

Estimate for Electrical & AC Piping works for Baroda U.P. Bank

At Regional Office Mahrajanj

S.No.	Particulars	Unit	Qty.	Rate	Amount
	The work shall also include for cutting chase for conduits and moulded boxes, if required, in the wall/ floor (Without damaging the building/wall) along with clamping the conduit at every 750mm interval & finally finishing the surface & matching the same with the existing surface. Item 1,3, 4 & 5				
	The rate should include the cost of all materials, modular switch complete with MS box & cover plate, labour, T&P, taxes & levies, scaffolding, shifting of furniture, carting away the debris and cleaning the floor etc				
	L&F Point Wiring, Circuit wiring & Power Point wiring				
1	Primary Point Wiring for light points controlled thru modular switches complete with boxes & cover plate - The point wiring shall be carried with 3*1.5sq.mm FRLSH stranded Cu. Wires in 20mm PVC conduit pipe concealed in wall/ floor/ panelling/ partitions or above false ceiling as per requirement. The job shall include cost of circuit wiring with 3*1.5sq.mm FRLSH Cu stranded wires in 20mm OD PVC Pipe from nearest TPN Db to controloing SDb. The job shall be complete & to the entire satisfaction of the Bank. Each Switch board should be provided with suitable capacity fuses/ fuse indicator	Point	100.00		
2	Secondray Light Point				
	Same as above but looped from PP with 3*1.5sq.mm FRLSH stranded Cu. Wires in 20mm PVC conduit pipe concealed in wall/ floor/ panelling/ partitions or above false ceiling as per requirement. The job shall be complete & to the entire satisfaction of the Bank.	Point	80.00		
3	6 A switch socket points on Sdb: S/F of 6A switch points with an additional indicator and 6Amp. modular Type switch & socket. It shall have 3*1.5sq.mm FRLSH stranded Cu. Wire as per requirement. The job shall be complete & to the entire satisfaction of the Bank.	Point	20.00		
4	Point Wiring for wall fan points controlled thru modular switches complete with boxes & cover plate - The point wiring shall be carried with 3*1.5sq.mm FRLSH stranded Cu. Wires in 20mm PVC conduit pipe concealed in wall/ floor/ panelling/ partitions or above false ceiling as per requirement. The job shall also included S/F of 6A switch socket near wall fan for regulating the same. The job shall include cost of circuit wiring with 3*1.5sq.mm FRLSH Cu stranded wires in 20mm OD PVC Pipe from nearest TPN Db to controloing SDb. The job shall be complete & to the entire satisfaction of the Bank. Each Switch board should be provided with suitable capacity fuses/ fuse indicator	Point	35.00		

5	Point Wiring for Ceiling fan points controlled thru modular switches complete with boxes & cover plate - The point wiring shall be carried with 3*1.5sq.mm FRLSH stranded Cu. Wires in 20mm PVC conduit pipe concealed in wall/ floor/ panelling/ partitions or above false ceiling as per requirement. The job shall also included S/F of <i>modular electronic regulator in SDb</i> for regulating the same. The job shall include cost of circuit wiring with 3*1.5sq.mm FRLSH Cu stranded wires in 20mm OD PVC Pipe from nearest TPN Db to controloing SDb. The job shall be complete & to the entire satisfaction of the Bank. Each Switch board should be provided with suitable capacity fuses/ fuse indicator	Point	2.00		
6	Point Wiring for exhaust fan points controlled thru modular switches complete with boxes & cover plate - The point wiring shall be carried with 3*1.5sq.mm FRLSH stranded Cu. Wires in 20mm PVC conduit pipe concealed in wall/ floor/ panelling/ partitions or above false ceiling as per requirement. The job shall also included S/F of 6A switch socket near wall fan for regulating the same. The job shall include cost of circuit wiring with 3*1.5sq.mm FRLSH Cu stranded wires in 20mm OD PVC Pipe from nearest TPN Db to controloing SDb. The job shall be complete & to the entire satisfaction of the Bank. Each Switch board should be provided with suitable capacity fuses/ fuse indicator	Point	2.00		
	PVC Insulated FRLSH Copper wire (ISI Marked)- Skyline/ Finolex/ Havells/ Polycab				
	PVC Conduit- CAP/ BEC/ Sieko/ AKG/Finolex				
	Modular Switch/ Sockets - ABB/ Legrand/ MK/ Anchor/ Elleys/ GW				
	<u>Power Point Wiring</u>				
1	Primary Power Point: Raw power points on workstations / table / Printer etc using 3*4 Sq.mm FRLSH Cu. stranded wire laid in 20mm OD PVC pipe medium conduit pipe laid & concealed in wall/ floor/ panelling/ partitions or above false ceiling as per requirement. Each power point shall also consists of 1 nos of 16A , 2/3/5 pin sockets & 1 No., 16A Switch , wired together forming one point. The earth wire of green color only.	Point	20.00		
2	Secondary Power Point: Raw power points on workstations / table / Printer etc using 3*2.5 Sq.mm FRLSH Cu. stranded wire laid in 20mm OD PVC pipe medium conduit pipe laid & concealed in wall/ floor/ panelling/ partitions or above false ceiling as per requirement. Each power point shall also consists of 1 nos of 16A , 2/3/5 pin sockets & 1 No., 16A Switch , wired together forming one point. The earth wire of green color only. Secondary P to b einterlooped with Primary PP. Maximum length 6m.	Point	15.00		
	<u>Air - Conditioning</u>				

1	AC Point: Providing AC points with circuit wiring with 3*4sq.mm FRLSH Cu stranded wires to be laid in 20mm PVC medium concealed in wall/ floor/ panelling/ partitions as per requirement. Each point consisting of 1 nos of 20/25A , 3/5 pin sockets & 1 No. Single module 32/25A MCB, 1 Nos 25A Motor starter switch wired together forming one point. The earth wire of green color only. The above includes supply & fixing modular cover plates, base plates, PVC box/ Gang box in brick wall by making necessary chase/ recess and making good damaged surface including proper connections. The job shall be complete & to the entire satisfaction of the Bank.	Nos.	10.00		
2	Wiring with 3*4.0sq.mm FRLSH stranded Cu. wires laid in 20mm OD PVC/ flexible pipe heavy duty laid on floor & concealed in wall/ floor as per requirement <u>to various voltage stabilizers</u> . The job includes making connections at both ends with proper size of lugs to the entire satisfaction of the Bank.	Mtr.	40.00		
	For Cassette AC				
3	Input supply to OD units - S/ F of 2way SPN Db metallic c/w 40A 2P MCB including all connections complete in all respects to the entire satisfaction of the Architect/ bank. All DB's to be properly earthed.	Nos.	6.00		
4	S/ laying of XLPE insulated armoured Copper Conductor cable including cost of lugs, cable glands for Cassette OD units				
	4c x 4sq.mm	Mtr.	240.00		
	<u>UPS</u>				
	<i>(Assumed 2nos. 7.5KVA UPS - 1P Input & 1P Output</i>				
1	Incoming supply to UPS room: S/laying of 4 core 6sq.mm XLPE insulated armoured Copper conductor cable from main Panel to 4way TPN Db in the UPS room to be laid in medium duty 20mm PVC conduit/ pipe & run on surface or concealed in wall/ floor/ false ceiling including connections at both ends with lugs.	Mtr.	50.00		
	Cables Armoured/ Unarmoured - Finolex/ Polycab/ Havells/ RR Kabel/ KEI				
2	S/ F of 4way SPN Db metallic c/w 63A 4P MCB including all connections complete in all respects to the entire satisfaction of the Architect/ bank.	No.	1.00		
	Distribution Boards Double door in steel sheet housing - ABB/ MDS/ Indo-asian/ Siemens/ HPL				
	MCB- 10kA "C" Curve L&T/ Siemens/ Schnider/ ABB/ HPL/ Legrand				
3	S/ F of 2way SPN Db metallic c/w 63A 2P MCB including all connections complete in all respects to the entire satisfaction of the Architect/ bank.	Nos.	2.00		
4	Supply & laying of incoming & outgoing wiring to & from UPS with 3*6sq.mm Copper unarmoured cable laid in 20/25 mm flexible PVC pipe for medium duty for UPS incoming & from UPS outgoing.	Mtr.	20.00		

5	UPS Output Db in UPS Room - S/ F of 8way SPN Db complete with 80A 2P MCB as incomer and 5*40A 2P MCB as outgoing feeders including proper connections thru lugs. The job shall be complete & to the entire satisfaction of the Bank.	No.	1.00		
	UPS Output Distribution Boards				
6	For Router, CCTV & FDAS supply - Location RHS wall near router- S/ F of 12way SPN Db c/w 32A 2P MCB + 2*16A 1P for router+ 2*16A 2P MCB for CCTV and FDAS supply complete in all respect and as required & to the satisfaction of the bank.	Set	1.00		
	RO UPS distribution				
	RHS & LHS				
7	S/F for 12way SPN Db c/w 32A 2P MCB and 10*6A 1P MCB complete in all respect and as required & to the satisfaction of the bank.	Set	2.00		
8	CR UPS Db - Location on LHS wall rear side in CR - S/ F of 8way SPN Db c/w 32A 2P MCB and 2*6A 1P MCB + 2*10A 1P MCB (2 CP per ckt) for CR Computer points complete in all respect and as required & to the satisfaction of the bank.	Set	1.00		
9	For LHS - Location LHS wall SM 2 cabin- S/ F of 8way SPN Db c/w 32A 2P MCB and 2*16A 1P MCB for DRM & RM + 2*6A 1P MCB for SM1 & SM 2 complete in all respect and as required & to the satisfaction of the bank.	Set	1.00		
10	Supply & laying of incoming wiring from UPS Db in UPS room to UPS output Db near cash cabin with 3*2.5 sq.mm FRLSH stranded Cu. Wires laid in 20/25 mm flexible PVC pipe medium duty complete in all	Mtr.	120.00		
	<u>All DB Bodies should be earthed.</u>				
11	Supply & Installation of point wiring for UPS power plug points on workstations / table for computers using 3*1.5 Sq.mm copper conductor multi stranded FRLSH wire pulled through floor raceways/conduit and taken upto table top using PVC rigid or flexible conduits run within wooden/metal partitions. Each point consisting of 3 nos of 6A , 2/3 pin sockets & 1 No., 16A Switch wired together forming one point. The earth wire of green color only.	Nos.	34.00		
	<u>DISTRIBUTION MAINS</u>				
12	S/F of 200A 4P MCCB in SS enclosure for regulating power utility input supply 25kA with adjustable over load & thermal relay including making of connection from electronic meter etc. complete in all	Set	1.00		
	MCCB - Hager/ Legrand/ L&T/ ABB/ HPL/ Siemens/ Havells/ Schneider				
	<u>Main Incoming Panel</u>				
13	SITC of main distribution board panel fabricated of 18swg (powder coated) comprising of	Each	1.00		
	Indicator lamps 3 nos.				

	Voltmeter & ammeter (one each) c/w rotay switches and CT's for Ammeter				
	Busbar 1nos. - (each of RYB +N) Copper 200A each				
	Incomer - 200A 4P MCCB adjustable 25kA				
	<u>160A 4P Changeover outside Panel - Item 3 below</u>				
	<u>Outgoing</u>				
	<u>To be tapped from input side of the incomer MCCB</u>				
	AC - 100A 4P MCCB for Cassette AC Panel in Pantry				
	UPS - 63A 4P MCCB				
	<u>From Main Bus</u>				
	63A 4P MCB- 5nos. - 4nos. For LHS & RHS TPN Db + 1 spare				
	32A 2P MCB's - 1nos. for signage and 1 spare				
	Earth bus bar 25x5mm GI strip - 2nos. At the bottom.				
	Ammeter, Voltmeter- AE/ L&T/ Meco/ Rishab				
	Selector Switch, Push Button switch/ Emergency switch- Kay Cee/ L&T/ Siemens/ Schnider				
	Indication Lamps- AE/ L&T/ Siemens/ Schnider				
	CT's- L&T/ AE/ Kappa				
	AT's- L&T/ Siemens/ Schnider/ Legrand				
	MCCB- Legrand/ Schnider (MG)/ ABB/ Siemens/ L & T				
	MCB- 10kA "C" Characteristics L&T/ Siemens/ Schnider/ Legrand				
14	AC Panel - Location by Architect	Each	1.00		
	SITC of AC panel				
	Indicator lamps 3 nos.				
	Busbar 1nos. - (each of RYB +N) Copper 100A each				
	Incomer - 100A 4P MCCB adjustable 25kA				
	<u>Outgoing</u>				
	AC - 10*40A 2P MCB for Cassette AC				
	Earth bus bar 25x5mm GI strip at the bottom.				
15	<u>Changeover:</u> S/F of 160A 4P changeover in SS enclosure near panel for regulating DG set supply including proper connections.	Each	1.00		
	S/ laying of XLPE insulated armoured Aluminium Conductor cables including cost of lugs, cable glands etc. The cable should be laid on surface with proper clamps @750mm or laid & concealed in wall/ floor/ PVC Conduit/ false ceiling complete in all respect. The work also includes cutting chases for conduits in the wall/ floor (Without damaging the building) along with clamping the cable. All connection shall be done thru proper size of lugs				

16	3.5c 50sq.mm for Pole & 200A 4P MCCB	Mtr.	35.00		
	S/ laying of XLPE insulated armoured Copper Conductor cables including cost of lugs, cable glands etc. The cable should be laid on surface with proper clamps @750mm or laid & concealed in wall/ floor/ PVC Conduit/ false ceiling complete in all respect. The work also includes cutting chases for conduits in the wall/ floor (Without damaging the building) along with clamping the cable. All connection shall be done thru proper size of lugs				
17	4c x 16sq.mm for VTPN Db's for LHS VTPN Db + AC Panel	Mtr.	60.00		
18	4c x 10sq.mm for RHS VTPN Db's	Mtr.	100.00		
	Supply, installtion, testing & commissioning of TPN Db complete in all respects for AC, PP & LF as under				
19	4way VTPN Db for Conference room double door - Location rear entrance near LHS wall	No.	1.00		
	Incomer - 63A 4P MCB				
	5no. 20A 1P MCB - Primary PP+ looped secondary PP - 1 for 2PP LHS wall, 2 for CR table + 1 for 2PP rear end enrance & 1 for screen				
	2no. 16A 1P MCB - 1 LHS PP, 2 CR Table PP				
	4nos. 10A 1P MCB for L & F				
	Blanking Plates - 1nos.				
	All connection shall be done thru proper size of lugs				
	Input connection thru 4c 10Sq.mm Cu condustor XLPE armoured cable				
20	8way VTPN Db for Balance area Location by Architect	No.	1.00		
	Incomer - 63A 4P MCB				
	4no. 32A 1P MCB - DRM, RM, SM1 & SM 2				
	2no. 20A 1P MCB - Primary PP+ looped secondary PP - 1 DRM & 1RM				
	4no. 16A 1P MCB - 1 toilet RM, 1 toilet DRM & 2 for SM1 & SM 2				
	5nos. 10A 1P MCB for L & F				
	5nos. 6A 1P MCB for L & F				
	Blanking Plates - 4nos.				
	All connection shall be done thru proper size of lugs				
	Input connection thru 4c 16Sq.mm Cu condustor XLPE armoured cable				
21	6way VTPN Db for RHS rear area (Legal to Credit+ Reception & pantry area - Location RHS near pillar in legal deptt.	No.	1.00		
	Incomer - 63A 4P MCB				
	1*32A 1P MCB - Reception AC				
	4*20A 1P MCB - Primary PP+ looped secondary PP - 1 Legal, 1NPA, 1 Credit & 1 Pantry				
	4*16A 1P MCB - 1 D/w, 1 Legal , 1 Credit+ 1 reception				

	3nos. 10A 1P MCB for L & F				
	2nos. 10A 1P MCB for L & F				
	Blanking Plates - 4os.				
	All connection shall be done thru proper size of lugs				
	Input connection thru 4c 10Sq.mm Cu condustor XLPE armoured cable				
22	4way VTPN Db for RHS rear area (PND to HRD) Location - Rear wall o/s UPS room	No.	1.00		
	Incomer - 63A 4P MCB				
	2no. 20A 1P MCB - Primary PP+ looped secondary PP - 1 PND+ 1 Vigilance +1 HRD				
	3no. 16A 1P MCB - 1 PND + 2 IT				
	3nos. 10A 1P MCB for L & F				
	Blanking Plates - 1no.				
	All connection shall be done thru proper size of lugs				
	Input connection thru 4c 10Sq.mm Cu condustor XLPE armoured cable				
	<u>All Db bodies should be earthed.</u>				
23	Glow sign Board - Circuit wiring with 3* 2.5 sq.mm FRLSH stranded Cu. wires laid in 20 mm PVC pipe heavy duty laid & concealed in wall/ floor/ panelling/ partitions or above false ceiling as per requirement. The job shall be complete & to the entire satisfaction of the Bank.	Mtr.	20.00		
24	Timer - Supply of 40 A SP 230 V analog time switch panel(TIMER), in manufacturer sheet steel panel, fully prewired with all components like time switch, MCB, contactor, selector switch, indicating lamp.(1 for sign board)	No.	1.00		
	<u>DG SET SUPPLY</u>				
25	S/laying of 3.5c 35sq.mm XLPE insulated armoured Aluminium Conductor cable c/w 1*6sq.mm stranded copper wire for earthing from proposed DG set to Changeover switch including its connections at both ends with lugs to be laid in 25mm dia rigid PVC /flexible conduit	Mtr.	40.00		
	<u>EARTHING</u>				
26	S/burying of Dual pipe technology (Pipe in Pipe) earthing electrode having GI 80mm O/D pipe with 25 micron coating, 3metres long. The job also includes S/F of GI strip clamp with two holes (with SS/GI bolts & nuts) on the electrode & taking one lead of 4sq.mm Cu Stranded wire upto Main panel complete in all respects with guaranteed E/N voltage of less than 2 volts and resistance less than 1 ohms. The 4sq.mm Cu stranded wire shall be terminated on a separate 6way earthlink. The connections for Panel earthing & earth bus in the panel should be taken from this earthlink. (1for power system &1 for UPS). The distance between two earthing pits to be 10ft or more.	Job	2.00		
27	Supply & Fixing of 4sq.mm FRLSH Cu. Stranded wire on surface or in recess for loop earthing as required earthing to Db's or main panel as required.	Mtr.	30.00		

28	S/F of G I Strip earth clamp	Each	2.00		
	SUPPLY & FIXING LIGHT & FAN ITEMS				
29	S/F of Energy efficient recessed mounted LED luminaire - 30/32w LED recessed mounted 2'X2' luminaire suitable for grid ceiling with indirect lighting delivering soft and uniform light - Make as approved by Bank/ architect	Each	40.00		
	Light fittings - Philips/ Wipro/ Osram/ Havells/ Crompton Greaves				
30	S/F of recessed LED downlighter - 15w LED recessed mounted high performance low-height LED downlighter c/w robust PDC housing complete in all respects- Make as approved by Bank/ architect	Each	60.00		
31	S/F of Surface & wall mounted LED batten - Ultra-slim poly carbonate decorative LED batten with inbuilt heat sink, anti glare polycarbonate diffuser & energy efficient electronic driver 20W 1800 lumens - Make as approved by Bank/ architect	Each	10.00		
32	Same as above but 2' long 10w LED Tube	Each	2.00		
33	S/F of 6000/6500 K,(≥480lumens) Sleek slim Surface mounted 7w/8w LED downlight complete in all respects - Make as approved by Bank/ architect	Each	10.00		
34	S/F of wall mounted fan 450mm sweep - Sturdy & heavy duty 3 Blades, 120 spokes Nickel Chrome plated guard	Each	30.00		
	Fans- Crompton/ Havells/ Bajaj/ Usha				
35	S/F of 5 star energy saving/ efficient BLDC ceiling fan 1200mm sweep Make as approved by Bank/ architect	Each	2.00		
36	S/F of 5star energy efficient BLDC metallic exhaust fans 250mm sweep Atomberg/ Havells/ Crompton/ Bajaj or any equivalent make as approved by Bank/ architect	Each	5.00		
37	Supply & Fixing of chime bells as approved by Architect	Each	4.00		
	Total Cost of Electrical works				
	DATA CABLING WORK				
1	Supplying and laying D-link make CAT-6e Cable in PVC 20mm dia OD medium conduit complete with <u>CAT-6 information outlet with plate & surface Box</u> at work tables marked as DP	Point	34.00		
	Cable - Digi Link/ Clipser/ National/ Polycab/ Lapp/ Finolex				
	I/O- DigiLink/ Tyco (AMP)/ Schnider/ D- Link				

2	S/ F of 7ft Grey colour Patch chord	Nos.	34.00		
	Patch Chord- DigiLink/ Tyco (AMP)/ Schnider/ D- Link				
3	S/ F of 3ft Grey colour Patch chord	Nos.	34.00		
	Patch Chord- DigiLink/ Tyco (AMP)/ Schnider/ D- Link				
4	S/F of 24 Port Patch Panel complete in all respects	Nos.	2.00		
	Patch Panel- Brocade/ Cisco/ DigiLink/ 3 Com/ Nortel/ Foundary/ D- Link				
5	S/F of 24 Port switch complete in all respects	Nos.	2.00		
	Switch- Brocade/ Cisco/ DigiLink/ 3 Com/ Nortel/ Foundary/ D- Link				
6	Supply & Fixing of wall mounted rack 9U with glass perforated front door and removable rear locking door, Mounting Hardware pack, Fan assembly - Cable entry from rear complete in all respects	No.	1.00		
	Racks- Com Rack/ HCL/ Val Rack/ APW President				
7	Supply & fixing of 1U - PVC Cble Manager with cover	Nos.	2.00		
	Cable Manager - Krone/ Pouyet/ TVS				
	<i>Total for Data/ LAN Cabling</i>				
	TELEPHONE / INTERCOMM				
1	Supply and laying telephone cable 0.5 mm dia electrolytic tinned copper conductor PVC insulator and twisted two pair with rip cord, through PVC Conduit/ RACEWAYS. The rate shall include.	Mtr.	140.00		
2	Supply and fixing RJ -11 telephone Jack Panel complete in all respect.	Nos.	10.00		
	TOTAL FOR TELEPHONE AND INTERCOMM				
A	TOTAL FOR ELECTRICAL & DATA CABLING				
Air-Conditioning Piping Works					
Note:- 1. Each vendor to specify the Make of A.C. they propose to supply. 2. Common drain pipes of Cassette / Split A.C.'s be terminated in any toilet Nahni traps OR else be terminated from external wall up to ground. AC's with COPPER Condenser & Evaporator coils only to be supplied. 3. Pl. enclose Technical Brocher of quoted A.C.'s. 4. As built layout drawing of Refrigerant & Drain Piping has to be attached with Final Bill. Blue Star, Daikin, Carries. AC's with COPPER Condenser & Evaporator coils should only be supplied. Only one of these Makes to be quoted. Pl. enclose Tech. Brocher of the quoted Cassette/ Split A.C.					
ALL NEW A.C TO BE OF INVERTER TYPE					
	All a.c's to be inverter type.				
S.No.	Particulars	Unit	Qty.	Rate	Amount

1	Drain Water Piping Constructed out of PVC Hard Pipes, fitting, accessories, bends, elbows, tees, hanger, support, anchors, ISI approved Finolex/Prince Make (32mm) CORE CUTTING AND REPLASTERING COMPLETE IN ALL RESPECT	RM	110.00		
2	Rate for Extra Piping (Rate above 10Feet pipe which will be free with each unit) Ref.Piping(Only single distance will be measured between Indoor & Outdoor Units)				
a	Copper Piping Refrigerant along with insulator Piping for Hi Wall 2.0/1.5 ton, 1/2 and 1/4 Soft Copper Refrigerant piping with complete fitting, elbows bends supporting arrangements Nissan, Merchant, MET tube, Totaline tube, pressure tested tube and S.I.T.C. of 12.5 Sq.mm. & 6.25 Sq.mm. dia. Copper refrigerant pipe with foam Insulation between Indoor & Out door units with breaking of wall for making hole wherever required For Split Air- Conditioners. And S.I.T.C. of 19 mm dia & 16 mm dia Copper Refrigerant Pipes with Foam insulation between Indoor & Out door units.with breaking of wall wherever required for 2-3 Tr Cassette/ Inverter Air conditioners.	RM	260.00		
b	S.I.T.C. of 4 core Copper conductor flexible cable between Indoor & Outdoor Unit through holes made as above	RM	275.00		
B	Total AC Piping Works				
	Total (A+B)				
Note: All rates are excluding GST.					



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