

PROJECT NAME - BOQ FOR ELECTRICAL WORKS OF CHACHANI BRANCH OF INDIAN BANK
ADDRESS - AT CHACHANI, ASSAM
WORK TYPE- ELECTRICAL WORKS

<b>GENERAL NOTE</b>	
1	UPS input and Output wiring should be done with FRLS Insulated stranded copper conductor laid through M.S Conduit. ( From input DB to UPS and from UPS Output to UPS Output DB)
2	All wires for circuit wiring and other wiring should be drawn inside M. S. Conduits Only unless otherwise specified
3	Specifications of all wires should be followed strictly as mentioned in the BOQ
4	All makes of materials should be strictly followed as mentioned in the detailed specifications of the Tender document
5	Earthing Test Certificate should be provided alongwith the Final bill for further bill verification
6	Single Line diagram showing the all the wiring including point wiring, computer and RAW power wiring, Circuit wiring etc. all complete should be submitted with the Final Bill
7	Only DATA and Voice point wiring is allowed to be carried out through PVC Conduits

**PART A: ELECTRICAL WORKS**

Sl. No	Description	Unit	Qty	Rate	Amount
1	S.I.T.C. of Factory Manufactured Single/ 3 Phase & Neutral Double Door Distribution board made out of 16 SWG sheet steel enclosure with cutouts for operating MCB/MCCB/RCCB etc. knobs & consisting of Phase, Neutral & Earth Busbars with tapped holes , phase barriers, & covers with removable plates on Top & bottom for Incoming & Outgoing Cables . D.B.'s shall be flush mounting type for both single & three phase.				
1.1	S.I.T.C. of 3 phase & N 4 way Double Door Vertical Distribution Board with following M.C.B./M.C.C.B./RCCB & cable end boxes at Input & Output. [Main DB]				
a	4 Pole ,Type C, 63Amp M.C.B. as Incomer - 1 no.s	No.	1		
	SP ,Type C, 25 Amp M.C.B -1 no. For RAW POWER DB INPUT (Water Dispenser & Mobile Charger Load)				
	SP,Type C, 25 Amp M.C.B -1 no. For LIGHT DB INPUT				
	SP,Type C, 25 Amp M.C.B-1 no. For U.P.S. Incomer (3-4 KVA UPS WILL BE USED)				
	S.P.,25 Amp MCB -1 no. For Inverter Input				
	S.P. 16 Amp MCB - 3 Nos For Future provisioning of AC				
	S.P. 20 Amp MCB - 2 no.s as Spare				
	Blanking Plates - 2 nos.				
	<u>Note- Rates Shall be inclusive of S.I.T.C. of 4 X16 Sq.mm. F.R.L.S. Copper Flexible wires with 2 X 10 Sqmm Copper Earth Wires in M. S conduit from 100 A MCCB in Metal Box (Metering Cabinet) at the output of Br. Meter to Main DB through</u>				
b	Supplying and installation of Earth Leak Circuit Breaker (ELCB) either seperately or in the main DB (if provisions available) to avoid earth leak. Rates shall be inclusive of necessary wiring as required for this item of work	No.	1		
	<b>SECTION-B</b>				
2	<b>MAIN SWITCH</b>				
	Supply and fixing of following MCCB Unt with MCCB in sheet steel enclosure on M.S. angle frame / M.S. legs on wall complete with interconnection, mending good damages to original finish, painting, etc. as required.				
	a)63A 4P 16KA MCCB	No.	1		
3	<b>MCB DISTRIBUTION BOARD</b>				
	Supplying, installation, testing and commissioning of surface/recess mounting, 220/415 volts prewired MCB distribution boards with all switchgears as specified below, of sheet steel, dust protected, duly phosphatized and powder painted, inclusive of 200 amps tinned uniformly rated electrolytic copper bus-bar, common neutral link, earth bar, din bar for mounting MCB/MCCB/RCCBs detachable gland/knock out plates and with built in loose wire box, and superior make terminal connectors for all incoming and outgoings circuits, duly prewired with adequate size of FR PVC insulated copper conductor upto the terminal connector/neutral link and ready for installation as specified below:				
3.1	S.I.T.C. Of L.D.B. [MCBDBL] (LIGHT DB)				

a	Light DB- S & I of 4 Way SPN, DB for distribution to all Light points of different areas (as indicated in the circuit diagram), having below mentioned switchgears (Earth bar inside these DB should be insulated from the body) - 1 no 25A(30mA) DP RCCB as incomer , 4 nos 6A SP MCB as outgoing	No.	1		
	<u>Note- Rates Shall be inclusive of S.I.T.C. of 3X 2.5 Sq.mm. F.R.L.S. copper flexible wires in 19/20 mm. M.S conduit from Main D.B To L.D.B</u>				
b	<b>S.I.T.C. Of P.D.B. [MCBDB-POWER] (Raw Power DB)</b> S.I.T.C. of Single Phase 6 way Double door D.B. with Incomer. Double pole 100 Milliamp & 40 Amp R.C.C.B. - 1 No . 10 Amp S.P. Amp M.C.B. - 3 No and 10 A/16 A MCB- 1 Nos Spare ( One MCB for Branch Sign Board). with all wiring connections.( Max. 2 work-Station Points to be looped on one MCB, 3 nos. in exceptional case.)	No.	1		
	<u>Note- Rates Shall be inclusive of S.I.T.C. of 3 X 4 Sq.mm. F.R.L.S. Copper Flexible wires in M. S. conduit from Main DB to Power DB</u>				
c	<b>U.P.S. D.B. : ( Output) [MCBDB-UPS/1 ]</b> S.I.T.C. of Single Phase 6 way Double door D.B. with Incomer. Double pole 100 Milliamp & 40 Amp R.C.C.B. - 1 No . 10 Amp S.P. Amp M.C.B. - 4 No and 10 A/16 A MCB- 1 Nos Spare with all wiring connections.( Max. 2 work-Station Points to be looped on one MCB, 3 nos. in exceptional case.)	No.	1		
	<u>Note- Rates Shall be inclusive of S.I.T.C. of 3 X 4 Sq.mm. F.R.L.S. Copper Flexible wires in M.S. conduit from Main DB to MCBDB-UPS-1. (body to be earthed)</u>				
d	<b>S.I.T.C. Of ACDB [MCBDB- AC]</b> Supply Installation Testing and Commissioning of Three Phase 4 way Double door Distribution Board with all wiring connections. Incomer : - 40A FP RCCB (100mA) : - 1 No. Outgoing : - 32A SP MCB : - 10 Nos.	No.	0		
	<u>Note- Rates Shall be inclusive of S.I.T.C. of 4 x 6.0mm<sup>2</sup> + 2x4.0 mm<sup>2</sup> F.R.L.S. copper flexible wires in 19/20 mm. M. S. conduit from Main Panel To Lighting DB</u>				
	<b>SECTION-C</b>				
5	<b>POINT WIRING</b>				
5.1	Supply & Installation of concealed point wiring using 3 x 1.5 sqmm stranded FRLS copper conductor in <u>M.S Conduit</u> including the cost of circuit wiring from the relevant DB's with 3x 1.5 sq mm stranded FRLS copper conductor in <u>M.S Conduit</u> . PIN GRIP Lugs should be used for connection/ terminations at both the ends with proper colour coding of phase, neutral and earth wire ( Phase R,Y,B Neutral-Black & Earth - Green Colour). The rate shall also include concealed M.S Box, Cover Plate and Switches of grid plate type switches and sockets of approved shade and make as approved by Bank / Architect. Each circuit should not have more than 8 points / 800 W in one loop as per the following configuration.				
a (i)	Primary light points including the cost of 6A switch	Pts	14		
(ii)	Primary light points including the cost of 6A switch in UPS Power	Pts	8		
b	Secondary light points looped from the above point - a(i)	Pts	0		
c	6A plug point as primary point. [SO] - (For AC Indoor Unit / TV Point)	Pts	0		
d	Secondary 6A Plug point on switch board. [SO]	Pts	1		
e	16A Plug Point directly taken from DB for hotplate/geyser / zerox / fridge [P]	Pts	1		
g	Exhaust fan/ Wall Fan point consisting of 6A socket near fan and switch on light switch board	Pts	3		
h	Ceiling fan point with electronic regulator (2 module step, 100 watt ( min.)	Pts	6		
i	Wiring for Signages with 2R x2.5 Sq.mm and 1 Rx 1.5 Sq.mm, PVC insulated copper conductor flexible cable to be connected to the SPN D/D consumer along with a Timer and Contactor unit installed in Electrical Room room	Set	1		
j	S.I.T.C. of call bell with bell point .	Nos.	1		
5.2	<b>COMPUTER/ RAW POWER WIRING</b>				
	Note- All sockets should be placed below the workstations as mentioned in the drawings but the controlling switch should fixed above the work stations and at place as directed by the architect				

a	Supply & Installation of concealed UPS or stabilized power plug points on workstations / table for computers using 3 x 1.5 sqmm stranded FRLS copper conductor in <u>M.S Conduit</u> including the cost of circuit wiring from the relevant DB's with 3 x 4.0 sq mm stranded FRLS copper conductor in <u>M.S Conduit</u> . PIN GRIP Lugs should be used for connection/ terminations at both the ends with proper colour coding of phase, neutral and earth wire ( Phase R,Y,B Neutral-Black & Earth - Green Colour). Each point shall consist of 3 Nos of 6A/16A 2 / 3 Pin sockets and 1 No 16A switch, wired together forming one point. Switches and sockets to be of approved shade and make. ( Only 2 tables served by one circuit from UPS DB/ Not more than 2 points shall be permitted per loop) Cost is inclusive of necessary cutting the walls/ partitions and carrying all the wires through <u>M.S Conduit</u> and ageing finishing the walls with Putty/ Cement/ POP to receive the final paint.. [SOC]	Pts	8		
b	S & I of points similar to above but to be used as raw power point on the tables consisting of one 6/16A socket with switch of other color and flexible cable of black color & circuit taken from <b>Raw Power DB</b> ( 4 tables served by one circuit from LDB/PDB) Taken Above False ceiling and through walls/ partitions inside <b>M.S. Conduits</b> as raceways are not provided. Cost is inclusive of necessary cutting the walls and including <b>M.S. Conduits as required for taking the wires.</b>	Pts	8		
c	1 Nos of 6A sockets/SWITCH with one No. of 6A switch.. UPS Power/Raw Power ON CASH COUNTER	Pts	2		
d	1 No of 6A/16A switch sockets 6pin. Raw Power/Raw power FOR PRINTERS/ XEROX/HEATER& OTHER UTILITIES,	Pts	1		
	<b>SECTION-D</b>				
6	<b>EARTHING</b>				
6.1	Earthing with Copper earth plate 600 x 600 x 3 mm thick including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe of 2.7 meter long etc with charcoal/ coke and salt as required.Rate shall be inclusive of Providing & fixing 25 mm x 5 mm Cu strip on surface or in recess for connection as required.	Each	1		
6.2	Earthing with GI earth plate 600x600x3mmthick including accessories, and providingmasonry enclosure with cover plate having locking arrangement and watering pipe of 2.7 meter long etc with charcoal/ coke and salt as required. Rate shall be inclusive of Providing & fixing 25 mm x 5 mm G.I. strip on surface or in recess for connection as required.	Each	1		
	<b>SECTION-E</b>				
7	<b>LIGHTING FIXTURES (Bajaj or equivalent)</b>				
7.1	S & I of lighting fixtures as per the details given below including necessary hardware such as clamps,nuts, bolts, nails, screws and suspension chains as required for fixing the fixtures in position as directed by architect / Consultant.				
a	<b>DOWN LIGHT</b> - Round LED recess-mounted designer panel with aluminium die cast housing , Item Code- BAJAJ BGSLO SLEEK 18W WH RD, Wattage-18W, CCT- 4000 K, or equivalent as approved by the Engineer-incharge/ Architect. [DL]	Each	0		
b	<b>PANEL LIGHT</b> - Sauver Ultra Slim LED Panel made from extruded aluminium housing frame (recess / pendant) 2ft x 2ft , Item Code- BAJAJ BZRSQ 30W GZi , Wattage-30W, CCT- 4000 K, or equivalent as approved by the Engineer-incharge/ Architect. [PL]	Each	0		
d	<b>1200 MM TUBE LIGHT</b> - LED batten tubes, Glaze LED Batten, High quality aluminium extruded with decorative end caps, Item Code-LGLZ01x020XN , Wattage-20W, CCT- 4000 K, or equivalent as approved by the Engineer-incharge/ Architect. [TL]	Each	20		
g	<b>600 MM TUBE LIGHT</b> - LED batten tubes, Glaze LED Batten, High quality aluminium extruded with decorative end caps, Item Code-LGLZ01x010XN , Wattage-10W, CCT- 4000 K, or equivalent as approved by the Engineer-incharge/ Architect. [FL]	Each	2		
7.2	Supply and fixing of 10" - 12" PVC exhaust fans with louvers.[EF]	EACH	2		
7.3	Supplying including fitting fixing of following star rated A.C. Ceiling fan complete with all accessories like down rod, canopy etc. of following sweeps with making necessary connection cable, as approved by the Deptt.s etc. as required complete and as directed by the Department [Without regulator]. (ORIENT PSPO make / Usha make/ CROMPTON make/ATC/ V GAURD make)				

	a) 1200 mm sweep [F]	EACH	6		
	b) 600 mm sweep [F]	EACH			
7.4	Supplying including fitting fixing of following star rated Plastic Blade, new 400-450 mm dia bracket/wall fan of Ivory Colour , complete with all accessories of following sweeps with making necessary connection cable, as approved by the Deptt.s etc. as required complete and as directed by the Department				
	a) 400- 450 mm sweep				
8	<b>WIRING FOR DATA AND VOICE OUTLETS</b>	EACH	0		
8.1	Supplying, laying and termination of 4 pair Copper solid, twisted pair G600 CAT--6 cables through specified dia PVC conduits / raceways. Cables must meet and exceed category 6/ class E standards requirements in ISO/IEC11801, CENELEC EN50173 & TIA 568-B2-1. and providing & terminating with RJ-45 (Krone make) with face plates / I/O Ports in suitable modular / MS box from server / EPABX room to individual work stations and terminating other end with RJ-45 connector including numbering with ferule. <b>Note- Rates shall be all inclusive as mentioned in the description above and the payment for the same item shall be made on the number of points provided based on the above description</b>				
a	RJ-45 for data points ( THROUGH False ceiling and wall)	points	8		
8.2	Providing and laying Cat 5 cable (Make: D-Link) for voice through specified dia PVC conduits / raceways for voice and providing & terminating with RJ-11 (Krone make) with face plates / I/O Ports in suitable modular / MS box from server / EPABX room to individual work stations and terminate the other end with RJ-11 connector or on a Crone module with numbering of each cable with Ferule. Note- Rates shall be all inclusive as mentioned in the description above and the payment for the same item shall be made on the number of points provided based on the above description				
8.3	Network Rack Mount Recessed Frame for DATA Terminations including Cat 6 Jack Panel for 15 DATA Points	No.	1		
8.4	SUPPLY AND FIXING OF CAT-6 PATCH CHORD (3' LONG)				
9	<b>A.C POINT WIRING</b>	NOS	8		
9.1	A.C. power point wiring from AC DB with 1100 volt grade 2 Nos. single core 6 sq.mm. + 1 No. 4 sq.mm. (Green colour for earthing) PVC insulated flexible FRLS copper conductor cable through suitable size M.S. conduit (ISI marked embossed on conduit surface) complete with junction box, circular box, elbows, bends, couplers and other accessories on surface above false ceiling or concealed by chase cutting on wall complete with North-West make AC power unit having 25A Socket, 20A Starter, mounting box & front plate, interconnection, mending good all damages to original finish, painting etc. as required. All connections of wires to be done by means of 'Wago' type connectors.Rates shall be inclusive of cost of wires, wirings, sockets,starter, testing all complete	NOS	0		
<b>A</b>	<b>TOTAL OF ELECTRICAL &amp; OTHER RELATED WORKS</b>				