

## Annexure-I

## BILL OF QUANTITY CUM PRICE SCHEDULE

Project: 7 765/400 KV TANTRANS CO SUB-STATION AT ARIYALUR IN TAMILNADU

Work: BALANCE CABLE TRENCH INCL. CULVERTS

S. No.	Description of work	Customer Item No.	Quantity	Unit	Unit Rate (Rs)	Amount (Rs)
1	Earth work excavation and depositing on bank with initial lead of 10m and initial lift of 2m in hard stiff clay, stiff black cotton soil, hard red earth, shales, murram, gravel, stoney earth and earth mixed with small size boulders as per standard specification including dewatering etc; complete.					
1a	In Hard stiff clay and gravelly soil	2a.	2932	Cum	125.95	369285.40
1b	In soft disintegrated rock not requiring blasting	2b.	1770	Cum	221.05	391258.50
1c	In medium & dense medium rock not requiring blasting	2c	12	Cum	420.43	5045.16
1d	In medium & dense medium rock requiring blasting	2d.	12	Cum	305.43	3665.16
1e	Removal of hard rock by blasting	2e.	12	Cum	389.80	4677.60
1f	Removal of hard rock by wedging & chiselling/using compressor and jack hammer	2f.	12	Cum	619.80	7437.60
2	Refilling the foundation and basement with excavated earth including ramming as per specification, cost of all labours, leads and lifts etc., complete.	3	730	Cum	125.75	91797.50
3	Filling the foundation, basement and yard area with quarry dust including ramming, leads and lifts etc. complete including the cost of materials, labours, lead, lift, etc..	4	8	Cum	1177.71	9421.68
4	Filling the foundation and basement with river sand including watering, ramming, dressing, lead and lift etc. complete including the cost of materials, labours, lead, lift, etc..	5	8	Cum	810.82	6486.56
5	Plain cement concrete 1:3:6 using 20mm (machine crushed) hard broken stone including cost of all materials, labour, curing, leads and lifts etc; complete. Without formwork	7	414	Cum	4522.52	1872323.28
6	RCC 1: 1.5 : 3 using 12 to 20mm size HBG stone including cost of all materials, form work, centering and curing all leads, lifts etc., complete but excluding cost of reinforcement. <b>For cable trench raft, foundation, etc</b>	8a)	950	Cum	5846.84	5554498.00
7	Brick work in CM 1:5 using II Class chamber burnt bricks for basement & super structure including cost of all materials, scaffolding, leads, lift and curing etc., complete.	17				
7a	For ground floor	17a	4	Cum	4610.85	18443.40
8	Supplying, fabricating and placing in position of TMT/RTS steel reinforcement for RCC works including all labours for cutting, bending, tying and fixing in position as per specification including cost of binding materials, lead, lift, labour including cost of binding wire, etc., complete. complete as per standard specification. <b>Cost of Supply of TMT/RTS Steel Reinforcement is included.</b>	32	10	MT	49620.00	496200.00
9	Fabricating and placing in position of TMT/RTS steel reinforcement for RCC works including labour for cutting, bending, tying and fixing in position as per specification including cost of binding materials, lead, lift, labour including cost of binding wire, etc., complete. Complete as per standard specification. <b>Excluding Supply of MS/RTS/TMT Steel Reinforcement</b> (Reinforcement Steel shall be supplied by BHEL Free of Cost however unloading, storage, watch & ward, etc. shall be in the scope of contractor. In case, Reinforcement Steel is issued by BHEL from storage/stock yard of other contractor within the sub-station premises then loading, to & fro transportation, weighing, reconciliation, etc. shall be paid separately as per <b>BOQ item no. 33</b> )	32	166	MT	10994.00	1825004.00
10	Plastering with CM 1:5, 12mm thick for all faces of walls culverts including cost of all materials and scaffolding etc. complete. as per standard specification.	38	20	Sqm	162.22	3244.40
11	Painting the outside walls with two coats of exterior emulsion over a primer coat of approved colour and quality including cost of all materials, lead and lift etc., complete as per standard specification	45	20	Sqm	80.15	1603.00
12	PCC 1:2:4 mix for foundation using 12 to 20mm size HBG stone including cost of all materials, form work, centering and all leads, lifts etc., complete	135	82	CUM	4943.80	405391.60
13	RCC 1: 1.5 : 3 using 12 to 20mm size HBG stone including cost of all materials, form work, centering and all leads, lifts etc., complete as per standard specification but excluding cost of reinforcement. <b>For cable duct/trench wall, drain wall, sump pit wall, structure plinth/ pedestal, cast in situ slab at top of cable duct/trench, sump pit and precast slab:-</b>	136				
13a	Walls of Cable duct/trench, drain, sump pit	136a	1660	CUM	10001.09	16601809.40
13b	Cast in situ slab at top of cable duct/trench, sump pit	136e	66	CUM	9706.41	640623.06

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S. No.	Description of work	Customer Item No.	Quantity	Unit	Unit Rate (Rs)	Amount (Rs)
13c	Pre cast slab for cable duct/ trench, drain & sump pit, etc. including loading, transportation, unloading & placement in position	136f	226	CUM	7382.04	1668341.04
14	Providing RCC heavy duty pipe (NP3) hume pipe including cost of collar pipe as directed by department Engineer at site including all materials leads and lifts etc. for cable crossing and storm water drainage as per standard specification.	138				
14a	600 mm dia	138a	16	RM	2159.04	34544.64
14b	300 mm dia	138b	780	RM	960.54	749221.20
15	Supplying, fabricating and fixing in position of G.I angles for cable duct including cost of steel labour, lead and lift and hot tip of galvanizing charges etc., complete as per standard specification.	141	3.2	MT	60385.00	193232.00
16	Drilling suitable holes using power drilling machine to the required depth to fix the angle without disturbing the strength of the concrete including hire charges for drilling machine cable lead lift etc., complete as per standard specification.	142	24	Nos	71.15	1707.60
17	Supply with gravel complying with standard specification for filling in foundation, basement including cost of labour, lead, lift, watering consolidation etc., complete as per standard specification.	148	20	cum	1488.38	29767.60
18	Providing/cutting opening for cable, Exhaust fan, AC duct, water pipe line etc in brick work/RCC in building and retaining wall & cable duct including cost of machineries, labour etc complete as per standard specification.	151				
18a	For RCC wall/slab	151b	40	Nos	208.19	8327.60
19	Supplying and fixing PVC pipes of 6kg/cmf to a length of 300 to 450 mm for the cable entry in cable duct including cost of PVC pipes fixing charges etc., complete as per standard specification.	152				
19a	75mm pvc pipe	152a	24	RM	66.12	1586.88
19b	110mm PVC pipe	152b	36	RM	107.94	3885.84
20	Fixing (all dia & length) foundation bolts in position with help of proper templates (template to be supplied by contractor) including nuts and washers without any tilt until completion of concrete, checking the alignment for various structures including cost of template, labour, lead lifts etc., all complete as per specs, drawings & directions of Engr-in-Charge. (Foundation bolts shall be supplied by BHEL free of cost. Weight of foundation bolts including weight of nuts & washers only shall be measured for payment purpose)	162	44	kg	7.24	318.56
21	Providing shoring and shuttering using CW planks and scantlings including cost of all materials labour lead lift etc. complete as per standard specification.	171	20	sqm	184.42	3688.40
22	Supplying, fabrication, cutting, welding, placing in position MS structural steel (such as angle/flat/plate/round bar/square bar, etc) as <b>embedded steel</b> such as edge protection angle with lugs, insert plates with lugs, etc in concrete wall/ beam/ slab/ plinth etc. including painting one coat of primer & 2 coat of synthetic enamel paint all complete as per Specification and instructions of Engineer-in-charge. This shall include cost of all materials, labours, lead, lift, etc. and all other associated activities.	Extra	4	MT	56660	226640.00
23	Supplying, fabrication, cutting, welding, placing in position MS structural steel (such as channel/angle/flat/plate/round bar/square bar, etc) as <b>non-embedment steel</b> such gratings, supports for chequered plates, supports for panels, etc. including painting one coat of primer & 2 coat of synthetic enamel paint all complete as per Specification and instructions of Engineer-in-charge. This shall include cost of all materials, labours, lead, lift, etc. and all other associated activities.	Extra	3.6	MT	78070	281052.00
24	Fixing of supplied fabricated insert plates/flats/angles/channels etc in position as per drawing in wall/plinth/slab/beam etc before concreting. Work includes required cutting, binding/welding to reinforcement steel for keeping in position along with all required material, steel primer, T&P etc. <b>Note:- Fabricated structural steel will be supplied by BHEL as per drawing however, unloading, storage, watch &amp; ward and supplying &amp; applying steel primer shall be in the scope of contractor</b> ).	Extra	60	MT	17169.67	1030180.20
25	Extra for every additional lift of 1.5 m or part thereof in excavation / banking excavated or stacked materials. In all kind of soil/rock	Extra	200	cum	51.75	10350.00

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S. No.	Description of work	Customer Item No.	Quantity	Unit	Unit Rate (Rs)	Amount (Rs)
26	Transporting and levelling of excavated earth to low lying area and consolidation with power roller within sub station premises including cost of loading, labour, lead, lift etc., complete as per standard specification.	166	4052	CUM	129.29	523883.08
27	Removal of excavated rock /boulders away from site within a lead of 1.0 km and spreading the same wherever necessary as per standard specification disposal as per Instruction of Engineer-in-charge, etc. within a lead of 1.0 km including loading, transportation, unloading, etc. all complete.	149	20	CUM	157.35	3147.00
28	Removal of excavated earth of all kinds excluding rock / boulder away from the site and spreading the same wherever necessary as per standard specification or disposal as per Instruction of Engineer-in-charge, etc. within a lead of 1.0 km including loading, transportation, unloading, etc. all complete.	Extra	200	cum	98.34	19668.00
29	Demolishing/ Dismantling of RCC Works including necessary excavation, stacking of steel bars and disposal of unserviceable material within the substation boundary (upto a lead of 1km) as per direction of site-in-charge.	Extra	2	cum	1454.55	2909.10
30	Demolishing / Dismantling of Cement Concrete manually / by mechanical means including necessary excavation and disposal of unserviceable material within the substation boundary (upto a lead of 1km) as per direction of site-in-charge.					
30a	Nominal concrete 1:3:6 or richer mix (i/c equivalent design mix)	Extra	2	cum	997.05	1994.10
30b	Nominal concrete 1:4:8 or leaner mix (i/c equivalent design mix)	Extra	2	cum	615.15	1230.30
31	Extra for providing and mixing water proofing material in Cement Concrete work in doses by weight of cement as per manufacturer's specification.	Extra	22788	1 kg per 50 kg of cement	41.73	950943.24
32	Providing and placing in position suitable PVC water stops conforming to IS 12200 or equivalent for construction/ expansion joints between two RCC members and fixed to the reinforcement with binding wire before pouring concrete etc. complete. PVC Water Stops shall be Serrated with central bulb (230mm wide, 8-11mm thick)	Extra	152	RM	216.54	32914.08
33	Loading,Transportation to nearest Weigh Bridge at Kallakurichi /Ulunderpet through trailer as instructed by Engineer Incharge, weighment, transportation back to site through trailer, etc., of reinforcement steel of standard length of 10-12m (upto total to & fro lead of 120km).	32	178	MT	414.47	73775.66
34	Providing and fixing in position 12mm thick bitumen impregnated fibre board conforming to IS: 1838, including the cost of primer, sealing compound in expansion joints.	Extra	1000	per cm depth per 100 m	397.12	397120.00
35	Supplying and fixing in position of 40mm GI pipe B class including cost of materials labour lead lift etc complete as per standard specification.	81	4	RM	356.26	1425.04
TOTAL AMOUNT (in Rs)- Excluding GST						345,60,068.46

Note:- Bidder to quote considering river sand only for all items of BOQ related with sand, However, in case of non-availability of the river sand and subject to approval by customer, good quality crushed stone sand/ M-sand conforming to the grading limits and other requirements set in IS:383 may be used. If crushed stone /M-sand is used in place of river sand, net rebate of Rs.100/- per cum of concrete on final amount shall be given by the bidder to BHEL for all concreting items.

## ANNEXURE-II

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

**PRICE SCHEDULE FORMAT**

**SUB: TENDER FOR “EXECUTION AND HANDING OVER OF BALANCE CIVIL WORKS OF CABLE TRENCHES INCLUDING CULVERTS FOR 765/400KV SUB-STATION AT ARIYALUR IN VILLUPURAM DISTRICT IN TAMILNADU”.**

**TENDER NO.:- TBSM/ARIYALUR/CIVIL/PKG-VI (A)/CABLE TRENCH /TENDER/PART-02/19-20  
DATE: 19.07.2019**

(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 ) 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 Cum Price Schedule (Annexure I) of subject tender for evaluation purpose. 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 by L1 bidder will apply to the individual items uniformly.

Date:

Place

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

**ANNEXURE-III**

**EXECUTION AND HANDING OVER OF BALANCE CIVIL WORKS OF CABLE TRENCHES INCLUDING  
CULVERTS FOR 765/400KV SUB-STATION AT ARIYALUR IN VILLUPURAM DISTRICT IN TAMILNADU**

**Tender Spec. no.:- TBSM/ARIYALUR/CIVIL/PKG-VI (A)/CABLE TRENCH /TENDER/PART-02/19-20**

**Date:- 19.07.2019**

<b>Sl No.</b>	<b>Description</b>	<b>Amount (Rs.)</b>
1	Total amount as per the rates in BOQ for " Execution and handing over of Balance civil works of cable trenches including culverts for 765/400kV sub-station at Ariyalur in Villupuram district in Tamilnadu" (Annexure-I)	<b>345,60,068.46</b>
2	Value of percentage above/below/at par (As indicated in Price Schedule Format, Annexure-I) applicable to the total amount of civil work (Sl. no. 1 above)	.....% above/below/ at par
5	<b>Total amount after consideration of percentage above/below/ at par.</b>	