

Annexure - I

Detailed Price Schedules
(Part I to Part XV)

Part I: Page 1 of 1

Name of Work: Civil Works pertaining to 400 K.V. / 220 KV Sub – Station at Lonikand II, Tal. Haveli,
Dist. Pune.

Part I: Land Development of 400 / 220 K.V. Lonikand II

ABSTRACT

NO.	PARTICULARS OF ITEMS	QUANTITY	RATE	UNIT	AMOUNT
1.	Excavation for leveling of land in earth soil all sort, sand, gravel or soft murum including dressing, the section to required grade, camber and side slopes and conveying the excavated material with all lifts upto a distance of 50meters beyond the cutting area and spreading for embankment or stacking as directed (Rd.2 page 183 &184)	15,000.00		Cum.	
2.	--do--as per item No.1 but excavation in hard murum with or without boulders etc. complete.(Rd.2 page 183 &184)	30,000.00		Cum.	
3.	Conveying the material obtained from cutting for leveling of land including all lifts, laying in layers of breaking clods, dressing for the required level for a lead of 50 meters to 300 meters, compaction with power roller at 95% of standard proctor density of 20 to 30 cm from the excavation of the site of deposition as directed etc. complete. (Rd.11A/188)	40,000.00		Cum.	
				Total	

Part II: Page 1 of 5

Name of Work: Civil Works pertaining to 400 K.V. / 220 KV Sub – Station at Lonikand II, Tal. Haveli, Dist. Pune.

Part II: Construction of Transformer foundation, permanent rail track, diamond crossing and allied works in 400/ 220 KV S/s Lonikand II (400 K.V. SWITCHYARD)

ABSTRACT

NO.	PARTICULARS OF ITEMS	QUANTITY	RATE	UNIT	AMOUNT
1 a.	Excavation for foundation in earth soil of all types sand, gravel and soft murum etc. upto any depth below ground level including removing the excavated material upto a distance of 50 meter beyond the working area and all lift and stacking and spreading as directed, dewatering, shoring and strutting preparing the bed for the foundation necessary back filling etc. complete. (Bd. A – 1 page no. 259)	400.00		Cum.	
1 b.	-- do -- all as per Item No. 1 a. but excavation in hard murum with or without boulders etc. complete. (Bd. A – page no. 259)	500.00		Cum.	
1 c.	-- do -- as per Item No. 1 a. but excavation in soft rock etc. complete. (Bd. E – page no. 287)	350.00		Cum.	
1 d.	-- do -- as per Item No. 1 a. but excavation in hard rock by controlled blasting etc. complete.	1000.00		Cum.	
1 e.	-- do -- as per item No. 1 a. but excavation in hard rock by pneumatic chiseling etc. complete.	300.00		Cum.	
2.	Providing and laying in situ cement concrete 1:4:8 using 40 mm graded stone metal for foundation and bedding including dewatering, formwork, compacting, curing etc. complete as directed. (Bd. E – 1 / 287)	242.00		Cum.	
3.	Providing & fixing M.S. / Tor steel reinforcement of various diameter in RCC footings, columns, beams, slabs, etc. as per detailed design & drawing and schedule including cutting, bending hooking the bar, binding with binding wire or tack welding and supporting as required etc. complete. (Bd.F 17)	115.00		M.T.	
4.	Providing and laying in situ cement concrete 1:2:4 of trap stone metal for coping to B.B.M. walls, including scaffolding, compacting, curing etc. complete. (Bd. E – 3 page no. 288)	14.00		Cum.	

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NO.	PARTICULARS OF ITEMS	QUANTITY	RATE	UNIT	AMOUNT
5.	Providing and laying in situ cement concrete M 25 of trap stone metal for R.C.C. foundation raft etc. including bailing out water, formwork, centering, compaction and curing etc. complete. as directed. (Bd. F – 3 page no. 298)	340.00		Cum.	
6.	Providing and laying in situ cement concrete M 25 of trap metal for R.C.C. foundation footing etc. including bailing out water, formwork, centering, compaction and curing etc. complete. as directed. (Bd. F – 3 page no. 298)	83.00		Cum.	
7 a.	Providing and casting in situ cement concrete M 25 of trap metal for R.C.C. beams walls etc. including bailing out water, formwork, centering compaction and curing etc. complete as directed. (Bd. F – 6 page no. 300)	230.00		Cum.	
7 b.	-- do -- as per item no. 7 a. but cement concrete M 25 for R.C.C. column etc. complete.	70.00		Cum.	
7 c.	-- do -- as per item no. 7 a. but cement concrete 1:1½:3 for slab etc. complete.	200.00		Cum.	
8.	Providing and constructing IInd class burnt brick masonry with conventional type of bricks in CM 1:6 in foundation and plinth of inner and outer walls including bailing out water, striking joints on exposed faces, watering etc. complete. (BDG 5 / Page no. 314)	120.00		Cum.	
9.	Providing and constructing IInd class burnt brick masonry with conventional type of bricks in CM 1:6 in superstructure at all heights and lifts, including racking out joints, watering and scaffolding etc. complete. (BDG 5 / Page no. 314)	224.00		Cum.	
10.	Providing and applying cement plaster 20 mm thick in cement mortar 1:4 without neeru finish to brick or concrete surface complete at all lifts as per detailed specification and direction of Engineer – in – charge & curing etc. complete. (Bd. L – 4 / 368)	1,495.00		Sqm.	
11.	Providing and applying sand face cement plaster in CM 1:4 in two coats to brick masonry concrete surface, using approved screened sand in all positions including base coat of 15 mm thick in CM 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	500.00		Sqm.	

Part II: Page 3 of 5

NO.	PARTICULARS OF ITEMS	QUANTITY	RATE	UNIT	AMOUNT
	receive the sand face treatment of 6 to 8 mm thick in CM 1:4 finishing the surface by taking out grains and curing scaffolding etc. complete. (Bd. L – 7 / 369)				
12.	Supplying of 80 mm trap stone metal including conveying and stacking etc. complete at all leads and lift as directed.	300.00		Cum.	
13.	Supplying of 40 mm trap stone metal including conveying and stacking etc. complete at all leads and lift as directed.	120.00		Cum.	
14.	Providing and constructing brick masonry inspection chamber of size 900 x 450 mm (internal size) including cement concrete 1:4:8 foundation, C.C. 1:2:4 for coping, B.B. masonry upto desired depth, plastering from inside & outside, including necessary excavation, 3” thick R.C.C. covers with frame fixed in C.C. 1:2:4, curing etc. complete as directed by Engineer – in –charge.	60.00		Nos.	
15.	Providing and laying cement concrete pipes of ISNP 150 mm. dia. in proper line, level and slope excluding excavation and fixing of collars, filling joints in cement mortar 1:1 curing refilling the trench etc. complete. (Bd. V – 42 / 574)	500.00		Rmt.	
16.	Providing and fixing of 105 / 90 lbs rail poles on transformer plinth and rail track diamond crossing in required line, level and gauge specified including cutting, welding, transporting from store to site fixing with welding on M.S. plate and painting with two coats of oil paint over on coat of red oxide etc. complete.	27.00		M.T.	
17.	Disposal of surplus material obtained from excavation like soft murum, boulders, soft rock & hard rock etc. by any means, including loading, unloading and spreading upto 500 m & laying in low lying area including compaction / watering etc. complete.	1,800.00		Cum.	
18.	Providing and supplying factory made pre-stressed cable trench covers of required size and length as directed by Engineer – in – charge including R.C.C. concrete of M 40 grade, high tensile wire of 4 mm dia 8 nos. in width of 300 mm and thickness of covers 60 to 75 mm neat cement finish in all side	155.00		Sqm.	

Part II: Page 4 of 5

NO.	PARTICULARS OF ITEMS	QUANTITY	RATE	UNIT	AMOUNT
	and grinding of external edge of H.T. wire and providing non corrosive lifting arrangement at two places of cover top, curing, testing of covers, including transportation of the work site, loading and unloading etc. complete.				
19.	Providing, fabricating and fixing in required position, M.S. insert consisting of M.S. angles, plates, channels etc. in concrete including properly in position and level by welding to the reinforcement etc. complete, including one coat of primer and two coats of approved oil paint etc. complete as directed.	2.00		M.T.	
20.	Labour charges for fixing the bolts of various dia with the help of M.S. template including transporting the templates, bolts and nuts to site at desired location, leveling templates and bolts as directed, including laying fixing the bolts with the help of M.S. bar pieces welding properly with reinforcement of column for keeping the template and bolts in position, while concreting cleaning the template, nut and threaded portion of bolts, greasing the threaded portion of the bolts & tying it with gunny bags etc. complete. All as per the directives of the Engineer – in – charge including transporting nuts to company's site – store after completion of the work. (only anchor bolts, nuts and templates will be supplied by the company at free of cost.	500.00		No.	
21.	Providing and fixing formwork for pocket holes of various sizes or as directed, including shuttering, fixing in position, proper alignment it desired center line, removing the shuttering after concreting work, making good any damages occurred while removing all as directed etc. complete.	100.00		No.	
22.	Providing and laying dry trap stone soling in plinth and below flooring sub grade, 230 mm thick including hand packing compaction etc. complete. (Bd. A page no. 264)	170.00		Cum.	
23.	Providing supplying and filling the shinglu sand into cable trench including conveying etc. complete at all lead and lift as directed.	50.00		Cum.	
24.	Providing and applying water proofing cement paint	2,300.00		Cum.	

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NO.	PARTICULARS OF ITEMS	QUANTITY	RATE	UNIT	AMOUNT
	in 3 coat of approved manufacturer and approved shade to the plaster surface watering for two day etc. complete.				
				Total.	

Part III: Page 1 of 4

Name of Work: Civil Works pertaining to 400 K.V. / 220 KV Sub – Station at Lonikand II, Tal. Haveli, Dist. Pune.

Part III: Construction of Transformer plinths and other allied works in 220 KV Switchyard 400 KV Lonikand II S/s (220 K.V. SWITCHYARD)

ABSTRACT

NO.	PARTICULARS OF ITEMS	QUANTITY	RATE	UNIT	AMOUNT
1 a.	Excavation for foundation in earth soil of all types sand, gravel and soft murum etc. upto any depth below ground level including removing the excavated material upto a distance of 50 meter beyond the working area and all lift and stacking and spreading as directed, dewatering, shoring and strutting preparing the bed for the foundation necessary back filling etc. complete. (Bd. A – 1 page no. 259)	125.00		Cum.	
1 b.	-- do -- all as per Item No. 1 a. but excavation in hard murum with or without boulders etc. complete. (Bd. A – page no. 259)	500.00		Cum.	
1 c.	-- do -- as per Item No. 1 a. but excavation in soft rock etc. complete. (Bd. E – page no. 287)	190.00		Cum.	
1 d.	-- do -- as per Item No. 1 a. but excavation in hard rock by controlled blasting etc. complete.	570.00		Cum.	
1 e.	-- do -- as per item No. 1 a. but excavation in hard rock by pneumatic chiseling etc. complete.	250.00		Cum.	
2.	Providing and laying in situ cement concrete 1:4:8 of trap stone metal for foundation and bedding including bailing out water, compacting, curing etc. complete as directed. (Bd. E – 1 / 287)	60.00		Cum.	
3.	Providing and laying in situ cement concrete 1:3:6 of trap stone metal for foundation and bedding including bailing out water, compacting, curing etc. complete as directed. (Bd. E – 6 / 291)	20.00		Cum.	
4.	Providing and laying in situ cement concrete 1:2:4 of trap stone metal for coping to B.B.M. walls, including scaffolding, compacting, curing etc. complete. (Bd. E – 3 page no. 288)	8.00		Cum.	
5 a.	Providing and casting in situ cement concrete M 25 of trap stone metal for R.C.C. foundation raft etc. including bailing out water, formwork, compaction	22.00		Cum.	

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NO.	PARTICULARS OF ITEMS	QUANTITY	RATE	UNIT	AMOUNT
	and curing etc. complete. as directed. (Bd. F – 3 page no. 298)				
5 b.	Providing and laying in situ cement concrete M 25 of trap metal for R.C.C. foundation footing, raft etc. including bailing out water, formwork, centering, compaction and curing etc. complete. as directed. (Bd. F – 3 page no. 298)	65.00		Cum.	
6.	-- do – as per Item No. 5 b but M 25 for column etc. complete.	27.00		Cum.	
7.	-- do – as per Item No. 5 b but M 25 for R.C.C. beams / walls etc. complete.	18.00		Cum.	
8.	-- do – as per item no. 7 b but C.C. 1:1 ½ :3 for R.C.C. slab etc. complete.	3.00		Cum.	
9.	Providing & fixing M.S. / Tor steel reinforcement of various diameter in RCC footings, columns, beams, slabs, etc. as per detailed design & drawing and schedule including cutting, bending hooking the bar, binding with binding wire or tack welding and supporting as required etc. complete. (Bd.F 17 Page no.306)	21.00		M.T.	
10.	Providing and constructing IInd class burnt brick masonry with conventional type of bricks in CM 1:6 in foundation and plinth of inner and outer walls including bailing out water, striking joints on exposed faces, watering etc. complete. (BDG 5 / Page no. 314)	115.00		Cum.	
11.	Providing and applying 20 mm sand face cement plaster in CM 1:4 to masonry or concrete with fine cement finish in all position including scaffolding, smooth finish, curing etc. complete.	820.00		Sqm.	
12.	Providing & applying 20 mm thick cement plaster in C:M 1:4 to concrete or brick surface with approved type sand and in all position including scaffolding curing etc. complete. (BDL 4A / Page no. 365)	180.00		Sqm.	
13.	Providing & applying 12 mm thick integral finishing in C:M 1:3 including smooth cement finish and with using water proofing compound as per manufacturers instruction, curing etc. complete. As directed by Engineer – in –charge.	150.00		Sqm.	

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NO.	PARTICULARS OF ITEMS	QUANTITY	RATE	UNIT	AMOUNT
14.	Providing and supplying and filling in required area 80 mm trap stone metal in transformer foundation, plinth with approved quality metal etc. complete.	110.00		Cum.	
15.	-- do -- as per Item No. 14 but for 40 mm metal etc. complete.	50.00		Cum.	
16.	Providing and constructing brick masonry inspection chamber of size 900 x 450 mm (internal size) including cement concrete 1:4:8 foundation, C.C. 1:2:4 for coping, B.B. masonry upto desired depth, plastering from inside & outside, including necessary excavation, 3" thick R.C.C. covers with frame fixed in C.C. 1:2:4, curing etc. complete as directed by Engineer – in –charge.	24.00		No.	
17.	Providing and laying cement concrete pipes of ISNP 150 mm. dia. in proper line, level and slope excluding excavation and fixing of collars, filling joints in cement mortar 1:1 curing refilling the trench etc. complete as directed.	150.00		Rmt.	
18 a.	Providing and supplying factory made pre-stressed cable trench covers of required size and length as directed by Engineer – in – charge including R.C.C. concrete of M 40 grade, high tensile wire of 4 mm dia 8 nos. in width of 300 mm and thickness of covers 60 mm, neat cement finish in all side and grinding of external edge of H.T. wire and providing non corrosive lifting arrangement at two places of cover top, curing, testing of covers, including transportation of the work site, loading and unloading etc. complete.	320.00		Sqm.	
18 b.	Laying of R.C.C. cover in line and level on cable trench top including conveying at any lead etc. complete as directed by Engineer – in –charge.	320.00		Sqm.	
19.	Providing and fixing R.C.C. cover of 3" thickness over man hole and inspection chamber, including M.S. / Tor steel reinforcement, fixing in C.C. 1:2:4 curing etc. complete. (1.15m x 0.60 mtr. size) etc. as directed.	38.00		No.	
20.	Providing and fixing PVC pipe 160 mm dia with fittings such as bends, tees, reducers, clamps, elbows, including necessary excavation, back filling the trenches etc. all as directed by Engineer – in – charge.	10.00		Rmt.	

Part III: Page 4 of 4

NO.	PARTICULARS OF ITEMS	QUANTITY	RATE	UNIT	AMOUNT
21.	Providing and fixing of 105 / 90 lbs rail poles on transformer plinth and rail track, diamond crossing in required line, level and gauge specified including cutting, welding, transporting from store to site fixing with welding on M.S. plate and painting with two coats of oil paint over on coat of red oxide etc. complete.	2.50		M.T.	
22.	Disposing of surplus excavated material by any means including loading, unloading and spreading and stacking upto 500 m in low lying area including compaction / watering as directed.	1,200.00		Cum.	
23.	Providing and applying water proofing cement paint in 3 coat of approved manufacturer and approved shade to the plaster surface watering for two day etc. complete.	180.00		Sqm.	
24.	Back filing of foundation pit with approved departmental excavated material obtained from item No. 1 a. to 1 e. in 150 mm to 200 mm layer, including sufficient watering and compaction up to satisfaction of Engineer – in -charge.	635.00		Cum.	
25.	Providing, fabricating and fixing in required position, M.S. insert consisting of M.S. angles, plates, channels etc. in concrete including properly in position and level by welding to the reinforcement etc. complete, including one coat of primer and two coats of approved oil paint etc. complete as directed.	2.00		M.T.	
26.	Providing and fabricating mild steel galvanized anchor bolts and washers of required dimensions, lengths & diameter as per detailed drawing, design including threading at top of required length and providing hot dip galvanized for bolts upto required length at top and nuts, washers, mild steel plate of required size shall be welded at bottom of the bolts including 2 nos. of standard galvanized nuts and spring washers suitable for bolts shall be supplied with each bolt the bright steel for bolts to confirm IS 2629 and IS 2638 etc. complete all as per directions of the Engineer-in-charge.	1.00		M.T.	
				Total	

Part IV: Page 1 of 3

Name of Work: Civil Works pertaining to 400 K.V. / 220 KV Sub – Station at Lonikand II, Tal. Haveli, Dist. Pune.

Part IV: Construction of 400 K.V. Gantry foundations at 400 K.V. Lonikand II S/s (400 K.V. SWITCHYARD)

ABSTRACT

NO.	PARTICULARS OF ITEMS	QUANTITY	RATE	UNIT	AMOUNT
1 a.	Excavation for foundation in earth soil of all types sand, gravel and soft murum etc. including removing excavated materials up to a distance of 50 meter beyond the building area and stacking, spreading as directed, dewatering, preparing the bed for the foundation, ramming watering including shoring and strutting etc. complete. (Bd. A – 1, Page no. 259)	6,000.00		Cum.	
1 b.	-- do – as per Item No. 1 a. but excavation in hard murum with or without boulders etc. complete. (Bd. A 2&3, Page no. 259)	3,500.00		Cum.	
1 c.	-- do – as per Item No. 1 a. but excavation in soft rock etc. complete. (Bd. A – 4 Page no. 259)	1,000.00		Cum.	
1 d.	-- do -- as per Item No. 1 a. but excavation in hard rock by controlled blasting etc. complete. (Bd. A – 5 Page no. 259)	2,000.00		Cum.	
1 e.	-- do -- as per item No. 1 a. but excavation in Hard rock by pneumatic chiseling etc. complete. (As directed by Engineer – in –charge)	500.00		Cum.	
2.	Providing and laying in situ cement concrete 1:4:8 of trap stone metal for foundation and bedding including bailing out water, compacting, curing etc. complete. (Bd. E – 1 Page no. 287)	160.00		Cum.	
3 a.	Providing and laying in situ cement concrete M 25 of trap metal for R.C.C. work in foundations like raft, grillages, strip, foundations and footings of R.C.C. columns and steel stanchions including bailing out water, formwork, compacting, curing & roughening the surface if special finish is to be provided. (Excluding reinforcement & structural steel) complete. (Bd. F – 2 Page no. 297, B 7, Page no. 38)	2,000.00		Cum.	
3 b.	Providing & casting in situ C.C. M 25 (1:1:2) of trap metal for RCC beams ,walls etc such other items including bailing out water, formwork, compacting, roughening the surface if special finish is to be provided, curing & finishing if required, complete. (BdE 4, Page no. 289 & B – 7 Page no.	100.00		Cum.	

Part IV: Page 2 of 3

NO.	PARTICULARS OF ITEMS	QUANTITY	RATE	UNIT	AMOUNT
	38)				
4 a.	Providing & casting in situ C.C. M 25 of trap metal for R.C.C. columns as per detailed design & drawings or as directed including centering, formwork, compacting & roughening the surface if special finish is to be provided, curing complete. (Excluding reinforcement) (BDF 5, Page no. 300 & B – 7 Page no. 38)	270.00		Cum.	
5.	Providing & fixing M.S. / Tor steel reinforcement of various diameter in RCC footings, columns, beams, slabs, etc. as per detailed design & drawing and schedule including cutting, bending hooking the bar, binding with binding wire or tack welding and supporting as required etc. complete. (Bd.F 17)	250.00		M.T.	
6.	Labour charges for fixing the bolts of various dia with the help of M.S. template including transporting the templates, bolts and nuts etc. to site at desire position, leveling template and bolts as directed including laying, fixing the bolts with the help of M.S. bar pieces, welding properly with the reinforcement of columns for keeping template and bolt in position while concreting cleaning the templates and nuts and threaded portion of bolts, templates and nuts & tying it with gunny bags etc. complete. All as per the directives of the Engineer – in – charge including transporting templates & nuts to company's site – store after completion of the works (only anchor bolts, nuts and templates will be supplied by the company at free of cost, all tools and plants required shall be arranged by the agency.	670.00		No. of Bolts	
7.	Providing and applying 20 mm cement plaster in C M 1:4 to masonry or concrete surface with approved type of sand and in all positions including smooth finish, curing etc. complete. (Bd.L 4, Page no. 368)	300.00		Sqm.	
8.	Conveying of excavated material like soft murum, boulders by any means including loading, unloading & spreading / stacking up to a lead of 300 m or as directed by Engineer – in – charge The material should be spreading in low lying area including compacting and watering..	3,000.00		Cum.	
9.	Providing & applying 3 coats of water proof cement paint of approved manufacturer and of approved colour to the plastered surface, watering for two days etc. complete. (Bd.O 8, Page no. 406)	300.00		Sqm.	

Part IV: Page 3 of 3

NO.	PARTICULARS OF ITEMS	QUANTITY	RATE	UNIT	AMOUNT
10.	Providing, fabricating and fixing in required position M.S. insert consisting of angles, plates, channels etc. in concrete including properly in position by welding to the reinforcement etc. complete including one coat primer and two coats of approved oil paints.	1.00		M.T.	

Part V: Page 1 of 3

Name of Work: Civil Works pertaining to 400 K.V. / 220 KV Sub – Station at Lonikand II, Tal. Haveli, Dist. Pune.

Part V: Construction of 220 K.V. Gantry foundations at 400 / 220 K.V. Lonikand II S/s (220 K.V. SWITCHYARD)

ABSTRACT

NO.	PARTICULARS OF ITEMS	QUANTITY	RATE	UNIT	AMOUNT
1 a.	Excavation for foundation in earth soil of all types sand, gravel and soft murum etc. including removing excavated materials up to a distance of 50 meter beyond the building area and stacking, spreading as directed, dewatering, preparing the bed for the foundation, ramming watering including shoring and strutting etc. complete. (Bd. A – 1, Page no. 259)	9,000.00		Cum.	
1 b.	-- do -- as per Item No. 1 a. but excavation in hard murum with or without boulders etc. complete. (Bd. A 2&3, Page no. 259)	2,000.00		Cum.	
1 c.	-- do -- as per Item No. 1 a. but excavation in soft rock etc. complete. (Bd. A – 4 Page no. 259)	625.00		Cum.	
1 d.	-- do -- as per Item No. 1 a. but excavation in hard rock by controlled blasting etc. complete. (Bd. A – 5 Page no. 259)	1,250.00		Cum.	
1 e.	-- do -- as per item No. 1 a. but excavation in Hard rock by pneumatic chiseling etc. complete. (As directed by Engineer – in –charge)	850.00		Cum.	
2.	Providing and laying in situ cement concrete 1:4:8 of trap stone metal for foundation and bedding including bailing out water, compacting, curing etc. complete. (Bd. E – 1 Page no. 287)	180.00		Cum.	
3 a.	Providing and laying in situ cement concrete M 25 of trap metal for R.C.C. work in foundations like raft, grillages, strip, foundations and footings of R.C.C. columns and steel stanchions including bailing out water, formwork, compacting, curing & roughening the surface if special finish is to be provided. (Excluding reinforcement & structural steel) complete. (Bd. F – 2 Page no. 297, B 7, Page no. 38)	3,250.00		Cum.	
3 b.	Providing & casting in situ C.C. M 25 (1:1:2) of trap metal for beams, walls etc such other items including bailing out water, formwork, compacting, roughening the surface if special finish is to be	80.00		Cum.	

Part V: Page 2 of 3

NO.	PARTICULARS OF ITEMS	QUANTITY	RATE	UNIT	AMOUNT
	provided, curing & finishing if required, complete. (BdE 4, Page no. 289 & B – 7 Page no. 38)				
4.	Providing & casting in situ C.C. M 25 of trap metal for R.C.C. columns as per detailed design & drawings or as directed including centering, formwork, compacting & roughening the surface if special finish is to be provided, curing complete. (Excluding reinforcement) (BDF 5, Page no. 300 & B – 7 Page no. 38)	185.00		Cum.	
5.	Providing & fixing M.S. / Tor steel reinforcement of various diameter in RCC footings, columns, beams, slabs, etc. as per detailed design & drawing and schedule including cutting, bending hooking the bar, binding with binding wire or tack welding and supporting as required etc. complete. (Bd.F. 17)	250.00		M.T.	
6.	Labour charges for fixing the bolts of various dia with the help of M.S. template including transporting the templates, bolts and nuts etc. to site at desired position, leveling template and bolts as greasing the threaded portion of the bolts & tying it with gunny bags etc. complete. All as per the directives of the Engineer – in – charge including transporting templates & nuts to company's site – store after completion of the works (only anchor bolts, nuts and templates will be supplied by the company at free of cost, all tools and plants required shall be arranged by the agency.	900.00		No. of Bolts	
7.	Providing and applying 20 mm cement plaster in C M 1:4 to masonry or concrete surface with approved type of sand and in all positions including smooth finish, curing etc. complete. (Bd.L 4, Page no. 368)	400.00		Sqm.	
8.	Conveying of excavated material like soft murum, boulders by any means including loading, unloading & spreading up to a lead of 300 m for leveling of ground including compaction / watering etc. as required.	4,000.00		Cum.	
9.	Providing & applying 3 coats of water proof cement paint of approved manufacturer and of approved colour to the plastered surface, watering for two days etc. complete. (Bd.O 8, Page no. 406)	400.00		Sqm.	

Part V: Page 3 of 3

NO.	PARTICULARS OF ITEMS	QUANTITY	RATE	UNIT	AMOUNT
10.	Providing, fabricating and fixing in required position M.S. insert consisting of angles, plates, channels etc. in concrete including properly in position by welding to the reinforcement etc. complete including on coat primer and two coats of approved oil paints.	1.00		M.T.	

Part VI: Page 1 of 3

Name of Work: Civil Works pertaining to 400 K.V. / 220 KV Sub – Station at Lonikand II, Tal. Haveli, Dist. Pune.

Part VI: Construction of Equipment foundation in 400 KV and 220 KV Switchyard at 400 KV S/s Lonikand II

ABSTRACT

SR. NO.	PARTICULARS OF ITEMS	QUANTITY	RATE	UNIT	AMOUNT
1 a.	Excavation for foundation in earth soil of all types sand, gravel and soft murum and all types of filled up strata including removing the excavated material upto a distance of 50 meter beyond the working area and stacking and spreading as directed, dewatering preparing the bed for the foundation and necessary back filling, ramming, watering including shoring and strutting etc. complete at all lead and lift. (Bd. A – 1 Page no. 259)	20,000.00		Cum.	
b.	Excavation for foundation in hard murum with or without boulders including removing the excavated material upto a distance of 50 meter beyond the working area and stacking and spreading as directed, dewatering preparing the bed for the foundation and necessary back filling, ramming, watering including shoring and strutting etc. complete at all lead and lift. (Bd. A – 2&3 Page no. 259)	10,000.00		Cum.	
1 c.	-- do -- as above Item No. 1 b. but excavation in soft rock etc. complete. (Bd. A – 4 / 259)	500.00		Cum.	
1 d.	Excavation for foundation in hard rock by controlled blasting including trimming and leveling the bed by chiseling where necessary and removing the excavated material and stacking and spreading within a distance 50 meter from working area including dewatering and back filling with available earth soil, murum watering ramming etc. at all lead and lifts etc. complete. (Bd. A – 5 / 259)	200.00		Cum.	
2.	Providing and laying in situ cement concrete 1:4:8 of trap / granite / quartzite / gneiss metal for foundation and bedding including bailing out water, formwork, compacting & curing etc. at all lead and lifts complete. (Bd. E – 1 / 287)	270.00		Cum.	
3.	Providing and fixing in position M.S. / Tor steel bar reinforcement of various diameters for R.C.C. piles, caps, footings, foundations, slab beams, columns etc. as per detailed designs, drawings and schedules including cutting, bending, hooking the bars,	160.00		M.T.	

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SR. NO.	PARTICULARS OF ITEMS	QUANTITY	RATE	UNIT	AMOUNT
	binding with wires or tack welding and supporting as required etc. complete. (Bd. F – 17 / 306)				
4.	Providing and laying in situ cement concrete M : 20 of trap / granite / quartzite / gneiss metal for R.C.C. work in foundations like raft, strip etc. including bailing out water, formwork, compaction, curing and roughening the surface if special finish is to be provided. Excluding M.S. reinforcement & structural steel complete. (cement content 6.90 bags/cum.) (Bd. F – 3 / 298, B 7/38)	460.00		Cum.	
5.	Providing and fabricating M.S. templates of various sizes by using structural steel, i.e. M.S. flat, angles etc. as per detailed drawing and designs, including making the holes of required diameter and welding etc. as directed, including one coats of anticorrosive paint and over it two coats of oil paintings of approved quality etc. complete. (Bd. C – 2 / 275)	1.00		M.T.	
6.	Labour charges for fixing the bolts of various dia with the help of M.S. template including transporting the templates, bolts and nuts etc. to site at desire position, leveling template and bolts as greasing the threaded portion of the bolts & tying it with gunny bags etc. complete. All as per the directives of the Engineer – in – charge including transporting templates & nuts to company's site – store after completion of the works (only anchor bolts, nuts and templates will be supplied by the company at free of cost, all tools and plants required shall be arranged by the agency.	5,010.00		Nos.	
7.	Providing and laying in situ cement concrete M 20 (1:1½:3) of trap / granite / quartzite / gneiss metal for R.C.C. columns as per detailed design and drawing as directed including centering, formwork, compaction, curing & roughening the surface if special finish is to be provided. (Excluding reinforcement & structural steel) (cement content 6.90 bags / cum.) (Bd. F – 5 Page no. 300)	1,500.00		Cum.	
8.	Providing and applying cement plaster 20 mm. thick in cement mortar 1:4 without neeru finish to concrete, brick surface in all positions including scaffolding and curing etc. complete. (Bd. L – 4A page no. 368)	1,500.00		Sqm.	

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SR. NO.	PARTICULARS OF ITEMS	QUANTITY	RATE	UNIT	AMOUNT
9.	Disposal of surplus excavated materials upto distance 300 meter from work site, conveying by mechanical means, stacking & spreading in low lying area including compaction / watering etc. complete as directed.	2,850.00		Cum.	
10.	Providing and applying water proof paint of approved manufacture and approved shade to the plastered surface including scaffolding if necessary, cleaning and preparing surface watering for two day etc. complete. (Bd. O – 8A Page no. 401)	1,500.00		Sqm.	
				Total	

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Name of Work: Civil Works pertaining to 400/220 KV Sub – Station at Lonikand II, Tal. Haveli, Dist. Pune.

Part VII: Construction of Control Room Building at 400/220 Lonikand II Sub - Station

ABSTRACT

NO.	PARTICULARS OF ITEMS	QUANTITY	RATE	UNIT	AMOUNT
1 a.	Excavation for foundations in earth soil of all types sand, gravel, soft murum etc. upto 4 m. below ground level including removing the excavated material upto a distance of 50 m. behind the building area and all lifts, stacking and spreading as directed, dewatering, shoring and strutting, preparing the bed for the foundation and necessary back filling etc. complete. (Bd. A 1 / 259)	200.00		Cum.	
1 b.	-- do -- as per Item No. 1 a. but excavation in hard murum with or without boulders etc. complete. (Bd. A 2 & 3 / 259)	200.00		Cum.	
1 c.	-- do -- as per Item No. 1 a. but excavation in soft rock etc. complete. (Bd. A 4 / 259)	180.00		Cum.	
1 d.	-- do -- as per Item No. 1 a. but excavation in hard rock by controlled blasting etc. complete. (Bd. A 5 / 259)	200.00		Cum.	
2.	Providing and laying in situ cement concrete 1:4:8 i.e. M-75 using 40 mm. graded metal for foundation and bedding of column, footing, beams, flooring sub grade etc. including dewatering formwork, compaction, curing etc. complete. (Bd. E – 1 C / Page No. 287)	46.00		Cum.	
3 a.	Filling in plinth and floors with approved quality excavated materials in 15 cm. to 20 cm. layers including watering and compaction etc. complete as per detailed drawing etc. complete. (Bd. A – 10 / Page No. 262)	100.00		Cum.	
3 b.	-- do -- as per Item No. 3 a. but with contractors own good quality hard murum brought from outside source etc. complete. (Bd. A – 11 / 263)	400.00		Cum.	
4.	Providing and laying dry trap stone / rubble soling in plinth, below flooring surface 23 cm. thick including hand packing, compaction etc. complete. (Bd. A – 12 / 264)	300.00		Cum.	
5.	Providing and laying in situ cement concrete 1:3:6	80.00		Cum.	

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NO.	PARTICULARS OF ITEMS	QUANTITY	RATE	UNIT	AMOUNT
	of trap stone metal for foundation and bedding including bailing out water, compacting, curing etc. complete. (Bd. E – 6 / 291)				
6 a.	Providing and laying in situ plain or reinforced cement concrete M – 25 C.C. grade with approved 20 mm. size graded trap stone aggregate for foundations and footings of columns, including dewatering, formwork, mechanical compaction, finishing, curing etc. complete. (Excluding M.S. reinforcement) Bd. F – 3 / 298)	140.00		Cum.	
6 b.	Providing and laying in situ cement concrete M – 250 grade with approved 20 mm. size graded trap stone aggregate for columns above ground levels and all lifts, finishing the formed surface in cm. 1:3 of sufficient thickness to give as an even surface or roughening if special finish is to be provided including dewatering, formwork, mechanical compaction, curing etc. complete. (Excluding M.S. reinforcement) (Bd. F – 5 / 300)	110.00		Cum.	
6 c.	Providing and casting in situ cement concrete M – 250 of trap metal for R.C.C. beams and lintels as per detailed design and drawing or as directed, including dewatering, centering, formwork, compaction, finishing the formed 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 and curing etc. complete. (excluding reinforcement but using plywood centering) (Bd. F – 6 / 300)	220.00		Cum.	
6 d.	Providing and casting in situ cement concrete M – 250 of trap metal for R.C.C. flat slab or any slope and landing of all thickness as per detailed design and drawing including canopy slabs including formwork, compacting and giving form finish surface to the satisfaction of Engineer – in – charge and curing, finishing the formed surface with cement mortar 1:3 of sufficient minimum thickness to give a smooth and even surface or roughening them if special finish is to be provided and curing etc. complete. (Excluding M.S. reinforcement but using plywood centering only) (Bd. F – 8 / 302)	225.00		Cum.	
6 e.	-- do -- as per Item No. 6 a. but for R.C.C. chajja in M – 25 etc. complete. (Bd. F – 9 / 303)	30.00		Cum.	
7.	Providing and laying in situ cement concrete M –	5.00		Cum.	

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NO.	PARTICULARS OF ITEMS	QUANTITY	RATE	UNIT	AMOUNT
	150 grade with approved 20 mm. size graded trap stone aggregate for bed block above ground levels and all lifts, finishing the formed surface in c.m. 1:3 of sufficient thickness to give as an even surface or roughening if special finish is to be provided including dewatering, formwork, mechanical compaction, curing etc. complete. (Excluding M.S. reinforcement) (Bd. F – 5 / 300)				
8.	Providing and cleaning, cutting, hooking etc. and placing in position as per detailed drawing or as directed high, yield strength deformed bars Tor / MS plain bars to IS : 178 / and 432 in all cement concrete works of foundation columns, beams etc. at all location and of any shape inclusive and of any shape including providing and binding with 18 GMS wire and supporting the same detailed specifications and drawing etc. complete. TMT FE – 415 / CBD-F – 17046 / Page No. 306	120.00		M.T.	
9.	Providing U.C.R. masonry of trap stone in c.m. 1:6 in foundation and plinth of inner walls / in plinth of external walls including bailing out water, striking joints on unexposed faces and watering etc. complete. (Bd. H – 1 / 329)	10.00		Cum.	
10 a.	Providing and constructing IInd class burnt brick masonry in super structure above plinth using conventional bricks in CM 1:6 at all heights including racking out joints, watering and scaffolding etc. complete. (Bd. G – 4 / Page No. 314)	35.00		Cum.	
10 b.	Providing and constructing second class brick masonry in super structure above plinth using conventional bricks in cement mortar 1:6 at all heights including racking out joints, watering and scaffolding etc. complete. (Bd. G – 4 / 314)	320.00		Cum.	
11.	Providing and constructing in superstructure second class burnt brick masonry in cement mortar 1:4 in half brick thick wall including mild steel longitudinal reinforcement of 2 bars of 6 mm. diameter 2 hoop iron strips 25 mm. x 1.6 mm. (16 gauge) at every third layer, properly bent and bonded at ends cement concrete – 150 grade of 75 mm. thick at every ninth layer at lintel level and at top of the wall where it is free, scaffolding, racking out joints and watering at all heights all as per detailed specification and directions of Engineer – in – charge. (Bd. G – 7 / 316)	10.00		Sqm.	

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NO.	PARTICULARS OF ITEMS	QUANTITY	RATE	UNIT	AMOUNT
12 a.	Providing internal cement plaster 12 mm thick in a single coat in cement mortar 1:4 with neeru finish to R.C.C. slab, chajja, ceilings, surface in all position including scaffolding, curing etc. complete. (Bd. L – 2 / 368 / Bd. L – 10 / 370)	1,250.00		Sqm.	
12 b.	Providing cement plaster 12 mm. thick in single coat in cement mortar 1:4 without neeru finish to R.C.C. to R.C.C. slab, chajja, celings, surface in all position including scaffolding, curing ec. complete. (Bd. L 2 / 368, Bd. L 10 / 370)	100.00		Sqm.	
12 c.	Providing cement plaster 20 mm. thick in two coats in cement mortar 1:4 with neeru finish to R.C.C. / brick / stone surfaces complete at all lifts as per detailed specification and direction of Engineer – in – charge. (Bd. L – 2 / 368, Bd. L 10 / 370)	1,300.00		Sqm.	
12 d.	Providing cement plaster 20 mm. thick in two coats in cement mortar 1:4 without neeru finish to R.C.C. / brick / stone surface complete at all ifts as per detailed specification and directions of Engineer – in – charge. (Bd. L – 2 / 368, Bd. L – 10 / 370)	400.00		Sqm.	
12 e.i.	Providing sand faced cement plaster 20 mm. thick in two coats to all external brick / stone / R.C.C. surfaces in cement mortar 1:4 using approved quality sand and in all positions including base coat, scaffolding, keeping the surfaces of the base coat rough to receive the sand face treatment, finishing surface by taking out grains and curing etc. complete at all leads and lifts and as per detailed specifications and Engineer – in – charge.	1,800.00		Sqm.	
12 e.ii.	Providing rough cast cement plaster with cement mortar 1:4 25 mm. thick in two coats to concrete / brick or stone masonry surface in all position including scaffolding and curing etc. complete. (Bd. L – 8 / 370)	50.00		Sqm.	
12 f.	Providing patti on plastered surface 12 mm. to 15 mm. thick in c.m. 1:3 in line, level including neat finishing, scaffolding, curing etc. complete. (as directed by Engineer – in – charge)	120.00		Rmt.	
12 g.	Providing and laying in cement concrete flooring 40 mm. thick laid in proper level and slope in alternate bays including compaction, filling joints, marking lines to give appearance of tiles of 30 cm.	20.00		Sqm.	

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NO.	PARTICULARS OF ITEMS	QUANTITY	RATE	UNIT	AMOUNT
	x 30 cm. or other size laid diagonally / square etc. finishing smooth (with extra cement) in any colour as directed. (Bd. M – 7 / 383)				
13 a.	Providing and laying polished kotah stone slabs flooring 25 mm thick of required size (600 mm x 450 mm) diamond pattern or other approved pattern on a bed of 1:4 cm or 1:2 lime mortar including cement float, filling joints with neat cement slurry, curing, polishing and cleaning, waxing etc. complete. (Kotah stone should be hand cut and of approve size.) (Bd. M – 3 / 380)	600.00		Sqm.	
13 b.	Providing, laying and fixing granite stone slab of 12 to 15 mm. thick of approved make and shade for floor and architectural pattern portion with smooth machine polish rounding edges if required laid in cm. 1:4 with extra cement for fixing the tile and dado portion, cutting, levelling with necessary pin fixing etc. complete.	200.00		Sqm.	
13 c.	Providing and laying marble mosaic tiles of approved pattern with white and coloured marble chips upto the maximum size 6/12/20 for flooring in required position set on a bed of 1:6 c.m. including neat coloured cement slurry, curing polishing and rubbing of tiles of different colour and design as directed in white cement base. (Bd. M – 14 / 386)	50.00		Sqm.	
14.	Providing and laying rectified and vitrified mirron finish decorative type tiles of any size and approved make, shade and pattern for flooring in required position set on a bed of 1:4 c.m. including neat coloured cement slurry, curing, polishing and rubbing of tiles of different colour and design as directed by Engineer – in – charge.	100.00		Sqm.	
15.	Providing and laying rough shahabad stone flooring 25 mm. or 30 mm. thick of required size diamond / pattern or other approved pattern on a bed of 1:6 c.m. including neat cement float, striking out joints, pointing in c.m. 1:3 curing and cleaning etc. complete. (Bd. M – 1 / 379)	150.00		Sqm.	
16 a.	Providing and fixing ceramic tiles of approved size of 300 x 300 x 7 mm. thickness for flooring in required position laid on a plaster of CM (1:4) 12 to 20 mm. thick including all special required like round corner tiles, angles cups etc. filling in joints with white cement slurry, curing and	40.00		Sqm.	

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NO.	PARTICULARS OF ITEMS	QUANTITY	RATE	UNIT	AMOUNT
	cleaning etc. complete. (Bd. M 13 / 386)				
16 b.	Providing and fixing ceramic tiles of approved size of 300 x 300 x 7 mm. thickness for dado and skirting in required position laid on a plaster of CM (1:4) 12 to 20 mm. thick including all special required like round corner tiles, angles cups etc. filling in joints with white cement slurry, curing and cleaning etc. complete. (Bd. M 13 / 386)	100.00		Sqm.	
17 a.	Providing and laying polished kotah stone slabs for dado / skirting 25 mm thick of required size (600 mm x 450 mm) diamond pattern or other approved pattern on a bed of 1:4 cm or 1:2 lime mortar including cement float, filling joints with neat cement slurry, curing, polishing and cleaning, waxing etc. complete. (Kotah stone should be hand cut and of approve size.) (Bd. M – 3 / 380)	40.00		Sqm.	
17 b.	Providing, laying and fixing granite stone slab of 12 to 15 mm. thick of approved make and shade for dado and skirting and architectural pattern portion with smooth machine polish rounding edges if required laid in cm. 1:4 with extra cement for fixing the tile and dado portion, cutting, levelling with necessary pin fixing etc. complete.	200.00		Sqm.	
18 a.	Providing and laying super white makrana abu marble coloured 20 mm. thick slab of approved quality and machine cut but veined for flooring on a bed of C.M. 1:4 including neat cement float filling, joints with coloured cement slurry to match the colour of slab etc. curing, polishing and cleaning etc. complete.	50.00		Sqm.	
18 b.	Providing and laying super white makrana abu marble coloured 20 mm. thick slab of approved quality and machine cut but veined for dado / skirting on a bed of C.M. 1:4 including neat cement float filling, joints with coloured cement slurry to match the colour of slab etc. curing, polishing and cleaning etc. complete.	10.00		Sqm.	
19.	Providing and laying super white makrana abu marble coloured 25 mm. thick slab of approved quality and machine cut but veined for tread and riser of steps on a bed of C.M. 1:4 including rounding nosing for treads, neat cement float filling, joints with coloured cement slurry to match the colour of slab etc. curing, polishing and cleaning etc. complete.	80.00		Sqm.	

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NO.	PARTICULARS OF ITEMS	QUANTITY	RATE	UNIT	AMOUNT
20.	Providing and fixing FRP door in single leaf 25 m. thick with alluminium outer frame as per detailed drawing including teak wood door frame of size 125 x 60 mm. with wrought iron hold fast, aluminium anodized fixtures and fastening and handles on both sides and including moulding lipping of 50 x 20 mm. and including finishing one coat of primer shade and three coat of oil paint etc. complete.	5.00		Sqm.	
21.	Providing and fixing teak wood double or single leaf fully paneled doors 35 mm thick shutter and 25 mm thick panels with openable fanlight as per detailed drawing including teak wood frame of size 125 x 60 mm and teak wood shutter, bottom rail, lock rail top rail side style as per drawing No. MC/213/2 or as directed by Engineer-in-Charge including necessary mouldings lipping of architraves of size 50 x 20 mm size with aluminum anodized fixtures such as aldrops of 16 mm dia. and 400 mm long, Tower bolts 200 mm long C.P. mortorised lock 2 Nos., 150 mm handles, wrought iron hold fasts, painting or polishing with 3 coats of oil paint of approved shade with stopper to each shutter or as per specifications, drawings or as per directions of Engineer-in-Charge.	10.00		Sqm.	
22.	Providing and fixing solid core flush door in single leaf 32 mm thick commercial type as per detailed drawing including teak wood door frame of size 125 mm x 60 mm with wrought iron hold fasts, aluminum anodized fixtures and fastenings and handles on both sides and aluminum sheet fixing on back side of shutters full width and 900 mm and including moulding lipping of 50 x 20 mm and including finishing one coat of premier and 3 coats of oil paint of approved shade etc. complete.	7.00		Sqm.	
23.	Providing fabricating and fixing in position aluminum door with powder coating with approved colour including frame in single / double / leaf, double swing shutter using approved I.S. aluminum anodized sections, supplying and fixing 5.5 mm thick plain glass panes of ATUL or equivalent having clear vision including all fixture and fastening fitted with aluminum anodized mongery such as hinges, handles, tower bolts (concealed) chromium plated brass motroised lock, aldrep, bolt, concealed type floor spring	5.00		Sqm.	

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NO.	PARTICULARS OF ITEMS	QUANTITY	RATE	UNIT	AMOUNT
	heavy type etc. all as per drawing No. MC 213/2 manufacturer's specifications etc. complete.				
24.	Providing and fabricating and fixing in position aluminum windows and ventilators (openable or fixed or sliding) of standard aluminum anodized I.S. sections with applying powder coating as per required colours and as per manufacturing specifications including supplying and fixing clear vision 5 mm thick sheet glass including all fixtures and fastening and aluminum anodized fittings heavy duty rail sections for sliding window metal bedding as per drawing with using 24 mm series of approved sections manufactures specifications or instructions of Engineer-in-Charge etc. complete.	40.00		Sqm.	
25.	-- do -- as per Item No. 24 but with double glass partitions in windows with necessary double glass make of 22 mm. over all thickness with 5 + 5 + 12 mm. air gap sealed into a single unit by providing double glass fixing sections etc. complete.	20.00		Sqm.	
26.	-- do -- as per Item No. 24 but fixed double glass alluminium window etc. complete.	35.00		Sqm.	
27.	Providing and fixing in position alluminium fixed window fully glazed of any size as per detailed and as directed by Engineer – in – charge with all necessary alluminium sections including necessary fixtures and fastenings such as 5 mm. thick clear float glass with powder coating etc. complete. Specifications : as directed by Engineer – in – charge.	25.00		Sqm.	
28.	Providing, fabricating and fixing alluminium in positions alluminium partitions with powder coating by using approved I.S. alluminium anodized sections for frame work as per ddrawing and design, supplying and fixing 5 mm. clear vision glass pans of ATUL or equivalent having clear vision including all fixtures and fastening etc. complete.	100.00		Sqm.	
29.	-- do -- as per Item No. 28 but with double glass partitions in doors with necessary double glass make of 22 mm. overall thickness with 5 + 5 + 12 mm. air gap sealed into a single unit by providing double glass fixing section etc. complete.	10.00		Sqm.	
30.	Providing and fixing steel ventilators fully glazed	10.00		Sqm.	

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NO.	PARTICULARS OF ITEMS	QUANTITY	RATE	UNIT	AMOUNT
	both sides of partly fixed as per detailed drawing without hot dip zinc coating including fabricating glazing with plain obsured glass panes and approved type and quality and fixtures and fastenings and oil paint two coats etc. complete. (Spec. No. Bd. T- 53 / 509 and as directed by Engineer – in – charge.)				
31.	Providing and fixing rolling shutter fabricated from steel laths of minimum thickness 0.9 mm. with lock plate of 3.15 mm. thickness reinforced with 35 x 35 x 5 mm. angle section fitted with sliding bolts and handles for both sides, deep M.S. channel sections of depth and thickness not less than 65 mm. and 3.15 mm. respectively with hold fast arrangement M.S. bracket plate 300 x 300 x 3.15 mm. minimum size and shape with square bar suspension shaft of minimum 32 mm. diameter hood cover of M.S. sheet not less than 0.9 mm. thickness and of any size of top and safety devices including mechanical gear operation arrangement consisting of worm gear wheel and worms of high grade cast iron or mild steel and one coat of red lead primer etc. complete. (I.S. 6248 – 1979) Specification No. Bd. T 55 / 510)	10.00		Sqm.	
32.	Providing and fixing mild steel grill work for windows ventilators etc. etc. 15 Kg./Sqm. As per drawing including fixtures, necessary welding and painting with one coats of anticorrosive paint and two coats of oil painting etc. complete. (Spec. No. Bd. U. 1 / 537)	40.00		Sqm.	
33.	Providing and fixing mild steel grill railing 20 Kg./Sqm. With teak wood hand rail of size 75 mm. x 60 mm. and sill of 75 mm. x 25 mm. and newel posts for staircase including fabricating, fixtures, erecting, painting the grill work with one coat of anticorrosive paint and two coats of oil painting with approved colour or polishing the sill, hand rail and the newel post with French polish. (Spec. No. Bd. U 2 / 537)	20.00		Sqm.	
34.	Providing structural steel work in rolled section like joists, channels, singles, tees etc. as per detailed design and drawing including fixing in position with connecting plate, braces, cleats etc. with welding and painting 2 coats of oil paints over one coat of primer etc. complete for cable trench brackets.	2.00		M.T.	

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NO.	PARTICULARS OF ITEMS	QUANTITY	RATE	UNIT	AMOUNT
35.	Providing and fixing in position hydraulic door closure of approved I.S.I. mark at all position etc. complete.	7.00		No.	
36.	Providing slots of required size and shape upto 300 mm. in width in floor slabs necessary formwork, finishing the same with C.M. 1:4 with wherever required and providing, fabricating and fixing M.S. angles 45 x 45 x 6, spacers alongwith the top edge of the slot including 3 coats of oil paint over one coat of primer, all as at all leads and lifts, as per the directives of the Engineer – in – charge.	10.00		No.	
37.	Providing and laying concrete pipes of ISNP 300 mm. dia. In proper line, level and slope excluding excavation, fixing of collars, filling joints in C.M. 1:1 curing, refilling the trench etc. complete. As directed by Engineer – in – charge.	30.00		Rmt.	
38.	-- do -- as per Item No. 37 but for 225 mm. dia. etc. complete.	30.00		Rmt.	
39.	Providing and supplying factory made pre-stressed cable trench covers of required size and length as directed by Engineer – in – charge, the technical details include R.C.C. concrete of M – 40 grade, high tensile wire of 4 mm. dia. 8 nos. in width of 300 mm. thickness of covers 60 mm. with neat cement finish in all sides and grinding of external edges of H.T. wire and providing no corrosive lifting arrangement at two places of cover top curing, testing of covers including transportation to the work site, loading and unloading etc. complete.	80.00		Sqm.	
39.	Providing and laying 40 mm. x 40 mm. alluminium square water spout including providing hole to R.C.C. or brick etc. complete.	10.00		No.	
40.	Providing & erecting washing platform in battery room of size 2230 x 800 mm. with Hindustan make glazed earthen ware sink, overall size 600 x 200 x 450 mm. dith drain board fixed in C.M. 1:4 on R.C.C. platform at 800 mm. height with stainless steel fitting, 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 / topoping of washing platform in acid resisting tiles liad in acid proof cement etc. complete as per detailed specifications	1.00		No.	

NO.	PARTICULARS OF ITEMS	QUANTITY	RATE	UNIT	AMOUNT
	and as directed by the Engineer – in – charge.				
41.	Providing and laying brick bat coba of average 75 mm. thick in 1:2:4 line concrete in proper slope over the specified area including rubbing and clearing the base formwork, if necessary, cutting etc. complete at all leads and lifts as per detailed specifications and directives of Engineer – in – charge.	5.00		Sqm.	
42.	Providing and fixing white glazed earthware large flat back urinal 610 mm. x 400 mm. x 380 mm. with concealed walls, hangers approved cistern 5 liters capacity PVC with fittings like PVC connection stop cock, brackets etc. G.I. flush pipe 20 mm. and 22 mm. dia. fittings including PVC waste pipe and bottle trap and G.I. concealed pipe connection upto the nearest inspection chamber, all complete as per detailed specifications or as directed. (Bd. V 23 / 562)	2.00		No.	
43 a.	Providing and fixing European type white glazed earthenware first quality, water closet symphonic trap with symphonic low level white glazed 10 litres with black backlite seat and lead with chromium plated brass hinges pan of approved make including “P” or “S” trap C.I. soil and vent pipe upto the outside face of wall including 100 mm. dia. G.I. plug bends inlet pipe stop tap etc. including all fitting, cutting and making good walls and floors etc. complete. Spec. as directed by Engineer – in – charge.	1.00		No.	
43 b.	Providing and fixing Orrisa pattern white glazed earthenware first quality 625 x 450 mm. water closet pan of approved make including “P” or “S” trap C.I. soil and vent pipe upto the connecting chamber, all net in bedding with 10 litre capacity fiber flushing water tank for flushing water with necessary G.I. pipe to W.C. pan, drilling the holes in walls, slabs, etc. and remaking them etc. complete as directed.	2.00		No.	
44.	Providing and fixing white glazed earthenware wash hand basin of approved make 550 mm. x 400 mm. including best quality chromium plated brass screw down pillar cock G.I. pillar trap rubber plug and brass chain brass stop cock with PVC inlet connection PVC waste pipe upto Nahani trap of outside face of wall etc. complete as directed.	2.00		No.	

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NO.	PARTICULARS OF ITEMS	QUANTITY	RATE	UNIT	AMOUNT
45.	Providing and fixing in position 100 mm. diameter nahani trap with long nose including grating and piece of G.I. pipe upto outside face of wall and necessary connection with the chambers etc. complete.	5.00		No.	
46.	Providing and fixing 150 mm. x 100 mm. salt glazed stoneware gully trap in CM 75 grade outside the building C.I. grating, connecting glazed stoneware pipe brick masonry chamber 225 mm. x 300 mm. with C.I. lid and frame fixed in M : 150 grade concrete coping all as per detailed specifications. (Bd. V 38 / 572)	4.00		No.	
47.	Providing and laying 100 mm. diameters salt glazed stone ware pipe on 1:4:8 C.C. bed in proper slope including all fittings such as bends, tees, single or double junctions, testing, refilling of trenches etc. complete including excavations in all types of strata.	40.00		Rmt.	
48.	-- do -- as per Item No. 47 but salt glazed stone ware pipe of 150 mm. dia. etc. complete.	80.00		Rmt.	
49 a.	Providing and constructing inspection chambers of 230 mm. thick 2 nd class brick masonry work 900 mm. x 450 mm. clear size including cement concrete M : 75 grade bed concrete M : 150 grade channel, plastering, inside and outside exposed surface of brick masonry with CM 1:3 including neat cement finish airtight C.I. lid with frame fixed in cement concrete M : 150 grade, all as per detailed specifications. (Bd. V 43 / 574, 575)	5.00		No.	
49 b.	-- do -- as per Item No. 49 a. but 900 mm. x 450 mm. etc. complete. (Bd. V 43 / 574)	5.00		No.	
50.	Providing and fixing PVC soil pipe / vent pipe with necessary fixtures and fittings such as bends, tees, single junctions, double junctions, slotted vent offsets on walls with clamping or in the ground including excavation, laying, refilling trenches etc. complete.				
a.	75 mm. diameter. (Bd. V – 60 G)	40.00		Rmt.	
b.	110 mm. diameter. (Bd. V – 60 H)	60.00		Rmt.	
c.	140 mm. diameter. (Bd. V – 60 H)	100.00		Rmt.	

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NO.	PARTICULARS OF ITEMS	QUANTITY	RATE	UNIT	AMOUNT
51.	Providing and fixing Hume pipe septic tank 1200 mm. dia. with vent pipe and cowl including necessary excavation and laying in position including providing soak pit of required size as directed by Engineer in charge.	1.00		No.	
52.	Providing and fixing in position G.I. pipes of sizes specified "B" class medium type screwed socket joints and necessary fittings such as sockets, reducers, enlargers, unions, clamps etc. including necessary excavation in trenches and back filling and fixing on wall with clamps, drilling the holes in walls, slabs etc. and remaking them all complete as directed.				
a.	15 mm. diameter.	20.00		Rmt.	
b.	20 mm. diameter.	20.00		Rmt.	
c.	25 mm. diameter.	20.00		Rmt.	
d.	32 mm. diameter.	20.00		Rmt.	
e.	40 mm. diameter.	50.00		Rmt.	
53 a.	Providing and fixing in position 25 mm. diameter wheel screw down full way (peet) valve of approved manufactured and tested quality including necessary sockets union nut, brick masonry chamber with C.I. frame and lid and locking arrangement etc. complete. (Bd. V 10/555)	4.00		No.	
53 b.	32 mm. diameter wheel valve.	2.00		No.	
53 c.	40 mm. diameter wheel valve.	2.00		No.	
54.	Providing and fixing in position 15 m m diameter heavy duty brass bib taps including necessary sockets union etc. complete. (Bd. V-8/554)	5.00		No.	
55.	Providing & applying Asian paint 'Apex' weather proof emulsion paint for exterior wall in two coats of approved colour & shade to any surface including scaffolding, preparing the surface & finishing etc. complete. (As directed by Engineer in charge)	1,800.00		Sqm.	
56.	Providing and applying three coats of acid resisting (Epoxy based) paint of approved make and shade to plastered / wooden surface in all	220.00		Sqm.	

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NO.	PARTICULARS OF ITEMS	QUANTITY	RATE	UNIT	AMOUNT
	position including scaffolding, if necessary preparation of surface and priming coat etc. complete.				
57 a.	Providing and applying avery lic emulsion velvet touch paint of approved quality, colour and shade to the new plastered surface in three coats over surface lambi (filler putty) to receive the paint etc. complete at all leads and lifts all as per detailed specifications and as directed by the Engineer – in – charge.	450.00		Sqm.	
57 b.	Providing and applying washable plastic emulsion paint of approved colour shade to new surface in two coats including scaffolding, preparing the surface to receive the priming and finishing coats complete as per detailed specifications. (Bd. P - 6A/4134)	400.00		Sqm.	
58.	Providing and applying washable oil bound colour and distemper of approved colour shade to new surface in two coats including scaffolding, preparing the surface to receive the priming and finishing coats complete as per detailed specifications. (Bd. P - 5/413)	250.00		Sqm.	
59.	Providing and applying oil paint of approved colour shade to new surface in two coats including scaffolding, preparing the surface to receive the priming and finishing coats complete as per detailed specifications. (Bd. O - 56A/406)	50.00		Sqm.	
60.	Providing and applying luster paint of approved colour shade to new surface in two coats including scaffolding, preparing the surface to receive the priming and finishing coats complete as per detailed specifications.	20.00		Sqm.	
61.	Providing and fixing chromium plated brass towel rod 25 mm. diameter and 600 mm. long on teakwood 20 mm. thick and 100 mm. wide including all fixtures, painting with oil paint etc. complete.	3.00		No.	
62.	Providing and fixing in position best quality kohinoor or equivalent make 600 mm. X 400 mm. size plain glass mirror with 16 mm. dia. nickel plated towel rod and 6 mm. thick plywood packing chromium plated brass brackets 600 x 100 x 6 mm. thick glass shelf etc. complete as per detailed specifications.	3.00		No.	

NO.	PARTICULARS OF ITEMS	QUANTITY	RATE	UNIT	AMOUNT
63.	Providing and fixing in position marble year plate of size 400 mm. X 300 mm. X 20 mm. thick with engraved figures and letters with approved black Japan as directed including fixing in cement mortar 1:4 at all heights all as per detailed specifications and directions of Engineer-in-charge.	1.00		No.	
64.	Providing and fixing acid resistant heavy tiles of endura brand H.R. Johnson and Co. with 10 mm. thickness and in approved size and shades in the floor of battery room with necessary cleaning, applying oe coat of bitumen primer (Kerbit) heating and laying about 10 mm. thick bitumastic ready acid mode proof cement mortar bedding (cement Kerasilk) in line and level and sealing the points with acid resistant epoxy mortar cleaning etc. complete as directed by Engineer – in – charge.	150.00		Sqm.	
65.	Providing and laying waterproof treatment of terrace slab with B.B. coba all position with an average thickness of 112 mm. consisting specialized materials as per the manufacturers specification and covering 10 years guarantee on court fee stamp paper including all lead and lift etc. complete. (Spec. as directed by the engineer – in – charge.)	700.00		Sqm.	
66.	Providing and laying aluminium chequered plate for cable trench covers of thickness (3.00 + 1.00) mm. chequered 400 mm. shall be width of each fixed on M.S. angle frame made out of angle size 25 mm. X 25 mm. X 3 mm. both side diagonal and border angles including fabrication, painting to angles in three coats of silver paint, revetting and making grooves to the chequered plate for handling etc. complete. drawing. No. EEC / 494	50.00		Sqm.	
67.	Providing and fixing in position PVC " Sintex" make or equivalent make water storage tank with lid of 1100 mm. diameter and 1200 mm. height with all necessary fittings for inlet outlet overflow scour vent pipe brass ball cock for inlet etc. including erecting on roof slab/loft slab on plastered brick pillars as per manufactures requirements etc. complete. (Bd. V - 134 A)	10,000.00		No.	
68.	Providing 12 m m thick integral finishing in C.M. 1:3 including smooth cement finish & with using water proofing compound as per manufacturer's	50.00		Sqm.	

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NO.	PARTICULARS OF ITEMS	QUANTITY	RATE	UNIT	AMOUNT
	instructions, curing etc. complete. (As directed by Engineer in charge)				
69.	Providing and fixing marble partition between urinal and wash basin of 20 mmx 1800mm. thickness and of required heights including fixing etc. complete.	4.00		No.	
70.	Providing and fixing 300 mm dia R.C.C. collar at required position etc complete.	5.00		No.	
71.	Providing and applying polymer modified cementations at 1:6 water proofing coating of roff or equivalent make as per the manufacturers instructions over the R.C.C. slab, parapet, walls, chajjas including cleaning the surface prior to the applications as dedire.	950.00		Sqm.	
72.	Providing and fixing collapsible steel gate in one/ two leaves with hot rolled vertical channels of 18x 9x3mm minimum size, crossing of M.S. flat of size 18 x5 mm. and or E section for runner of minimum 40x6mm size for flunge , M.S Flat runner of minimum size 40x12 mm with roller wheels confirming to grade F.G.150 filled with snap headed rivets of minimum size 6mm spaing of vertical channels be 100 mm enclose gate position and clear space of 150 mm between two sets of crossing with hold fast, stopper, spaces handles ' locking and one coat of red lead primer etc, complete I.S,10521-1983 (Bd. T - 657/511)	10.00		No.	
73.	Providing, laying and fixing Andhra slate / Dholpor slate of required thickness of approved make and shade for fixing on the wall as per architecture pattern, portion, rounding edges if required laid in cm. 1:4 with extra cement for fixing the tile and cutting, leveling with necessary pin fixing etc. complete.	50.00		Sqm.	
74.	Providing and fixing in position G.I. Pipes of sizes specified "C" class medium type screwed socket joints and necessary fittings such as sockets, reducers, enlargers, unions, clamps etc. including necessary and fixing in wall with clamps drilling the holes in walls, slabs etc. and remaking them all complete as directed and applying anticorrosive primer oil paint and two coats of oil painting complete.				
a.	15 mm. dia.	25.00		Rmt.	

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NO.	PARTICULARS OF ITEMS	QUANTITY	RATE	UNIT	AMOUNT
b.	20 mm. dia.	25.00		Rmt.	
c.	32 mm. dia.	20.00		Rmt.	
75.	Providing and laying of bitumen waterproof paper for bottom surface of roof slabs of roof beams before placing of concrete etc. complete as directed.	1,000.00		Sqm.	
76.	Providing and laying concrete paving flooring blocks of size approved size and pattern placing and fixing over 75 mm. thick loose sand bedding in approved design, patterning, locking into each other flush, with each other and spreading of sand at top for filling inner spaces within block free edges of flooring are to be covered by constructing in C.C. 1:2:4 of 150 mm. wide and 150 mm. thick including cleaning the flooring etc. complete as directed.	400.00		Sqm.	
77.	Providing and fixing chromium plated concealed coat of required dia. making in masonry or concrete all necessary fixtures, making good finish to the spoil / surface of the masonry or concrete including all leads, lifts etc. as directed by the Engineer – in – charge.	5.00		No.	
78.	Providing and fixing white glazed tiles of approved size for dado in required position on a bed of acid proof mortar neat acid proof liquid and harner of approved quality etc. complete.(As directed by Engineer in charge)	30.00		Sqm.	
79.	Providing and fixing 1st class glazed earthenware precast type soap dish of size 150 x 150 mm.in C.M.(1:4) of approved type at all position including necessary cutting holes in walls and finishing the joints with neat white or coloured cement slurry all as per detailed specifications and directions.	4.00		No.	
80.	Providing and erecting service cum kitchen platform on the floor of size 3000 x 700 mm. including 100 mm. thick vertical support of burnt brick masonry walls in cement mortar 1:4 with kadappa slab upto 40 mm. thick at bottom with two kadappa shalves and ver black granite top, fascia fixed in surface in required thickness size stainless steel sink with all fitting in c.m. 1:4 providing required nahani trap of size 100 mm.	1.00		No.	

NO.	PARTICULARS OF ITEMS	QUANTITY	RATE	UNIT	AMOUNT
	dia, with grating at sink base all as per detailed drawing, specification and directions of engineer – in – charge.				
81.	Providing and fixing stainless steel sink of approved make with drain board sink 470 x 940 mm. with board 432 mm. X 381 mm. in battery room including one cold water screw down chromium plate pillar cock CP pillar, trap, C.I. brackets rubber plug with brass C.D. chain including inlet PVC connection with brass stop cock PVC wasted up to Nahani trap painting the bracket with acid paint etc. complete as directed.	2.00		No.	
82.	Providing and fixing high strength aluminium alloys grill with approved design including fixtures for fixing to the wall / windows as per manufactures specification aluminium grill with powder coating of approved colour etc. complete.	70.00		Sqm.	
83.	Providing and fixing sun control film (polyester) & approved sample and of approved shade and quality by Engineer-in-charge to glass panes including parting to glass with all labour cutting and wastage etc. complete.	100.00		Sqm.	
84.	Providing and fixing chicken mesh jali (24 gauge) at the junction of two different surface or different material compound at the time of plastering to prevent cracking in plaster surface as and where directed at all floors with all leads and lifts etc. complete. (Spec.: As directed by engineer in charge)	180.00		Sqm.	
85.	Providing and fixing in position a set of 4 heavy type chromium plated brass double pointed pegs over teakwood moulded patti with formica facing and of overall size 600 mm x 100 mm. X 20 mm.on teakwood embedded blocks with polishing etc. complete as directed.	2.00		No.	
86.	Providing and laying PVC vinyl flooring 1.5 mm. thick of approved design over existing tiles flooring of approved make and manufacturers instructions etc. complete as directed.	300.00		Sqm.	
87.	Providing and supplying Godrej make brass navtal lock seven leaves with tree keys for locking arrangement of rooms etc. complete.	8.00		No.	
88.	Providing and fixing brass letters of required width and having 250 mm. height as per Devnagri	Job		Job	

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NO.	PARTICULARS OF ITEMS	QUANTITY	RATE	UNIT	AMOUNT
	script at the front portion etc. complete as directed.				
89.	Providing and fixing R.C.C. cover of 3" thickness over manhole and inspection chamber including M.S. / tor steel reinforcement, fixing in c.c. 1:2:4 curing etc. complete (1.15 m. x 0.60 m.) size as directed by Engineer – in – charge.	5.00		No.	
90.	Conveying of excavated material like soft murum, boulders by any means including loading, unloading & spreading / stacking up to a lead of 300 m or as directed by Engineer – in – charge The material should be spreading in low lying area including compacting and watering.	780.00		Cum.	
				Total	

Part VIII: Page 1 of 4

Name of Work: Civil Works pertaining to 400 KV / 220 KV Sub – Station at Lonikand II, Tal. Haveli, Dist. Pune.

Part VIII: Construction of Bay Control Room for 400 KV, 220 KV & 22 KV S/s at 400 / 220 K.V. Lonikand II R.S.

ABSTRACT

NO.	PARTICULARS OF ITEMS	QUANTITY	RATE	UNIT	AMOUNT
1 a.	Excavation for foundation in earth soil of all types sand, gravel and soft murum etc. including removing excavated materials up to a distance of 50 meter beyond the building area and stacking, spreading as directed, dewatering, preparing the bed for the foundation, ramming watering including shoring and strutting etc. complete. (Bd. A – 1, Page no. 259)	200.00		Cum.	
1 b.	-- do – as per Item No. 1 a. but excavation in hard murum with or without boulders etc. complete. (Bd. A 2&3, Page no. 259)	200.00		Cum.	
1 c.	-- do – as per Item No. 1 a. but excavation in soft rock etc. complete. (Bd. A – 4 Page no. 259)	200.00		Cum.	
1 d.	Excavation for foundation in hard rock by controlled blasting depth upto 3.00 Mtr. below Ground level including removing the excavated material upto any lead and all lifts, stacking and spreading / backfilling as directed, dewatering shoring and strutting, preparing the bed for the foundation and necessary back filling etc. complete. (Bd. A – 5 / Page No. 259)	130.00		Cum.	
2.	Providing and laying in situ cement concrete 1:4:8 i.e. M-75 using 40 mm. graded metal for foundation and bedding of column, footing, beams, flooring sub grade etc. including dewatering formwork, compaction, curing etc. complete. (Bd. E – 1 C / Page No. 287)	23.00		Cum.	
3.	Providing and cleaning, cutting, hooking etc. and placing in position as per detailed drawing or as directed high, yield strength deformed bars Tor / MS plain bars to IS : 178 / and 432 in all cement concrete works of foundation columns, beams etc. at all location and of any shape inclusive and of any shape including providing and binding with 18 GMS wire and supporting the same detailed specifications and drawing etc. complete. TMT FE – 415 / CBD-F – 17046 / Page No. 306	14.00		M.T.	
4.	Providing and laying in situ plain or reinforced cement concrete M – 25 C.C. grade with approved	15.00		Cum.	

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NO.	PARTICULARS OF ITEMS	QUANTITY	RATE	UNIT	AMOUNT
	20 mm. size graded trap stone aggregate for foundations and footings of columns, including dewatering, formwork, mechanical compaction, finishing, curing etc. complete. (Excluding M.S. reinforcement) Bd. F – 3 / 298)				
5.	-- do -- as per Item No. 4 but for R.C.C. columns in M – 25 etc. complete.	23.00		Cum.	
6.	-- do -- as per Item No. 4 but for R.C.C. beams & lintels in M – 25 etc. complete.	60.00		Cum.	
7.	-- do -- as per Item No. 4 but for R.C.C. slab and landings in M – 25 etc. complete.	50.00		Cum.	
8.	-- do -- as per Item No. 4 but for R.C.C. chajjas, pardi & fins in M – 25 etc. complete.	4.00		Cum.	
9.	Providing and constructing IInd class burnt brick masonry for foundation and super structure using conventional bricks in CM 1:6 at all heights including racking out joints, watering and scaffolding etc. complete. (Bd. G – 4 / Page No. 314)	295.00		Cum.	
10.	Filling in plinth and floors with approved quality excavated materials in 15 cm. to 20 cm. layers including watering and compaction etc. complete as per detailed drawing. (Bd. A – 11 / Page No. 263)	150.00		Cum.	
11.	Providing and laying dry trap stone / rubble soling in plinth, below flooring surface 23 cm. thick including hand packing, compaction etc. complete. (Bd. A – 12 / 264)	45.00		Cum.	
12.	Providing and laying in situ cement concrete in 1:2:4 (M – 15) of trap / granite / quartzite / gneiss metal for floors, bedding including formwork, compacting and curing etc. complete.	40.00		Cum.	
13.	Providing and fixing the C.C. teakwood double / single leaf second class fully poannelled doors 35 mm. thick shutter and 25 mm. thick panels as per detailed drawings including the door frame 60 x 100 mm. iron oxidized fixtures and fastening and finishing the wood work with oil painting 3 coats etc. complete. (Spec. No. Bd. T – 748 / 481-82)	36.00		Sqm.	
14.	Providing and fixing in position alluminium fixed window fully glazed of any size as per detailed drawing and as directed by Engineer – in – charge with all necessary alluminium sections including necessary fixtures and fastenings such as 5 mm. thick clear float glass etc. with powder coating etc.	11.00		Sqm.	

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NO.	PARTICULARS OF ITEMS	QUANTITY	RATE	UNIT	AMOUNT
	complete. (Bd T 97 / 97)				
15.	Providing and fixing in position alluminium openable / sliding window of any size as per detailed drawing and as directed by Engineer – in – charge with all necessary alluminium sections including necessary fixtures and fastenings such as alluminium latch, all stay, tower bolts, P.V.C. gasket and rubber lining, all screws, hinges etc. with 5 mm. thick clear float glass etc. with powder coating etc. complete. (Bd. T 98 / 97)	31.00		Sqm.	
16.	Providing internal cement plaster 12 mm thick in a single coat in cement mortar 1:4 with neeru finish to R.C.C. slab, chajja, ceilings, surface in all position including scaffolding, curing etc. complete. (Bd. L – 2 / 368 / Bd. L – 10 / 370)	1,300.00		Sqm.	
17.	Providing sand faced cement plaster 20 mm. thick in two coats to all external brick / stone / R.C.C. surfaces in cement mortar 1:4 using approved quality sand and in all positions including base coat, scaffolding, keeping the surfaces of the base coat rough to receive the sand face treatment, finishing surface by taking out grains and curing etc. complete at all leads and lifts and as per detailed specifications and Engineer – in – charge.	1,700.00		Sqm.	
18.	Providing and applying polymer modified cementations 1:6 water proofing coating of as equivalent make as per the manufacturers instructions over the R.C.C. slab etc. including cleaning, the surface prior to the applications as directed.	460.00		Sqm.	
19.	Providing and laying water proof treatment on roof slab with B.B. coba in all positions with an average thickness of 112 mm. consisting specialized material as per manufacturers specification and covering 10 years guarantee on court fee stamp paper including all lead, lift etc. complete as directed by the Engineer – in – charge.	460.00		Sqm.	
20.	Providing, fixing & laying 3.15 mm. thick plain with 0.85 mm. chequered al. trench cover for cable trenches of control room the cover should be as per required size including fabricating chequered plate cutting making the edges smooth by grinding and reveting the plate to the ms angle frame both with diamond of cover size by using ms angle 25 x 25 x 3 mm. including fabrication of ms angle with 3 coats	70.00		Sqm.	

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NO.	PARTICULARS OF ITEMS	QUANTITY	RATE	UNIT	AMOUNT
	of oil painting etc., providing and fixing al. chequered plate cover including fabrication of the angles cutting, fixing in flooring of cable trenches in line, level by drilling the holes as hold fast etc. including drilling the holes in angles and flooring and slot providing screws hold fast providing 3 coats of oil paint to angles and as per directives of the Engineer – in – charge. (weight of the plate should be 9.49 Kg./Sqm.)				
21.	Providing and laying marble mosaic cement tiles with white / colour cement base size 250 mm. x 250 mm. x 20 mm. thick with approved pattern on a 20 mm. thick of cm. 1:6 as lime mortar 1:2 including neat cement float for flooring in required position, drilling joints with neat cement slurry, curing, polishing and cleaning tiles, giving proper slopes etc. complete at all leads and lifts as per detailed specifications and directives of the Engineer – in – charge.	335.00		Sqm.	
22.	-- do -- as per Item No. 21 but for skirting / dado etc. complete.	60.00		Sqm.	
23.	Providing and applying washable oil bound distemper of approved colour and shade in three coats of the new plastered surfaces on over coat primer of approved make including scaffolding, preparing the surface to receive roff priming and finishing coat etc. complete at all leads and lifts and as per detailed specifications and directives of Engineer – in – charge.	1,300.00		Sqm.	
24.	Providing and applying two coats of water proof cement paint of approved manufacturers and of approved colour to the plastered surfaces including scaffolding if necessary cleaning and preparing the surfaces, watering for two days etc. complete.	1,700.00		Sqm.	
25.	Conveying of excavated material like soft murum, boulders by any means including loading, unloading & spreading / stacking up to a lead of 300 m or as directed by Engineer – in – charge The material should be spreading in low lying area including compacting and watering..	730.00		Cum.	
				Total	

Part IX: Page 1 of 11

Name of Work: Civil Works pertaining to 400 K.V. / 220 KV Sub – Station at Lonikand II, Tal. Haveli, Dist. Pune.

Part IX: Construction of storeshed at 400 KV R.S. Lonikand II Sub – Station,

ABSTRACT

NO.	PARTICULARS OF ITEMS	QUANTITY	RATE	UNIT	AMOUNT
1 a.	Excavation for foundation in earth soil of all types sand, gravel and soft murum etc. including removing excavated materials up to a distance of 50 meter beyond the building area and stacking, spreading as directed, dewatering, shoring and strutting, preparing the bed for the foundation and necessary back filling etc. complete. (Bd. A – 1, Page no. 259)	48.0		Cum.	
1 b.	-- do – all as above item No. 1 but excavation in hard murum with or without bolulders etc. complete. (Bd. A 2&3, Page no. 259)	48.0		Cum.	
1 c.	-- do – as per Item No. 1 a. but excavation in soft rock etc. complete. (Bd. A – 4 Page no. 259)	70.00		Cum.	
1 d.	-- do -- as per Item No. 1 a. but excavation in hard rock by controlled blasting etc. complete. (Bd. A – 5 Page no. 259)	130.00		Cum.	
1 e.	-- do -- as per item No. 1 a. but excavation in Hard rock by pneumatic chiseling etc. complete. (As directed by Engineer – in –charge)	50.00		Cum.	
2 a.	Filling in plinth and floors with approved quality excavated materials in 15 cm. to 20 cm. layers including watering and compaction etc. complete as per detailed drawing etc. complete.	53.00		Cum.	
2 b.	- do – as per item No. 2 a but with contractor's own good quality hard murum brought from outside source etc. complete. (Bs. A-11/263)	250.00		Cum.	
3.	Providing and laying dry trap stone rubble soling in plinth below flooring sub grade 15 cm. to 23 cm. thick including hand packing, compaction etc. complete. (Bd. A-12/264)	265.00		Cum.	
4.	Providing and laying in situ c.c. 1:4:8 M-75 using 40 mm. graded metal for foundation and bedding of column, footing, beams flooring sub-grade etc. including dewatering, formwork, compaction, curing etc. complete. (Bd.E-1C/287)	23.00		Cum.	
5.	Providing, cleaning, cutting, bending, hooking etc.	3.00		M.T.	

NO.	PARTICULARS OF ITEMS	QUANTITY	RATE	UNIT	AMOUNT
	and placing in position as per detailed drawing or as directed by Engineer-in-Charge including high yield strength deformed bars (Tor / M.S. plain bars of various diameters) confirming to I.S. 178 and 432 in all cement concrete works of foundation, columns, beams, slabs, storage tank, stairs, chajjas, canopies etc. location and of any shape including providing and binding with soft annealed 18 GMS wire and supporting the same as per approved methods all as per detailed specifications, drawings etc. complete. (Bd. F 17/306)				
6 a.	Providing and laying in situ plain or reinforced cement concrete M-20 c.c. grade with approved 20 mm. size graded trap stone aggregate for foundations and footings of columns including dewatering, formwork, mechanical compaction, finishing, curing etc. complete (excluding M.S. reinforcement) (Bd. F – 3/298)	6.00		Cum.	
6 b.	Providing and laying in situ cement concrete M-20 grade with approved 20 mm. size graded trap stone aggregate for columns above ground levels and all lifts, finishing the formed surface in c.m. 1:3 of sufficient thickness to give as an even surface or roughening if special finish is to be provided including dewatering, formwork, mechanical compaction, curing etc. complete (excluding M.S. reinforcement) (Bd. F – 5/300)	14.00		Cum.	
6 c.	Providing and casting in situ cement concrete M-20 of trap metal for <u>R.C.C. beams and lintels</u> as per detailed design and drawing or as directed, including dewatering, centering formwork, compaction, finishing the formed 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 and curing etc. complete (excluding reinforcement but using plywood centering) (Bd. F – 6/300)	5.00		Cum.	
6 d.	Providing and casting in situ cement concrete M-250 of trap metal for <u>R.C.C. flat slab or any slope and landing</u> of all thickness as per detailed design and drawing, including canopy slabs, including formwork, compacting, and giving form finish surface to the satisfaction of Engineer-in-Charge and curing finishing the formed surface with cement mortar 1:3 of sufficient minimum thickness to give a smooth and even surface or roughening them if special finish is to be provided and curing etc.	3.00		Cum.	

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NO.	PARTICULARS OF ITEMS	QUANTITY	RATE	UNIT	AMOUNT
	complete (excluding M.S. reinforcement but using plywood centering only) (Bd. F – 8/302)				
6 e.	- do – as above item No. 6 d but for R.C.C. <u>chajja</u> M 25 (Bd. F – 9/303)	1.00		Cum.	
7.	Providing and laying in situ c.c. 1:3:6 of trap stone metal for foundation and bedding including bailing out water, compacting, curing etc. complete. (Bd. E 6, Page No. 291)	57.00		Cum.	
8 a.	Providing hoisting and fixing in position mild steel/ tubular trusses of required span as per drawing and design includ. purlins,wind bracing,runners,gusset plate foundation bolts, including painting 3 coats of oil paint of approved quality and shade, scaffolding etc. complete as per ISI specifications (Bd.16,P 78)	3.00		M. T.	
8 b.	Providing hoisting and fixing in position mild steel / tubular trusses of required span as per drawing and design including purlins, wind bracing, runners, gusset plate foundation bolts, including painting 3 coats of oil paint of approved quality and shade, scaffolding etc. complete as per ISI specifications (Bd.16,P 78)	3.00		M. T.	
9.	Providing U. C. R. masonry of trap stones in C.M. 1 : 6 in foundation & plinth of inner walls/in plinth of external walls incl. Bailing out water, striking joints on unexposed faces & watering complete.(Bd H 1 P, 329)	198.00		Cum.	
10.	Providing and constructing second class brick masonry in super structure above plinth using conventional bricks in cement mortar 1:6 at all heights including racking out joints watering and scaffolding etc. complete. (Bd. G - 4/314)	83.00		Cum.	
11.	Providing and constructing in superstructures second class burnt brick masonry in cement mortar 1:4 in half brick thick wall including mild steel longitudinal reinforcement of 2 bars of 6 mm. diameter 2 hoop iron strips 25 mm X 1.6 mm. (16 gauge) at every third layer, properly bent and bonded at ends cement concrete -150 grade of 75 mm. thick at every ninth layer at lintel level and at top of the wall where it is free, scaffolding, racking out joints and watering at all heights all as per detailed specification and directions of Engineer-in-	9.00		Sqm.	

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NO.	PARTICULARS OF ITEMS	QUANTITY	RATE	UNIT	AMOUNT
	charge. (Bd. G - 7/316)				
12.	Providing and laying in situ C.C. 1:2:4 of trap stone metal for coping to BBM walls including scaffolding, compacting, curing etc. comp. (Bd.E 3, Page no. 288)	8.00		Cum.	
13.	Providing flush grooved pointing with C.M. 1 : 3 for stone masonry incl. Scaffolding & curing etc. complete. (Bd L 15, P.No.372)	55.00		Sqm.	
14 a.	Providing cement plaster 12 mm.thick in single coat in cement mortar 1:4 with neeru finish to R.C.C. slab, chajja, ceilings, surface in all position including scaffolding curing etc. complete. (Bd. L-2/368, Bd. L-10/370)	403.00		Sqm.	
14 b.	Providing cement plaster 6 mm.thick in two coats in cement mortar 1:4 with neeru finish to R.C.C./Brick/stone surfaces complete at all lifts as per detailed specification and directions of Engineer-in-charge. (Bd. L-2/368, Bd. L-10/370)	23.00		Sqm.	
15.	Providing sand faced plaster 20 mm. Thick in two coats to all brick/stone masonry surfaces in cement mortar 1:4 using approved quality sand and in all positions including base coat, scaffolding, keeping the surfaces of the base coat rough to receive the sand faces treatment finishing surface by taking out grains and curing etc. complete at all leads and lifts and as per detailed specification and Engineer-in-charge.	378.00		Sqm.	
16.	Providing patti on plastered surface 12 to 15 mm thick in C.M. 1 : 3 in line, level incl. Neat finishing, scaffolding, curing etc. complete. (As directed by Engineer - in - charge)	201.00		Rmt.	
17 a.	Providing and laying polished tandur stone flooring 25 to30 mm. thick with plain /diamond pattern on a bed of 1:6 cm.including neat cement float filling the joints with cement slurry, curing, polishing and clearing etc. complete. (Bd. M-3/380)	73.00		Sqm.	
18.	-- do -- all as above item No 17a but tandur stone for skirting	6.00		Sqm.	
19 a.	Providing and laying cement concrete flooring 40 mm. thick laid in proper level and slope in alternate bays, including compaction filling joints, marking lines to give appearance of tiles of 30cmx30cm or	323.00		Sqm.	

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NO.	PARTICULARS OF ITEMS	QUANTITY	RATE	UNIT	AMOUNT
	other size laid diagonally / square etc. finishing smooth (with extra cement) in any colour as directed (Bd.M -7/383)				
19 b.	Providing and laying white glazed tiles of 148.5x148.5 mm.and 5 mm. Thick for flooring in required position on a bed of 1:1 lime mortar or 1:6 cement mortar including neat cement float , fixing in joints with white cement slurry, curing and cleaning etc. complete.(As directed by Engineer in charge)	3.00		Sqm.	
20.	Providing and laying white glazed tiles of 148.5x148.5 mm.and 5 mm. Thick for dado or skirting in required position on a bed of 1:1 lime mortar or 1:6 cement mortar including neat cement float , fixing in joints with white cement slurry, curing and cleaning etc. complete.(As directed by Engineer in charge)	15.00		Sqm.	
21 a.	Providing and laying sills polished Kadappa stone slab 25 to 30 mm. thick on a bed of 1:4 cm. including neat cement float filling the joints with cement slurry, curing, polishing and clearing etc. complete. (Bd. M-29/391)	6.00		Sqm.	
21 b.	Providing and laying both side polished Kadappa stone slab 25 to 30 mm. thick on a bed of 1:4 cm. including neat cement float filling the joints with cement slurry, curing, polishing and clearing etc. complete. (Bd. M-29/391)	19.00		Sqm.	
22.	Providing and fixing rolling shutter fabricated from steel laths of minimum thickness 0.9 mm with lock plate of 3.15 mm thickness reinforced with 35x35x5 mm angle section fitted with sliding bolts and handles for both sides, deep M.s. channel sections of depth and thickness not less than 65 mm and 3.15 mm respectively with hold fast arrangement M. S. bracket plate 300x300x3.15 mm minimum size and shape with square bar suspension shaft of minimum 32 mm diameter, hood cover of M. S. sheet not less than 0.9 mm thickness and of any size of top and safty devices including mechanical gear operation arrangement consisting of worm gear wheel and worms of high grade cast iron or mild steel and one coat of red lead primer etc. complete (I.S.6248-1979) specification no.Bd T55 page no 510)	13.00		Sqm.	

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NO.	PARTICULARS OF ITEMS	QUANTITY	RATE	UNIT	AMOUNT
23.	Providing and fixing solid core flush door in single leaf 32 mm. thick commercial type as per detailed drawing including teak wood door frame of size 125 x 60 mm. With wrought iron hold fast, aluminium anodized fixtures and fastening and handles on both sides and aluminium sheet fixing on back side of shutters full width and 900 mm. and including moulding lipping of 50 x 20 mm. and including finishing one coat of premier shade etc. complete.	3.00		Sqm.	
24.	Providing and fixing FRP door in single leaf 25 mm. thick with aluminium outer frame as per detailed drawing including teak wood door frame of size 125 x 60 mm. With wrought iron hold fast, aluminium anodized fixtures and fastening and handles on both sides and including moulding lipping of 50 x 20 mm. and including finishing one coat of premier shade and three coat of oil paint etc. complete.	6.00		Sqm.	
25 a.	Providing and fixing steel casement windows of various sizes as per detail drawing without hot dip zinc coating, without ventilators, including fabricating / glazing with plain/ obscured glas panes and of approved type and quality and fixtures and fastenings, without teak wood boxing and architraves and finishing with two coats of oil paints complete with guard 12 mm square bars at 10 cm c/c Os spec.no. (Bd. T-53/509	10.00		Sqm.	
25 b.	-- do -- all as above item No 25a but for ventilators	6.00		Sqm.	
26.	Providing and fixing Orissa pattern white glazed earthen wear first quality 625 x 450 mm. Water closet pan of approved make including "P" of "s" trap C.I. Soil and vent pipe upto the connecting chamber, all net in bedding with 10 liter capacity fiber flushing water tank for flushing water with necessary G.I. pipe to W.C. pan, drilling the holes in walls, slab etc. and remaking them etc. complete as directed. Spec. : As directed by Engineer in charge.	1.00		No.	
27.	Providing and fixing white glazed earthenware wash hand basin of approved make 550 mm. X 400 mm. Including best quality chromium plated brass screw down pillar cock G.I. pillar trap rubber plug and brass chain brass stop rubber plug and brass stop cock with PVC inlet connection PVC waste pipe upto Nahani Trap of outside face of wall etc.	1.00		No.	

NO.	PARTICULARS OF ITEMS	QUANTITY	RATE	UNIT	AMOUNT
	complete as directed. (Bd. V - 30/565)				
28.	Providing and fixing white glazed earthenware large flat back urinal 610 mm. X 400 mm. X 380 mm. With concealed walls, hangers approved cistern 5 liters capacity PVC with fittings like PVC connection stop cock, brackets etc. G.I. Flush pipe 20 mm and 22 mm. dia. fittings including PVC waste pipe and bottle trap and G.I. concealed pipe connection upto the nearest inspection chamber, all complete as per detailed specifications or as directed. (Bd. V-23/562)	1.00		No.	
29.	Providing and fixing in position 100 mm. Diameter Nahani trap with long nose including grating and piece of G.I. pipe upto outside face of wall and necessary connection with the chambers etc. complete. (Bd. V - 32/567)	2.00		No.	
30.	Providing and fixing 150 mm. X 100 mm. salt glazed stoneware gully trap in C.M. 75 grade outside the building C.I. grating connecting glazed stoneware pipe brick masonry chamber of 225 mm. X 300 mm. with C.I. lid and frame fixed in M:150 grade concrete coping all as per detailed specifications. (Bd. V - 38/572)	1.00		No.	
31.	Providing and fixing PVC soil pipe / vent pipe with necessary fixtures and fittings such as bends, tees, single junctions double junctions, slotted vent offsets on walls with clamping or in the ground including excavation, laying refilling trenches etc. complete.				
31 a.	110 mm. diameter (Bd. V - 60 H)	3.00		Rmt.	
31 b.	75 mm. diameter (Bd. V - 60 G)	5.00		Rmt.	
32.	Providing and laying 100 mm. diameter salt glazed stone ware pipe on 1:4:8 C.C. bed in proper slope including all fittings such as bends, tees, single or double junctions, testing refilling of trenches etc. complete including excavation in all types of strata. (Bd. V - 39/573)	10.00		Rmt.	
33 a.	Providing and constructing inspection chambers of 230 mm. thick, 2 nd class brick masonry work 900 mm. X 450 mm. clear size including cement concrete M:75 grade bed concrete M:150 grade	1.00		No.	

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NO.	PARTICULARS OF ITEMS	QUANTITY	RATE	UNIT	AMOUNT
	channel, plastering inside and outside exposed surfaces of brick masonry with C.M. 1:3 including neat cement finish airtight C.I. lid with frame fixed in cement concrete M:150 grade, all as per detailed specifications etc. (Bd. V - 43/574)				
33 b.	-- do -- 600 mm. X 450 mm. (Bd. V - 43/574)	1.00		No.	
34.	Providing and fixing in position G.I. Pipes of sizes specified "B" class medium type screwed socket joints and necessary fittings such as sockets, reducers, enlargers, unions, clamps etc. including necessary excavation in trenches and back filling and fixing on wall with clamps drilling the holes in walls, slabs etc. and remaking them all complete as directed and applying anticorrosive primer oil paint and two coats of oil painting complete. (Bd. V-5/551)				
34 a.	40 mm. diameter	5.00		Rmt.	
34 b.	25 mm. diameter	25.00		Rmt.	
34 c.	20 mm. diameter	25.00		Rmt.	
34 d.	15 mm. diameter	13.00		Rmt.	
35.	Providing and fixing in position 15 m m diameter heavy duty brass bib taps including necessary sockets union etc. complete. (Bd. V-8/554)	2.00		No.	
36.	Providing and fixing in position 25 mm. diameter wheel screw down full way (peet) valve of approved manufactured and tested quality including necessary sockets union nut, brick masonry chamber with C.I. frame and lid and locking arrangement etc. complete. (Bd. V 10/555)	1.00		No.	
37.	Providing and fixing chromium plated brass towel rod 25 mm. diameter and 600 mm. long on teakwood 20 mm. thick and 100 mm. wide including all fixtures, painting with oil paint etc. complete.	1.00		No.	

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NO.	PARTICULARS OF ITEMS	QUANTITY	RATE	UNIT	AMOUNT
38.	Providing and fixing in position best quality kohinoor or equivalent make 600 mm. X 400 mm. size plain glass mirror with 16 mm. dia. nickel plated towel rod and 6 mm. thick plywood packing chromium plated brass brackets 600 x 100 x 6 mm. thick glass shelf etc. complete as per detailed specifications.	1.00		No.	
39 a.	Providing and applying water proof cement paint of "Snowcem" or other equivalent quality approved colour and shade in two coats with approved primer to the plastered surface at all height including scaffolding preparation of surface watering etc. complete. (Bd. O - 8/406)	363.00		Sqm.	
39 b.	Providing and applying washable oil bound colour and distemper of approved colour shade to new plastered surface in two coats including scaffolding, preparing the surface to receive the priming and finishing coats complete as per detailed specifications with primer coat (Bd. P - 5/413)	370.00		Sqm.	
39 c.	Providing and applying Plastic emulsion paint of approved colour shade to new plastered surface in two coats including scaffolding, preparing the surface to receive the priming and finishing coats complete as per detailed specifications. with primer coat (Bd. P - 5/413)	33.00		Sqm.	
39 d.	Providing and applying white wash in two coats on new plastered surface of slab ceiling including scaffolding and preparing the surface by brushing and brooming down etc. complete. (Bd. P - 1/411)	340.00		Sqm.	
39 e.	Providing and applying oil paint of approved colour shade to new plastered surface in two coats including scaffolding, preparing the surface to receive the priming and finishing coats complete as per detailed specifications. with primer coat (Bd. P - 5/413)	48.00		Sqm.	
40.	Providing and laying water proof treatment of terrace slab with BB coba in all positions with an average thickness of 112 mm consisting specialised materials as per the manufactures specifications and covering 10 years guarantee on court fee stamp paper including all lead, lift etc. complete (As directed by Engineer in charge)	2.00		Sqm.	
41.	Providing 12 m m thick integral finishing in C.M. 1:3 including smooth cement finish & with using	15.00		Sqm.	

NO.	PARTICULARS OF ITEMS	QUANTITY	RATE	UNIT	AMOUNT
	water proofing compound as per manufacturer's instructions, curing etc. complete. (As directed by Engineer in charge)				
42.	Providing and applying water proof algiproof water, weather proof compound for slab and beams, with I.S.I. mark etc. complete as directed by the manufacture etc. complete.	3.00		Kg.	
43.	Providing and applying modified cementious acts 1:6watwr proofing coating of roff or equivalent make as per the mannufactorer's instructions over the RCC slab, parapet walls, chajjas,including cleaning the surface prior to the applications as directed	28.00		Sqm.	
44.	Providing and fixing in position PVC " Sintex" make or equivalent make water storage tank with lid of 1100 mm. diameter and 1200 mm. height with all necessary fittings for inlet outlet overflow scour vent pipe brass ball cock for inlet etc. including erecting on roof slab/loft slab on plastered brick pillars as per manufactures requirements etc. complete of 1000 liters capacity. (Bd. V - 134 A)	2,000.00		Litre	
45.	Providing and fixing 6.00mm thick Asbestos cement corrugated (Big size) sheet roofing including galvanised iron J or L hook bolts galvanized iron band bituminous G.I.washers, ,galvanised iron clamps and bolts and nuts and scaffolding complete (Bd. R-7 /453)	323.00		Sqm.	
46.	Providing and fixing 6.00mm thick Asbestos cement Semi ridge capping for roofing including galvanised iron J or L hook bolts galvanized iron band bituminous G.I.washers, ,galvanised iron clamps and bolts and nuts and scaffolding complete (Bd. R-7 /453)	30.00		Sqm.	
47.	Providing and fixing false ceiling of plain Asbestos cement 4 mm thick with country teak wood beading 45x12 mm with frame work of country teak wood battens of size 70x60 mmat 1.00 meter center to center including scaffolding if necessary, all iron work and painting (visible surface) to A.C. sheet and beading in two coats complete (Bd. R-16/460)	74.00		Sqm.	
48.	Providing and supplying Godrej make bass Navtal lock of 7 levers with three keys	3.00		No.	
49.	Providing and fixing Hume pipe septic tank 1200 mm. dia.with vent pipe cowl including necessary	1.00		No.	

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NO.	PARTICULARS OF ITEMS	QUANTITY	RATE	UNIT	AMOUNT
	excavation and laying in position including providing soak pit of required size as directed by Engineer-in-charge.				
50.	Supplying and spreaing of 40mm size trap/granite / quartzite /gneiss stone metal including conveying and stacking etc. complete at all leads and lifts as directed etc complete (stack measurement will be paid for) Spec. No. Rd. 41 page no 215	68.00		Cum.	
51.	Supplying trap /granite /quartzite /gneiss stone dust / grit including conveying & stacking etc. complete at all leads and lifts as directed etc. complete (stack measurement will be paid for) Spec. no. Rd. 41 page no 215	8.00		Cum.	
52.	Compacting the subgrade layers with power rollers including necessary labour, material & artificial watering etc. complete.	1650.00		Sqm.	
53.	Conveying of excavated material like soft murum, boulders by any means including loading, unloading & spreading / stacking up to a lead of 300 m or as directed by Engineer – in – charge The material should be spreading in low lying area including compacting and watering..	298.00		Cum.	
				Total	

Part X: Page 1 of 2

Name of Work: Civil Works pertaining to 400 / 220 KV Sub – Station at Lonikand II, Tal. Haveli, Dist. Pune.

Part X: Construction of R.C.C. cable Trenches for 400 KV & 220 KV Sub – Station at 400 KV R.S. Lonikand II,

ABSTRACT

NO.	PARTICULARS OF ITEMS	QUANTITY	RATE	UNIT	AMOUNT
1.	Excavation for foundation in soft soil below ground level including removing the excavated material up to a distance of 50 m. behind the building area and all lifts stacking and spreading as directed, dewatering, shoring and strutting, preparing the bed for the foundation and necessary back filling etc. complete. (Bd. A – 1 Page no. 259)	700.00		Cum.	
2.	-- do – all as per Item No. 1 a. but excavation in hard murum with boulders etc. complete. (Bd. A – 4 Page no. 259)	1,000.00		Cum.	
3.	-- do – all as per Item No. 1 a. but excavation in hard rock by controlled blasting etc. complete. (Bd. A – 5 Page no. 259)	100.00		Cum.	
4.	-- do – all as per item No. 1 a. but excavation in Hard rock by pneumatic chiseling etc. complete. (As directed by Engineer – in –charge)	100.00		Cum.	
5.	Providing and laying in situ cement concrete 1:4:8 M 75 using 40 mm graded metal for foundation and bedding of column, footing, beams flooring sub – grade etc. including dewatering, formwork, compaction, curing etc. complete. (Bd. E – 1C Page no. 287)	210.00		Cum.	
6.	Providing, cleaning, cutting, bending hooking etc. and placing in position as per detailed drawing or as directed by Engineer- in –charge including high yield strength deformer bars (Tor / M.S. plain bars of various diameters) confirming to IS 178 and 432 in all cement concrete works of foundation, columns, beams, slabs, storage tank, stairs, chajjas, canopies etc. location and of any sghapes including providing and binding with soft annealed 18 GMS wire and supporting the same as per approved methods all as per detailed specifications, drawings etc. complete. (Bd. F – 17 Page no. 306)	71.00		M.T.	
7.	Providing & laying R.C.C. M-20 C.C. grade with approved 20 mm size graded trap stone aggregate for foundation / footing of columns including	270.00		Cum.	

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	dewatering formwork, mechanical compaction finishing, curing etc. complete. (excluding M.S. reinforcement) (BdF 3, Page no. 298)				
8.	Providing & casting in situ C.C. M 20 of trap metal for R.C.C. wall of all thickness as per detailed design & drawings or as directed including dewatering, centering, formwork, compaction, finishing the formed 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 but using plywood centering) (BDF 6, Page no. 300)	500.00		Cum.	
9.	Providing structural steel work in rolled section like joints, channels, angles, tees etc. as per detailed and drawing including fixing in position with connecting plate braces, cleats etc. with welding and painting 2 coats of oil paints over one coat of primer etc. complete for cable trench brackets. (Bd. C - 2/275)	15.00		M.T.	
10.	Providing and supplying factory made pre-stressed cable trench covers of required size and length as directed by Engineer – in – charge including R.C.C. concrete of M 40 grade, high tensile wire of 4 mm dia 8 nos. in width of 300 mm and thickness of covers 60 to 75 mm neat cement finish in all side and grinding of external edge of H.T. wire and providing non corrosive lifting arrangement at two places of cover top, curing, testing of covers, including transportation of the work site, loading and unloading etc. complete.	1,800.00		Sqm.	
11.	Providing sand face cement plaster 20 mm thick in two coats to all brick / stone masonry surfaces in CM 1:4 using approved quality sand and in all positions including base coat, scaffolding, keeping the surface of the base coat rough to receive the sand faces treatment finishing surface by taking out grains and curing etc. complete at all leads and lifts and as per detailed specification and Engineer – in – charge.	500.00		Sqm.	
12.	Conveying of excavated material like soft murum, boulders by any means including loading, unloading & spreading up to a lead of 300 m material in low lying area including compaction / watering.	2,100.00		Cum.	
				Total	

Part XI: Page 1 of 3

Name of Work: Civil Works pertaining to 400 K.V. / 220 KV Sub – Station at Lonikand II, Tal. Haveli, Dist. Pune.

Part XI: Construction of 3.00 meter high chain link fencing with U.C.R. wall at 400 / 220 K.V. R.S. Lonikand II S/s

ABSTRACT

NO.	PARTICULARS OF ITEMS	QUANTITY	RATE	UNIT	AMOUNT
1 a.	Excavation for foundation in earth soil of all types sand, gravel and soft murum etc. including removing excavated materials up to a distance of 50 meter beyond the building area and stacking, spreading as directed, dewatering, shoring and strutting, preparing the bed for the foundation and necessary back filling etc. complete. (Bd. A – 1, Page no. 259)	190.00		Cum.	
1 b.	-- do – all as above item No. 1 but excavation in hard murum with boulders etc. complete. (Rd. 3 & 4, Page no. 183 & 184)	430.00		Cum.	
1 c.	-- do – as per Item No. 1 a. but excavation in soft rock etc. complete. (Rd.– 5 Page no. 184)	125.00		Cum.	
1 d.	-- do -- as per item No. 1 a. but excavation in Hard rock by pneumatic chiseling etc. complete. (As directed by Engineer – in –charge)	61.00		Cum.	
2.	Providing and laying in situ cement concrete in 1:4:8 trap / granite / quartzite / gneiss / metal for foundation and bedding including bailing out water, formwork, compacting and curing etc. complete. (Bd. E1 C Page No. 287)	125.00		Cum.	
3.	Providing uncoursed rubble masonry of trap stone in cement mortar 1:6 in foundation and plinth of inner and external walls including bailing out water, striking joints on unexposed faces and watering etc. complete. (Bd. H1 Page No. 329)	700.00		Cum.	
4.	Providing and erecting 3.00 meter high chainlink fencing with both side anticlimbing as per detailed drawing No. PCD/M 25 a. Laying of cement 1:2:4 plain or moulded Blocks in coarse and shape including centering, formwork, compacting of size 0.40 x 0.45 x 0.60 meter for posts at 3.50 meter c/c and 0.60 x 0.45 x 0.40 m. for stays at every 10 th post and corner etc. complete. b. Post height of 3.5 m. of size 65 x 65 x 6	1,720.00		Rmt.	

	<p>mm. m.s. angle with double anticlimbing arrangements at top 0.60 meter length at 3.00 meters c/c stay of M.S. angle size 65 x 65 x 6 mm. and 3.40 meter length including 12 mm. dia. dowel bar and as required etc. complete.</p> <p>c. 50 x 50 mm. diamond mesh chain link fencing 10 gauge G.I. wire 3.00 meter height.</p> <p>d. 8 rows of G.I. barbed wire 12 gauge with double pointed barbs spaced at 75 mm. c/c etc. complete.</p> <p>e. 16mm diameter 2 nos. nut bolts for fixing on stay and 16 mm. diameter 4 nos. nut bolts for fixing M.S. flat and chain link to each post etc. complete.</p> <p>f. 65 x 65 x 6 mm M.S. angle for fixing of chain link fencing of 2 meter height etc. complete.</p> <p>g. Painting with 3 coats of oil paint over one coat of red oxide primer to M.S. steel surface etc. complete.</p> <p>h. Stringing of 8 gauge G.I. wire at top and bottom as directed etc. complete.</p> <p>i. Including fabrication of above material erection fixing of barbed wire with required 'U' clips etc. complete. (extra double anticlimbing arrangement if required at step included in above item.)</p>				
5.	Providing and laying in situ cement concrete M-15 (c.c. 1:2:4) of trap / granite / quartzite / gneiss / metal for coping to plinth or parapet moulded o chamfered as per drawing or as directed including centering, formwork, compacting, roughening them if special finish is to be provided and curing and finishing if required etc. complete. (Bd. E3 Page No. 288)	77.00		Cum.	
6.	Providing flush grooved pointing with cement mortar 1:3 for stone masonry work including scaffolding, curing etc. complete.	1,032.00		Sqm.	
7.	Providing cement plaster 20 mm. thick in two coats in cement mortar 1:4 without neeru finish to concrete, brick or stone surface in all positions	1,090.00		Sqm.	

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	including racking out joints scaffolding and curing etc. complete. (Bd. L-7/369)				
				Total	

Part XII: Page 1 of 2

Name of Work: Civil Works pertaining to 400 K.V. / 220 KV Sub – Station at Lonikand II, Tal. Haveli, Dist. Pune.

Part XII: Supplying and spreading metal for 400 K.V. / 220 K.V. Switchyard at 400 / 220 K.V. Lonikand II S/s

ABSTRACT

NO.	PARTICULARS OF ITEMS	QUANTITY	RATE	UNIT	AMOUNT
1.	Leveling and dressing the switchyard ground to the required level by excavating in all types of strata filled-up soil, normal soil, hard murum and hard murum with boulders, soft rock or hard rock etc. filling the depressed area of ground if any as required maximum depth upto 200 mm including transporting the excavated stuff within the area by head load / mechanical means upto 1 km lead including spreading compacting by power roller / light Roller watering and removing the grass, shrubs etc. complete making the ground as directed by Engineer – in – charge.	90,000.00		Sqm.	
2.	Supplying trap / granite / quartzite / gneiss machine crushed stone dust / grit including conveying and stacking at site etc. complete as directed.	3,000.00		Cum.	
3.	-- do -- as above but for 40 mm. size machine crushed stone metal etc. complete as directed.	5,850.00		Cum.	
4.	-- do -- as above but for 20 mm. size machine crushed stone metal etc. complete as directed.	3,150.00		Cum.	
5.	Spreading of stone dust / grit within 100 meters distance by head loading including leveling etc. complete as directed by the Engineer – in – charge.	4,500.00		Cum.	
6.	Spreading 20 mm. and 40 mm. size stone metal within 100 meters distance by head loading including leveling etc. complete as directed.	9000.00		Cum.	
7.	Providing & laying G.I. pipe line 'B' class of following diameter with screwed sockets, joints and necessary G.I. fitting such as bends, elbows, back nuts, tees, reducer or enlarger, clamp, union etc. complete including excavation of trenches for pipe line and back filling etc. complete. (BDV – 5A)				
a.	40mm diameter	400.00		Rmt.	
b.	25mm diameter	600.00		Rmt.	
c.	15mm diameter	300.00		Rmt.	
8.	Providing and fixing 40mm. dia. Screwdown wheeled stop of brass including necessary sockets,	40.00		No.	

Part XII: Page 2 of 2

NO.	PARTICULARS OF ITEMS	QUANTITY	RATE	UNIT	AMOUNT
	unions, nuts etc. complete as directed by Engineer – in – charge etc. complete. (BDV – 9 –D)				
9.	Providing & fixing 25mm dia Screw down wheeled stop tap of brass including necessary sockets, unions with chamber nuts etc. complete. (BDV – 10 – B)	80.00		No.	
10.	Providing & fixing 25mm dia. Screw down bib / stop tap of brass including necessary sockets, unions, nuts etc. complete (BDV – 8 – B / 554)	300.00		No.	
11.	Providing earthing pits of size 1.20 x 1.20 x 3 mtr. depth including excavation and laying C.I. pipe of 150mm dia etc. complete.	200.00		No.	
				Total	

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Name of Work: Civil Works pertaining to 400 K.V. / 220 KV Sub – Station at Lonikand II, Tal. Haveli, Dist. Pune.

Part XIII: Construction of W.B.M. Road at 400 / 220 K.V. Sub – Station Lonikand II

ABSTRACT

NO.	PARTICULARS OF ITEMS	QUANTITY	RATE	UNIT	AMOUNT
1 a.	Excavation for roadways in earth soils of all sorts & gravel or soft murum including dressing section to the required grade, camber & side slopes & conveying the excavated materials with all lifts up to a lead of 50 m & spreading for embankment or stacking as directed etc. complete spec. no. Rd-2page no180	410.00		Cum.	
1 b.	---do--- as above but excavation in hard murum with or without boulders.	820.00		Cum.	
1 c.	---do--- as above but excavation in soft rock. (Provisional Quantity)	100.00		Cum.	
2.	Conveying of excavated material like soft murum, boulders by any means including loading, unloading & spreading up to a lead of 300 M. material in low lying area including compaction / watering.	3,100.00		Cum.	
3.	Watering and compaction of embankment form of materials obtained from the road cutting within a lead of 50 meters to 95 % of standard proctor density test after laying them in layers of 20 to 30 cm. With power roller spec. no. Rd- 10 page no. 187	3,000.00		Cum.	
4 a.	Providing dry trap / granite / quartzite / gneiss rubble stone soling 15 cm to 20 c.m. thick incl. hand packing & compaction etc. complete (Bd. A 12, Page no. 264)	750.00		Cum.	
4 b.	laying dry trap / granite / quartzite / gneiss made from the deptt. of trap stones (by making from deptt. excavated rock) with transporting rubble stone soling 15 c.m. to 20 c.m. thick including hand packing & compaction etc. complete.	200.00		Cum.	
5 a.	Supplying & stacking 60 mm trap stone over size metal at the road side including conveying & stacking etc. complete. (Stack measurements will be paid for) spec. no. Rd- 20 page no. 200	1,450.00		Cum.	

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NO.	PARTICULARS OF ITEMS	QUANTITY	RATE	UNIT	AMOUNT
5 b.	Labour charges for making 60 mm trap stone over size metal and stacking at the road side including conveying from any lead from company's site & stacking etc. complete. (Stack measurements will be paid for)	4,100.00		Cum.	
6 a.	Supplying & stacking 40 mm trap stone size metal at the road side including conveying & stacking etc. complete. (Stack measurements will be paid for) spec. no. Rd- 22 page no. 201	1,200.00		Cum.	
6 b.	Labour charges for making 40 mm trap stone size metal and stacking at the road side including conveying from any lead from company's site & stacking etc. complete. (Stack measurements will be paid for)	2,500.00		Cum.	
7.	Supplying & stacking hard murum at road side for embankment with approved quality hard murum brought from out side source. (stack measurements will be paid for) (Provisional Quantity)	500.00		Cum.	
8.	Supplying & stacking soft murum at road side for blindage with approved quality soft murum brought from out side source. (stack measurements will be paid for)	500.00		Cum.	
9.	Spreading of over size metal in layers as directed by engineer in charge etc. complete.	6,000.00		Cum.	
10.	Spreading of 40 mm size metal in layers as directed by engineer in charge etc. complete.	3,700.00		Cum.	
11.	Spreading of hard murum in layers as directed by engineer in charge etc. complete. (murum available form departmental excavation & brought form outside sources is to be used)	500.00		Cum.	
12.	Spreading of soft murum for blindage on road as directed by engineer in charge etc. complete.	500.00		Cum.	
13.	Compacting the subgrade layers with power rollers including necessary labour, material & artificial watering etc. complete.	18,500.00		Cum.	
14.	Compacting the over size metal / size metal layers with power rollers including necessary labour,	77,000.00		Sqm.	

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NO.	PARTICULARS OF ITEMS	QUANTITY	RATE	UNIT	AMOUNT
	material & artificial watering etc. complete.				
15.	Compacting the side berms with power rollers including necessary labour, material & artificial watering etc. complete.	8,000.00		Sqm.	
16.	Providing and laying in situ C.C. 1:3:6 of trap stone metal for foundation and bedding including bailing out water, compacting, curing etc. comp. (Bd.E 6, Page no. 291)	230.00		Cum.	
17.	Providing and laying in situ C.C. 1:4:8 of trap stone metal for foundation and bedding including bailing out water, compacting, curing etc. comp. (Bd.E 1, Page no. 287)	65.00		Cum.	
18 a.	Providing U. C. R. masonry of trap stones in C.M. 1 : 6 in foundation & plinth of inner walls/in plinth of external walls incl. Bailing out water, striking joints on unexposed faces & watering complete.(Bd H 1 P, 329)	365.00		Cum.	
18 b.	U. C. R. masonry made from the dept. of trap stones (by making from dept. excavated rock) in C.M. 1:6 in foundation & plinth of inner walls/in plinth of external walls incl. Bailing out water, striking joints on unexposed faces & watering complete (As directed by Engineer in charge).	800.00		Cum.	
19 a.	Providing dry rubble stone pitching 23 cm (about 9") thick etc. complete. (Rd 73, P. No.246)	1,300.00		Sqm.	
19 b.	Dry rubble stone pitching 23 cm made from deptt excavated rock (about 9") thick etc. complete. (Rd 73, P. No.246)	3,500.00		Sqm.	
20.	Providing flush grooved pointing with C.M. 1: 3 for stone masonry incl. Scaffolding & curing etc. complete. (Bd L 15, P.No.372)	4,800.00		Sqm.	
21.	Providing and laying in situ C.C. 1:2:4 of trap stone metal for coping to BBM walls including scaffolding, compacting, curing etc. comp. (Bd.E 3, Page no. 288)	195.00		Cum.	
22.	Providing cement plaster 12 mm. thick in single coat in cement mortar 1:4 with neeru finish to R.C.C. slab, chajja, ceilings, surface in all position including scaffolding curing etc. complete. (Bd. L-2/368, Bd. L-10/370)	2,650.00		Sqm.	

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NO.	PARTICULARS OF ITEMS	QUANTITY	RATE	UNIT	AMOUNT
23.	Providing patti on plastered surface 12 to 15 mm thick in C.M. 1 : 3 in line, level incl. Neat finishing, scaffolding, curing etc. complete. (As directed by Engineer - in - charge)	5,100.00		Rmt.	
24 a.	Providing & laying concrete pipes of ISNP 600 mm dia. In proper line, level & slope excluding excavation, fixing of collars, filling joints in CM 1:1, curing, refilling the trench etc. complete. (As directed by Engineer in charge)	5.00		Rmt.	
24 b.	---do--- for 450 dia. Pipes (As directed by Engineer in charge)	120.00		Rmt.	
24 c.	---do--- for 300 dia. Pipes (As directed by Engineer in charge)	32.00		Rmt.	
24 d.	---do--- for 225 dia. Pipes (As directed by Engineer in charge)	20.00		Rmt.	
				Total	

Part XIV: Page 1 of 2

Name of Work: Civil Works pertaining to 400 KV / 220 KV S/s at Lonikand II, Tal. Haveli, Dist. Pune.

Part XIV: Construction of R.C.C. Culvert for 400 KV & 220 KV S/s at 400 KV R.S. Lonikand II

ABSTRACT

NO.	PARTICULARS OF ITEMS	QUANTITY	RATE	UNIT	AMOUNT
1 a.	Excavation for foundation in hard murum and hard murum with boulders below ground level including removing the excavated material up to a distance of 50 m. behind the building area and all lifts stacking and spreading as directed, dewatering, shoring and strutting, preparing the bed for the foundation and necessary back filling etc. complete. (Bd. A – 1 Page no. 259)	20.00		Cum.	
1 b.	-- do – all as per Item No. 1 a. but excavation in hard rock by controlled blasting etc. complete. (Bd. A – 5 Page no. 259)	40.00		Cum.	
1 c.	-- do – all as per item No. 1 a. but excavation in Hard rock by pneumatic chiseling etc. complete. (As directed by Engineer – in –charge)	15.00		Cum.	
2.	Providing and laying in situ cement concrete 1:4:8 M 75 using 40 mm graded metal for foundation and bedding of column, footing, beams flooring sub – grade etc. including dewatering, formwork, compaction, curing etc. complete. (Bd. E – 1C Page no. 287)	3.00		Cum.	
3.	Providing, cleaning, cutting, bending hooking etc. and placing in position as per detailed drawing or as directed by Engineer- in –charge including high yield strength deformer bars (Tor / M.S. plain bars of various diameters) confirming to IS 178 and 432 in all cement concrete works of foundation, columns, beams, slabs, storage tank, stairs, chajjas, canopies etc. location and of any shapes including providing and binding with soft annealed 18 GMS wire and supporting the same as per approved methods all as per detailed specifications, drawings etc. complete. (Bd. F – 17 Page no. 306)	5.00		M.T.	
4.	Providing & laying R.C.C. M-25 C.C. grade with approved 20 mm size graded trap stone aggregate for foundation / footing of columns including dewatering formwork, mechanical compaction finishing, curing etc. complete. (excluding M.S. reinforcement) (BdF 3, Page no. 298)	12.00		Cum.	
5.	Providing & casting in situ C.C. M 25 of trap metal for R.C.C. wall 300 mm thick as per detailed design	15.00		Cum.	

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NO.	PARTICULARS OF ITEMS	QUANTITY	RATE	UNIT	AMOUNT
	& drawings or as directed including dewatering, centering, formwork, compaction, finishing the formed 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 but using plywood centering) (BDF 6, Page no. 300)				
6.	-- do -- as per Item No. 5 but for R.C.C. slab of M-25 etc. complete.	11.00		Cum.	
				Total	

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Name of Work: Civil Works pertaining to 400 K.V. / 220 KV Sub – Station at Lonikand II, Tal. Haveli, Dist. Pune.

Part XV: Providing and laying half round pipes and construction of brick masonry, cable trench for breakers in 400/220 KV Switch Yard at 400 KV Sub-Station Lonikand II

ABSTRACT

NO.	PARTICULARS OF ITEMS	QUANTITY	RATE	UNIT	AMOUNT
1 a.	Excavation for foundation in earth soils of all types sand, gravel and soft murum including removing the excavated materials upto a distance of 50 metres beyond the working place and stacking and spreading as directed dewatering preparing the bed for foundation and necessary backfilling, ramming, watering including shoring and strutting etc. complete with all lifts as directed.	262.00		Cum.	
1 b.	-- do -- as per item no. 1 (a.) but for excavation in hard murum and hard murum with boulders.	262.00		Cum.	
1 c.	-- do -- as per item no. 1 (a.) but for excavation in soft rock.	393.00		Cum.	
1 d.	-- do -- as per item no. 1 (a.) but for excavation in hard rock with controlled blasting.	1,180.00		Cum.	
1 e.	-- do -- as per item no. 1 (a.) but for excavation in hard rock with air compressor and 4 nos. of breaker.	523.00		Cum.	
2.	Providing and laying sand screened / shingle bedding of 75 mm thick at bottom of trenches for laying of half round pipes at all lead and lift etc. complete as directed.	140.00		Cum.	
3.	Supplying of 250 mm internal diameter factory made R.C.C. half round pipes of length 1000 mm with providing and fixing 4 mm. dia. reinforcement at 100 mm c/c as longitudinal reinforcement and transverse reinforcement of same diameter at 25 mm c/c for 250 mm portion at both ends and for middle portion 150 mm c/c with casting in cement concrete 1:1½:3 including pond curing and transportation of pipes at work site at the same at desired location etc. complete as directed and as per the detailed drawings.	8,000.00		Rmt.	
4.	-- do -- as per item no. 3 but in 350 mm internal diameter half round pipes.	3,600.00		Rmt.	
5.	Laying of 250 mm dia R.C.C. half round pipes including lowering the pipes, laying in proper	4,000.00		Rmt.	

NO.	PARTICULARS OF ITEMS	QUANTITY	RATE	UNIT	AMOUNT
	alignment and level, laying of one over the other (after laying the cables by the electrical wing) clamping with M.S flat 25 mm x 1.6 mm each pipe including transporting the half round pipes at desired location at all leads and lifts etc. complete as directed.				
6.	-- do -- as above but for 350 mm dia R.C.C. pipes.	1,800.00		Rmt.	
7.	Providing and laying approved dry trap rubble soling of 150mm to 230 mm size 230 mm thick layers for foundation, bedding, flooring etc. including hand-packing and providing blindage of murum over soling, watering and compaction etc. complete.	5.00		Cum.	
8.	Providing, manufacturing, supplying and placing over the locations precast cement concrete factory made M-200 R.C.C. covers of 300 mm width and 50 mm in thickness and of required sizes with lifting arrangements at both ends including smooth cement finish to both faces to and also for side in CM 1:3 conveying from manufacturing yard to actual site making good the damages if any including cost of M.S. Reinforcement using 10 mm diameter twisted bars 3 nos. as longitudinal reinforcement 6 mm dia. at 150 mm c/c for rings and 10 mm. 2 nos. for lifting hooks etc. including necessary pond curing compaction, formwork etc. complete all as directed.	510.00		Sqm.	
9.	Providing and laying in situ cement concrete 1:4:8 of trap / granite / quartzite / gneiss stone metal for foundation and flooring including dewatering, formwork, compaction, curing etc. complete with all lead and lifts etc. as directed.	51.00		Cum.	
10.	Providing second class burnt brick masonry with conventional type bricks in cement mortar 1: 6 in foundation, plinth and superstructure at all leads and lifts including striking out joints an unexposed faces and rocking out on exposed faces all necessary scaffolding curing etc. complete.	146.00		Cum.	
11.	Providing supplying and fabricating and fixing in required position and levels M. S. Angle 65 x 65 x 6 mm for brick masonry cable trench, including 2 No. of 150 mm length hold fast or 16 mm dramatic M. S. bar, including properly holding in brick masonry etc complete, including one coat of primer and two coats of approved oil paint etc a per directives of Engineer in charge.	1.80		M.T.	

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NO.	PARTICULARS OF ITEMS	QUANTITY	RATE	UNIT	AMOUNT
12.	Providing and casting in situ cement concrete 1:2:4 of trap / granite / quartzite / gneiss stone metal in coping over brick masonry wall including all leads and lifts dewatering wherever necessary centering and formwork compacting, finishing the exposed faces where minor honey occurred with sufficient minimum thickness of C.M. 1:3 or roughening the surface to receive plaster and curing etc. complete as directed.	27.00		Cum.	
13.	Providing and applying cement plaster 20 mm. thick in cement mortar 1:4 without neeru finish to concrete / brick masonry surface in all positions including scaffolding and curing etc. complete.	1,600.00		Sqm.	
14.	Disposing of surplus excavated material by any means including loading, unloading and spreading and stacking upto 500 m in low lying area including compaction / watering as directed.	825.00		Cum.	
				Total	