

BILL OF QUANTITY AND PRICE SCHEDULE

Name of Project : EXTN OF 400/220kV ITARSI S/S

Name of Work : CIVIL WORKS OF SWITCHYARD

S.No.	Description of Item	QUANTITY	Unit	UNIT RATE (Rs.)	AMOUNT (Rs.)
1(a)	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 3.5m, disposed earth to be levelled and neatly dressed. All kinds of soil.	4300	cum	125.95	541585.00
1(b)	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 3.5m, disposed earth to be levelled and neatly dressed. Ordinary rock	500	cum	221.05	110525.00
1(c)	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 3.5m, disposed earth to be levelled and neatly dressed. Hard rock (blasting prohibited)	500	cum	619.03	309515.00
3	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.	2460	cum	125.75	309345.00
4	Supplying and filling in plinth with local sand under floors/foundations including watering, ramming, consolidating and dressing complete.	50	cum	810.82	40541.00
5	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.	1800	cum	98.34	177012.00
6(a)	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 : 2coarse sand : 4 graded stone aggregate 20mm nominal size)	20	cum	4943.80	98876.00
6(b)	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 40mm nominal size)	10	cum	4415.45	44154.50
6(c)	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)	370	cum	4148.54	1534959.80
6(d)	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 brick aggregate) with a layer of cement slurry of mix 1:6 (1 cement : 6 Fine Sand) over PCC layer as per Technical Specification. Note : The contractor has option to use stone aggregate in place of brick aggregate without any financial implication on BHEL)	170	cum	3577.55	608183.50
7	Extra for providing and mixing water proofing material 'Impermo' or equivalent in cement concrete work in the proportion recommended by the manufacturer.	30	per 50 kg cement	41.73	1251.90

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8(a)	Providing and laying in position machine batched, machine mixed and machine vibrated design mix cement concrete of specified grade for RCC structural elements including roads 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. - M25 grade reinforced cement concrete by using minimum 330kg of cement per cum of concrete.All works upto plinth level	1000	cum	5887.43	5887430.00
8(b)	Providing and laying in position machine batched, machine mixed and machine vibrated design mix cement concrete of specified grade for RCC structural elements including roads 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. - M25 grade reinforced cement concrete by using minimum 330kg of cement per cum of concrete.All works above plinth level upto floor V level	340	cum	6691.00	2274940.00
9	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.	240	cum	194.57	46696.80
10(a)	Centering and shuttering including strutting, propping, etc., and removal of form for: Foundations, footings, bases of columns, etc., for mass concrete.	900	sqm	184.42	165978.00
10(b)	Centering and shuttering including strutting, propping, etc., and removal of form for: RCC walls at all levels (any thickness).	3400	sqm	369.24	1255416.00
10(c)	Centering and shuttering including strutting, propping, etc., and removal of form for: Lintels, beams, plinth beams and cantilevers.	200	sqm	333.23	66646.00
10(d)	Centering and shuttering including strutting, propping, etc., and removal of form for: Columns, Pillars, Piers, Posts and Struts.	3360	sqm	454.41	1526817.60
10 (e)	Centering and shuttering including strutting, propping, etc., and removal of form for: Suspended floors, roofs, landings, balconies and access platform	8860	sqm	413.62	3664673.20
11(a)	Steel reinforcement -Cold twisted bars /TMT- Fe 500- 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. Unloading, storing, watch & ward, handling and Testing of material as per PGCIL BOQ shall be in bidders scope)	104100	kg	10.77	1121157.00
11(b)	Steel reinforcement -Cold twisted bars /TMT- Fe 500 (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.	10300	kg	49.62	511086.00
12	Brickwork with F.P.S.bricks of class designation 75 in foundation and plinth in: Cement mortar 1:6 (1 cement : 6 coarse sand)	60	cum	4524.10	271446.00
13	Brickwork with F.P.S.bricks of class designation 75 in superstructure above plinth level to floor V level in all shapes and sizes in: Cement mortar 1:6 (1 cement : 6 coarse sand)	40	cum	5355.29	214211.60
14	Half brick masonry with bricks of class designation 75 in foundation and plinth in: Cement mortar 1:4 (1 cement : 4 coarse sand)	10	sqm	562.70	5627.00
15	Half brick masonry with bricks of class designation 75 in superstructure above plinth level to floor V level. Cement mortar 1:4 (1 cement : 4 coarse sand)	10	sqm	653.36	6533.60

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S.No.	Description of Item	QUANTITY	Unit	UNIT RATE (Rs.)	AMOUNT (Rs.)
16	Extra for providing and placing in position 2 Nos 8mm dia bars at every third course of half brick masonry (with FPS bricks)	10	sqm	48.21	482.10
17	12 mm cement plaster of mix: 1:6 (1 cement : 6 coarse sand)	430	sqm	154.72	66529.60
18	18 mm cement plaster in 02 coats on external surface of brick wall of mix : Under layer of 12mm thick with 1:5 (1 cement : 5 coarse sand) and finished with 6mm thick with 1:6 (1 cement : 6 Fine sand)	240	sqm	245.49	58917.60
19	6 mm cement plaster to all ceilings of mix: 1:3 (1 cement : 3 Fine sand)	140	sqm	138.39	19374.60
20	Neat cement punning	270	sqm	39.55	10678.50
21	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.	20	sqm	74.91	1498.20
22	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.	34600	kg	51.36	1777056.00
23(a)	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.	9700	kg	56.66	549602.00
23(b)	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, gates (including pipes), rails, ISMB, ISMC and similar works.	12100	kg	78.07	944647.00
24	Applying priming coat - With ready mixed red oxide zinc chromate primer of approved brand and manufacture on steel galvanised iron/ steel works.	20	sqm	28.47	569.40
25(a)	Providing and laying Medium duty hume pipe (NP3) as per drawing and specification all complete excluding concrete and reinforcement. 100mm dia	40	RM	361.53	14461.20
25(b)	Providing and laying Medium duty hume pipe (NP3) as per drawing and specification all complete excluding concrete and reinforcement. 250mm dia	10	RM	903.83	9038.30
25(c)	Providing and laying Medium duty hume pipe (NP3) as per drawing and specification all complete excluding concrete and reinforcement. 300mm dia	10	RM	1084.61	10846.10
25(d)	Providing and laying Medium duty hume pipe (NP3) as per drawing and specification all complete excluding concrete and reinforcement. 450mm dia	10	RM	1660.11	16601.10
26	Providing and fixing in culvert/road crossing/building PVC pipes conforming to IS : 12818 including jointing with seal in complete 150mm diameter	10	RM	283.20	2832.00
27	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	1	Nos	9280.60	9280.60
28	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.	860	Kg	55.86	48039.60

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S.No.	Description of Item	QUANTITY	Unit	UNIT RATE (Rs.)	AMOUNT (Rs.)
29	Extra over Item above for providing galvanised bolts (Mass of zinc coating = 610gms/sqm), nuts & washer .	860	kg	5.88	5056.80
30	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.	8550	Kg	7.35	62842.50
31	Providing & fixing in position precast cement concrete trench covers or perforated covers 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 M25	35	Cum	6186.67	216533.50
32	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.	11	cum	12179.63	133975.90
33	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.	2050	sqm	88.30	181010.90
34 (a)	Suppling and stacking at site 90 mm to 45 mm size stone aggregate	230	cum	1278.69	294098.70
34 (b)	Suppling and stacking at site 63 mm to 45 mm size stone aggregate	180	cum	1386.53	249575.40
34 (c)	Suppling and stacking at site 53 mm to 22.5 mm size stone aggregate	170	cum	1475.02	250753.40
34 (d)	Suppling and stacking at site Stone screening 13.2 mm nominal size (type A)	70	cum	1439.66	100776.20
34 (e)	Suppling and stacking at site Stone screening 11.2 mm nominal size (type B)	30	cum	1398.19	41945.70
34 (f)	Suppling and stacking at site moorum	90	cum	563.01	50670.90
35	Laying spreading and compacting stone aggregate of specified sizes to WBM specifications incuding 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 bairi etc. to be made separately)	700	cum	449.10	314370.00
36	Providing and laying polythene sheet of 125 microns between the PCC and RCC slab all complete as per direction of Engineer in charge.	2060	sqm	15.72	32375.90
37	Supplying & installation of bitumen impregnated fibre board confirming to IS 1838 as joint filler including nailing, coating of both faces with coal tar pitch/bitumin etc. all complete as per specification, drawing and as directed by engineer. (20 mm wide joints)	80	Sqm	884.96	70796.40
38	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.	200	RM	11.50	2300.00
39	Supplying and filling stone (40mm size) over grating for transformer/reactor foundation.	160	cum	1584.89	253582.40

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S.No.	Description of Item	QUANTITY	Unit	UNIT RATE (Rs.)	AMOUNT (Rs.)
40	Finishing walls with water proofing cement paint of required shade : New work (Two or more coats applied @ 3.84 kg/10 sqm)	390	sqm	56.21	21921.90
41	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.	10	cum	615.15	6151.50
42	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.	10	cum	1454.55	14545.50
43	Dismantling 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 : Bitumenous road	375	sqm	177.00	66375.00
44	Providing and laying 20mm thk cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate).	45	sqm	146.68	6600.40
45	Antiweed treatment in switchyard area including micro leveling, dressing etc as per Technical Specification.	4000	Sqm	12.54	50160.00
46	Supplying and spreading stone aggregate in switchyard as per drawing and specification all complete but excluding micro leveling, dressing & antiweed treatment as per Technical Specification C/ENGG/SPEC/CIVIL Rev No.: 11A	4000	Sqm	158.47	633880.00
47	Removal, cleaning & washing of existing stone and relaying of stone in switchyard including supply of extra matching gravel but excluding micro leveling, dressing & antiweed treatment as per Technical Specification.	4000	Sqm	79.17	316680.00
48	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).	40	sqm	90.36	3614.40
49	Providing and laying damp proof course 50mm thick cement concrete 1:1.5:3 (1 Cement:1.5 coarse sand : 3 graded stone aggregate 12.5 mm nominal size) .	10	sqm	287.48	2874.80
50	Applying a coat of residual petroleum bitumen of penetration 80/100 of approved quality using 1.7 kg per sqm on damp proof course after cleaning the surface with brushes and finally with a piece of cloth lightly soaked in kerosene oil.	10	sqm	88.05	880.50
51	Making plinth protection of 50mm thick cement concrete 1:2:4 (1 cement : 2coarse sand : 4 graded stone aggregate 20mm nominal size) laid over 75mm thick bed of dry brick balast 40mm nominal size well rammed and consolidated and grouted with fine sand including finishing the top smooth.	30	sqm	446.54	13396.20
52	Add or deduct plaster drip course /groove in plastered surface or moulding to RCC projections:	150	meter	34.15	5122.50
53	Providing and fixing aluminium work for doors, windows, ventilators and partitions with extruded builtup standard tubular and other sections of approved make conforming to IS: 733 and IS:1285, fixed with rawl plugs and screws or with fixing clips or with expansion hold fasteners including necessary filling up of gaps at junctions at top , bottom and sides with required PVC/neoprene felt, etc. Aluminium sections shall be smooth , rust free, straight, mitred and jointed mechanically wherever required including cleat angle, aluminium snap beading for glazing/panelling, CP brass/stainless steel screws, all complete as per architectural drawings and direction of Engineer-in-charge. Powder coated aluminium (minimum thickness of podwer caoting 50 micron) (Glazing and panelling to be paid for separately). For fixed portion	30	kg	334.55	10036.50

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S.No.	Description of Item	QUANTITY	Unit	UNIT RATE (Rs.)	AMOUNT (Rs.)
54	Providing and fixing aluminium work for doors, windows, ventilators and partitions with extruded builtup standard tubular and other sections of approved make conforming to IS: 733 and IS:1285, fixed with rawl plugs and screws or with fixing clips or with expansion hold fasteners including necessary filling up of gaps at junctions at top, bottom and sides with required PVC/neoprene felt, etc. Aluminium sections shall be smooth, rust free, straight, mitred and jointed mechanically wherever required including cleat angle, aluminium snap beading for glazing/panelling, CP brass/stainless steel screws, all complete as per architectural drawings and direction of Engineer-in-charge. Powder coated aluminium (minimum thickness of powder coating 50 micron) (Glazing and panelling to be paid for separately). For shutters of doors, windows & ventilators including providing and fixing hinges/pivots and fittings wherever required including the cost of PVC/neoprene gasket required.	50	kg	391.32	19566.00
55	Providing and fixing glazing in aluminium door, window, ventilator shutters and partitions, etc., with PVC/neoprene gasket, etc., complete as per the architectural drawings and directions of Engineer-in-charge. (Cost of aluminium snap beading shall be paid in basic item). With float glass panes of 5.5mm thickness (weight not less than 13.75kg/sqm)	20	sqm	886.51	17730.20
56	Providing and fixing chromium plated brass 100mm mortice latch and lock with 6 levers and a pair of lever handles with necessary screws etc. complete (best make of approved quality).	1	each	486.96	487.00
57	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	1	each	184.35	184.40
58	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	1	each	85.64	85.60
59	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. 150 X 10mm	4	each	55.22	220.90
60	Providing and fixing aluminium handles 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. 125mm	5	each	43.86	219.30
61	Providing and fixing double action hydraulic floor spring of approved brand and manufacture IS 6315 marked "hardwyn" make (Model 3000) or equivalent for doors including cost of cutting floors as required, embedding in floors and cover plates with brass pivot and single piece M. S. sheet outer box with slide plate etc. complete as per direction of Engineer-in-charge. With Stainless steel cover plate	1	each	1777.08	1777.10
62	Providing and laying polished vitrified floor tiles in different sizes (thickness to be specified by the manufacturer) with water absorption's less than 0.08% and conforming to IS: 15622 of approved make in all colours and shades laid over 20mm thick cement mortar 1:4 (1 Cement:4 coarse sand) including grouting the joints with white cement and matching pigments etc. complete as per direction of Engineer-in charge. Size of tile 60 x 60 cm	40	sqm	990.82	39632.80

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63	Providing and laying polished vitrified floor tiles in different sizes (thickness to be specified by the manufacturer) with water absorption's less than 0.08% and conforming to IS: 15622 of approved make in all colours and shades, in skirting, riser of steps, over 12mm thick cement mortar 1:4 (1 Cement:4 coarse sand) including grouting the joints with white cement and matching pigments etc. complete as per direction of Engineer-in charge. Size of tile 60 x 60 cm	10	sqm	1010.07	10100.70
64	Providing and laying pressed mangalore tiles (as per approved pattern 20mm nominal thickness of approved size) on roofs jointed with cement mortar 1:4 (1 cement : 4 coarse sand) mixed with 2% integral water proofing compund, laid over a bed of 20mm thick cement mortar 1:4 (1 cement : 4 coarse sand) and finish neat complete	40	Sqm	206.82	8272.80
65	Providing and fixing Chicken wire mesh of 22G x 12mm on wall, floor and roof of switchyard panel room all complete as per drawing, specification and direction of Engineer-in-charge (Rate shall be inclusive of all material chicken wire mesh, labour, T & P etc.)	140	Sqm	34.85	4879.00
66	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.	140	Sqm	82.18	11505.20
67	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 priming coat with cement primer.(Work to be carried as per relevant IS codes.)	140	Sqm	91.81	12853.40
68	Finishing walls with Premium Acrylic Smooth exterior flat paint with Silicone additives of required shade over an under coat of suitable primer on new cement plaster surface: New work : (Two or more coat).	170	Sqm	91.61	15573.70
69	Dismantling of street light poles embedded in cement concrete foundation etc. as required and shifting the same to place designated by engineer in charge within substation boundary.	30	each	1295.00	38850.00
70	Supplying and filling good earth including watering, ramming, consolidating and dressing complete including royalty etc.	300	cum	332.55	99765.00
	TOTAL				28029668.30

The above amount is excluding GST

Annexure-II

BOQ AND PRICE SCHEDULE FOR UNDERGROUND EARTHING & ELECTRODE AND DISMANTLING WORKS

Project :- Civil works of switchyard at extension of 400/220 kV ITARSI S/s in Madhya Pradesh under PGCIL SUBSTATION

Customer : POWERGRID CORPORATION OF INDIA LIMITED

Name of Work:- Underground Earthing & Electrode AND Dismantling Works

S.N o.	Description	Unit	QTY.	Unit Rate (INR)	Amount (Rs.)
1	Unloading and proper storage of 40 mm dia MS Rod including safety & security of material.	MT	56	606.69	33974.50
2	Dismantling of existing earthmat i.e. 40mm MS ROD / Earthing material/ riser / GI Flat with approximate depth of 600 mm measured from the top of FGL as per site requirement complete in all respect including the following works: - excavation - Cutting of existing earthing material - MS rod / GI Flat / TMT Bar etc - Shifting of dismantled items to store and safekeeping	MT	2	2730.09	5460.19
3	Material handling and laying of 40 mm dia MS Rod at a minimum depth of 600 mm measured from the top of Finished Ground Level and bringing out risers just below gravel level near the equipment foundations as per requirement including following works: - excavation - laying of MS rod - welding of rods (refer Drg No. C/ENG./STD/EARTHINGS/09 SHEET # 1, Sheet # 2 , SHEET # 3 for Welding details of rods) - backfilling of soil and compaction for bringing out pig tail risers of 40 dia MS rod for equipments. Risers shall be raised from the earthmat (at 600 mm depth) to approx. 150 mm below finished ground level to the nearest point of the equipment. This shall include all cutting, bending, welding, fixing, application of paints on cutting & welding surface, etc to the main earthmesh. - any other work necessary to complete the laying of earthmat (40 mm dia MS rod will be supplied by BHEL).	MT	5	5460.19	27300.94
4	Fabrication & laying of Auxiliary Mat of 40 mm Dia MS Rods at a depth of 300 mm from top of FGL including excavation & backfilling as per Drg No. C/ENG/STD/EARTHINGS/09 SHEET # 4 - any other work necessary to complete the laying of earthmat. - welding of rods (refer Drg No. C/ENG/STD/EARTHINGS/09 SHEET # 1, Sheet # 2 , SHEET # 3 for Welding details of rods. (40 Diameter MS rod will be supplied by BHEL)	Nos.	20	2189.41	43788.23
5	Installation of Pipe Electrode(to be driven - 3.0 Mtr) as per Drg. No. C/ENG/STD/EARTHINGS/09 SHEET # 5 including following works: - excavation - installing the pipe electrode. - pipe electrodes in treated earth pit (as per IS) such as alternate layers of coke/ charcoal and salt or bentonite clay. - Backfilling and compaction - Cement Concrete pit with a ISI marked cast iron cover hinged to a cast iron frame to have an access to the joints. - any other work necessary to complete the work Remark :- Pipe Electrode assembly i.e. GI Pipe, Nuts, Bolts & Washers and funnel with wire mesh will be supplied by BHEL.	nos.	2	8007.18	16014.37

Annexure-II

BOQ AND PRICE SCHEDULE FOR UNDERGROUND EARTHING & ELECTRODE AND DISMANTLING WORKS

Project :- Civil works of switchyard at extension of 400/220 kV ITARSI S/s in Madhya Pradesh under PGCIL SUBSTATION

Customer : POWERGRID CORPORATION OF INDIA LIMITED

Name of Work:- Underground Earthing & Electrode AND Dismantling Works

S.N o.	Description	Unit	QTY.	Unit Rate (INR)	Amount (Rs.)	
6	Installing of 40 mm diameter Rod Electrode with test pit as per Drg. No. Drg. No. C/ENG./STD/EARTHINGS/09 SHEET # 6 including following works: - excavation - installing the rod electrode - backfilling and compaction - Cement Concrete pit with a ISI marked cast iron cover hinged to a cast iron frame to have an access to the joints. - any other work necessary to complete the work Remark:- 40 mm dia MS rod, GI Flat, Nut Bolt washers will be supplied by BHEL	Nos.	18	3728.68	67116.28	
7	Installing of 40 mm diameter Rod Electrode without test pit including following works: - excavation/hammering of rod in earth - installing the rode electrode - backfilling and compaction - any other work necessary to complete the work (40 mm dia MS rod will be supplied by BHEL).	Nos.	2	3331.54	6663.08	
8	Dismantling of existing lattice / pipe structure such as Lightening Mast/ Tower structure/ equipment structure including the following works: 1. Arrangement of skilled manpower for structure works, hydra / crane etc as per requirement. 2. Proper Listing and stacking of material, individual item wise. 3. Storage of material in store and safekeeping. 4. Mode of measurement shall be on weight basis including weight of hardwares.	MT	31	3091.41	95833.77	
9	Erection of lattice / pipe structure such as Lightening Mast/ Tower structure/ equipment structure. including the following works: 1. Arrangement of skilled manpower for structure works, hydra / crane etc as per requirement. 2. Material handling, shifting from store to erection site 3. Erection of material in complete respect 4. Mode of measurement shall be on weight basis including weight of hardwares.	MT	31	4052.80	125636.71	
	Total Amount in Rs. (Excluding GST)					421788
Enclosed: Drawing C/ENG/STD/EARTHINGS/09						

ANNEXURE-III

BILL OF QUANTITIES CUM PRICE SCHEDULE

Name of Project : Civil works of switchyard at extension of 400/220 kV Itarsi s/s in Madhya Pradesh under PGCIL Substation under subsation Package SS-19					
Name of Work: Construction of Stores					
SI No.	Description	Unit	Qty.	Unit Rate (Rs.)	Amount (Rs.)
1	Open stores of size 500 Sqm (As per specification enclosed with tender documents).	Sqm	500	488	2,44,000
2	Covered Store of Size 200 Sqm (As per Specification enclosed with tender documents).	No.	1	12,63,430	12,63,430
Total Amount (Rs.)-Excluding GST					15,07,430
Notes:					
1	The quoted rate is inclusive of all materials, tools & plants etc. required for above works.				
2	Decision regarding store location and execution of above items shall be taken by site in charge as per site requirement.				
3	Size of open store may vary as per site requirement and the same shall be measured on prorated basis				
4	Requirement of closed store may be changed based on site requirement and may also be deleted.				

ANNEXURE-IV

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

PRICE SCHEDULE FORMAT

**SUB: TENDER FOR "EXECUTION AND HANDING OVER OF CIVIL WORKS OF SWITCHYARD AT
EXTENSION OF 400/220 KV ITARSI S/S IN MADHYA PRADESH".**

TENDER NO.:- TBSM/ITARSI/ PKG-SS19/ CIVIL/TENDER

DATE: 20.09.2019

(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-IV
(Summary of Prices)

**EXECUTION AND HANDING OVER OF CIVIL WORKS OF SWITCHYARD AT EXTENSION OF 400/220 KV
ITARSI S/S IN MADHYA PRADESH**

Sl No.	Description	Amount (Rs.)
1.a	Total amount as per the rates in BOQ for "Execution and handing over of civil works of switchyard at extension of 400/220 kV Itarsi S/s in Madhya Pradesh" (Annexure-I)	280,29,668
1.b	Total amount as per the rates in BOQ for "Underground Earthing & Electrode and Dismantling Works" (Annexure-II)	4,21,788
1.c	Total amount as per the rates in BOQ for construction of stores (Annexure-III)	15,07,430
1	Total Amount - Excluding GST (Annexure-I + Annexure-II + Annexure-III)	299,58,886
2	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. 1 above)% above/below/ at par
3	Total amount after consideration of percentage above/below/ at par.	