

ROPOSED FOR ELECTRCIAL WORKS FOR ATAL NAGAR BRANCH UNDER RBO-1 RAIPUR

S.No.	Description of Item	Qty	Unit	Rate	Amount
	Electrical Works :				
	ELECTRICAL WIRING WORK				
	Note: Use of Flexible conduits & Elbows in Circuit wiring is not allowed except in exceptional site conditions with the approval of Bank's Engineer / Architect and All wiring laying in the MS/PVC conduit strickle follow IE(Indian Electricity) rules, IS code, follow in all items of project/ work execution. Proper ferrules, lux, thimble , gland termination to be done in all cabling & wiring from both load/source end. Conduit carrying submain will not carry circuit/point wiring. Similarly conduit carrying circuit wiring will not carry submain/point wiring. Conduit carrying point wiring will not carry submain/circuit wiring. All Electrical works (Cabling/wiring/panel etc) to be carried out as per layout/General Arrangement (GA)Drawing attached only.				
1	ELECTRICAL WIRING				
	Providing, fixing, testing and commissioning of POINT WIRING of any length for light point/Wall fan point/Exhaust fan point/ Call bell point/ including call bell/ including fan box(if required), 'S' type fan hook etc with 3 X 1.5 Sq.mm(P/N/E) PVC 650V/1100V Grade FR insulated copper conductor single core multi streded wire in 16 SWG(Medium Gauge) stove enamelled rigid steel conduit 20mm/25mm with conduit accessories like bend, junction box etc in concealed/surface manner as per site requirment with suitable Modular Switches/Sockets with plate and Metal/PVC box,Scaddle, angle bracket (if required), 3 plate ceiling rose/bulb holder etc. The floor/roof/wall junction box shuold be of MS(heavy duty) box of suitable size and covered with Steel finish Steel cover sheet by screw tight and gasket to avoid water/dust insertion. The item includes Circuit wiring from DB to the switch board with 3x2.5 Sq.MM. The above wiring carried out surface or recess in wall/floor/roof should be cutting by cutter/chiesling, replastering, curing, painting with uniform and smooth finish by specilised workman ship and making the surface neat afterwards complete in all respect as per direction of Bank Engg. (EACH Circuit to take NOT MORE than 7-8 points) The conduit/ Flexible conduit/junction box/metal modular box etc must be joined by gland and check nut at both ends. (each circuit to be controlled by one MCB). The colour code of wire are as under:				
	Phase- Red, Neutral- Black, Earth-Green				
	Make of Material for items of BOQ:-				
	(i) Modular Type Switch/socket/step electronic fan regulator, plate, box, TV/telephone, bulb holder/3 pin ceiling rose with all accessories:- Lergand/ Anchor(Roma)/MK/ Crabtree				
	(ii) MS conduit/PVC conduit with all accessories:- BEC/AKG/NIC/Precision				
	(iii) PVC insulated copper wire(FR) 650V/1100 V grade:- Finolex/RR cable/ Havells				
a	Providing and fixing of point wiring with above specifications. One light point controlled by one switch 6 Amp.	45	Nos.		
b	Providing and fixing of point wiring with same above specifications. Two light points to be controlled by one switch 6 Amp.	25	Nos		
C	Providing and fixing of ceiling fan point controlled as under (i) one 6 amp switch (ii) one no 5 stepped electronic regulator of two module type.	15	Nos.		
d	Providing and fixing 6 Amps 5 Plug Points with same specs as above and install along with same light switchboard	12	Nos		
e.	Master switch of 16 Amps to install alongwith same light switch board to control all light as a master switch ON/OFF in each switch board	12	Nos		

2	6 AMP. POINTS ON SEPARATE BOARD :				
	Supply,fixing,testing and commissioning of 1 No 6 A Multi Socket with 1No. 6 A switch (Modular type) with cover plate , sheet steel box / PVC modular box etc on surface / concealed manner I/c electrical connections and making good all the damages, painting, cleaning the site etc complete including all accessories as per site requirement and as directed.	12	Nos		
	(Minimum two and Maximum three points are loop with one circuit as mentioned beolw)				
3	Power Wring (6 / 16 AMP. POWER POINTS)				
	Supply, fixing, testing and commissioning of 1 No 16 A switch & 1 No.six pin 6/16 Amp. Multi Socket (Modular Type) with cover plate , sheet steel box etc on surface / concealed manner I/c electrical connections and making good all the damages, painting, cleaning the site etc complete including all accessories as per site requirement and as directed.	12	Nos		
	(Maximum two points are loop with one circuit as mentioned below)				
4	SPECIAL POINTS : (For Computers)				
	Supply, fixing, testing and commissioning of following Modular type switch socket with cover plate, PVC modular box on Surface / sheet steel box in concealed manner I/c electrical connections and making good all the damages, painting, cleaning the site etc complete including all accessories as per site requirement and as directed.	12	Nos		
	2 Nos. 6 A Switch + 3 Nos. 6 A, 3 pin Socket				
	(Minimum two and Maximum three points are loop with one circuit as mentioned beolw)				
5	AC(Single Phase)				
	Supply, Installation, Testing and commissioning of the surface / recess mounting A.C. / GEYSER power point with the followings :				
	Metra Plug and Socket DBs with one Nos 20 Amp SP MCB, 20 Amp plug and socket with complete Enclosur plate and box.- 1 set i/c electrical connections and making good all the damages, painting, cleaning the site etc complete including all accessories as required as per site requirement and as directed by Bank Engineer.	4	Nos		
	OR Modular 32A DP 1 way switch with plate & box 1 set. + 25A & 10A twin socket				
	(Only one point is connected with one circuit as mentioned below)				
6	AC Point (Three Phase)				
	Supply, Installation, Testing and commissioning of the surface / recess mounting A.C. Cassette power point with the followings :				
a.	Metal enclose Four way with one Nos 32 Amp FP MCB with complete Enclosur plate and box.- 1 set i/c electrical connections and making good all the damages, painting, cleaning the site etc complete as required as per site requirement and as directed. (Only one point is connected with one circuit as mentioned below)	4	Nos		
7	CIRCUIT WIRING :				
	Supplying, providing circuit wiring for Power/UPS with following PVC insulated copper conductor single core multi streded wire (HRFR) in mentioned conduit i/c electrical connections in suitable size MS / PVC modular boxes and it laying, fixing, testing and commissioning in suitable size 20/25 mm dia,16 SWG (Medium Gauge) thickness rigid MS conduit with conduit accessories like bend/junction box/ fan box etcwith cover plate, sheet steel box/ PVC modular box etc on surface/ concealed manner i/c electrical connections and making goods all the damages,replastering, painting, cleaning the site etc complete as required as per site condition. The floor/roof/wall junction box should be of MS(heavy duty) box of suitable size and covered with Steel finish Steel cover sheet by screw tight and gasket to avoid water/dust insertion. The length of circuit upto 30 meter length or less as per site condition/requriment. Make of Material				
	(i) MS conduit/PVC conduit with all accessories:- BEC/AKG/NIC/Precision				

	(ii) PVC insulated copper wire(FR) 650V/1100 V grade:- Finolex/RR cable/ Havells				
a	3 X 2.5 sqmm (For UPS Circuit/6 amp Separate Board) in suitable size of 16 SWG (MMS) steel conduit as per IS code.	15	Nos		
b	3 X 4.0 sqmm (For AC/Power Circuit) in suitable size of 16 SWG (MMS) steel conduit as per IS code.	8	Nos		
8	UPS OUTGOING & OTHER WIRING, As Per Requirement.				
(a)	3 x 10 Sqmm copper multistread wire in 25 mm 16 SGW (MMS) steel conduit.(UPS INPUT DB TO UPS)	20	R.Mtr		
(b)	3 X 1.5 Sqmm copper multistread wire in suitable size of 16 SWG (MMS) steel conduit.	60	R.Mtr		
(c)	3 X 2.5 Sqmm copper multistread wire in suitable size of 16 SWG (MMS) steel conduit.	50	R.Mtr		
(d)	3 X 4 Sqmm copper multistread wire in suitable size of 16 SWG (MMS) steel conduit.	25	R.Mtr		
(e)	5 X 4 Sqmm. Copper multistread wire in suitable size of 16 SWG (MMS) steel conduit (For Cassettee AC)	10	R.Mtr		
9	DISTRIBUTION BOARDS				
	All MCB to be "C" series				
a	B.INCOMING SWITCHGEARS :(RYB LED Indicators for Both Main/DG) (i) 1 No. FP.125 A , 25 KA MCCB with thermal magnetic trip unit with digital voltmeter & ammeter with suitable size of CTs, selector switch etc. C. OUTGOING SWITCHGEARS: (i) 1 Nos- 125Amp TP MCCB for main with 200amp bus bar with indicator. (ii) 160 amp onload changeover with 1 Nos 125 amp 25 KA, TP MCCB for DG supply with 200 amp bus bar with indicator (iii) 200 amp bus bar for parallel connection with DG changeover output (Note:- Before Placing the Panel order, firstly it Passed by The Bank Authority, otherwise it will not considered) should include phase lighting.	1	Nos		
	Panel- As per IS Standards/CPRI Tested.				
b	Supply & Installation of SDP(Surge Protector Devicve) for general protection of main Distribution Board Legrad Make Cat No. 412247 (3P+N) , 40 KA, T2- Imax 40KA/pole with complete wiring.	1	Nos		
c	Providing & fixing 6 way vertical load line double door D.B for AC with 125 Amp. TP MCCB incomer and outgoing to be 2 Nos 32 amp TP MCB, 12 Nos 32 amp SP MCB FOR AC	1	Nos		
d	Providing and fixing 6 way TPN double door DB for LIGHT /POWER POINTS with 63 Amp TPN , controlling 18 Nos. 10/16/32 Amps SPMCBs. & Complete.	1	Nos		
e	Providing and fixing 4 way TPN double door DB for LIGHT /POWER POINTS with 63 Amp TPN , controlling 12 Nos. 16/32 Amps SPMCBs. & Complete.	1	Nos.		
f	Providing and fixing (12) way SPDB double door type For UPS points with 1x32 Amps DP, controlling 10 Nos, 16 AMP SPMCB	1	Nos.		
g	Providing and fixing (8) way SPDB double door type For Light DB only for Emergency Lights like glow sign etc with 1x32 Amps DP, controlling 6 NO.10 A./16 AMP SPMCB	1	Nos.		

h	Providing and fixing (4) way TPN double door type For UPS INPUT with 1x63 Amps TPN and 63 amp DP MCB- 3 Nos & 3 Nos, 32 amp SP MCB complete (E-lobby/UPS Output)	1	Nos.		
i	Providing and fixing of Kit Kat Rewirable Porcelain fuse carrier & base with wooden frame of 200 amp/415 Volt near meter box	1	Set		
10	CABLES				
	Supplying, unloading, storage, laying, testing and commissioning of PVC/XLPE insulated (Heavy Duty) Al/Cu conductor armoured cable suitable for working voltage upto and including 1100 V grade, laid and tied on existing overhead cable trays, or laid and tied over MS supports in masonry trenches with copper/al cable lugs, single compression brass cable glands, tapping, crimping etc. as required and all cables run with double run(2 No.) of GI wire of 8 SWG size. The size of cables are as under:-				
	Make of Material:-				
	(i) PVC/XLPC Armoured cable:- Finolex, Havells, RR cable, CCI(Cable Corp. of India)				
	(ii) Cable Termination:- Dowells, Comet				
a	3.5 X 50 Sq.mm XLPE. Al. armoured Cable(AC VTPN & BUS BARS)/Main cable	15	Mtr		
b	3.5 X35 Sq.mm XLPE.Al.armoured Cable (POWER)	15	Mtr		
c	4X16 Sq.mm XLPE.Al.armoured Cable (POWER)	15	Mtr		
11	EARTHING				
	COPPER PLATE EARTH STATION:				
	Preparation of the Plate Earth Station:(As per IS:3043)				
	(a) Excavation of hard rocky earth, soft murrum, hard murrum etc and back filling with black cotton soil for the earth station, the earth pit size is 1000 mm X 1000 mm X 2500 mm.				
	(b) Supply and fixing of Copper Plate of Size 600 mm X 600 mm X 3.0 mm thick.				
(i)	(c) Fixing of 50 mm X 6 mm, 3 Mtrs copper strips from Copper Plate to earth terminal including brazing/welding at plate etc.	1	Nos		
	(d) Supply and laying in position 19 mm, 2 Mtrs G.I "B" Class pipe for watering with reducer/funnel with mesh.				
	(e) Supply and Fixing of the following in the earth station.				
	(i) 75 Kg. Charcoal.				
	(ii) 15 Kg. Original Salt.				
	(iii) Black Cotton soil of adequate amount.				
	(f) Construction of earth pit chamber including necessary brick work concrete, plastering, S/F of C.I Cover of size 12" X 12" complete as per site requirement.				
	G.I.PLATE EARTH STATION :				
	Preparation of the Plate Earth Station: (as per IS:3043)				
	(a) Excavation of rocky earth, soft murrum, hard murrum etc and back filling with black cotton soil for the earth station, the earth pit size is 1000 mm x 1000 mm x 2500 mm deep.				
	(b) S/F of G.I. plate of size 600 x 600 x 6.0 mm thick.				
(ii)	(c) S/F fixing 50 mm x 6 mm, 3 mtrs G.I, strips from G.I.plate to earth terminal including brazing / welding at plate etc.	2	Nos		
	(d) Supplying and laying in position 19 mm, 2 mtrs G.I. 'B' class pipe for watering. with reducer/funnel with mesh.				
	(e) S/F of the following in the earth station.				
	75 Kg. Charcoal, 15 Kg. Original Salt. and Black Cotton soil of adequate amount.				
	(f) Construction of earth pit chamber including necessary brick work concrete, plastering, S/F of C.I. Cover of size 12" x 12" complete as per site req.and marking its value and identification etc.				

(iii)	Providing and fixing Copper/GI strip as per specification complete including connection to earth electrode retvetting/sweating/soldering, burying 15 cms below in all types of soil/rocks etc complete as required.				
	(a) Copper Strip 25 X 5 mm	10	Mtr.		
	(b) G.I.Strip 25 X 5 mm	5	Mtr		
(iv)	Supply and laying of 10 Sq.mm 650V/1100 V PVC grade insulated copper wire in 15 mm G.I. Pipe ISI grade including all accessories complete as required. Dedicated Earthing for UPS output DB only	30	Mtr.		
13	TELEPHONE POINT				
	Supplying, Installation, testing and commissioning of the telephone point with the followings				
(i)	Two pair, 0.61 mm dia. telephone cable tinned copper conductor, P.V.C. insulated and sheathed , fire retarding, anti termite, colour coded twisted pairs and rip cord, Double outlet The length of telephone cable upto 35 meter length or less as per site condition with shutter modular type Telephone Outlets (RJ — 11) wth suitable size MS / PVC modular boxes and it laying, fixing, testing and commissioning in suitable size 20/25 mm dia,16 SWG (Medium Gauge) thickness rigid PVC conduit with conduit accessories like bend/junction box/cover plate/sheet steel/PVC box on surface/ concealed manner i/c electrical connections and making goods all the damages,replastering, painting, cleaning the site etc complete as required as per site condition. The floor/roof/wall junction box shuold be of MS(heavy duty) box of suitable size and covered with Steel finish Steel cover sheet by screw tight and gasket to avoid water/dust insertion. Make of Material:- Delton/Finolex/RR cable	2	Nos		
(ii)	Supplying and fixing of krone telephone tag block on surface/ recess mounted with its accessories suitable for the multi core telephone cable and shall accommodate tin-plated phosphor bronze connectors, the connectors shall splice unskinned cables up to 0.61 mm dia and shall be terminate both incoming and out going lines, the tag blocks shall be mounted inside, water proof box and locking arrangement and shall be fully accessible. (A) 20 Pair tag block	1	Nos		
(iii)	Supply, installation, testing and commissioning of the following size jelly filled armoured tehephone cable. 20 pair	25	Mtr		
14	DATA CABLING FOR LAN				
a	Providing, fixing, testing and commissioning of all nodes of four pair UTP CAT 6 LAN cables length upto 30 meter length or less as per site condition in suitable size 20/25 mm dia, 16 SWG wall thickness rigid PVC conduit with conduit accessories like bend/junction box/ fan box etc on surface/recessed manner and making good all the damages, painting, cleaning the site etc complete as required as per site condition and as directed as required. Junction box shuld be covered with Stainless steel plate with screw with gasket for protection of water/dust. Providing, fixing, testing and commissioning of modular type Information Outlets with suitable size of MS/PVC modular boxes complete, all accessories with insulation displacement connectors etc suitable for CAT 6 UTP cabling with RJ-45 socket with testing and commissioning of STP cabling with scanner for all the nodes/switches/jack panel complete (Each point/circuit/cable from both load and source end to be marked with ferrules.) Make of Material:- (i) Data Cable, Cat 6 cable, Switch, Jack panel, Rack, Patch cords & Other accessories:- D-Link, Legrand	11	Nos		
b	Providing and fixing Patch Panels 24 port (100 base TX) CAT 6 patch/jack panel with connector, out lets and necessary connectivity complete as required & (D-Link make)	1	Nos		

c	Providing, assembling, fixing, testing and commissioning Floor/Wall mounted RACKS for gig switches, patch panels etc including cooling DUAL fan trays, a 10 Point PDU, Fixed Trays as necessary complete. 9 U wall mounted RACK	1	Nos		
d	Providing and fixing of flowing factory fabricated Patch cords. (UTP/CAT 6 complete with connector on both side.)				
i)	for 1 Mt. long	4	Nos.		
ii)	for 2 Mt. long	4	Nos		
e	Providing, fixing, testing and commissioning of four pair CAT 6 LAN cable in suitable size of 20/25mm PVC medium gauge 16SWG conduit including all accessories to interconnect the switches from different location.	60	Mtr		
f	Providing, fixing, testing and commissioning of Jack Panel of reputed brand.	1	Nos		
15	TV POINT:- Supply, installation, testing and commissioning of TV point (Modular) with RG-6 cable in the Medium Gauge 1.6 mm PVC Conduit with all accessories complete in all respect	3	Nos		
16	Supply and installation of Vinyl sticker for on Electrical DBs like, " Switch Off at Night" , Switch Off For Safety, etc	10	Nos		
17	Making & Providing of 3 sets of Asbuilt Drawing with coloured print for entire Electrical work (Power/UPS/Light/Data/Telephone/AC etc.) as advised by the Bank's Authority.	1	Lum sum		
	Description of light /fan fixture				
	Supply and Installation, Testing and commissioning of the following fittings / equipments in surface/recess mounted as directed etc down rods of size upto 300 mm where ever required with ball sockets, anchor fastner etc complete as per site conditions. All fittings should be hang with suitable size of GI wire to four corner of fittings to the RCC rooftop with suitable size of anchor fastner/heavy gauge screw. The necessary arrangement is made by the contractor to install fittings in false ceiling especially 2'X2' and 4'X1' etc. as per instruction of Bank Engg.				
18	LED LUMINAIRES:- 2' x2' (FULL GLOW TYPE) LED light fittings (600 X600mm) dimension suitable for grid/gypsum ceiling complete with its electronic driver as required per instruction of Bank's Model No are as under:- PHILIPS:- RC380B G2 LED 35S-6500 PSU OD WH LED (FULLGLOW) WIPRO, HAVELLS, CG, Halonix	20	Nos		
20	LED DOWNLIGHTER: 15 Watt, recessed mounted circular down lighter , 6" dimension with complete its electronic driver are as under:- HAVELLS, Halonix. PHILLIPS, CG	25	Nos		
22	LED COVE/ STRIP LIGHT WITH ITS ELECTRONIC DRIVER(BLUE COLOUR):- Supply, installation, testing and commissioning of bright LED strip light with its electronic driver complete as required. PHILIPS, WIPRO, HAVELLS, CG	95	Mtr		
23	BOX TYPE LUMINAIRES: LED TUBE FITTINGS, 1200mm, 18/20 Watt PHILIPS/WIPRO/HAVELLS/CG/HALONIX	15	Nos		
24	CEILING FAN: Single phase heavy duty grease filled double ball bearing, aerodynamically designed heavy gauge aluminium blades, copper wound and impregnated silicon stamping BLDC motors etc 5 star	15	Nos		

	1200 mm sweep, brilliant white				
	CG/HAVELLS				
25	EXHAUST FAN:- Single phase, 300mm sweep, 900 rpm, metallic exhaust fan of the following single phase Exhaust fan continuously rated, capacitor start and run type, totally enclosed and ruggedly built, pre lubricated double ball bearing, copper wound, A & E class insulation, dynamically balanced, below 40 db sound level etc, front cover with grill/gravity louver for protection purpose with 12 mm plywood complete in all respect make as under: CG/ ORIENT/HAVELLS	5	Nos		
26	Electronic Timer for auto swith on/off to AC of server/ATM/E-lobby for 4Hr/8Hr. Make:- Legrand, L&T, and other Eq. ISI make	1	Nos		
27	Metallic Fan				
	Oscillating wall fan with regulator i/c coonections etc complete as required as per approved make, Sweep 400/450 mm , RPM 1300 make are as under: CG/ ORIENT/HAVELLS	1	Nos		
	(Electrical Works)				
	TOTAL WORK				