioning of Thermal insulation for ducting, the material shall be Closed Cell Elastomeric Nitrile Rubber (NBR) laminated with >90% pure 12 microns ALU Foil. The thermal conductivity of insulation material shall not exceed 0.035 W/(m.K) at mean temperature of 0 deg C as per EN 12667. The insulation material shall be fire rated Class O as per BS 476 Part 6:1989 for fire propagation test and Class 1 as per BS 476 Part 7, 1987 for surface spread of flame. Density of insulation material shall be between 40 to 55 Kg/m ³ . The Insulation material shall be Moisture Diffusion Resistance Factor or 'μ' value of insulation material shall be minimum 7,000 without any external barrier as per EN 12086. Adhesives to be GRIHA/IGBC compliant.				
3	Installation should be as per manufacturers SOP.				
3.1	19 MM Thick	Sqmt	400.00	500.00	2,00,000.00

S. NO.	PARTICULARS	UNIT	TOTAL	Rate	Amount
	Supply, Installation, testing and commissioning of Acoustic insulation material for ducting, the material shall be Open Cell Elastomeric Nitrile Rubber (NBR) with density of acoustic insulation material shall be within 140-180 Kg/m ³ . Thermal conductivity of insulation material shall not exceed 0.047 W/(m.K) at mean temperature of 20°C as per EN 12667. The insulation material shall be Class 1 as per BS 476 Part 7, 1987 for surface spread of flame & UL 94 (HB, V-0) in accordance to UL 94, 1996. The acoustic insulation material shall have Microban®* antimicrobial product protection and shall pass Fungi / Mould Resistance as per DIN EN ISO 846 method A and Bacterial Resistance as per DIN EN ISO 846 method C, from an independent testing agency. The acoustic insulation material shall have good sound absorption, damping and barrier properties. The acoustic insulation material shall be dust and fibre free Adhesives to be GRIHA/IGBC compliant. Installation should be as per manufacturers SOP.				
4.1	15 MM Thick	sqm	220.00	900.00	1,98,000.00
	SITC Of Walls and ceiling of air handling unit rooms may be provided with acoustic lining. Material shall be processed from Nitrile rubber open cell foam. The material should be fibre free. The density of the same shall be 140-180 Kg/m ³ . The material should have thermal conductivity not exceeding 0.05 W/Mk. The maximum surface temperature of material shall withstand is 1050C. and minimum temp shall be -200C. Thickness shall be as specified. The material should confirm to class 1 rating for surface spread of flame as per BS 476 Part 7 & HBF, HF1 & FH 2 in accordance with UL 94, 1996. Thickness shall be as specified. Surface shall be cleaned and two coats of adhesive recommended by the manufacturer should be applied on the walls. The foam sheets should be cut to required size and a layer of adhesive should also be applied to it. When it is tack dry it is stuck to the walls / ceiling. All longitudinal and transfer joint shall be covered with 22-gauge 50 mm wide GI strip with screws. Acoustic lining of walls shall be terminated approximately 15 cm above the finished floor to prevent damage to insulation due to accidental waterlogging in plant/AHU / fan rooms.	sqm			
5.1	25 MM Thick	sqm	150.00	1,500.00	2,25,000.00
	Supply, installation, testing and commissioning of under deck insulation as per specifications. Material shall be 25 mm thick nitrile rubber insulation. Vendor's datasheet to be submitted for final approval. (19th floor ceiling)	Sqmt	QR		
6	Supply, installation, testing and commissioning of flexible connections constructed of fire resistant rexin material, as per approved shop drawing. The Flexible Duct Connector consisting of a flame retardant fabric, secured to galvanized sheet metal on either side by a double lock seam inserted between the equipment / air duct and the ductwork to provide a wear resistant Air tight flexible connection to eliminate vibrations, noise and rattles.(with zipper chain)	Sqmt	35.00	3,952.00	1,38,320.00
7	Supplying & fixing of powder coated extruded aluminium Supply/Exhaust/Fresh Air Grills with aluminium volume control dampers as per specifications.	Sqmt	20.00	5,000.00	1,00,000.00
8	SITC Of supply air square diffusers of powder coated aluminium with OBD (aluminum volume control collar damper (Colour shall be as per Arch req) as per specifications complete as required. All diffusers to have flange size 600mmX600mm to suite type grid ceiling Diffuser size 375 X 375 mm				
8.1	Neck Size 300 X 300 MM	Nos.	39.00	2,353.00	91,767.00
	Diffuser size 225 X 225 mm				
8.2	Neck Size 150 X 150 MM	Nos.	30.00	1,914.00	57,420.00

S. NO.	PARTICULARS	UNIT	TOTAL	Rate	Amount
	SITC Of return air square diffusers as per specifications complete as required.				
	All diffusers to have flange size 600mmX600mm to suite grid ceiling	sqmt	QR		
	SITC Of supply air Round diffusers of powder coated aluminium with OBD (aluminum volume control collar damper 9 (Colour shall be as per Arch req) as per specifications complete as required.				
	All diffusers to have flange size 600mmX600mm to suite grid ceiling				
9.1	Neck Size Ø 300 MM (12 inch)	Nos.	143.00	2,056.00	2,94,008.00
	Supply, Installation, Testing and balancing of powder coated extruded aluminum Slot Diffusers. Each slot to have a 10 180 degree adjustable air pattern controller.				
	1 slot diffusers (1" slot width)	Rmt	QR		
10.1	2 slot diffusers (1" slot width)	Rmt	30.00	1,433.00	42,990.00
10.2	3 slot diffusers (1" slot width)	Rmt	QR		
	Supply, installation, testing and balancing of aluminum hit & miss type damper anodized in matt black shade in accordance with the approved shop drawings and specifications. The damper to be at the rear of the slot diffuser and separate for each individual slot. The dampers should be such that it can be operated from the front face of the slot diffuser and provides the flexibility of modulating the air flow in each slot individually as per site requirements				
11	Damper for 1 slot diffuser (1" slot width)	Nos	QR		
11.1	Damper for 2 slot diffuser (1" slot width)	Nos	18.00	1,649.00	29,682.00
	Damper for 3 slot diffuser (1" slot width)	Nos	QR		
	Supply, installation, testing & commissioning of flexible ducts with inner and outer skin with Metallised polyester & 12 helical spring sandwiched in between along with clamps & accessories.				
	SITC of Insulated flexible ducts with 25 mm thick fiber glass insulation between the inner and outer skin:				
	150 mm Dia Insulated Flexible Ducting	Rmt	QR		
12.1	250 mm Dia Insulated Flexible Ducting	Rmt	18.00	426.00	7,668.00
	SITC Of factory fabricated Plenum boxes for slot diffusers constructed with 22 gauge GI sheets with single / double 13 inlet connections as per approved drawings, sizes as mentioned below:				
13.1	W 250 mm x H 325mm	Rmt	25.00	4,120.00	1,03,000.00
	Supply, installation, testing and balancing of aluminum volume control damper anodized in matt black shade in 14 accordance with the approved shop drawings and specifications	Sqmt	10.00	3,500.00	35,000.00
	Supply, installation, testing and balancing of aluminum volume control collar damper anodized in matt black shade 15 in accordance with the approved shop drawings and specifications.	Sqmt	QR		
	Supplying, installing, testing and commissioning of Powder coated extruded aluminum, non vision air transfer door 15 grilles, with flange at both side as per approved shop drawing.	Sqmt	5.00	3,500.00	17,500.00
	Supply, installation, testing and comissioning of back draft gravity dampers manufactured from high quality aluminium alloy extrusions and assembled using screw fixing, welding and soldering techniques to form a robust construction. The blade pivot mechanism shall incorporate nylon bushes and stainless steel pins to ensure maintenance free operation.	Sqmt	QR		

S. NO.	PARTICULARS	UNIT	TOTAL	Rate	Amount
	FUSIBLE LINK FIRE DAMPER				
16	Supply, installation, testing and commissioning of fire damper with fusible link and all necessary fire sleeves, other accessories as required. For item specification please refer specifications & drawings and complete the works in all respective ways. Quoted rate to include fusible links for all fire damper.	Sqmt	3.00	10,000.00	30,000.00
	Supply, installation, testing and commissioning of motorised fire damper complete with control panel, inter connecting wiring at locations shown in approved shop drawings and as per specifications. Fire Damper to be UL555S listed and to have at least 1½ hour fire rating.				
	Fire Dampers	Sqmt	QR		
	Actuators (3NM)	Nos	QR		
	Actuators (4NM)	Nos	QR		
	Actuators (10NM)	Nos	QR		
	Actuators (15NM)	Nos	QR		
	Control Panel (with IP 65 Enclosure) & Wiring	Lot	QR		
	Note : -Dampers and accessories to be suitable for smoke exhaust purpose & the panel to be capable of receiving a signal from PLC panel / Fire alarm.				
	Note :- Quantities of Ducting / dampers & insulation shall be as per final Approved shop drawings.				
F	SECTION-IV HVAC RELATED ELECTRICAL WORKS				
	Supply, installation, testing and commissioning of starter panel (IP 54 Rating) with DOL/Star Delta/VFD starter of required capacity incoming switch gear (MPCB), overload relay, control accessories like Elmex connectors, ferrules etc. with ON/OFF push button & indicating lamps (ON/OFF/TRIP), facility of control wiring for remote operation. Also potential free contacts to be provided for BMS. The panels to be designed considering 'Type 2' coordination.				
1	DOL Starter/Star Delta Starter (AHU/CSU/TFA)	Nos	QR		
1.1	4 Kw DOL Starter for staircase pressurization fan	Nos	1.00	26,000.00	26,000.00
	Note: Fan motor KW may vary as per the final fan selection.				
	STARETR FOR AHU / CSU TO BE CONSIDERED ONLY IN CASE OF PLUG FAN INSTEAD OF EC FAN				
2	L.T. Power Cables				
	Supply, handling, laying proper connections testing and commissioning of following sizes of 1.1 kV grade XLPE insulated Armoured Copper/ Aluminum conductor cables in an approved manner as required.				
	3C X 10 Sq.mm. XLPE, FRLS, Armoured Cable with Copper Conductor.	Rmt	QR		
	3C X 6 Sq.mm. XLPE, FRLS, Armoured Cable with Copper Conductor.	Rmt	QR		
2.1	3C X 4 Sq.mm. XLPE, FRLS, Armoured Cable with Copper Conductor.	Rmt	90.00	394.00	35,460.00
	3C X 2.5 Sq.mm. XLPE, FRLS, Armoured Cable with Copper Conductor.	Rmt	QR		
	L.T. Power Cables Terminations				
3	SITC of double compression type brass Cable Glands for XLPE with brass washers, rubber rings complete erected with cable ends leads including supply and erecting crimping type Cu/Al lugs confirming to IS suitable for cables evenly crimped with high pressure tools and connected to switch gear terminal with brass or cadmium plated nut bolt in an approved manner.				

S. NO.	PARTICULARS	UNIT	TOTAL	Rate	Amount
	Terminations to be carried out with double compression brass glands and suitable lugs / ferrules.				
	3C X 10 Sq.mm. XLPE, FRLS, Armoured Cable with Copper Conductor.	Nos	QR		
	3C X 6 Sq.mm. XLPE, FRLS, Armoured Cable with Copper Conductor.	Nos	QR		
3.1	3C X 4 Sq.mm. XLPE, FRLS, Armoured Cable with Copper Conductor.	Nos	18.00	206.00	3,708.00
	3C X 2.5 Sq.mm. XLPE, FRLS, Armoured Cable with Copper Conductor.	Nos	QR		
4	Earthing Conductor				
4.1	SITC of following mentioned earthing conductors connecting the following continuous earth conductors.				
	8 SWG. GI wire	Rmt	90.00	108.00	9,720.00
	6 SWG. GI wire	Rmt	QR		
				Total	2,20,29,825.00

IIT VMCC PROJECT AT, MUMBAI

INTERNAL HVAC ELECTRICAL BOQ-FOR PRIMARY VARIABLE CHW PUMPS- ELECTRICAL PANEL

Item No.	Description	Unit	QTY	SNJ Unit Price (Rs.)	
				Budgetary Rate SITC	Budgetary Amount SITC
	DISTRIBUTION BOARDS / LT PANELS				
	The rates for the distribution boards apart from the Breakers and instruments shall also include the following :				
1	This Bill of Quantities shall be read in conjunction with the technical specification, General & Special conditions as well as all tender drawings.				
2	Supporting rigid steel framework.				
3	Cubicle type, 14 gauge CRCA sheet steel enclosed.				
4	Complete with interconnections and distribution bus bars.				
5	Proper bonding to earth.				
6	Painting/lettering on Breakers and distribution boards, the location they serve, providing on each panel its circuit diagram.				
7	Providing cable clamps / supports within distribution boards cable alley.				
8	TPN ACB's / MCCB's shall mean 3 pole ACB's / MCCB's with adequate size of neutral link.				
9	All MCB's shall be of minimum 10 KA breaking capacity.				

Item No.	Description	Unit	QTY	SNJ Unit Price (Rs.)	
				Budgetary Rate SITC	Budgetary Amount SITC
10	The breaking capacity of MCCB's are mentioned panel wise. All MCCB's shall be with thermal magnetic releases upto 250 amps and microprocessor based above 250 amps capacity, unless specified otherwise.				
11	All motor feeders MCCBs shall be of motor duty.				
12	Distribution panels shall be Powder Coated with Siemens gray paint shade no. RAL-7032 of IS-5.				
13	Degree of protection for following type of distribution panel enclosure shall be as per IS:13947-1993.				
a	IP 52 for indoor panels.				
b	IP 65 for outdoor panels.				
c	IP 42 for final distribution boards.				
14	All MCCB's shall be provided with operating mechanism for door interlock.				
15	Current density of aluminium busbars shall be 0.8 A/sq mm and current density of copper shall be 1.4A/sq.mm				
16	Tinned copper / GI earth bus as specified in the BOQ shall be provided through out the length of each board.				
17	All measuring instruments (Meters) shall be of digital electronic with LED of approved make and compatible with BAS.				
18	All hinged door shall be earthed through 2.5 sq mm tinned braided copper wire.				

Item No.	Description	Unit	QTY	SNJ Unit Price (Rs.)	
				Budgetary Rate SITC	Budgetary Amount SITC
a.	All panels shall have provision of the following:				
b.	Pad locking of Switch board doors.				
c	Pad locking of MCCB's handles in "OFF" Position.				
19	2NO + 2NC potential free contacts, connectors, contactors with wiring etc are to be provided for BAS including space required for various transducers in Main Switch Board sections. Only transducers shall be supplied by BAS contractor.				
20	All MCB's used for protection of resistive and lightly inductive load shall be type "B" characteristic and inductive (motor) load shall be of type "C" characteristic and discharge lamps and UPS etc. shall be of type D characteristic.				
21	All incoming and outgoing air circuit breakers shall be placed on middle portion of the vertical in single tier formation.				
22	All PTs / control transformer shall be provided with centre tap earth secondary.				
A	LT PANEL				
	Design, fabrication, assembling, supply, installation, testing and commissioning of Main LT panel, Main Distribution Panels, Sub Distribution panels and Final Distribution panels suitable for 415 V, 3 phase, 50 Hz, 4 wire power supply system.				

Item No.	Description	Unit	QTY	SNJ Unit Price (Rs.)	
				Budgetary Rate SITC	Budgetary Amount SITC
	Panels shall be fabricated out of 2 mm thick CRCA sheet steel in cubical formation, compartmentalized in Form 3b Construction, floor mounted, free standing and shall be dust and vermin proof. 3 mm thick cable gland plate, shall be provided both at the top and the bottom of the panel.				
	Final distribution panels shall be fabricated out of 1.6 mm thick CRCA sheet steel and shall be wall mounted. All large panels shall be provided with lifting hooks. Distribution panels shall be fabricated in accordance with the specifications IS 61439 TYPE TESTED				
1	MCC PANEL TERRACE FLOOR (Outdoor Type-IP-65)	No.	1	90,000	₹ 90,000.00
A	Incoming				
	125 amps, 25kA,FP electrically operated fully drawout type air circuit breaker with built in microprocessor based release unit for protection and measurment as per specification and with following accessories :	No.	1	3,50,000	₹ 3,50,000.00
i.	0-500 volts digital electronic volt meter with selector switch through 415 V / $\sqrt{3}$: 110 V / $\sqrt{3}$ PT, primary and secondary of PT shall be protected by 2 amps TP MCB's.	Set	1	15,000	₹ 15,000.00
ii.	0-125Amps digital electronic ammeter with selector switch and 125/5 amps 15 VA, Class 1 CTs .	Set	1	60,000	₹ 60,000.00
iii.	Phase indicating light through 415 / 110 V PT, primary & secondary of PT shall be protected by 2 amps SP MCB's.	Sets	1	10,500	₹ 10,500.00
iv	Class - C, 20KA, TVSS surge arrestor(Lines to Neutral) & (Neutral to Earth) suitable for 3 phases, 4 wire.	No.	1	14,500	₹ 14,500.00
v	Load Manager conserve EM 6400 with KWH reading for Grid supply	Set	1	1,62,500	₹ 1,62,500.00
vi	Breaker ON / OFF / TRIP indicating lights with control MCB's.	Set	1	9,500	₹ 9,500.00
B	Bus Bars				

Item	Description	Unit	QTY	SNJ Unit Price (Rs.)	
No.				Budgetary Rate SITC	Budgetary Amount SITC
i	125 amps ,25kA,FP Aluminium bus bars with coloured heat shrinkable insulated sleeve.	Set			
C	Outgoing				
i	63 amps FP MCCB with VFD starter	No.	3	1,45,800	₹ 4,37,400.00
ii	63 amps FP MCCB	No.	1	48,000	₹ 48,000.00
	MCC PANEL TERRACE FLOOR	No.	1	15,000	₹ 15,000.00
	TOTAL : "A" CARRIED TO SUMMARY				₹ 12,12,400.00

Project Name: Victor Menezes Convention Center (VMCC)

Client: Indian Institute of Technology, Bombay

Building/Floor:

Revision Number:

Rev. Date: 27/03/2025

Sr. No	Equipment Type	Equipment Description	Quoted Make	Quoted Model	Qty	UoM	Unit Price	Total Price
Multipurpose Room								
3	Digital Signage Player	SITC of Digital Signage Player with two HDMI outputs, expert HTML performance, stunning 8K video and graphics and an expanded I/O package. Runs intense 3D graphics, WebGL & JavaScript, PC Class HTML Performance, Plays 8K video & graphics, Simple SSD & Wi-Fi/Bluetooth module installation with pre-installed dual antenna coax, Complete set of I/Os to craft cutting-edge interactive experiences, Includes cloud-connectivity for real-time access, Up to 8K 3D WebGL across 2 screens, 8K video decoding "8-bit at 60p, 10-bit at 30p", 4K video decoding "10-bit at 60p", Dual HD at 60p video decode, 8K video codecs: H.265, 4K Video codes: H.265, H.264, 8K Video Resolutions: 7680x4320x23.97/24/25/29.97/30/50/59.94/60p, 2 x HDMI Outputs, Serial: 3.5mm RS-232, Audio: 3.5mm Output. With 64GB Class 10 MicroSD Memory Card	BrightSign	XC2055 + SDHC-64C10-1(M)	1	EA	₹ 2,09,880	₹ 2,09,880
4	Video Reinforcement Display	SITC of 86" Professional grade display featuring 330 nits brightness, 16/7 operation hours, webOS-based High Performance, Easy Content Management/Group Management, SuperSign Control / CMS Compatibility, Built-in Speaker: 20W & Connectivity Ports: 3 x HDMI In, 1 x External Speaker Out(3.5mm Phone jack), 1 x RJ45, 1 x USB(2.0) & 1 x RS-232C (D-Sub 9pin / Phone jack)	LG	86UR640S	2	EA	₹ 2,41,680	₹ 4,83,360
5	Wall Mount for 86" Display	SITC of Heavy Duty Pop-Out Flat Screen Wall Mount. Min / Max Load: 70kg (154lbs) - 125kg (275lbs), VESA compatibility (as standard): 200 x 100 to 400 x 400, VESA compatibility (with included Adaptor Arms): up to 600 x 400, Flat to wall depth: 101mm* (4") (+/-7mm (0.3") with micro-adjustment), Popped out depth: 293mm* (11.5") (+/-7mm (0.3") with micro-adjustment).	B-Tech AV Mounts	BT8310XL	2	EA	₹ 66,780	₹ 1,33,560
6	Confidence Monitor	55" Professional grade display featuring 400 nits brightness & 16/7 operation hours, webOS-based High Performance, Easy Content Management/Group Management, SuperSign Control / CMS Compatibility, Built-in Speaker: 20W & Connectivity Ports: 3 x HDMI In, 1 x External Speaker Out(3.5mm Phone jack), 1 x RJ45, 1 x USB(2.0) & 1 x RS-232C (D-Sub 9pin / Phone jack)	LG	55UR640S	2	EA	₹ 47,064	₹ 94,128
7	Display Trolley for Confidence Monitor	Low Level Flat Screen Trolley features Max load: 70kg (154lbs), VESA compatibility: up to 600 x 400, Tilt adjustment: 0°, 22.5°, 45°, 67.5° and 90°	B-Tech AV Mounts	BT8540	2	EA	₹ 96,036	₹ 1,92,072
8	Interactive Display with Trolley	SITC of 55" Interactive UHD display with connectivity tray featuring 350 nits of brightness, Operating System: Tizen OS, Storage: 8 GB, Touch Out x 2, 1 x Audio Out, HDMI in x 3, USB 2.0x1, RJ-45 x 1, RS232 x 1	Samsung	WM55R + CY-TF65BRC + Trolley	1	EA	₹ 1,08,120	₹ 1,08,120

Sr. No	Equipment Type	Equipment Description	Quoted Make	Quoted Model	Qty	UoM	Unit Price	Total Price
9	Digital Podium	SITC of Digital Podium with 23.6" customized touch all in one PC featuring CPU: i7 , 11th Generation, Memory: 8GB, Solid State Disk: 512GB and High quality load-bearing casters: Four wheels for easy movement, Built-in gooseneck microphone, Laptop input: HDMI*1, Type-C*1, Audio*1. Bottom ports: Left output interface: HDMI, audio, USB, network port, MIC. The right side is the AC power input interface and switch. Electric powerlifting (up to 250 mm) to adjust podium height. Ports for audio, USB, VGA, HDMI, volume adjusting, height adjusting, etc. Built-in cable management and rounded handrails, Removable rack door, Small cabinet space inside rack area to keep extenders. The removable laptop computer tray x2 (at the left & right side).	EIS	ET-500XA	1	EA	₹ 3,81,600	₹ 3,81,600
10	Wireless Collaboration System	SITC of Wireless Conferencing & Presentation Device with USB-C dongle and Power Pack. Complete room solution enables secure presentation from laptops, smartphones, tablet devices, and USB Adapters using either a wired HDMI connection or a wireless connection, Integration friendly features such as HDMI input and output, dual LAN, balanced audio output, and display control via RS-232 and IR, Enables smart automation via intelligent display control, Enterprise-grade security and content encryption protects privacy and ensures compliance with IT policies, Built-in digital signage functionality with support for Appspace software and other web-based signage providers, Supports content sharing of up to four simultaneous sources for multi-user, Wireless conferencing and presentation allows for collaboration with in-room and remote participants, Wi-Fi, Bluetooth version 5.0, USB 3.0 for computer console, USB 2.0 for connecting a USB audio conferencing peripheral, USB 3.0 for connecting a USB video conferencing peripheral, HDMI Input HDCP 1.4, EDID, HDMI Output HDCP 2.2, EDID, CEC, HDMI Output Resolutions 3840x2160@60Hz (2160p60). Wireless adapter Connects to a personal device using an integrated USB-C connector, Shares content up to 4K30 resolution within seconds of connecting to a personal device, Wirelessly pairs with a Wi-Fi network, Pair up to eight Adaptors with a single Wi-Fi network, Includes backlit capacitive touch buttons, No software or driver installation required	Crestron	AM-3200-WF-I + AM-TX3-100-I + PW-2412WU	1	EA	₹ 2,86,200	₹ 2,86,200
11	USB Receiver over LAN	SITC of USB Receiver over LAN, USB over Network with Routing deliver reliable, high-speed USB signal extension and routing for USB 1.0, 1.1, and 2.0 devices throughout a home, business, or campus for distances up to 330 ft (100 m). Support Virtual Hub capabilities with up to five endpoints, Plug-and-play compatible with most types of USB 1.1 and 2.0 devices and hosts, No drivers required with Windows, macOS, or Linux operating systems, Transport USB over Ethernet or CAT5e (or better) at speeds up to 480 Mbps, Ethernet 100Base-T or 1000Base-T, Layer 2, Link Speed Up to 480 Mbps	Crestron	DM-NUX-R2	1	EA	₹ 55,332	₹ 55,332

Sr. No	Equipment Type	Equipment Description	Quoted Make	Quoted Model	Qty	UoM	Unit Price	Total Price
12	Recording & Streaming Processor	SITC of 4-channel HD switcher, recorder and live streaming media processor. VIDEO INPUT Number / Signal: 4 HDMI digital video Resolution Range 480i~1080p 60fps IP Source Lumens IP PTZ / Box Cameras RTSP Source (H.264 1080p 60/30fps) VIDEO PROCESSING Video Compression: H.264/AVC 4:2:0 8bit color Encoding profile: High, Main, Baseline Bitrate: 200 kbps to 10 Mbps VIDEO OUTPUT Number / Signal: 3 H.264/AVC digital video over Ethernet, 2 HDMI digital video Scaled Resolution: 1080p Frame Rate: 30 / 60 fps RECORDING AND STORAGE Internal Storage: Standard 1TB HDD / Optional 2TB HDD External Storage: 1 USB 3.0 port in front panel File Type: H.264 and AAC in an MP4 container, JPEG Resolution: 360p, 720p, 1080p ETHERNET Ethernet Host Port: 1 female RJ-45,10/100/1000 Base-T high/full duplex Streaming Protocol: Pull: RTSP, Push: RTMP / RTMPS / MPEG-TS, TCP, UDP, HTTP, DHCP Client FUNCTIONS Supports IP Sources: IP Cameras, RTSP Scenes Switch: Yes, preset for layout, background and	Lumens	LC-200	1	EA	₹ 4,00,680	₹ 4,00,680
13	Presenter Camera	SITC of 4K AI Auto-Tracking 30x Optical Zoom PTZ Camera featuring HDMI, Ethernet, 3G-SDI, USB output including wall mount bracket.	Lumens	VC-TR61 + VC-WM12	1	EA	₹ 2,94,468	₹ 2,94,468
14	Audience Camera	SITC of 4K 60fps PTZ camera with 30x zoom Optical Zoom, 3G-SDI, HDMI and IP streaming including wall mount	Lumens	VC-A61P + VC-WM12	2	EA	₹ 2,53,764	₹ 5,07,528
15	Camera HDMI Extender	SITC of Camera HDMI Extender 4K60 4:4:4 Transmitter & Receiver for HDMI, RS-232, and IR Signal Extension over CATx Cable, distance up to 130 ft (40 m) for UHD and 4K signals or up to 230 ft (70 m) for 1080p, WUXGA, and 2K signals, 4K60 4:4:4 capability, HDR10, HDR10+, and Dolby Vision video formats, Compliance with HDCP 2.3, CEC (Consumer Electronics Control) pass-through capability, Bidirectional RS-232 and IR pass-through capability, EDID pass-through capability, Compact, surface-mountable design	Crestron	HD-TXC-4KZ-101 + HD-RXC-4KZ-101	3	Set	₹ 72,504	₹ 2,17,512

Sr. No	Equipment Type	Equipment Description	Quoted Make	Quoted Model	Qty	UoM	Unit Price	Total Price
16	Multi-Viewer for Camera	SITC of 4K Multi-Window Video Processor with HDBaseT & HDMI Outputs, Displays up to four video sources on a single HD, Ultra HD, or 4K display, Nine windowing modes consisting of automatic, full screen, PIP, side by side, quad view, 3 up, 3 down, 3 small left - large right, and 3 small right - large left, Automatic mode affords plug-and-play operation without a control system, Automated display power control via CEC, IR, or RS-232, Supports input and output resolutions up to 4K/30 (4096x2160@30Hz) or WQXGA (2560x1600@60Hz), Supports HDMI, DVI, and Dual-Mode DisplayPort sources, Includes comprehensive built-in EDID and HDCP configuration tools, HDCP 2.2 and 1.4 compliant, Text and image overlay capabilities, Passes Dolby TrueHD, Dolby Atmos, DTS-HD, DTS:X and uncompressed 7.1 linear PCM audio, Supports stereo audio de-embedding via a balanced analog audio output, Simplified setup through the front panel OLED display or a web browser, High-speed Ethernet LAN connection	Crestron	HD-WP-4K-401-C	1	EA	₹ 5,94,838	₹ 5,94,838
17	HDMI to USB Converter	SITC of USB Converter with HDMI and Analog Audio Input, Converts a 4K60 4:4:4 HDMI input to a USB 3.0 output, Captures uncompressed 1080p60 video and stereo audio over USB 3.0, Supports deep-color and HDR up to 12-bit, HDCP 2.2 and HDCP 1.x compliant on HDMI input and output, Automatically downscales 4K sources to 1080p for USB capture, Supports capturing 2-channel digital audio from either HDMI (LPCM 2.0) or the 3.5 mm analog audio input, Compliant with the USB Audio Class (UAC) and USB Video Class (UVC) standards, HDMI output port for local viewing or loop-through functionality, Compact surface-mountable housing, Input Resolution 4K UHD @ 60 fps 4:4:4 with support for 12-bit HDR, Output Resolution USB: HD 1080p @ 60 fps uncompressed,; HDMI: 4K UHD @ 60 fps 4:4:4 with support for 12-bit HDR, Audio Format Stereo 2-channel LPCM	Crestron	HD-CONV-USB-300	1	EA	₹ 83,189	₹ 83,189
18	Camera Controller Joystick	SITC of IP Camera Controller featuring Controls up-to total of 255 IP-connected cameras, Supports RTSP Preview on LCD screen, Supports RS-232, RS-422 and Ethernet control, Supports VISCA and VISCA Over IP control protocols	Lumens	VS-KB21	1	EA	₹ 1,76,808	₹ 1,76,808
19	Operator Preview Monitor	SITC 24" UHD Monitor featuring 250 nits brightness, Panel Type: IPS, Color Depth (Number of Colors): 10bit (8bit + A-FRC), Connectivity Ports: HDMI x2 (ver 2.0) & DisplayPort x1(ver 1.2)	LG	24UD58-B	1	EA	₹ 43,248	₹ 43,248

Sr. No	Equipment Type	Equipment Description	Quoted Make	Quoted Model	Qty	UoM	Unit Price	Total Price
20	Teleprompter	SITC of Teleprompter with PTZ Camera Supports almost all PTZ cameras. By mounting the PTZ upside down it removes the operational limitations of a PTZ camera within a prompter, the PTZ has greater movement in the shots it can achieve. Can be mounted on lightweight tripod or lighting stand. Built in 15.3" LCD Display running DV Prompter Plus for complete PTZ teleprompter solution. Powered from mains or V-Mount Battery. Miracast to multiple units or other displays or daisy chain multiple units either via HDMI In/Out or LAN connection (LAN requires hub). Fully controllable via Ethernet. 4K UHD PTZ Camera (2160p/1080p/1080i/720p) - Black SDI & HDMI output PTZ Camera, supports HEVC & H.264 encoding, 1/1.8" CMOS sensor 8.42Megapixels, 20x Optical zoom *16x Digital, (c/w IR Remote control), RS-422 Sony VISCA /Pelco-D/Pelco-P/DVIP control (c/w Ceiling mount bracket)	Datavideo	TP-900 + PTC-300	1	EA	₹ 5,02,440	₹ 5,02,440
21	Signage Display	SITC of 50" Professional grade display featuring 400 nits brightness & 16/7 operation hours, webOS-based High Performance, Easy Content Management/Group Management, SuperSign Control / CMS Compatibility, Built-in Speaker: 20W & Connectivity Ports: 3 × HDMI In, 1 × External Speaker Out(3.5mm Phone jack), 1 × RJ45, 1 × USB(2.0) & 1 × RS-232C (D-Sub 9pin / Phone jack)	LG	50UR640S	2	EA	₹ 38,796	₹ 77,592
22	Wall Mount for 50" Display	SITC of Universal Flat Screen Wall Mount featuring Max load: 80kg (176lbs), Fits universal patterns: up to 455 x 400mm & Distance from wall: 30mm (1.2")	B-Tech AV Mounts	BT8441	2	EA	₹ 12,084	₹ 24,168
23	Digital Signage Player	SITC of An Ultra HD player offering pristine 4K60p video, mainstream HTML5 performance, digital audio and a basic I/O package with SD card 64GB. Input/Output: 4K BASIC HTML5 Performance Level: Popular HTML widgets & simple motion graphics Power: 12V / 1.5A locking power supply Audio: 3.5mm output for analog or SPDIF digital audio Video Decoding: 4K 8-bit at 60p or 4K 10-bit at 30p Video Codecs: Full HD/4K HDMI Outputs: 1 HDMI 2.0a Ethernet : 10/100 Media Formats: FULL HD/4K VIDEO: .ts, .mov, .mp4, .mkv	BrightSign	LS445 + SDHC-64C10-1(M)	2	EA	₹ 76,320	₹ 1,52,640
24	Wireless Handheld Mic	SITC of Wireless Handheld Transmitter with Mic Capsule and Rechargeable Lithium ion battery. Gain Adjustment Range: -25 to +15 dB (in 1 dB steps) Maximum Input Level (Mic gain @ -16 dB): -9 dBV Antenna Type: Internal, Spacial Diversity, Linear Polarization Battery Type: Rechargeable Li-Ion Battery Life: Up to 15 hours Charge Connector: USB 3.0 Type A Microphone Capsule: SM58 Configuration: Unbalanced Input Impedance (@ 1 kHz): >20 kΩ	Shure	MXW2/SM58 + SB902	6	EA	₹ 66,176	₹ 3,97,055

Sr. No	Equipment Type	Equipment Description	Quoted Make	Quoted Model	Qty	UoM	Unit Price	Total Price
25	Wireless Lavalier Mic	SITC of Wireless Hybrid bodypack transmitter with Omnidirectional Lavalier, Black and Rechargeable Lithium ion battery. Gain Adjustment Range: -25 to +15 dB (in 1 dB steps) Maximum Input Level (Mic gain @ -16 dB): -9 dBV Headphone Output 3.5 mm (1/8"), dual mono (will drive stereo phones) Maximum Headphone Output Power (1kHz @ 1% distortion, peak power, @16Ω): 17.5 mW Antenna Type: Internal, Spacial Diversity, Linear Polarization Battery Type: Rechargeable Li-Ion Battery Life: Up to 9 hours Charge Connector: USB 3.0 Type A Microphone Connector: 4-Pin male mini connector (TA4M) Input Impedance (@ 1 kHz): >20 kΩ Internal Microphone: Omnidirectional (20 Hz - 20 kHz)	Shure	MXW1 + WL183MB + SB901A	2	EA	₹ 78,864	₹ 1,57,728
26	Wireless Earset headworn Mic	SITC of Wireless Hybrid bodypack transmitter with Earset headworn omnidirectional microphone, Black and Rechargeable Lithium ion battery. Gain Adjustment Range: -25 to +15 dB (in 1 dB steps) Maximum Input Level (Mic gain @ -16 dB): -9 dBV Headphone Output 3.5 mm (1/8"), dual mono (will drive stereo phones) Maximum Headphone Output Power (1kHz @ 1% distortion, peak power, @16Ω): 17.5 mW Antenna Type: Internal, Spacial Diversity, Linear Polarization Battery Type: Rechargeable Li-Ion Battery Life: Up to 9 hours Charge Connector: USB 3.0 Type A Microphone Connector: 4-Pin male mini connector (TA4M) Input Impedance (@ 1 kHz): >20 kΩ Internal Microphone: Omnidirectional (20 Hz - 20 kHz)	Shure	MXW1 + MX153B + SB901A	2	EA	₹ 89,676	₹ 1,79,352
27	Microphone AP Transceiver	SITC of 8-Channel Access Point Transceiver featuring PoE and Dante digital networked audio Network Interface: RJ45 Gigabit Ethernet, Dante digital audio Plenum Rating: UL 2043 Power Requirement: Power over Ethernet (PoE) Class 0, 6.5W	Shure	MXWAPT8	1	EA	₹ 3,51,767	₹ 3,51,767

Sr. No	Equipment Type	Equipment Description	Quoted Make	Quoted Model	Qty	UoM	Unit Price	Total Price
28	Microphone AP Transceiver	SITC of 4-Channel Access Point Transceiver featuring PoE and Dante digital networked audio Network Interface: RJ45 Gigabit Ethernet, Dante digital audio Plenum Rating: UL 2043 Power Requirement: Power over Ethernet (PoE) Class 0, 6.5W	Shure	MXWAPT4	1	EA	₹ 2,67,120	₹ 2,67,120
29	Networked Charging Station	SITC of 8 port Networked Charging Station compatible with Wireless microphone systems. Network Interface: 10/100 Mbps Ethernet Power Requirement: 15 V DC @ 3.3 A maximum, supplied by external power supply (tip positive)	Shure	MXWNCS8	1	EA	₹ 1,83,361	₹ 1,83,361
30	Networked Charging Station	SITC of 2 port Networked Charging Station compatible with Wireless microphone systems. Network Interface: 10/100 Mbps Ethernet Power Requirement: 15 V DC @ 3.3 A maximum, supplied by external power supply (tip positive)	Shure	MXWNCS2	1	EA	₹ 60,420	₹ 60,420
31	Music Streaming Device	SITC of Streaming audio player/preamplifier with Wi-Fi and Bluetooth Frequency Response: 20Hz to 20KHz Audio Outputs: Analog - Stereo Audio RCA / Digital Optical Line Audio Output: 2V rms Audio Inputs: 3.5mm Analog Stereo Audio, Digital Optical, USB2.0 Media Playback Communication Ports: Ethernet RJ45 10/100 BaseT Wi-Fi: 802.11ac, dual band Bluetooth Audio Support: Yes Trigger Output: 12vDC @100mA Music File Formats: MP3 (CBR, VBR), WAV (8, 16-bit), OGG Vorbis, FLAC (8, 16-bit). AAC, AAC+ (supports up to 24-bit/192 kHz) Power Requirements: 12VDC, 1.25A	Russound	MBX-PRE	1	EA	₹ 45,792	₹ 45,792
32	Audio DSP with Dante License	SITC of Audio digital signal processor featuring 24 channels of analog I/O, including 8 configurable Flex channels, 16x AEC processors, Up to 32 x 32 Dante audio channels (8 x 8 included), External USB audio device host & Up to 4x VoIP instances	QSC	Core110f + SLDAN-32-P	1	EA	₹ 4,35,024	₹ 4,35,024
33	Digital Mixer	SITC of Premium 48-channel digital mixer designed for professionals who need exceptional performance in a portable format. It features 16+1 motorized faders, 16+1 onboard preamps and 8 assignable SoftKeys, providing comprehensive control in a compact 19" rack-mountable design. 96kHz XCVI FPGA processing, 48 input channels, 12 stereo mixes + LR, 3 stereo matrix, 8 stereo FX engines + dedicated stereo returns, 16+1 built-in mic preamps, 2 stereo line inputs, 12 XLR line outputs, 2 TRS line outputs, AES output, 7" capacitive touchscreen, 32x32 96kHz USB interface, direct recording to USB, 64x64 Dante Card with 64x64 channel audio and control over a network, 96kHz or 48kHz operation, Multichannel recording / playback using Dante Virtual Soundcard (available separately), Two ports with redundant and switch modes, Internal Control Network Bridge, Locking Ethercon connectors, Dante Domain Manager ready, AES67 compatible	Allen & Heath	SQ-5 + SQ Dante 64x64	1	EA	₹ 4,84,680	₹ 4,84,680

Sr. No	Equipment Type	Equipment Description	Quoted Make	Quoted Model	Qty	UoM	Unit Price	Total Price
34	Stage Box	SITC of Stage box with Dante audio expander (96kHz / 48kHz), 16 mic preamps on XLR with Phantom Power status LEDs, 8 XLR Line Outs, Primary and Secondary Dante ports with locking EtherCon, Redundant or Switched mode, AES67 compatible, Dante Domain Manager ready	Allen & Heath	DT168	1	EA	₹ 1,90,638	₹ 1,90,638
35	Power Amplifier	SITC of Dual-channel Class-D amplifier 2 x 500W RMS/AES power handling: @ 4 Ω Stereo - 2 x 500 W @ 8 Ω Stereo - 2 x 300 W @ 8 Ω Bridge - 1000 W Frequency Response (± 3 dB): 20 Hz - 20 kHz Inputs: Sensitivity - 0 dB (1V RMS) Impedance - 12 kΩ balanced Connector - XLR female with Male Linkthrough	Audac	EPA502	1	EA	₹ 71,232	₹ 71,232
36	FOH Column Speaker	SITC of Column speaker consists of 24 x 2" high-quality aluminum cone full-range drivers, delivering extraordinary clarity and detailed sound. The overall continuous power handling reaches 240 Watt and the beamwidth of 174° x 7°. Peak power handling: 960 W, Program power handling: 480 W, RMS/AES power handling: 240 W, Impedance: 4 Ω	Audac	KYRA24/W	2	EA	₹ 1,34,517	₹ 2,69,033
37	Power Amplifier	Quad-channel Class-D amplifier 4 x 250W - crossover RMS/AES power handling: @ 4 Ω Stereo - 4 x 250 W @ 8 Ω Stereo - 4 x 130 W @ 8 Ω Bridge - 2 x 500 W Frequency Response (± 3 dB): 20 Hz - 20 kHz Impedance: 12 kΩ balanced Connector: 3-pin XLR female	Audac	EPA254	2	EA	₹ 79,500	₹ 1,59,000
38	Side Fills Column Speaker	SITC of Column speaker consists of 6 x 2" high-quality aluminum cone full-range drivers, delivering extraordinary clarity and detailed sound. The overall continuous power handling reaches 60 Watt and the beamwidth of 174° x 28°. Peak power handling: 240 W, Program power handling: 120 W, RMS/AES power handling: 60 W, Impedance: 12 Ω	Audac	KYRA6/W	8	EA	₹ 38,160	₹ 3,05,280
39	Power Amplifier	SITC of Dual-channel Class-D amplifier 2 x 500W RMS/AES power handling: @ 4 Ω Stereo - 2 x 500 W @ 8 Ω Stereo - 2 x 300 W @ 8 Ω Bridge - 1000 W Frequency Response (± 3 dB): 20 Hz - 20 kHz Inputs: Sensitivity - 0 dB (1V RMS) Impedance - 12 kΩ balanced Connector - XLR female with Male Linkthrough	Audac	EPA502	1	EA	₹ 71,232	₹ 71,232
40	Passive Sub woofer	SITC of Compact 12" bass reflex cabinet delivering RMS/AES power handling 500 W Peak power handling: 2000 W Program power handling: 1000 W RMS/AES power handling: 500 W Impedance: 8 Ω Connectors: 2 x Speakon compatible connector in recessed connector dish (linkthrough)	Audac	BASO12/W	2	EA	₹ 76,956	₹ 1,53,912
41	Active Stage Monitor Speaker	SITC of 10" high performance 2-way active loudspeaker Peak power handling: 1200 W Program power handling: 600 W RMS/AES power handling: 300 W Impedance: 8 Ω Dispersion: Horizontal - 90° & Vertical - 70°	Audac	VEXO110A/W	2	EA	₹ 1,10,365	₹ 2,20,730

Sr. No	Equipment Type	Equipment Description	Quoted Make	Quoted Model	Qty	UoM	Unit Price	Total Price
42	AVoIP Encoder	SITC of AVoIP Encoder with 4K60 4:4:4 video over standard Gigabit Ethernet, HDR10, HDR10+, and Dolby Vision video support, Real-time video performance over the network Pixel Perfect Processing technology, Enterprise-grade security including 802.1X, Active Directory credential management, TLS, and AES-128, HDCP 2.3 compliant, One HDMI output, Image preview, Background image for on-screen display, Analog audio de-embedding 7.1 surround sound audio, AES67 audio embedding and de-embedding, Copper Ethernet connectivity with PoE+ support, Automatic point-to-point connectivity, Device control via RS-232, IR, and CEC, Easy setup via built-in web pages, Compact, surface-mountable design, Powered via PoE+, Video Resolutions Up to 4096x2160@60Hz, 2-way device control and monitoring	Crestron	DM-NVX-E30	2	EA	₹ 1,20,128	₹ 2,40,255
43	AVoIP Encoder	SITC of AVoIP Encoder with 4K60 4:4:4 video over standard Gigabit Ethernet, HDR10, HDR10+, and Dolby Vision video support, Real-time video performance over the network, Pixel Perfect Processing technology, Enterprise-grade security including 802.1X, Active Directory credential management, TLS, and AES-128, HDCP 2.3 compliant, One HDMI input, One HDMI output with 4K60 4:4:4 scaler, Video wall processing, Dynamic text overlay, Image preview, Background image for on-screen display, Test pattern generator, Analog audio embedding or de-embedding, 7.1 surround sound audio, AES67 audio embedding and de-embedding, Breakaway audio, USB 2.0 and KVM signal extension and routing, Copper and fiber Ethernet connectivity, Network port selection, Automatic point-to-point connectivity, Device control via RS-232, IR, and CEC, Easy setup via built-in web pages, ompact, surface-mountable design, Powered via POE+ and with Wall Mount Power Pack, 24 VDC, 1.25 A, 2.1 mm, Universal	Crestron	DM-NVX-360 + PW-2412WU	3	EA	₹ 1,97,821	₹ 5,93,464
44	AVoIP Decoder	SITC of AVoIP Decoder with 4K60 4:4:4 video over standard Gigabit Ethernet, HDR10, HDR10+, and Dolby Vision video support, Real-time video performance over the network, Pixel Perfect Processing technology, Enterprise-grade security including 802.1X, Active Directory credential management, TLS, and AES-128, HDCP 2.3 compliant, One HDMI input, One HDMI output with 4K60 4:4:4 scaler, Video wall processing, Dynamic text overlay, Image preview, Background image for on-screen display, Test pattern generator, Analog audio embedding or de-embedding, 7.1 surround sound audio, AES67 audio embedding and de-embedding, Breakaway audio, USB 2.0 and KVM signal extension and routing, Copper and fiber Ethernet connectivity, Network port selection, Automatic point-to-point connectivity, Device control via RS-232, IR, and CEC, Easy setup via built-in web pages, ompact, surface-mountable design, Powered via POE+ and with Wall Mount Power Pack, 24 VDC, 1.25 A, 2.1 mm, Universal	Crestron	DM-NVX-360 + PW-2412WU	2	EA	₹ 1,97,821	₹ 3,95,643

Sr. No	Equipment Type	Equipment Description	Quoted Make	Quoted Model	Qty	UoM	Unit Price	Total Price
45	AVoIP Decoder	SITC of AVoIP Decoder with 4K60 4:4:4 video over standard Gigabit Ethernet, HDR10, HDR10+, and Dolby Vision video support, Real-time video performance over the network Pixel Perfect Processing technology, Enterprise-grade security including 802.1X, Active Directory credential management, TLS, and AES-128, HDCP 2.3 compliant, One HDMI output, Image preview, Background image for on-screen display, Analog audio de-embedding 7.1 surround sound audio, AES67 audio embedding and de-embedding, Copper Ethernet connectivity with PoE+ support, Automatic point-to-point connectivity, Device control via RS-232, IR, and CEC, Easy setup via built-in web pages, Compact, surface-mountable design, Powered via PoE+, Video Resolutions Up to 4096x2160@60Hz, 2-way device control and monitoring	Crestron	DM-NVX-D30	10	EA	₹ 1,20,128	₹ 12,01,277
46	Network Switch	48-Port 40xPoE+ 960W 8xSFP+ Primary Port Speed: 1 Gigabit Number of Ports: 48 (40x 1G PoE+, 8x SFP+) PoE Ports / Budget: 40 PoE+ (30W/port), 960W Budget IGMP Support: Enhanced Jumbo Frame Support: Yes, up to 12kb AVB Support: Yes. Electronic license required, activation key sent via email (AVB4248PX-10000S). Acoustics: Fanless or 59dB@25°C Power Consumption: With PoE - 1197W/4086.56Btu/hr Without PoE - 89.2W/304.53Btu/hr Standby without any port connection - 74.5W/254.34Btu/hr	Netgear	GSM4248PX	1	EA	₹ 2,97,648	₹ 2,97,648
47	Management Software	SITC of XiO Cloud Provisioning and Management Service, Free XiO Cloud Subscription	Crestron	SW-XIOC	1	EA	₹ 16,500	₹ 16,500
48	Power supply	SITC of DIN Rail 60 Watt Power Supply with Includes six power ports, 6M wide DIN rail mounting, 100-277 Volt AC line powered, Output Rating 60 Watts (2.5 Amps) at 24 Volts DC, regulated, limited power source, Efficiency 85%, Line Power/Mains 200 VA (2 Amps maximum) at 100-277 Volts AC, 50/60 Hz, 24 Volts DC output at all ports.	Crestron	DIN-PWS60	1	EA	₹ 19,538	₹ 19,538
49	AV Control Processor	SITC of A rack-mountable control system with a powerful control engine and numerous integrated control ports, Onboard IR/serial, COM, I/O, relay and high-speed gigabit Ethernet control ports, control system with 2 GB SDRAM and 8 GB flash memory, multicore CPU processor, iPhone®, iPad®, and Android™ device control app support, web based control, Modular programming architecture, High-speed USB 2.0 host port and rear panel memory card slot, 8 port replay output, 8 Port I/O, 8 port IR-Serial output, 1 port Bidirectional RS-232/422/485 port, 2 port Bidirectional RS-232 ports, Accepts one SD or SDHC card up to 32 GB for storage of log files,	Crestron	CP4	1	EA	₹ 1,84,440	₹ 1,84,440

Sr. No	Equipment Type	Equipment Description	Quoted Make	Quoted Model	Qty	UoM	Unit Price	Total Price
50	Wireless Touch Control	SITC of 10.9" iPad 10th generation, Wi-Fi, 128GB - Silver Wireless Touch Controller using GUI App with table-top magnetic mounting and wireless charging of iPad at an ergonomic 45-degree angle. Mount iPad in portrait or landscape orientation.	Apple + Iport	iPad (10th Gen) MD3Y4HN/A + CRESTRON-GO-TABLET App + 72352 + 72340	1	EA	₹ 1,39,920	₹ 1,39,920
51	WiFi Access Point	SITC of PoE Dual-Band WiFi 6 Wireless Access Point WiFi Standards: 5.0GHz: 802.11a/n/ac/ax 2.4GHz: 802.11b/g/n/ax Wireless Mode (Transmit x Receive): 2x2 in 5.0GHz 2x2 in 2.4GHz Maximum Theoretical Throughput: AX1800 1.8Gbps Maximum Theoretical Throughput per Band: 5.0GHz: 1200Mbps 2.4GHz: 600Mbps Power over Ethernet (PoE): 802.3at/af PoE Power Consumption: 15.3W # of Concurrent Devices: 50 Coverage: 2,500 sqft Ethernet port: 2.5G port	Netgear	WAX610	1	EA	₹ 36,506	₹ 36,506
52	AV Rack	SITC of PoE Dual-Band WiFi 6 Wireless Access Point WiFi Standards: 5.0GHz: 802.11a/n/ac/ax 2.4GHz: 802.11b/g/n/ax Wireless Mode (Transmit x Receive): 2x2 in 5.0GHz 2x2 in 2.4GHz Maximum Theoretical Throughput: AX1800 1.8Gbps Maximum Theoretical Throughput per Band: 5.0GHz: 1200Mbps 2.4GHz: 600Mbps Power over Ethernet (PoE): 802.3at/af PoE Power Consumption: 15.3W # of Concurrent Devices: 50 Coverage: 2,500 sqft Ethernet port: 2.5G port	Netrack	42U	1	EA	₹ 57,240	₹ 57,240
53	Bulk Cables & Connectors	SITC of Cables & Connectors HDMI, USB, CAT X, Speaker, mic, audio, control cable etc	Various	LOT	1	EA	₹ 2,54,400	₹ 2,54,400
54	Services	Programming & Configuration Charges	Custom	Custom	1	EA	₹ 3,18,000	₹ 3,18,000
55	Services	Documentation, Project Management & Training Charges	Custom	Custom	1	EA	₹ 63,600	₹ 63,600
							TOTAL	₹ 1,28,41,151

LIGHTING MANAGEMENT SYSTEM - IIT (Conference Room & Board Room)

Sr No.	DESCRIPTION	Model No.	UNIT	Qty	Unit Rate	Total
1	Main Processor Supply of 1 link Athena Processor	QP-1L	Nos	1.00	85,000	85,000
2	Connectot Blocks Supply of Wirelanding boards	QS-WLB	Nos	1.00	6,200	6,200
3	Occupancy sensor Supply of Wireless Occupancy/Vacancy Sensor for rooms with a frequency of 865 MHz, Ceiling mount, infrared, 37.2 sq m (400 sq ft), battery-powered, 102 mm (4.0 in) diameter, white similar to LRF5-OCR2B-P-WH	LRF5-OCR2B-P-WH	Nos	4.00	6,000	24,000
4	Wired Keypads 10 Button with raise lower Wired keypad in white polycarbonate finish	QSWE-10BRL-AW	Nos	2.00	26,000	52,000
5	Wireless Keypads Supply of PICO keypads for Lights & Blinds control	PN2 3BRL TAW L01 + PN2 3BRL TAW S01 + L- PED2-WH	Nos	4.00	12,100	48,400
6	Antenna for wireless devices SITC of Sensor Module, to connect 10 number of sensors either of the Occupancy / Daylight / Personal sensors/Pico. No wired connections, ceiling mount Similar to QSM5-XW-C	QSM5-XW-C	Nos	2.00	11,800	23,600
7	Power supply to power up QS LINK POWER SITC Step down adaptor based power supply unti used to manage the power required for Keypads via the QS link Similar to Lutron QSPS-DH-1-75	QSPS-DH-1-75	Nos	1.00	18,611	18,611
8	DALI Module SITC of Universal DALI Dimming controller; Controls 2 independent DALI links with up to 64 DALI ballasts per link Requires mains/line voltage feed Similar to Lutron QSN-2DALUNV-D	QSN-2DALUNV-D	Nos	1.00	85,000	85,000
9	Lutron cable QS cable for power and data simialr to QS-CBL-LSZH-500	QS-CBL-LSZH-500	Mtrs	150.00	190	28,500
10	Custom DB with Protective Device Complete Installtion, Programming & Commissioning of the system	Custom	Nos	1.00	12,000	12,000
			Lot	1.00	50,000	50,000
	GRAND TOTAL					4,33,311.00

LIGHTING MANAGEMENT SYSTEM - IIT (Auditorium)

Sr No.	DESCRIPTION	Model No.	UNIT	Qty	Unit Rate	Total

1	Main Processor					
	Supply of 2 link Athena Processor	QP-2L	Nos	1.00	1,50,000	1,50,000
2	Connectot Blocks					
	Supply of Wirelanding boards	QS-WLB	Nos	1.00	6,200	6,200
	Wired Keypads					
3	10 Button with raise lower Wired keypad in white polycarbonate finish	QSWE-10BRL-AW	Nos	2.00	26,000	52,000
	Power supply to power up QS LINK POWER					
4	SITC Step down adaptor based power supply unti used to manage the power required for Keypads via the QS link Similar to Lutron QSPS-DH-1-75	QSPS-DH-1-75	Nos	1.00	18,611	18,611
	DALI Module					
5	SITC of Universal DALI Dimming controller; Controls 2 independent DALI links with up to 64 DALI ballasts per link Requires mains/line voltage feed Similar to Lutron QSN-2DALUNV-D	QSN-2DALUNV-D	Nos	3.00	85,000	2,55,000
	Lutron cable					
6	QS cable for power and data simialr to QS-CBL-LSZH-500	QS-CBL-LSZH-500	Mtrs	150.00	190	28,500
7	Custom DB with Protective Device	Custom	Nos	1.00	12,000	12,000
8	Complete Installtion, Programming & Commissioning of the system		Lot	1.00	50,000	50,000
	GRAND TOTAL					5,72,311.00

LIGHTING MANAGEMENT SYSTEM - IIT (Atrium)

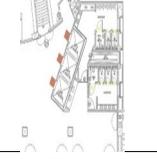
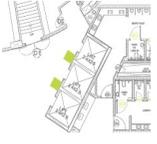
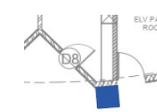
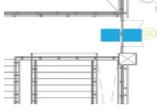
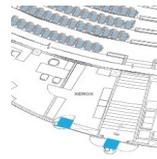
Sr No.	DESCRIPTION	Model No.	UNIT	Qty	Unit Rate	Total
1	Main Processor					
	Supply of 2 link Athena Processor	QP-2L	Nos	1.00	1,50,000	1,50,000
2	Connectot Blocks					
	Supply of Wirelanding boards	QS-WLB	Nos	1.00	6,200	6,200
3	Wired Keypads					
4	10 Button with raise lower Wired keypad in white polycarbonate finish	QSWE-10BRL-AW	Nos	2.00	26,000	52,000
	Power supply to power up QS LINK POWER					
5	SITC Step down adaptor based power supply unti used to manage the power required for Keypads via the QS link Similar to Lutron QSPS-DH-1-75	QSPS-DH-1-75	Nos	1.00	18,611	18,611
	DALI Module					
6	SITC of Universal DALI Dimming controller; Controls 2 independent DALI links with up to 64 DALI ballasts per link Requires mains/line voltage feed Similar to Lutron QSN-2DALUNV-D	QSN-2DALUNV-D	Nos	3.00	85,000	2,55,000

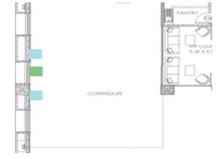
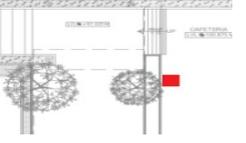
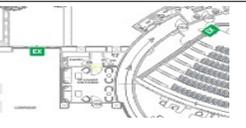
	Lutron cable					
7	QS cable for power and data simialr to QS-CBL-LSZH-500	QS-CBL-LSZH-500	Mtrs	150.00	190	28,500
8	Custom DB with Protective Device	Custom	Nos	1.00	12,000	12,000
9	Complete Installtion, Programming & Commissioning of the system		Lot	1.00	50,000	50,000
	GRAND TOTAL					5,72,311.00

MOTORIZED BLINDS

Sr No.	DESCRIPTION	Model No.	UNIT	Qty	Unit Rate	Total
	Providing, installing and programming (for autimization) Motorized roller blinds as per drawings and followings.					
	<p>Fabric specification</p> <p>Pro Shades Sunscreen fabric made up of 25% Polyester and 75% Polyester PVC coated 110tex Tilter Basket weave of thickness 0.65mm ±5% (ISO 2286-3) and wieghing 465 gsm ± 5% (ISO 2286-2) with openness factor of 3% & 5% . The tear resistance (Warp 135N ± 10% & ,Weft 105N ± 10%) as per ISO 4674, and Fire, Smoke classification FR (US) - NFPA 701 TM#1 &BS (GB) - 5867 Part2 TypeB & B1(CN)-GB50222. Bacterial & Fungal Resistance ASTM G21-09, ASTM E 2180-07 Reduce more than 99.9% of bacteria. Greenguard GOLD, EN71 Part 3:1994. Color fastness Grade 8 ISO105 B02:2014 >_4.0 AATCC TM 16.3-2014; Option 3; Xenon Arc lamp. SHGC (Fabric & Glass) 0.23 Fabric.</p>					
	<p>System specification</p> <p>The Roller blind system consists of 38mm OD extruded out of Aluminium alloy 6063 T6 with silver anodized to provide an everlasting finish and luster, the rotary unit shall be 36mm in OD incorporating a clutch mechanism composed of low - flexing braided polyster cord with nylon core, Control Ball chain shall be composed of braided nylon cord (2mm dia) with high engineering grade plastic beads of 4.5mm diameter mounted co-axially on the cord with a pitch of 6.2mm (C-T-C) Bottom rail should be powder coated Aluminium flat bottom rail of 290 gm to finish it from the ends it should have rail end caps. The clutch will be at the tube. The return end cap bracket shall incorporate snap spring design to facilitate easy installation and removal for maintenance activities. The bracket shall be finished with a white color on each side providing an aesthetic finish. It should handle up to 5 Kgs of material. The clutch should mount flush to the face of the bracket which minimize the light gap between the shade and the window frame.</p>					

	<p>System specification - Motorized Roller blind using wireless operated AC motor as operating system to lift shades UP & Down with multi channel RF remote or RF wireless switch. RF wireless AC motor of Nominal Torque,3Nm,nominal speed of 30rpm work on 230V AC voltage,rated current of 0.47Amps,power consumption 80W,frequency 50Hz & protection rate of IP44. Running time before thermal protector trip is 4Min & average running noise level 52dBA.This motor is compatible to be placed inside round headrail system consists of 42mm OD extruded out of Aluminium alloy 6063 T6 with mill finish, the rotary unit shall be 12mm adjustable spring load end plug to be inserted inside the 38mm ID tube and other end motor clutch fixed to bracket. Bottom rail should be powder coated Aluminium flat bottom rail of 290 gm to finish it from the ends it should have rail end caps.</p>					
	<p>The return end cap bracket shall incorporate snap spring design to facilitate easy installation and removal for maintenance activities. The bracket shall be finished with a flush mounting cover on each side providing an aesthetic finish. The system should handle 15kgs weight maximum & drop of shade upto 8m.</p>					
	<p>The system should have sun-tracking, time-based scenes, and energy-saving automation.System shall seamlessly works with HomeWorks, QSX, and other Lutron ecosystems.</p>					
	<p>Conference area & Board room</p>		Sqm	28.16	8,446.07	2,37,875.00
	<p>Atrium</p>		Sqm	235.20	10,197.07	23,98,352.00
					Total	26,36,227.00
					Total of lighting Management System	42,14,160.00

IIT Bombay												
SR.NO.	CODE	SIGN'S TYPE	Images	LOCATION	SIZE	TOTAL QUANTITY	Approved product suggested	Specs	Rate	Amount		
INTERNAL SIGNS												
1	ID.1	LIFT NUMBER			100 x 100	18	I sign fix	Providing and fixing sign Modular Aluminium extrusions (Alloy 6060 as per European standards EN755-2-2008 tensile strength 190 MPa typical BHN is 70 from virgin aluminium homogeneous billet) with premium grade anodizing (Thickness 15-20 microns) bronze finish as per international standards, with 10 years warranty under normal working conditions. Profile to form frame with overall depth of 10 mm with media of thickness upto 3mm, 2 mm thick acrylic/ACP. I-sign fix profile of with M.S zinc coated corners with grub screws. Installed at site in plumb and level at specified location as per drawing to the satisfaction of the engineer-in-charge.	350.00	6,300.00		
2	ID.2	ROOM ID BOH			200 X 93	26	Mpi -Slider	Providing and fixing at location a signs made as using Modular Aluminium extrusions (Alloy 6060 as per European standards EN755-2-2008 tensile strength 190 MPa typical BHN is 70 from virgin aluminium homogeneous billet) with Premium grade Anodizing (Thickness 15-20 microns) International standards, with Lifetime warranty under normal working conditions.Unique slide in feature of panels allow media to be slid in (eg. printed polycarbonate sheet with upto 0.6 mm thickness is provided with) Panels size 93 mm in height. Insert size 88 mm in height. Panels size 93 mm in height, fixed on 31 mm track clips to lock fit aluminium panels (plastic injection moulded), which are directly screwed with help of high tensile strength zinc coated self tapering screws. Approved make MP panels clicked fitted in clips and installed at site in plumb and level at specified location as per drawing.	1,250.00	32,500.00		
3	ID.3	FLOOR NUMBER			300x200	12	I sign fix	Providing and fixing sign Modular Aluminium extrusions (Alloy 6060 as per European standards EN755-2-2008 tensile strength 190 MPa typical BHN is 70 from virgin aluminium homogeneous billet) with premium grade anodizing (Thickness 15-20 microns) bronze finish as per international standards, with 10 years warranty under normal working conditions. Profile to form frame with overall depth of 10 mm with media of thickness upto 3mm, 2 mm thick acrylic/ACP. I-sign fix profile of with M.S zinc coated corners with grub screws. Installed at site in plumb and level at specified location as per drawing to the satisfaction of the engineer-in-charge.	1,198.00	14,376.00		
4	ID.4	DIRECTIONAL SIGN			300 x 600	6	IDD5 24 mm	Providing and fixing sign Modular Aluminium extrusions (Alloy 6060 as per European standards EN755-2-2008 tensile strength 190 MPa typical BHN is 70 from virgin aluminium homogeneous billet) with premium grade anodizing (Thickness 15-20 microns) bronze finish as per international standards, with 10 years warranty under normal working conditions. Profile to form frame with overall depth of 10 mm with media of thickness upto 3mm, 2 mm thick acrylic/ACP. I-sign fix profile of with M.S zinc coated corners with grub screws. Installed at site in plumb and level at specified location as per drawing to the satisfaction of the engineer-in-charge.	3,720.00	22,320.00		
5	ID.5	ROOM ID FOH			80 X 80	4	I sign fix	Providing and fixing sign Modular Aluminium extrusions (Alloy 6060 as per European standards EN755-2-2008 tensile strength 190 MPa typical BHN is 70 from virgin aluminium homogeneous billet) with premium grade anodizing (Thickness 15-20 microns) bronze finish as per international standards, with 10 years warranty under normal working conditions. Profile to form frame with overall depth of 10 mm with media of thickness upto 3mm, 2 mm thick acrylic/ACP. I-sign fix profile of with M.S zinc coated corners with grub screws. Installed at site in plumb and level at specified location as per drawing to the satisfaction of the engineer-in-charge.	303.00	1,212.00		
6	ID.5	ROOM ID FOH			300 X 93	48	Mpi -Slider	Providing and fixing at location a signs made as using Modular Aluminium extrusions (Alloy 6060 as per European standards EN755-2-2008 tensile strength 190 MPa typical BHN is 70 from virgin aluminium homogeneous billet) with Premium grade Anodizing (Thickness 15-20 microns) International standards, with Lifetime warranty under normal working conditions.Unique slide in feature of panels allow media to be slid in (eg. printed polycarbonate sheet with upto 0.6 mm thickness is provided with) Panels size 93 mm in height. Insert size 88 mm in height. Panels size 93 mm in height, fixed on 31 mm track clips to lock fit aluminium panels (plastic injection moulded), which are directly screwed with help of high tensile strength zinc coated self tapering screws. Approved make MP panels clicked fitted in clips and installed at site in plumb and level at specified location as per drawing.	1,250.00	60,000.00		

SR.NO.	CODE	SIGN'S TYPE	Images	LOCATION	SIZE	TOTAL QUANTITY	Approved product suggested	Specs	Rate	Amount
7	ID.6	FLOOR DIRECOTRY			600 x 1500	3	DDS 24 mm wal mounte	<p>Providing sign Modular Aluminium extrusions (Alloy 6060 as per European standards EN755-2-2008 tensile strength 190 MPa typical BHN is 70 from virgin aluminium homogeneous billet) with premium grade anodizing (Thickness 15-20 microns) bronze finish as per international standards, with 10 years warranty under normal working conditions. Profile to form frame with overall depth of 10mm with media of thickness upto 3mm, 2 mm thick acrylic/ACP. I-sign Fix profile of with M.5 zinc coated corners with grub screws. Installed at site in plumb and level at specified location as per drawing to the satisfaction of the engineer-in-charge.</p>	13,335.00	40,005.00
8	ID.7	WASHROOM			350 x 100	35	I sign fix	<p>Providing sign Modular Aluminium extrusions (Alloy 6060 as per European standards EN755-2-2008 tensile strength 190 MPa typical BHN is 70 from virgin aluminium homogeneous billet) with premium grade anodizing (Thickness 15-20 microns) bronze finish as per international standards, with 10 years warranty under normal working conditions. Profile to form frame with overall depth of 10 mm with media of thickness upto 3mm, 2 mm thick acrylic/ACP. I-sign Fix profile of with M.5 zinc coated corners with grub screws. Installed at site in plumb and level at specified location as per drawing to the satisfaction of the engineer-in-charge.</p>	724.00	25,340.00
9	ID.9	CLASSROOM			300 x 93	45	Mpi -Slider	<p>Providing and fixing at location a signs made as using Modular Aluminium extrusions (Alloy 6060 as per European standards EN755-2-2008 tensile strength 190 MPa typical BHN is 70 from virgin aluminium homogeneous billet) with premium grade anodizing (Thickness 15-20 microns) International standards, with Lifetime warranty under normal working conditions. Unique slide in feature of panels allow media to be slid in (eg. printed polycarbonate sheet with upto 0.6 mm thickness is provided with) Panels size 93 mm in height. Insert size 88 mm in height. Panels size 93 mm in height. fixed on 31 mm track clips to lock fit aluminium panels (plastic injection moulded), which are directly screwed with help of high tensile strength zinc coated self tapering screws. Approved make MPI panels clicked fitted in clips and installed at site in plumb and level at specified location as per drawing.</p>	1,250.00	56,250.00
10	ID.8	RULES & REGULATION			600 x 400	3	DDS 24 mm wal mounte	<p>Providing and fixing sign Modular Aluminium extrusions (Alloy 6060 as per European standards EN755-2-2008 tensile strength 190 MPa typical BHN is 70 from virgin aluminium homogeneous billet) with premium grade anodizing (Thickness 15-20 microns) bronze finish as per international standards, with 10 years warranty under normal working conditions. Profile to form frame with overall depth of 10 mm with media of thickness upto 3mm, 2 mm thick acrylic/ACP. I-sign Fix profile of with M.5 zinc coated corners with grub screws. Installed at site in plumb and level at specified location as per drawing to the satisfaction of the engineer-in-charge.</p>	4,057.00	12,171.00
11	ID.10	CAMPUS LOGO			NA	2			4,50,000.00	9,00,000.00
12	ID.10	RECEPTION LOGO			NA	2			4,00,000.00	8,00,000.00
FIRE SIGNAGES										
1	FX	FIRE EXIT			300 x 100	17	I sign fix	<p>Providing and fixing sign of Modular Aluminium extrusions (Alloy 6060 as per European standards EN755-2-2008 tensile strength 190 MPa typical BHN is 70 from virgin aluminium homogeneous billet) with premium grade anodizing (Thickness 15-20 microns) bronze finish as per international standards, with 10 years warranty under normal working conditions. Profile to form frame with overall depth of 10 mm with media of thickness upto 3mm, 2 mm thick acrylic/ACP. I-sign Fix profile with M.5 zinc coated corners with grub screws. Installed at site in plumb and level at specified location as per drawing to the satisfaction of the engineer-in-charge.</p>	724.00	12,308.00
2	EX	EXIT			300 x 100	88	I sign fix	<p>Providing and fixing sign of Modular Aluminium extrusions (Alloy 6060 as per European standards EN755-2-2008 tensile strength 190 MPa typical BHN is 70 from virgin aluminium homogeneous billet) with premium grade anodizing (Thickness 15-20 microns) bronze finish as per international standards, with 10 years warranty under normal working conditions. Profile to form frame with overall depth of 10 mm with media of thickness upto 3mm, 2 mm thick acrylic/ACP. I-sign Fix profile with M.5 zinc coated corners with grub screws. Installed at site in plumb and level at specified location as per drawing to the satisfaction of the engineer-in-charge.</p>	724.00	63,712.00

SR.NO.	CODE	SIGN'S TYPE	Images	LOCATION	SIZE	TOTAL QUANTITY	Approved product suggested	Specs	Rate	Amount
3	FHC	FHC			200 x 200	6	I sign fix	Providing and fixing sign of Modular Aluminium extrusions (Alloy 6060 as per European standards EN755-2-2008 tensile strength 190 MPa typical BHN is 70 from virgin aluminium homogeneous billet) with premium grade anodizing (Thickness 15-20 microns) bronze finish as per international standards, with 10 years warranty under normal working conditions. Profile to form frame with overall depth of 10 mm with media of thickness upto 3mm, 2 mm thick acrylic/ACP. I-sign Fix profile with M.5 zinc coated corners with grub screws. Installed at site in plumb and level at specified location as per drawing to the satisfaction of the engineer-in-charge.	852.00	5,112.00
4		FIRE EXIT DIRECTIONAL & RIGHT ARROW (LEFT)			310 x 225 x 55	22	ES1	Providing and fixing sign of Modular Aluminium extrusions (Alloy 6060 as per European standards EN755-2-2008 tensile strength 190 MPa typical BHN is 70 from virgin aluminium homogeneous billet) with premium grade anodizing (Thickness 15-20 microns) bronze finish as per international standards, with 10 years warranty under normal working conditions. Profile to form frame with overall depth of 10 mm with media of thickness upto 3mm, 2 mm thick acrylic/ACP. I-sign Fix profile with M.5 zinc coated corners with grub screws. Installed at site in plumb and level at specified location as per drawing to the satisfaction of the engineer-in-charge.	3,200.00	70,400.00
5		IN CASE OF FIRE			100 x 100	12	I-sign Fix	Providing and fixing sign of Modular Aluminium extrusions (Alloy 6060 as per European standards EN755-2-2008 tensile strength 190 MPa typical BHN is 70 from virgin aluminium homogeneous billet) with premium grade anodizing (Thickness 15-20 microns) bronze finish as per international standards, with 10 years warranty under normal working conditions. Profile to form frame with overall depth of 10 mm with media of thickness upto 3mm, 2 mm thick acrylic/ACP. I-sign Fix profile with M.5 zinc coated corners with grub screws. Installed at site in plumb and level at specified location as per drawing to the satisfaction of the engineer-in-charge.	350.00	4,200.00
6		FIRE EVACUATION			350 x 250	53	I-sign Fix	Providing and fixing sign of Modular Aluminium extrusions (Alloy 6060 as per European standards EN755-2-2008 tensile strength 190 MPa typical BHN is 70 from virgin aluminium homogeneous billet) with premium grade anodizing (Thickness 15-20 microns) bronze finish as per international standards, with 10 years warranty under normal working conditions. Profile to form frame with overall depth of 10 mm with media of thickness upto 3mm, 2 mm thick acrylic/ACP. I-sign Fix profile with M.5 zinc coated corners with grub screws. Installed at site in plumb and level at specified location as per drawing to the satisfaction of the engineer-in-charge.	1,460.00	77,380.00
7	STR				300 x 100	17	I-sign Fix	Providing and fixing sign of Modular Aluminium extrusions (Alloy 6060 as per European standards EN755-2-2008 tensile strength 190 MPa typical BHN is 70 from virgin aluminium homogeneous billet) with premium grade anodizing (Thickness 15-20 microns) bronze finish as per international standards, with 10 years warranty under normal working conditions. Profile to form frame with overall depth of 10 mm with media of thickness upto 3mm, 2 mm thick acrylic/ACP. I-sign Fix profile with M.5 zinc coated corners with grub screws. Installed at site in plumb and level at specified location as per drawing to the satisfaction of the engineer-in-charge.	724.00	12,308.00
8	DUCT	DUCT			300 x 100	12	I-sign Fix	Providing and fixing sign of Modular Aluminium extrusions (Alloy 6060 as per European standards EN755-2-2008 tensile strength 190 MPa typical BHN is 70 from virgin aluminium homogeneous billet) with premium grade anodizing (Thickness 15-20 microns) bronze finish as per international standards, with 10 years warranty under normal working conditions. Profile to form frame with overall depth of 10 mm with media of thickness upto 3mm, 2 mm thick acrylic/ACP. I-sign Fix profile with M.5 zinc coated corners with grub screws. Installed at site in plumb and level at specified location as per drawing to the satisfaction of the engineer-in-charge.	724.00	8,688.00
9	MCP	MANUAL CALL POINT			100 x 100	12	I-sign Fix	Providing and fixing sign of Modular Aluminium extrusions (Alloy 6060 as per European standards EN755-2-2008 tensile strength 190 MPa typical BHN is 70 from virgin aluminium homogeneous billet) with premium grade anodizing (Thickness 15-20 microns) bronze finish as per international standards, with 10 years warranty under normal working conditions. Profile to form frame with overall depth of 10 mm with media of thickness upto 3mm, 2 mm thick acrylic/ACP. I-sign Fix profile with M.5 zinc coated corners with grub screws. Installed at site in plumb and level at specified location as per drawing to the satisfaction of the engineer-in-charge.	350.00	4,200.00
10		LEVEL INDICATOR			200 x 300	17	I-sign Fix	Providing and fixing sign of Modular Aluminium extrusions (Alloy 6060 as per European standards EN755-2-2008 tensile strength 190 MPa typical BHN is 70 from virgin aluminium homogeneous billet) with premium grade anodizing (Thickness 15-20 microns) bronze finish as per international standards, with 10 years warranty under normal working conditions. Profile to form frame with overall depth of 10 mm with media of thickness upto 3mm, 2 mm thick acrylic/ACP. I-sign Fix profile with M.5 zinc coated corners with grub screws. Installed at site in plumb and level at specified location as per drawing to the satisfaction of the engineer-in-charge.	1,198.00	20,366.00
										22,49,148.00

PROJECT : VICTOR MENEZES CONVENTION CENTRE, IIT MUMBAI
BOQ : C&I Renovation Works

Sr.No.	RA REF.	Description	REFERENCE IMAGE	UNIT	QTY	RATE	AMOUNT
A		BOUGHT OUT FIXED FURNITURE					
1	RA-1	Removal of all Two Seater student desk and Three Seater desk. This includes removal of the existing furniture, removal of the leg, by cutting the anchor bolt, grinding it down, total removal, necessary cutting of the head, grinding, levelling all inclusive. Three Seater has got four legs, two seater has three legs. Cost is per seat. This includes removal of seat, removal of back, cleaning, packing, shifting to a safe place within IIT campus as directed by the Project Manager, shifting lifting to the specified floor as directed.		Nos.	1720	417.00	7,17,240.00
2	RA-2	Refixing of the old furniture "as it is" after cleaning the legs, seat and back with anchor bolts, this includes, drilling into the floor, including hardware etc. (Anchor bolts of 8" to be used with necessary plugs) Cost per seat. Elements : Seat / back / legs / hardware.		Nos.	1720	564.00	9,70,080.00
3	RA-3	Supply of table top size :- 1600(L) x 380(D) Postforming table top 18mm thk plywood		Nos.	1	4,506.00	4,506.00
4	RA-4	Supply of table top size :- 1100(L) x 380(D) Postforming table top 18mm thk plywood		Nos.	2	3,103.00	6,206.00
5	RA-5	Supply of new table legs .		Nos.	40	3,485.00	1,39,400.00
6	RA-6	Supply of the repaired legs for tables after duly powder coating in the same colour.		Nos.	800	2,069.00	16,55,200.00
7	RA-7	Supply of the new tables		Nos.	3	17,539.00	52,617.00
8	RA-8	Supply of the new chairs		Nos.	2	12,776.00	25,552.00
9	RA-9	Supply of the seat (bent seat, laminated). The material / colour of the seat is exactly as per the original along with necessary edge binding etc. Hardware included.		Nos.	15	1,822.00	27,330.00
11	RA-10	Supply of the back as per original material / colour of the back to be exactly as per the original hardware included.		Nos.	20	1,822.00	36,440.00
12	RA-11	Supply of the new apron (front panel) for Two Seater.		Nos.	5	3,103.00	15,515.00

Sr.No.	RA REF.	Description	REFERENCE IMAGE	UNIT	QTY	RATE	AMOUNT
13	RA-12	Supply of the new apron (front panel) for Three Seater.		Nos.	5	3,103.00	15,515.00
14	RA-13	Supply of the repaired legs for chairs after duly powder coating in the same colour.		Nos.	1000	1,936.00	19,36,000.00
15	RA-14	Supply of the apron powder coating in the same colour.		Nos.	159	2,930.00	4,65,870.00
16	RA-15	Supply of the repaired apron (front panel) for Two Seater after removing the dents, duly powder caoted.		Nos.	4	1,418.00	5,672.00
17	RA-16	Supply of the repaired apron (front panel) for Three Seater after removing the dents, duly powder caoted.		Nos.	4	1,418.00	5,672.00
18	RA-17	Removal of all auditorium chairs, dismantling the chairs, dismantling of handrest, seat, back keeping safely in the specified area. Packing and stacking all inclusive.		Nos.	390	476.00	1,85,640.00
19	RA-18	Re upholstery with fabric (removal of old fabric, carting away the same) Upholstry with new fabric (fabric basic rate @Rs.880/- sqmtr) including hardware; melamine polish of the back rest, Reassembly of the chair, fixing into the floor as per layout with anchor bolts and necessary hardware. And fixing using anchor bolts.		Nos.	390	4,746.00	18,50,940.00
		TOTAL OF BOUGHT OUT FIXED FURNITURE (A)					81,15,395.00
C		ON-SITE FIXED FURNITURE					
16	RA-34	RECEPTION TABLE		Nos.	2	1,29,336.00	2,58,672.00
		Providing, refurbishing and Re-placing in position of existing reception table. Including replacing back storage with new material, replacing damaged engineered marble, polishing existing marble. Etc complete.					
17	RA-35	DRY PANTRY COUNTER		Sqm	20	47,934.00	9,58,680.00

Sr.No.	RA REF.	Description	REFERENCE IMAGE	UNIT	QTY	RATE	AMOUNT
		P/F Counter : 600mm deep & 800mm ht Low ht storage with 150mm ht. drawers made out of 19mm marine ply finished in 1mm app. laminate. Counter top finished in 12mm corian of Dupont make . Shutter made of 19mm thk ply with 100mm Kich make 'C' type SS handle; ball catch & necessary hardware & fittings. The shutters to be mounted with 2 nos. of Hafele make SS hinges & finished with 1mm thk. laminate of approved shade on all surfaces, including SS 240mm dia Swing Waste Chute, Code-CWC3 Euronics with Dustbin - SS Lid 10 ltr Perforated Metal Type - SS Thickness - 0.6 mm Size - 8" dia x 12" height All complete as per Architect's instructions & detail drawings.					
18	RA-36	JANITOR STORAGE		Sqm	15	28,331.00	4,24,965.00
		P/F Janitor - Full ht storage unit of 450mm deep & 2400mm avg. ht. made out of 19mm thk. marine ply with openable shutters mounted on Hafele make SS hinges, 19mm thk Side verticals and Top. Storage to be finished in 1mm thk app laminate externally & internally. Storage units to have 19mm thk. shelves at 375mm c/c. All exposed edges to be finished in laminate. Back of storage unit to be out of 9mm thk ply finished in laminate. All shutters to have Kich make SS handles, magnetic ball catch, Hafele make locks. All complete as per details.					
19	RA-37	Providing Key unit storage -		Sqm	5	27,569.00	1,37,845.00
		P/F unit made of 19mm thk. Plywood with all sides in lamiate finish with 6mm thk. Clear glass & necessary hardware , J type hooks, lock hinges & handle with proper Line & Level as directed.					
20	RA-38	Refurbishing of Desk With Laminate (Desk size - 2300 L x 750 W x 750 Ht)		Nos.	17	36,954.00	6,28,218.00
		Providing & fixing of 1.5 mm thk Laminate (Match with Ex.Laminate) fixed on Existing ply as approved by Architect including machine screw etc complete.Work will be carried out as per drg & instruction of Acoustic consultant Site Engineer /Architect.					
21	RA-39	Podium Table - Size - 750mm L X 1200mm ht X 6000mm depth		Nos.	2	63,912.00	1,27,824.00
		Providing and fixing podium table with BWP table and veneer finished as per details drawing, All wooden surface will be clear PU polished, rate including making all arrangement for mic etc.					
		TOTAL OF ON-SITE FIXED FURNITURE (B)					25,36,204.00
		TOTAL OF (A) + (B)					1,06,51,599.00

**INDIAN INSTITUTE OF TECHNOLOGY BOMBAY
ESTATE OFFICE**

PROJECT : VICTOR MENEZES CONVENTION CENTRE, IIT MUMBAI

SUMMARY

Sr. No	Description Of Work	Amount
I	INTERIOR CIVIL FINISHES WORKS	
A	Demolition Work	29,98,338.18
B	Misc. Civil works	70,54,464.51
C	Allied Works	20,02,606.49
D	Flooring & Skirting & Jambs Works	2,89,51,976.82
E	Cladding Work	87,43,430.91
F	Counter Work	14,63,249.00
G	Carpentry Work	2,40,84,789.00
H	FALSE CEILING.	3,48,64,328.38
I	Painting Work	52,22,133.94
J	Wallpaper / Graphics	46,50,211.00
K	Partition Works	86,05,916.00
L	Door Works	48,82,929.00
M	Roller Blinds	1,32,330.00
N	Miscellaneous Work	34,25,453.00
	TOTAL OF INTERIOR CIVIL FINISHES WORKS	13,70,82,156.23
II	PHE WORKS	
	SANITARY WARE & CP FITTINGS	26,79,498.00
	INTERNAL WATER SUPPLY	10,02,376.00
	INTERNAL DRAINAGE (SOIL, WASTE & VENT)	16,15,470.00
	INTERNAL STORM WATER	3,09,600.00
	TOTAL OF PHE WORKS	56,06,944.00
III	ELECTRICAL WORKS	2,72,10,990.00
IV	ELV WORKS	
	ADDRESSABLE FIRE ALARM SYSTEM	32,02,344.60
	FIRE FIGHTING TELEPHONY SYSTEM	4,56,163.50
	PUBLIC ADDRESSING SYSTEM	23,12,315.00
	IP CCTV SYSTEM	18,36,142.50
	NETWORK SYSTEM	2,98,444.00
	TOTAL OF ELV WORKS	81,05,409.60
V	FIREFIGHTING WORKS	
	FIRE HYDRANT INSTALLATION (WET RISERS)	18,39,299.00
	FIRE PUMP ROOM EQUIPMENT	18,90,382.00
	AUTOMATIC SPRINKLERS SYSTEM	34,52,456.00
	FIRE EXTINGUISHERS	6,25,000.00
	TOTAL OF FIREFIGHTING WORKS	78,07,137.00
VI	HVAC	
	AC & VENTILATION	2,20,29,825.00
	HVAC ELECTRICAL WORK	12,12,400.00
	TOTAL OF HVAC	2,32,42,225.00
VII	AUDIO VIDEO SYSTEM	1,28,41,151.26

VIII	LIGHTING MANAGEMENT SYSTEM	
	CONFERENCE & BOARD ROOM	4,33,311.00
	AUDITORIUM	5,72,311.00
	ATRIUM	5,72,311.00
	MOTORIZED BLINDS	26,36,227.00
	TOTAL OF LIGHTING MANAGEMENT SYSTEM	42,14,160.00
IX	SIGNAGE	22,49,148.00
X	FURNITURE WORK	1,06,51,599.00
	TOTAL	23,90,10,920.09
	Say Rs.	23,90,10,920.00
	Above % in words	& in figure
	Below % in words	& in figure
		Amount
		CGST 9%
		SGST 9%
		Total Amount after GST
		Say Rs.

Amount in Words(_____)

(Rates for all items & net amount of total to be filled with figure and words, Percentage for above/below in words as well as in figures should be mention clear & correct. If it is not done, it will be assumed as incomplete tender & tender opening committee will reject your offer at the time of opening of tenders/quotations).

1) If you will engage labourer 20 or more any day, you have to get labour licence as per contract Regulation & Abolition Act 1970 Rule 1971, and also, you have to keep all such recored for inspection to the Principal Employer. If you will engage labour up to 10 Nos. per day, you have to file returns after completion of work as per Building & Construction Act to the Office of Regional Labour Commissioner (Central), Sion, Mumbai.

2) Tender will be rejected if white ink applied for correction in the schedule of work.

3) This work is to be executed as per the the clauses mentioned in the tender document signed by you. In addition to the existing safety clause of the tender documents a penalty of Rs. 5,000/- (per case) will be recovered from the bills of the particular work, in case any safety violations are noticed.

***For details please refer to BOQ/SCHEDULE/DESCRIPTION OF WORK.**

Signature and Stamp/seal of the Company