

BILL OF QUANTITY

Name of Project:		400/220kV Substation at Koradi			
Name of Work:		Construction of Compound Wall			
Sr.No.	Particulars	Unit	Qty	Rate (Rs.)	Amount (Rs.)
1a	Excavation for foundation in earth, soils of all types, sand, gravel, soft murum including removing the excavated material up to a distance of 50.0 m. beyond the building area and stacking or spreading as directed, dewatering, preparing the bed for the foundation and necessary back filling, ramming, watering, including shoring and strutting etc. complete for all lifts.	Cum	7047	129.30	911177.10
b	do as above in Hard murum	Cum	1	129.30	129.30
c	do as above in soft rock	Cum	1	197.80	197.80
d	do as above in hard rock	Cum	1	347.80	347.80
2	Providing and Filling foundation with lime sand 1:10 of approved quality including watering & compaction complete as per direction of Engineer-in-charge.	Cum	1	887.00	887.00
3	Providing and laying in situ cement concrete in proportion 1:3:6 of trap metal for foundation and bedding including bailing out water, manually formwork, compacting, curing etc. complete.	Cum	203	3626.20	736118.60
4	Providing and laying in situ cement concrete M-20 of trap metal for R.C.C. work in foundations like raft and footings of R.C.C. columns and steel stanchions including bailing out water, steel centering, plywood / steel formwork compaction, curing and roughening the surface if special finish is to be provided, finishing uneven and honeycombed surface with cement mortar 1:3 of sufficient minimum thickness to give smooth and even surface etc. complete. (Excluding reinforcement and structural steel).	Cum	13	6096.30	79251.90
5	Providing and casting in situ cement concrete M-20 of trap metal for R.C.C. columns as per detailed design & drawings or as directed, including steel centering, plywood / steel formwork, compaction finishing uneven and honeycombed surface with cement mortar 1:3 of sufficient minimum thickness to give a smooth and even surface or roughening if special finish is to be provided curing etc. complete (excluding reinforcement).	Cum	1	9157.60	9157.60
6	Providing and casting in situ cement concrete M-20 of trap metal for R.C.C. beams and lintels as per detailed design & drawings or as directed, including steel centering, plywood / steel formwork, steel props. Compaction finishing uneven and honeycombed surface with cement mortar 1:3 of sufficient minimum thickness to give a smooth and even surface or roughening if special finish is to be provided curing etc. complete. (excluding reinforcement).	Cum	225	7833.80	1762605.00
7	Providing and fixing in position Tor steel bar reinforcement of various diameters for R.C.C. pile caps, footings, foundations, slabs, beams and columns, canopies, staircases, newels, chajja, lintels, pardies, coping fins, arches etc. as per detailed design and drawings and schedules including cutting, bending, hooking the bars, binding with wires or tack welding and supporting etc. complete.	MT	33	62250.00	2054250.00

Sr.No.	Particulars	Unit	Qty	Rate (Rs.)	Amount (Rs.)
8	Providing fly ash lime Brick masonry with conventional / I.S. type bricks in cement mortar 1:6 in foundation/ superstructure including striking joints, raking out joints watering and scaffolding complete.	Cum	1	3978.50	3978.50
9	Providing cement plaster 20 mm thick in single coat in cement mortar 1:4 without neeru finish to concrete or brick surface in all positions, including racking out joints, scaffolding & curing etc. complete as directed.	Sqm.	2000	186.70	373400.00
10	Providing and applying Three coats of water proof cement paint with one coat of primer on concrete / masonry / asbestos cement / plastered surfaces including scaffolding if necessary, preparing the surface by thoroughly cleaning oil, grease, dirt and other foreign matter and scoured with wire brushes, fine steel wool, scrappers and sand paper, watering for two days complete.	Sqm.	1	44.90	44.90
11	Providing and erecting anti-climbing demarcation peripheral fencing with 8 rows of G.I. wire, 12 gauge double pointed for rows of M.S. angles of size 50 x 50 x 6 mm fastening the wires with nails & painting the M.S. angles with one coat of Redoxide primer & Two coats of oil Paint, all as per specifications and as directed by the Engineer-in charge and as per the drawing.	Rmt.	1750	269.20	471100.00
12	Filling in plinth and floors with contractor's own materials murrum / Stone dust approved by Engineer-in-charges in 15 cm. to 20 cm. layers including watering and compaction in layers etc. complete.	Cum	1	1243.00	1243.00
13	Providing uncoursed rubble masonry of trap stones in cement mortar 1:6 in foundation and plinth of inner walls, and in superstructure including bailing out water manually- striking joints on unexposed faces and watering etc. complete. (Spec. No. BdH - Page No. 329)	Cum	6218	1717.00	10676306.00
14	Providing and casting in situ cement concrete M-15 of trap metal for coping to plinth or parapet, moulded or chamfered as per drawing or as directed by Engineer - in - charge, roughening the exposed faces if special finish is to be provided and curing etc. complete. (Spec.No.BdE-3 Page No. 288)	Cum	1	4404.00	4404.00
15	Providing tuck pointing with cement mortar 1:3 for stone / brick masonry including scaffolding and curing complete. (Spec. No. BdL-17 Page No. 373)	Sqm.	8079	78.40	633393.60
16	Providing and fixing granite of best- Quality for dado / skirting / flooring of approved colour and feature 18 to 20 mm thick in required position with ready made adhesive mortar of approved quality including joints filling with coloured cement slurry, cleaning, curing etc. complete.	Sqm.	5	3226.00	16130.00
17	Providing and fixing steel letter of height 300/200mm for Sub-station Name Board at entrance including drilling holes in concrete / Bricks / Granite surface etc. cleaning, finishing and scaffolding etc. complete all as directed by Engineer-in-charge.	No.	50	250.00	12500.00

Sr.No.	Particulars	Unit	Qty	Rate (Rs.)	Amount (Rs.)
18	Providing and fixing in position M.S. grill heavy type gate at Main entrance of Sub station by using pipe, structural steel, angles etc. as per detailed drawing / design including hinges, pivot blocks, locking arrangement, guide raise etc. welding, revetting, erecting, scaffolding, tower bolts including painting with oil painting in Three coats over anttcorrosive paint etc. of approved colour and shade etc. complete all as directed (Gate shall be in double leafs with entire size of gate as 6.0 x 2.0 Mtrs. maximum).	Sqm.	14	2722.50	38115.00
19 A	Conveying the excavated material obtained in the road way of all categories including loading, unloading, conveying, spreading, dressing to the required slope, etc. for development or stacking etc. complete beyond free lead of 50m and within the board's premises upto 300 mtr. etc. complete.	Cum	600	82.80	49680.00
19 B	do- same as per item no.19A but for lead upto 5 kms.	Cum	7994	126.00	1007244.00
20	Providing rubble stone soling using 80mm size trap 15 to 20 centimeter thick including hand packing filling, voids with sand, grit, watering and compacting complete all as directed.	Cum	83	493.00	40919.00
21	Providing and laying weep holes of 100mm diameter of PVC pipes asper drawing for retaining wall etc.complete as directed by Engineer- in-charge	Rmt.	1565	182.00	284830.00
	Total amount (Rs.)				19167410.10

BILL OF QUANTITY

Name of Project:		400/220kV Substation at Koradi			
Name of Work:		Construction of Watchman Cabin			
Sr.No.	Particulars	Unit	Qty	Rate (Rs.)	Amount (Rs.)
1a	Excavation for foundation in earth, soils of all types, sand, gravel, soft murum including removing the excavated material up to a distance of 50.0 m. beyond the building area and stacking or spreading as directed, dewatering, preparing the bed for the foundation and necessary back filling, ramming, watering, including shoring and strutting etc. complete.	Cum.	30	129.30	3879.00
b	do as above in Hard murum	Cum	1	129.30	129.30
c	do as above in soft rock	Cum	1	197.80	197.80
2	Providing and laying in situ cement concrete in proportion 1:4:8 of trap metal for foundation and bedding including bailing out water, manually formwork, compacting, curing etc. complete.	Cum.	3	4594.70	13784.10
3	Providing dry trap rubble stone soling 15 to 20 centimeter thick including hand packing and compacting complete.	Cum.	10	259.00	2590.00
4	Filling in plinth and floors with approved excavated materials in 15 cm to 20 cm. Layers including watering and compaction complete.	Cum.	1	67.00	67.00
5	Providing and laying in situ cement concrete M-20 of trap metal for R.C.C. work in foundations like raft and footings of R.C.C. columns and steel stanchions including bailing out water, steel centering, plywood / steel formwork compaction, curing and roughening the surface if special finish is to be provided, finishing uneven and honeycombed surface with cement mortar. 1:3 of sufficient minimum thickness to give smooth and even surface etc. complete. (Excluding reinforcement and structural steel).	Cum.	3	6096.30	18288.90
6	Providing and casting in situ cement concrete M-20 of trap metal for R.C.C. columns as per detailed design & drawings or as directed, including steel centering, plywood / steel formwork, compaction finishing uneven and honeycombed surface with cement mortar 1:3 of sufficient minimum thickness to give a smooth and even surface or roughening if special finish is to be provided curing etc. complete (excluding reinforcement).	Cum.	3	9391.70	28175.10
7	Providing and casting in situ cement concrete M-20 of trap metal for R.C.C. beams and lintels as per detailed design & drawings or as directed, including steel centering, plywood / steel formwork, steel props. Compaction finishing uneven and honeycombed surface with cement mortar 1:3 of sufficient minimum thickness to give a smooth and even surface or roughening if special finish is to be provided curing etc. complete. (excluding reinforcement).	Cum.	2	7833.80	15667.60

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Name of Project:		400/220kV Substation at Koradi			
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8	Providing and casting in situ cement concrete M-20 of trap metal for R.C.C. chajja as per detailed design and drawings including steel centering, plywood / steel formwork, steel props. Compaction, finishing uneven and honeycombed surface with cement mortar 1:3 of sufficient minimum thickness to give a smooth and even surface or roughening the surface if special finish is to be provided and curing etc. complete. (excluding reinforcement)	Cum.	1	10257.90	10257.90
9	Providing and casting in situ cement concrete M-20 of trap metal for R.C.C. slab (Flat / sloping) and landings as per detailed design and drawings, including steel centering, plywood / steel formwork, steel props compaction, finishing uneven and honeycombed surface with cement mortar 1:3 of sufficient minimum thickness to give a smooth and even surface or roughening the surface if special finish is to be provided with fan hook box of 2 mm thick M.S. sheet rectangular size 180 mm x 100 mm with required depth, with holes or notches, as required bottom and top lids of 1.6 mm thick M.S. sheet fixed with 3.5 mm diameter. Round headed screws together with 12 mm diameter. M.S. bar bent to shape with hooked ends for fan hook and painting to exposed surface and curing etc.	Cum.	3	6096.30	18288.90
10	Providing and fixing in position Tor steel bar reinforcement of various diameters for R.C.C. pile caps, footings, foundations, slabs, beams and columns, canopies, staircases, newels, chajja, lintels, pardies, coping fins, arches etc. as per detailed design and drawings and schedules including cutting, bending, hooking the bars, binding with wires or tack welding and supporting etc. complete.	MT	1	62250.00	62250.00
11	Providing second class Burnt Brick masonry with conventional / I.S. type bricks in cement mortar 1:6 in foundations and plinth of inner walls / in plinth of external walls including bailing out water, striking joints on unexposed faces, racking out joints on exposed faces and watering complete.	Cum.	0	0.00	0.00
12	Providing second class Burnt Brick masonry with conventional / I.S. type bricks in cement mortar 1:6 in superstructure including striking joints, raking out joints watering and scaffolding complete.	Cum.	0	0.00	0.00
13	Providing sand faced plaster for external portion in cement mortar using approved screened sand in all positions including base coat of 15 mm thick in cement mortar 1:4 using water proofing compound at 1 KG per cement bag, curing the same for not less than 2 days and keeping the surface of the base coat rough to receive the sand faced treatment 6 to 8 mm thick in cement mortar 1:4 finishing the surface by taking out grains, making grooves and curing for fourteen days, scaffolding etc. complete as directed by Engineer in-charge.	Sqm.	50	305.00	15250.00

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Name of Project:		400/220kV Substation at Koradi			
Name of Work:		Construction of Watchman Cabin			
14	Providing internal cement plaster of following thickness in single coat in cement mortar 1:4 with neeru finish to concrete or brick stone surface in all positions including scaffolding and curing, providing groove at joint of B.B. Masonry, concrete members complete as directed by Engineer in-charge.	Sqm	40	129.00	5160.00
15	Providing, fabricating and fixing in position aluminum door making frame in single / double leaf double swing shutter using approved I.S. Aluminum anodised sections, supplying and fixing 5.50 mm thick plain glass of Actual or equivalent make having clear vision including all fixtures and fastening and fittings with aluminum anodised such as hinges, handle, tower bolts, chromium plated brass mortised lock aldop bolt, chromium plated brass mortised lock aldop bolt concealed type floor spring, automatic door closer etc. all as per drawing, manufacturer's specifications, detailed item wise specification etc. complete.	Sqm.	48	3564.00	171072.00
16	Providing and fixing in position aluminum windows / ventilators three / two track sliding, openable with outer frame made from section of overall size 92 x 45 mm bottom section with or without drain section track weighing 0.90 kg. Per Rmt and top and side section 0.838 kg. per Rmt with shutter or sections made of 19 mm x 40 mm size having average weight of 0.60 Kg. per Rmt. (or as required size) with change in proportionate weight with 5.50 mm selected quality plain sheet glass fixed with neoprene gasket shutters to be provided with nylon encased stainless rollers, necessary locks and handles complete as directed by Engineer - in - charge.	Sqm.	4	4404.00	17616.00
17	Providing and laying polished kota stone flooring 25 mm to 30 mm thick in plain / diamond pattern on a bed of cement mortar 1:6 including cement float, filling joints with neat cement slurry, curing, rubbing, polishing and cleaning complete.	Sqm.	12	928.00	11136.00
18	Providing and laying polished Kota stone slab 30 mm thick, and in strips of 300 mm width for window sills, machine cut of approved quality set on a bed of cement mortar 1:4, 20 mm thickness including neat cement float, filling joints with slurry, curing, polishing, rounding edges, cleaning complete.	Sqm.	35	928.00	32480.00
19	Providing and fixing in position a set of 4 heavy type chromium plated brass double pointed pegs over T.W. moulded patti with Formica facing and of over all size 600 x 100 x 20 mm thick T.W. embedded block with polish etc. complete as directed.	No	1	250.00	250.00

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Name of Project:		400/220kV Substation at Koradi			
Name of Work:		Construction of Watchman Cabin			
20	Providing and fixing chicken wire mesh (Reference IS - 3150 - 1982) of 19 size of aperture at the junction of R.C.C. members and brick work of approved quality including fixing mesh in position by necessary nailing in concrete or B.B. Masonry and or tying by binding wire etc. complete all as directed.	Sqm.	10	173.33	1733.30
21	Providing & laying cement concrete flooring 40 mm thick cement concrete M-25 laid to proper line , level & slope in alternate bays including compacting, filling joints, marking lines to give appearance of tiles 30 X 30 cm or other approved design finishing smooth (with extra cement) in approved colour as directed & curing etc. complete.	Sqm.	25	219.00	5475.00
22	Providing & fixing New Mangalore tiles on a sloping R.C.C. slab including scaffolding etc. and Mangalore type ridge tiles complete as directed. Spec. As directed by Engineer in-charge.	Sqm.	1	136.00	136.00
23	Providing and applying two coats of water proof cement paint with one coat of primer on concrete / masonry / asbestos cement / plastered surfaces including scaffolding if necessary, preparing the surface by thoroughly cleaning oil, grease, dirt and other foreign matter and scoured with wire brushes, fine steel wool, scrappers and sand paper, watering for two days complete.	Sqm.	50	39.00	1950.00
24	Providing and applying two coats of sandtex matt finish paint with one coat of primer on concrete / masonry / asbestos cement / plastered surfaces including scaffolding if necessary, preparing the surface by thoroughly cleaning oil, grease, dirt and other foreign matter and scoured with wire brushes, fine steel wool, scrappers and sand paper, watering for two days complete.	Sqm.	50	200.00	10000.00
25	Providing and applying washable oil bound distemper of approved make colour and shade to old and new surfaces in two coats and one primer coat to receive oil bound distemper including scaffolding, preparing the surfaces etc. complete.	Sqm.	50	53.00	2650.00
26	Providing and fixing aluminum anodised grill work for windows and ventilators all as per drawing including fixtures etc. complete.	Sqm.	4	3713.00	14852.00
Total amount					463335.90

BILL OF QUANTITY

Name of Project:		400/220kV Substation at Koradi			
Name of Work:		Construction of Store Shed			
Sr.No.	Particulars	Qty	Unit	Rate (Rs.)	Amount (Rs.)
1	Excavation for foundation in earth soil of all types sand, gravel, soft murum depth 3.0 meters including removing the excavated material up to a distance of 50.0 m. beyond the building area and stacking or spreading as directed, dewatering, preparing the bed for the foundation and necessary back filling, ramming, watering, including shoring and strutting as necessary complete.				
a	In soft soil lift upto 1.5 m .	Cum.	10	130.80	1308.00
c	In Hard murum lift upto 1.5 m .	Cum.	0		
d	In Hard murum with boulders	Cum.	0		
e	In soft rock lift upto 1.5 m .	Cum.	0		
2	Providing dry trap rubble stone soling 15 to 20 centimeter thick including hand packing and compacting complete.	Cum.	26	259.00	6734.00
3 .	Providing and laying in situ cement concrete of proportion 1:4:8 of trap metal for foundation and bedding, including dewatering manually, formwork, compacting and curing complete.	Cum.	3	2984.00	8952.00
4	-- do -- as per item No. 3 but for cement concrete 1:3:6	Cum.	12	3116.00	37392.00
5 a.	Filling in plinth and floors with approved excavated materials in 15 cm to 20 cm. layers including watering and compaction in layers etc. complete.	Cum.	0		
5 b.	Filling in plinth and floors with contractor's own materials approved by Engineer-in -charges in 15 cm. to 20 cm. layers including watering and compaction in layers etc. complete.	Cum.	0		
6	Providing and casting in situ cement concrete of proportion 1:2:4 of trap metal for coping to plinth or parapet moulded or chamfered as per drawing as directed including centering, formwork, compacting, roughening them if special finish is to be provided and curing complete.	Cum.	1	5705.30	5705.30
7a.	Providing second class BBM with conventional/ I.S.type bricks in C.M.:1:6 in plinth as backing in composite masonry including bailing out water manually striking joints 00raking out joints and watering ccomplete at all lead and lifts (spec.No. BdG3 No.314).for plinth details	Cum	0		
7b.	Providing second class burnt brick masonry with conventional type brick in cement mortar 1:6 in superstructure including striking joints, racking out 2joints watering and scaffolding complete.	Cum.	0		
8	Providing second class burnt brick masonry with conventional bricks in cement mortar 1:4 in half brick thick wall including mild steel longitudinal reinforcement of 2 bars of 6 mm diameter at every third course, properly bent and rounded at ends, scaffolding, racking out joints and watering complete.	Sqm.	0		
9	Providing fabricating and erecting at site of works steel structures for shed standard design and specifications having various spans ranging from 6m to 18m length in between trusses and in multiples of standard length of bays as specified as per tender specification inclusive of cost of steel and trusses, angular trusses columns purlins tie runner foundation bolts , base plate, nut and bolts , welding wherever required etc as per drawing inclusive of one coat of anticorrosive paint at all lead and lifts complete all as directed by Engineer in charge	MT	1	66500.00	66500.00

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Name of Project:		400/220kV Substation at Koradi			
Name of Work:		Construction of Store Shed			
Sr.No.	Particulars	Qty	Unit	Rate (Rs.)	Amount (Rs.)
10	Providing and fixing in position 6 mm thick asbestos cement corrugated (big size) sheet roofing including 'J' or 'L' hook bolts galvanized iron and bituminous washer and G.I. Clamp. Bolts and nuts including scaffolding complete.	Sqm.	2	405.00	810.00
11	Providing and fixing 6 mm thick asbestos cement ridge capping for roofing including galvanised iron and bituminous washers galvanised iron clamps, bolts and nuts etc. complete.	Rmt.	1	292.00	292.00
12	Providing and casting in situ cement concrete M-20 of trap metal for reinforced cement concrete beams and lintels as per detailed designs and drawings or as directed including dewatering manually, centering, formwork, compacting and curing etc. complete (excluding reinforcement)	Cum.	0		
13	Providing and casting in situ cement concrete M-20 of trap metal for reinforced cement concrete chajja as per detailed design and drawings including centering, formwork, compacting and curing etc. complete (excluding reinforcement).	Cum.	0		
14	Providing and casting in situ cement concrete M-20 of trap metal for reinforced cement concrete pardi as per detailed & design including centering, formwork, compacting and curing etc. complete. (excluding reinforcement)	Cum.	1	8916.00	8916.00
15	Providing and casting in situ cement concrete M-20 of trap metal for reinforced cement concrete slab and landing as per detailed designs and schedules including centering, formwork, compacting and curing etc. complete (excluding reinforcement).	Cum.	1	5746.00	5746.00
16	----- do----- as per Item No 12 but for	Cum	2	4278.00	8556.00
	RCC M20 raft & footings				
17	----- do----- as per Item No 12 but for	Cum	1	6176.00	6176.00
	RCC M20 column				
18	Providing and fixing in position mild steel bar reinforcement of various diameters for reinforced cement concrete pile caps, footings, foundations, slabs, beams, columns, staircases, newels, chajjas. Lintels etc. as per detailed drawing and designs and schedules including cutting, bending, hooking the bars, binding with wires and tack welding, supporting as required etc. complete all as directed.	M.T.	0		
19	Providing cement plaster 12 mm thick in single coat in cement mortar 1:4 with neeru finish to concrete or brick surfaces in all positions including scaffolding and curing etc. complete.	Sqm.	32	129.00	4128.00
20	Providing sand faced plaster externally , using approved screened sand in all positions including base coat of 15 mm thick in C.M. 1:4 using water proofing compound @ 1 kg. Per bag of cement, curing the same for not less than 2 days and keeping the surface of base coat rough to receive the sand faced treatment 6 to 8 mm thick in c.m. 1:4 finishing the surface by taking out grains and curing for fourteen days scaffolding etc. complete.	Sqm.	11	305.00	3355.00
21	Providing and fixing rolling steel shutters fabricated from 18 gauge steel laths with side guides, bottom rail, brackets, door suspension shaft including rolling springs, locking arrangement and housing box at the top including mechanized gear operation arrangement and painting 3 coats etc. complete.	Sqm.	0		

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Name of Project:		400/220kV Substation at Koradi			
Name of Work:		Construction of Store Shed			
Sr.No.	Particulars	Qty	Unit	Rate (Rs.)	Amount (Rs.)
22	Providing & Fixing steel windows of various sizes as per detailed drawings with welded square bars 12 mm at 10 cm c/c without hot dip zinc coating without /with ventilator including fabrication glazing with non-acetinic/plain obscured glass panels of approved type and quality, all fixtures and fasteners without teak wood boxing and architraves and finishing with one coat of primer complete.	Sqm.	0		
23	Providing and fixing steel louvered windows/ventilators of various sizes as per detailed drawings without hot dip zinc coating including fabrication with approved type and quality all fixtures and fastening without teak wood boxing and architraves including finishing one coat of primer and two coats of oil pointing etc complete.	Sqm.	1	2496.00	2496.00
24	Providing & fixing pressed steel door box frame of M.S. sheet made of 18 gauge thick of required section with rebate of 10mm required thickness of shutters and tie rod of 12 mm square square bar at bottom as per specification with or without ventilators including hold fasts, hinges welded to the frame fixing in box frame in cm 1:10 and finishing with 2 coats of oil painting etc complete.	Sqm.	0		
25	Providing and fixing country teak wood single leaf 2nd class 20 mm thick false panelled door without ventilator as per detailed drawings including iron oxidized fixtures and fastening and finishing the wood work with one coat of primer (excluding door frame) etc complete.	Sqm.	0		
26	Providing and fixing in position partition of polished Kadappa of required thickness including making grooves in wall/concrete surface, filling joints with slurry wiring, polishing, rounding edges as required cleaning etc. complete.	Sqm.	30	626.00	18780.00
27	Providing & applying white wash in two coats on old/new plastered or masonry surface and asbestos cement sheets including scaffolding and preparing the surface by brushing and brooming down complete.	Sqm.	800	10.00	8000.00
28	Providing & applying three coats of water proof cement paint of approved manufacturer and approved colour to new plastered surfaces including scaffolding if necessary cleaning and purpore the surface watering for two days complete.	Sqm.	320	50.00	16000.00
29	Providing and applying two coats of synthatic enamel paint of approved colour to new structural steel work and wood work in building including scaffolding if necessary cleaning and preparing the surface including primer coat complete.	Sqm.	320	53.80	17216.00
30	Providing and laying cement concrete flooring 40mm thick with cc 1:2:4 cement concrete laid to proper level and slope in alternate bays including compacting PVC/glass/aluminium strips at joints, marking lines to give appearance of tiles 30x 30 cm or other size laid diagonally /square etc finishing smooth (with extra cement) in any colour as directed and wiring complete.	Sqm.	100	219.00	21900.00
	Total amount (Rs.)				248962.30

BILL OF QUANTITY

Name of Project:		400/220kV Substation at Koradi			
Name of Work:		Construction of Control Room Building			
Sr.No.	Particulars	Unit	Qty	Rate (Rs.)	Amount (Rs.)
1	Excavation for foundations in trenches, general levelling etc. in earth, soil of all types such as B.C.soil, slushy soils, sand gravel and soft murum etc. upto any depth below ground level, including removing of the excavated material upto a distance of 50 m beyond the building area with all lifts, stacking and / or spreading as directed, dewatering both for surface as well as sub soil water and keeping the area dry till casting of foundations, shoring and strutting wherever necessary, preparing the bed for the foundation and necessary backfilling all as per the specifications and as directed by Engineer-in-charge etc. complete.				
a	In soft soil lift upto 1.5 m .	Cum	173	130.80	22628.40
b	In soft soil lift from 1.5 m to 3.00 m.	Cum	0		
c	In Hard murum lift upto 1.5 m	Cum	0		
d	In Hard murum lift from 1.5 m to 3.00 m	Cum	0		
e	In soft rock lift up to 1.5 m .	Cum	0		
f	In soft rock lift from 1.5 m to 3.00 m	Cum	0		
g	In Hard Rock	Cum	0		
2a)	Filling in plinth, floors and around foundation etc. with approved selected excavated materials brought from any lead in 15 cm to 20 cm thick layers including watering ramming and compaction etc. complete.	Cum	1	67.00	67.00
2.b)	Providing supplying and filling in plinth with sand or murum of approved quality in 15 cm to 20 cm thick layers, including watering, ramming and compaction at all leads & lifts etc. complete.	Cum	20	1243.00	24860.00
2.c)	Providing pre-constructional anti-termite treatment by treating the bottom surface and the sides of excavation at the rate of 5 ltrs. Of emulsion concentrate of 0.50% of chloropyviphox per sq.m of surface area with ten years guarantee bond as per I.S.6313 (Part(ii) 1973 (quantity as per the item No.22.41 of schedule of rates of National Building Organisation) as directed by the Engineer in charge etc. complete at all leads and lifts.	Sq.m	32	63.00	2016.00
2.d)	Providing post-constructional anti termite treatment to the soil along the external perimeter of building by punching holes of 1.20 cm to 1.50 cm diameter about 30-60 cm deep at 15 cm centre to centre as close to the wall as possible and to inject 0.50% aldrin or chlorophyriphox at the rate of 7.50 liter per hole and sealing a same with proper filling with ten years guarantee bond as per I.S.6313 (Part III, 1971 (Quantity as per item no.22.44 of schedule of rates of national building organization as directed by the Engineer in charge at all leads 7 lifts.	RMT	360	22.83	8218.80

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Name of Work:		Construction of Control Room Building			
Sr.No.	Particulars	Unit	Qty	Rate (Rs.)	Amount (Rs.)
3	Providing and laying dry trap granite / quartzite /gneiss approved rubble stone 80 mm size metal for soling of specified thickness, in one or more layers below flooring, foundation, below pile caps, including hand packing, filling the interstices with quarry spoil and hard murum watering ramming and compaction and leveling with all lifts and leads etc. complete.	Cum	50	493.00	24650.00
4.a	Providing and laying in situ CC 1:3:6 grade by using 40mm down graded trap metal for foundation and columns footing and in flooring subgrade column extensions in parapet walls at terrace level including form work compacting as per the direction of the Engineer-in-charge (Cement consumption @ 4.42 bags/cum)	Cum	60	3888.20	233292.00
4.b	----do---- as above but for C.C.1:4:8 (Cement consumption @ 3.40 bags/cum)	Cum	11	3593.30	39526.30
5.	Providing and casting in situ, cement concrete 1:2:4 of black basalt or equivalent 20 mm size down graded approved stone metal for coping to plinth, parapet, sills cornices, jambs, block in course, architraves, embedding doors or windows frames, all moulded or chamfered as per drawing or as directed, including all lifts, dewatering wherever necessary centering, formwork compacting, finishing the exposed faces where minor honey combing or other minor facial defects have occurred with sufficient minimum thickness of 1:3 cement mortar to give a smooth and even surface or roughening the surface to receive plaster and curing etc. complete. (Cement consumption @ 6.27 bags / cum).	Cum	1	7443.60	7443.60
6.a)	Providing and laying in situ reinforced and/or encased cement concrete M-25 grade (28 days works cube strength 25N/mm ²) with approved, graded, trap, Granite, quartzite, gneiss, basalt or equivalent approved stone aggregate of maximum size 20 mm including dewatering where ever necessary and keeping the pit dry till the concrete sets, mechanical vibration, finishing to required line, level, formwork shuttering curing, all as per detailed specifications and as directed by the Engineer-in-charge for the following works but excluding reinforcement for foundation and column footings, raft and pile foundation. (Cement consumption @ 7.50 bags / cum).	Cum	22	7334.80	161365.60
6.b(i)	For columns & walls above 100 mm thickness. (Cement consumption @ 7.50 bags/cum)	Cum	26	10630.30	276387.80
6.b(ii)	----do---- for column on parapets with C.C.1:3:6/M-10 grade concrete (Cement consumption @ 4.42 bags / cum)	Cum	1	7680.00	7680.00
6.c	For RCC Beams and lintels (Cement consumption @ 7.50 bags / cum)	Cum	6	7833.80	47002.80
6.d	For RCC slab, landing loft up to 150mm thickness and above (Cement consumption @ 7.50 bags / cum)	Cum	6	10257.90	61547.40
6.e(i)	For Chajjas (Cement consumption @ 7.50 bags / cum)	Cum	1.5	10257.90	15386.85
6.e(ii)	Canopy, parade up to 100 mm thick above. (Cement consumption @ 7.50 bags / cum)	Cum	1	10257.90	10257.90

Name of Project:		400/220kV Substation at Koradi			
Name of Work:		Construction of Control Room Building			
Sr.No.	Particulars	Unit	Qty	Rate (Rs.)	Amount (Rs.)
6.f	For staircase RCC waist slab & steps etc. (Cement consumption @ 7.50 bags / cum)	Cum	1	10257.90	10257.90
7	Providing and laying in situ RCC and / core in cased cement concrete M-15 grade (28 days works cube strength 15 N / mm ² with approved graded trap / granite / quartzite / gneiss / basalt or equivalent approved stone aggregate of maximum size 20 mm including dewatering wherever necessary and keeping the pit dry till the concrete sets mechanical vibration finishing to required line, level, formwork & shuttering, curing, all as per detail specifications and as directed by Engineer-in-charge etc. complete (Cement consumption @ 6.27 bags / cum)for R.C.C. flooring in M-15).	Cum	59	5705.30	336612.70
8.	Providing, supplying cleaning, cutting bending and placing in position as per details furnished in the drawings or as directed by the Engineer-in-charge including preparation of bar bending schedules where required, plain mild steel reinforcement tested bars of grade conforming to IS:432 (latest) and HYSD bar reinforcement conforming to IS:1139 or IS:1785 (latest edition) in all cement concrete works, including binding with 18 guage soft annealed M.S.binding wire / tack welding with all leads and lifts etc. complete (steel to be purchased tested & brought at site by the contractor.)	MT	6	62250.00	373500.00
9.	Providing UCR masonry of trap / granite quartzite / gneiss / stone in C.M. 1:6 in foundation and plinth of inner and outer walls including bailing out water dewatering racking out joints on exposed faces to receive plaster and striking out joints on remaining sides at all leads and lifts as per specification and directions of Engineer-in-charge. (Cement consumption @ 1.77 bags / cum)	Cum	1	3059.20	3059.20
10.a)	Providing fly ash brick masonry with conventional type brick in cement mortar 1:6 of 230 mm or more thickness in plinth at all leads & lifts including striking joints on unexposed faces and racking out joints on exposed faces, all necessary scaffolding curing etc. complete. (Cement consumption @ 1.44 bags / cum)	Cum	26	3978.50	103441.00
10.b)	---do--- as above but in super structure. (Cement consumption @ 1.77 bags / cum)	Cum	10	3978.50	39785.00
11.	Providing fly ash brick masonry with conventional type brick in cement mortar 1:4 in half brick thick wall (100 to 115 mm thickness) including providing mild steel longitudinal reinforcement of two bars of 6 mm dia at every third course properly bent and bounded at ends, and concrete bond of 1:2:4 of 75 mm thick at every 1m height scaffolding, racking out joints with all leads and lifts and watering etc. complete (inclusive of M.S. reinforcement and concrete in bond) (Cement consumption @ 0.22 bags / cum)	Sq.m	23	579.00	13317.00

Name of Project:		400/220kV Substation at Koradi			
Name of Work:		Construction of Control Room Building			
Sr.No.	Particulars	Unit	Qty	Rate (Rs.)	Amount (Rs.)
12.	Providing & construction in super structure 150 mm thick cement concrete block masonry in CM 1:4 (concrete block to be made of cement concrete M-60 grade) including scaffolding, racking out joints and watering etc. complete at all leads and lifts as per detailed specification and directions of Engineer-in-charge. Note: Payment of providing chicken mesh 300 mm wide shall be paid under separate item i.e. Item No.13.e(iii)] (Cement consumption @ 2.65 bags / cum)	Sq.m	1	542.30	542.30
13.a)	Providing internal cement plaster of 12 mm minimum thickness in a single coat in cement mortar 1:4 with cement or neeru finish to concrete or brick masonry surfaces, in all positions and heights after securing with nails prior to plastering chicken mesh 300 mm wide at joints of RCC & masonry including scaffolding, roughening the base surface to receive plaster, curing et etc. Complete. [Note: Payment of providing chicken mesh 300 mm wide shall be paid under separate item i.e. Item No.13.e(iii)] (Cement consumption @ 0.11 bags / Sq.m)	Sq.m	1	130.40	130.40
13.b)	---do--- as above without neeru. (Cement consumption 0.11 bags / Sq.m)	Sq.m	1	123.50	123.50
13.c)	Providing cement plaster of 20mm minimum thickness, in a single coat, in cement mortar 1:4 with cement or neeru finish to concrete or brick masonry surfaces, in all positions and heights, after securing with nails prior to plastering chicken mesh 300 mm wide at joints of RCC & masonry including scaffolding roughening the base surface to receive plaster curing etc. complete. [Note: Payment of providing chicken mesh 300 mm wide shall be paid under separate item i.e. Item No.13.e(iii)] (Cement consumption @ 0.17 bags / Sq.m)	Sq.m	481	181.00	87061.00
13.d)	---do--- as above but without neeru. (Cement consumption @ 0.17 bags / Sq.m)	Sq.m	1	173.30	173.30
13.e(i)	Providing on brick/concrete masonry surface sand faced cement plaster 25mm thick in two coats to all external surfaces in cement mortar 1:4 using approved quality of sand in all positions after securing with nails prior to plastering chicken mesh 300 mm wide at joints of RCC and masonry including base coat of 15 mm thick using water proofing compound at 1kg per cement bag (water proofing compound will not be paid separately) curing the same for not less than 2 days and keeping the surfaces of the base coat rough to receive the sand faced treatment 8 to 10mm thick in C.M. 1:4 finishing the surface by taking out grains curing complete at all leads & lifts complete. [Note: Providing and fixing chicken mesh 300 mm wide shall be paid under separate item i.e. Item No.13.e(iii)] (Cement consumption @ 0.22 bags / Sq.m)	Sq.m	167	305.00	50935.00

Name of Project:		400/220kV Substation at Koradi			
Name of Work:		Construction of Control Room Building			
Sr.No.	Particulars	Unit	Qty	Rate (Rs.)	Amount (Rs.)
13.e(ii)	Providing rough cast cement plaster in C.M.1:4 in two coats to concrete, stone or brick masonry surfaces in all position in base coat of 12 to 15mm thick in C.M.1:4 and rough cast treatment 12mm in thick in proportion 1:1 1 / 2:3 including scaffolding & 14 days curing etc. complete. (Cement consumption @ 0.22 bags / Sq.m)	Sq.m	1	324.00	324.00
13.e(iii)	Providing and fixing in position 30cm wide chicken mesh on external joints of R.C.C.member and brick wall of approved quality including fixing of mesh necessary nailing, drilling etc. complete as directed.	Sq.m	77	173.33	13346.67
13.f	Providing and applying 1.5mm to 2 mm thick wall texture with natural mesh aggregate like silica / quartz / mica / gypsum / inorganic pigments / fungicides / importeack polymeric compounds by using spray gun & compassor / wood roller / sponge roller / plastic & stainless steel / trowel / pattern roller / rubber patterns etc.give out finish line minar king or Olympia / super metallic / trowdoc, flat pearl / providing and applying base coat of internal cement mortar 1:4 with or without neeru finish to the surface where wall texture is to be applied including scaffolding and curing at all leads and lifts etc. complete.	Sq.m	1	459.00	459.00
13.g	Providing grooves rounded or square in sand faced plaster / rough cast plaster / large pebble of size 25 mm wide & 12 mm to 20 mm deep in correct line and level while the plaster is till fresh scaffolding curing etc. complete all as per architectural drawing & as directed.	Rmt	201	76.40	15356.40
13.h	Providing 20mm thick patta plaster 75 to 200 mm height in C.M. 1:3 in proper line & level with specified finish for chajjas, canopy, slab projection, bands etc. including scaffolding curing etc. complete.(Cement consumption @ 0.22 bags / Sq.m)	Rmt	0		
13.i	Providing 25mm thick and 50 mm wide drip mould patta plaster in cement mortar 1:3 with specified finish for chajjas canopy etc. including scaffolding curing etc. complete.	Rmt	163	22.20	3618.60
14.a(i)	Providing & laying plain ordinary (gray) cement tiles confirming to I.S.:1237 (latest) with white / colour cement base of size 250mm x 250mm x 20 mm thick of approved pattern on a bed of 20mm thick C.M.1:6 or lime mortar 1:2 including neat cement float, for flooring in required position, filling joints with neat cement slurry, curing, polishing and cleaning with / without border with pattern cement tiles, giving proper slopes complete at all leads and lifts as per detailed specifications and directions of the Engineer-in-charge.(Cement consumption @ 0.15 bags/Sq.m)	Sq.m	1	328.00	328.00
14.a(ii)	---do--- but white cement marble mosaic tiles. (Cement consumption @ 0.15 bags/Sq.m)	Sq.m	1	398.00	398.00
14.b(i)	---do--- as above but for skirting & dado for gray cement base. (Cement consumption @ 0.21 bags/Sq.m)	Sq.m	1	363.00	363.00

Name of Project:		400/220kV Substation at Koradi			
Name of Work:		Construction of Control Room Building			
Sr.No.	Particulars	Unit	Qty	Rate (Rs.)	Amount (Rs.)
14.b(ii)	---do--- but for white cement base tiles for skirting & dado	Sq.m	1	433.00	433.00
14.c	Providing and laying 35mm thick precast polished chequered coloured cement tiles and pattern for treads of size 200mm x 300mm and 20mm thick plain cement tiles for risers of steps and staircase with nosing of treads moulded as per drawing or as directed on a bed of 1:4 cement mortar in required position including neat cement float, filling joints with neat cement slurry mixed with approved shades of the pigment to match the colour of the tiles curing and polishing complete.(Cement consumption @ 0.18 bags/Sq.m)	Sq.m	1	351.00	351.00
15.	Providing and laying coloured semi terrazzo marble mosaic base tiles with conforming to IS, cement base of size 250mm x 250 mm x 20 mm thick, with approved pattern with approved colour of marble chips of size upto 30mm, for flooring in required position on a 20mm thickness or more bed of CM 1:6 or LM 1:2 set in neat cement slurry, jointed and pointed with / coloured cement slurry, curing polishing with or without border tiles giving proper slope etc. complete at all leads and lifts as per detailed specifications and directions of the Engineer-in-charge.(Cement consumption @ 0.18 bags/Sq.m)	Sq.m	1	719.00	719.00
16.	---do--- as per Item No.15 but using tiles to size 250 x 125 mm x 20mm thick in dado and skirting. (Cement consumption @ 0.21 bags/Sq.m)	Sq.m	1	769.00	769.00
17.	Providing and laying white glazed tiles of 200x100mm in size or as directed and 6.6 mm thick of pilkiston confirming to IS make for flooring in required position laid on a bed of 20mm thick one or more giving proper slope with approved pattern cement mortar 1:4 with neat white acid proof cement slurry, curing, with or without border cleaning etc. complete at all leads and lifts as per detailed specifications and directions of the Engineer-in-charge.(Cement consumption @ 0.22 bags/Sq.m)	Sq.m	1	745.00	745.00
18.	---do--- as per Item No.17 above but dado and skirting in required position laid on a 12mm thick plaster in CM 1:4 including all special required like rounds, corners. (Cement consumption @ 0.21 bags/Sq.m)	Sq.m	1	781.00	781.00
19	Providing and laying ceramic tiles of 300x300mm in size of "SPARTEX" make of approved color and shade for flooring in required position with an approved pattern laid on a bed of 20mm thick cement plaster 1:4 neat cement float, filling joints with cement slurry of shade matching with the tiles as per detailed specification and directions of the Engineer-in-charge.(Cement consumption @ 0.22 bags / sq.m)	Sq.m	79	813.00	64227.00

Name of Project:		400/220kV Substation at Koradi			
Name of Work:		Construction of Control Room Building			
Sr.No.	Particulars	Unit	Qty	Rate (Rs.)	Amount (Rs.)
20	Providing and laying ceramic tiles of 100x100mm in size of "SPARTEX" make of approved color and shade for dado / skirting in required position with an approved pattern 12mm to 20mm thick one or more coat cement plaster 1:4 filling of joints with cement slurry of shade matching with the tiles curing, cleaning etc. complete at all lead & lifts as per detailed specification and directions of the Engineer-in-charge.	Sq.m	146	963.00	140598.00
21.a	Providing and laying polished chequered marble mosaic tiles of 20 to 25mm thick and 20cm x 30 cm size approved colour and pattern with white and coloured chips upto the maximum size of 6mm / 12mm / 20mm for flooring and treads, in required position set in a bed of 1:1 lime mortar / 1:4 cement mortar including neat cement float, filling the joints with neat coloured cement slurry, curing, polishing and rubbing complete.(Cement consumption @ 0.15 bags / sq.m).	Sq.m	150	624.00	93600.00
21.b	Providing and laying polished kotah hand cut stene slabs of size 600x 450mm or required size upto 40mm thick for flooring of approved pattern and laying on 20mm thick one or more bed of CM 1:6/LM 1:2 and for dado skirting on cement plaster 12mm to 20 mm thick one or more in C.M. 1:4 and 20mm thick one or more in C.M.1:4 for tread and risers of steps including chamfering to exposed edges of tread, filling groove (2 no.) on the tread filling joints with neat cement slurry, curing, polishing and cleaning etc. complete at all lead & lifts as per detailed specifications & directions of the Engineer-in-charge.(Cement consumption @ 0.13 bags / sq.m).	Sq.m	23	764.00	17572.00
22.	Providing and laying makarana Abu marble slabs (Dongri Brand) of size (600mm x 600mm) or of required size machine cut 20mm thick of approved quality veins of shade for flooring in approved pattern as directed by Engineer-in-charge on a bed of required thickness in L.M.1:2 or C.M.1:6 including filling joints cleaning etc. complete all leads and lifts as per detailed specifications directions of Engineer-in-charge.	Sq.m	1	2521.00	2521.00
23.	Providing and laying makarana Abu marble slabs (Dongri Brand) of size 2000 x 300 mm or 2000 x 135mm machine cut 20mm thick of approved quality veins of shade for treads, risers & partitions of slab of size 1350mm x 650 x 20mm for steps on a bed of C.M.1:4 20mm thick including roughning nosing of the tread, with neat cement float filling joints with neat white / coloured cement slurry, curing polishing and cleaning etc. complete all leads and lifts as per detailed specifications directions of Engineer-in-charge.(Cement consumption @ 0.15 bags/sq.m)	Sq.m	1	2558.00	2558.00

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Sr.No.	Particulars	Unit	Qty	Rate (Rs.)	Amount (Rs.)
24.	Providing and laying makarana / Abu marble slabs (Dongri Brand) slabs machine cut of size 600x400x12mm to 20mm thick approved quality, veins and shade for skirting in approved pattern, 250mm wide strip for border line in flooring and for window sills. Projecting 5mm beyond the finished wall surface as directed by the Engineer in charge on a cement plaster / bed upto 20mm thick in C.M. 1:4 / L.M.1:2 including filling joints with neat with coloured cement slurry to match the flooring slabs, curing polishing and cleaning etc.complete at all leads and lifts as per detailed specifications and directions of Engineer-in-charge.(Cement consumption @ 0.15 bags/sq.m)	Sq.m	1	2558.00	2558.00
25.	Providing and erecting a platform of size 3000 x 700 mm including 100mm thick vertical support of fly ash masonry walls in cement mortar 1:4 with, cudappa slabs upto 40mm thick at bottom with two cudappa shelves and 20mm thick jet black granite for top to sink side, bottom, fascia fixed in a surface in required thickness in cement mortar 1:4 providing required. Nahani trap of size 400 mm dia with grating at the sink base all as per detail drawing including curing etc.complete at all leads and lifts as per detailed specifications and directions of Engineer-in-charge.	No	1	10656.00	10656.00
26.	Providing, cutting & fixing machine cut polished export quality jet black or of any other approved colour granite stone for skirting of column & on walls at main entrance with approved pattern door 20mm thick as per provided sample including filling joints with black cement slurry, black polish finishing and cutting etc. complete at all leads and lifts as per detailed specifications and directions of Engineer-in-charge.	Sq.m	23	3119.60	71750.80
27.a	Providing & fixing double leaf panelled door shutters 35mm thick as per the detailed drawing consisting country cut teak wood vertical styles & top rail 95 mm x 35 mm & lock and bottom rail 195mmx 35mm and panels 12mm thick marine plywood (conforming IS:309.7) including Brass oxidized fixtures and fastenings inserted including providing and applying three coats of oil painting over a prepared polished smooth surface as directed by the Engineer-in-charge etc. complete at all leads and lifts with C.C.TW 60x100mm frame.	Sq.m	1	2714.00	2714.00

Name of Project:		400/220kV Substation at Koradi			
Name of Work:		Construction of Control Room Building			
Sr.No.	Particulars	Unit	Qty	Rate (Rs.)	Amount (Rs.)
27.b	Providing and fixing single leaf paneled door C.C.T.W.60mm x 100 mm frame without ventilator, shutter 35mm thick as per detailed drawing consisting C.C.T.W. vertical styles and top rail 95 x 35mm and lock and bottom rail 195mm x 35mm and panel with 12mm thick marine plywood 9conforming IS:3097) including brass oxidized fixtures and fastenings and T.W. beading at junctions of penels inserted including providing and applying 3 coats of oil painting complete over a prepared polished smooth surface as directed by the Engineer-in-charge at all leads and lifts.	Sq.m	1	4356.00	4356.00
27.c	Providing and fixing 21 guage plain aluminium sheet on the face door shutter including cutting to required size & fixing by screws including making good the damage if any to the existing door shutter & frame etc. Complete at all leads lifts as directed by Engineer-in-charge.	Sq.m	1	545.00	545.00
28.	Providing & fixing in position ready made FRP moulded door shutter 33/35mm thick of wooden frame skelton inside with 3 mm plywood skin at both faces and with all round drawing with M.S.pressed steel door frame 175x60mm 14 guage including filling with concrete 1:2:4 including 4 nos. hold fasts all necessary beading moulding, lipping providing & fixing aluminium matt finished fixture such as 250mm long latch 2 nos, 2 nos. handle 125mm tower bolts 200mm long, hinges painting the frame with one coat of primer and two coats of synthetic enamel oil paint of approved colour shade complete (M.S.pressed steel door / frame and concrete filling cost is included)[Note: measurement shall be taken for unrebated portion only].	Sq.m	0		0.00
29.	Providing & fixing in position single shutter aluminium extruded anodized on power coated door of over all size 0.90 m x 2.40 m with aluminium door frame of anodized or powder coated section 101.690 x 44.75mm, 3.18mm thick and shutter comprising of power coated section having bottom and lock rail of size 150mm x 44.45 mm x 2.90 mm thick, top rail 47.62 x 44.45mm x 3.18mm thick vertical styles 47.62 x 44.45 mm x 3.00 mm thick and glass panes 5mm thick for panels for shutter tubular door closer of heavy duty having I.S.I mark, heavy duty concealed lock, necessary glazing clips. PVC gaskets, tower bolts etc. as per detailed drawing and as directed by Engineer-in-charge including all material, labour and equipment etc. complete at all leads and lifts.	Sq.m	1	6801.30	6801.30
30	Providing and fixing M.S.grill door 24kg per sq.m of various size as per detail drawing without hot dip coating with iron oxidized fixture and fastening including providing and applying 3 coats of oil paint over a coat of primer paint as directed by the Engineer in charge etc. complete at all leads and lifts.	Sq.m	1	1475.00	1475.00

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Name of Work:		Construction of Control Room Building			
Sr.No.	Particulars	Unit	Qty	Rate (Rs.)	Amount (Rs.)
31.	Providing and fixing collapsible steel gates in two leaves, with channel pickets, pivoted flat bars, including top and bottom guides, rollers stoppers handles all fitting accessories, locking arrangement and one coat of primer etc.complete as directed by the Engineer-in-charge at all leads and lifts.	Sq.m	1	2594.00	2594.00
32.a	Supplying and fixing in position powder coated alluminium extruded section two track sliding window upto required height outer frame made from section of overall size 62mm x 45mm, bottom section with or without drain, track section weighting 0.90 kg per meter and top and side section weighting 0.838kg per running meter with shutter or sections made of 19mm x 40mm size having average weight of 0.6kg per running meter (or as required size with change in proportionate weight) as directed by the Engineer-in-charge at all leads and lifts with powder coated.	Sq.m	0		0.00
32.b	Supplying and fixing in position alluminium powder coated extruded section three track sliding windows upto required height, outer frame made from section of overall size 92mm x 45mm bottom section with or without drains track section weighting 0.901 kg per running meter and top and side section weighting 0.838kg per running meter with shutters of sections made of 19mm x 40mm size having average weight of 0.6 kg per running meter (or as per required size with change in proportionate weight) with 5.5 mm selected quality plain sheet glass fixed with nylon encased stainless rollers, locks and handles etc. complete (drawing No.of job T-MISC/5000 drawing and specification including alluminium frames 80x38mm box type 5mm thick sheet glass louvers, clips rubber plain PVC gasket of approved quality etc. complete (sample to be got approved from the Executive Engineer before use) all as directed by Engineer-in-charge at all leads and lifts.	Sq.m	0		0.00
32.c	Providing and fixing in position extruded alluminium fixed glass panels window having frame made all of extruded tubular section of size 34mm x 42mm (or as required size in proportionate weights) of average thickness 2mm and weight 0.726 kg per meter (or as required0 mechanically assembled at corners with glazing, beading of average 0.26 kg / running meter or required weight including 5.5mm thick selected quality plain sheet glass with neoprene (rubber) gasket etc. complete (as per Architect's drawing job no.T-MISC/5000/drawing no.22 dt.03.02.92) as directed by the Engineer-in-charge at all leads and lifts with powder coated.	Sq.m	1	4115.00	4115.00

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Sr.No.	Particulars	Unit	Qty	Rate (Rs.)	Amount (Rs.)
32.d	Providing and fixing in position alluminium louvred windows / ventilators of various sizes with powder coating as per detailed with 5.5 mm thick selected quality plain sheet glass fixed with new neoprene gasket shutters to be provided with nylon encased stainless roller, necessary locks and handles etc. complete (as per Architect's drawing job no.T-MISC/5000/drawing no.22 dt.03.02.92) as directed by the Engineer-in-charge at all leads and lifts with powder coated.	Sq.m	6	3902.00	23412.00
33.a	Providing and fixing Aluminium partition with glass size of 8.27 x 3.35 m with or a suitable size as directed with in built double leaf door shutter and ventilator of over all size 1.8 x 2.52m fixed at the middle of the partition Al.section for partition surrounding the door shutter made out of jindal section vertical No.4604 of size 63.5 x 38.1 x 1.9mm thick weighing 1.093 kg / Rmt confirming to IS 1943—1961 four no.of vertical section placed and fixed at 1078 mm /C/C on either side to door shutter frame P/F door vertical frame of Al.section jindal of size 100x40x1.626mm thick in weighing 1.29kg/Rmt & Al.vertical frame of size 1x40x1.626mm thick weighing 1.29kg / Rmt for door ventilators centre IS:1761-1960 of Atul or modiguard clear vision sheat glass fixed by means of triangular glazing cleaps, rubber gasket as approved by department including 2 nos. of 300mm long Al.tower bolt shutter duly fixed with floor springs boxes swing type with 180 swing to each leaf as per approved ISI make full points interconnecting the Al.section inside by using angle cleat 60mm long screw well with teak wood batten placed inside the section for screweing including providing and fixing decorative type handles 2 nos. to each leaft for front and rear side. Providing maximum safety locking arrangement with approved lock & key including finishing cleaning polishing the Al.frame with petrol or other agent as specified by the manufacturer or as directed by the Engineer-in-charge.[Note: In case, Al.sections are found less in weight & size, rate shall be reduced proportionately @ Rs.200/- per kg].	Sq.m	1	2856.00	2856.00
33.b	---do--- as above under I.No.33(a) but for partition size 5.66m x 3.35 m or 5.695m x 3.35m or a suitable size as directed in built. Al.door of size 1.20m x 2.52m single leaft with ventilator [Note: As per I.No.33(a)]	Sq.m	2	2704.00	5408.00
34	---do--- as above under I.No.33(a) but for fixed partition without door of size 5.55m x 3.35m or a suitable size as directed. [Note: As per I.No.33(a)]	Sq.m	3	2424.70	7274.10
35.	Providing, fabricating & fixing M.S.hinged gate in two leaves weighting approx.55kg per gate with required hold fast, hinges aldrops, painting the gate with one coat of primer and 2 coats of oil paint of approved colour at all leads and lifts and as per directions of the Engineer-in-charge.	Kg	1	59.90	59.90

Name of Project:		400/220kV Substation at Koradi			
Name of Work:		Construction of Control Room Building			
Sr.No.	Particulars	Unit	Qty	Rate (Rs.)	Amount (Rs.)
36.	Providing and fixing rolling shutter fabricating from steel laths of minimum thickness 0.9mm with lock plate of 3.15mm thickness reinforced with 35x35x5mm angle section fitted with sliding bolts and handles for both side deep MS channel section of depth and thickness not less than 65 mm and 3.15 mm respectively. With hold fast arrangement MS bracket plate 300x300x3.15mm minimum size and shape square bar suspension shaft of minimum 32mm dia hood cover of MS sheet 0.9 mm thickness of any size at top and safety device including mechanical gear operation arrangement consisting of worm gear wheels and worms of high grade cast iron and mild steel and one coat of red lead primer etc. complete (I.S.6248-1979) etc. complete.	Sq.m	0		0.00
37.a	Providing & fixing mild steel grill railing weighing 20kg/sq.m with PVC handrail cover and newel post for stair case including fabricating, fixtures, drilling holes in concrete/other surfaces, erecting the grill work, necessary welding fixing by nuts and bolts, fixing PVC handrail cover with one coat of anticorrosive paint and two coats of oil painting with approved colour and shade, remaking the damaged surfaces, cleaning etc. complete as directed by the Engineer-in-charge at all leads & lifts.	Sq.m	1	1479.00	1479.00
37.b	Providing, fabricating & fixing 450mm wide M.S.ladder weighing approx.11.5kg/mt as shown in the drawing and detailed specification including one coat of primer & 2 coats of oil paint of approved colour at all leads and lifts and as per directions of the Engineer-in-charge.	MT	0.5	77900.00	38950.00
38.	Providing, fabricating & fixing inserts in position M.S.flat of size 150x50x6mm thick at desired locations, flush with centering for roof slab fixing, holders 8mm dia M.S. bar and welding 10mm dia M.S hook to M.S.flat embedded in roof slab including form work, painting with one coat of anti corrosive paint and 2 coats of oil paint of approved colour at all leads & lifts and as per directions of Engineer-in-charge.	No	1	100.00	100.00
39.	Providing, fabricating & fixing in position M.S.flat bracket, suspensions ISMB 200mm size or equivalent for fixing of cable trays to concrete beam / column by M.S.brackets / anchor bolts all as per drawings including one coat of primer & 2 coats of oil paint of approved colour at all leads and lifts and as per directions of Engineer-in-charge.	MT	1.5	59900.00	89850.00
40.	Providing & fixing in position hydraulic door closer of efficient gadget make to doors as per detailed specification at all leads and lifts and as per directions of the Engineer-in-charge.	No	1	662.80	662.80

Name of Project:		400/220kV Substation at Koradi			
Name of Work:		Construction of Control Room Building			
Sr.No.	Particulars	Unit	Qty	Rate (Rs.)	Amount (Rs.)
41.	Providing slots of required size and shape in floor slabs, necessary form work, finishing the same with C.M.1:4 wherever required and providing fabricating and fixing M.S.angles 45x45x6mm spacers along the top edge of the slot including 3 coats of oil paint, over one coat of primer at all leads and lifts as per directions of the Engineer-in-charge. [Note: Placing of marble plates shall be paid in respective item for covering open slots]	Rmt	1	400.00	400.00
42.	Providing, lowering, laying & jointing cement concrete NP2 class hume pipe 450mm dia in C.M.1:4 at G.L. for laying cables including jointing C.M.1:1 curing etc. complete at all, leads and lifts as per directions of the Engineer-in-charge.	Rmt	5	620.90	3104.50
43.	Providing, manufacturing, supplying and placing over the location precast M-15 (1:2:4) RCC cover 75mm thick 1150 x 300mm with filling arrangement at both ends including smooth cement finish to both face & on top in C.M.1:3 conveying from manufacturing yard to actual site, making good damages if any and including cost of M.S.bar steel reinforcement as per drawing etc. complete as directed by Engineer-in-charge.	Sq.m	70	575.30	40270.94
44.	Providing, fixing in position alluminium rectangular pipes 40x75mm as spouts for rain water drainage to balcony, chajjas, canopies including making of hole, fixing of pipe in C.M.1:3 in proper slope preparing and making good surface at all leads and lifts and as per detailed specifications and directions of the Engineer-in-charge.	No.	1	100.00	100.00
45.	Providing & fixing in position after hoisting if necessary precast in C.M.1:2, 50mm thick RCC jali of approved design fixed in C.M.1:3 curing etc, complete including M.S.bar reinforcement at all leads and lifts as per direction of the Engineer-in-charge.	Sq.m	1	429.00	429.00
46.	Providing & erecting washing platform in battery room of size 2230 x 800mm with Hindustan make glazed earthenware sink of overall size 600x200x450mm with drain board fixed in C.M.1:4 on RCC platform at 800 mm height with stainless steel fittings lock nut, C.P.brass heavy duty pillar cock of approved make, brass stop cock, water proof brass stop outlet upto nahani trap including cladding/topping of washing platform in white/colour glazed tiles laid in acid proof cement etc. complete cutting and redoing work at all leads and lifts and as per detailed specifications and directions of the Engineer-in-charge.	no	1	4587.00	4587.00
47.	Providing & laying brick bat coba of average 75mm thick in 1:2:4 lime concrete in proper slope/over the specified area including rubbing and cleaning the base form work, necessary cutting etc. completed at all leads and lifts and as per detailed specifications and directions of the Engineer-in-charge.	Sq.m	1	304.30	304.30

Name of Project:		400/220kV Substation at Koradi			
Name of Work:		Construction of Control Room Building			
Sr.No.	Particulars	Unit	Qty	Rate (Rs.)	Amount (Rs.)
48.	Providing & fixing white glazed earthenware full stall type urinal with cast iron automatic flushing cistern of 5 ltr. Capacity with fitting inlet pipes and stop tap brackets for fixing the cistern, 32mm dia lead/brass oxidized/brass chromium plated flush pipe with fitting and spreader arrangement including lead soil pipe lead trap soil pipe connection upto the outside face of the wall complete at all leads and lifts and as per detailed specifications and directions of the Engineer-in-charge.	No.	2	5354.50	10709.00
49.	Providing & fixing Hindustan make No.92002 white glazed earthenware European type W.C.pan of first quality with 's' trap with Hindustan make cistern and commander make teak wood seat or plastic seat lid with CP brass hinges & rubber buffers including C.I.soil and vent pipe upto the outside face of wall, with CP stopcock and CP pipe connecting W.C. pan and other standard CP fitting including all connections upto the side face of the wall cutting and making good walls and flooring at all leads and lifts and as per detailed specifications and directions of the Engineer-in-charge.	No	1	3808.00	3808.00
50.	Providing & fixing Hindustan make no.20004 white glazed earthenware Orissa type W.C.pan of first quality of size 580 x 450 x 280 mm including 'P' / 'S' trap including C.I soil and vent pipe upto the outside face of wall, fixed in brick bat lime concrete bedding, with CP flush valve suitable for 32mm G.I concealed flush pipe with fitting, cutting and making good walls and flooring at all leads and lifts and as per detailed specifications and directions of the Engineer-in-charge.	No.	1	3825.00	3825.00
51.	Providing & fixing Hindustan make no.10001 with pedestal No.11003, 630x440mm white glazed earthenware wash hand basin of first quality CP brass heavy type cold water pillar tap of approved make C.I.braket, rubber plug and CP brass chain, CP brass stop tap with PVC flexible pipe connection for inlet, CP brass bottom trap with concealed GI waste pipe 32mm dia, upto the nearest nahani trap.	No	2	2081.00	4162.00
52.	Providing & fixing 100mm dia C.I.nahani trap with bend and piece of cast iron pipe 75mm dia upto the outside face of the wall / nearest nahani trap as shown in the drawing with CP steel grating cover with frame making the joint etc. complete.	No.	3	797.00	2391.00

Name of Project:		400/220kV Substation at Koradi			
Name of Work:		Construction of Control Room Building			
Sr.No.	Particulars	Unit	Qty	Rate (Rs.)	Amount (Rs.)
53.	Providing 7 fixing 150x100mm size salt glazed stone ware gully trap outside the building including excavation for brick masonry chamber in C.M.1:6 cement concrete bedding 1:4:8 outside cement plaster and outside the building in brick masonry chamber 225x300mm with 75mm thick C.I.cover required size in C.C.1:1, 5:3 with steel 8mm and both ways at the rate of 10mm C/C upto out to out size of burnt brick masonry chamber placed on 75mm thick cement concrete 1:4 coping over burnt brick masonry etc. complete all as per detailed specification and Engineering-in-charge cement finish in C.M.1:3 & C.I.grating in the sink, connecting glaed stoneware pipe with C.I. lid etc. completed as per detailed specifications and directions of the Engineer-in-charge. (inclusive of M.S.reinforcement).	No.	5	788.00	3940.00
54.	Providing & laying 150mm dia salt glazed stoneware pipe including fittings, such as bends, tees, single junction, double junction, jointing including excavation in all types of strata, upto any depth laying in proper line and level, with proper slope jointing with C.M.1:1 curing the joints, refilling the trenches complete as directed by the Engineer-in-charge at all leads and lifts.	Rmt.	50	519.00	25950.00
55.	Providing & construction brick masonry inspection chamber of 900 x 450 x 1200mm size including cement concrete M-75 grade foundation C.C.M-15 grade channels half round glazed stoneware pipe, brick masonry in C.M.1:6 plastering inside and outside exposed surface with C.M.1:3 including neat cement finish providing and fixing air tight C.I.lid with frame fixed in C.C.M-150 grade etc. complete as per detailed specifications and directions of the Engineer-in-charge. Mode of measurement: Reduction in depth of chamber less than 1.2 m depth the rate will be reduced @ Rs.1807.00 per meter depth. (Cement consumption @ 4 bags / No.)	No.	5	4999.00	24995.00
56.	Providing & fixing C.I.soil/waste/vent pipe of specified dia, including necessary fittings such as bend, tees, single junction, offset, excavation, refilling the trench and painting to the exposed pipes with two coats of oil paint etc. complete as per detailed specifications and directions of the Engineer-in-charge.				
	A) 80 mm dia	Rmt	10	656.60	6566.00
	B) 100 mm dia	Rmt	10	734.30	7343.00

Name of Project:		400/220kV Substation at Koradi			
Name of Work:		Construction of Control Room Building			
Sr.No.	Particulars	Unit	Qty	Rate (Rs.)	Amount (Rs.)
57.	Providing and fixing rigid PVC pipe (4kg/cm ²) pressure pipe class (2) of ISI mark prime or equivalent with solvent cement joint for soil/waste water pipe/vent/antisiphonage, rain water pipes of specified diameter – 110mm dia with all fixtures such as bends, tees, single or double junction slotted vertical offsets, cleaning eyes shoes with necessary excavation and refilling trenches if required, fixing on the walls vertical with brackets and nails and applying 3 coats of oil paint or water proof cement paint as per detailed specification and as directed by the Engineer-in-charge.	Rmt	42	123.00	5166.00
59.	Providing, laying & fixing G.I.pipes with screwed socket joint of specified diameters & 'c' class heavy type with all necessary G.I.fittings such as sockets, elbows, bends, tees, reducers, plugs, unions, clamps, etc. including necessary excavation in all types of strata, backfilling up to required depth, fixing with clamps and remaking the holes with good finishing, backfilling the excavated trench with all leads and lifts providing and applying anticorrosive primer and two coats of oil paint etc. complete as directed by the Engineer-in-charge at all leads and lifts.				
	On External Wall:				
	a) 15 mm dia	Rmt	25	142.20	3555.00
	b) 20 mm dia	Rmt	25	161.30	4032.50
	c) 25 mm dia	Rmt	25	209.40	5235.00
	d) 32 mm dia	Rmt	25	248.60	6215.00
	e) 40mm dia	Rmt	25	294.20	7355.00
	f) 50 mm dia	Rmt	10	356.00	3560.00
	--do--as above but on internal wall				
	a) 15 mm dia	Rmt	60	161.60	9696.00
	b) 20 mm dia	Rmt	20	188.10	3762.00
	c) 25 mm dia	Rmt	20	243.20	4864.00
	d) 32 mm dia	Rmt	60	296.50	17790.00
	e) 40mm dia	Rmt	10	364.10	3641.00
	f) 50 mm dia	Rmt	10	453.70	4537.00
	--do- as above but in trenches				
	a) 15 mm dia	Rmt	1	142.20	142.20
	b) 20 mm dia	Rmt	1	161.30	161.30
	c) 25 mm dia	Rmt	1	209.40	209.40
	d) 32 mm dia	Rmt	1	248.60	248.60
	e) 40mm dia	Rmt	50	294.20	14710.00
	f) 50 mm dia	Rmt	50	356.00	17800.00
62.	Providing & fixing screw down gun metal wheel / gate valve of leader make & specified size including necessary socket union nut etc. complete as per detailed specification and directions of the Engineer-in-charge including necessary testing etc. complete at all leads & lift for following pipes.				
	a) 20mm dia	No.	2	330.00	660.00
	b) 25 mm dia	No.	2	373.00	746.00
	c) 32 mm dia	No.	4	450.90	1803.60
	d) 40 mm dia	No.	2	546.10	1092.20
	e) 50 mm dia	No.	1	780.60	780.60

Name of Project:		400/220kV Substation at Koradi			
Name of Work:		Construction of Control Room Building			
Sr.No.	Particulars	Unit	Qty	Rate (Rs.)	Amount (Rs.)
63.	Providing & fixing 15 mm dia screw down C.P.brass bib taps including necessary socket / unions etc. complete as per detailed specifications and directions of the Engineer-in-charge.	No.	8	205.60	1644.80
64.	Providing and applying "SANDTEXMATT" KILLICK NIXON make of approved colour & shade in two coats to the plastered surfaces as per manufacturer's specifications over one coat of cement paint of corresponding shade including scaffolding if necessary etc. complete at all leads and lifts and as per detailed specifications and directions of the Engineer-in-charge.	Sq.m	1400	200.00	280000.00
65.	Providing & applying three coats of acid resisting (Epoxy base) paint & hardener of approved make, shade, scaffolding if necessary preparation of the surface and primary coat etc. complete at all leads and lifts and as per detailed specifications and directions of the Engineer-in-charge.	Sq.m	4	108.60	434.40
66.	Providing & applying acrylic emulsion valvet touch paint of approved quality, colour and shade to the new plastered surfaces, in two coats over surface lambi 9filler putty0 to receive the paint, etc. complete at all leads and lifts and as per detailed specifications and directions of the Engineer-in-charge.	Sq.m	1710	88.00	150480.00
67.	Providing & applying washable oil bound distemper of approved, colour and shade in two coats to the new plastered surfaces, on one coat of primer of approved make including scaffolding, preparing the surface to receive the priming and finishing coat etc. complete at all leads and lifts and as per detailed specifications and directions of the Engineer-in-charge.	Sq.m	1233	53.00	65349.00
68.	Providing & applying washable powder distemper in two coats after adding Fevicol DDL admixture on new plastered or masonry surface, including scaffolding & preparing the surface by brushing and brooming down etc. complete at all leads and lifts and as per detailed specifications and directions of the Engineer-in-charge.	Sq.m	100	46.30	4630.00
69.	Providing & applying 3 coats of oil paint of approved colour and shade to internal/external plastered surface, including scaffolding if necessary, cleaning and preparing the surface etc. complete at all leads and lifts and as per detailed specifications and directions of the Engineer-in-charge.	Sq.m	100	58.00	5800.00
70.	Providing & fixing C.P.towel rods 16mm dia and 750mm long including all accessories like brackets, screws etc. complete at all leads and lifts and as per detailed specifications and directions of the Engineer-in-charge.	No.	4	172.00	688.00
71.	Providing & fixing in position a set of 2 no. of heavy type C.P.brass double pointed pegs fixed on C.P.screws for fixing etc. complete at all leads and lifts and as per detailed specifications and directions of the Engineer-in-charge.	No.	2	300.00	600.00

Name of Project:		400/220kV Substation at Koradi			
Name of Work:		Construction of Control Room Building			
Sr.No.	Particulars	Unit	Qty	Rate (Rs.)	Amount (Rs.)
72.	Providing & fixing in position best quality Modiguard glass mirror of size 600 x 400 mm fixed on fibre glass plate with fibre glass frame all round etc. complete at all leads and lifts and as per detailed specifications and directions of the Engineer-in-charge.	No.	2	465.00	930.00
73.	Providing & fixing in position a 300mm x 150mm marble year plate engraving 10cm height letters / figures as directed including painting the letters / figures with approved colour & shade including etc. complete at all leads and lifts and as per detailed specifications and directions of the Engineer-in-charge.	No.	2	606.00	1212.00
74.	Providing , fixing and laying 3.15mm thick plain with 0.85 mm chequered Aluminium trench covers for cable tranches of 400KV control room. The covers should be of size 1.22 mm x 0.6 mm or as required different size including fabricating chequered plate cutting making the edges smooth by the granding and reveting the plate to the M.S angle frame both with diagonal of cover size by using M.S angle 25x25x3mm including fabrication of M.S angle with 3 coats of oil painting etc. providing and fixing aluminium chequered plate cover including fabrication the angles cutting fixing in flooring of cable trenches in line and level by drilling the holes or holdfast etc. including drilling the holes in angles and flooring a slot providing screws holdfast providing 3 coats of oil paint to angles and as per directions of the Engineer-in-charge. (Wt.of the plate should be 9.49 kg/sq.m)	Sq.m	95	2997.00	284715.00
75.	Providing and laying cement concrete flooring 40mm thick with cc 1:2:4 cement concrete laid to proper level and sloop in alternative bays including adding water proofing compound of approved quality at 1kg per bag of cement, compacting, PVC/glass/alluminium strips at joints, marking lines to give appearance of tiles 30 x 30 cm or other size laid diagonally/square etc. finishing smooth (with extra cement) in any colour as directed and curing complete.with drip mould at the junction of plaster and curing etc. complete at al leads and lifts with a guarantee of seven years (contractor shall have to give a ponding test for same.) Sp.No.as directed by the Engineer-in-charge.	Sq.m	3	219.00	657.00
76.	Providing & laying polished mandana acid proof tiles of 25 to 30mm in battery room on a bed on 20mm cement mortar 1:6 with neat Acid proof liquid & hardener of approved copy by providing 3 mm the joint between mandana tiles, firightly etc. complete.	Sq.m	8	1075.60	8604.80
77.	Providing integral finishing over RCC slabs as directed in C.M.1:2 and 20mm thick with approved quality of water proofing compound at the rate 1kg per 50 kg. of cement including finishing smooth in required slope, watering curing etc. complete on freshly laid RCC slabs with all leads and lifts (including coat of water proofing compound).	Sq.m	1	217.30	217.30

Name of Project:		400/220kV Substation at Koradi			
Name of Work:		Construction of Control Room Building			
Sr.No.	Particulars	Unit	Qty	Rate (Rs.)	Amount (Rs.)
78.	Providing and fixing 300mm diameter RCC collars in the exterior walls during construction for exhaust fan portion including finishing of edges to make perfect circular appearance etc. with all leads and lifts etc. as directed by the Engineer-in-charge.	No.	5	122.00	610.00
79.	Providing and adding liquid integral water proofing compound of approved make such as roff hyproof or equivalent, as per the manufacturer's instructions in cement concrete for roof slab, w.c. bath and nahani traps etc. complete as per the directions of Engineer-in-charge.	Litre	2	100.00	200.00
80.	Providing & laying 16 SWG G.I. sheet of 235mm width in between existing M.S angle slot, fixing, welding 10mm dia rod 150mm long at 125mm C.C. below G.I sheet for supporting at all leads and lifts, all as per detail drawing and fixing 240 av. Width 20mm thick white makrana abu marble slab at top as directed by the Engineer-in-charge.	Rmt	5	128.30	641.50
81.	Providing & fixing white glazed soap case of size 225 x 100 x 100 mm in the toilet including making necessary arrangement to wall fixing in c.m.1:4 and remaking the surface complete as directed.	No.	2	151.10	302.20
82.	Providing & fixing of liquid soap container of best quality with capacity of 250 ml. with filling of liquid soap inside, fixing at required places etc. complete as directed by the Engineer-in-charge at all leads & lifts.	No.	2	180.10	360.20
83.	Providing & supplying Godrej make brass Navtal lock seven levers with three keys for locking arrangement to main entrance door including all leads and transportation complete.	No.	5	525.00	2625.00
84.	Providing & installing high density polythelene ready made water storage tank of "Sintex" or equivalent or required capacity including conveying, hoisting making supporting arrangement interconnecting pipes, necessary connection to G.I.pipes, wash out arrangements, ball cock with PVC float as directed including toasting etc. complete as directed by the Engineer-in-charge.	Ltr	8000	7.00	56000.00
85.	Providing and fixing of approved quality aluminium grill of 8mm thick to the window and ventilator including fixing the grill in approved aluminium F channel, drilling, screwing fixing at all leads and lifts including and specification and direction of Engineer-in-charge.	Sq.m	200	3713.00	742600.00
86.	Providing and fixing 60mm thick factory made, hydraulically pressed, mechanically vibrated and compacted precast interlocking cement concrete paving blocks in following grade of approved size and shape as specified, 50 mm in gray cement and top surface 10mm in white cement with coloured pigment including cost of all materials, manufacturing, curing transportation of blocks to work site, including loading, unloading and stacking as directed, laying paving blocks in	Sq.m	500	963.00	481500.00

Name of Project:		400/220kV Substation at Koradi			
Name of Work:		Construction of Control Room Building			
Sr.No.	Particulars	Unit	Qty	Rate (Rs.)	Amount (Rs.)
	position over prepared bed of / sand of 50mm thickness laid on 230mm thick boulder soling with 100 mm thick sand padding below soling, which shall be paid under the respective item No.3 & 2 (b) including necessary excavation in all stratas, spreading blindage of fine sand over the prepared bed, compacting blocks by plate vibrator etc. complete at all leads and lifts as directed by the Engineer-in-charge for M-40 interlocking blocks.				
87.	--do--as above but for interlocking, blocks in M-25.	Sq.m	600	952.20	571320.00
88.	Providing and adding liquid plasticizer of approved make such as roff plast 330 or equivalent as per the manufacturers specification for use in controlled cement concrete of piles & pile caps etc. complete as per the directions of the Engineer-in-charge at all leads and lifts.	LITRE	10	168.00	1680.00
	Total Amount				5522401.66

BILL OF QUANTITY

Name of Project:		400/220kV Substation at Koradi			
Name of Work:		Construction of Bay control rooms			
Sr.No.	Particulars	Unit	Balance Qty	Rate (Rs.)	Amount (Rs.)
1	Excavation for foundation in trenches general leveling etc. in earth soils or all types such as slushy soils and gravel and soft murum etc. upto any depth below ground level including removing at a distance of 50 m beyond the building area with all lifts, stacking and / or spreading as directed, dewatering both for surface as well as sub soil water and keeping the area dry till casting of foundations, shoring and strutting wherever necessary, preparing the bed for the foundation and necessary back filling all as per the specifications and as directed by Engineer-in-charge etc. complete.				
a	In soft soil lift upto 1.5 m .	Cum	110	130.80	14378.84
b	In soft soil lift from 1.5 m to 3.00 m.	Cum	0		
c	In Hard murum lift upto 1.5 m	Cum	0		
d	In Hard murum lift from 1.5 m to 3.00 m	Cum	0		
e	In soft rock lift up to 1.5 m .	Cum	0		
f	In soft rock lift from 1.5 m to 3.00 m	Cum	0		
g	In Hard Rock	Cum	0		
2	Providing and laying dry trap granite quartzite/gneiss rubble 15 cm to 20 cm size for soling of specified thickness in one or more layers below flooring, foundations, including hand packing filling the interstices with quarry spoils and hard murum, watering, ramming and compaction and leveling with all lifts and leads etc. complete (Rate is for compacted volume.)	Cum	102	336.50	34168.04
3	Providing and laying in situ, cement concrete 1:4:8 of 40mm size down graded black basalt or equivalent approved stone metal for leveling course below foundations, flooring including dewatering wherever necessary form work, ramming, compacting, finishing to line, levels at all leads and lifts and curing etc. (Cement consumption @ 3.40 bags / cum)	Cum	0		
4	Providing and laying in situ reinforced and / or encased cement concrete M-25 grade (28 days works cube strength 25 N/mm ²) with approved, graded, trap, granite, quartzite, gneiss, basalt or equivalent approved stone aggregate of maximum size 20mm, including dewatering wherever necessary and keeping the pit dry till the concrete sets, mechanical vibration, finishing to required line, level, formwork, shuttering, curing at all leads and lifts all as per detailed specifications and as directed by the Engineer-in-charge for the following works but excluding reinforcement for foundation and footing. (Cement consumption @ 7.50 bags/cum)	Cum	0		
5	-do- but for columns and walls above 100mm thick . (Cement consumption @ 7.50 bags/cum)	Cum	0		

BILL OF QUANTITY

Name of Project:		400/220kV Substation at Koradi			
Name of Work:		Construction of Bay control rooms			
Sr.No.	Particulars	Unit	Balance Qty	Rate (Rs.)	Amount (Rs.)
6	-do- but for beams and lintels (Cement consumption @ 7.50 bags/cum)	Cum	2	7833.80	18014.92
7	-do- but for slab, landing, waist slab and steps etc. (Cement consumption @ 7.50 bags/cum)	Cum	1	10257.90	7188.74
8	-do- but for Chhajjas etc. (Cement consumption @ 7.50 bags/cum)	Cum	2	10257.90	17719.29
9	Providing and casting in situ cement concrete 1:2:4 of black basalt or equivalent 20mm size down graded approved stone metal for coping to plinth, parapet, sills, cornices, jambs, block course, architrave's, embedding floors or window frames all bounded or chamfered for RCC flooring etc. as per drawing and or as directed, including all leads & lifts, dewatering wherever necessary centering, form work, compacting finishing the exposed faces where minor honey combing or other minor facial defects have occurred with sufficient minimum thickness or 1:3 cement mortar to give a smooth and even surface or roughening the surface to receive plaster and curing etc. complete. (Cement consumption @ 6.27 bags / cum).	Cum	1	5705.30	5705.30
10	Providing, supplying, cleaning, cutting, bending and placing in position as per details furnished in the drawing or as directed by the Engineer-in-charge including preparation of bar bending schedule where required, plain mild steel reinforcement tested bars of grade 1 conforming to IS:432 (latest) and HYSD bar reinforcement conforming to IS:1139 or IS:1785 (latest edition) in all cement concrete works, including binding with 18 gauge soft annealed, M.S.binding wire / tack welding with all leads and lifts etc. complete.	MT	1	62250.00	62250.00
11	Providing and laying in situ M-25 grade cement concrete of trap / granite / quartzite / gneiss metal for cable trench wall including form work compaction by vibrating and rodding, curing at all leads and lifts etc. complete (excluding cost of reinforcement and cement consumption @ 7.50 bags / cum)	Cum	0		
12	Providing second class burnt brick masonry with conventional type brick in cement mortar 1:6 of 230mm or more thickness for plinth and superstructure at all leads and lifts including striking, joints on unexposed faces and raking out joints on exposed faces all necessary scaffolding curing etc. complete (Cement consumption @ 1.44 bags / cum).	Cum	1	3978.50	3978.50

BILL OF QUANTITY

Name of Project:		400/220kV Substation at Koradi			
Name of Work:		Construction of Bay control rooms			
Sr.No.	Particulars	Unit	Balance Qty	Rate (Rs.)	Amount (Rs.)
13	Providing internal cement plaster of 12mm minimum thickness in a single coat in cement mortar 1:4 with cement or neeru finish to concrete or brick masonry surface, in all positions and heights including scaffolding, roughening the base surface to receive plaster at all leads and lifts, curing etc. complete. (Cement consumption @ 0.11 bags / Sq.m).	Sq.m	47	130.40	6128.80
14	Providing on brick / concrete masonry surface sand faced cement plaster 25mm thick in two coats to all external surface in cement mortar 1:4 using approved quality of sand and in all positions after securing with nails prior to plastering chicken mesh 300mm wide at joints or RCC and masonry including base coat of 15mm thick using water proofing compound at 1kg per cement bag.(water proofing compound will not be paid separately) curing the same for not less than 2 days and keeping the surface of the base coat rough to receive the sand faced treatment 8 to 10 mm thick in C.M.1:4 finishing the surface by taking out grains curing complete at all leads and lifts complete (Cement consumption @ 0.22 bags / Sq.m).	SQM	0		
15	Providing rough cast cement plaster in C.M.1:4 in two coat to concrete, stone or brick masonry surfaces in all positions with base coat of 12 to 15mm thick in C.M.1:4 and rough cast treatment 12mm thick in proportion 1:1 1 / 2:3 including scaffolding at all leads and lifts and 14 days curing etc. complete(Cement consumption @ 0.22 bags / cum).	Sqm	1	324.00	324.00
16	Providing and fixing about 30 cm width chicken mesh of 22 gauge over external/internal joints of RCC member and brick wall of approved quality including fixing of mesh necessary nailing, drilling, tying at all leads and lifts and as per requirement and direction of Engineer-in-charge.	Sqm	10	173.33	1758.29
17	Providing and fixing precast marble mosaic chequered cement tiles conforming IS 1237 (latest) with gray cement base for treads of steps and staircase with nosing or treads, stilt area, moulded as per drawing or as directed in required position and landing also on a bed of C.M.1:4 including neat cement float finishing joints with neat cement slurry at all leads and lifts, curing polishing and cleaning complete (Cement consumption @ 0.18 bags/Sq.m	Sq.m	450	398.00	179100.00

BILL OF QUANTITY

Name of Project:		400/220kV Substation at Koradi			
Name of Work:		Construction of Bay control rooms			
Sr.No.	Particulars	Unit	Balance Qty	Rate (Rs.)	Amount (Rs.)
18	Providing and laying polished kotah hand cut stone slabs of size 600x450 mm or required size upto 40mm thick for flooring of approved pattern and laying on 20mm thick one or more bed for C.M.1:6 / LM 1:2 and for dado skirting on cement plaster 12mm to 20mm thick filling joints with neat cement slurry, curing polishing cleaning etc. complete at all leads and lifts as per detailed specifications and direction of the Engineer-in-charge (Cement consumption @ 0.13 bags/Sq.m	Sq.m	39	764.00	29481.81
19	Providing and fixing double leaf paneled door shutters 35mm thick as per the detailed drawing consisting country cut teak wood vertical styles and top rail 100 mm x 35mm and panels 12mm thick marine plywood (conforming to IS 710) including brass oxidized fixtures and fastenings inserted including T.W.beading providing and applying three coats of oil painting over a prepared polished smooth surface as directed by the Engineer-in-charge etc. complete at all leads and lifts with C.C.T.W.60x100mm frame.	Sq.m	1	4104.20	4104.20
20	Providing and fixing 24 guage plain aluminium sheet on the face door shutter including cutting to required size and fixing by screws including making good the damage if any to the existing door shutter and frame etc. complete at all leads and lifts as directed by Engineer-in-charge.	Sq.m	1	545.00	545.00
21	Supplying and fixing in position powder coated alluminium extruded section two track sliding window upto required height outer frame made from section of overall size 62mm x 45mm, bottom section with or without drain, track section weighting 0.90 kg per meter and top and side section weighting 0.838 kg per running meter with shutter or sections made of 19mm x 40mm size having average weight of 0.6 kg per running meter (or as required size with change in proportionate weight) with 5.5 mm selected quality plain sheet glass fixed with new neoprene gasket, shutters to be provided with nylon encased stainless steel roller, necessary locks and handles etc. as directed by the Engineer-in-charge at all leads and lifts with approved colour powder coated.	Sq.m	87	4044.00	351019.20

BILL OF QUANTITY

Name of Project:		400/220kV Substation at Koradi			
Name of Work:		Construction of Bay control rooms			
Sr.No.	Particulars	Unit	Balance Qty	Rate (Rs.)	Amount (Rs.)
22	Providing, fabricating structural steel work and fixing in position M.S.flat bracket, suspension for fixing of cable trays to concrete beam / column by M.S. brackets/anchor bolts all as per drawings including one coat of primer and two coats of oil paint of approved colour at all leads and lifts as directed by Engineer-in-charge.	MT	5	59900.00	299500.00
23	Providing and fixing rigid PVC pipe (4kg/cm ²) pressure pipe class (2) of ISI mark prime or equivalent with solvent cement joint for soil / water pipes of specified diameter 110mm dia with all fixtures such as bends, tees, single or double junction slotted vertical offsets, cleaning eyes shoes with necessary excavation and refilling trenches if required, fixing on the walls vertical with brackets and nails and applying 3 coats of oil paint or water proof cement paint at all leads and lifts as per detailed specification and as directed by Engineer-in-charge.	RMT	172	123.00	21156.00
24	Providing and applying "SAND TEXMATT" KILLICK NIXON make or equivalent of approved colour and shade in two coats to the plastered surfaces as per manufacturer's specification over one coat of cement primer paint of corresponding shade including scaffolding if necessary etc. complete at all leads and lifts and as per detailed specification and direction of the Engineer-in-charge.	Sq.m	1700	200.00	340000.00
25	Providing and applying acrylic emulsion valvet touch paint of approved quality, colour and shade to the new plastered surfaces, in two coats over surface lambi (filler putty) to receive the paint, etc. complete at all leads and lifts and as per detailed specifications and directions of the Engineer-in-charge.	Sq.m	1350	88.00	118800.00
26	Providing and applying washable powder distemper in two coats after adding Fevicol DDL admixture on new plastered or masonry surface, including scaffolding and preparing the surface by brushing and brooming down etc. complete at all leads and lifts and as per detailed specifications and directions of the Engineer-in-charge.	Sq.m	1	53.00	53.00

BILL OF QUANTITY

Name of Project:		400/220kV Substation at Koradi			
Name of Work:		Construction of Bay control rooms			
Sr.No.	Particulars	Unit	Balance Qty	Rate (Rs.)	Amount (Rs.)
27	Providing, fixing and laying 3.15 mm thick plain with 0.85mm chequered alluminium trench covers for cable trenches of 400KV control room the covers should be of size 1222 mm x 600mm or as required different size including fabricating chequered plate reveting making the edges smooth by the grinding and reveting the plate to the MS angle frame both with diagonal of cover size by using MS angle 25x25x3mm including Fabrication of M.S angle with 3 coats of oil painting etc. providing and fixing alluminium chequered plate cover including fabrication the angles cutting fixing in flooring of cable trenches in line and level by drilling the holes or holdfast etc. including drilling the holes in angles and flooring a slot providing screws holdfast providing 3 coats of oil paint to angles and as per direction of the Engineer-in-charge (Wt. of the plaster should be 9.49 kg/sqm) (Rate is excluding structural steel work. Amount of structural steel work will be paid under respective item).Note: Weight of aluminium cover sheet will be measured for finished cover.	sqm	150	3011.00	451650.00
28	Providing and laying cement concrete flooring 40mm thick with cc 1:2:4 cement concrete laid to proper level and sloope in alternative bays including adding water proofing compound of approved quality at 1kg per bag of cement, compacting, PVC/glass/alluminium strips at joints, marking lines to give appearance of tiles 30 x 30 cm or other size laid diagonally/square etc. finishing smooth (with extra cement) in any colour as directed and curing complete.	Sq.m	26	219.00	5604.78
29	Providing and adding liquid integral water proofing compound of approved make such as roff hyproof or equivalent as the manufacturer's instructions in cement concrete for roof slab, W.C.bath and Nahani taps etc. complete as per the directions of Engineer-in-charge.	Liter	21	100.00	2051.84
30	Providing and supplying Godrej make brass Navatal Lock seven levers with three keys for locking arrangement to main entrance door including all leads and transportation etc.	No.	1	525.00	525.00
TOTAL AMOUNT (Rs.)					1975205.54

BILL OF QUANTITY

Name of project :		400/220 KV Sub - Station at KORADI			
Name of work :		Other miscellaneous works			
ITEM NO.	PARTICULARS OF ITEMS	UNIT	Qty	Unit Rate	Amount
1	Providing and laying vetrified tiles of approved make and quality of required size and thickness for flooring in required position laid on bed of C.M. 1:4 cement slurry, cleaning, complete. a) 600mmX600mm Size.	Sq.m	10	1337.10	13371.00
2	Providing cement plaster 6mm thick to ceiling in single coat in cement mortar 1:3 with neeru finish to concrete surface in all positions including scaffolding and curing etc. complete.	Sq.m	25	105.70	2642.50
3	Providing cement plaster 6mm thick to ceiling in single coat in cement mortar 1:4 with neeru finish to concrete surface in all positions including scaffolding and curing etc. complete.	Sq.m	25	100.20	2505.00
4	Providing and casting in situ C.C.1:1 1/2:3 (M 20) grade of trap/granite/quartzite/gneiss black basalt approved 20mm size metal fo following RCC works as per detailed drawing and design or as directed including dewatering,,steel/plywood, centering, form work, compaction, finishing the formed surface with C.M.1:3 of sufficient minimum thickness to give smooth and even surface or roughening if special finish is to be provided and curing etc. complete as directed (excluding steel reinforcement)			0.00	
	a) Wall	Cum	15	9157.60	137364.00
	b) Slab	Cum	1	6096.30	6096.30
5	Providing, lowering, laying & jointing cement concrete NP2 class hume pipe 300mm dia in C.M.1:4 at G.L. for laying cables including jointing C.M.1:1 curing etc. complete at all, leads and lifts as per directions of the Engineer-in-charge.	Rmt	10	422.90	4229.00
6	Providing and fixing division plate for urinal in gents toilet as per direction of the Engineer-in-charge.	Nos	2	1103.30	2206.60
7	Providing and construction soakpit of size 2500mm dia and 3000mm in depth by honeycombing brickwork with brick bat and brick ballast etc. as per specification and direction of the Engineer-in-charge.	No	1	15228.15	15228.15
				TOTAL	183642.55