

"Unprice bid format" cum "Schedule of quantity and rate"

Name of the work: Signalling & Telecommunication (S&T) Modification Works in Section "Gr 241 Outdoor Works" 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.

Tender ref no.T0AVX00072 dated:07.12.2022

Item No.	Item Description	UOM	Quantity	Rate in Rs.	Amount in Rs.	Weightage %
1	Supply and installation of Thermo shrinkable jointing kits for Quad cables.	each	77.00			35.8066855%
2	Testing of OFC cable including supply of joint protection and splicing activity.	km	113.00			7.6302473%
3	Testing of Quad cable	km	150.00			10.1286469%
4	Excavation of trench 0.35m width 1.2m deep in all categories of soil such as black cotton / hard soil / murrum / 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	0.35			3.8749511%
5	Laying of Quad cables	km	0.83			0.3708860%
6	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 is to be replaced by contractor at free of cost.	km	5.00			5.8595481%
7	Laying and fixing of RCC Pipes(full/split set).	km	0.20			0.6519094%
8	Supply of RCC Pipe [150MM OD] with collars (full/split set).	metre	0.20			0.0068304%
9	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. This includes Supply & installation of VF transformer (1120:470) 6 Quad for Block Equipment & EC sockets as per specification IRS:TC 22/76	each	77.00			34.5770258%
10	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level : 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)	cum	3			1.0932694%
	Total amount (Excluding GST)				No need to quote here	100.0000000%

Item No.	Item Description	UOM	Quantity	Rate in Rs.	Amount in Rs.	Weightage %
	Bidder to confirm having quoted their price in BHEL NIC portal (https://eprocurebhel.co.in) in the manner described in Note: (a) below, by writing "QUOTED" here					

Note

a	Bidders should quote only the total amount excluding GST in the specified place in BHEL NIC Portal . They should not fill/quote/write anything in col. of Rates and Amount. These rates & amount will be derived from the Total amount quoted and weightage factor assigned against respective items indicated in weightage . (Bidder to quote the total price in BHEL NIC portal https://eprocurebhel.co.in)
b	The rate and amount are inclusive of all applicable taxes, except for the GST. For details of taxes, refer chapter-XIII of SCC.
c	Evaluation Shall be based on total amount quoted by bidder.

Explanatory Notes:: Gr241 Outdoor work

Item No.	Item Description	Explanatory Notes
1	Supply and installation of Thermo shrinkable jointing kits for Quad cables.	Supply, installation of thermo 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. All variety of Quad cable joints like Derivative joints, thermo shrinkable joints, T-junction type thermo shrinkable joint, etc as per Indian Railways practice are part of this item along with the required materials with accessories. (6 quad cable is free supply by BHEL.)
2	Testing of OFC cable including supply of joint protection and splicing activity.	Testing OFC Cable : This work includes carrying out the jointing of the OFC Cable with suitable protection, joint test with railway engineer & BHEL representatives. The work includes submission of OTDR readings etc for OFC cable laid, supply of joint protection, splicing activity are part of contractor. For every 3 kms, "cable jointing chamber" will be installed by BHEL appointed agency.
3	Testing of Quad cable	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 testing and communication shall be completed in all respect for the total length of the Quad cable including EC socket (Emergency communication), if any. (Thermoshrinkable joint kit, EC socket with post items are covered in a saperate line items)
4	Excavation of trench 0.35m width 1.2m deep in all categories of soil such as black cotton / hard soil / murrum / 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.	Excavation trench 0.35 M wide 1.2 M deep in all categories of soils such as black cotton/ hard / murrum / 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. Contractor to coordinate with BHEL appointed agency who provides "cable jointing chamber" at every 3 km, for coiling and jointing purpose. Laying of cable covered in separte item
5	Laying of Quad cables	Laying of quad 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 through pipes, laying is covered in this item and supply of pipe shall be covered in separate item.
6	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 is to be replaced by contractor at free of cost.	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 defective length of HDPE duct is to be replaced by Contractor at free of cost. This includes loading/unloading & transportation of cables to site from BHEL stores. (HDPE Duct with accessories are free issue by BHEL).
7	Laying and fixing of RCC Pipes(full/split set).	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).
8	Supply of RCC Pipe [150MM OD] with collars (full/split set).	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) as per Specn. No. IS/458/1971 or latest amendments if any along with required collars/joining accessories, T-joints etc. for use near OHE Substation etc for cable protection.

Item No.	Item Description	Explanatory Notes
9	<p>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.</p> <p>This includes Supply & installation of VF transformer (1120:470) 6 Quad for Block Equipment & EC sockets as per specification IRS:TC 22/76</p>	<p>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).</p>
10	<p>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)</p>	<p>work shall be done as per DSR item 4.1.3</p>