



**Extension of Last Date of Submission of Quotations –
Quotations invited for Interior Designing and Set up of Corporate Office of AMH SSC**

Greetings from the Apparel Made-ups & Home Furnishing Sector Skill Council.

The last of submission of sealed quotations for the Interior Design and Set Up of Corporate Office of AMHSSC has been extended to 27.01.2019.

Interested parties are requested to submit the sealed quotations on/before 27.01.2019 before 11.00 a.m.

Sd/-
Dr. Roopak Vasishtha
CEO & DG
AMH SSC

Summery Sheet

BOQ for Proposed Interiors Works AMHSSC

Office Interior Work

Projects & Client Details

Date - 20.01.2019

Project - Office Interiors	Index - Floor		Area in sft	3,800
Client - AMHSSC	Location - Delhi		Project Value	
Building -				

Bill OF Quantities

Sl.No.	Description		Costing	Cost Per Sft
1	Interiors			
	Civil			
2	Modular Furniture			
3	Chairs			
4	Furniture			
5	Electricals works			
6	.			
7	AC Works			
8	LV Security			
		Grand Total		

Civil BOQ for AMHSSC

SI No.	Description	Unit	Qty	Rate	Amount
A	Dismantling				
1	Dismantling of existing aluminium/wooden partitions,Ac ducts, Electrical items, plumbing items,FAS items, furniture with removal & clearing of debris from site.	Ls	Rate Only		
2	Dismantling of existing brick wall, Partation, tiles screeding & tile flooring etc.,with removal & clearing of debris from site.	sqft	Rate Only		
B	Civil - Wet Works				
	Construction of Wall				
2	Providing and construct 115 mm thick brick wall in cement and sand mortar1:3 with flush joints with both side cement mortar finishing of plastering and every 7th course providing one RCC beam of 100 x 100mm including hacking, cleaning scaffolding & curing etc	sqft	Rate Only		
B	Flooring				
1	Providing & laying 600x600 vitrified tile flooring laid in two differing shades as per design fixed with tile adhesive/ cement mortar, chemical grout . Tile Adhesive - 'unitile' make ; chemical grout - colour to Architect's approval. Rate shall include for preparation of base surface & protection till Handover with necessary POP. Basic rate of vitrified tile - Rs.60/-	sqft	Rate Only		
2	Water Proofing				
	Providing and Applying two coats of DR.FIXIT/Fosroc Brush bond or equivalent (polymer cementations coating) after thoroughly cleaning the surface by making it free of all loose material, oil etc. Filling all the joints with appropriate sealants complete for sunken slab etc. complete to specification. Vendor to inspect site to understand the problem of leakage.	sqft	Rate Only		
TOTAL AMOUNT					

PROPOSED OFFICE INTERIOR FOR AMHSSC

Date - 20.01.2019

INTERIOR WORKS

Sl.No	Description		Qty	Rate	Amount
A PARTITION WORKS					
1	75 mm PARTITION - Type 1 (GI Frame with both side gypsum skinning)				
	Providing and fixing of gyp board Full Height Partitions Up to True Ceiling height using 50 x 25mm GI section framework @ 600 c/c both ways with horizontal member at floor and soffit, proper in line and level, screw fixed to section with 25mm long dry wall screws. The hollow core to be filled with 50mm thick and 32Kg/cubic meter Rock wool blocks wrapped in Hussein paper for sound insulation. The frame both side Skinned with 12 mm gyp board up to 2100 ht and above that Up to true ceiling with gypsum plaster board to seal the Services gap in between partition and the A.C duct, electrical, sprinkler etc., wherever required in above false ceiling partition. Provide the return air path way as per architect approval. Also provide the holes/ reinforcement in frame for electrical/network conduit as per requirement. Including paint finish also.	sqft	1,478		
1A.	As same as above spec (considered Partition Above false ceiling). Without Paint Finish.	sqft	400		
B GLAZED PARTITION WORK					
1	Providing and fixing full height 12mm toughened glass fixed with Aluminium U-channel on the top above false ceiling and at the bottom at floor level and all gaps to be sealed with necessary sealant(GE make)and In-between glass and solid partition should have 35x20mm beech wood beading with Melamine polish as per the details mentioned in the drawing. Number of vertical joints shall be as per the drawing only. The partition to have support above false ceiling made from 50 x 50 mm wooden sections , 32 kg Density Rockwool Insulation and 12.5 mm Gypsum boards on both sides of the frame. The measured quantity shall be area of the glass only.	sqft	175		
C PANELLING & BOXING WORK					
1	Wooden rafters / Fins				
	Providing and fixing of 200mm x 100mm Ply boxing to be made with 19mm plywood finished with 1mm thick laminate of approved make and shade as per design and architect approval.	rft	120		
2	Lacquered glass panelling				
	Supply and fixing of 6mm thick Lacquered glass fixed on the 12 ply panelling by 19mm SS studs/pasted with Silicon as per approved drawing.	sqft	130		
D DOORS & SHUTTERS					
	Shutter work				

INTERIOR WORKS

Sl.No	Description		Qty	Rate	Amount
1	Providing and Fixing shutters for DB panels made from 25mm Plywood and finished in 1mm laminate of approved make & shade. All exposed edges should be concealed with 12mm wooden lipping and polished IN MELAMINE MATT FINISH. Openable shutters to be provided with all necessary hardware such as, S.S. Clip-on Auto close Hinges, opens up to 90 to 180 degrees as the case may be, S.S. Handle, Lock of approved make & finish, etc., all inside surfaces to be polished.	sqft	36		
	Doors				
	Fabricating and fixing single leaf glazed door of 1200mm x 2100mm x 12mm ,fabricated with SS Patch fitting				
	Applicable hardware's to be considered for following doors according to requirement as per detailed drawings and approval by Architect:				
	1No. Floor spring - OZONE				
	2no Pivots - OZONE				
	1 set SS Patch fitting				
	1 no. SS Lock - KIch				
	1 no. 300mm high 25mm thick SS Handle - KIch				
4	Any other hardware etc required to complete the related works.	Nos	Rate Only		
6	Same as but size 900x2100	Nos	16		
E	Loose Furniture				
1	Reception Table - Customized				
	Providing & Fixing of Reception table of size 1800mm length and 675mm, made of 25mm plywood with 1.5mm laminate finish of approved make on all visible surfaces and 0.5mm laminate for under surface of table. All interior vertical faces to be in laminate, Provision of cable management as per drawing with flip tops resting.(design as per architect drawing).	Nos	1		
G	STORAGES				
	Pantry Counter - Customized				
1	Supply and fixing of pantry and kitchen Storages with ply storage base made from 19mm Hdf/Ply and finished in 1mm laminate of approved make & shade. All exposed edges should be concealed with 6mm Teak wood lipping/25x18mm Pvc beeding and polished. Openable shutters to be provided with all necessary hardware such as, S.S. Clip-on Auto close Hinges, S.S. Handle, Lock of approved make & finish, Tower Bolt, etc., all inside surfaces to be laminated with Balancing Laminate.	sqft	90		
H	FALSE CEILING				
1	Acoustical Ceiling Grid Systems				
	Supplying and fixing of Mineral fibre tile with suspension system, fire rating of 1 hr, with following Specs Grid - 25mm tile fine Fissure of Armstrong or equivalent (15mm thk). Tegular Edge.	sqft	1,800		
2	Gypsum Ceiling				

INTERIOR WORKS

Sl.No	Description		Qty	Rate	Amount
	Providing and fixing in position multi level GYPSUM board false-ceiling suspended on G.I. frame work as per design & as shown in the drawing. The G.I. frame work consists of Perimeter channel of size 27mm x 0.5mm. Intermediate channel of size 45mm x 0.5mm thick. Ceiling section of 0.5mm thickness. 12.5mm thick tapered edge gypsum plaster board fixed to ceiling channel with 25mm dry wall screws at 230mm centres Jointed and finished with requisite filler, paper tape, finisher and primer suitable for Gypsum plaster boards & finishing the same with 3 coats of acrylic emulsion paint as/app. Rate to include making necessary cut-outs/openings for light fittings, diffusers etc. All components to be of India Gypsum & all spacing's should match their recommendation & standards.	sqft	2,000		
I	Flooring				
I	Carpet Flooring				
	Providing Imported nylon 6.6 approved make and colour shade 100% Optimum Solution Dyed / Wear On Nylon Tufted, Textured Loop/cut Pile Carpet tiles (Modular Carpet) of approved size and make InterfaceShaw or equivalent The Carpet tiles shall be Permanent static control, Pile height to a maximum of machine Gauge-1/12 Gauge, Total thickness 6mm+/-0.5mm, Density-Over 6500 Oz/Cu Yd, with synthetic non-woven, backing of tile as approved by client , PVC free underscore cushion including color fastness as per standard, moth proof, stain resistant, anti microbial, fire -resisting class 1 etc. complete, laying over existing flooring as per manufacturer's specification and the product shall be in compliance to ASTM standards. The quoted rate shall be all inclusive of transportation, loading, unloading etc at site and wastage etc; (Quantity is inclusive of attic stock of 5% on the required quantity and attic stock shall be handed over to client in full packing condition) Actual laid area and attic stock will be measured and paid. Preparing the surface like deep cleaning of floor and removing of loose particle and Laying of Carpet tiles including necessary pre-applied or post applied adhesives (Note: Volatile organic compound free adhesive of approved make shall be used for laying the carpet.) for fixing over existing flooring as per Manufacturer's specification. Rate shall be inclusive of providing and laying protective plastic sheets over the laid area of carpets till the area is fully handed over and application of vacuum cleaners before handing over and also water extraction cleaning/ shampooing post occupancy for full areas.(Actual laid area only will be measured and paid). basic cost Rs.150 per sft.	sqft	3,600		
11	Supply and laying of 1.6 mm Vinyl roll Flooring , complete with cleaning and preparation of base and including installation with adhesive, surface protection till handover of site. L.G MAKE .	sqft	40		
J	Painting :-				
1	POP of average 12mm thickness for walls in true level and plumb complete as per architects instructions.	sqft	3,000		
2	Providing & applying Premium emulsion paint to walls after preparation of surface with necessary primer, two coats of luppam (Altech or eq.) to get smooth finish and two coats of paint and final roller coat to get Satin finish in approved shade.	sqft	8,000		
K	Miscellaneous				
1	Blinds				
	Providing and fixing of Roller blinds in fabric with powder coated channel with the matching colour as app.. by architect.	sqft	780		
2	Skirting				
	Providing & Fixing of 75mm high skirting of extruded Aluminium profile. Make: wall line / equivalent.	rmt	290		

INTERIOR WORKS

Sl.No	Description		Qty	Rate	Amount
3	Pelmet				
	Pelmet in L shaped of 150mm x 300mm (for Blinds and pull down screen) all along external windows fabricated with 12mm commercial plywood & finished in .8mm thick Laminate in visible area and other area covered with paint as per approval shade and make.	rmt	120		
4	Glass Shelves				
	Glass Shelves of 12mm glass with edge polished rested with suitable SS clamp.	sqft	Rate only		
5	Glass Etching				
	Providing and fixing 3M/ Equivalent make frosted sparkle film on existing glass in partitions and doors, in design cut in computer as per drawing. 3M certification to be provided.	sqft	240		
6	Digital Prints				
	Providing and fixing of Graphic prints as per design on 3m film on partitions a. 3M certification to be provided. Graphic on Reception Side Wall and Main WS area.	sqft	210		
7	Trap Door				
	Providing and fixing of trap doors of size for Services made with Wooden Frame and 12 mm laminated Ply , both sides.	sqft	Rate only		
8	L shape SS corner strip 25x25mm for column edges - WALL LINE MAKE / Equivalent	rft	48		
	Supplying and fixing of ceiling hanging lights rates includes of necessities back support work.	L.s	1		
9	Signage's				
10	Providing and Fixing of Door PUSH / PULL Signage's of S.S finish with Acid etched lettering of approved shade and of size 200 x 50 mm. The S.S signage shall be pasted using double-sided tape of 3M make on the Glass doors / Flush doors.	Nos	16		
11	Main Reception Signage including Vinyl Cut letters pasted on 6 mm Acrylic Sheet, of Size Approx 1200 x 1200 fixed to wall with SS Studs.	Nos	1		
	Total Amount				-

Modular BOQ For AMHSSC

Sl.No	Description	Unit	QTY	Unit Price	Total
1	CABIN TABLE : L SHAPE MAIN TABLE SIZE 1500X900X750MM HT, RETURN CREDANZA : 1000X450X750MM HT, TABLE TOP: Table top 25 mm thick pre.lam Edge banding finishes Supported by MS 50X50 Leg & 18mm thick Modesty panel . with Side Cabinete.	nos	5		
	PRE.LAM PEDESTAL UNIT :- One Mobile Pre.lam pedestal with lockable castors made of Prelam particle board finish. One drawers Pedestal 400mm (w) X 450mm (d) X 680 mm (h) contain two equal drawers and one larger drawer for box files. Each lock has One sets of keys. The slides are ball bearing to ensure smooth movement. Slides & Letterbox are of EBCO make, Handles & Locks from Hettich.	nos	12		
	CEO Cabin (STORAGE UNIT) : Made of 18mm thick pre.laminated particle board with PVC edge banding finishes top top , Shutter & shelves with Flush handle with lock.	sqft	40		
2	12 SEATER MEETING TABLE :3600X1200X750MM HT WITH EMPTY FLIPUP BOX 2 NO CONSIDERED TABLE TOP: is made of 50mm thick Prelaminated Boards with 2mm PVC edge banding supported on MS Powder coated legs. Leg :- 50x50 MS Square 16 gauge MS leg with Approved powder coating in 80 microns. Wire Management :- Powder coated vertical post 715mm ht provided below table top with 150x150 for electrical & data cable carrying vertically to dump box.	nos	1		
1	WORKSTATION : L SHAPE SIZE 1500X1500X750MM HT, TABLE TOP: Table top 25 mm thick pre.lam Edge banding finishes Supported by MS 50X50 Leg & 18mm thick Modesty panel . with Side Cabinete.	nos	12		
1	WORKSTATION : SIZE 1500X600X750MM HT, TABLE TOP: Table top 25 mm thick pre.lam Edge banding finishes Supported by MS 50X50 Leg & 18mm thick Modesty panel . with Side Cabinete.	nos	8		
5	Discussion Table : Supply of Round shape discussion glass top table with SS design legs size : 900 mm dia	nos	2		
6	STORAGE UNIT : Made of 18mm thick pre.laminated particle board with PVC edge banding finishes top top , Shutter & shelves with Flush handle with lock.				
7	REPRO STORAGE - 1200 X 600 X 750 MM HT (Photocopier)	nos	2		
8	File Storage - Factory Made / Floor & Wall Mount				
	Supply and fixing of Storages made from 19mm Hdf/Ply and finished in 1mm laminate of approved make & shade. All exposed edges should be concealed with 2mm PVC lipping/25x18mm Pvc beeding and polished. Openable shutters to be provided with all necessary hardware such as, S.S. Clip-on Auto close Hinges, S.S. Handle, Lock of approved make & finish, Magnetic Catcher, Tower Bolt, etc., all inside surfaces to be polished.(depth 350mm).	sqft	300		
TOTAL					

Modular BOQ For AMHSSC

Sl.No	Description	Unit	QTY	Unit Price	Total
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BOQ for Chairs : M/s. AMHSSC

Sl.No	Specification	Unit	Price	Total Price
1	Work Station Chairs/Meeting Room/Cabin	12		
	visitor chair/Reception			
	Mesh - Medium Back (BSP @ 7000/-)			
	Glass filled Nylon Base, Gaslift, Twin Wheel Nylon Castors,			
	T' Type Adjustable PU Armrest, Back: ABS with Mesh Upholstery			
	Synchrony Tilt Mechanism, Inbuilt Lumbar Support,			
	Seat: PU Moulded Cushion			
2	Conference room/ Cabin Chair (BSP @ 9000/-)	24		
	Mesh - Medium Back (Refer Image).			
	Glass filled Nylon Base, Gas lift, Twin Wheel Nylon Castors,			
	T' Type Adjustable PU Armrest, Back: ABS with Mesh Upholstery			
	Synchrony Tilt Mechanism, Inbuilt Lumbar Support,			
	Seat: PU Moulded Cushion			
3	Collaborative Chairs			
	Supply of collaborative chairs (BSP @ 5500/-)	2		
4	Quite/Discussion chairs			
	Supply of Quite chairs (BSP @ 3500/-)	4		
5	Sofa			
	Providing and Supplying sofa with PVC upholstery as per design with steel legs, and foam			
	Supply of Three Seater (BSP @ 24000/-)	4		
	Supply of Single Seater (BSP @ 12000/-)	8		
			Total	

SCHEDULE OF QUANTITIES
For Electrical Works

Date - 20.01.2019

S.No	DESCRIPTION	UNIT	QTY. COMMON	RATE (Rs.)	AMOUNT (Rs.)
	GENERAL SPECIFICATIONS				
1	All wiring shall be of 1100 volts grade.				
2	All wiring shall be HR FRLS PVC insulated or ZHLS Polymer insulated , unsheathed, flexible, copper conductor, single or multi core as called for.				
3	Earth wiring shall also be HR FRLS PVC insulated or ZHLS Polymer insulated , unsheathed, flexible, copper conductor, single core as called for.				
4	Size of earth wire shall be the same as of the phase conductor or as specified.				
5	All Switches & Sockets shall be of modular design complete with modular plate and suitable sized GI/ moulded boxes as called for and shall be suitable upto 250V, AC supply.				
6	The recessed Switches and Socket outlet boxes shall be of 16G GI and of the same make/ manufacturer as of the switches and sockets. Local make boxes are not to be used.				
7	The surface mounted Switches & Sockets outlet boxes shall be moulded and of the same make/ manufacturer as of the Switches & Sockets.				
8	PVC Conduits shall be of FRLS type and shall be of minimum wall thickness of 2mm . (Rigid Heavy duty Conduit) unless otherwise specified. Company specified adhesive to be used for joining/ fixing of PVC conduits.				
9	GI and MS Conduits shall be of min. 16G thickness . Metallic conduit work shall be complete with proper threads, check nuts/ lock nuts etc.				
10	Flexible conduits, where ever required, shall be of heavy duty and complete with couplers.				
11	Minimum diameter of the conduit to be used shall be 25mm . Conduit less than 25mm dia is not to be used unless otherwise specified.				
12	Conduiting may be concealed or surface mounted (Exposed) as the case may be.				
13	Circuit cum point wiring for light points, ceiling fan points & exhaust fan points, 6A raw light plug sockets, 16A raw power Sockets, Raw Metal clad and Raw moulded socket outlets shall include:				
a	Circuit Wiring (Phase & Neutral).				
b	Point Wiring (Phase & Neutral).				
c	Insulated Green Colour earth wire for earthing of light fixture, switch and socket outlet box and 3rd pin of socket. Each circuit will have a separate earth wire from the DB.				
d	Conduits, bends, junction boxes, pull boxes and GI pull wire.				
e	Switch/ Switches/ socket outlets with GI outlet boxes/ moulded outlet boxes of suitable sizes.				
f	All hard ware and civil work etc.				
14	Circuit cum point wiring for UPS points shall include:				
a	Circuit Wiring (Phase & Neutral).				
b	Point Wiring (Phase & Neutral)				
c	Insulated green colour earth wire for socket outlet box and furniture and a separate green colour earth wire with yellow band for 3rd pin of the socket outlet. Each circuit will have separate earth wires for 3rd pin earthing and box/ furniture earthing from the DB.				
d	Conduits, bends, junction boxes, pull boxes and GI pull wire.				
e	Switch/ Switches/ socket outlets with GI/ moulded outlet boxes of suitable sizes as called for.				
f	All hard ware and civil work etc.				
15	For UPS Sockets outlets, separate insulated copper conductor earth wires shall be used for the sockets third pin earthing & for the outlet box and furniture earthing. One earth wire for box and furniture shall be of green colour and that of 3rd pin of socket outlet shall be of green colour with yellow band.				
16	Wiring terminations shall be made using proper sized thimbles/ lugs.				
17	All circuit & point wiring shall be colour coded & shall have ferruling on either end for circuit identification.				
18	The rates shall include material & labour for necessary length of circuit and point wiring, earth wiring, rigid and flexible conduiting, bends, junction boxes, pull boxes, screws, washers, check nuts, couplers, saddles, hangers supports, GI pull wire, civil work comprising chipping, cutting chases, fixing conduits & making good or surface clamping of conduit work as the case may be, modular switches, socket outlets, Electronic fan regulators surface or recessed outlet boxes as the case may be, ceiling rose, rigid and flexible conduit (PVC/ GI/ MS) as may be required, connectors and terminal blocks of proper rating etc. & sleeves etc. including lugs/ thimbles for terminations . Fan points wiring shall include switch as well as electronic speed regulator and fan hook box with fan hook.				

S.No	DESCRIPTION	UNIT	QTY. COMMON	RATE (Rs.)	AMOUNT (Rs.)
	Wiring shall include conduiting and wiring (Phase, Neutral, Earth) of light points/ fan points/ UPS and raw sockets outlets of any length from the distribution board via switch to the point.				
19	Cost of circuit cum point wiring shall include everything and all items and accessories to make the job complete in all respects.				
20	Circuit cum point wiring shall be countable on point basis and not measurable in liner length except for floor boxes, pop-up boxes or Server Room/ Hub Room/ Labs/ Data Centre Racks where liner length of wiring & conduiting shall be measurable and sockets shall be paid separately.				
21	Wiring for Racks/ floor boxes/ pop-up boxes shall however, be on measurable basis for wiring & conduiting & switch/ socket shall be countable.				
A.	CIRCUIT CUM POINT WIRING				
	CONDUITING: MS CONDUITS				
	WIRING: FRLS PVC insulated flexible Copper wires in MS Conduits				
	TYPE-1:- Wiring on Point Basis				
Note:	It shall include circuit wire, point wire, earth wire and conduit work of any length from DB to point via switch, switch, socket outlet, metal clad/ moulded outlet and box and complete in all respects and shall be payable on point basis.				
1	Light points wiring:- circuit wiring with 3 x 1.5 mm and point wiring with 3 x 1.5mm² (Earth).				
i.	Primary (First) light point controlled by a switch.	Nos.	12		
ii	Secondary (Loop) light point looped to first point and so on.	Nos.	40		
Note:	MCB cost not to be included here.				
2	Ceiling/Wall Fans & Exhaust Fans wiring with 2 x 1.5 mm² + 1.0 mm² (Earth)				
i.	Ceiling fan point controlled by a switch and an electronic speed regulator. (Including 150mm dia hexoganal type 1.6mm thick MS sheet fan hook box with fan hook).	Nos.	12		
ii.	Exhaust fan point with 6A, 3 pin wall socket outlet, near the fan and controlled by a switch and an electronic speed regulator.	Nos.	2		
Note:	Ceiling fans & exhaust fans may be looped to the lighting circuit.				
3	6A, 5 pin switched socket outlets wiring on work stations/ tables/ desks/ wall :				
i.	Circuit wiring with 3 x 2.5 mm ² for a first raw socket outlet on the work station/ table/ desks wiring partly in conduits & partly in raceways. Raceways to be a accounted for separately but conduiting is included here.	Nos.	20		
6	6A, 5 pin UPS switched socket outlet wiring for TV's & on walls or counters/ tables:				
i.	Wiring for a 6A, 5 pin, switched UPS socket outlet with 3 x 2.5mm ² + for box/ furniture earth wire for 3rd pin earthing in 25mm dia conduit.	Nos.	12		
7	Wiring for work station socket outlets :				
	Wiring with 3 x 2.5 mm² PVC insulated FRLS Cu. flexible cable (Phase + Earth) for 3rd pin earthing for a First set of socket outlets on the work stations/ table/ counter. Wiring partly in conduits & partly in raceway. Raceways to be accounted for separately but Conduiting is included here.				
i.	A set of 2 x 6A 5pin round pin socket outlets controlled by a 16A switch.	Nos.	45		
	Extra loop point wiring with 3 x 2.5 mm² PVC insulated FRLS Cu. flexible cable (Phase + Earth) for 3rd pin earthing for a next set of socket outlets on the next work station/ table/ counter wiring to run in furniture wire ways in flexible conduits or as may be required.				
i.	A set of 2 x 6A 5pin round pin socket outlets controlled by a 16A switch.	Nos.	45		
8	6A/ 16A Raw power point wiring.				
i.	Wiring for 1 x 6A /16A raw switched socket outlet with 2 x 4mm ² + 1 x 2.5mm ² (Earth) (one socket outlet on one circuit) in 25mm dia conduit. (For Kichen)	Nos.	4		
ii.	Wiring for 1 x 6A/ 16A raw switched socket outlet with 2 x 6mm ² + 1 x 4mm ² (Earth) (one socket outlet on one circuit) in 25mm dia conduit. (For Hand Driyer,Geyserr etc)	Nos.	R/O		

S.No	DESCRIPTION	UNIT	QTY. COMMON	RATE (Rs.)	AMOUNT (Rs.)
iii.	Wiring for 2 x 6A/ 16A raw switched socket outlets. Wiring with 2 x 6 mm ² + 1 x 4 mm ² (Earth) upto first socket outlet and the loop wiring to the second point with 2 x 4 mm ² + 1 x 2.5 mm ² (Earth) (Two socket outlets on one circuit) in 25mm dia conduit.(For General Perpose)	Sets	12		
9	6A/ 16A or following UPS power point wiring on walls, ceilings & counters etc. for printers, OHP's, motorised screens & plasma etc. but not for IT racks.				
i.	Wiring for 1 x 6A/ 13A UPS switched socket outlet with 2 x 2.5mm ² + 1 x 1.5 mm ² (earth) for box/ furniture earth wire + 1 x 1.5 mm ² (Earth) for 3rd pin earthing. (one socket outlet on one circuit) in 25mm dia conduit.	Nos.	45		
ii.	Wiring for 2 x 6/13A International UPS outlets controlled by a 16Amp switch with 2 x 2.5mm ² + 1 x 1.5mm ² (earth) for box/ furniture earth wire + 1 x 1.5mm ² (Earth) for 3rd pin earthing. (Four sets of socket outlet may on one circuit) in 25mm dia conduit.	Sets	R/O		
iii.	Wiring for 1 x 6A/ 16A UPS switched socket outlet with 2 x 4mm ² + 1 x 2.5mm ² (Earth) for box/ furniture earth wire + 1 x 2.5mm ² (Earth) for 3rd pin earthing. (one socket outlet on one circuit) in 25mm dia conduit.(Projector & Printer etc.)	Nos.	3		
iv.	Wiring for 2 x 6A/ 16A UPS switched socket outlets. Wiring with 2x 6 mm ² + 1x4mm ² (Earth) for box/ furniture + 1x4mm ² (Earth) for 3rd pin earthing upto First socket outlet and the loop wiring to the second point with 2x4mm ² + 1x2.5mm ² (Earth) for box/ furniture earth wire + 1x2.5mm ² (Earth) for 3rd pin earthing. (Two socket outlets on one circuit) in 25mm dia conduit.	Sets	R/O		
10	Wiring for 1 phase & 3 phase AC split units:				
a	Wiring: Supply, laying, terminating 1100V grade, flexible copper conductor wiring in 16G GI conduiting complete with bends, junction boxes, pull boxes GI pull wire including necessary civil work such as chase cutting/ chipping and making good for concealed conduiting or clamping with saddles and clamps on surface for surface conducting:				
ii.	2 x 4 mm ² + 1 x 2.5 mm ² (Earth) in 25mm dia conduit.(1TR)	RM	R/O		
iii.	2 x 6mm ² + 1 x 4mm ² (Earth) in 25mm dia conduit.(1.5 TR to 2 TR)	RM	80		
Note:	Wiring for Split units to be considered upto the outdoor unit MCB box. Out door MCB box shall be countable as per item listed below.				
b.	MCB / ELCB Boxes - Outdoor enclosre: Supply, fixing, including terminations of wiring of following MCB's in weather proof moulded enclosure IP67 for split AC's/ duct able splits/ Pr. AC's etc. near outdoor condensing units:				
i.	16A DP ELCB (upto 1TR)	Nos.	R/O		
ii.	25A DP ELCB (1.5TR)	Nos.	R/O		
iii.	32A DP ELCB (1.5TR to 2TR)	Nos.	8		
iv.	40A DP ELCB (2TR to 2.5 TR)	Nos.	R/O		
11	MCB/ MCCB Boxes - Indoor enclosure for Pr. AC's & Ceiling Hung AHU's: Supply, fixing, including terminations of wiring of following MCCB's/ MCB's in factory fabricated powder coated metal enclosure for indoor units of Pr. AC's/ ceiling hung AHU's:				
i.	25A 4P MCB	Nos.	16		
ii.	40A 4P MCB	Nos.	2		
Note:-	Wiring/ Cabling for Pr. AC's & ceiling hung AHU's shall be accounted for in LT cables & submains chapter.				
12	Wiring for 1 phase & 3 phase raw metal clad/ moulded socket outlets for AC units (window AC's), for misc. equipment etc. & for kitchen/ cafeteria, breakout areas points & at misc. locations:				
i.	16A 3pin, 1 phase , 240V moulded socket outlet in factory fabricated powder coated metal box with 30mA DP RCBO and plug top with 2 x 4mm ² + 1 x 2.5mm ² (Earth) 3rd pin & box earthing in 25mm dia conduit.	Nos.	1		
ii.	32A 3pin, 1 phase , 240V moulded socket outlet in factory fabricated powder coated metal box with 30mA DP RCBO and plug top with 2 x 6mm ² + 1 x 4mm ² (Earth) 3rd pin & box earthing in 25mm dia conduit.	Nos.	R/O		
iii.	32A 5pin, 3 phase , 415V moulded socket outlet in factory fabricated powder coated metal box with 30mA 4P RCBO and plug top with 4 x 6mm ² + 2 x 4mm ² (Earth) 3rd pin & box earthing in 32mm dia conduit.	Nos.	2		
13	Wiring for IT Racks for Hub rooms, Mux Rooms etc.				
a	Providing & fixing of following socket outlets:				
i.	16A 3pin, 1 phase, 240V moulded socket outlet in factory fabricated powder coated metal box with DP MCB and plug top.	Nos.	R/O		
ii.	32A 3pin, 1 phase, 240V moulded socket outlet in factory fabricated powder coated metal box with DP MCB and plug.	Nos.	2		

S.No	DESCRIPTION	UNIT	QTY. COMMON	RATE (Rs.)	AMOUNT (Rs.)
b	Wiring in existing raceways for above mentioned sockets.				
i.	4C x 4mm ² 1100V grade flexible copper conductor sheathed FRLS PVC cable (P, N, IG, PE)	RM	R/O		
ii.	4C x 6mm ² 1100V grade flexible copper conductor sheathed FRLS PVC cable (P, N, IG, PE).	RM	60		
14	U-PVC Trunking				
a.	Supply & Fixing of U-PVC trunking with top cover, end caps angles, bends, joints, junction boxes, separators, couplers and clips etc. as may be required and as approved by Architect/ Consultants:				
i.	100mm wide x 50mm deep	RM	10		
ii.	100mm wide x 40mm deep	RM			
Note:	'IG' stands for isolated earth (3rd pin).				
	'PE' stands for protected earth (body/box).				
B.	CONDUITING & RACEWAYS FOR VOICE/ DATA (N/W) & TV SYSTEM:				
	Important Notes:-				
a.	Contractor to get the samples of floor and ceiling raceways to be approved from the Architect/ Project Manager/ Consultant/ Client before supply & erection.				
b.	Depth of the floor raceway is to be decided by the contractor after checking/ examining screed depth available at site. For this purpose chipping to be carried out at various places on the floor/ floors to carefully assess the depth/ floor margin available. Final approval is to be obtained from the Architect/ Project Manager/ Client before ordering/ fabricating raceway. The sizes & depths of raceways given in the BOQ are only tentative & indicative.				
c.	Contractor is also supposed to check and confirm the adequacy of raceway sizes by calculating the exact number of electrical circuit wires & N/W wires for respective Electrical & N/W raceways.				
d.	Electrical & N/W raceways to be run separated by a gap of not less than 450mm or more.				
e.	'N/W' stands for Networking cables.				
f.	1N/ 2N/ 3N/ 4N stands for One node/ Two nodes/ Three nodes & Four nodes respectively of voice & data face plates/ wires.				
1	CONDUITING FOR VOICE/ DATA & TV OUTLETS:				
b.	Providing and fixing in position of MS conduit including bends, junction boxes, pull boxes, GI pull wire including necessary civil work such as chase cutting, chipping, making good for recessed conduiting or clamping on surface with saddles, clamps etc. for surface conduiting:				
i.	20mm dia, PVC conduit.	RM			
ii.	25mm dia, PVC conduit.	RM	350		
iii.	32mm dia, PVC conduit.	RM	50		
2	CONDUITING FOR VOICE/ DATA & TV OUTLETS (INCASE CONCEALED):				
a.	Providing and fixing in position of rigid FRLS PVC conduit including bends, junction boxes, pull boxes, GI pull wire including necessary civil work such as chase cutting, chipping, making good for recessed conduiting or clamping on surface with saddles, clamps etc. for surface conduiting:				
i.	20mm dia, 2mm thick FRLS PVC conduit.	RM			
ii.	25mm dia, 2mm thick FRLS PVC conduit.	RM	230		
iii.	32mm dia, 2mm thick FRLS PVC conduit.	RM	20		
3	GI OUTLET BOXES FOR VOICE/ DATA FACE PLATES:				
	Providing & Fixing of factory fabricated 1.6mm thick GI outlet boxes for IN/2N/3N/4N Voice/ Data (N/W) face plates.	Nos.	90		
4	TV CORD OUTLET				
	Supply, Fixing, Connecting including testing & commissioning of TV Co-axial cable moduler socket outlet with moduler plate and 1.6mm thick GI outlet box.	Nos.	12		
5	TV CO-AXIAL CABLE				
	Supply & laying of RG-6 Co-axial TV signal cable in existing conduits.	RM	120		
6	CEILING RACEWAY				

S.No	DESCRIPTION	UNIT	QTY. COMMON	RATE (Rs.)	AMOUNT (Rs.)
	Supply and Fixing GI openable bottom cover junction boxes made from 1.6 mm thick pre-galvanized sheets for top, bottom and sides and complete with 1.6 mm thick bottom cover complete with rubber gasketing. This includes GI openable bottom cover junction boxes made from 1.6 mm thick pre-galvanized sheets for top, bottom & sides and complete with 1.6 mm thick bottom cover complete with rubber gasketing. junction box shall be suitable to accommodate GI raceways specified above. Necessary civil work to support/ clamp from RCC slab need to be included here too.				
	For 50mm Depth				
i.	100 x 50	RM	20		
ii.	150 x 50	RM	55		
iii.	225 x 50	RM	40		
C.	<u>LT CABLES & SUB MAINS</u>				
1	<u>SUPPLY OF CABLES:</u>				
	Supply of following sizes of 1.1kV grade LT XLPE insulated, FRLS grade PVC sheathed, stranded Aluminum conductor, Armoured/ Unarmoured cables as per IS:7098 Part-I.				
	4 CORES				
i.	4Cx 50 sq.mm. Al Ar. XLPE cable	RM	50		
2	<u>LAYING OF CABLES</u>				
	Laying, Fixing, Testing & Commissioning of following sizes of 1.1kV grade LT XLPE insulated, FRLS grade PVC sheathed, stranded Aluminum conductor, Armoured/ Unarmoured cables as per IS:7098 part-I on existing cable trays/ in existing hume pipes/ PVC pipes/ GI pipes/ on surface of slabs, walls or masonry/ RCC trenches/ ducts including cables ties, GI saddles, clamps and necessary hard ware.				
	4 CORES				
i.	4Cx 25 sq.mm. Copper Cable	RM	50		
ii.	4Cx 10 sq.mm. Copper Cable	RM	80		
4	<u>SUPPLY and Alaying OF CABLES</u>				
	Supply of following sizes of 1.1kV grade Single core LT PVC insulated, unsheathed, multi strand, flexible Copper conductor Un. Ar. Cables as per IS:694 .				
i	1C x 50 sq.mm. Cu. Un. Ar. Flexible cable	RM	60		
ii	1C x 16 sq.mm. Cu. Un. Ar. Flexible cable	RM	60		
Note:	For Input cables to UPS from UPS input panel & output cable from UPS to UPS out panel with in the UPS room.				
7	<u>PERFORATED CABLE TRAY</u>				
	Supply, fabrication and installation of GI perforated type cable trays including suitable structural steel support complete with all bends, tees, elbows, reducers etc. of various width in two tier/ three/ five tier fashion either on one side of the wall or on two sides of the wall or at other places and paint afterward if required. (All bends & tees shall be of factory built in of same make as that of tray).				
i.	100mm tray, 2mm thick 40mm collar.	RM	30		
ii.	150mm tray, 2mm thick 40mm collar.	RM	R/O		
iii.	200mm tray, 2mm thick 40mm collar.	RM	R/O		
E.	<u>DISTRIBUTION BOARDS & PANELS</u>				
	Design, Manufacturing, Assembly, Wiring and Supply of following Totally Type Tested, extensible cubicle type indoor mounting, fixed type, dead front, fully compartmentalized with hinged lockable detachable front & back openable, dust and vermin proof, IP-54 Degree of Protection, form 3b, floor mounting sheet steel clad switchboard fabricated out of 2 mm thick CRCA powder coated sheet steel suitable for use at 415 volts 3 phase 4 wire 50 cycle system and to withstand asymmetrical fault level as specified in the BOQ. Panels shall be fabricated in easily transportable sections, length, height, depth etc to match with site condition.				
	The following provisions shall be required to be made in the switchboard as detailed below.				
	<u>NOTES FOR PANELS/ SWITCH BOARDS</u>				
a.	The switchboard and the associated equipment including switchgear, control gear, bus bars, bus bar supports assemblies, door hinge, door lock etc shall be identical in mechanical construction to the LV switchboards which had been type tested.				
b.	Hinges provided shall not be visible from front.				
c.	For shrouding of the live parts use of PVC/ SRBP/ Hylem Sheets is not allowed.				
d.	The switchboard shall have provision to accommodate all cables from the top and Bottom as required.				
e.	The height of panels should not be more than 2100 mm.				

S.No	DESCRIPTION	UNIT	QTY. COMMON	RATE (Rs.)	AMOUNT (Rs.)
f.	Bus bar shall be high conductivity (99%), ETP - Electrical grade copper or 50-55% Aluminium as specified in BOQ.				
g.	Bus bar shall be designed on 45 deg. Ambient temperature and limit of temperature rise shall be 35 deg. Over and above Ambient temperature.				
h.	The material of bus bar support shall be SMC.				
i.	Suitable aluminium earth bus to be provided throughout the length of each switchboard.				
j.	Bus bars shall be with heat shrinkable PVC sleeves.				
k.	All switch gear (MCB's, MCCB's, MPCB's, contactors & O/L relays etc.) shall be of same make i.e. mixing of different makes in one panel shall not be permissible.				
l.	All UPS output panels shall have two earth bus bars of tinned copper of suitable rating. One of the earth buses shall be dedicated i.e. mounted on insulated supports.				
m.	Panels with copper bus bars shall be of tinned copper.				
n.	BMS compatible multifunction meters shall be complete with communication card, shall be net workable and shall be wired on to common RS485 Bus and information from these meters to BMS to be released at one point.				
o.	Only cast resin CT's to be used.				
p.	Phase indication lamps and ON/ OFF Indication lamp shall be LED type and shall be controlled/ protected by suitable control fuses or required fault with stand capacity (KA rating of switch board) MPCB's/ MCB's.				
q.	Terrace Panels shall be of outdoor weather proof with IP:65 rating.				
r.	Drawing approval shall be taken for each panel before manufacturing.				
	NOTES FOR MOTOR FEEDERS				
a.	Each motor feeder will have an "Auto/ Manual/ Off" selector switch.				
b.	Motor feeder shall be controlled by suitable rating MPCB, contactor and ON/OFF push buttons with 'ON' indication. MPCB shall have in built O/L relay & SPP.				
	NOTES FOR TRANSIENT VOLTAGE SURGE SUPPRESSOR (TVSS):				
a.	Transient Voltage Surge Suppressors (TVSS) shall be mounted out side the panel/ switch board in a sheet steel enclosure.				
b.	It shall be suitable for handling required (specified) surge handling capacity, shall be 10 modes protection with noise filters. (EMI & RFI)				
c.	Surge suppressor shall be complete with isolating/ protective device in the form of MCB/ MCCB of KA rating (fault with stand capacity) as of switch board.				
	NOTES FOR MCCB's:				
a.	MCCB's shall be with Ics= Icu rating.				
b.	MCCB's shall be with Extended rotary handles.				
c.	MCCB's upto 250Amp shall be with thermal - magnetic releases & beyond 250Amp shall be with micro processor based releases.				
d.	MCCB's shall have auxiliary contact where ever BMS compatability is needed.				
e.	For all UPS output panels, 3Pole MCCB's with 2N Neutral links (twice rated neutral link) shall be used.				
f.	The MCCB rating given in BOQ is not final. Exact MCCB's rating & fault with stand capacity to be calculated by the electrical contractor based on the feeder load, nature of load & fault current.				
	NOTES FOR MCB's & DB's:				
a.	MCB's shall be of minimum 10kA fault with stand capacity.				
b.	Use 'B' curve MCB's for lighting & small power circuits, 'C' curve for motor duty i.e. for pumps, AC motors, AHU motors, window and split AC's etc. & 'D' curve for UPS DB's i.e. for computers/ PC's circuit. Main incomer & outgoing circuit MCB's shall be selected accordingly i.e. type B,C & D. Contractor to select the MCB's accordingly as per the nature of the circuit/ load.				
c.	Each DB shall have separate neutral links of rating not less than 100A for each phase. The main incoming neutral link shall be in addition to three outgoing neutral links and shall be of 125A.				
d.	UPS DB's shall have a dedicated Earthing link fixed on insulated supports, which will be in addition to body earth link.				
e.	All internal inter connecting wiring with in the DB's shall be PVC insulated flexible copper conductor wires of adequate capacity as per the current rating.				
f.	DP ELCB's shall be used for each phase.				
g.	Inside each DB, a DB chart is to be fixed.				
f.	The MCB ratings given in the DB description is not final. Exact MCB rating & category is to be calculated by the electrical contractor based on the load of the circuit, its nature and fault current.				
1	MAIN FLOOR DB				
	Incomer:				
	1 No. 200A/25kA 4P MCCB Micro processor based with O/L,S/C & E/F Protection with ON-OFF-TRIP Indication light.				

S.No	DESCRIPTION	UNIT	QTY. COMMON	RATE (Rs.)	AMOUNT (Rs.)
	Metering for incoming:				
	1 set of multi function meter ,Class-I accuracy with 200/5A rating CT,s				
	1 set of RYB phase indicating lamps with 2A rating control, MCB .				
	Bus Bars:				
	Electrolytic high conductivity Aluminium three phase and 100% neutral busbars rated at 250 amps, insulated with heat shrinkable coloured PVC sleeves & clip on shrouds for joints. The current density of Bus-Bars shall not be more than 0.8 Amps/ sq. mm.				
	Outgoing:				
	3 Nos. 63A/ 25kA 3P+N MCCB with 100% solid neutral link & lcs breaking capacity.				
	2 Nos. 63A 4P MCB of 10kA breaking capacity.				
	2 No. 40A 4P MCB of 10kA breaking capacity.				
	4 No. 25A 4P MCB of 10kA breaking capacity.				
	4 Nos.32A DP MCB of 10kA breaking capacity.				
	UPS Input Panel- as described above shall be complete with all interconnections, risers, internal wiring, labels, terminal blocks & accessories etc. complete as required.	Nos.	1		
2	UPS- O/P Panel -1				
	Incomer:				
	2 Nos. 63A/ 25kA 3P+2N MCCB with O/L,S/C & E/F Protection with ON-OFF-TRIP Indication light.				
	Metering for incoming:				
	2 set of multi function meter ,Class-I accuracy with 63/5A rating CT,s				
	2 set of RYB phase indicating lamps with 2A rating control, MCB .				
	Bus Bars:				
	Electrolytic high conductivity Tinned Copper Three phase and 200% neutral busbars rated at 100 amps, insulated with heat shrinkable coloured PVC sleeves & clip on shrouds for joints. The current density of Bus-Bars shall not be more than 1.4 Amps/ sq. mm.				
	Outgoings:				
	2 Nos. 63A 4P MCB of 10kA breaking capacity.				
	3 NoS. 32A DP MCB of 10kA breaking capacity.				
	UPS -O/P Panel-1 as described above shall be complete with all interconnections, risers, internal wiring, labels, terminal blocks & accessories etc. complete as required.	Nos.	1		
3	Final Distribution Boards				
	Design, fabrication, assembling, wiring, supply, installation, testing & commissioning of Final Distribution boards made out of pre-treated and powder coated 1.2mm sheet steel and glazed steel door in double door enclosure with MCB's/ ELCB's mounted on din channel, insulated prong bus bars rated for 100A and with separate neutral and earth terminals and in 1,2,3 & 4 pole versions as asked for or as required along with the cable end boxes on all sides of the DB's as per the requirement or Cup-board layout suggested by Architect/ Consultant.				
a.	LDB- 10WAY TPN DB				
	Incomer				
	1 No. 40A, 4P MCB + 3x40A / 30mA DP ELCB's + separate neutral link per phase				
	Outgoing				
	24 Nos, 6A/ 10A, SP MCB's				
	Neutral Link				
	Suitable for above outgoing				
	Earthing Bus				
	Suitable for above outgoing				
	LDB- 10WAY TPN DB as described above	Set	1		
b	PDB - 12WAY TPN DB				

S.No	DESCRIPTION	UNIT	QTY. COMMON	RATE (Rs.)	AMOUNT (Rs.)
	<u>Incomer</u>				
	1 No. 63A, 4P MCB + 3x63A / 30mA DP ELCB's + separate neutral link per phase				
	<u>Outgoing</u>				
	30 Nos. 6A/10A/16A/20A/32A SP MCB's				
	<u>Neutral Link</u>				
	Suitable for above outgoing				
	<u>Earthing Bus</u>				
	Suitable for above outgoing				
	PDB- 1 - 12WAY TPN DB as described above	Set	1		
c.	UPS DB- 12WAY TPN DB				
	<u>Incomer</u>				
	1 No. 63A, 4P MCB + 3x63A / 30mA DP ELCB's + separate neutral link per phase.				
	<u>Outgoing</u>				
	30 Nos., 6A/ 10A/ 16A/20A/32A SP MCB's				
	All MCB will be "D" curve.				
	<u>Neutral Link</u>				
	Suitable for above outgoing				
	<u>Earthing Bus</u>				
	Suitable for above outgoing				
	UPS DB- 12WAY TPN DB as described above	Set	1		
d.	EM DB- 4 WAY SPN DB				
	<u>Incomer</u>				
	1 No-32A DP RCBO				
	<u>Outgoing</u>				
	4 Nos., 6A/ 10A/ 16A SP MCB's				
	<u>Neutral Link</u>				
	Suitable for above outgoing				
	<u>Earthing Bus</u>				
	Suitable for above outgoing				
	EM. DB- 4WAY SPN DB as described above	Set	1		
F.	SUPPLY and Fixing OF LIGHTING FIXTURES & FANS				
a.	Note:				
b.	All fixtures shall be complete with LED lamps and driver.				
c.	All LED tube light fixtures shall be complete with driver				
d.	Colour index of the lamps to be checked from the architect.				
e.	Samples of all the fixtures shall be submitted to the architect/ client/ Project Manager before supply & approval is taken.				
f.	Please check the fixtures final quantity from the Architect/ Project Manager before ordering and be sure of actual requirement prior to ordering.				
	Size and shape of fixtures shall be suitable for the type of false ceiling and its grid to be used.				
1	2' x 2' (600mm x 600mm) recess mounted LED fixture suitable for grid ceiling.	Nos.	40		
2	Decorative circular/ squarish/ rectangular LED lamp false ceiling recess mounted down lighter.	Nos.	60		
3	LED Recessed directional spotlight JUPITER with LED(Light Emitting Diode) system power: 8W, luminous flux of luminaire 720lm, 230V constant current driver, 70% of luminous flux after 50,000 operating hours; energy efficient LEDs, colour temperature of 4000K, neutral white, direct light emission, narrow beam of 10°, luminaire part adjustable, polyester powder coat applied over a 5-stage pre- treatment, electronic control gear, Protection class II, IP20 L = 90mm, B = 90mm, DA(ø) = 80mm, ET = 65mm	Nos.	20		
4	Self luminous Exit signage with text size shall be in capital letters 6" in height, directional arrow as required & painted in green colour self luminous paint on white background complete with all necessary hardwares required for mounting/ hanging the fixtures.	Nos.	2		
	Total Carried to Summary				

SUMMARY OF AC WORKS AMHSSC					
	Electrical work i.e.				
1	3 Pin socket switch for Cassette, Split Fan single phase units .				
2	Isolator Switch (Weather Proof) near to the each Outdoor Units.				
3	Copper wiring /earthing from Isolator switch to M/C (Outdoors)				
4	RCC Foundation for outdoor units.				
S.no	Description	Unit	Qty.	Rate (Rs)	Total
ANNEXURE-V Supply of VRF Air Conditioning System					
S.No.	Description	Unit	Qty.	Rate	Amount
1	VRV/VRF VARIABLE REFRIGERANT FLOW AIR CONDITIONING SYSTEM(Blue Star, Daiken)				
	Supply of variable refrigerant Flow Non-modular type air conditioning system with DIP - IPM Inverter controlled with stepless modulation complete with indoor and outdoor units, individual remote controller.				
	SUPPLY OF OUTDOOR UNIT (Blue Star, Daiken)				
	Supply of Non-Modular type outdoor units equipped with high efficiency scroll compressor with minimum one inverter compressor with special heat exchanger ,25 steps DC motor condensor fan ,auto check function for connection error ,auto address setting and buit double stage oil separation to ensure minimum oil entrachment and proper Lubrication.				
	ODU - 10HP(Cooling and Heating)	Nos.	2		
	ODU - 10HP(Cooling and Heating)	Nos.	1		
2	INDOOR UNITS				
	1 TR wall Mount Split	Nos.	4		
	2 TR wall Mount Split	Nos.	2		
	2.0 TR Cassatte Mount Split	Nos.	4		
	3.0 TR Cassatte Mount Split	Nos.	1		
3	Remote Controllers	Nos.	11		

4	REFNETS	Nos.	11		
5	Installtion Charges	Nos.	2		
6	Refrigerant Piping				
	Supply, Installation, testing & commissioning of Interconnecting refrigerant copper pipe (VRF Only.) work with (19 mm / 13 mm thick) closed cell elastomeric nitrile rubber tubular insulation between each set of indoor & outdoor units.				
	Refrigerant Copper Pipe. (For VRF Only.)	RMT	110		
7	Rigid PVC piping complete with fittings, supports and duly insulated with 6 mm thick closed cell nitrile rubber insulation.	RMT	45		
8	Providing & fixing control cum transmission wiring of 2 core x 1.5 sqmm copper in suitable PVC conduits between indoor and out door unit.	RMT	220		
9	AC Stand	No	2		
	Total				

BOQ for Structured cabling Solution

Date - 20.01.2019

1	DATA AND NETWORKING				
Sl.No	Description	Qty	Unit	Rate	Amount
	<u>UTP Cable & Accessories (For Data)</u>				
1	GigaSPEED® XL 3071 ETL Verified Category 6 U/UTP Cable, low smoke zero halogen white jacket,4 pair count,1000ft (305m) length,WE TOTE® box	8	Roll		
	<u>Faceplate & I/O's</u>				
2	Modular Shuttered Faceplate, 4 port, white (86x86)	2	Nos		
3	Modular Shuttered Faceplate, 2 port, white (86x86)	36	Nos		
4	Modular Shuttered Faceplate, 1 port, white (86x86)	2	Nos		
5	GigaSPEED XL® MGS400 Series Category 6 U/UTP Information Outlet, Blue for Data	40	Nos		
6	GigaSPEED XL® MGS400 Series Category 6 U/UTP Information Outlet, Green for Voice	17	Nos		
	<u>Jack panel & I/O's</u>				
1	M2000 U/UTP Modular Panel 1U, 24 port Straight	2	No's		
2	GigaSPEED XL® MGS400 Series Category 6 U/UTP Information Outlet, Blue for Data	40	Nos		
3	GigaSPEED XL® MGS400 Series Category 6 U/UTP Information Outlet, Green for Voice	40	Nos		
4	GigaSPEED XL® MGS400 Series Category 6 U/UTP Information Outlet, Ivory for Voice - Resorce Side	80	Nos		
	<u>Patch Cords</u>				
5	UTP, Cat-6 Patch Cord, 1m Blue, Data, both end	80	No's		

2					
	<u>Riser Multipair Cable</u>				
1	25 Pair unaromed Riser Cable	20	Mtr		
2	50 Pair Krone Box with Krone Blocks	1	Nos		
3	Hookup Wire	10	Rolls		
4	Cable Tie	10	Pkt		
	<u>Panduit Labels</u>				
5	Patch Cords Labels	80	sheet		
6	Patch Panel Labels	80	sheet		
7	Face Plate Labels	80	sheet		

3 Installation Charges (UTP)					
1	Installation Charges towards Cable Laying/Ferruling/Termination/Testing of UTP/Face Plates/Racks Dressing and Management with Labeling in Pre laid Raceways Conduits/Penta Scanning documentation and certification of Voice /data with all fixing accessories .	80	Nodes		
2	Installation Charges towards Laying/termination/testing of Riser cable	1	Length		
	Total Amount				

SCHEDULE OF QUANTITIES FOR LV SECURITY SYSTEM

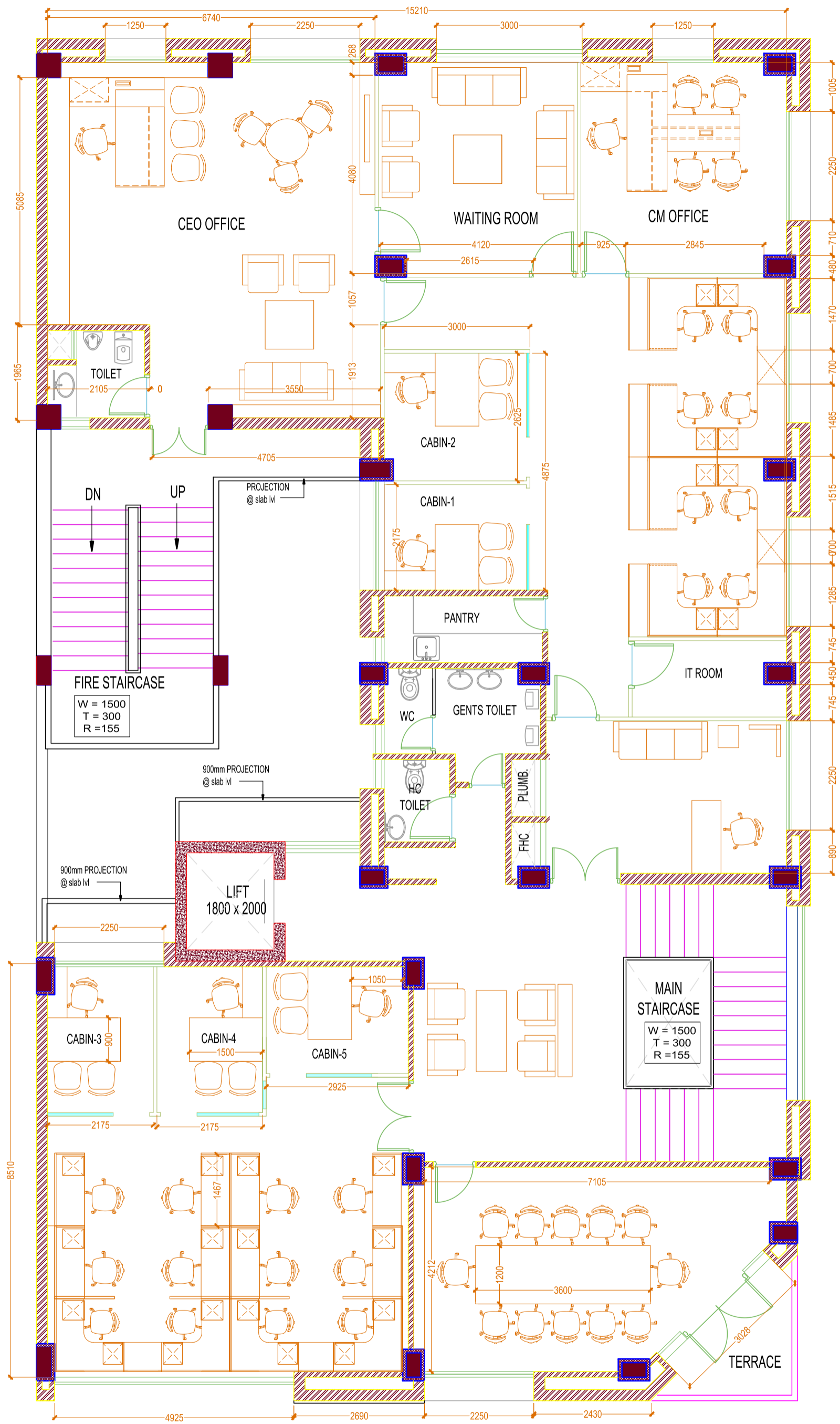
Date - 20.01.2019

S No.	DESCRIPTION	UNIT	QTY.	RATE (Rs.)	AMOUNT (Rs.)
A.	FIRE DETECTION SYSTEM (MAKE: AGNI/RAVEL)				
1.	Supply, installation, testing and commissioning of conventional type smoke detector with standard base Led etc complete as required .	Nos	18		
2.	Supply, installation, testing and commissioning of conventional heat detector with standard base LED etc as required .	Nos	1		
3.	Supply, installation, testing and commissioning of LED type Response Indicator complete as required and as per specifications.	Nos	12		
4.	Supply, installation, testing and commissioning of manual push button to initiate audio alarm with a breakable glass cover/resettable , conventional type complete as required.and as per specifications.	Nos	4		
5.	Supply, installation, testing and commissioning of Fire Alarm Hooter,conventional type, (sound output of minimum 90 dB upto a distance of 30 meters) with strobe light of 110 cd intensity with power supply arrangement complete as required and suitable for wall/ceiling mounting and as per specifications.	Nos	4		
6	Supply, installing, testing and commissioning of control modules for:				
a.	PA Integration	Nos.	1		
b.	Access Control integration	Nos.	1		
c.	Two way landlord fire panel integration	Nos.	1		
7.	Supply , installation, testing and commissioning of conventional based 8 zone fault tolerant loop, fire alarm/detection/fault control panel. Further, the panel must be able to automatically deactivate the access control door system when ever any alarm is triggered. The panel shall have a built in power supply and battery charger along with maintenance free 24 AH, 2 x 12 volt SMF Lead acid batteries capable of running for a minimum of 8 hours with battery charger complete as required.and as per specifications.	Nos	1		
8.	Supply and laying and terminating of 2 C X 1.5 Sq mm Twisted copper FRLS Fire survival armoured Cable. Complete with termination and testing as per requirement.	RM	400		
Note:	i) At each detector, consider approx. a wire / cable loop of 3M to 4M				

S No.	DESCRIPTION	UNIT	QTY.	RATE (Rs.)	AMOUNT (Rs.)
	ii) All hooters, relay output modules shall also be power wired directly from the fire control panel with 2Cx1.5 sq.mm Fire Survival armoured cable in a loop.				
	iii) Necessary interlocking, relays, power supplies and wiring etc. that may be required to automatically start smoke exhaust fans and staircase / lift well pressurization fans and to stop automatically air-conditioning plant and indoor air supply units and fire dampers on the detection of a fire signal through the fire alarm panel to be included in the scope of work and costs quoted above. It should also ensure automatic opening of all access controlled doors on fire signal.				
	iv) It will be an absolute responsibility of the electrical contractor to ensure operation of fire safety system / sequence as per NFPA / NBC / Indian standards.				
	v) Contractor shall submit the fire life safety sequence of operation of various exhaust and pressurization fans and AC plants for approval to client / architect / consultant before implementation.				
B.	CCTV SYSTEM (MAKE: Hikvision)				
	Supply, installation, testing and commissioning of followings:				
1	Colour Camera with fixed lens (25/30 fps) and HD 720p (25/30fps) image with 1/3" 2 MP sensor ,True Day/Night capability, vivid colour pictures by day and clear black-and-white pictures at night with ICR , Excellent low-light performance with 3D Noise Reduction, saving storage and bandwidth together with H.264 High Profile codec	Nos.	10		
2	16 Channel Digital Video Surveillance System, record rate 200 FPS – record and viewing shall be 25 FPS per Camera, with built in Multiplexer, Video motion detection, smart search with TCP – IP connectivity, recording on real time , high quality (24 hours, 30 days), HDD suitable for 24 hours and 30 days recording, Windows 2007 Professional OS, MPEG 4 plus and other options, Resolution – 640 x 480 pixels, suitable for connecting the CCTV's.	Nos.	R/O		

S No.	DESCRIPTION	UNIT	QTY.	RATE (Rs.)	AMOUNT (Rs.)
3	8 Channel Digital Video Surveillance System, record rate 200 FPS – record and viewing shall be 25 FPS per Camera, with built in Multiplexer, Video motion detection, smart search with TCP – IP connectivity, recording on real time , high quality (24 hours, 30 days), HDD suitable for 24 hours and 30 days recording, Windows 2007 Professional OS, MPEG 4 plus and other options, Resolution – 640 x 480 pixels, suitable for connecting the CCTV's.	Nos.	R/O		
5	Colour high resolution monitor 21 inch coloured complete as required.	Nos	1		
6	Supply, laying & termination of video cable in existing conduits:				
a	RG 6 (75 Ohms) cable	RM	75		
7	Supply, laying and termination of 3C x1.5 sq.mm PVC insulated copper conductor flexible unarmoured cable in existing conduits for camera power.	RM	75		
8	Supply and laying of 2 mm thick FRLS PVC conduit including bends, junction boxes, pull boxes, GI pull wire and necessary civil works such as chasing and making good of the wall for concealed conduiting or surface conduiting which shall include saddles and supports etc for surface conduiting and making good as required :	RM			
	20 mm dia conduit				
	25 mm dia conduit		125		
	(Separate conduit for video and separate conduit for power to be taken)				
C.	ACCESS CONTROL SYSTEM (MAKE: Honeywell)				
	Supply , installation, testing and commissioning of:				
1	UL listed 32 bit 2 reader networkable access controller with capacity to handle 4 readers and 8 alarm inputs and with IP on board technology complete with enclosure and power supply as required. (PRO3000)	No.	2		
2	Access Management cum time management integration management software for minimum of 256 readers, 64 controllers ,alarm handling capability and graphics support.	No	1		
3	Pentium -IV , Windows 2000 or higher , 1GB RAM, 320 GB or higher HDD, 104 Keystroke keyboard, 52 X OR better CD/DVD RW drive PC for loading of Access software. The PC may be given by customer but still may be quoted	No	R/O		
4	Supply of Smart Card Transition Reader complete as required and as per specification complete as required.	Nos.	3		
5	UL listed 3-5" read range Proximity card reader with integrated keypad	Nos.	R/O		

S No.	DESCRIPTION	UNIT	QTY.	RATE (Rs.)	AMOUNT (Rs.)
6	UL listed Biometric finger cum proximity card reader.	Nos.	R/O		
7	Single Electromagnetic locks for single leaf access doors.	Nos.	2		
8	Double Electromagnetic lock for dual leaf access doors	Nos.	R/O		
9	Electric strike for access doors complete with enclosure	RO			
10	Magnetic contacts for all access and fire doors (one for each single leaf door and two for each doouble leaf doors).	Nos.	2		
11	Push to exit button for access doors which have readers only on one side	Nos.	1		
12	Supply of Smart Cards Isoprox with sticky ID card, one side 4 colour printing etc. complete as required.	Nos.	100		
13	Emergency break glass unit for access doors which have readers on both in and out sides (TO BE INSTALLED ON THE IN SIDE OF THE DOOR)	Nos.	4		
14	Panic bars for fire exit doors with 85 db hooters and to be integrated into access controller	Nos.	R/O		
15	Supply ,laying and termination of 8C x 1.5 sq mm screen shielded cable for access control in existing conduits	RM	120		
16	Supply,laying and termination of 3C X1.5 sq mm PVC insulalted copper conductor flexible unarmoured cable in exisitng conduits for power	RM	40		
17	Supply and laying of 2 mm thick FRLS PVC conduit including bends, junction boxes, pull boxes, GI pull wire and necessary civil works such as chasing and making good of the wall for concealed conduiting or surface conduiting which shall include saddles and supports etc for surface conduiting and making good as required :				
a.	20 mm dia conduit	RM			
b.	25 mm dia conduit	RM	60		
	(Conduit for power and communication shall be separate)				
Note:	Integration of Public Address system with fire alarm shall be done as required through NO / NC contact of Plena Voice Alarm Controller.				
	Contractor has to dismantle, store, and reinstall the existing Speakers in original shape. Any damage to the equipment will be in the scope of contractor.				
	Total Amount				



PROPOSED LAYOUT PLAN FOR AMH SSC HO AT NEW DELHI