

BILL OF QUANTITY CUM PRICE SCHEDULE					
Name of Project :220kV GIS SUBSTATION AT IOCL PANIPAT					
Name of Work :CIVIL WORKS OF YARD OF 220kV SWITCHYARD					
S.No.	Description of Item	Quantity	Unit	Unit Rate(Rs)	Amount(Rs)
A1	Executing geophysical survey works for assesment of underground utilities such as pipe lines, cables,underground structures etc. in proposed 220kV switchyard and along cable route upto 4m depth including mobilizing, grid making, data collection,processing and analysing, preparing detailed report including autoCAD layout drawing showing all underground utilities all complete as per project requirement and direction of Engineer-in-charge.	sqm	8400	20.00	168000.00
A2	Earthwork in excavation by mechanical means(Hydraulic excavator)/manual means over areas (exceeding 30cm in depth 1.5m in width as well as 10sqm on plan) including dewatering as necessary of rain water/subsoil seepage water and disposal of excavated earth upto 100m and lift upto 4m, disposed earth to be levelled and neatly dressed. All kinds of soil .	cum	6670	125.95	840086.50
A3	Earthwork in excavation by mechanical means (Hydraulic excavator)/manual means in foundation trenches or drains (not exceeding 1.5m in width as well as 10sqm on plan) including dewatering as necessary of rain water/subsoil seepage water and dressing of sides and ramming of bottoms, lift upto 3.5m, including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 100m. All kinds of soil .	cum	1040	166.40	173056.00
A4	Filling available excavated earth (including rock) in trenches, plinth, sides of foundations, etc., in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering, lead upto 100m and lift upto 3.5m.	cum	3220	125.75	404915.00
A5	Supplying and filling in plinth with Jamuna/local sand under floors including watering, ramming, consolidating and dressing complete.	cum	20	810.82	16216.40
A6	Carriage & disposal of surplus excavated earth/rock beyond initial lead by mechanical means not necessarily all the times on pucca roads, including loading, unloading, dressing of excavated material, etc., complete as per specifications -. Lead upto 1 km.	cum	1895	98.34	186354.30
A7	Carriage & disposal of surplus excavated earth/rock beyond initial lead by mechanical means not necessarily all the times on pucca roads, including loading, unloading, dressing of excavated material, etc., complete as per specifications Lead upto 3 km.	cum	545	124.51	67857.95
A8	Carriage & disposal of surplus excavated earth/rock beyond initial lead by mechanical means not necessarily all the times on pucca roads, including loading, unloading, dressing of excavated material, etc., complete as per specifications Lead upto 5 km.	cum	275	149.17	41021.75
A9	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work upto plinth level. 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size)	cum	70	4943.80	346066.00
A10	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work upto plinth level. 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20mm nominal size)	cum	5	4522.52	22612.60
A11	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work upto plinth level. 1:4:8(1 cement : 4 coarse sand : 8 graded stone aggregate 20mm nominal size)	cum	490	4148.54	2032784.60
A12	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work upto plinth level. 1:4:8(1 cement : 4 coarse sand : 8 graded stone aggregate 40mm nominal size)	cum	5	4148.54	20742.70
A13	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work upto plinth level. 1:5:10(1 cement : 5 coarse sand : 10 graded stone aggregate 40mm nominal size)	cum	20	3697.11	73942.20
A14	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work upto plinth level. 1:4:8 (1 cement : 4 fine aggregate : 8 coarse aggregate) with a layer of cement slurry of mix 1:4 (1 cement : 4 Fine aggregate) over PCC layer as per Technical Specification.	cum	235	4640.00	1090400.00
A15	Extra for providing and mixing water proofing material like "Plastocrete Super" or approved equivalent make in cement concrete work all complete as per specification and instruction of Engineer in Charge	per 50 kg cement	50	41.73	2086.50

BILL OF QUANTITY CUM PRICE SCHEDULE					
Name of Project :220kV GIS SUBSTATION AT IOCL PANIPAT					
Name of Work :CIVIL WORKS OF YARD OF 220kV SWITCHYARD					
S.No.	Description of Item	Quantity	Unit	Unit Rate(Rs)	Amount(Rs)
A16	Providing and laying in position machine batched and machine mixed design mix M-25 grade cement concrete for reinforced cement concrete work , using cement content as per approved design mix, including pumping of concrete to site of laying but excluding the cost of centering,shuttering, finishing and reinforcement, including admixtures in recommended proportions as per IS: 9103 to accelerate, retard setting of concrete, improve workability without impairing strength and durability as per direction of Engineer-in-charge.(Note :- Cement content considered in this item is @ 330 kg/cum.%Excess/ less cement used as per design mix is payable/recoverable separately). All works upto plinth level	cum	10	5887.43	58874.30
A17	Providing and laying in position machine batched and machine mixed design mix M-20 grade cement concrete for reinforced cement concrete work including road, using cement content as per approved design mix, including pumping of concrete to site of laying but excluding the cost of centering,shuttering, finishing and reinforcement, including admixtures in recommended proportions as per IS: 9103 to accelerate, retard setting of concrete, improve workability without impairing strength and durability as per direction of Engineer-in-charge.(Note :- Cement content considered in this item is @ 320 kg/cum.%Excess/ less cement used as per design mix is payable/recoverable separately). All works upto plinth level.	cum	1635	5570.40	9107604.00
A18	Providing and laying in position machine batched and machine mixed design mix M-20 grade cement concrete for reinforced cement concrete work, using cement content as per approved design mix, including pumping of concrete to site of laying but excluding the cost of centering,shuttering, finishing and reinforcement, including admixtures in recommended proportions as per IS: 9103 to accelerate, retard setting of concrete, improve workability without impairing strength and durability as per direction of Engineer-in-charge.(Note :- Cement content considered in this item is @ 320 kg/cum.%Excess/ less cement used as per design mix is payable/recoverable separately). All works above plinth level upto floor V level	cum	115	6501.16	747633.40
A19	Add for using extra cement in the items of design mix over and above the specified cement content therein	quintal	830	533.82	443070.60
A20	Extra for finishing of concrete (in road pavement) with screed board vibrator, vacuum dewatering process and finally finished by floating, brooming with wire brush etc complete.	cum	325	198.00	64350.00
A21	Centering and shuttering including strutting, propping, etc., and removal of form at all heights for. Foundations, footings, bases of columns, etc., for mass concrete.	sqm	1160	184.42	213927.20
A22	Centering and shuttering including strutting, propping, etc., and removal of form at all heights for. RCC walls at all levels (any thickness).	sqm	1490	369.24	550167.60
A23	Centering and shuttering including strutting, propping, etc., and removal of form at all heights for. Lintels,beams,plinth beams and cantilevers.	sqm	110	333.23	36655.30
A24	Centering and shuttering including strutting, propping, etc., and removal of form at all heights for. Columns, Pillars, Piers, Posts and Struts.	sqm	2040	454.41	926996.40
A25	Centering and shuttering including strutting, propping, etc., and removal of form at all heights for. Suspended floors, roofs, landings, balconies and access platform	sqm	100	413.62	41362.00
A26	Steel reinforcement -Cold twisted bars /TMT- Excluding supply but including straightening, cutting, bending, binding, (i/c cost of binding wire), placing in position, etc., all labour & material, complete. (Note: Reinf, steel shall be supplied by BHEL free of cost at site. Unloading, storing, watch & ward, handling and testing of material as per FQP is in the scope of the contractor)	kg	139945	11.00	1539395.00
A27	Steel reinforcement -Cold twisted bars /TMT- Fe 500/Fe 500D(To be procured from SAIL,TISCO, IISCO and RINL only) Including supply, straightening, cutting, bending, binding, (i/c cost of binding wire), placing in position, etc., all labour & material, complete.	kg	14000	49.62	694680.00
A28	Brickwork with non modular bricks of class designation 10 in foundation and plinth in: Cement mortar 1:6 (1 cement : 6 coarse sand)	cum	282	4524.10	1275796.20
A29	Brickwork with non modular bricks of class designation 10 in superstructure above plinth level upto V level in all shapes and sizes: Cement mortar 1:6 (1 cement : 6 coarse sand)	cum	5	5355.29	26776.45
A30	Brickwork with non modular bricks of class designation 10 in foundation and plinth in: Cement mortar 1:4 (1 cement : 4 coarse sand)	cum	5	4697.59	23487.95
A31	Brick masonry with common burnt clay non modular bricks of class designation 10 in superstructure above plinth level up to floor V level: Cement mortar 1:3 (1 cement :3 coarse sand)	cum	103	5850.34	602585.02
A32	Half brick masonry with non modular bricks of class designation 10 in foundation and plinth in: Cement mortar 1:4 (1 cement : 4 coarse sand)	sqm	5	562.70	2813.50
A33	Half brick masonry with non modular bricks of class designation 10 in superstructure above plinth upto floor V level. Cement mortar 1:4 (1 cement : 4 coarse sand)	sqm	5	653.36	3266.80

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Name of Project :220kV GIS SUBSTATION AT IOCL PANIPAT					
Name of Work :CIVIL WORKS OF YARD OF 220kV SWITCHYARD					
S.No.	Description of Item	Quantity	Unit	Unit Rate(Rs)	Amount(Rs)
A34	Extra for providing and placing in position 2 Nos 6mm dia. M.S. bars at every fourth course of half brick masonry.	sqm	5	48.21	241.05
A35	12 mm cement plaster of mix: 1:5 (1 cement : 5 coarse sand)	sqm	1450	154.72	224344.00
A36	20 mm cement external (or rough side) plaster in two coats under layer 12mm thick cement plaster 1:5 (1 cement : 5 coarse sand) finished with a top layer 8mm thick cement plaster 1:3 (1 cement : 3 Fine sand)	sqm	435	259.23	112765.05
A37	Neat cement punning	sqm	10	39.55	395.50
A38	Painting with synthetic enamel paint of approved brand and manufacture of required colour to give an even shade: Two or more coats on new work over an under coat of suitable shade with ordinary paint of approved brand and manufacture.	sqm	5	74.91	374.55
A39	Structural steelwork welded in built up sections like edge protection angles, pipes, insert plates with lugs & framed work including providing, cutting, hoisting, fixing in position/ embedding in concrete and applying a priming coat of approved steel primer all complete.	kg	9650	51.36	495624.00
A40	Steelwork welded in built up sections/framed work including providing, cutting, hoisting, fixing in position and applying a priming coat of approved steel primer using structural steel etc., as required. In covering of floors/trenches of control room building with chequered plates, stringers, treads, landings, etc., of staircases involving use of chequered plates, wherever required, all complete.	kg	4670	56.66	264602.20
A41	Steelwork welded in built up sections/framed work including providing, cutting, hoisting, fixing in position and applying approved primer etc., as required. In gratings, frames, ladders, stair railings, rails, ISMB, ISMC and similar works.	kg	53250	78.07	4157227.50
A42	Applying priming coat - With ready mixed red oxide zinc chromate primer of approved brand and manufacture on steel galvanised iron/ steel works.	sqm	10	28.47	284.70
A43	Providing and laying non-pressure NP2 class (light duty) R.C.C.pipes with collars jointed with stiff mixture of cement mortar in the proportion of 1:2 (1 cement : 2 fine sand) including testing of joints etc. complete: 150 mm dia. R.C.C. pipe	M	50	315.32	15766.00
A44	Providing and laying non-pressure NP2 class (light duty) R.C.C.pipes with collars jointed with stiff mixture of cement mortar in the proportion of 1:2 (1 cement : 2 fine sand) including testing of joints etc. complete: 250 mm dia. R.C.C. pipe	M	20	429.98	8599.60
A45	Providing and laying non-pressure NP2 class (light duty) R.C.C.pipes with collars jointed with stiff mixture of cement mortar in the proportion of 1:2 (1 cement : 2 fine sand) including testing of joints etc. complete: 300 mm dia. R.C.C. pipe	M	20	459.59	9191.80
A46	Providing and laying Non Pressure NP-3 class (Medium duty) R.C.C. pipes including collars/spigot jointed with stiff mixture of cement mortar in the proportion of 1:2 (1 cement : 2 fine sand) including testing of joints etc. complete: 450 mm dia RCC pipes	M	20	1660.11	33202.20
A47	Providing and laying Non Pressure NP-4 class (Heavy duty) R.C.C. pipes including collars/spigot jointed with stiff mixture of cement mortar in the proportion of 1:2 (1 cement : 2 fine sand) including testing of joints etc. complete 600 mm dia RCC pipes.	M	10	2883.70	28837.00
A48	Providing and fixing in culvert/road crossing/building PVC pipes conforming to IS : 12818 including jointing with seal in complete 150mm diameter	RM	20	283.20	5664.00
A49	Supplying and erection of approved make dewatering pumps including all cable and pipe connections alongwith auto starter and necessary shed all complete as per customer's specification and instruction of engineer in charge 0.5 HP	Nos	1	9280.60	9280.60
A50	Supplying and erection of approved make dewatering pumps including all cable and pipe connections alongwith auto starter and necessary shed all complete as per customer's specification and instruction of engineer in charge 2.0 HP	Nos	1	25000.00	25000.00
A51	Supplying & fixing (all dia & length) foundation bolts in position with help of proper templates (to be supplied by contractor) including nuts, washers and template all complete as per drawings & directions of Engr-in-Charge. Weight of the template shall not be measured for payment purpose.	Kg	4000	87.19	348760.00
A52	Extra over Item above for providing galvanised bolts (Mass of zinc coating = 610gms/sqm), nuts & washer .	kg	4000	5.88	23520.00
A53	Fixing (all dia & length) foundation bolts in position with help of proper templates including nuts, washers and template (to be supplied by contractor) all complete as per drawings & directions of Engr-in-Charge. Weight of the template shall not be measured for payment purpose.	Kg	500	9.20	4600.00

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Name of Project :220kV GIS SUBSTATION AT IOCL PANIPAT					
Name of Work :CIVIL WORKS OF YARD OF 220kV SWITCHYARD					
S.No.	Description of Item	Quantity	Unit	Unit Rate(Rs)	Amount(Rs)
A54	Providing & fixing in position precast cement concrete trench covers/perforated covers/tile wherever necessary at various elevations in all kinds of work including moulding, formwork, mixing, laying out, compacting and curing, storing, transportation, erection without damage, setting in position with cement and sand mortar, grouting etc all as per specs, drawings and directions of Engr-in-Charge but excluding the cost of reinforcement, inserts, edge angles, etc. Grade of concrete shall be M20	Cum	15	7697.87	115468.05
A55	Grouting of block outs, pockets, foundations, bolts holes and underside of base plates with cement, sand aggregate (of size 6 mm and down) grout 1:1:2 with non-shrink additive and shall be of strength not less than M30 including placing, curing, cleaning, surface preparation, testing, etc. complete with labour, materials, equipment, handling, testing, etc. all complete as per specifications, drawings and instructions of the Engineer.	cum	3	12179.63	36538.89
A56	Grouting of block outs, pockets, foundations, bolts holes and underside of base plates with Dr.Fixit pidigROUT 10M including all materials,placing, curing, cleaning, surface preparation, testing, etc. complete with labour, materials, equipment, handling, testing, etc. all complete as per manufacturer specifications and instructions of the Engineer.	cum	3	12179.63	36538.89
A57	Preparation and consolidation of sub grade with power road roller of 8 to 12 tonne capacity after excavating earth to an average of 22.5 cm depth,dressing to camber and consolidating with road roller including making good the undulations etc and re-rolling the sub grade and disposal of surplus earth lead upto 50 metres.	sqm	2210	90.10	199121.00
A58	Suppling and stacking at site 90 mm to 45 mm size stone aggregate	cum	255	1278.69	326065.95
A59	Suppling and stacking at site 63 mm to 45 mm size stone aggregate	cum	195	1386.53	270373.35
A60	Suppling and stacking at site 53 mm to 22.5 mm size stone aggregate	cum	195	1475.02	287628.90
A61	Suppling and stacking at site Stone screening 13.2 mm nominal size (type A)	cum	80	1439.66	115172.80
A62	Suppling and stacking at site Stone screening 11.2 mm nominal size (type B)	cum	30	1398.19	41945.70
A63	Suppling and stacking at site moorum	cum	55	563.01	30965.55
A64	Laying spreading and compacting stone aggregate of specified sizes to WBM specifications including spreading in uniform thickness, hand picking, rolling with 3 wheeled road/vibratory roller 8-10tonne in stages to proper grade and camber, applying and brooming requisite type of screening/binding material to fill up interstices of coarse aggregate water and compacting to the required density (payment for stone aggregate, screenings, kankar, moorum and red bajri etc., to be made separately)	cum	565	449.10	253741.50
A65	Providing and laying polythene sheet of 125 microns between the PCC and RCC slab all complete as per direction of Engineer in charge.	sqm	2210	14.76	32619.60
A66	Providing and filling in position bitumen mix filler of Proportion 80 kg. of hot bitumen, 1 kg. of cement and 0.25 cubic metre of coarse sand for depth per xpansion joints all complete as per specification, drawing and as directed by engineer. (20 mm wide joints)	cum	1	16494.35	16494.35
A67	Supplying and filling in position hot applied bitumen sealing compound (Grade A) of specified thick confirming to IS 1834 including cleaning, mixing, heating, pouring/injecting sealing compound in gaps in joints, sealant primer etc all complete as per specification, drawing and as directed by Engineer.	RM	260	10.80	2808.00
A68	Providing, laying and making kerb channel 30 cm wide and 50 mm thick with cement concrete 1:1.5:3 with joints filled with 1:6 (1 cement:6 coarse sand) and pointed with 1:2 (1 cement:2 fine sand) including ramming, consolidating,finishing the top smooth etc. complete and as per direction of Engineer-in-charge	sqm	155	382.05	59217.75
A69	Providing and laying at or near ground level factory made kerb stone of M-25 grade cement concrete in position to the required line, level and curvature, jointed with cement mortar 1:6 (1 cement: 6 coarse sand) and pointed with 1:2 (1 cement:2 fine sand), including making joints with or without grooves (thickness of joints except at sharp curve shall not to more than 5mm), including making drainage opening wherever required complete etc. as per direction of Engineer-in-charge (length of finished kerb edging shall be measured for payment). (Precast C.C. kerb stone shall be approved by Engineer-in-charge).	cum	35	4335.95	151758.25
A70	Providing and laying chequerred precast cement concrete tiles 22 mm thick in footpath & courtyard, jointed with neat cement slurry mixed with pigment to match the shade of tiles, including rubbing and cleaning etc. complete, on 20mm thick bed of cement mortar 1:3 (1 cement: 3 coarse sand).	sqm	310	661.35	205018.50
A71	Providing and placing in position suitable PVC water stops conforming to IS 12200 for construction/expansion joints between two RCC members and fixed to the reinforcement with binding wire before pouring concrete etc. complete. Serrated with central bulb(225mm wide,8-11mm thick)	metre	50	216.54	10827.00
A72	Supplying and filling stone (40mm size) over grating for transformer/reactor foundation.	cum	92	2989.26	275011.92

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Name of Work :CIVIL WORKS OF YARD OF 220kV SWITCHYARD					
S.No.	Description of Item	Quantity	Unit	Unit Rate(Rs)	Amount(Rs)
A73	Supplying and erecting in position 2.4m high PVC coated galvanized chain linked fencing of minimum 8 gauge (including PVC coating) of mesh size 75mmx75mm (Diameter of the hot dipped galvanized steel wire of the chain linked fencing excluding PVC coating shall not be less than 12 gauge) including fixing the same on fence posts with the help of hot dipped galvanized tension wire, 50x6 GI flat, nut bolts etc. Cost to include GI hook bolts, rings and washers, physical and chemical test of structural steel if required etc. all complete as per drawing, specification and direction of Engineer-in-charge. (Earth work, concrete works, brick work, fence post, barbed wire to be paid separately under respective items). The structural steel manufactured by TISCO, SAIL, IISCO, RAHTRIYA ISPAT (primary manufacturers) shall conform to IS:2062 1786 shall only be used.	sqm	744	623.92	464196.48
A74	Providing & fixing in position precast RCC fence post of grade M20 with wooden plugs or 6mm bar nibs wherever required including grouting in concrete foundation & alignment all complete as per drawing & direction of Engineer-in-charge including cost of form work, fixing reinforcement steel, painting with water proofing cement paint, all other material, labor and T&P. (cost of earth work, concrete, form work & reinforcement steel in foundation to be paid separately, in addition to this reinforcement steel for post shall also be paid separately)	cum	10	10750.00	107500.00
A75	Supply, fabrication and installing in position and testing galvanized MS Gates out of channels, joists, angles, flats, plates, pipes, welded steel wire mesh & sheets including stiffeners, bracings, fabricated hinges, MS Aldrops with locking arrangement, tempered steel pivot, guide track of MS Tee, bronze aluminium ball bearing arrangements, castor wheels, paintings & motorized arrangement of opening /closing etc. all complete.	MT	2	89577.25	179154.50
A76	Supply and fixing 600mm high GI barbed wire fencing conforming to IS 298 at top of chain link fencing consisting of 4 strands of barbed wire hot dipped galvanized wire of 12G comprising of 2 ply of wires with barbs of 16G spaced at 100mm including GI clips, anchors, accessories etc. all complete as per drawing and Engineer-in-charge. (Fencing post and chain link fencing shall be paid separately). Payment to be made per meter cost of total length of barbed wire used.	M	1240	7.45	9238.00
A77	Finishing walls with water proofing cement paint of required shade New work (Two or more coats applied @ 3.84 kg/10 sqm)	sqm	720	56.21	40471.20
A78	Demolishing cement concrete Nominal mix 1:4:8 or leaner mix (i/c equivalent design mix) manually/ by mechanical means including disposal of material within 50 metres lead as per direction of Engineer - in - charge.	cum	5	615.15	3075.75
A79	Demolishing R.C.C. work manually/ by mechanical means including stacking of steel bars and foundation bolts and disposal of unserviceable material within the substation boundary as per direction of site-in-charge.	cum	5	1454.55	7272.75
A80	Antiweed treatment in switchyard area including micro leveling, dressing, consolidating subgrade with three ton roller etc as per Technical Specification.	Sqm	2350	12.54	29469.00
A81	Supplying and spreading 100mm thick uncrushed/crushed/broken stone of 20/40mm in switchyard as per drawing all complete as per Technical Specification Clause 5.0 of specification but excluding antiweed treatment and PCC.	Sqm	2350	158.47	372404.50
A82	Providing and applying white cement based putty of average thickness 1 mm, of approved brand and manufacturer, over the plastered wall surface to prepare the surface even and smooth complete.	Sqm	20	82.18	1643.60
A83	Design, preparation of drawing, submission and approval from the concerned authority and construction of Rain water harvesting system including all earth work, brick work, misc steel, gravel and boulder filling, drilling bore hole, supply and installation of MS pipe etc. all complete as required for completion of work. Only concrete and reinforcement shall be paid under respective item.	LS	1	244474.20	244474.20
A84	Supplying and filling good earth including watering, ramming, consolidating and dressing complete including royalty etc.	cum	20	332.55	6651.00
A85	Shifting and Dismantelling:- 1) Shifting of all stored items of 04 No. stores at designated place as instructed by customer within the refinery. 2) Dismantling, disposal, levelling, scrap removal of existing 1no. watch tower (Lattice type) and 04 stores (1nos. 43x9, 2nos. 35x8, 1 nos. 42x8) and dismantelling its foundations all complete as per the direction of Engineer-in-charge including disposal/shifting of all scrap, debris, dismantled materials to the place shown by IOCL.	LS	1	500000.00	500000.00
A86	Providing and construction of temporary barricading on (buy back basis) around hot work location on safety point of view as per instruction of EIC. The barricading shall be done with metallic sheet and supporting structures. Height of the barricading shall be sufficient enough to cover all hot jobs even at height. (Measurement shall be as - Clear ht. of barricade x Length). After multiple uses required at site contractor will take back all materials of barricading.	sqm	1400	350.00	490000.00
Total Amount in Rs (Excluding GST) - Annexure- I A					325,36,731

BILL OF QUANTITY CUM PRICE SCHEDULE					
Name of Project: - 220kV GIS SUBSTATION AT IOCL PANIPAT					
Name of Work: -CIVIL WORKS OF 220kV GIS BUILDING CUM CRB BUILDING & CONTROL ROOM EXTENSION					
S.No.	Description of Item	Quantity	Unit	Unit Rate(Rs)	Amount(Rs)
B1	Earthwork in excavation by mechanical means(Hydraulic excavator)/manual means over areas (exceeding 30cm in depth 1.5m in width as well as 10sqm on plan) including dewatering as necessary of rain water/subsoil seepage water and disposal of excavated earth upto 100m and lift upto 4m, disposed earth to be levelled and neatly dressed. All kinds of soil .	7600	cum	125.95	957220.00
B2	Earthwork in excavation by mechanical means (Hydraulic excavator)/manual means in foundation trenches or drains (not exceeding 1.5m in width as well as 10sqm on plan) including dewatering as necessary of rain water/subsoil seepage water and dressing of sides and ramming of bottoms, lift upto 4m, including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 100m. All kinds of soil .	100	cum	166.40	16640.00
B3	Filling available excavated earth (including rock) in trenches, plinth, sides of foundations, etc., in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering, lead upto 100m and lift upto 4m.	6600	cum	125.75	829950.00
B4	Carriage & disposal of surplus excavated earth/rock beyond initial lead by mechanical means not necessarily all the times on pucca roads, including loading, unloading, dressing of excavated material, etc., complete as per specifications -. Lead upto 1 km.	1000	cum	98.34	98340.00
B5	Carriage & disposal of surplus excavated earth/rock beyond initial lead by mechanical means not necessarily all the times on pucca roads, including loading, unloading, dressing of excavated material, etc., complete as per specifications -. Lead upto 3 km.	100	cum	124.51	12451.00
B6	Carriage & disposal of surplus excavated earth/rock beyond initial lead by mechanical means not necessarily all the times on pucca roads, including loading, unloading, dressing of excavated material, etc., complete as per specifications -. Lead upto 5 km.	100	cum	149.17	14917.00
B7	Supplying and filling in plinth with Jamuna/local sand under floors including watering, ramming, consolidating and dressing complete.	500	cum	810.82	405410.00
B8	Supplying chemical emulsion in sealed containers including delivery as specified. Chloropyriphos emulsifiable concentrate of 20%	400	litre	157.45	62980.00
B9	Diluting & injecting chemical emulsion for PRE-CONSTRUCTIONAL ANTI-TERMITE treatment and creating a continuous chemical barrier under and all around the column pits, wall trenches, basement excavation, top surface of plinth filling, junction of wall & floor, along the external perimeter of building, expansion joints, over the top surface of consolidated earth on which apron is to be laid , surroundings of pipes and conduits, etc complete as per specifications (Plinth area of the building at ground floor only shall be measured for payment)	1800	sqm	131.90	237420.00
B10	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work upto plinth level. '1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size)	10	cum	4943.80	49438.00
B11	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work upto plinth level. '1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20mm nominal size)	210	cum	4522.52	949729.20

BILL OF QUANTITY CUM PRICE SCHEDULE					
Name of Project:- 220kV GIS SUBSTATION AT IOCL PANIPAT					
Name of Work:-CIVIL WORKS OF 220kV GIS BUILDING CUM CRB BUILDING & CONTROL ROOM EXTENSION					
S.No.	Description of Item	Quantity	Unit	Unit Rate(Rs)	Amount(Rs)
B12	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work upto plinth level. 1:4:8(1 cement : 4 coarse sand : 8 graded stone aggregate 20mm nominal size)	20	cum	4148.54	82970.80
B13	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work upto plinth level. 1:4:8(1 cement : 4 coarse sand : 8 graded stone aggregate 40mm nominal size)	20	cum	4148.54	82970.80
B14	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work upto plinth level. 1:5:10(1 cement : 5 coarse sand : 10 graded stone aggregate 40mm nominal size)	20	cum	4209.05	84181.00
B15	Providing and laying damp proof course 50mm thick cement concrete 1:1.5:3 (1 Cement:1.5 coarse sand : 3 graded stone aggregate 10 mm nominal size) .	80	sqm	310.14	24810.96
B16	Providing and laying vertical damp proof course 20mm thick cement plaster 1:3 in two layers and applying hot bitumen on dried surface all complete as per specification and instruction of Engineer in Charge	150	sqm	248.10	37215.00
B17	Extra for providing and mixing water proofing material like "Plastocrete Super" or approved equivalent make in cement concrete work all complete as per specification and instruction of Engineer in Charge	30	per 50kg cement	41.73	1251.90
B18	Providing and laying in position machine batched and machine mixed design mix M 25 grade cement concrete for reinforced cement concrete work, using cement content as per approved design mix, including pumping of concrete to site of laying but excluding the cost of centering, shuttering, finishing and reinforcement, including admixtures in recommended proportions as per IS: 9103 to accelerate, retard setting of concrete, improve workability without impairing strength and durability as per direction of Engineer-in-charge. (Note :- Cement content considered in this item is @ 330 kg/cum. Excess/less cement used as per design mix is payable/recoverable separately). All works upto plinth level	980	cum	5887.43	5769681.40
B19	Providing and laying in position machine batched and machine mixed design mix M 25 grade cement concrete for reinforced cement concrete work, using cement content as per approved design mix, including pumping of concrete to site of laying but excluding the cost of centering, shuttering, finishing and reinforcement, including admixtures in recommended proportions as per IS: 9103 to accelerate, retard setting of concrete, improve workability without impairing strength and durability as per direction of Engineer-in-charge. (Note :- Cement content considered in this item is @ 330 kg/cum. Excess/less cement used as per design mix is payable/recoverable separately). All works above plinth level upto terrace level	1990	cum	6691.00	13315090.00
B20	Providing and laying in position machine batched and machine mixed design mix M 20 grade cement concrete for reinforced cement concrete work, using cement content as per approved design mix, including pumping of concrete to site of laying but excluding the cost of centering, shuttering, finishing and reinforcement, including admixtures in recommended proportions as per IS: 9103 to accelerate, retard setting of concrete, improve workability without impairing strength and durability as per direction of Engineer-in-charge. (Note :- Cement content considered in this item is @ 320 kg/cum. Excess/less cement used as per design mix is payable/recoverable separately). All works upto plinth level	270	cum	5570.21	1503956.70

BILL OF QUANTITY CUM PRICE SCHEDULE					
Name of Project:- 220kV GIS SUBSTATION AT IOCL PANIPAT					
Name of Work:-CIVIL WORKS OF 220kV GIS BUILDING CUM CRB BUILDING & CONTROL ROOM EXTENSION					
S.No.	Description of Item	Quantity	Unit	Unit Rate(Rs)	Amount(Rs)
B21	Providing and laying in position machine batched and machine mixed design mix M 20 grade cement concrete for reinforced cement concrete work, using cement content as per approved design mix, including pumping of concrete to site of laying but excluding the cost of centering, shuttering, finishing and reinforcement, including admixtures in recommended proportions as per IS: 9103 to accelerate, retard setting of concrete, improve workability without impairing strength and durability as per direction of Engineer-in-charge. (Note :- Cement content considered in this item is @ 320 kg/cum. Excess/less cement used as per design mix is payable/recoverable separately). All works above plinth level upto terrace level	10	cum	6501.16	65011.60
B22	Add for using extra cement in the items of design mix over and above the specified cement content therein.	1620	quintal	533.82	864788.40
B23	Providing ,laying and compacting stone base under the floors as per direction of Engineer-in-Charge including supply of stones and preparing surface complete.	410	cum	1638.80	671908.00
B24	Centering and shuttering including strutting, propping, etc., and removal of form at all heights for. Foundations, footings, bases of columns, etc., for mass concrete.	2620	sqm	184.42	483180.40
B25	Centering and shuttering including strutting, propping, etc., and removal of form at all heights for. Columns, Pillars, Piers, Abutments, Posts and Struts	2200	sqm	454.41	999702.00
B26	Centering and shuttering including strutting, propping, etc., and removal of form at all heights for. RCC walls at all levels (any thickness).	150	sqm	369.24	55386.00
B27	Centering and shuttering including strutting, propping, etc., and removal of form at all heights for. Suspended floors, roofs, landings, balconies and access platform	3810	sqm	413.62	1575892.20
B28	Centering and shuttering including strutting, propping, etc., and removal of form at all heights for. Lintels, beams, plinth beams, girders, bressumers and cantilevers	4560	sqm	333.23	1519528.80
B29	Centering and shuttering including strutting, propping, etc., and removal of form at all heights for. Stairs (excluding landing)	30	sqm	391.50	11745.00
B30	Extra for additional height in centering, shuttering where ever required with adequate bracing, propping etc., including cost of de-shuttering and decentering at all levels, over a height of 3.5 m, for every additional height of 1 metre or part thereof -- Suspended floors, roofs, landing, beams and balconies (Plan area to be measured)	7610	sqm	169.97	1293471.70
B31	Steel reinforcement -Cold twisted bars /TMT- Fe 500/500D (To be procured from SAIL,TISCO, IISCO and RINL only) Including supply, straightning, cutting and bending, binding (i/c cost of binding wire), placing in position, etc., all labour & material, complete.	29600	kg	49.62	1468752.00
B32	Steel reinforcement -Cold twisted bars /TMT Excluding supply but including straightning, cutting, bending, binding (i/c cost of binding wire), placing in position, etc., all labour & material, complete. (Reinforcement steel shall be supplied by BHEL free of cost at site. Unloading, storing, watch& ward, handling & testing of material as per FQP is in the scope of the contractor)	296000	kg	11.00	3256000.00
B33	Brickwork with non modular bricks of class designation 10 in foundation and plinth in: Cement mortar 1:6 (1 cement : 6 coarse sand)	50	cum	4524.10	226205.00

Annexure-I

BILL OF QUANTITY CUM PRICE SCHEDULE					
Name of Project:- 220kV GIS SUBSTATION AT IOCL PANIPAT					
Name of Work:-CIVIL WORKS OF 220kV GIS BUILDING CUM CRB BUILDING & CONTROL ROOM EXTENSION					
S.No.	Description of Item	Quantity	Unit	Unit Rate(Rs)	Amount(Rs)
B34	Brickwork with non modular bricks of class designation 10 in superstructure above plinth level upto V level in all shapes and sizes: Cement mortar 1:6 (1 cement : 6 coarse sand)	880	cum	5355.29	4712655.20
B35	Half brick masonry with non modular bricks of class designation 10 in foundation and plinth in: Cement mortar 1:4 (1 cement : 4 coarse sand)	10	sqm	562.70	5627.00
B36	Half brick masonry with non modular bricks of class designation 10 in superstructure above plinth upto floor V level. Cement mortar 1:4 (1 cement : 4 coarse sand)	100	sqm	653.65	65365.00
B37	Extra for providing and placing in position 2 Nos 6mm dia. M.S. bars at every fourth course of half brick masonry.	100	sqm	48.20	4820.00
B38	Extra for brick masonry in superstructure above storey height of 5m	120	cum	205.45	24654.00
B39	20 mm cement external (or rough side) plaster in two coats under layer 12 mm thick cement plaster 1:5 (1 cement : 5 coarse sand) finished with a top layer 8 mm thick cement plaster 1:3 (1 cement : 3 fine sand).	1700	sqm	259.23	440691.00
B40	12mm cement plaster internal (or even side) of the walls in the mix: 1:3 (1cement :3 coarse sand)	3500	sqm	213.18	746130.00
B41	15mm cement plaster internal (or rough side) of the walls in the mix: 1:3 (1cement :3 coarse sand)	1700	sqm	213.18	362406.00
B42	6mm cement plaster to ceiling of mix. 1:4 (1 cement : 4 fine sand)	4190	sqm	138.39	579854.10
B43	2mm thick plaster of paris punning over the plastered surfaces on wall surfaces as directed by engineer-in-charge.	3120	sqm	117.08	365289.60
B44	Plaster drip course /groove in plastered surface or moulding to RCC projections:	500	meter	34.15	17075.00
B45	Applying priming coat with chlorinated rubber zinc Phosphate primer of approved brand and manufacture on steel works.	50	sqm	28.47	1423.50
B46	Applying priming coat with Epoxy Zinc Phosphate primer of approved brand and manufacture on steel works.	50	sqm	28.47	1423.50
B47	Painting with Acrylic Polyurethane finish paint of approved brand and manufacture to give an even shade: Two or more coats on new work.	50	sqm	107.66	5383.00
B48	Painting with Chlorinated rubber finish paint of approved brand and manufacture to give an even shade: Two or more coats on new work.	50	sqm	107.66	5383.00
B49	Painting with High build Epoxy finish paint of approved brand and manufacture to give an even shade: Two or more coats on new work.	50	sqm	116.30	5815.00
B50	Structural steelwork welded in built up sections like edge protection angles,insert plates with lugs & framed work including providing, cutting, hoisting, fixing in position/ embedding in concrete and applying a priming coat of approved steel primer all complete.	3500	kg	51.36	179760.00
B51	Steelwork welded in built up sections/framed work including providing ,cutting, hoisting, fixing in position and applying a priming coat of approved steel primer using structural steel etc., as required. In covering of floors/trenches inside the buildings with chequered plates, stringers, treads, landings etc of staircases involving use of chequered plates, wherever required, all complete.	200	kg	56.66	11332.00
B52	Steelwork welded in built up sections/framed work including providing ,cutting, hoisting, fixing in position and applying a priming coat of approved steel primer using structural steel etc., as required. In gratings, rails ,mono rails, frames, ladders, stair railings, gates(including pipe) , gantry girder(beams,channels etc), grills and similar works.	6500	kg	78.07	507455.00

BILL OF QUANTITY CUM PRICE SCHEDULE					
Name of Project: - 220kV GIS SUBSTATION AT IOCL PANIPAT					
Name of Work: -CIVIL WORKS OF 220kV GIS BUILDING CUM CRB BUILDING & CONTROL ROOM EXTENSION					
S.No.	Description of Item	Quantity	Unit	Unit Rate(Rs)	Amount(Rs)
B53	52 mm thick cement concrete flooring with concrete hardener topping, under layer 40 mm thick cement concrete 1:2:4 (1 cement : 2 coarsesand : 4 graded stone aggregate 20 mm nominal size) and top layer 12 mm thick cement hardener consisting of mix 1:2 (1 cement hardener mix : 2 graded stone aggregate 6 mm nominal size) by volume, hardening compound mixed @ 2 litre per 50 kg of cement or as per manufacturer's specifications. This includes cost of cement slurry, but excluding the cost of nosing of steps etc. complete.	210	sqm	516.84	108536.40
B54	Cement plaster skirting (upto 30cm height) with cement mortar 1:3 (1cement: 3 coarse sand) finished with a floating coat of neat cement. 18mm thick	20	sqm	328.96	6579.20
B55	Providing & fixing 25mm thick Acid / Alkali resistant (Chemical resistant) tiles conforming to IS:4457 in flooring/Dado and shall be laid over bitumastic lining of min 12mm thick (to be laid in layers of 6mm each). The tiles shall be applied with 13 mm thick Potassium Silicate bedding mortar as per IS:4441, 4443 & 4832 and including preparation of surface, application of bitumen primer, curing etc. all complete for following thicknesses. The joints shall be cured with resin type mortar filling up the entire length of the joint. The excess mortar shall be trimmed off to make the joints smooth & place. Seal coat shall then be applied over the epoxy mortar to cover up porosity that may be left in mortar. The tiles should be abrasion resistant & durable. Total thickness of flooring shall be 50 mm.	190	sqm	3231.92	614064.80
B56	Providing and laying vitrified floor tiles in different sizes (minimum 7.5mm thickness) with water absorption less than 0.08% and conforming to IS: 15622, of approved make, in all colours and shades, laid on 20mm thick cement mortar 1:3 (1 cement : 3 coarse sand), jointing with grey cement slurry @ 3.3kg/sqm including grouting the joints with white cement and matching pigments etc., complete. Size of Tile 600x600 mm	2150	sqm	990.82	2130263.00
B57	Providing and laying Vitrified tiles in different sizes (minimum 7.5mm thickness), with water absorption less than 0.08 % and conforming to I.S. 15622, of approved make, in all colours & shade, in skirting, riser of steps, over 12 mm thick bed of cement mortar 1:3 (1 cement: 3 coarse sand), jointing with grey cement slurry @ 3.3kg/sqm including grouting the joint with white cement & matching pigments etc. complete. Size of Tile 600x600 mm	110	sqm	990.82	108990.20
B58	Providing and fixing 18 mm thick gang saw cut, mirror polished, premoulded and prepolished, machine cut for kitchen platforms, vanity counters, window sills , facias and similar locations of required size, approved shade, colour and texture laid over 20 mm thick base cement mortar 1:3 (1 cement :3 coarse sand), joints treated with white cement, mixed with matching pigment, epoxy touch ups, including rubbing, curing, moulding and polishing to edges to give high gloss finish etc. complete at all levels. Granite of any colour and shade	30	sqm	3010.10	90303.00
B59	Providing and fixing pressed steel door frames conforming to IS:4351 manufactured from commercial mild steel sheet of 1.25mm thickness including hinges, jamb, lock jamb, bead and if required angle threshold of mild steel angle of section 50X25mm, or base ties of 1.25mm pressed mild steel welded or rigidly fixed together by mechanical means, adjustable lugs with spit end tail to each jamb including steel butt hinges 2.5mm thick with mortar guards, lock strike plate and shock absorbers as specified and applying a coat of approved steel primer after pre-treatment of the surface as directed by Engineer-in-Charge: Profile C	30	RM	318.17	9545.10

Annexure-I

BILL OF QUANTITY CUM PRICE SCHEDULE					
Name of Project:- 220kV GIS SUBSTATION AT IOCL PANIPAT					
Name of Work:-CIVIL WORKS OF 220kV GIS BUILDING CUM CRB BUILDING & CONTROL ROOM EXTENSION					
S.No.	Description of Item	Quantity	Unit	Unit Rate(Rs)	Amount(Rs)
B60	Providing & fixing 45mm steel door shutter made of double sheet 18G steel suitably reinforced with horizontal stiffeners and filled with mineral wool, fixtures like handles, tower bolts, Aldrops,etc., all complete as per drawing and instruction of Engineer - in-Charge.	10	sqm	5646.78	56467.80
B61	Providing and fixing aluminium work for doors, windows, ventilators and partitions with extruded built up standard tubular sections/appropriate Z sections and other sections of HINDALCO or approved equal make conforming to IS: 733 and IS: 1285 (anodised transparent or dyed to required shade according to IS: 1868, Minimum anodic coating of grade AC 15) including fixing with dash fasteners of required dia and size, including necessary filling up the gaps at junctions, i.e. at top, bottom and sides with required EPDM rubber/ neoprene gasket etc. Aluminium sections shall be smooth, rust free, straight, mitred and jointed mechanically wherever required including cleat angle, Aluminium snap beading for glazing / paneling, C.P. brass / stainless steel screws, all complete as per architectural drawings and the directions of Engineer-in-charge. (Glazing, paneling and dash fasteners to be paid for separately) : For fixed portion	1350	kg	309.77	418189.50
B62	Providing and fixing aluminium work for doors, windows, ventilators and partitions with extruded built up standard tubular sections/appropriate Z sections and other sections of HINDALCO or approved equal make conforming to IS: 733 and IS: 1285 (anodised transparent or dyed to required shade according to IS: 1868, Minimum anodic coating of grade AC 15) including fixing with dash fasteners of required dia and size, including necessary filling up the gaps at junctions, i.e. at top, bottom and sides with required EPDM rubber/ neoprene gasket etc. Aluminium sections shall be smooth, rust free, straight, mitred and jointed mechanically wherever required including cleat angle, Aluminium snap beading for glazing / paneling, C.P. brass / stainless steel screws, all complete as per architectural drawings and the directions of Engineer-in-charge. (Glazing, paneling and dash fasteners to be paid for separately) : For shutters of doors, windows & ventilators including providing and fixing hinges/ pivots and making provision for fixing of fittings wherever required including the cost of EPDM rubber / neoprene gasket required (Fittings shall be paid for separately)	2030	kg	366.04	743061.20
B63	Providing and fixing glazing in aluminium door, window, ventilator shutters and partitions etc. with EPDM rubber / neoprene gasket etc. complete as per the architectural drawings and the directions of Engineer-in-charge . (Cost of aluminium snap beading shall be paid in basic item): With float glass panes of 6 mm thickness.	210	sqm	886.51	186167.10
B64	Providing and fixing fire resistant door frame of section 50 x 60 mm on horizontal side & 35 x 60 mm on vertical sides having built in rebate made out of 1.6 mm thick GI sheet (Zinc coating not less than 120gm/m ²) suitable for mounting 120 min Fire Rated Glazed Door Shutters. The frame shall be filled with Mineral wool Insulation having density min 96Kg/m ³ . The frame will have a provision of G.I. Anchor fastners 14 nos (5 each on vertical style & 4 on horizontal style of size M10 x 80) suitable for fixing in the opening along with Factory made Template for SS Ball Bearing Hinges of Size 100x89x3mm for fixing of fire rated glazed shutter. The frame shall be finished with a approved fire resistant primer or Powder coating of not less than 30 micron in desired shade as per the directions of Engineer - in-charge . (Cost of SS ball bearing hinges is excluded).	10	meter	1260.00	12600.00

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Name of Project:- 220kV GIS SUBSTATION AT IOCL PANIPAT					
Name of Work:-CIVIL WORKS OF 220kV GIS BUILDING CUM CRB BUILDING & CONTROL ROOM EXTENSION					
S.No.	Description of Item	Quantity	Unit	Unit Rate(Rs)	Amount(Rs)
B65	Providing and fixing 60 mm thick glazed fire resistant door shutters of 120 min Fire Rating confirming to IS:3614 (Part II) or EN1634- 1:1999, tested and certified as per laboratory approved by Engineer-in-charge, with suitable mounting on door frame, consisting of vertical styles, top rail & side rail 60 mm x 60 mm wide and bottom rail of 110 mm x 60 mm made out of 1.6mm thick G.I. sheet (zinc coating not less than 120gm/m ²) duly filled mineral wool insulation having density min 96 kg/m ³ and fixing with necessary stainless steel ball bearing hinges of size 100x89x3mm of approved make, including applying a coat of approved fire resistant primer or powder coating not less than 30 micron etc all complete as per direction of Engineer-in-charge (panelling to be paid for seperately).	20	sqm	6839.35	136787.00
B66	Providing & fixing double glazed hermetically sealed glazing in aluminium windows, ventilators and partitions, etc, with 6mm thick toughened safety glass conforming to IS: 2553. Inner glass shall be clear glass and outer glass shall be tinted heat reflecting with 10mm air gap including providing EPDM gasket, perforated aluminium spacers, dessicants, sealants (both primary & secondary sealant) etc. as per specifications, drawings & direction of Engineer-in-charge complete.	50	sqm	3176.20	158810.00
B67	Providing and fixing double action hydraulic floor spring of approved brand and manufacture conforming to IS : 6315, having brand logoembossed on the body / plate with double spring mechanism and door weight upto 125 kg, for doors, including cost of cutting floors, embedding in floors as required and making good the same matching to the existing floor finishing and cover plates with brass pivot andsingle piece M.S. sheet outer box with slide plate etc. complete as per the direction of Engineer-in-charge.	30	each	1777.08	53312.40
B68	Providing and fixing aluminium sliding door bolts anodised (anodic coating not less than grade AC 10 as per IS: 1868) transparent or dyed to required colour or shade with nuts and screws etc., complete. 300 X 16mm	40	each	184.35	7374.00
B69	Providing and fixing aluminium sliding door bolts anodised (anodic coating not less than grade AC 10 as per IS: 1868) transparent or dyed to required colour or shade with nuts and screws etc., complete. 250 X 16 mm	20	each	164.68	3293.60
B70	Providing and fixing aluminium tower bolts anodised (anodic coating not less than grade AC 10 as per IS: 1868) transparent or dyed to required colour or shade with necessary screws etc., complete. 300 X 10mm	20	each	85.64	1712.80
B71	Providing and fixing aluminium tower bolts anodised (anodic coating not less than grade AC 10 as per IS: 1868) transparent or dyed to required colour or shade with necessary screws etc., complete. 250 X 10 mm	80	each	75.81	6064.80
B72	Providing and fixing aluminium handles anodised (anodic coating not less than grade AC 15 as per IS: 1868) transparent or dyed to required colour or shade with necessary screws etc., complete. 125mm	80	each	43.86	3508.80
B73	Providing and fixing aluminium extruded section body tubular type universal hydraulic door closer (having brand logo with ISI, IS : 3564, embossed on the body, door weight upto 36 kg to 80 kg a), with double speed adjustment with necessary accessories and screws etc. complete.	20	each	336.80	6736.00

Annexure-I

BILL OF QUANTITY CUM PRICE SCHEDULE					
Name of Project: - 220kV GIS SUBSTATION AT IOCL PANIPAT					
Name of Work: -CIVIL WORKS OF 220kV GIS BUILDING CUM CRB BUILDING & CONTROL ROOM EXTENSION					
S.No.	Description of Item	Quantity	Unit	Unit Rate(Rs)	Amount(Rs)
B74	Supplying and fixing GI rolling shutters of approved make, made of required size MS laths interlocked together through their entire length and jointed together at the end by end locks mounted on specially designed pipe shaft with brackets, side guides and arrangements for inside and outside locking with mechanical arrangement for operation complete including the cost of providing and fixing necessary 27.5cm long wire springs grade no. 2 and MS top cover of required thickness for rolling shutters. 80x1.25 mm M.S. laths with 1.25 mm thick top cover	30	sqm	2019.89	60596.70
B75	Providing and fixing ball bearing for rolling shutters.	10	each	329.39	3293.90
B76	Extra for providing mechanical device chain and crank operation for operating rolling shutters.	30	sqm	617.14	18514.20
B77	Providing and fixing M.S. grills of required pattern in frames of windows etc. with MS flats,square or round bars etc. including priming coat with approved steel primer all complete.all complete.	1160	kg	104.57	121301.20
B78	White washing with lime to give an even shade New work (three or more coats)	1070	sqm	16.97	18157.90
B79	Distempering with oil bound washable distemper of approved brand and manufacture to give an even shade : New work (two or more coats) over and including water thinnable priming coat with cement primer	3930	sqm	91.81	360813.30
B80	Wall painting with acrylic emulsion paint, having VOC (Volatile Organic Compound) content less than 50 grams/ litre, of approved brand and manufacture, including applying additional coats wherever required, to achieve even shade and colour. Two coats	3950	sqm	71.22	281319.00
B81	Applying priming coats with primer of approved brand and manufacture, having low VOC (Volatile Organic Compound) content. With water thinnable cement primer on wall surface having VOC content less than 50 grams/litre	3950	sqm	36.27	143266.50
B82	Finishing walls with water proofing cement paint of required shade : New work (Two or more coats applied @ 3.84 kg/10 sqm)	200	sqm	56.21	11242.00
B83	Finishing walls with Acrylic Smooth exterior paint of required shade : New work (Two or more coat applied @ 1.67 ltr/10 sqm over and including priming coat of exterior primer applied @ 2.20 kg/10 sqm)	2510	sqm	85.91	215634.10
B84	Providing and applying plaster of paris putty of 2 mm thickness over plastered surface to prepare the surface even and smooth complete.	3950	sqm	117.08	462466.00
B85	Providing and applying white cement based putty of average thickness 1 mm, of approved brand and manufacturer, over the plastered wall surface to prepare the surface even and smooth complete.	2510	sqm	82.18	206271.80
B86	Painting with synthetic enamel paint of approved brand and manufacture to give an even shade: Two or more coats on new work.	100	sqm	74.91	7491.00
B87	Providing and fixing water closet squatting pan (Indian type W.C. pan) with 100 mm sand cast Iron P or S trap, 10 litre low level white P.V.C. flushing cistern, including flush pipe, with manually controlled device (handle lever) conforming to IS : 7231, with all fittings and fixtures complete, including cutting and making good the walls and floors wherever required: White Vitreous china Orissa pattern W.C. pan of size 580x440 mm with integral type foot rests	1	each	3192.12	3192.12

Annexure-I

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Name of Project: - 220kV GIS SUBSTATION AT IOCL PANIPAT					
Name of Work: -CIVIL WORKS OF 220kV GIS BUILDING CUM CRB BUILDING & CONTROL ROOM EXTENSION					
S.No.	Description of Item	Quantity	Unit	Unit Rate(Rs)	Amount(Rs)
B88	Providing and fixing colour glazed vitreous china European type water closet of approved size and shape including vitreous china cistern with dual flush fitting with flushing capacity 3litre/6 litre (adjustable to 4 litre/ 8 litre) including seat cover, cistern fitting, valveless fittings, necessary C.P connections etc all complete. wall mounted	2	each	7741.79	15483.58
B89	Providing and fixing 8 mm dia C.P. / S.S. Jet with flexible tube upto 1 metre long with S.S. triangular plate to European type W.C. of quality and make as approved by Engineer - in - charge.	2	each	254.80	509.60
B90	Providing and fixing white vitreous china battery based infrared sensor operated urinal of approx. size 610 x 390 x 370 mm having pre & post flushing with water (250 ml & 500 ml consumption), having water inlet from back side, including fixing to wall with suitable brackets all as per manufacturers specification and direction of Engineer-in-charge	2	each	5162.20	10324.40
B91	Providing and fixing 10mm thk toughened glass partition with frosted film to be fixed in position for urinals on appropriate stainless steel patch fittings of did shape and size	2	each	2831.95	5663.90
B92	Providing and fixing wash basin with C.I. brackets, 15 mm C.P. brass pillar taps, 32 mm C.P. brass waste of standard pattern, including painting of fittings and brackets, cutting and making good the walls wherever require: Coloured Wash basin size 630x450 mm with a pair of 15 mm C.P. brass pillar taps	3	each	2068.68	6206.04
B93	Providing and fixing Stainless Steel A ISI 304 (18/8) kitchen sink as per IS : 13983 with C.I. brackets and stainless steel plug 40 mm, including painting of fittings and brackets, cutting and making good the walls wherever required : Kitchen sink with drain board 510x1040 mm bowl depth 250 mm alongwith Sink Mixer with Regular Swinging Spout (Wall Mounted Model) with Connecting Legs & Wall Flanges	1	each	3634.25	3634.25
B94	Providing and fixing 100 mm sand cast iron grating for gully, floor or Nahani trap.	3	each	26.06	78.18
B95	Providing and fixing 1000x600 mm beveled edge mirror of superior glass (of approved quality) complete with 6 mm thick hard board ground fixed to wooden cleats with 25mm dia SS Studs, washers all complete.	2	each	755.54	1511.08
B96	Providing and fixing CP brass towel rail complete with brackets fixed with necessary CP brackets, CP screws, washers. Plug etc.	2	each	390.57	781.14
B97	Providing and fixing CP Brass liquid soap container of approved make fixed with necessary CP brackets, CP screws, washers. Plug etc.	2	each	118.78	237.56
B98	Providing and fixing CP Brass 32mm size Bottle Trap of approved quality & make and as per the direction of Engineer-in-charge.	3	each	795.15	2385.45
B99	Providing and fixing G.I. Pipes of heavy duty of approved make complete with G.I. Fitting and clamps , including cutting and making good the walls etc. (internal work). 15 mm dia nominal bore.	15	RM	170.61	2559.15
B100	Providing and fixing G.I. Pipes of heavy duty of approved make complete with G.I. Fitting and clamps , including cutting and making good the walls etc. (internal work). 20 mm dia nominal bore.	15	RM	203.86	3057.90
B101	Providing and fixing G.I. Pipes of heavy duty of approved make complete with G.I. Fitting and clamps , including cutting and making good the walls etc. (internal work). 25 mm dia nominal bore.	10	RM	225.30	2253.00

Annexure-I

BILL OF QUANTITY CUM PRICE SCHEDULE					
Name of Project:- 220kV GIS SUBSTATION AT IOCL PANIPAT					
Name of Work:-CIVIL WORKS OF 220kV GIS BUILDING CUM CRB BUILDING & CONTROL ROOM EXTENSION					
S.No.	Description of Item	Quantity	Unit	Unit Rate(Rs)	Amount(Rs)
B102	Providing and fixing G.I. Pipes of heavy duty of approved make complete with G.I. Fitting and clamps , including cutting and making good the walls etc. (internal work). 32 mm dia nominal bore.	10	RM	278.65	2786.50
B103	Providing and fixing G.I. Pipes (medium grade) of approved make complete with G.I. Fitting and clamps , including trenching and refilling, etc. (external work). 15 mm dia nominal bore.	20	RM	146.22	2924.40
B104	Providing and fixing G.I. Pipes (medium grade) of approved make complete with G.I. Fitting and clamps , including trenching and refilling, etc. (external work). 20 mm dia nominal bore.	20	RM	168.32	3366.40
B105	Providing and fixing G.I. Pipes (medium grade) of approved make complete with G.I. Fitting and clamps , including trenching and refilling, etc. (external work). 25 mm dia nominal bore.	20	RM	185.85	3717.00
B106	Providing and fixing G.I. Pipes (medium grade) of approved make complete with G.I. Fitting and clamps , including trenching and refilling, etc. (external work). 32 mm dia nominal bore.	20	RM	221.03	4420.60
B107	Providing and fixing G.I. Pipes (medium grade) of approved make complete with G.I. Fitting and clamps , including trenching and refilling, etc. (external work). 40 mm dia nominal bore.	30	RM	267.43	8022.90
B108	Making connection of GI distribution branch with GI main of following sizes by providing and fixing tee, including cutting and threading the pipe etc., complete. 25 to 40mm nominal bore.	2	each	385.62	771.24
B109	Providing and fixing brass bib cock of approved quality : 15 mm nominal bore	5	each	248.49	1242.45
B110	Providing and fixing brass bib cock of approved quality : 20 mm nominal bore	2	each	267.97	535.94
B111	Providing and fixing brass stop cock of approved quality : 15 mm nominal bore	5	each	248.49	1242.45
B112	Providing and fixing brass stop cock of approved quality : 20 mm nominal bore	2	each	268.57	537.14
B113	Providing and fixing gun metal gate valve with CI wheel of approved quality (screwed end) 25mm nominal bore	1	each	365.84	365.84
B114	Providing and fixing gun metal gate valve with CI wheel of approved quality (screwed end) 40mm nominal bore	1	each	499.15	499.15
B115	Providing and placing on terrace (at all floor levels) polyethylene water storage tank of Sintex or approved brand and manufacture with cover and suitable locking arrangement and making necessary holes for inlet, outlet and overflow pipes but without fittings and the base support for tank. The tank should be ISI marked .	3000	per litre capacity	6.29	18870.00
B116	Providing and fixing ball valve (brass) of approved quality , high or low pressure with plastic floats complete. 25mm nominal bore	1	each	290.94	290.94

BILL OF QUANTITY CUM PRICE SCHEDULE					
Name of Project:- 220kV GIS SUBSTATION AT IOCL PANIPAT					
Name of Work:-CIVIL WORKS OF 220kV GIS BUILDING CUM CRB BUILDING & CONTROL ROOM EXTENSION					
S.No.	Description of Item	Quantity	Unit	Unit Rate(Rs)	Amount(Rs)
B117	Providing and fixing square-mouth S.W. gully trap class SP-1 complete with C.I. grating brick masonry chamber with water tight C.I. cover with frame of 300 x300 mm size (inside) the weight of cover to be not less than 4.50 kg and frame to be not less than 2.70 kg as per standard design: 100x100 mm size P type With common burnt clay F.P.S. (non modular) bricks of class designation 10	2	each	1462.79	2925.58
B118	Providing and fixing C.I. floor traps size 100 mm Inlet and 100 mm Outlet Sand Cast Iron S&S as per IS: 1729 with C.P jalli all complete.	5	each	26.06	130.30
B119	Painting top of roofs with bitumen of approved quality @ 17kg per 10 sqm impregnated with a coat of coarse sand at 60 cudm per 10 sqm, including cleaning the slab surface with brushes and finally with a piece of cloth lightly soaked in kerosene oil complete : With residual type petroleum bitumen of penetration 85/25	1750	sqm	98.3	171972.50
B120	Laying & well compaction of good soil with optimum moisture content (upto 10 cm thick average) on roofs laid to slope consolidated and plastered with 25 mm thick mud mortar mixed with bhusa @ 35 kg per cum of earth and gobri leaping with mix 1:1 (1 clay : 1 cow dung) and covered with flat tile bricks, grouted with cement mortar 1:3 (1 cement : 3 fine sand) mixed with 2% of integral water proofing compound by weight of cement and finished neat: With common burnt clay F.P.S.(non modular) brick tile of class designation 10	1750	sqm	576.0	1007930.00
B121	Providing and fixing on wall face unplasticised - Rigid PVC rain water pipes conforming to IS : 13592 Type A including jointing with seal ring conforming to IS : 5382 leaving 10 mm gap for thermal expansion.: Single socketed pipes all complete including clamps, bends etc making good the walls etc. wherever required 110 mm diameter.	200	meter	211.92	42384.00
B122	Providing and fixing on wall face unplasticised - Rigid PVC rain water pipes conforming to IS : 13592 Type A including jointing with seal ring conforming to IS : 5382 leaving 10 mm gap for thermal expansion.: Single socketed pipes all complete including clamps, bends etc making good the walls etc. wherever required 150 mm diameter.	150	meter	288.98	43347.27
B123	Providing and fixing unplasticised -PVC pipe clips of approved design to unplasticised - PVC rain water pipes by means of 50x50x50 mm hard wood plugs, screwed with M.S. screws of required length, including cutting brick work and fixing in cement mortar 1:4 (1 cement : 4 coarse sand) and making good the wall etc. complete.	150	each	210.12	31518.00
B124	Providing and fixing to the inlet mouth of rain water pipe cast iron grating 15 cm diameter and weighing not less than 440 grams.	50	each	35.89	1794.50
B125	Providing & fixing Aluminium Luxalon (Hunter Douglas) make Techstyle panel type false ceiling system including T grid , fasteners & fixtures, materials, scaffolding ,leaving cut out etc all complete as per specification "general guidelines for civil work" clause no 18.16 & direction of Engineer-in -Charge.	1060	sqm	2900.00	3074000.00
B126	Providing and fixing removable raised/false access flooring with system as per DSR 2016 Item no 11.54.2 & as per instructions of Engineer in charge.	70	sqm	4275.4	299278.00
B127	Providing and fixing Resin Bonded glass wool insulation minimum 50 mm thick in aluminium foil backing shall be provided over false ceiling for thermal and acoustical insulation. The density of glass wool shall be 32 kg/cu.m (minimum) and shall conform to IS 8183. Maximum value shall be 1.0 W/sq.m/deg.C	1060	sqm	194.25	205905.00

BILL OF QUANTITY CUM PRICE SCHEDULE					
Name of Project:- 220kV GIS SUBSTATION AT IOCL PANIPAT					
Name of Work:-CIVIL WORKS OF 220kV GIS BUILDING CUM CRB BUILDING & CONTROL ROOM EXTENSION					
S.No.	Description of Item	Quantity	Unit	Unit Rate(Rs)	Amount(Rs)
B128	Providing and fixing thermal insulation of ceiling (under deck insulation) Underdeck insulation minimum 50 mm thick High density polystyrene blocks 30kg/CuM density Providing and Installing under deck insulation using minimum 0.05 mm thick aluminium foil on exposed surface followed by 0.56 mm dia and 25 mm mesh GI wire netting, fixed to ceiling with metallic cleats (50x50x3 mm) @ 60 cm at various elevations with rawl plugs including clips .all complete as per customer's specification and direction of engineer-in charge.	1050	sqm	395.72	415506.00
B129	Providing, laying and jointing glazed stoneware pipes class SP-1 with stiff mixture of cement mortar in the proportion of 1:1 (1 cement : 1 fine sand) including testing of joints etc. complete : 100mm diameter	30	metre	197.68	5930.40
B130	Providing, laying and jointing glazed stoneware pipes class SP-1 with stiff mixture of cement mortar in the proportion of 1:1 (1 cement : 1 fine sand) including testing of joints etc. complete : 150mm diameter	30	metre	296.56	8896.80
B131	Making soak pit 2.5m diameter 3m deep with 45X45cm dry brick honeycomb shaft with bricks of class 10 and SW drain pipe 100mm diameter, 1.8m long complete as per standard design and specification. With FPS bricks	1	each	19882.96	19882.96
B132	Providing and laying non-pressure NP2 class (light duty) RCC pipes with collars jointed with stiff mixture of cement mortar in the proportion of 1:2 (1 cement: 2 fine sand) including testing of joints etc., complete. 150mm dia. RCC pipe	10	RM	315.32	3153.20
B133	Providing and laying non-pressure NP2 class (light duty) RCC pipes with collars jointed with stiff mixture of cement mortar in the proportion of 1:2 (1 cement: 2 fine sand) including testing of joints etc., complete. 250mm dia. RCC pipe	10	RM	429.98	4299.80
B134	Providing and laying non-pressure NP2 class (light duty) RCC pipes with collars jointed with stiff mixture of cement mortar in the proportion of 1:2 (1 cement: 2 fine sand) including testing of joints etc., complete. 300mm dia. RCC pipe	10	RM	459.59	4595.90
B135	Providing and laying non-pressure NP2 class (light duty) RCC pipes with collars jointed with stiff mixture of cement mortar in the proportion of 1:2 (1 cement: 2 fine sand) including testing of joints etc., complete. 450mm dia. RCC pipe	10	RM	639.06	6390.60
B136	Providing and laying non-pressure NP3 class (light duty) RCC pipes with collars jointed with stiff mixture of cement mortar in the proportion of 1:2 (1 cement: 2 fine sand) including testing of joints etc., complete. 450mm dia. RCC pipe	15	RM	1660.11	24901.65
B137	Providing and laying non-pressure NP3 class (light duty) RCC pipes with collars jointed with stiff mixture of cement mortar in the proportion of 1:2 (1 cement: 2 fine sand) including testing of joints etc., complete. 600 mm dia RCC pipes.	10	RM	2159.04	21590.40
B138	Providing and applying polysulphide based sealant conforming to IS:12118 in expansion joints in concrete including cleaning of joints, raking out groove, application of primer, scaffolding etc. all complete for required size grooves. 25mmx25mm	130	RM	556.71	72372.56
B139	Providing and applying polysulphide based sealant conforming to IS:12118 in expansion joints in concrete including cleaning of joints, raking out groove, application of primer, scaffolding etc. all complete for required size grooves. 50mmx25mm	130	RM	1079.60	140348.00

Annexure-I

BILL OF QUANTITY CUM PRICE SCHEDULE					
Name of Project: - 220kV GIS SUBSTATION AT IOCL PANIPAT					
Name of Work: -CIVIL WORKS OF 220kV GIS BUILDING CUM CRB BUILDING & CONTROL ROOM EXTENSION					
S.No.	Description of Item	Quantity	Unit	Unit Rate(Rs)	Amount(Rs)
B140	Providing and installation of bitumen impregnated fibre board conforming to IS 1838 as joint filler at joints in concrete including nailing, coating of both faces with coal tar pitch/bitumen etc. all complete. 25mm wide joint	50	sqm	818.16	40908.00
B141	Providing and installation of bitumen impregnated fibre board conforming to IS 1838 as joint filler at joints in concrete including nailing, coating of both faces with coal tar pitch/bitumen etc. all complete. 50mm wide joint	50	sqm	1583.90	79194.80
B142	Providing & fixing aluminium strips 18SWG thk and 300mm wide over expansion joints with minimum lap of 50mm length including brass/aluminium screws, rawl plugs etc all complete	5	kg	307.59	1537.96
B143	Providing and laying plinth protection with plain cement concrete 1:1.5:3 (100THK) with top smooth finish over an under bed of 75 mm thick dry aggregate well compacted & grouted with sand.	340	sqm	669.09	227490.60
B144	Providing & fixing chicken wire mesh in plaster all complete as per specification and direction of Engineer - in - charge.	1000	sqm	43.79	43790.00
B145	Demolishing R.C.C. work manually/ by mechanical means including stacking of steel bars and disposal of unserviceable material within 50 metres lead as per direction of Engineer - in- charge.	30	cum	1454.55	43636.50
B146	Demolishing brick work in cement mortar manually/ by mechanical means including stacking of serviceable material and disposal of unserviceable material within 50 metres lead as per direction of Engineer-in-charge.	30	cum	842.75	25282.50
B147	Supply,fabrication and fixing of stainless steel pipe hand railing conforming to SS 409 of 32/40/50 mm dia including transportation, loading/unloading etc. all complete as per drawing and specification.	500	kg	418.68	209340.00
B148	Providing and Placing in position suitable PVC water stops conforming to IS:12200 for construction/ expansion joints between two RCC members and fixed to the reinforcement with binding wire before pouring concrete etc. complete : Serrated with central bulb (225 mm wide, 8-11 mm thick)	25	metre	216.54	5413.50
Total Amount in Rs. (Excluding GST) - Annexure-I B					582,36,589

Bill of Quantity Cum Price Schedule

Name of Project:- 220kV GIS SUBSTATION AT IOCL PANIPAT					
Name of Work:- Under-ground Earthing & Electrode along with other earthing works					
Sl. No.	Description	Unit	Quantity	Unit Rate (Rs)	Amount (Rs.)
1	Unloading, handling & proper storage of 40mm (min) dia MS rod including arrangement of watch & ward	MT	30	629.38	18881.41
2	<p>Handling, fabrication & laying of 40mm (min) dia MS rod at depth of 600mm (min) measured from the top of Finished Ground Level (FGL) and bringing out risers upto gravel level near the equipment/ building foundation in line with technical specification, including following activities but not limited to,</p> <ul style="list-style-type: none"> - Excavation as per requirements - Laying of MS rod - Welding of rods in line with earthing philosophy and/ or technical specification attached. - Backfilling of soil and compaction for bringing out risers of 40 dia MS rod for equipments. Risers shall be raised from the earthmat, positioned at 600mm (min) depth to gravel level and nearest point of the equipment. This shall include all activities such as cutting, bending, welding, fixing, application of paints on cutting & welding surface etc. to the main earthmat. - Any other work necessary to complete the below earthing work related to main earth mat and risers in all respect. <p>MS rod for main earth mat and risers shall be provided by BHEL as a free issue material (FIM).</p>	MT	15	5664.40	84966.02
3	<p>Handling, fabrication & laying of auxiliary mat of 40mm (min) Dia MS rod at a depth of 300mm (min) from top of Finished Ground Level (FGL) including excavation & backfilling in line with technical specification, including following but not limited to,</p> <ul style="list-style-type: none"> - Excavation as per requirements - Fabrication of auxiliary mat including all activities such as cutting, bending, welding, fixing, application of paints on cutting & welding surface etc. - Welding of rods in line with earthing philosophy and technical specification attached. - Backfilling and compaction - Any other work necessary to complete the auxiliary mat and its associated work in all respect. <p>MS rod for auxiliary mat shall be provided by BHEL as a free issue material (FIM).</p>	No	10	2271.29	22712.94
4	<p>Handling, fabrication, if any and installation of pipe electrode (to be driven upto 3.0 meter) in line with technical specification, including following activities but not limited to,</p> <ul style="list-style-type: none"> - Excavation as per requirements - Fabrication, if required & installation of electrode. - Electrodes in treated earth pit, as per applicable standards/ IS (For alternate layers of coke/ charcoal and salt or bentonite clay etc). - Backfilling and compaction - Construction of cement concrete pit with a ISI marked cast iron cover hinged to a cast iron frame to have an access to the joints including supply of materials. - any other work necessary to complete the work <p>Pipe Electrode assembly i.e. GI Pipe, Nuts, Bolts & Washers and funnel with wire mesh shall be provided by BHEL as a free issue material (FIM).</p>	no	200	8306.65	1661329.71

Bill of Quantity Cum Price Schedule

Name of Project:- 220kV GIS SUBSTATION AT IOCL PANIPAT					
Name of Work:- Under-ground Earthing & Electrode along with other earthing works					
Sl. No.	Description	Unit	Quantity	Unit Rate (Rs)	Amount (Rs.)
5	Handling, fabrication and installation of rod electrode with test pit (to be driven upto 3.0 meter) in line with technical specification, including following activities but not limited to, - Excavation as per requirements - Fabrication & installation of electrode. - Electrodes in treated earth pit, as per applicable standards/ IS (For alternate layers of coke/ charcoal and salt or bentonite clay etc). - Backfilling and compaction - Construction of cement concrete pit with a ISI marked cast iron cover hinged to a cast iron frame to have an access to the joints including supply of materials. - any other work necessary to complete the work Materials for fabrication for rod Electrode assembly i.e. 40mm (min) MS rod, GI flat and harwares etc. shall be provided by BHEL as a free issue material (FIM).	No	4	3868.13	15472.53
6	Handling, fabrication and installation of rod electrode without test pit (to be driven upto 3.0 meter) in line with technical specification, including following activities but not limited to, - Excavation as per requirements - Fabrication & installation of electrode. - pipe electrodes in treated earth pit, as per applicable standards/ IS (For alternate layers of coke/ charcoal and salt or bentonite clay etc). - Backfilling and compaction - Construction of cement concrete pit with a ISI marked cast iron cover hinged to a cast iron frame to have an access to the joints including supply of materials. - any other work necessary to complete the work Materials for fabrication for rod Electrode assembly i.e. 40mm (min) MS rod , GI flat and harwares etc. shall be provided by BHEL as a free issue material (FIM).	No	16	3456.14	55298.23
Total Amount in Rs. Excluding GST -Annexure-II					18,58,661
Enclosures:					
1. Customer's Technical Specification for Grounding					

ANNEXURE-III

BILL OF QUANTITIES CUM PRICE SCHEDULE

Name of Project : 220kV GIS SUBSTATION AT IOCL PANIPAT					
Name of Work: Construction of Stores					
Sl No.	Description	Unit	Qty.	Unit Rate (Rs.)	Amount (Rs.)
1	Open stores of size:- 20mx10m (200sqm) (As per specification enclosed with tender documents).	Sqm	200	488	97,600
2	Closed/Covered Store – 20mx10m (200sqm) (As per Specification enclosed with tender documents).	No.	1	15,35,888	15,35,888
Total Amount (Rs.)-Excluding GST					16,33,488
Notes:					
1	The quoted rate is inclusive of all materials, tools & plants etc. required for above works.				
2	Decision regarding Store requirement (open/ closed) along with location shall be taken by site in charge as per site requirement as per prevailing conditions. The height of rolling shutter may be increased from 5mtr to height suitable for hydra movement.				
3	Size of open store may vary as per site requirement and the same shall be measured on prorated basis and may be deleted also.				

ANNEXURE-IV

**TRANSMISSION BUSINESS GROUP
(SUB- CONTRACTS MANAGEMENT)
TBG - NOIDA**

PRICE SCHEDULE FORMAT

SUB: TENDER FOR "EXECUTION & HANDING OVER OF CIVIL WORKS OF 220 KV YARD, 220 KV GIS BUILDING CUM CONTROL ROOM BUILDING & CONTROL ROOM EXTENSION FOR 220 KV GIS SUBSTATION AT IOCL PANIPAT REFINERY IN HARYANA".

TENDER NO.:- TBSM/PANIPAT-LSTK / CIVIL /TENDER

DATE: 06.03.2020

(a) I/ We hereby agree to execute the above work at ----- % (in figure).....
----- (in words) Above / Below/ At Par the rates of items given in BOQ
(Annexure-I, II & III) of subject tender.

NOTE:

1. In this annexure the tenderer shall quote a percentage above/ below/At Par the rates shown in the Bill of Quantities (Annexure-I, II & III) of subject tender. The percentage quoted shall be clearly written both in words and figures In case of discrepancy in rates in figure and words, the minimum will be taken into account by BHEL.
2. The quoted percentage will apply to the individual items uniformly.

Date:

Place

Signature of tenderer
Name & Designation of authorized person(s) with seal

ANNEXURE-V**(Summary of Prices)**

Subject :- Execution & handing over of civil works of 220 kV yard, 220 kV GIS building cum control room building & control room extension for 220 kV GIS substation at IOCL Panipat refinery in Haryana

Tender Spec. no.:- TBSM/PANIPAT-LSTK / CIVIL /TENDER Date 06.03.2020

Sl No.	Description	Amount (Rs.)
1	Total amount as per the rates in BOQ for " civil works of 220 kV yard, 220 kV GIS building cum control room building & control room extension for 220 kV GIS substation at IOCL Panipat refinery in Haryana" (Annexure-I:- Annexure-IA+ Annexure-IB) Annexure-IA:- Rs. 325,36,731/- Annexure-IB : Rs. 582,36,589/-	907,73,320.00
2	Total amount as per the rates in BOQ for " Under-ground Earthing & Electrode along with other earthing works" (Annexure-II)	18,58,661.00
3	Total amount as per the rates in BOQ for construction of stores (Annexure-III)	16,33,488.00
4	Total Amount For Subject work - Excluding GST (Annexure-I + Annexure-II + Annexure-III)	942,65,469.00
5	Value of percentage above/below/at par (As indicated in Price Schedule Format, Annexure-IV) applicable to the total amount of subject work (Sl. no. 4 above)% above/below/ at par
6	Total amount after consideration of percentage above/below/ at par.	