PRICE BID FORMAT(Tender ref. no.: T0ATX00052)

Name of Work:S&T OUTDOOR WORKS AND SERVICES "GR. 239, JHANSHI DIVISION FOR RAILWAY ELECTRIFICATION PROJECT IN BHANDAI-UDI, BIRLANAGAR-ETAWAH AND SHIKOHABAD-FARRUKHABAD INCLUDING MAINPURI-ETAWAH, SECTION OF AGRA, JHANSI AND ALLAHABAD DIVISIONS OF NORTH CENTRAL RAILWAY UNDER RE PROJECT LUCKNOW, TOTAL RKM 386/440TKM

Item No.	Item Description	UOM	Quantity	Rate(in Rs.)	Amount(in Rs.)	Weightage in %age of total value	Explanatory Notes
I	II	III	IV	V	VI	VII	VIII
A	**Civil Works**						
1	Centering and shuttering including strutting, propping etc and removal of form for : Foundations, footings, bases of columns etc for mass concrete	Sqm	50	**Bidder not to quote here**	**Bidder not to quote here**	**0.04**	work shall be done as per DSR item 5.9.1
2	Reinforcement for RCC work including straightening, cutting, bending, plancing in position and binding all complete Thermo-Mechanically Treated bars of grade Fe-500D or more.	Kg	200			**0.05**	work shall be done as per DSR item 5.22.6
3	Demolishing cement concrete manually/ by mechanical means including disposal of material within 50 metres lead as per direction of Engineer - in - charge. Nominal concrete 1:4:8 or leaner mix (i/c equivalent design mix)	cum	10			**0.03**	work shall be done as per DSR item 15.2.2
4	Demolishing R.C.C. work by mechanical means and stockpiling at designated locations and disposal of dismantled materials up to a lead of 1 kilometre, stacking serviceable and unserviceable material separately including cutting reinforcement bars.	cum	10			**0.07**	work shall be done as per DSR item 15.3
5	Dismantling tile work in floors and roofs laid in cement mortar including stacking material within 50 metres lead. For thickness of tiles 10 mm to 25 mm	sqm	10			**0.00**	work shall be done as per DSR item 15.23.1
6	Demolishing brick work 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 In cement mortar	cum	10			**0.04**	work shall be done as per DSR item 15.7.4
7	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level : 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)	cum	10			**0.20**	work shall be done as per DSR item 4.1.3
8	Brick work with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 in foundation and plinth in: Cement mortar 1:6 (1 cement : 6 coarse sand)	cum	10			**0.1768712**	work shall be done as per DSR item 6.1.2
9	15mm cement plaster on the rough side of single or half brick wall of mix: 1:6 (1 cement : 6 fine sand)	Sqm	50			**0.0420602**	work shall be done as per DSR item 13.2.2
10	Chipping of concrete in reinforced concrete work, cutting pockets, making openings at all levels and according to shapes, disposal of waste materials upto a lead of 2 km as directed by engineer including equipment, safety precautions, making good the broken surface etc all complete as per specification, drawing, instructions of engineer in charge but excluding cutting of reinforcement .	CUDM	500			**0.1900441**	
11	Extra over and above the above mentioned item for cutting of reinforcement, all sizes and types including labour, equipment, return of cut reinforcement to store etc all complete as per specification, drawings and instructions of engineer in charge. Measurement shall be on the cross sectional area of reinforcement cut.	SQCM	1000			**0.4332258**	
12	Making openings in existing brick wall or partition wall including making good the broken edges/surface with cement mortar 1:6 etc. complete.	CUM	10			**0.0470006**	
13	Supply and placing in position mild steel wire fabric of square mesh 25 mm size and wire diameter of 2 mm for encasing of steel sections in concrete including cutting, bending, fixing etc. complete.	SQM	20			**0.0205166**	
14	Filling existing brick wall/ partition wall opening at all level including making good the broken edges/surface with cement mortar 1:6, painting, finishing to match with existing finishing, scaffolding/supporting at all level, removal of debris upto a lead of 1 km including loading, unloading, transportation etc. all complete.	SQM	10			**0.0271785**	
15	Supply, placing and positioning width wise , of second- class country made Bricks above the screened earth after laying the cable. (Placing of bricks @ eight to nine bricks to cater one meter length)	KMs	3			**0.7518552**	
16	Placing and positioning width wise , of second- class country made Bricks above the screened earth after laying the cable. (Placing of bricks @ eight to nine bricks to cater one meter length)(cost of brick not included)	KMs	28			**2.8894826**	
B.	**Signalling & Telecommunication Works**						

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I	II	III	IV	V	VI	VII	VIII
1	Supply and installation of OFC cable joint enclosure and splicing of optical fiber cables (24 Fiber) and testing.	each	18	Bidder not to quote here	Bidder not to quote here	**0.9990823**	Supply and installation of OFC cable joint enclosure including all accessories with contractor's tools and plants as per ***TEC No. G/OJC-01/03 Jan 99*** or latest and splicing of optical fibre cables (24 Fibre) and testing. (OFC cable is free supply by BHEL)
2	Supply and installation of Thermo shrinkable jointing kits for Quad cables.	each	90			**2.2394758**	Supply, installatin of theromo shrinkable jointing kits including all accessories with contractor's tools and plants as per **RDSO Spec. No. IRS. TC77-2012, Rev 3 /Amdt.1 to 3 (or latest RDSO specification)** suitable for 6 quad cable. (6 quad cable is free supply by BHEL.)
3	Excavation of square coil pit of size 1 Mtr X 1.5 Mtr x 1 Mtr Depth for providing coil at joint locations / location box / points signals, culverts, bridges and at LC gates.	each	10			**0.0087635**	Excavation of pit of size 1mtr X 1.5mtr and depth 1mtr for providing coil at joint locations/ location box/ points signals, culverts, bridges and at LC gates etc., This includes back filling and ramming of trench in layers after laying the coil and consolidation / compaction as per the direction of Engineer-in-charge.
4	Testing of OFC cable	km	114			**0.4119053**	Testing OFC Cable : This work includes carrying out the joint test with railway engineer & BHEL representatives. The work includes submission of OTDR readings etc for OFC cable laid. The contractor shall submit as mades 5 sets of cable route plans, jointing details, EMC details as per railway practice along with one set of AUTO CAD drawings in softcopy
5	Testing of Quad cable	km	85			**0.3071224**	Testing Quad cable : This work includes carrying out the joint test with railway engineer & BHEL representatives. The work includes submission of measurement of loop resistance, Insulation test, EMC test etc for Quad cable laid . The contractor shall submit as mades 5 sets of cable route plans, jointing details, EMC details as per railway practice along with one set of AUTO CAD drawings in softcopy
6	Excavation of trench 0.35m width 1.2m deep in all categories of soil such as black cotton / hard soil / murram / soft rock mixed with boulders etc., as per cable route plan. Filling the trench with earth to the level of surrounding ground after laying cables.	km	80			**47.3934827**	Excavation trench 0.35 M wide 1.2 M deep in all categories of soils such as black cotton/ hard / murram / hardy soft rock. Back filling the trench with earth in layers and compaction as per the direction of Engineer-in-charge to the level of surrounding ground after laying cables. Laying of cable covered in separte item
7	Laying of signaling / power / telecom / Quad cables of various sizes.	km	56.4			**1.3485652**	Laying of various sizes and types of cables in trenches: Laying of Signaling / power / telecom / quad/OFC cable of various sizes in the excavated trench/through pipes. This includes loading/unloading & transportation of cables to site from BHEL stores. Wherever several cables are to be laid, separation of cables should be done as advised by site engineer. This includes unwinding of cable drum using proper jigs without causing damage to cable. in case cables are to be laid throuh pipes, laying is covered in this item and supply of pipe shall be covered in separate item. (1.Signaling / power / telecom / Quad cables will be issued free of cost by BHEL. 2.Bidders to note that Supply & Installation of Cable Jointing Chambers and RCC Cable Markers will be done by BHEL's other agency. Bidder has to co-ordinate with the agency and provide all required support for smooth execution of the work of both agencies)
8	Excavation of cable trench of 1 m depth & 0.3m wide across the track crossing, road crossing, level crossing, platform & refilling	km	3			**0.8934784**	Excavation of cable trench of **1 m. depth & 300 mm.** wide for the track crossing, road crossing, level crossing, platform etc & refilling in layers and compaction as per direction of Engineer-in-charge after laying DWC/GI pipe with suitable joints/collars .This does not include provision of Tiles etc in case of Platform. DWC/GI pipe is covered in seprated item.

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9	Digging of cable trench to a depth of not less than 30 cm and width 15 cm. In rocky terrain, concreting the trench with 150mm thick concrete in the ratio 1:2:4 and back filling with excavated soil.	metre	300			**0.4856100**	Digging of cable trench to a depth of not less than 30 cm and width 15 cm as per direction of Engineer-in-charge. In rocky terrain, concreting the trench with 150mm thik concret in the ratio 1:2:4 and back filling with excavated soil as per direction of Engineer-in-charge after laying cable. (Cement, sand & metal are to be supplied by the contractor) This is applicable for concrete platforms/metal tar/cement roads.Laying of cable covered in separte item.
10	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level: 1:3:6 (1 cement : 3 coarse sand (zone-lll) : 6 graded stone aggregate 20 mm nominal size).	cum	20			**0.4397799**	General concreting work with mixture of cement ,coarse sand and stone of aggregate 25 mm size having 1:3:6 ratio scattered at different locations in the yard and midsection and plastering of top in fine plaster of cement and sand of 1:4 ratio (bridge approach , culverts, LC gate area etc and wherever directed by the engineer-in-charge) payment shall be done for the concrete quanity measured and no separate payment shall be done for plastering/finishing.
11	Track crossing by Horizontal boring method as advised by the engineer at site. Confirming to IS 139 heavy class in the Bore drilled with coupler between two pipes All the joints of casing pipes should be tightened leak proof.	metre	972			**11.2385118**	Track crossing by Horizontal Directional Drilling (HDD) boring method and as advised by the engineer at site. This includes supply and insertion /pushing of suitable HDPE / GI pipe of suitable dia (of 100mm to 200mm) as per RDSO guidelines and Engineer-in-charge. confirming to relavent IS/RDSO standards heavy class in the Bore drilled with coupler between two pipes .All the joints of casing pipes should be tightened leak proof. (6 Quad cable, HDPE duct suitable for OFC Blowing are part of BHEL supply).
12	Blowing of armored Optical Fiber Cable into duct by using blowing machine and associated works .Before blowing the duct integrity shall be tested If any defect found during duct integrity test , the entire length of HDPE duct from one chamber to another chamber is to be replaced by contractor at free of cost.	km	117	Bidder not to quote here	Bidder not to quote here	**7.3368625**	Blowing of armoured Optical Fiber Cable into duct by using blowing machine and associated works. Before blowing the duct integrity shall be tested on liad HDPE Duct. If any defect shall be found during duct integrity test, the entire length of HDPE duct from one chamber to another chamber is to be replaced by Contractor at free of cost. (HDPE Duct with accessories and OFC Cable are free issue by BHEL).
13	Laying and fixing of RCC Pipes(full/split set).	km	2.4			**0.4185998**	Laying and fixing/joining of RCC pipe of class NP2 (cross section may be either single circular section or set of two semi circular spllit setion as per the site requirement) in already made trench with all accessories at TSS/SP/SSP locations etc. (Cost of pipe, collar are covered in separate item).
14	Supply of RCC Pipe [150MM OD] with collars (full/split set).	metre	1890			**3.4538811**	Supply of **RCC pipes** 150mm dia of class NP2 (cross section may be either single circular section or set of two semi circular spllit setion as per the site requirement) along with required collars/joining accessories as per Specn. **No. IS/458/1971**or latest for use near OHE Substation etc for cable protection.
15	Laying and fixing of HDPE Pipes	km	114			**6.5904816**	Laying and fixing of HDPE pipe / duct with all accessories in already made trench as per the RDSO standards and direction of Engineer-in-charge.(HDPE Duct with accessories are free issue by BHEL).
16	Perforation and Fixing of GI Pipes& MS channel on girder bridge, RCC bridges, Drains, Culverts, Rocky places tunnels / deep cutting. (cost of GI pipes , MS channel not included in this item)	metre	1500			**0.3493424**	Perforation (24 to 36 perforation in a pipe) and Fixing of GI pipes for entry of cable on girder bridges, RCC bridges, drains, culverts, rocky places tunnels/deep cutting or at places as advised by the engineer in charge of the work & concreting the ends with brick channelling at both ends as per drg. The pipes are to be fixed on the bridges by suitable bridge fixtures or MS clamps or brick support at an interval of 3.0 mts (max) or as per approved drawing and directives of Railway Engineers. On masonry bridges or in rocky place if required the entire length of the pipe by cement, sand and 15-25 mm chips. All the fixing materials nut & bolts, clamps, materials for construction of pillars. cost of GI pipe and MS channel are covered in separate items.
17	Supply and installation of GI pipe 100 mm dia class "B" ISI marked with accessories including bends	metre	900			**4.5110131**	Supply of **GI pipe 100 mm dia** class "B" ISI marked with all accessories including bends and other items as required for laying of the 6 Quad cables through in it. (6 quad cable is free supply by BHEL.)
18	Supply of Mild steel channel for trough/GI pipe fixing on grider bridge	metre	500			**1.8542649**	Mild steel channel for trough/GI pipe fixing on girder bridge as per RDSO drg.no. RDSO/ TCDO/ COP-13.
19	Excavation of cable pit without damaging existing working cables, laying& insertion of new extra cables.	each	8			**0.0413465**	Excavation of cable pit without damaging existing working cables, laying& insertion of new extra cables. Closing of excavated cable trench/ Pit & plastering of foundation etc. under instruction from site Engineer.
20	Supply and Installation of DWC pipe with one snap fit coupler and 'O' ring conforming to RDSO/SPN/204/2011 Ver. 1.1or latest RDSO specification , Non-metallic, corrugated, multiwalled, normal duty, pliable, without protection against chemical attack and Non flame propagating in 6 meter length of size 120 mm outer dia& 102 mm inner dia.(Permitted tolerance in dia = +/- 2 mm). DWC can be either in full circle shape or Semi circular shape as per site requirement.	metre	2000			**2.1051945**	Supply and installation of **DWC pipe** in already excavated trench with one snap fit coupler and 'O' ring conforming to **RDSO/SPN/204/2011 Ver. 1.1or latest** RDSO specification , Non-metallic, corrugated, multiwalled, normal duty, pliable, without protection against chemical attack and Non flame propagating in 6 meter length of **size 120 mm outer dia& 102 mm inner dia**.(Permitted tolerance in dia = +/- 2 mm).
21	Supply and installation of Emergency socket on released rails (2.8 mtr long each) for fabrication of EC sockets.and Installation of emergency socket box including socket on the rail post in the section and yard at every one km. distance as per tapping chart supplied by the survey team. This will include wiring and termination of quad cable on the socket box mounted at 1 m height, clamped with 2 nos. U-Clamps, provision of concrete foundation of rail post in such a way that the rail post is one meter above the earth level. The concreting shall be in ratio of 1:3:6 of cement, sand and stone chips. The contractor shall jointly test with BHEL engineer for its satisfactory operation. This includes painting of Emergency socket post with alternate yellow and black strip of 6" width and painting of the socket box with grey colour paint and painting of arrows on the telephone posts/ cable markers to show the nearest Emergency socket as instructed by the engineer at site. Rail posts and MS pipes of required lengths for fixing Emergency sockets will also be supplied and installed by the Contractor.	each	49			**1.1773984**	Supply and installation of Emergency socket Box on released rails (2.8 mtr long each) for fabrication of EC (Emergency Communication) sockets and Installation of emergency socket box including socket box on the released rail post in the section and yard at every one km. distance as per tapping chart supplied by the survey team. This will include wiring and termination of quad cable on the socket box mounted at 1 m height, clamped with 2 nos. U-Clamps, provision of concrete foundation of rail post in such a way that the rail post is one meter above the earth level. The concreting shall be in ratio of 1:3:6 of cement, sand and stone chips. The contractor shall jointly test with BHEL engineer for its satisfactory operation. This includes painting of Emergency socket post with alternate yellow and black strip of 6" width and painting of the socket box with grey colour paint and painting of arrows on the telephone posts/ cable markers to show the nearest Emergency socket as instructed by the engineer at site. Rail posts and MS pipes of required lengths for fixing Emergency sockets will also be supplied and installed by the Contractor.
22	Excavation of PIT, casting of concrete foundation for Location Box-Single case / Junction Box etc.,	per Box	30			**0.7528763**	Excavation of pit, making RCC frame as per the Site engineer drawing: RVNL/S&T/SG-003/2005, RVNL/S&T/SG-004/2005 and other dwgs issued by BHEL/RE for installation of Boxes (Full / Half / Junction boxes etc.,) as per instruction of site Engineer.
23	Design and drawings for complete outdoor and interfacing with indoor signalling & telecom for complete RE modifications works for entire section.	Set	1			**0.6334219**	Outdoor drawings which are required to be submitted for approval of BHEL, and RE/Lucknow to be prepared and submitted in three sets of hard copies. During work progress, any modification of approved drawings partly or completely the drawings needs to be marked "As Built" drawings and informed to BHEL. Sub sequently, these "As Built" documents to be converted into final documents and made in 6 sets of hard copies and submitted to BHEL / RE-Lucknow. All these documentation to be completed prior to CRS inspectionof Railways. Documents like Cable Route Plan, Location of Cable markers dwg, Location of Jointing chamber and other drawings shall be informed by BHELduring Kick-off-meeting.

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I	II	III	IV	V	VI	VII	VIII
	Total=					**100.00**	
	Total (in Figures) Rs.=						
	Total in words Rs.=						
	Note:						
	1.All Singnalling related works shall be carried out as per Signal engineering manual.						
	2. All telecom works shall be carried out as per Telecom engineering manual.						