WO No :-Semolina/PO/24-25/000687

RA-02 - Abstract

Date:- 10-10-2024

AJ Kitchen Fit Out

SR.NO.	DESCRIPTION	UNIT	PO QTY	PO RATE (Rs)	PO AMOUNT (Rs)	TOTAL EXECUTED QTY	RA - 1		RA - 2 (Current Bill)		VARIATION	
							QTY	AMOUNT (Rs)	QTY	AMOUNT (Rs)	QTY	AMOUNT (Rs)
	CIVIL & INTERIOR WORKS											
1.00	**Partition walls**											
1.01	Supply and installation of fire rated **calcium silicate board Partition Wall** with the necessary supports, fittings and fixtures (excluding final finishes) Purposed height of kitchen partition wall is 4500 mm and pot wash room is 3150mm, it may be change as per site conditions., Note: Framing and double side board to be installed. Final Finishes price to be quoted in wall finishes section.	SQM	44.17	1,700.00	75,089.00	44.17	**44.17**	**75,091.04**	-	-	0.00	2.04
1.02	Supply and installation of fire rated **calcium silicate board cladding** on the **existing walls** in the **Kitchen & pot wash area** to pass the MEP services & to receive the final finishes with the necessary supports, fittings and fixtures (excluding final finishes) Purposed height is 3150mm, it may be change as per site conditions. Note: Framing and single side board to be installed on existing wall. Final Finishes price to be quoted in wall finishes section.	SQM	26.91	2,000.00	53,820.00	26.91	**26.91**	**53,819.40**	-	-	-0.00	-0.6
1.03	Supply and installation of 100 mm thick fire rated **Gypsum board cladding** on the **existing walls** to pass the MEP services & to receive the final finishes with the necessary supports, fittings and fixtures in the **FOH & dining area walls.** (excluding final finishes) Purposed height is 3700mm, it may be change as per site conditions. Note: Framing and single side board to be installed on existing wall. Final Finishes price to be quoted in wall finishes section.	SQM	47.71	1,800.00	85,878.00	47.73	**47.73**	**85,914.00**	-	-	0.02	36
1.04	Supply and installation of 65mm thick fire rated **Gypsum board cladding** on the **existing walls** to pass the MEP services & to receive the final finishes with the necessary supports, fittings and fixtures in the **FOH & dining area walls.** (excluding final finishes) Purposed height is 3700mm, it may be change as per site conditions. Note: Framing and single side board to be installed on existing wall. Final Finishes price to be quoted in wall finishes section.	SQM	50.00	1,800.00	90,000.00	68.45	**68.45**	**123,210.00**	-	-	18.45	33210
2.00	**FLOOR FINISHES**											
2.01	150mm thick **concrete floor screeding** to raise the floor to accommodate the drainage pipes and floor gratings & to receive floor finish in the **Kitchen & FOH counter areas**; all in accordance with drawings & site conditions. Note: Total height of floor to be raised including floor finishes is ***180mm in the kitchen & FOH counter area only***	SQM	32.40	5,800.00	187,920.00	32.40	**32.40**	**187,920.00**	-	-	-	0
2.02	Supply & installation of **water proofing** with all necessary items; all in accordance with drawings and below mentioned specification. Note: Detailed specifications of the materials to be submitted to client.					-			-	-	-	0
2.02a	**Wet Areas:** 2 Layers of 4mm thick SBS Bituminous membrane with 24-hour water ponding test including the sealing of Cores in the slab/walls (inspected and approved from airport team).	SQM	44.14	1,200.00	52,968.00	44.14	**44.14**	**52,968.00**	-	-	-	0
2.03	Supply and installation of **self levelling** with all necessary items; all in accordance with drawings.	SQM	83.28	1,585.00	131,998.80	83.28	**83.28**	**131,998.80**	-	-	-	0
2.04	Supply and installation of anti-skid **600 x 600 mm white floor tile** in the kitchen & Pot wash area as per the drawings and renders Note: Material to be approved by Clients team	SQM	14.07	2,500.00	35,175.00	14.04	**14.04**	**35,100.00**	-	-	-0.03	-75
2.05	Supply and installation of **Stone Plastic Composite (SPC) flooring** in the FOH dining area area; colour & design as per drawings & render. Note: material to be approved by Clients Team	SQM	47.25	2,800.00	132,300.00	47.25	**47.25**	**132,300.00**	-	-	-	0

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2.06	Supply and installation of anti skid **300 x 300 mm designer floor tile** in the FOH area; colour & design as per drawings & render. *Note: material to be approved by Clients Team*	SQM	23.63	2,700.00	63,801.00	23.63	**23.63**	**63,801.00**	-	-	-	0
3.00	**SKIRTING**											
3.01	supply & installation of **100mm wooden skirting matching wall color** as per the renders & drawings. *Note: material to be approved by Clients Team*	RM	21.67	4,300.00	93,181.00	11.40	**10.84**	**46,590.50**	**0.57**	**2,429.50**	-10.27	-44161
4.00	**WALL FINISHES**											
A	**Kitchen & Pot Wash areas**										-	0
4.01	Supply & installation of **300x300 mm White wall tile** in the kitchen & Pot wash area as per drawings and renders. *Note: material to be approved by Clients Team.* Considered Ceiling height in kitchen is 3000mm	SQM	61.73	1,600.00	98,768.00	65.40	-	-	**61.73**	**98,768.00**	3.67	5872
4.02	Allow sum for the supply and installation of **SS corner beading** on the corners of kitchen wall tiles.	RM	14.40	4,300.00	61,920.00	14.20	-	-	**14.20**	**61,060.00**	-0.20	-860
B	**FOH & Dining areas**										-	0
4.03	Supply & Painting of **matt finish paint of approved color** on the walls of dining & FOH area as per the drawings & renders. *Note: Material to be approved by clients Team*	SQM	117.40	350.00	41,090.00	115.56			**117.40**	**41,090.00**	-1.84	-644
4.04	Supply & installation of **WOODEN MOULDING STRIP finished** with paint of approved colour on the walls of Dining & FOH area as per drawings and renders. *Note: Material to be approved by clients Team*	RM	168.71	500.00	84,355.00	194.14	**84.36**	**42,178.50**	**109.78**	**54,891.50**	25.43	12715
5.00	**GYPSUM WORKS**											
5.01	Supply & installation of fire rated **bulkhead gypsum** above the hood in white paint matt finish. Paint shall be included, as per the below hood sizes. Considered Ceiling height in kitchen is 3000mm											
5.01A	Hood - Hot Cooking line : 2600 L x 1000 W x 600 H mm	Nos	1.00	20,000.00	20,000.00	1.00	-	-	**1.00**	**20,000.00**	-	0
6.00	**CEILING WORKS**											
6.01	Supply & installation of **600x600 mm metal tile ceiling** in the Kitchen & Pot wash area with necessary support, fixtures & accessories as per drawings & renders *Note: Material to be approved by Clients Team.*	SQM	13.94	2,600.00	36,244.00	16.10	-	-	**13.94**	**36,244.00**	2.16	5609.5
6.02	Supply and installation of **Metal 3x3cm mesh ceiling with fire rated hanging flowers** in the FOH & Dining areas including the final finishes with necessary support, fixtures & accessories as per drawings & renders. *Note: Material to be approved by Clients Team.* *This ceiling will be Mesh type so that flower can be hanged.*	SQM	36.12	4,100.00	148,092.00	35.80	-	-	**35.80**	**146,780.00**	-0.32	-1312
6.03	Supply and installation of **fire rated Gypsum false ceiling with cove (for cove lights provision)** in the the FOH & dining area **with paint of approved color** with necessary support, fixtures & accessories as per drawings & renders, refer to RCP layout. including access panel/door as per the MEP services and Cutting & finishing for the AC grill/diffuser and lights. *Note: Material to be approved by Clients Team.* *Running meter of cove has included in total quantity (24.87m+9.32m)*	SQM	67.86	1,800.00	122,148.00	67.86	**32.93**	**59,274.00**	**34.93**	**62,874.00**	-	0
6.04	Supply and painting with **matt finish paint of approved color** on the slab & walls of inside ceiling area of FOH & dinning, including paints on all MEP services & metal ceiling parts. *Note: color to be selected/approved by Clients Team.* *The mentioned quantity is the total covered area of the FOH and dining, quote the price accordingly for the paint on the slab and walls above the ceiling level and painting on all the MEP services*	SQM	67.45	500.00	33,725.00	67.00	-	-	**67.00**	**33,500.00**	-0.45	-225
7.00	**DOORS**											

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7.01	Supply and installation of heavy duty single leaf **both side swing fire rated wooden door** (kitchen door flushed to wall invisible type finished with same wall color) with the door frame for kitchen, including all the fittings & accessories as per the drawings and renders. Groove to be provided as per drawing and render. Dim: 2100H x 900W mm Note: Door frame should not be visible from Customer dining area.	Nos	1	32,000.00	32,000.00	1.00	-	-	1.00	32,000.00	-	0
8.00	**Miscellaneous works**											
8.01	Allow sum for the closing of wall opening using foams.	LS	1.00	10,000.00	10,000.00	1.00	-	-	1.00	10,000.00	-	0
8.02	Allow sum for the Kitchen equipment equipment unloading and shifting till outlet	LS	1.00	10,000.00	10,000.00	1.00	-	-	1.00	10,000.00	-	0
	CIVIL & INTERIOR WORKS - TOTAL				**1,700,472.80**			**1,090,165.24**		**609,637.00**		**10,166.94**
	FURNITURE											
1.00	**CHAIRS & BANQUETTE SEATING**											
1.01	**Customer Dining Chair** : Supply of Chair, Inner side of chair in upholstery designer fabric of approved design and color, outer side of chair in upholstery of approved grey fabric, MS tube legs finished in golden powder coat. Dimensions, color & design as per the drawings and renders. Note: Samples to be submitted by contractor	PCS	24.00	12,500.00	300,000.00	24.00	12.00	150,000.00	12.00	150,000.00	-	0
1.02	**Banquett Seating:** Supply and installation of BANQUETTE SEATING MADE OF CUSHION FINISHED WITH LEATHER OF APPROVED COLOUR with 18mm THK MR MDF FINISHED LEATHER OF APPROVED COLOUR as per the drawings & renders. Size: L 11280 mm Dimensions, color & design as per the drawings and renders. Note: Samples to be submitted by contractor.	PCS	1.00	180,000.00	180,000.00	1.00	0.50	90,000.00	0.50	90,000.00	-	0
2.00	**TABLE**											
2.01	**Customer Dining Table:** Supply and installation of Table made up of 20mm thick Corian tabletop of approved color with 2 mm thick MS tube legs finished in black powder coat and gold power coat, 6mm thick Golden metal embedded in the sides of tabletop, leg base with 6mm thick steel plate in gold powder coat finish as per the drawings and renders. Note: Samples to be submitted by contractor Dimensions, color & design as per the drawings and renders.											
	650L x 650W x 750H mm	PCS	18.00	28,000.00	504,000.00	18.00	9.00	252,000.00	9.00	252,000.00	-	0
3.00	**JOINERY**											

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3.01	Supply & installation of "**FOH counter**" made up of 18mm thick MR-MDF structured, with 12mm thick Corian material finish on top; and sides finished by stucco paint of RAL 4008 color and with black metal strips and cove lighting. 20mm wide black metal strips placed on the top of stucco finish with 20mm spacing 12mm thick corian skirting. 30mm dia 75mm high from centre guard rail finished with gold colour. 18mm THK MR MDF Partition wall 1100mm high finished with Oak wood veneer 18mm THK MR MDF swing door finish with oak wood veneer. 18mm THK MR MDF Planter box above counter sides finished with Oak wood Veneer and top with Corian of approved design Adjustable 2 layer open shelf finished with approved white laminate. 3 layer adjustable shelf inner side finished with approved white laminate and outer with Oak wood veneer. Open spaces for display units. All inner sides of the counter are to be finished with white laminate. and all necessary support, fittings, and accessories as per approved drawings and renders. Space/provisions are to be provided to accommodate the equipment inside the counter as shown in the drawings and renders. *Note: Actual countertop material sample shall be submitted by the contractor and required provision for electrical socket as per power layout.* The contractor shall refer to the counter details for complete detailings, dimensions & materials etc.	NOS	1.00	5,20,000.00	5,20,000.00	1.00	0.50	2,60,000.00	0.50	2,60,000.00	-	0
3.02	Supply and installation of "FOH Back counter" made up of SS metal structure (Kitchen equipment vendor makes SS metal frame structure). Top finished with Corian material of approved design and the sides cladding & doors by 18mm thick MR-MDF finished with oak wood veneer. The contractor shall refer to the FOH back counter detail drawings & renders for complete detailings, dimensions & materials etc.	Nos	1.00	120000	1,20,000.00	1.00	-	-	1.00	1,20,000.00	-	0
3.03	Supply and installation of "**Back Counter for u/c Ice Machine**" made up of 18mm THK MRMDF COUNTER WITH OPEN SHELF FOR UNDERCOUNTER ICE CUBE MACHINE. Top finished with Corian material of approved design and the sides cladding by 18mm thick MR-MDF finished with oak wood veneer. The contractor shall refer to the detail drawings & renders for complete detailings, dimensions & materials etc.	Nos	1.00	68000	68,000.00	1.00	-	-	1.00	68,000.00	-	0
3.04	Supply and installation of **SERVICE COUNTER** MADE UP OF 18mm THK MRMDF FINISHED WITH OAK WOOD VENEER ON THE OUTER SIDE, 18mm THK MRMDF DRAWER FOR CUTTLERY, FINISHED IN WHITE MICA IN INNER SIDE, as per the renders and drawings. The contractor shall refer to the service counter detail drawings & renders for complete detailings, dimensions & materials etc.	Nos	1.00	42000	42,000.00	1.00	-	-	1.00	42,000.00	-	0
3.05	Supply and installation of **Electrical panel unit** made up of 18mm THK FRMDF finished with paint of the same wall colour outer side with mouldings and in white mica on the inner side as per the drawings. The contractor shall refer to the service counter detail drawings & renders for complete detailings, dimensions & materials etc.	Nos	1.00	16500	16,500.00	1.00	-	-	1.00	16,500.00	-	0
4.00	**PLANTER BOXES & ARTIFICIAL PLANTS**											

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4.01	Supply & installation of **planter box with fire rated artificial plants** with the 18mm thick MDF finished with laminate of approved color. 18mm thick wooden moulding, 2mm thick Green cladding with 4mm gap & artificial looking artificial fire rated plant as per drawings and vendors. Size 300 x 300 x 600 mm. Dimensions, color & design as per the drawings and vendors. Note: Samples shall be submitted to contractor.	NOS	2.00	31,500.00	63,000.00	2.00	2.00	63,000.00	-	-	-	0
4.02	Supply & installation of round shape **planter box with fire rated artificial plants** with the solid powder coated finish as per drawings and vendors. Size of planter box 450 x 300mm. Note: Samples shall be submitted to contractor.	Nos	3.00	12,000.00	36,000.00	3.00	-	-	3.00	36,000.00	-	0
4.03	Supply and installation of **NATURALY LOOKING ARTIFICIAL GRASS AND TREE** as per the drawings and vendors. To be coordinate with 10th counter drawings. Note: Samples shall be submitted to contractor.	Nos	1.00	55,000.00	55,000.00	1.00	-	-	1.00	55,000.00	-	0
	FURNITURE - TOTAL				**19,04,500.00**			**8,15,000.00**		**10,89,500.00**		-
	SIGNAGES & DISPLAY UNIT											
5.01	**ALUMI LOGO AT FRONT ELEVATION:** Supply & installation of 4.00 feet 3 dimension 3D logo white made of aluminium chromadume 3D letters with front face acrylic illuminated LED with transformer including the **lifeyte graphic base & structure** to be hanged from the top as per the drawings & vendors. Supply and fixing of 3D controller to adjusting LED brightness. Note: Material to be approved by client team.	Nos	1.00	32,500.00	32,500.00	1.00	-	-	1.00	32,500.00	-	0
	Above mentioned logo in the kitchen language with the same material and specification.	Nos	1.00	32,500.00	32,500.00	1.00	-	-	1.00	32,500.00	-	0
5.02	**ALUMI LOGO IN THE DINING AREA WALL:** Supply & installation of 4.00 feet 3 dimension 3D logo white made of aluminium chromadume 3D letters with front face acrylic illuminated LED with transformer as per the drawings & vendors. Supply and fixing of 3D controller to adjusting LED brightness. Note: Material to be approved by client team.	Nos	1.00	18,500.00	18,500.00	1.00	-	-	1.00	18,500.00	-	0
5.03	**HEART SHAPE LOGO IN THE DINING AREA WALL:** Supply & installation of 4.00 feet 3 dimension heart shape white made of aluminium chromadume 3D letters with front face acrylic illuminated 3D with transformer as per the drawings & vendors. Supply and fixing of 3D controller to adjusting LED brightness. Note: Material to be approved by client team.	Nos	1.00	11,000.00	11,000.00	1.00	-	-	1.00	11,000.00	-	0
5.04	Supply and installation of **42" Digital Display unit for the Menu** as per the drawings and vendors. Note: Sample to be approved by client team.	Nos	2.00	43,000.00	86,000.00	2.00	-	-	2.00	86,000.00	-	0
	SIGNAGES & DISPLAY UNIT - TOTAL				**1,80,500.00**			**-**		**1,80,500.00**		-
	PLUMBING											
6	**SANITARY FIXTURES**											

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5.0	Supplying, installing, testing & commissioning of Pantry sink with single bowl with out drain board manufactured from stainless steel, 18G high grade indestructible chrome nickel steel with top quality polish, 1no.40 mm dia CP waste coupling, with 1no. 40mm dia CP bottle trap with extension pipe, CP angle cock, & divertor with Counter mounted type sink tap and necessary wall flanges,angle cock etc., complete.	Nos	4.00	13500	54000	4.00	-	-	4.00	54,000.00	-	0
							-	-			-	0
6.0	Supplying, installing, testing and commissioning of 15mm CP angle valve with CP flanges including necessary fixing materials etc.,complete.	Nos	17.00	520	8840	17.00	-	-	17.00	8,840.00	-	0
							-	-			-	0
7.0	Supplying, installing, testing and commissioning of 15mm CP bib cock with CP flanges including necessary fixing materials etc.,complete.	Nos	2.00	3000	6000	2.00	-	-	2.00	6,000.00	-	0
							-	-	-		-	0
14.0	Supply, Fixing, testing and commissioning of approved make vertical/horizontal type Electric 'water heater suitable for pressure rating up to 6Kg/sqcm with heating element with thermostat, 2 Nos. 15mm dia CP angle valve, pressure relief valve, non-return valve with CP copper connecting pipes with wall flanges etc., complete with all inlets, outlets, valves and all other accessories etc., complete.										-	0
14.1	Capacity : 15 lits 1.5 K.W heating element	Nos	1.00	11000	11000	1.00	-	-	1.00	11,000.00	-	0
14.2	Capacity 25 lits 2 K.W heating element	Nos	1.00	11500	11500	1.00	-	-	1.00	11,500.00	-	0
8	**DRAINAGE**											
1.0	Supplying, fixing, testing and commissioning of PVC Soil, waste and ventilating pipes (SWR) conforming to IS:13592 Type B with rubber ring yellow seal (conforming to IS : 5382) joints inclusive of all necessary specials like bends, tee, offsets, door bends, junctions, cowls, threaded type cleanout etc., laid under floor / fixed on walls and in pipe shaft with proper pipe support like brackets, hangers, G.I grip bolts etc., complete. The support shall be painted with two coats of enamel paint.The rate shall include the cost of galvanized U clamps, bolts & nuts,painting of supports with 2 coats of zinc chromate primer with 2 coats of enamel paint of total DFT minimum 100 micron. As required at site as per drawings to the satisfaction of the Project Manager. Internal Toilet											
1.1	75 mm dia	Rm	30.00	950	28,500.00	32.30	30.00	28,500.00	-	-	2.30	2185
						-	-		-	-	-	0
2.0	Supplying, fixing and testing uPVC pressure pipes (6Kg/sqcm) conforming to IS 4985 for waste connection from washbasin, kitchen sink to floor trap including threading, cutting, laid under floor / concealed in wall etc. The work shall include wall chase and making good the same in cement mortar etc. complete to the satisfaction of Engineer-in-charge The rate shall include the cost of galvanized U clamps, bolts & nuts painting of pipes with 2 coats of zinc chromate primer with 2 coats of enamel paint of total DFT minimum 100 micron					-			-	-	-	0
2.1	40mm dia	Rm	10.00	1250	12,500.00	10.00	10.00	12,500.00	-	-	-	0
2.2	50 mm dia	Rm	0.00			-			-	-	-	0
						-			-	-	-	0
3.0	Supplying, installing, testing and commissioning of Upvc floor trap with 110mm dia pipe PVC deep seal 'P' trap with necessary PVC fabricated boss connection with a minimum 2Nos. of 50mm dia inlets & CP floor grating (sealed type) etc.. Complete. The cost shall include Cockroach Traps	Nos	6.00	600	3,600.00	6.00			6.00	3,600.00	-	0
						-			-	-		

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4.0	Drilling with core cutting in RCC beams, slabs, floors etc.,for laying pipes and rendering the same in RCC 1:2:4, finishing the same to the satisfaction of the Owner or his authorized representative etc.,including nominal reinforcement where ever required, complete. The quoted rate shall also include for providing EPOXY based water proofing compound for sealing the joints around the pipes. Core cut shall be done using rebar detector after getting the approval from the structural consultant..					-			-	-		
4.1	RCC slabs					-			-	-		
	s	Nos	0.00			-			-	-		
	50mm dia upto 110 mm	Nos	0.00			-			-	-		
	125mm dia. upto 160 mm	Nos	0.00			-			-	-		
	160mm upto 250mm	Nos	0.00			-			-	-		
						-			-	-		
						-			-	-		
5.0	Supplying and installing MS fabricated drain grating at kitchen area where ever indicated using 50mm nominal bore,MS pipes at 105mm C/C and 8mm thick MS flats welded together and placed on MS angles of size 65mm x 65mm x 6mm, the quoted rates shall include for painting two coats of enamel paint over a coat of primer etc,.Complete.					-			-	-		
5.1	150mm wide Drain Channel	Nos	0.00			-			-	-		
5.2	300mm wide Drain Channel	Nos	3.00	8500	25,500.00	3.00	3.00	26,500.00	-	-	-	0
5.3	450mm wide Drain Channel	Nos	0.00			-						
C	**WATER SUPPLY**											
1.0	Supply installation, testing & commissioning of Chlorinated Polyvinyl Chloride (CPVC) pipes, SDR 11 as per IS 15778: 2007 & fittings as per ASTM D2846 / D2846M - 14 for pipe upt 50mm dia and for pipe 65mm and above use Sch 80 Pipes as per ASTM F - 441 & Sch 80 fittings as per ASTM F439 - 13, both of approved make. both of approved make having thermal stability for hot & cold water supply, including all CPVC plain & brass threaded fittings such as bends, elbows, tees, sockets, unions, plugs etc., including fixing the pipe., including necessary drilling holes, chasing walls and making the same good in as directed by the Engineer in-charge.											
	Cost shall be inclusive of all hangers, clamps, brackets etc. shall be of galvanized iron unless specified otherwise and then supply of the same shall also be included for rates under this head. Also rates including flusing and chemical cleaning of pipes.Charges for Labelling of pipe as per color schedule over painted surface of the pipes.											
	All pipes are mentioned here is ID only											
	Domestic water supply											
1.1	15 mm nominal dia	Rm	130.00	200	26,000.00	130.00	130.00	26,000.00	-	-	-	0
									-	-		
2.0	Supply installation, testing & commissioning of **full way lever operated forged brass ball valve** working pressure not less than PN10 with threaded / flanged joints complete with nuts, bolts, gaskets, washers etc.								-	-		
2.1	15 mm nominal dia	Nos	1.00	1100	1,100.00	1.00	1.00	1,100.00	-	-	-	0
2.2	20 mm nominal dia	Nos	1.00	1900	1,900.00	1.00	1.00	1,900.00	-	-	-	0
	PLUMBING - TOTAL				**1,90,440.00**			**95,500.00**		**94,940.00**		**2,185.00**
	ELECTRICAL											
1.00	**LT SWITCHGEAR and Distribution Boards**											

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							QTY	AMOUNT (Rs)	QTY	AMOUNT (Rs)	QTY	AMOUNT (Rs)
	Supply, installation, testing and commissioning of Low voltage switchgear's, free standing, Cubical type, dead front, **Frame and Doors:2mm, Internal Partations:1.6mm thick, Gland Plates:3mm Thick**, powder coated (Paint Shade: RAL 7032/7035), indoor type with vermin proof hinged lockable doors for each compartment, bus bar interconnections for incoming and outgoing including feeders earthing and painting and as per specifications comprising of ACB,MCCB and MCB horizontal and vertical aluminum bus bar, earth bus bar as per SLD. All meters shall be digital with LED display, whereever mentioned and shall have RS 485 Modbus RTU half duplex communication interface for provision of BMS connectivity and wired accordingly. Provide required NO/NC potential free contacts wires and terminal blocks in the cable alley for BMS operation (Optional).The switchboards are to be tested as per IS 8623 - 1977 specifications. The busbars are of high conductivity Al. alloy E91E IS 5082 specification and cable entries will be from either top or bottom depending on location. LT Switchgear shall be as per technical specification and single line diagram											
1.1	**MDB**											
	MDB **shall be as per** Single line diagram and technical specifications (Indoor -IP 42)	Nos	1.00	87000	87,000.00	1.00	-	-	**1.00**	**87,000.00**	-	0
1.2	**ISOLATORS**											
a	160A 4P MCCB in metallic enclosure -IP 42	Nos	1.00	12500	12,500.00	1.00	-	-	**1.00**	**12,500.00**	-	0
b	63A 4P MCB in metallic enclosure -IP 42	Nos	RO									
c	40A 4P MCB in metallic enclosure -IP 42	Nos	RO									
d	25A 4P MCB in metallic enclosure -IP 42	Nos	RO									
e	40A DP MCB in metallic enclosure -IP 42	Nos	2.00	3000	6,000.00	2.00	-	-	**2.00**	**6,000.00**	-	0
f	25A DP MCB in metallic enclosure -IP 42	Nos	0.00									
1.3	**STARTERS**											
a	Supply & Installation of 1.1kW Similat to Motor KW of fan slelected by OEM of unit as per approved TDS DOL/STAR DELTA starter with contactor, MPCB, overload relay, ON-OFF push buttons, Auto/Manual, ON/OFF/Trip indicating lamps, NO/NC Contacts and potential free contacts with required accessories and provied universal sockets as shown in SLD, refere Single line diagram and technical specifications. Starter panel shall be supplied with space provisons with internal wiring circuits and sight glass for VFD installtions. Installation and wiring terminations for VFD will be electrical vendor scope. Supply of VFD in HVAC vendor scope.	Nos	1.00	4000	4,000.00	1.00	-	-	**1.00**	**4,000.00**	-	0
2.00	**MCB Distribution boards**											
a	**12 Way TPN MCB Distribution Board -PPI (KDB)**	Nos	1.00	17000	17,000.00	1.00	-	-	**1.00**	**17,000.00**	-	0
	MCB DB comprising the following											
	Type of DB - 12 way TPN PPI MCB DB (**Double Door**)											
	100A 4P MCB - 1 No. as incomer											
	63A DP RCCB, 30mA, 2 Module - 3 Nos. as Sub incomer per phase											
	20A SP MCB, 10 kA - 29 Nos. as outgoings : MCB are of 'C' Curve											
	32A SP MCB, 10 kA - 1 Nos. as outgoings : MCB are of 'C' Curve											
	The rate shall include providing Cu. bus barsinterconnection, **separate earth bus, separate neutral bus for each phases,** Blank Plates and inclauding necessary connected civil works like chipping, rough plastering etc.											
b	**8 Way TPN MCB Distribution Board - PPI (LPDB)**	Nos	1.00	10500	10,500.00	1.00	-	-	**1.00**	**10,500.00**	-	0
	MCB DB comprising the following											
	Type of DB - 8 way TPN PPI MCB DB (**Double Door**)											
	32A 4P MCB - 1 No. as incomer											

SR.NO.	DESCRIPTION	UNIT	PO QTY	PO RATE (Rs)	PO AMOUNT (Rs)	TOTAL EXECUTED QTY	RA - 1		RA - 2 (Current Bill)		VARIATION	
							QTY	AMOUNT (Rs)	QTY	AMOUNT (Rs)	QTY	AMOUNT (Rs)
	25A DP RCCB, 30mA, 2 Module - 3 Nos. as Sub incomer per phase											
	10A SP MCB, 10 kA - 18 Nos. as outgoings : MCB are of 'C' Curve											
	The rate shall include providing Cu. bus barsinterconnection, **separate earth bus, separate neutral bus for each phases,** Blank Plates and incluuding necessary connected civil works like chipping, rough plastering etc.											
c	**12 Way SPN MCB Distribution Board**	Nos	1.00	10500	10,500.00	1.00	-	-	**1.00**	**10,500.00**	-	0
	MCB DB comprising the following											
	Type of DB - 12 way SPN MCB DB **(Single Door)**											
	40A DP RCBO,30mA, 2 Module - 1 No. as Incomer											
	6A SP MCB, 10 kA - 4 Nos. as outgoings : MCB are of 'C' Curve											
	10/16A SP MCB, 10 kA - 10 Nos. as outgoings : MCB are of 'C' Curve											
	The rate shall include providing Cu. bus barsinterconnection, separate earth bus, separate neutral bus for each phases, Blank Plates and incluuding necessary connected civil works like chipping, rough plastering etc.											
3.00	**LOW VOLTAGE CABLES AND END TERMINATION**											
3.1	**Low voltage Aluminium conductor cables**											
	Supply and laying of 1100 V grade, XLPE insulated,extruded PVC Inner Sheathed and extruded FRLS-PVC Outer sheatehed , aluminium conductor, Armoured power cable as per specifications. The cable shall be laid in indoor trenches / cable trays as required. The cable shall be clamped at regular intervals to the suppoprts in trench or to cable trays or brick wall using MS clamps and fasteners. Rate shall exclude the cost of cable trays and termination in this item.											
	NOTE: Cables will not be procured based on BOQ only. True measurements will be taken by Contractor before ordering, based on Drawings/ Site actual requirements (Applicable to all respect Line items)											
a	3.5CX 50Sqmm Alu.arm Cable	Rmt	30	350	10,500.00	31.85	**30.00**	**10,500.00**	-	-	1.85	647.5
b	3.5CX 35Sqmm Alu.arm Cable	Rmt	RO				-	-				
c	3.5CX 25Sqmm Alu.arm Cable	Rmt	RO				-	-				
d	4CX 16Sqmm Alu.arm Cable	Rmt	RO				-	-				
e	4CX 10Sqmm Alu.arm Cable	Rmt	15	250	3,750.00	16.10	**15.00**	**3,750.00**	-	-	1.10	275
3.2	**Low Voltage Copper Conductor Cables**											
	Supply and laying of 1100 V grade, XLPE insulated,extruded PVC Inner Sheathed and extruded FRLS-PVC Outer sheatehed copper conductor, Armoured/Un armoured power cable as per specifications. The cable shall be laid in indoor trenches / cable trays as required. The cable shall be clamped at regular intervals to the suppoprts in trench or to cable trays or brick wall using MS clamps and fasteners. Rate shall exclude the cost of cable trays and termination in this item.											
	Armoured Copper Cables :											
a	4Cx 16sqmm Cu Arm Cable	Rmt	15	283	4,249.95	15.00	**15.00**	**4,249.95**	-	-	-	0
b	4Cx 6sqmm Cu Arm Cable	Rmt	15	450	6,750.00	15.00	**15.00**	**6,750.00**	-	-	-	0
c	4Cx 4sqmm Cu Arm Cable	Rmt	20	250	5,000.00	20.00	**20.00**	**5,000.00**	-	-	-	0
d	3Cx 6sqmm Cu Arm Cable	Rmt	RO				-	-				
e	3Cx 4sqmm Cu Arm Cable	Rmt	20	180	3,600.00	22.00	**20.00**	**3,600.00**	-	-	2.00	360
3.3	Copper **Flexible Cables :**											
a	3Cx6sqmm Cu Flexible Cable	Rmt	20	330	6,600.00	20.00	**20.00**	**6,600.00**	-	-	-	0
b	4Cx6sqmm Cu Flexible Cable	Rmt	RO				-	-				
3.4	**LOW VOLTAGE CABLE END TERMINATION:**											

BS NO	DESCRIPTION	UNIT	PO QTY	PO RATE (Rs)	PO AMOUNT (Rs)	TOTAL EXECUTED QTY	RA - 1		RA - 2 (Current Bill)		VARIATION	
							QTY	AMOUNT (Rs)	QTY	AMOUNT (Rs)	QTY	AMOUNT (Rs)
	Supply and providing (1) cable end termination for below listed cable with copper Lugs, brass cable glands, laying, crimping etc. complete Single Compression Glands - Cable Size Below 180 Sqmm Double Compression Glands - Cable size above 185sqmm and Single core cables 400sqmm and above											
1	[illegible] cable	Nos	2	300	600.00	2.00	2.00	600.00	-	-	-	0
2	[illegible] cable	Nos	RO				-	-				
[illegible]	[illegible] cable	Nos	RO				-	-				
4	[illegible] cable	Nos	RO				-	-				
5	[illegible] cable	Nos	2	300	600.00	2.00	2.00	600.00	-		-	0
[illegible]	[illegible] cable	Nos	RO				-	-				
3.3	Armoured Copper Cables											
1	[illegible] cable	Nos	2	300	600.00	2.00	2.00	600.00	-	-	-	0
2	[illegible] cable	Nos	2	300	600.00	2.00	2.00	600.00	-	-	-	0
3	[illegible] cable	Nos	2	300	600.00	2.00	2.00	600.00	-	-	-	0
4	[illegible] cable	Nos	RO				-	-				
5	[illegible] cable	Nos	2	300	600.00	2.00	2.00	600.00	-	-	-	0
3.4	Copper Flexible Cables											
1	[illegible] cable	Nos	8	300	2,400.00	8.00	8.00	2,400.00	-	-	-	0
2	[illegible] cable	Nos	RO									
4.0	SWITCHES AND SOCKETS											
	Supply and install switches and Sockets System as required according to the specification, drawings and design. The installation rate of all the following accessories shall include for the supply of all materials such as Galvanized metal switchbox, junction boxes, switch plate, switches, conduit accessories, wires, tags, supports, fittings fixings and the like, to form complete elements and shall include for earthing the switchboxes. The installation rate shall include for termination of all cables and wires into the devices, testing, commissioning and setting to work as required by the specifications.											
	NOTE: SWITCHES AND SOCKETS will not be procured based on BOQ only. True measurements will be taken by Contractor before ordering, based on Drawings, Site actual requirements. Applicable to all related Line items.											
	Power Receptacles with Box											
4	Supply, installation, testing and Commissioning of 1 x 6/16A, Universal 5 pin round flat socket controlled with 1 x 16A Switch with indication lamp including interconnection etc. complete. The sockets shall be with face plate. (i) BOX with accessories. Rate shall include the cost for fixing of back box with plastering and rough finish	Nos	40	1150	46,000.00	44.00	-	-	40.00	46,000.00	4.00	4600
4.1	Supply, installation, testing and Commissioning of 1 x 6A, universal socket controlled with 1 x 6A Switch including interconnection etc. complete. The sockets shall be with face plate. (i) BOX with accessories. Rate shall include the cost for fixing of back box with plastering and rough finish	Nos	3	600	1,800.00	3.00	-	-	3.00	1,800.00	-	0
4.2	Supply, installation, testing and Commissioning of 2 x 6/16A, universal socket controlled with 2 x 16A Switch including interconnection etc. complete. The sockets shall be with face plate. (i) BOX with accessories. Rate shall include the cost for fixing of back box with plastering and rough finish	Nos	RO				-	-	-			
4.3	Supply, installation, testing and Commissioning of 2 x 6A, universal socket controlled with 1 x 16A Switch including interconnection etc. complete. The sockets shall be with face plate. (i) BOX with accessories. Rate shall include the cost for fixing of back box with plastering and rough finish	Nos	RO				-	-	-			

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							QTY	AMOUNT (Rs)	QTY	AMOUNT (Rs)	QTY	AMOUNT (Rs)
4.1	Supply, installation, testing and Commissioning of 1 x 6A, universal socket controlled with 1 x 6A Switch including interconnection etc. complete. The sockets shall be with face plate. (I.S.I.) with accessories. Rate shall include the cost for fixing of back box with plastering and rough finish	Nos	RO				-	-	-			
4.2	Supply, installation, testing and Commissioning of 1 x 20A, universal socket controlled with 1 x 20A Switch floor mounted pop up box including interconnection etc. complete. The sockets shall be with face plate. (I.S.I.) with accessories. Rate shall include the cost for fixing of back box with plastering and rough finish (MK Type Floor Box)	Nos	RO				-	-	-			
	Power Receptacle without Box								-			
									-			
4.3	Supply, installation testing and commissioning of 3 nos. of 6/16 A, multi Pin Universal socket controlled by 1 no. 16 A common switch along with face plate, raceway/Table mounted and other necessary accessories to complete the installation	Nos	2	2100	4,200.00	2.00	-	-	2.00	4,200.00	-	0
4.4	Supply, installation testing and commissioning of 6/16 A, multi Pin Universal socket controlled by 1 no. 16 A common switch along with face plate, raceway/Table mounted and other necessary accessories to complete the installation	Nos	RO					-	-			
	Industrial Sockets								-			
4.5	Supply, installation, testing and Commissioning of 16A, 1 phase industrial Plug & Socket controlled with 16A DP MCB in a enclosure with all accessories (IP65)	Nos	6	7500	45,000.00	6.00	-	-	6.00	45,000.00	-	0
4.6	Supply, installation, testing and Commissioning of 20A, 1 phase industrial Plug & Socket controlled with 20A DP MCB in a enclosure with all accessories (IP65)	Nos	10	8500	85,000.00	10.00	-	-	10.00	85,000.00	-	0
4.7	Supply, installation, testing and Commissioning of 25A, 1 phase industrial Plug & Socket controlled with 25A DP MCB in enclosure with all accessories (IP65)	Nos	RO				-	-	-			
4.8	Supply, installation, testing and Commissioning of 32A, 1 phase industrial Plug & Socket controlled with 25A DP MCB in enclosure with all accessories (IP65)	Nos	RO				-	-	-			
4.9	Supply, installation, testing and Commissioning of 32A, 3 phase industrial Plug & Socket controlled with 32A 4P MCB in enclosure with all accessories (IP65)	Nos	1	2000	2,000.00	1.00	-	-	1.00	2,000.00	-	0
4.10	Supply and installation of 1 x Modular Metal Boxes	Nos	RO				-	-	-			
4.11	Supply and installation of 2 x Modular Metal Boxes	Nos	RO				-	-	-			
4.12	Supply and installation of 3 Modular Metal Boxes	Nos	RO				-	-	-			
4.13	Supply and fixing of Bharmipatram	Nos	2	120	240.00	2.00	-	-	2.00	240.00	-	0
4.14	Supply and fixing of 2 Pin Plug top suitable for 16/20A	Nos	2	450	900.00	2.00	-	-	2.00	900.00	-	0
5.0	Cost of Wiring											
	Cost of Wiring for Lighting/Power											
	Supply and Drawing of 1100V grade multi strand FR-LS insulated copper conductor with Green PVC sheathing, raceway/conduit trays with necessary fixing accessories											
5.1	2 core + 1 earth Double insulated Copper conductor flexible cable with FR-LS Sheathing + the existing raceway/conduits. Rate shall include the cost of raceway/conduit + the same	Meters	35	165	5,775.00	35.00	35.00	5,775.00	-	-	-	0
5.2	2 core + 1 earth Double insulated Copper conductor flexible cable with FR-LS Sheathing + the existing raceway/conduits. Rate shall include the cost of raceway/conduit + the same	Meters	75	185	13,875.00	75.00	75.00	13,875.00	-	-	-	0
5.3	2 core + 1 earth Double insulated Copper conductor flexible cable with FR-LS Sheathing + the existing raceway/conduits. Rate shall include the cost of raceway/conduit + the same	Meters	150	225	33,750.00	150.00	150.00	33,750.00	-	-	-	0
5.4	2 core + 1 earth Double insulated Copper conductor flexible cable with FR-LS Sheathing + the existing raceway/conduits. Rate shall include the cost of raceway/conduit + the same	Meters	RO									

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							QTY	AMOUNT (Rs)	QTY	AMOUNT (Rs)	QTY	AMOUNT (Rs)
5.5	2R x 2.5 sq.mm. + 1R 1.5 sq mm FRLS, MSCC wires drawn in 25mm Dia GI conduit with all accessories for general lighting.The rate shall include the cost of conduits and its accessories .	Rmtrs	RO									
5.6	2R x 4sqmm and 1RX2.5Sqmm FRLS MSCC wires drawn in 25mm dia GI conduit with all accessories for general purpose power sockets.The rate shall include the cost of conduits and its accessories.	Rmtrs	RO									
5.7	1 core 4 sqmm Double Insulated Copper copper conductor flexible cable with FRLS Sheathing in the existing raceways/conduits. Rate shall exclude the cost of Raceway/conduit in this items.	Rmtrs	1750	175	3,06,250.00	1,750.00	1,750.00	3,06,250.00	-	-	-	0
5.8	1 core 6 sqmm Double Insulated Copper copper conductor flexible cable with FRLS Sheathing in the existing raceways/conduits. Rate shall exclude the cost of Raceway/conduit in this items.	Rmtrs	50	225	11,250.00	50.00	50.00	11,250.00	-	-	-	0
6	**POINT WIRING**											
	Point wiring of light, using 1100 volt grade, 3Rx1.5Sqmm multi strand FRLS insulated copper conductor flexible cable, drawn in existing raceways/Conduit. The rate shall include providing mounting boxes with tapped holes for lights switches, moulded front plates with brass screws earthing of all points using third core of the cable, For MCB Controlled Lights -DB to 1st light will be measured as circuit wiring.The point wiring shall be as per specification.Rate shall exclude the cost of MCB,Rceways in this item.**(CONDUIT - GI)**											
6.1	PRIMARY LIGHT POINT (Switch Control)											
	Primary light point means wiring from first switch control to the first light outlet. The switch and all necessary accessories would be part of primary point. Not to include the incoming lighting circuit from MCB-DB to switch. But to include the sub-circuit if it is drawn from adjacent switch box. Ceiling flexible conduit shall be included at the drop of light fixture.	Nos	10	2800	28,000.00	10.00	10.00	28,000.00	-	-	-	0
6.2	SECONDARY LIGHT POINT (Switch Control)											
	Secondary light point means extention of light outlet from existing primary point. Same to be controlled by the existing switch of primary point. Ceiling flexible conduit shall be included at the drop of light fixture.	Nos	25	2800	70,000.00	25.00	25.00	70,000.00	-	-	-	0
6.3	SECONDARY LIGHT POINT (MCB Control)											
	Secondary light point means extention of light outlet from existing primary point. Same to be controlled by the existing MCB of primary point. Ceiling flexible conduit shall be included at the drop of light fixture. The Wiring from DB to First Light point will be measured under circuit mains.	Nos	RO				-	-				
6.4	Ceiling fan point controlled by 6/10 A flush type SP switch. The rate shall include MS fan hook boxes. The rate shall also include cost of 300 W electronic fan speed controller in this item only.Rate shall exclude the cost of ceiling fan in this item.	Nos	RO				-	-				
7.00	**CABLE TRAY/RACEWAYS**											
7.1	Ladder Type											
	Supply and providing Ladder cable trays factory fabricated out of 2mm thick pre galvanized sheet steel channel size 75 x 15 mm and rung size 30 x 5 mm. spaced at 250 mm interval, supporting angle frame at every 1.8 m. bottom angle fasteners anchor grip bolts, synthetic enamelled painting, etc. The tray shall be suspended from ceiling using anchor bolt and angle iron supports or mounted from wall. The rate shall include all accessories like bends elbows tees coupler plates, etc., which will be measured as linear measurement and fixing accessories.The rate shall include the cost of Supports											
a	150 mm wide 50 mm height	Rmtrs	RO				-	-				0
b	300 mm wide 75 mm height	Rmtrs	RO				-	-				0

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							QTY	AMOUNT (Rs)	QTY	AMOUNT (Rs)	QTY	AMOUNT (Rs)
c	450 mm wide 75 mm height	Rmtrs	RO				-	-				0
7.2	**Perforated Type**											
	Supply and providing MS Perforated cable trays factory fabricated out of 2mm thick pre galvanized sheet steel, channel size 50 mm supporting angle frame at every 1.8 m, bottom angle fasteners, anchor grip bolts, synthetic enamelled painting, etc. The tray shall be suspended from ceiling using anchor bolt and angle iron supports or mounted from wall. The rate shall include all accessories like bends, elbows, tees, coupler plates, etc., which will be measured as linear measurement and fixing accessories.The rate shall include the cost of Supports.											
a)	50 mm wide 50 mm height	Rmtrs	RO									
b)	100 mm wide 50 mm height	Rmtrs	RO									
c)	150 mm wide 50 mm height	Rmtrs	RO									
d)	200 mm wide 50 mm height	Rmtrs	25	830	20,750.00	25.00	25.00	20,750.00	-	-	-	0
e)	300 mm wide 50 mm height	Rmtrs	RO									
7.7	**POWDER COATED FRAME FOR MCB DB's**											
a	Supply and installation of DB Frame with wire ways shall be made out of 1.6mm thick CRCA sheet steel and powder coating colour shall match the colour of MCB DB's with hinged type door. 100mm x 100mm 1.6mm thick wire ways / Raceway with 2mm thick screwed / press to fit cover with hinged type door for making Frame for MCB DB's. Complete required including installation accessories.	Rmtrs	15	900	13,500.00	15.00	15.00	13,500.00	-	-	-	0
8	**EARTHING**											
8.1	Supply and installation of earthing station as per IS3043 complete with 600x600x3.15mm Copper plate earthing with salt, charcoal, 2 nos. of 25x3mm Copper strip up to test link,19mm dia GI watering pipe with funnel, test link earthing chamber 450x450mm CI cover etc with required civil works complete. The CI Frame and cover shall be of heavy duty type	Nos	RO				-	-				0
8.2	Supply and installation of earthing station as per IS 3043 complete with GI pipe earthing with salt, charcoal, 2 nos. of 50x6mm GI strip up to test link, 40mm dia GI watering pipe with funnel,test link, earthing chamber of 450x450mm CI cover etc with required civil works complete.The CI Frame and cover shall be of heavy duty type. .	Nos	RO				-	-				0
8.3	Supply and running of below listed sizes of electrolytic copper / GI earth conductor tapes / wires and laid along with cable or clamped to brick wall, etc. as required										-	0
a	8 SWG GI wire for Earthing	Rmtrs	40	240	9,600.00	40.00	40.00	9,600.00	-	-	-	0
b	25x3mm GI Flat	Rmtrs	25	190	4,750.00	25.00	25.00	4,750.00	-	-	-	0
c	25x6mm GI Flat	Rmtrs	RO				-	-				
d	1Cx6sqmm Cu Flexible Cable Earthing (Green)	Rmtrs	75	100	7,500.00	75.00	75.00	7,500.00	-	-	-	0
e	1Cx4sqmm Cu Flexible Cable Earthing (Green)	Rmtrs	50	95	4,750.00	50.00	50.00	4,750.00	-	-	-	0
8.4	Supply and installation of Earth pads made out of copper/GI busbars installed on 11KV insulators including hardware and other minor civil works associated works											
a	Busbar of 5.5 Mtr length made out of 25 x 3 mm Cu strip with drill holes of M8 at 25mm interval mounted on insulators and acrylic cover to be provided	Nos	RO									
b	Busbar of 5.5 Mtr length made out of 25 x 6 mm Cu strip with drill holes of M8 at 25mm interval mounted on insulators and acrylic cover to be provided	Nos	RO									
c	Busbar of 5.5 Mtr length made out of 45 x 6 mm GI strip with drill holes of M8 at 25mm interval mounted on insulators	Nos	1	2000	2,000.00	1.00	1.00	2,000.00	-	-	-	0
9	**PVC pipes (Electrical/IT/AV/CCTV/ACS)**											
9.1	Supply and laying of 2 mm thick rigid FRLS PVC conduits in concealed conduit system using conduit accessories like junction boxes, collars, bends, elbows, binding wires, etc.											

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							QTY	AMOUNT (Rs)	QTY	AMOUNT (Rs)	QTY	AMOUNT (Rs)
a	32 mm dia conduit	Rmtrs	RO				-	-				0
b	25 mm dia conduit	Rmtrs	RO				-	-				0
c	20 mm dia conduit	Rmtrs	RO				-	-				0
	GI pipes (Electrical/IT/AV/CCTV/ACS)											
9.2	Supply and laying of 2 mm thick rigid MS conduits in concealed/Open conduit system using conduit accessories like junction boxes, collars, bends, elbows, binding wires, etc.											
											-	0
a	32 mm dia conduit	Rmtrs	10	250	2,500.00	10.00	9.00	2,250.32	1.00	249.68	-	0
b	25 mm dia conduit	Rmtrs	125	220	27,500.00	125.00	96.59	21,249.80	28.94	6,366.25	-	0
c	20 mm dia conduit	Rmtrs	80	190	15,200.00	80.00	58.95	11,199.93	21.06	4,000.64	-	0
10.00	STRUCTURAL WORKS											
10.1	Supply, cutting, welding, grouting, fastening, cleaning and painting of MS Channels, angles, plate, supporting brackets/structures , etc complete with necessary hardwares.	Kgs	RO				-	-				0
10.2	Supply of 6mm thick MS chequred plates duly painted. Plates to be cut size as per site requirement.	Kgs	RO				-	-				0
11.00	MISCELLANEOUS ITEMS											
11.1	Supply and fixing of danger boards of appropriate voltage grade, size and style as required by Electrical inspectorate.	Nos	1	850	850.00	1.00			1.00	850.00	-	0
11.2	Supply of Rubber checkered mat of size 2000 x 1000 x 10mm thick, 11000 V grade	Nos	0									
11.3	Supply of Rubber checkered mat of size 2000 x 1000 x 3mm thick, 11000 V grade	Nos	1	2000	2,000.00	1.00			1.00	2,000.00	-	0
11.4	Supply of Standard First aid box complete with all accessories.	Nos	1	1850	1,850.00	1.00			1.00	1,850.00	-	0
11.5	Supply of Wooden framed glass fronted shock treatment chart as per IE rules fixed to wall	Nos	1	1050	1,050.00	1.00			1.00	1,050.00	-	0
11.6	S/TC of Hand held Fire Extinguisher - ABC Powder - 6 Kg with floor mount accessories	Nos	1	6500	6,500.00	1.00			1.00	6,500.00	-	0
11.7	Temporary Works											
a	For temporary Lighting in the construction area with necessary light fixtures, cabling & Power Distribution control panel for construction works. The cost shall include necessary industrial sockets, cables, distribution boards, earthing, Light fixtures and all safety accessories as required.	LS	RO									
b	Professional charges towards filing application, preparation of drawings in necessary formats for approval, follow up and arranging approval of drawings scheme by Local electricity authority Electrical inspectorate, obtaining clearance from electricity authority / Electrical inspectorate	LS	RO									
c	Preparation and Submission of as built drawings of total work executed 2 Sets hard and soft copy.	Nos	1	2500	2,500.00	1.00			1.00	2,500.00	-	0
12.00	LIGHT FIXTURES								-			
12.1	Supply installation of LED 2x2 Grid Light (Type-1)	Nos	2	2800	5,600.00	2.00	-	-	2.00	5,600.00	-	0
12.2	Supply installation of LED Surface Mounted Type Light Fixtures (Type-2)	Nos	2	1400	2,800.00	2.00	-	-	2.00	2,800.00	-	0
12.3	Supply installation of LED Round pendenat-1 Type Light Fixtures (Type-3)	Nos	6	8500	51,000.00	6.00	-	-	6.00	51,000.00	-	0
12.3	Supply installation of LED Round pendenat-2 Type Light Fixtures (Type-4)	Nos	11	2000	22,000.00	11.00	-	-	11.00	22,000.00	-	0
12.2	Supply installation of LED Recessed COB Type Light Fixtures (Type-5)	Nos	5	4700	23,500.00	5.00	-	-	5.00	23,500.00	-	0
12.2	Supply installation of LED Decorative Wall Light Fixtures (Type-6)	Nos	5	6700	33,500.00	5.00	-	-	5.00	33,500.00	-	0
12.2	Supply installation of LED Strip Light (Type-7)	Mtrs	35	600	21,000.00	33.92	-	-	33.92	20,352.00	-1.08	-648
13.00	UPS											

SR.NO.	DESCRIPTION	UNIT	PO QTY	PO RATE (Rs)	PO AMOUNT (Rs)	TOTAL EXECUTED QTY	RA - 1		RA - 2 (Current Bill)		VARIATION	
							QTY	AMOUNT (Rs)	QTY	AMOUNT (Rs)	QTY	AMOUNT (Rs)
8	Supply, Installation, Testing & Comissioning of 5 KVA 1 Phase input/1 phase output UPS with 90 mins Backup Battery Type: SMF with racks & enclouser (Output Power Factor Unity)	Nos	1	115000	1,15,000.00	1.00	-	-	1.00	1,15,000.00	-	0
	ELECTRICAL - TOTAL				**12,45,189.95**			**6,12,900.00**		**6,31,758.57**		5,234.50
	IT											
1	**IT/NETWORKING :**											
1.1	4-pair, Cat 6 UTP FRLS Cable	Mtrs	175	80	14,000.00	182.00	87.50	7,000.00	87.50	7,000.00	7.00	560
1.2	Cat 6 UTP Information Outlet for Workstation end	Nos	8	300	2,400.00	8.00	4.00	1,200.00	4.00	1,200.00	-	0
1.3	Cat 6 RJ45-RJ45 UTP Patch Cords, color matched, Yellow - Workstation end, 7 ft	Nos	8	550	4,400.00	8.00	4.00	2,200.00	4.00	2,200.00	-	0
1.5	Dual Face Plates	Nos	0	700			-				-	0
1.4	Single Face Plates	Nos	8	500	4,000.00	8.00	4.00	2,000.00	4.00	2,000.00	-	0
1.6	Supply and fixing of Metal box suitable information outlet , flush/surface type in position .The rate shall exclude the cost of faceplate and information Outlet.	Nos	8	1200	9,600.00	8.00	4.00	4,800.00	4.00	4,800.00	-	0
1.7	Supply, installation, testing and Commissioning of RJ11 Telephone Point. The Telephone Socket shall be with face plate, GI BOX with accessories.	Nos	0				-				-	0
1.8	Cat 6 24 Port Angled Discrete Jack panel - fully loaded (1U).The rate shall include the cost of Patch Panel, Information Outlets with all the required supporting accessories.	Nos	1	3000	3,000.00	1.00	0.50	1,500.00	0.50	1,500.00	-	0
9	06 U wall mount rack with required mounting accessories, Rate shall include required accessories, tools etc., complete as required	No	1	7000	7,000.00	1.00	0.50	3,500.00	0.50	3,500.00	-	0
	IT - TOTAL				**44,400.00**			**22,200.00**		**22,200.00**		560.00
	CCTV											
.	Supply, installation, testing and Commissioning of UL approved, IP based Dome indoor type 5MP,HD Dome camera	Nos	5	3500	17,500.00	5.00	2.50	8,750.00	2.50	8,750.00	-	0
2	Supply, installation, testing and Commissioning of UL approved, Outdoor type 2MP Camera	Nos	RO			-	-	-	-	-		
3	Supply, installation, testing and Commissioning of **8 Channel** NVR Ultra 4 K resolution and recording software with **Storage capacity of 30Days** with all required accessories	No	1	16000	16,000.00	1.00	0.50	8,000.00	0.50	8,000.00	-	0
4	CAT 6 PoE Cable as per the survey done. Rate shall include required accessories, tools etc. complete as required	Mtr	100	80	8,000.00	116.00	50.00	4,000.00	50.00	4,000.00	16.00	1280
5	Cat 6 Single information Outlets including faceplates and backbox accessories	Nos	5	300	1,500.00	5.00	2.50	750.00	2.50	750.00	-	0
6	Cat 6 12 Port Angled Discrete Jack panel - fully loaded (1U).The rate shall include the cost of Patch Panel, Information Outlets with all the required supporting accessories.(CCTV)	Nos	RO			-	-	-	-	-		
7	Cat 6 PoE 7ft Gigabit Snagless Molded Patch Cable (RJ-45 Male) with factory crimping, these patch cords will suffice for connecting between Data Outlet & CCTV	No	0			-	-	-	-	-	-	0
8	Cat 6 PoE 4ft Gigabit Snagless Molded Patch Cable (RJ-45 Male) with factory crimping, these patch cords will suffice for connecting between Data Outlet & CCTV (100%)	No	5	3500	17,500.00	5.00	2.50	8,750.00	2.50	8,750.00	-	0
9	06 U wall mount rack with required mounting accessories. Rate shall include required accessories, tools etc. complete as required	No	RO			-	-	-	-	-		
10	PVC pipes					-			-	-		
						-			-	-		

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							QTY	AMOUNT (Rs)	QTY	AMOUNT (Rs)	QTY	AMOUNT (Rs)
	Supply and laying of 2 mm thick rigid FRLS PVC conduits in concealed conduit system using conduit accessories like junction boxes, collars, bends, elbows, binding wires, etc.					-			-	-		
a	32 mm dia conduit	Mtrs	RO			-	-	-	-	-		
b	25 mm dia conduit	Mtrs	RO			-	-	-	-	-		
c	19 mm dia conduit	Mtrs	RO			-	-	-	-	-		
						-			-	-		
11	GI pipes					-			-	-		
	Supply and laying of 2 mm thick rigid GI conduits in concealed/Open conduit system using conduit accessories like junction boxes, collars, bends, elbows, binding wires, etc.					-			-	-		
a	32 mm dia conduit	Mtrs	0				-	-				
b	25 mm dia conduit	Mtrs	30			36.00	-	-	36.00	-	6.00	0
c	19 mm dia conduit	Mtrs	35			40.00	-	-	40.00	-	5.00	0
						-		-	-	-		
12	1.5 meter length, Powder coated MS 25 mm dia Conduit supports for CCTV cameras with required supporting /mounting accessories complete.	No	RO			-	-	-	-	-		
13	Supervision, Programming, Testing & Commissioning, Documentation, Training.	LS	1			1.00	-	-	1.00	-		
	CCTV - TOTAL				**60,500.00**			**30,250.00**		**30,250.00**		**1,280.00**
	HVAC											
1.0	**CHILLED WATER TYPE DOUBLE SKIN AIR HANDLING UNITS - CEILING SUSPENDED TYPE**											
	Supply,Installation, Testing & Commissioning of Double skin type Ceiling suspended units complete with double skin (43±3 mm) insulated with CFC free polyurethane foam (PUF) panels of 40 +/- 2 kg/cum density. The outer and inner panel thickness shall be 0.8 mm and 0.63 mm GI respectively. Outer skin shall be precoated/Powder Coated G.I. sheet and internal skin shall be Plain G.I. sheet suitable for chilled water application. The unit shall be provided with DIDW Fan, Motor, minimum 4 row cooling coil and drain pan with 15mm thick nitrile rubber insulation, inlet filter section with with 50mm thick panel type pre-filter of MERV-8 as part of CSU, drive set & guard, spring isolator to avoid transmission of vibration,etc. The noise of the unit shall not exceed more than 55-60 dBA at 1m distance from the unit and at maximum operating speed.The height of the unit shall not exceed 650mm. Additional FRP drain tray shall be considered for this units. Cooling Coil should be certified by AHRI 410											
	The unit shall be provided with belt driven backward curved Multi fans for achive the unit hight as not Exceed 650mm, IE3 Motor, drive package, vibration isolating rubber bush to fans and motor to avoid transmission of vibration. All CSU motor pulleys shall be of adjustable type only. Cost shall be inclusive of non-cloth type canvas connection made of self extinguishing, moisture resistant flexible fabric to be provided between CSU outlet flange and the supply duct / plenum.Spring isolators shall be used in the installation of the Ceiling suspended Units to ensure there is no transmission of vibration from the equipment to the building structure.											

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							QTY	AMOUNT (Rs)	QTY	AMOUNT (Rs)	QTY	AMOUNT (Rs)
a	Supply. Installation,Testing & Commissioning of Double Skin CSU-Capacity-5 TR capacity, 1750 Dcfm with 0.325 sqm cooling cooling coil face area, 30 mmwg fan external static, 4/6 row cooling coil, 0.75/1.1 Kw fan motor, filter section with Pre Filter (EU-3)-MERV-8 supplied by the builder -Serving area: AJ Kitchen - Fine Dine	Set	1	65000	65,000.00	1.00	-	-	1.00	65,000.00	-	0
b	Supply, Installation, Testing & commissioning of Limit switch wiring ,lighting & motor interlock to be provided with 3 core 2.5sqmm cable in 19mm dia GI conduit	Rmt	20	2200	44,000.00	24.50	-	-	20.00	44,000.00	4.50	9900
2.0	CHILLED WATER PIPING WITH INSULATION											
	Supply, Installation, Testing & commissioning of MS 'C' Class pipes insulated with Closed cell elastomeric insulation of specified thickness & insulation to be covered with Aluminium cladding 26G , 0.5mm thick as per technical specification. All Bolts / Nuts used in the chilled water piping should be of GI & not MS. The cost shall be inclusive of pipe suppoorts with MS Channels. The piping flange connection bolts, washers and nuts should be hot dipped galvanised.The pipes should be supported with MS Channels, angle frame with neoprene rubber / PUF saddles. Fitting accessories for installation of pressure gauges, thermometers, BMS sensors, drain ports to be provided by the HVAC lowside contractor. Flourscent Plastic Sticker/ paint shall be applied to indicate Water flow directions. Only End flanges to be used for capping of pipes. "Table E" of BS code for flange thickness to be adhered. The Piping material & network should be selected to operate at PN 16 Rating						-					
	Pipe dia below 150 mm shall be C Class confirming to IS:1239 (part 1) 2004,Pipe size between 200 mm to 350 mm dia shall be 6.35 mm & pipe dia above 350 mm shall be 8.0 mm confirming to IS:3589 Gr330											
	Opening and closing for all the chilled pipe entries in civil / gypsum / any type of partition shall be under scope of HVAC vendor and inclusive of cost. Routing diagram can be checked in drawing prior for quoting.											
a	40 mm dia	Rmt	R.only									
b	32 mm dia	Rmt	20	2700	54,000.00	21.40	-	-	20.00	54,000.00	1.40	3780
3.0	BUTTERFLY VALVE WITH INSULATION											
	Supply, Installation, Testing & commissioning of Wafer type Butterfly valve which shall be of Slim seal wafer type with long stem of PN 16 rating. companion flanges shall also be of PN20 rating. Butterfly valves installed for the chilled water pipelines shall be insulated with nitrile rubber insulation and the insulation thickness shall be similar to that of the pipe dimensions. (valve sizes above 200mm shall be wheel operated type instead of handles). All bolts, washers and nuts shall be hot dipped galvanized only.The MOC of body shall be cast iron & disk shall be epoxy coated ductile iron.											
a	40 mm dia	Nos	R.only									
b	32 mm dia	Nos	5	10000	50,000.00	5.00	-	-	5.00	50,000.00	-	0
4.0	PRESSURE INDEPENDENT TYPE DYNAMIC BALANCING CUM FLOW CONTROL VALVE.											
	Valve selection to be submitted in the technical submittal for approval before procurement.											

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							QTY	AMOUNT (Rs)	QTY	AMOUNT (Rs)	QTY	AMOUNT (Rs)
	Supply, Installation, Testing & commissioning of Pressure independent dynamic balancing cum equal percentage type modulating flow control valve - PN16 rating fitted with high torque actuator with Non spring return type to ensure the valve closes automatically in the event of power disconnect to actuator. Actuator enclosure shall be rated for IP 54 protection. Step down transformer if required shall be part of valve supply, matching flanges, hot dipped galvanized bolts and nuts. Valve body to be insulated with closed cell elastomeric insulation. Supply , installition, testing & commissioning of thermostat along with control/ power cabling to be part of scope.The MOC of body shall be cast iron & membrane shall be EPDM, SS spring.											
	Actuator should be provided with position feed back switch and also actuator should have BMS interfacing card and shall be suitable for accepting signals from temperature sensors supplied by BMS vendor. Actuator should also have facility to set the required flow rate as per site requirements through dip switch adjustments. Valve body to be rated for PN 16. The valve design flow rate should be factory calibrated with +/- 5% flow accuracy. THe scope shall include the cost supply of thermostat/ return air temperature and required control cabling											
	Valve shall have necessary measuring ports, drain port, flanges etc., The balancing to be done through microprocessor based hand held terminal / POT and the same results shall be furnished in the water balancing report as part of commissioning report and handing over manual.											
a	40 mm dia	Nos	R.only									
b	32 mm dia	Nos	1	13500	13,500.00	1.00	-	-	1.00	13,500.00	-	0
5.0	2 WAY FLOW CONTROL VALVE.											
	Valve selection to be submitted in the technical submittal for approval before procurement.											
	Supply, Installation, Testing & commissioning of 2 Way- modulating flow control valve - PN16 rating fitted with high torque actuator with Non spring return type to ensure the valve closes automatically in the event of power disconnect to actuator. Actuator enclosure shall be rated for IP 54 protection. Step down transformer if required shall be part of valve supply, matching flanges, hot dipped galvanized bolts and nuts. Valve body to be insulated with closed cell elastomeric insulation. Supply , installition, testing & commissioning of thermostat along with control/ power cabling to be part of scope.The MOC of body shall be cast iron & membrane shall be EPDM, SS spring.											
	Actuator should be provided with position feed back switch and also actuator should have BMS interfacing card and shall be suitable for accepting signals from temperature sensors supplied by BMS vendor. Actuator should also have facility to set the required flow rate as per site requirements through dip switch adjustments. Valve body to be rated for PN 16. The valve design flow rate should be factory calibrated with +/- 5% flow accuracy. THe scope shall include the cost supply of thermostat/ return air temperature and required control cabling											

SR.NO.	DESCRIPTION	UNIT	PO QTY	PO RATE (Rs)	PO AMOUNT (Rs)	TOTAL EXECUTED QTY	RA - 1		RA - 2 (Current Bill)		VARIATION	
							QTY	AMOUNT (Rs)	QTY	AMOUNT (Rs)	QTY	AMOUNT (Rs)
	Valve shall have necessary measuring ports, drain port, flanges etc., The balancing to be done through microprocessor based hand held terminal / POT and the same results shall be furnished in the water balancing report as part of commissioning report and handing over manual.											
a	40 mm dia	Nos	R.only									
b	32 mm dia	Nos	R.only									
6.0	TEMPERATURE SENSORS											
	Supply, Installation, Testing & commissioning of Duct type/ space type temperature sensor for measuring the Return air temperature at the Chilled water type CSU Units (Range 45-150 deg. F).A Temperature sensor shall be provided in the return air path of CSU to control the 2 way modulating valve. The scope shall include the cost of Control Cabling with conduit between temperature sensor and actuator of 2 Way modulating flow control valve	Nos	1	4500	4,500.00	1.00	-	-	1.00	4,500.00	-	0
7.0	Y'-STRAINER WITH INSULATION											
	Supply, Installation, Testing & commissioning of Y-strainer -PN 16 rating body construction shall be with Mild steel and strainer shall be of SS screen with permanent magnet and drain port. The MOC of body shall be cast iron & SS-304 filter with 3 mm perforation with flanged connection, gaskets, permanent magnet. Note, the insulation quantity will be measured in running meters and the valve in numbers.											
a	40 mm dia	Nos	R.only									
b	32 mm dia	Nos	1	4500	4,500.00	1.00	-	-	1.00	4,500.00	-	0
8.0	BALANCING VALVE WITH INSULATION											
	SITC of BALANCING VALVE (Manual Type) - PN16 Rating. Balancing valves installed for the chilled water pipelines shall be insulated with 25mm thick nitrile rubber insulation The valve should be with factory calibrated with +/- 5% flow accuracy. Provided with necessary measuring port, drain port, flanges hot dipped galvanized bolts, washers and nuts etc., The balancing to be done by portable hand held device and same result should be furnished in the handing over manual.The MOC of body shall be cast iron & the seat shall be EPDM, brass / SS cone.											
a	40 mm dia	Nos	R.only									
b	32 mm dia	Nos	R.only									
9.0	TEMPERATURE GUAGES											
a	Supply, Installation, Testing & commissioning of Thermometer which shall be of Dial type (100mm) Range 0° to 50°C, with stainless steel body - IP 55 protection, with necessary theromowells.	Nos	2	6500	13,000.00	2.00	-	-	2.00	13,000.00	-	0
10.0	PRESSURE GAUGE (GLYCERINE FILLED)											
a	Supply, Installation, Testing & commissioning of Pressure Gauge which shall be of Bourdon tube Dial type (100mm) Range 0 to 10 kg/cm², with stainless steel body - IP55 protection with necessary pipe fitting and needle valve etc.,	Nos	2	8200	16,400.00	2.00	-	-	2.00	16,400.00	-	0
11.0	INSULATED RIGID PVC PIPING FOR CONDENSATE DRAIN											

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							QTY	AMOUNT (Rs)	QTY	AMOUNT (Rs)	QTY	AMOUNT (Rs)
	Supply, Installation, Testing and Commissioning of Rigid PVC piping with pressure rating of 6 Kg /CM2 duly insulated with 9 mm thick factory laminated aluminium foil faced closed cell elastomeric nitrile rubber insulation with class 'O' fire retardant properties in tubing form & all fittings, elbows, tees reducers, supports and clamps up to 50 mm dia. including drilling, wall chipping etc. and conceal the wall opening. Pipes shall be of following sizes :											
a	65mm. Dia.	Rmt	30	600	18,000.00	31.50	-	-	30.00	18,000.00	1.50	900
b	50mm. Dia.	Rmt	15	500	7,500.00	14.50	-	-	15.00	7,500.00	-0.50	-250
c	40mm. Dia.	Rmt	20	400	8,000.00	20.00	-	-	20.00	8,000.00	-	0
d	32mm. Dia.	Rmt	R.only									
d	25mm. Dia.	Rmt	R.only									
12.0	AUTOMATIC AIR VENTS											
a	Supply, Installation, Testing & commissioning of Automatic air vents to be provided at all high location of piping. The air vent to be provided with necessary ball valve.	Nos	R.only				-					
13.0	DRAIN VALVES											
	Supply, Installation, Testing & commissioning of Ball/Drain valves with handles and extended stem , threaded joints shall be of PN16 class and insulated with nitrile rubber.The MOC of body shall be forged brass, SS ball, SS 410 stem. The end connections shall be threaded.						-					
a	25 mm dia	Nos	2	2200	4,400.00	2.00	-	-	2.00	4,400.00	-	0
							-					
14.0	GSS DUCT WORKS											
	FACTORY FABRICATED DUCTING - TDF /TDC FLANGES - RECTANGULAR DUCTWORKS											
	Supply, Installation, Testing & Commissioning of factory fabricated GSS Ducting with TDF /TDC flange with GI bolt & nuts (the cleat into the flange Used for C and G together with Bolt) and necessary supporting arrangement using GI full threaded rods and slotted rail-Unistrut channel supports of size 41mm x 41mm for rectangular ducts to be used											
	Ducting shall include guide vanes etc., Ducting shall be designed for 500pa ESP as per the specifications, GSS Ducting:- Galvanized steel sheet shall be of Class VIII - light coating of zinc, nominal 120 gm /sqm as per IS-277.All ducts 900 mm to 1100mm shall have Stiffener bracket made of GI 1.25mm thick sheet and 1101mm above shall have Stiffener bracket made of GI 1.6mm thick sheet with special profile for strength and rigidity fixed throughout the duct perimeter intermediate between flanges with Fastener screws 2 nos for every interval of 150mm.											
	Spacing between duct supports should not exceed 2m i.e GI rods with GI 'C' channels. In case of duct sizes above 1800mm, MS angles duly painted with black enamel paint should be used along with neoprene pad in between the duct & MS angle. All duct support to be provided with check nuts (lock nuts).											

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							QTY	AMOUNT (Rs)	QTY	AMOUNT (Rs)	QTY	AMOUNT (Rs)
	While selecting the duct supports vendor shall ensure vibration free installation. Quoted price shall be inclusive of light testing with complete arragement & accessories for leakages. Quoted price shall be inclusive of necessary scaffolding charges towards installation of supply/exhaust air ducts outside or within building wherever required. Quoted price should also include necessary charges towards duct supports including MS angle/channel arrangement as required for ducts being installed outside or within building wherever required.											
	All duct construction and installation shall be in accordance with SMACNA standards. In addition ducts shall be factory fabricated utilizing the following machines to provide the requisite quality of ducts.											
a	24 G-GSS-0.63MM (1MM TO 250MM) - C & SS	Sqm	R.only									
b	24 G-GSS-0.63MM (251MM TO 1000MM) - TDF Flanges	Sqm	105	1800	1,89,000.00	108.40	-	-	108.00	1,89,000.00	3.40	6120
c	22 G-GSS-0.80MM (1001MM TO 1200MM) - TDF Flanges, Guide Vanes & Stiffeners Rods	Sqm	2	2000	4,000.00	2.00	-	-	2.00	4,000.00	-	0
d	20 G-GSS-1.00MM (1201MM TO 1300MM) - TDF Flanges, Guide Vanes & Stiffeners Rods	Sqm	R.only									
e	18 G-GSS-1.25MM (1301MM TO Above) - TDF Flanges, Guide Vanes & Stiffeners Rods	Sqm	R.only									
15.0	DUCT INSULATION MATERIALS											
15.1	THERMAL INSULATION FOR DUCTWORKS											
	Supply, Installation, Testing & Commissioning of Thermal insulation closed cell elastromeric nitrile rubber insulation manafactured as per ASTM E 84 test with density between 40-60 kg / m³(External and internal) for spiral duct, Material shall be FM GLOBAL approved, food grade material with antimicrobial properties, Class 'O', insulation material should meet NFPA 90A supplementary materials for air distribution system which should not absorbs less 0.2% water by volume (ASTM c 209), should not support microbial growth (ASTM C1071, G21, G22) and should emit objectionable odors (ASTM C 665) and should have thermal conductivity of 0.27 (R - 2.78 in 3.4" thickness) and water vapor permeance of 0.10. Scope shall include the cost for aluminium foil which to be laid over the thermal insulation. Aluminium foil shall provide protection against scratches.											
	Insulation material shall be bonded with the ducts using metal screw and washers to facilitate grip to the GI sheet.Insulation materials brought on site should be installed following the manufacturer recommended methodology and using the appropriately suitable manufacturer recommended cutting, measuring, pasting tools & tackles. It is advised to use the manufacturer's tool box for installation of insulation materials on site.											
a	9mm thick	Sqm	R.only				-					
b	13mm thick	Sqm	65	105	6,825.00	62.40	-	-	62.40	6,552.00	-2.60	-273
15.2	ACOUSTIC INSULATION FOR DUCTWORKS											

SR.NO.	DESCRIPTION	UNIT	PO QTY	PO RATE (Rs)	PO AMOUNT (Rs)	TOTAL EXECUTED QTY	RA - 1		RA - 2 (Current Bill)		VARIATION	
							QTY	AMOUNT (Rs)	QTY	AMOUNT (Rs)	QTY	AMOUNT (Rs)
	SITC of internal acoustic lining within air ducts plenum with open cell 10mm thick Elastromeric nitrile rubber insulation manafactured as per ASTM E 84 test with density140- 180 kg / m³, Material shall be FM rated as per the approved shop drawings / specifications. Insulation material should meet NFPA 90A supplementary materials for air distribution system which should not absorbs less 0.2% water by volume (ASTM c 209), should not support microbial growth (ASTM C1071, G21, G22) and should emit objectionable odors (ASTM C 665) and should have thermal conductivity of 0.27 (R - 2.78 in 3.4" thickness) and water vapor permeance of 0.10. - Class "1" Material.											
	Insulation sheets should have self-adhesive backing for faster installation and better quality. The adhesive used in self-adhesive backing should be Fire Retardant, LEED compliant and zero VOC.											
	Insulation material shall be bonded with the ducts using metal screw and washers to facilitate grip to the GI sheet.Insulation materials brought on site should be installed following the manufacturer recommended methodology and using the appropriately suitable manufacturer recommended cutting, measuring, pasting tools & tackles. It is advised to use the manufacturer's tool box for installation of insulation materials on site.											
a	10mm thick-acoustic insulation for main duct outlets as per HVAC drawings	Sqm	7	3450	24,150.00	6.85	-	-	6.85	23,632.50	-0.15	-517.5
b	20mm thick-acoustic insulation for main duct outlets as per HVAC drawings	Sqm	R.only				-					
16.0	AIR DISTRIBUTION DEVICES											
16.1	MANUAL TYPE VOLUME CONTROL DAMPERS											
a	Supply, Installation, Testing & Commissioning of Volume Control Dampers made out of 100 x 40 x 1.55 mm thick galavanised steel frame and blades of 1.55 mm galavanised sheet steel.	Sqm	0.7	4500	3,150.00	0.70	-	-	0.70	3,150.00	-	0
16.2	ALLUMINIUM COLLAR DAMPERS											
a	Supply, Installation, Testing & Commissioning of Collar Dampers or neck damper of opposed blade type made out of Aluminium alloy extrusion with anodised matt black finish (AL.blade thickness 1.0mm, Border thickness-1.3 MM). Qty is for Supply air grilles	Sqm	1.7	4500	7,650.00	1.70	-	-	1.70	7,650.00	-	0
16.3	CONTINUOUS LINEAR GRILLE											
	Supply, Installation , Testing & Commissioning of Extruded Al. powder coated continuous, discrete grilles for supply & return air distribution of 100 to 600 mm wide with 0 / 15 / 30 / 45 deg (AL.frame thickness 1.2MM, Louver thickness-3 MM). Deflection as specified in the approved shop drawings. Grilles complete with integral flanges on both sides & ends as required complete with corner pieces.(colour for the grill to be confirmed by Arch/ PMC team before placing the order)											
a	150mm wide	Nos	21	1100	23,100.00	21.00	-	-	21.00	23,100.00	-	0
16.4	POWDER COATED ALUMINIUM GRILLES- FOR EXHAUST AIR & FRESH AIR APPLICATION											

SR. NO	DESCRIPTION	UNIT	PO QTY	PO RATE (Rs)	PO AMOUNT (Rs)	TOTAL EXECUTED QTY	RA - 1		RA - 2 (Current Bill)		VARIATION	
							QTY	AMOUNT (Rs)	QTY	AMOUNT (Rs)	QTY	AMOUNT (Rs)
	87% of internal acoustic lining within air ducts plenum with open cell 10mm thick Elastomeric nitrile rubber insulation manufactured as per ASTM E 84 test with density 140- 180 kg / m³, Material shall be fire retard as per the approved shop drawings / specifications. Insulation material should meet NFPA 90A supplementary materials for air distribution system, which should not absorb less 0.2% water by volume (ASTM C 209), should not support microbial growth (ASTM G21, G22) and should emit objectionable odors (ASTM C 665) and should have thermal conductivity of 0.27 (R - 2.78 in 3.4" thickness) and water vapor permeance of 0.10 - Class '1' Material.											
	Insulation sheets should have self-adhesive backing for faster installation and better quality. The adhesive used in self-adhesive backing should be Fire Retardant, LEED compliant and zero VOC.											
	Insulation material shall be bonded with the ducts using metal screw and washers to facilitate grip to the GI sheet insulation materials brought on site should be installed following the manufacturer recommended methodology and using the appropriately suitable manufacturer recommended cutting, measuring, pasting tools & tackles. It is advised to use the manufacturer's tool box for installation of insulation materials on site.											
a	10mm thick-acoustic insulation for main duct outlets as per HVAC drawings	Sqm	7	3450	24,150.00	6.85	-	-	6.85	23,632.80	-0.15	-517.5
b	20mm thick-acoustic insulation for main duct outlets as per HVAC drawings	Sqm	R.only				-					
16.0	AIR DISTRIBUTION DEVICES											
16.1	MANUAL TYPE VOLUME CONTROL DAMPERS											
a	Supply, Installation, Testing & Commissioning of Volume Control Dampers made out of 100 x 40 x 1.55 mm thick galavanised steel frame and blades of 1.55 mm galavanised sheet steel.	Sqm	0.7	4500	3,150.00	0.70	-	-	0.70	3,150.00	-	0
16.2	ALLUMINIUM COLLAR DAMPERS											
a	Supply, Installation, Testing & Commissioning of Collar Dampers or neck damper of opposed blade type made out of Aluminium alloy extrusion with anodised matt black finish (AL.blade thickness 1.0mm, Border thickness-1.3 MM). Qty is for Supply air grilles	Sqm	1.7	4500	7,650.00	1.70	-	-	1.70	7,650.00	-	0
16.3	CONTINUOUS LINEAR GRILLE											
	Supply, Installation , Testing & Commissioning of Extruded AL. powder coated continuous, discrete grilles for supply & return air distribution of 100 to 600 mm wide with 0 / 15 / 30 / 45 deg (AL.frame thickness 1.2MM, Louver thickness-3 MM). Deflection as specified in the approved shop drawings. Grilles complete with integral flanges on both sides & ends as required complete with corner pieces.(colour for the grill to be confirmed by Arch/ PMC team before placing the order)											
a	150mm wide	Nos	21	1100	23,100.00	21.00	-	-	21.00	23,100.00	-	0
16.4	POWDER COATED ALUMINIUM GRILLES- FOR EXHAUST AIR & FRESH AIR APPLICATION											

SR.NO.	DESCRIPTION	UNIT	PO QTY	PO RATE (Rs)	PO AMOUNT (Rs)	TOTAL EXECUTED QTY	RA - 1		RA - 2 (Current Bill)		VARIATION	
							QTY	AMOUNT (Rs)	QTY	AMOUNT (Rs)	QTY	AMOUNT (Rs)
	Equipment should be selected on the basis of required Air handling capacity so as to achieve 90-95% particulate matter removal efficiency according to DOP Test or EN779 European standard (Equivalent to ASHRAE 52.1). Vendor should submit the Test report from the Lab having Test facility according to ASHRAE 52.2 or EN779. In the absence of Test report Vendor should demonstrate the efficiency claim at their manufacturing facility at their expenses.											
	Power supplies shall be 100% solid state, operate on 230 VAC, 50 Hz, 1 Phase input and provide a dual high voltage output of 12-13 KVDC for the Ionizer and 6.0-6.5 KVDC for the collector in normal operation conditions. Current output at the high tension shall be 12mA. A maximum power output for the solid state power supply shall be 120 watts to maintain the specified collection efficiency. Integrally mounted Electrical Interlocks shall be provided to prevent access to the high voltage components without first interrupting the primary input power. The power supply shall operate over a temperature range of -32 degrees F to 140 degrees F, be overloaded self-protecting and accommodate an LED lights indicating the performance status of the ionizing/collecting cell. High voltage output components in the power supply shall be sealed with epoxy for moisture resistance.											
	The power pack shall incorporate a short circuit arc protection with automatic power restoration system to prevent overload.											
	There shall be 2 LED lights (Green & Red) installed on the access door of the unit to indicate the status of the air cleaning system											
	BMS (Building Management System) Interface: The power supply (pack) shall have a 2 wire dry contacts (NO/NC) for remote link to Building Management System. This is for performance indication of the air cleaning system											
	Supply , Installation , Testing & Commissioning of Electro-static Dry Scrubber unit complete with all sections as listed above & detailed in tender drawings	LS	1	75000	75,000.00	1.00	0.50	37,500.00	0.50	37,500.00	-	0
	HVAC - TOTAL				**6,51,375.00**			**37,500.00**		**6,13,084.50**		**19,689.50**
	FIRE ALARM SYSTEM											
1	**FIRE Alarm System Works**											
1.1	Supply installation testing and commissioning of addressable type smoke detectors with LED indication lamp, MS Back box, detector base braket, along with complete fixing accessories.(Above false ceiling)	Nos	RO									
1.2	Supply installation testing and commissioning of addressable type smoke detectors with LED indication lamp, MS Back box, detector base braket, along with complete fixing accessories.(Below false ceiling)	Nos	4	3800	15,200.00	4.00	-	-	4.00	15,200.00	-	0
1.2a	Supply installation testing and commissioning of addressable type Multi Sensor Heat detectors with LED indication lamp, MS Back box, detector base braket, along with complete fixing accessories.	Nos	3	3000	9,000.00	3.00	-	-	3.00	9,000.00	-	0
1.3	Supply installation testing and commissioning of Response indicators with complete fixing accessories for the detectors placed above false ceiling and below false flooring	Nos	RO					-	-	-		

SR.NO.	DESCRIPTION	UNIT	PO QTY	PO RATE (Rs)	PO AMOUNT (Rs)	TOTAL EXECUTED QTY	RA - 1		RA - 2 (Current Bill)		VARIATION	
							QTY	AMOUNT (Rs)	QTY	AMOUNT (Rs)	QTY	AMOUNT (Rs)
1.4	Supply installation testing and commissioning of addressable hooter cum STROBE along with its control modules complete with all fixing materials	Nos	1	4500	4,500.00	1.00	-	-	1.00	4,500.00	-	0
1.5	Supply and installation of analogue addressable type Manual call points with Glass and hammer and monitor module with complete fixing accessories also with self illuminated signage	Nos	1	4100	4,100.00	1.00	-	-	1.00	4,100.00	-	0
1.6	Supply and installation of Short circuit Fault isolators @ 20 detectors with complete fixing accessories	Nos	RO					-				
1.7	Supply and installation of Monitor Module with complete fixing accessories	Nos	1	6000	6,000.00	1.00	-	-	1.00	6,000.00	-	0
1.8	Supply and installation of Control Relay Module with complete fixing accessories	Nos	1	4800	4,800.00	1.00	-	-	1.00	4,800.00	-	0
1.9	Supply and laying of PVC insulated 2C x 1.5sq mm shielded armored FRLS copper cable (RED COLUR) including cable glands and all fixing accessories where ever required complete with end terminations at both sides. The colour of the cable shall be RED only. (Shall be or actuals.)	Rmtrs	50	70	3,500.00	48.30	-	-	48.30	3,381.00	-1.70	-119
1.10	Supply installation testing and commissioning of Addressable fire alarm Panel which consists of display board which will have 160 Character Display with Touch key pad. Mother board which will have ARM CORTEX M3 32 Bit Processor. Inbuilt RS-485 Networking Circuit for peer to peer networking. Inbuilt USB 2.0 Port for upload and download the Configuration tools. Two inbuilt programmable inputs. Two inbuilt NAC's and Three Programmable Relays and 4 Loop Card circuits power Supply, installation and Commissioning Board which will have SMPS fully protected board which its operates on 120 to 220V AC ± 10% with 50/60 Hz battery backup 24V DC with built-in charger. the panel have IP-65 rating Optional: for BMS integration thru MODBUS converter. Graphical Software. Software for TCP/IP Module provision for GSM based Auto dialler provision for printer thru. compatible module. fire alarm panel with battery backup for 6 hours operation with battery charger, alarm bell, test buttons etc.				-	-	-	-	-	-	-	0
1.11	2 loop panel	Nos	1	47500	47,500.00	1.00	-	-	1.00	47,500.00	-	0
1.12	4 loop panel	Nos	RO				-	-	-	-	-	0
1.13	Supply of Hand held Fire Extinguisher - ABC Powder - 6 Kg with floor mount accessories	Nos	2	7000	14,000.00	2.00	-	-	2.00	14,000.00	-	0
1.13.2	Supply of Hand held Fire Extinguisher - CO2 - 4.5 Kg with floor mount accessories	Nos	2	12000	24,000.00	2.00	-	-	2.00	24,000.00	-	0
1.13.3	Supply installation testing and commissioning of Emergency Exit - LED Battery backup 180Min	Nos	0	0	-	-	-	-				
1.13.4	Supply installation testing and commissioning of Fire Exit - LED Battery backup 180Min	Nos	3	3000	9,000.00	3.00	-	-	3.00	9,000.00	-	0
1.13.5	Supply installation testing and commissioning of Exit - LED Battery backup 180Min	Nos	0				-	-	-	-	-	0
								-	-	-	-	0
2	PA System Works						-	-	-	-	-	0
2.1	Supply and installation testing and commissioning of 6 Watt 165mm Dia Surface mounted white colour speakers along with all fixing accessories	Nos	0				-	-	-	-	-	0
2.2	Supply and installation testing and commissioning of 6 Watt Recessed Mounted Ceiling speakers along with all fixing accessories	Nos	4	6400	25,600.00	4.00	-	-	4.00	25,600.00	-	0
2.3	Supply and laying of shielded twin twisted pair 1.5 sqmm cable in existing conduit. (Shall be or actuals.)	Rmtrs	50	90	4,500.00	48.90	-	-	48.90	4,401.00	-1.10	-99

SR.NO.	DESCRIPTION	UNIT	PO QTY	PO RATE (Rs)	PO AMOUNT (Rs)	TOTAL EXECUTED QTY	RA - 1		RA - 2 (Current Bill)		VARIATION	
							QTY	AMOUNT (Rs)	QTY	AMOUNT (Rs)	QTY	AMOUNT (Rs)
2.4	Supply and fixing of 20mm dia heavy guage GI conduit concealed in wall above false ceiling for taking copper wires including all accessories such as Conduit junction boxes, bends etc as required (Shall be on actuals).	Rmtrs	40	210	8,400.00	39.20	-	-	39.20	8,232.00	-0.80	-168
2.5	Mixer Amplifier -240W with Pre recorded Message ,Music Ssytem etc complete in a PA rack (The rate to include the Cost of rack and other required acessories)	Nos	RO					-	-	-		
2.6	Mixer Amplifier -120W with Pre recorded Message ,Music Ssytem etc complete in a PA rack (The rate to include the Cost of rack and other required acessories)	Nos	1	75000	75,000.00	1.00	-	-	1.00	75,000.00	-	0
	FIRE ALARM SYSTEM - TOTAL				**2,55,100.00**			-		**2,54,714.00**		-386.00
	FIRE SPRINKLER SYSTEM											
3.1	Supply, installation, testing and commissioning of G.I Heavy											
a	150mm nominal dia	Rmtrs	0									
b	100mm nominal dia	Rmtrs	0									
c	80mm nominal dia	Rmtrs	0									
d	65mm nominal dia	Rmtrs	0									
e	50mm nominal dia	Rmtrs	0									
f	40mm nominal dia	Rmtrs	0									
g	32mm nominal dia	Rmtrs	3	600	1,800.00	4.20	-	-	3.00	1,800.00	1.20	720
h	25mm nominal dia	Rmtrs	30	500	15,000.00	32.10	-	-	30.00	15,000.00	2.10	1050
3.2	Supplying, installing, testing and commissioning conventional Standard Response Sprinkler quartzoid bulb type with 15mm screwed end connection of 68 deg. C. temperature rating, K-Factor =5.6 GPM/psi½ (80.6 LPM/bar½) and orifice shall not be less than 6mm. Sprinklers shall be UL Listed / BIS approved with Chrome finished.				-		-	-				
a	Pendent Sprinkler	Nos	RO				-	-				
b	Upright Sprinkler	Nos	RO				-	-				
b	Concealed Sprinkler	Nos	16	3000	48,000.00	16.00	-	-	16.00	48,000.00	-	0
3.3	Stainless steel corrugated flexible pipe(hose) for dropping sprinklers below false ceiling, pipe shall be 16 bar pressure rating and 1500 mm long, 25 mm dia with union / reducer collar, clamps etc. as required.	Nos	16	1800	28,800.00	16.00	-	-	16.00	28,800.00	-	0
3.4	Supply & fixing of approved type rosette plates (Recessed type, in two piece) for Sprinklers below false ceiling area.	Nos	16	90	1,440.00	16.00	-	-	16.00	1,440.00	-	0
3.5	Supply and Installation, Testing and Commissioning of CI butterfly valves (body conforming to IS 210 GR FG 200) slim seal standard lever operated type conforming to IS13039/BS5155 with required flanges nuts, bolts etc complete with supervisory tamper switch for monitoring. The valves shall be suitable for 150 psi pressure rating. Tamper Switch equipped with 2 Nos. of NO-NC contacts for monitoring											
a	100 mm dia	Nos	RO									
b	80 mm dia	Nos	RO									
c	65 mm dia	Nos	RO									
3.6	Fire Sprinkler Pipe Modifictaion Works (Extending the branch pipe as per proposed interior layout wherever required and removal of existing rigid dropers)	Lot	RO									
	FIRE SPRINKLER SYSTEM - TOTAL				**95,040.00**					**95,040.00**		1,770.00

Arihant Infra
New Delhi - 110045