

**ASSAM PROJECT  
ON  
FOREST AND BIO-DIVERSITY CONSERVATION  
BILL OF QUANTITIES OF INTERNAL ELECTRICAL WORKS  
FOR  
CONSTRUCTION OF NEW RESIDENTIAL COMPLEX  
– AT REHABARI, GUWAHATI - 781 008.  
LOWER LEVEL STAFF**

Sl. No	Specification of item of works	Units	Quantities	Rate in Rs.		Amount (in Rs.)
				(in Figures)	(in Words)	
1.	<p>Wiring in surface/ recessed PVC conduit FR (Finolex /RR Kabel /Nicco / Anchor or Equivalent Make as approved by the Deptt.) cable</p> <p>Wiring for light/fan/call bell point with 2x1.5 sq. mm. P.V.C. insulated single core unsheathed industrial (Multistrand) cable FR conforming to IS-694: 1990 with flexible bright annealed electrolytic copper conductor for voltage grade up to 1100 volts (Finolex /RR Kabel /Nicco / Anchor or Equivalent Make as approved by the Deptt.) in surface/ recessed conduit wiring system with 20mm dia 2mm thick / heavy rigid PVC IS: 9537 Part - III conduit (Berlia/ AKG / Precision/ Presto Plast/Polycab/ MW or equivalent make as approved by the Deptt.) including 6 Amp flush type switch/ bell push (Anchor penta /Gold medal /Kolor kany.Kom/Havells or equivalent make as approved by the Deptt.) GI/ MS switch board (ISI marked) with phenolic laminated sheet cover ,ceiling rose (Anchor penta /Gold medal /Kolor kany.Kom/Havells or equivalent make as approved by the Deptt.) etc. complete</p>					

Sl. No	Specification of item of works	Units	Quantities	Rate in Rs.		Amount (in Rs.)
				(in Figures)	(in Words)	
(i)	Short point up to 3.00 metre. length.	Each	62			
(ii)	Medium point up to 6.00 metre. Length.	Each	80			
(iii)	Long point up to 10.00 metre. Length.	Each	65			
2.	Wiring to 5 a pin 6 Amps plug point with 1.5 sq. mm P.V.C. insulated single core unsheathed industrial (Multistrand) cable FR conforming to IS-694: 1990 with flexible bright annealed electrolytic copper conductor for voltage grade up to 1100 volts (Finolex /RR Kabel /Nicco / Anchor or Equivalent Make as approved by the Deptt.) in surface/ recessed 2 mm thick/ heavy rigid ISI marked IS: 9537 PART - III rigid PVC conduit (Berlia/ AKG / Precision/ Presto Plast/Polycab/ MW or equivalent make as approved by the Deptt.) wiring system including 5 pin 6 Amps flush type plug socket and 6 Amps F/T switch (Anchor penta /Gold medal /Kolor kany.Kom/Havells or equivalent make as approved by the Deptt.), GI/ MS switch board (I.S.I. mark with phenolic laminated sheet cover including earth continuity with 1.5 sq. mm. cable to third pin of the plug	Each	11			
(i)	Medium point up to 6.00 metre. Length.					

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				(in Figures)	(in Words)	
3.	Wiring for 5/6 pin 16 Amps power plug point with 4 sq. mm. P.V.C. insulated single core unsheathed industrial (Multistrand) cable FR conforming to IS-694: 1990 with flexible bright annealed electrolytic copper conductor for voltage grade up to 1100 volts (Finolex /RR Kabel /Nicco / Anchor or Equivalent Make as approved by the Deptt.) in surface/ recessed conduit wiring system including and fixing 5/6 pin 16 Amps flush type socket outlets and 16 Amps flush type switch (Anchor penta /Gold medal /Kolor kany.Kom/Havells or equivalent make as approved by the Deptt./ Havells make), GI/ MS switch board (I.S.I. mark with phenolic laminated sheet cover earth continuity with 2.5 sq. mm cable to the 3rd pin of the socket as required complete with 20 mm. dia. 2mm thick/ heavy rigid ISI marked IS: 9537 PART - III rigid PVC conduit (Berlia/ AKG / Precision/ Presto Plast/Polycab/ MW or equivalent make as approved by the Deptt.)	Each	11			
(i)	Extra long point up to 15.00 metre. length.					
(ii)	Extra long point up to 20.00 metre. Length.	Each	11			

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				(in Figures)	(in Words)	
4.	Wiring for drawing sub-main line with P.V.C. insulated single core unsheathed industrial (Multistrand) cable FR conforming to IS-694: 1990 with flexible bright annealed electrolytic copper conductor for voltage grade up to 1100 volts (Finolex /RR Kabel /Nicco / Anchor or Equivalent Make as approved by the Deptt.) PVC conduit (Berlia/ AKG / Precision/ Presto Plast/Polycab/ MW or equivalent make as approved by the Deptt.) including earth continuity in surface/ recessed 20 mm. dia. 2mm thick/ heavy ISI marked IS: 9537 PART - III rigid PVC conduit wiring system.					
(i)	With 2 x 2.5 sq. mm. + earth continuity with 1x1.5 sq. mm. in 20 mm. dia. 2mm thick/ heavy rigid PVC IS: 9537 Part - III conduit.	Metre.	1600.00			
(ii)	With 2 x 4 sq. mm. + earth continuity with 1x2.5 sq. mm. cable in 20 mm. dia. 2mm thick/ heavy rigid PVC IS: 9537 Part - III conduit.	Metre.	100.00			
(iii)	With 2 x 6 sq. mm. + earth continuity with 1x 4 sq. mm. cable in 25 mm. dia. 2mm thick/ heavy rigid PVC IS: 9537 Part - III conduit.	Metre.	360.00			

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				(in Figures)	(in Words)	
5.	Wiring for 5 pin 6 amp plug with 1.5 sq mm P.V.C. insulated single core unsheathed industrial (Multistrand) cable FR conforming to IS-694: 1990 with flexible bright annealed electrolytic copper conductor for voltage grade up to 1100 volts (Finolex /RR Kabel /Nicco / Anchor or Equivalent Make as approved by the Deptt.) including 5 pin 6 amp socket outlet (Anchor penta /Gold medal /Kolor kany.Kom/Havells or equivalent make as approved by the Deptt.)make) and 6 amp flush type switch (Anchor penta /Gold medal /Kolor kany.Kom/Havells or equivalent make as approved by the Deptt.)make) earthing the 3rd pin of the socket as required on the switch board in surface/recessed P.V.C. conduit wiring system. When fitted on same board of light and fan.	Each	22			
	<b>FITING AND ACCESSORIES</b>					
6.	Fitting and fixing of brackets on the wall in GI/ MS switch board (ISI marked) half conceal on wall with phenolic laminated sheet cover with all accessories such as GI/ MS switch board (ISI marked) with phenolic laminated sheet cover including connection as approved by the Deptt.)as required complete. [ BK ]	Each	64			

Sl. No	Specification of item of works	Units	Quantities	Rate in Rs.		Amount (in Rs.)
				(in Figures)	(in Words)	
7.	Supplying and fixing of 250/305 mm dia (Nominal size flush type circular ceiling fittings complete with holder, Aluminium anodized back plate and brass holder, 20 Watt CFL lamp including connection as approved by the Deptt.)as required. [CL]	Each	22			
8.	Supplying and fixing of Fan box (AKG or equivalent as approved by the Deptt.)with inbuild rod as required.	Each	33			
9.	Supplying and fitting of 11/15 Watt CFL lamp in the existing batten holder/angle holder/decorative bracket/bulk head fitting/pendent holder etc. as specified and directed by the deptt.	Each	64			
10.	Supplying and fixing of Call bell ( Buzzer ) including 6 amp capacity flush type bell push switch including connection as approved by the Deptt.)as required.	Each	11			

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				(in Figures)	(in Words)	
11.	<p>MCB DB (ABB, SCHNEIDER MG, LEGRAND, HAGER MAKE) &amp; (SCHNEIDER NEO BREAK, C&amp;S, Havells, INDOASIAN, HPL OR EQUIVALENT MAKE AS PPROVED BY THE DEPTT.)</p>					
	<p>Supplying with fitting and fixing sheet steel, phosphatised, powder painted dust &amp; vermin proof Double door IP-43 surface mounting SPN MCB DB incorporated with bas-bar, Neutral link, Earth bar and din rail etc fitted on wall with grouting nuts &amp; bolts as reqd. complete with making necessary connection as approved, specified and directed by the deptt. ABB, Schneider MG, legrand, Hager make)</p>	Each	1			
	<p>a) 8 way SPN double door</p>					
b)	<p>12 way SPN double door</p>	Each	11			

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				(in Figures)	(in Words)	
12.	<p>MCB, MCCB, RCCB, RCBO (ABB, SCHNEIDER MG, LEGRAND, AND HAGER MAKE) &amp; (SCHNEIDER NEO BREAK, C&amp;S, Havells, INDO ASIAN, HPL OR EQUIVALENT MAKE AS PPROVED BY THE DEPTT.) MCB (Conform to IS / IEC 60898-1:200/ MCCB (Conform to IS/IEC 60947- RCCB (Conform to IS/IEC 12640 / 61008)</p> <p>Supplying with fitting and fixing single Pole 10 KA 240/415V 50Hz MCB of the following capacity complete with making necessary connection as approved, specified and directed by the deptt. C Series (Schneider MG, legrand, Hager make) 6 to 32A</p>	Each	94			
13.	<p>Supplying with fitting and fixing DP 10 KA 240/415V 50Hz MCB of the following capacity complete with making necessary connection as approved, specified and directed by the deptt. C Series (ABB, Schneider MG, legrand, Hager make) 6 to 32A</p>	Each	12			

Sl. No	Specification of item of works	Units	Quantities	Rate in Rs.		Amount (in Rs.)
				(in Figures)	(in Words)	
14.	Supplying with fitting and fixing 30/100/300mA sensitivity 240/415V 50Hz DP RCCB of the following capacity complete with making necessary connection as approved, specified and directed by the deptt. 100/300mA sensitivity DP RCCB (ABB, Schneider MG, legrand, Hager make)  25A	Each	11			
15.	<b>EARTHING</b> Supply, installation & testing of G.I. earth station with perforated 40 mm dia and 4.50 Metre long heavy duty G.I. pipe with necessary 40 mm dia. G.I. Fittings such as Socket, Tee, elbow, nipple and 50 mmx40 mm G.I. reducing socket for funnel including locking arrangement 300 mmx300 mmx6 mm hinged cover C.I. earth plate complete with digging of earth pit, construction of brick chamber and plastering of both inner & outer surface of wall as specified and directed by the deptt .	Each	4			
16.	Extra for using salt (5 K and Charcoal (64 K in pipe Earth Station pit to provide low impedance ground in location of high soil resistivity as and when required and specified by the Deptt.	Each	4			

Sl. No	Specification of item of works	Units	Quantities	Rate in Rs.		Amount (in Rs.)
				(in Figures)	(in Words)	
17.	Supplying & laying of 6 SWG G.I. earth from Earth Electrode (below G.L.) to electrical switch gears or electrical machineries including making necessary connection as approved, specified and directed by the depts.	Metre.	50			
18.	Supplying & laying of following size 25mmX5mm G.I. strips drawn on surface from earth electrode to Electrical switch gears, machineries etc complete with supply of G.I. nuts & bolts, screws etc including riveting, soldering & making necessary connection as approved, specified and directed by the depts.	Metre.	40			
19.	Supply, fitting & fixing of Lighting Finial Arrestor made of 25 mm dia 300 mm long solid G.I. tube having 85 mm dia. single prong at top and 3 mm base plate at bottom complete with fitting & fixing with G.I. nuts & bolts on roof, RCC slab, top of column etc. as specified and directed by the depts.	Each	2			

Sl. No	Specification of item of works	Units	Quantities	Rate in Rs.		Amount (in Rs.)
				(in Figures)	(in Words)	
20.	Supply, fitting & fixing 20 mmx5 mm G.I. strips drawn on vertically or horizontally on building wall/parapet wall in surface system complete with supply of G.I. Nuts & Bolts, Screws etc including riveting, soldering and making connection as approved by the Deptt.)with earth electrode G.I. strips and Lightning Arrestor etc. as specified and directed by the deptt.	Per metre	85			
19.	<p><b>LUMINARIES</b></p> <p>Supplying with fitting fixing of CFL/Fluorescent luminaries complete with all accessories such as ballast, starter etc. directly on wall / ceiling including connection as approved by the Deptt.)with 1.5 sq mm P.V.C. insulated S.C. copper conductor as required and as directed by the department.</p> <p>Striplite luminaries complete with VPIT copper ballast/ Electronic ballast and decorative end cap and 1 X 36 / 40 watt Fluorescent tube.(Crompton Greaves make) Model- DSG1114LDB CROMGOLD / DSG1114LDBN CROM GOLD NEW / DSG1314EB CG GOLD / DSG 1414EB PLANET GOLD with Super Saver / Super Brite Lamp. Or equivalent (Equivalent will be selected by the deptt considering the mother items rate) PHILIPS/ WIPRO/ BAJAJ/ Havells/ HPL/ SOLAR/ JAQUAR make. [ TL ]</p>	Each	44			

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20.	<p><b>CEILING FAN, EXHAUST FAN AND AIR CURTAIN</b></p> <p>Supplying including fitting fixing of following A.C. Ceiling fan complete with all accessories like down rod, canopy etc. of following sweeps with making necessary connection as approved by the Deptt.)as required complete and as directed by the Department [Without regulator]. Premium model 1200 mm Sweep (ORIENT PSPO make) / Premium model 1050 / 1200 mm Sweep SS-390 Deco Havells make) [ F ]</p>	Each	33			
21.	<p>Supplying including fitting fixing of following A.C. Exhaust fan in the existing hole on the wall of following sweeps with making necessary connection as approved by the Deptt.)as required complete and as directed by the Department. Ventil Air DB 300 mm sweep (Havells make) [ EF ]</p>	Each	22			
22.	<p>Supplying fitting and fixing of ceiling fan Regulator including complete connections etc. complete as required and as directed by the department. Electronic Registrance Type</p>	Each	33			

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	<b>U. G. CABLE AND CABLE WORKS</b>					
23.	Supply and laying of following size PVC/XLPE insulated and PVC sheathed 1.1 KV G Solid Aluminium conductor up to 10 sq mm balance stranded conductor, XLPE Insulated, cores laid up, PVC tape inner sheathed, Armour (Aluminium for single core up to 70 sq mm balance Aluminium strip, Galvanised for cables up to 2x10 sq mm.3x10 sq mm,4x6 sq mm balance all galvanised steel strip) , extruded PVC Type ST2 sheathed, 650/1100V grade as per IS 7908(Part 1) 1988 armoured U.G. cable U.G. cable laid in ground/partially in air (as required for termination over ground including excavation of cable trench up to depth of 75cm, refilling, protective brick covering, Sand cushioning etc complete handling of surplus spoil, debris et to proper place as specified and directed by the deptt. (Nicco/ Havells/ RPG/CCI/Polycab/Gloster/ Finolex make) .	Metre	60.00			
(i)	3 Core A2XWY A2XFY					
(a)	6.00 Sq.mm 3 Core armoured U.G. cable					
(b)	10.00 Sq.mm 3 Core armoured U.G. cable	Metre	70.00			

Sl. No	Specification of item of works	Units	Quantities	Rate in Rs.		Amount (in Rs.)
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(ii) (a)	3 & 1/2 Core A2XFY 70.00 Sq. mm.3 & 1/2 Core armoured U.G. cable	Metre	40.00			
24.	Supply and laying of following size Solid Aluminium conductor up to 10 sq mm balance stranded conductor, XLPE Insulated, cores laid up, PVC tape inner sheathed, Armour (Aluminium for single core up to 70 sq mm balance Aluminium strip, Galvanised for cables up to 2x10 sq mm.3x10 sq mm,4x6 sq mm balance all galvanised steel strip) , extruded PVC Type ST2 sheathed, 650/1100V grade as per IS 7908(Part 1) 1988, LT armoured U.G. cable laid in pucca flooring, road crossing, drain crossing as per site requirement and partially in air to connection as approved by the Depts. the control switch, through medium duty G.I. pipe (Tata/ Nezone make or equivalent as approved by the Deptt) bend and socket including excavation and refilling the trench and making good damage done as specified and directed by the deptt. (Nicco/ Havells/ RPG/CCI/Polycab/Gloster/ Finolex make)					

Sl. No	Specification of item of works	Units	Quantities	Rate in Rs.		Amount (in Rs.)
				(in Figures)	(in Words)	
(i) (a)	Core - 3 A2XWY A2XFY 6.00 Sq.mm 3 Core U.G. cable in 32mm dia medium duty G.I. pipe	Metre	5.00			
(b)	10.00 Sq.mm 3 Core U.G. cable in 32mm dia medium duty G.I. pipe	Metre	5.00			
(ii) (a)	Core - 3 & 1/2 A2XWY A2XFY 70.00 Sq.mm 3&1/2 Core U.G. cable in 50mm dia medium duty G.I. pipe	Metre	5.00			

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				(in Figures)	(in Words)	
25.	<p><b>MAIN LT PANEL-GRADE- IV QUARTERS</b></p> <p>Supplying and installation of metal enclosed wall/floor mounted front operated cubical type switch gear panel suitable for indoor installation conforming to IS: 8623 (Part I &amp; II). The Panel should be made of sheet steel and thickness not less than 2mm and structural steel having light section. The panel shall be completely dust tight and vermin proof and shall be painted with anti corrosive and anti condensation type two coats of primer and two coats of paint. All wiring shall be PVC insulated and PVC sheathed of 1100 volt grade of required size. The panel should have provision of entry of cable at the bottom and also provision of out going feeders from the bottom of the panel. The bus bar shall be of high quality copper of uniform cross section. The panel shall consist of the following items (viz. voltmeter, ammeter, CT, indicating lamps, selector switch etc.) connected as per drawing and shall be flush mounted on the front of the panel.</p> <p><b>Incommer</b> 100A 4P MCCB 25 KA- 1no. Ammeter,voltmeter ,Switch fuse Unit ,Selector Switch, CT</p> <p><b>Busbar</b> 220 A TPN electrolytic Cu Busbar (25mmx5 mm) with uniform cross-section</p>	Each	1			

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				(in Figures)	(in Words)	
1.	<b>Outgoing</b> 32 A DP, MCB -12 nos. (Provisions to be kept for fixing ASEP tested 11 nos of single Phase electronic energy meter in the panel.) Supply, Installation antistatic rubber mat suitable for 1.1 KV Voltage grade	Sq.M	2.00			
2.	Supply, Fitting Fixing of Shock Treatment Chart	Each	2			
26.	Recessed type Night Lamp / Skirting Light of reputed make with 1 no. of 5W CFL lamp (warm white lamp). (NL)	Each	11			
<b>TOTAL = Rs.</b>						

(Rupees)

Signature of the Contractor :

Date & Seal :