

		SCHEDULE OF RATES STEEL PIPELINE PROJECT URMAR TANDA TO HOSHIARPUR - H&G GA REV.01 E Tender 579627		DOC. NO. - MAT-F-11 REV. NO. - 0 EFFECTIVE DATE - 29-01-2018		
TENDER DESCRIPTION:- Urmur Tanda to Hoshiarpur - Hoshiarpur & Gurdaspur GA						
REQUIREMENT PERIOD (TENDERED DURATION):- 1 Year from date of Kick off meeting						
Sr No	Short Text	Short Description	UoM	Quantity	Base Rate (INR)	Base Amount
PIPELINE LAYING - ALL TYPE OF SOIL (GREATER THAN 5 KM-UP TO 50 KM)						
1	STEEL LAYING,5-50KM,ALLSOIL,6.4MM,X52,12"	"PIPELINE LAYING / INSTALLATION _ALL TYPE OF SOIL _LENGTH > 5,000 METERS UP TO 50,000 METERS _SIZE: 12" NB (323.9 MM OD), WT 6.4 MM, API 5L (PSL-2) Gr. X52 3LPE COATED	Meter (M)	23,408.00	2,182.00	5,10,76,256.00
2	STEEL LAYING,5-50KM,ALLSOIL,6.4MM,X52,8"	"PIPELINE LAYING / INSTALLATION _ALL TYPE OF SOIL _LENGTH > 5,000 METERS UP TO 50,000 METERS _SIZE: 8" NB (219.1 MM OD), WT 6.4 MM, API 5L (PSL-2) Gr. X52 3LPE COATED	Meter (M)	100.00	1,995.00	1,99,500.00
3	STEEL LAYING,5-50KM,ALLSOIL,6.4MM,X52,6"	"PIPELINE LAYING / INSTALLATION _ALL TYPE OF SOIL _LENGTH > 5,000 METERS UP TO 50,000 METERS _SIZE: 6" NB (168.3 MM OD), WT 6.4 MM, API 5L (PSL-2) Gr. X52 3LPE COATED	Meter (M)	100.00	1,921.00	1,92,100.00
4	STEEL LAYING,5-50KM,ALLSOIL,6.4MM,X52,4"	"PIPELINE LAYING / INSTALLATION _ALL TYPE OF SOIL _LENGTH > 5,000 METERS UP TO 50,000 METERS _SIZE: 4" NB (114.3 MM OD), WT 6.4 MM, API 5L (PSL-2) Gr. X52 3LPE COATED	Meter (M)	50.00	1,846.00	92,300.00
PIPELINE LAYING BY HDD METHOD ALONG ROUTE (PARALLEL HDD)						
5	STEEL,HDD,ALONG,NONROCKY,6.4MM,X52,12"	PIPELINE LAYING / INSTALLATION BY HDD METHOD _ALONG ROUTE _ALL SOIL OTHER THAN ROCKY STRATA _SIZE: 323.9 MM (12") WT 6.4 MM API 5L(PSL-2) Gr. X52 3LPE COATED	Meter (M)	4,172.00	7,113.00	2,96,75,436.00
6	STEEL,HDD,ALONG,NONROCKY,6.4MM,X52,8"	PIPELINE LAYING / INSTALLATION BY HDD METHOD _ALONG ROUTE _ALL SOIL OTHER THAN ROCKY STRATA _SIZE: 219.1 MM (8") WT 6.4 MM API 5L(PSL-2) Gr. X52 3LPE COATED	Meter (M)	1.00	6,301.00	6,301.00
7	STEEL,HDD,ALONG,NONROCKY,6.4MM,X52,6"	PIPELINE LAYING / INSTALLATION BY HDD METHOD _ALONG ROUTE _ALL SOIL OTHER THAN ROCKY STRATA _SIZE: 168.3 MM (6") WT 6.4 MM API 5L(PSL-2) Gr. X52 3LPE COATED	Meter (M)	1.00	5,767.00	5,767.00
8	STEEL,HDD,ALONG,NONROCKY,6.4MM,X52,4"	PIPELINE LAYING / INSTALLATION BY HDD METHOD _ALONG ROUTE _ALL SOIL OTHER THAN ROCKY STRATA _SIZE: 114.3 MM (4") WT 6.4 MM API 5L(PSL-2) Gr. X52 3LPE COATED	Meter (M)	1.00	4,733.00	4,733.00
PIPELINE LAYING BY HDD METHOD ACROSS ROUTE (CROSSING HDD)						
9	HDD,CROSSING,UNCASED,NONROCKY,6.4MM,12"	PIPELINE LAYING / INSTALLATION BY HDD METHOD _ACROSS ROUTE (CROSSING) _WITHOUT CASING PIPE _ALL SOIL EXCEPT ROCKY STRATA _SIZE: 323.9 (12") WT 6.4 mm API 5L (PSL-2) Gr. X52 3LPE COATED	Meter (M)	1,486.00	7,107.00	1,05,61,002.00
10	HDD,CROSSING,UNCASED,NONROCKY,6.4MM,8"	PIPELINE LAYING / INSTALLATION BY HDD METHOD _ACROSS ROUTE (CROSSING) _WITHOUT CASING PIPE _ALL SOIL EXCEPT ROCKY STRATA _SIZE: 219.1 (8") WT 6.4 mm API 5L (PSL-2) Gr. X52 3LPE COATED	Meter (M)	1.00	6,322.00	6,322.00
11	HDD,CROSSING,UNCASED,NONROCKY,6.4MM,6"	PIPELINE LAYING / INSTALLATION BY HDD METHOD _ACROSS ROUTE (CROSSING) _WITHOUT CASING PIPE _ALL SOIL EXCEPT ROCKY STRATA _SIZE: 168.3 (6") WT 6.4 mm API 5L (PSL-2) Gr. X52 3LPE COATED	Meter (M)	200.00	5,783.00	11,56,600.00
12	HDD,CROSSING,UNCASED,NONROCKY,6.4MM,4"	PIPELINE LAYING / INSTALLATION BY HDD METHOD _ACROSS ROUTE (CROSSING) _WITHOUT CASING PIPE _ALL SOIL EXCEPT ROCKY STRATA _SIZE: 114.3 (4") WT 6.4 mm API 5L (PSL-2) Gr. X52 3LPE COATED	Meter (M)	150.00	4,734.00	7,10,100.00
13	HDD,CROSSING,NONROCKY,CASING24",12"CARR.	PIPELINE LAYING / INSTALLATION BY HDD METHOD _ACROSS ROUTE (CROSSING) _WITH CASING PIPE _ALL SOIL EXCEPT ROCKY STRATA _CARRIER SIZE: 323.9 (12") WT 6.4 mm API 5L (PSL-2) Gr. X52 3LPE COATED _CASING SIZE: 24"	Meter (M)	50.00	19,718.00	9,85,900.00
14	HDD,CROSSING,NONROCKY,18",CASING,12"CARR	PIPELINE LAYING / INSTALLATION BY HDD METHOD _ACROSS ROUTE (CROSSING) _WITH CASING PIPE _ALL SOIL EXCEPT ROCKY STRATA _CARRIER SIZE: 323.9 (12") WT 6.4 mm API 5L (PSL-2) Gr. X52 3LPE COATED _CASING SIZE: 18"	Meter (M)	1.00	17,633.00	17,633.00
15	HDD,CROSSING,NONROCKY,16"CASING,8"CARR.	PIPELINE LAYING / INSTALLATION BY HDD METHOD _ACROSS ROUTE (CROSSING) _WITH CASING PIPE _ALL SOIL EXCEPT ROCKY STRATA _CARRIER SIZE: 219.1 (8") WT 6.4 mm API 5L (PSL-2) Gr. X52 3LPE COATED _CASING SIZE: 16"	Meter (M)	1.00	15,063.00	15,063.00
16	HDD,CROSSING,NONROCKY,12"CASING,6"CARR.	PIPELINE LAYING / INSTALLATION BY HDD METHOD _ACROSS ROUTE (CROSSING) _WITH CASING PIPE _ALL SOIL EXCEPT ROCKY STRATA _CARRIER SIZE: 168.3 (6") WT 6.4 mm API 5L (PSL-2) Gr. X52 3LPE COATED _CASING SIZE: 12"	Meter (M)	1.00	9,256.00	9,256.00
17	HDD,CROSSING,NONROCKY,8"CASING,4"CARR.	PIPELINE LAYING / INSTALLATION BY HDD METHOD _ACROSS ROUTE (CROSSING) _WITH CASING PIPE _ALL SOIL EXCEPT ROCKY STRATA _CARRIER SIZE: 114.3 (4") WT 6.4 mm API 5L (PSL-2) Gr. X52 3LPE COATED _CASING SIZE: 8"	Meter (M)	1.00	7,957.00	7,957.00
SUPPLY OF CASING PIPE						
18	SUPPLY,CASING PIPE,WT 9.5MM,24"	SUPPLY OF STEEL CASING PIPE _24" NB x 9.5 mm thick - API 5L Gr. B / IS3589 Gr. Fe 410 or Fe 440 / ASTM A 106 Gr. B / ASTM A 333 Gr. 6 x 9.5 mm WT including transportation to site as directed by EIC	Meter (M)	50.00	11,892.00	5,94,600.00
19	SUPPLY,CASING PIPE,WT 9.5MM,18"	SUPPLY OF STEEL CASING PIPE _18" NB x 9.5 mm thick - API 5L Gr. B / IS3589 Gr. Fe 410 or Fe 440 / ASTM A 106 Gr. B / ASTM A 333 Gr. 6 x 9.5 mm WT including transportation to site as directed by EIC	Meter (M)	1.00	7,956.00	7,956.00
20	SUPPLY,CASING PIPE,WT 9.5MM,16"	SUPPLY OF STEEL CASING PIPE _16" NB x 9.5 mm thick - API 5L Gr. B / IS3589 Gr. Fe 410 or Fe 440 / ASTM A 106 Gr. B / ASTM A 333 Gr. 6 x 9.5 mm WT including transportation to site as directed by EIC	Meter (M)	1.00	6,564.00	6,564.00
21	SUPPLY,CASING PIPE,WT 9.5MM,12"	SUPPLY OF STEEL CASING PIPE _12" NB x 9.5 mm thick - API 5L Gr. B / IS3589 Gr. Fe 410 or Fe 440 / ASTM A 106 Gr. B / ASTM A 333 Gr. 6 x 9.5 mm WT including transportation to site as directed by EIC	Meter (M)	1.00	4,996.00	4,996.00
22	SUPPLY,CASING PIPE,WT 9.5MM,8"	SUPPLY OF STEEL CASING PIPE _8" NB x 9.5 mm thick - API 5L Gr. B / IS3589 Gr. Fe 410 or Fe 440 / ASTM A 106 Gr. B / ASTM A 333 Gr. 6 x 9.5 mm WT including transportation to site as directed by EIC	Meter (M)	1.00	2,898.00	2,898.00
ABOVE GROUND PIPING INSTALLATION						
23	FABRICATION,INSTALLATION,STEEL,SCH40	PIPING CONSTRUCTION / INSTALLATION FOR ABOVE GROUND / UNDER GROUND FACILITY _CARBON STEEL PIPING _SCH 40 _INCH DIAMETER	Inch Dia. (IDI)	400.00	949.00	3,79,600.00
24	FABRICATION,INSTALLATION,STEEL,SCH80	PIPING CONSTRUCTION / INSTALLATION FOR ABOVE GROUND / UNDER GROUND FACILITY _CARBON STEEL PIPING _SCH 80 _INCH DIAMETER	Inch Dia. (IDI)	120.00	600.00	72,000.00
25	FABRICATION,INSTALLATION,STEEL,SCH160	PIPING CONSTRUCTION / INSTALLATION FOR ABOVE GROUND / UNDER GROUND FACILITY _CARBON STEEL PIPING _SCH 160 _INCH DIAMETER	Inch Dia. (IDI)	80.00	463.00	37,040.00
INSTALLATION OF PRESSURE REDUCTION STATION						
26	INST,DRS/PRS/CPRS,A/G,500/1000SCMH	ABOVE GROUND INSTALLATION DRS / PRS/ CPRS _500/1000 SCMH CAPACITY"	Each (EA)	1.00	38,290.00	38,290.00
27	INST,DRS/PRS/CPRS,A/G,2000/5000SCMH	ABOVE GROUND INSTALLATION DRS / PRS/ CPRS _2000/5000 SCMH CAPACITY"	Each (EA)	1.00	38,290.00	38,290.00
28	INST,PRS,MODULE,U/G,2500/5000SCMH	UNDER GROUND INSTALLATION DRS / PRS/ CPRS _2500/5000 SCMH CAPACITY"	Each (EA)	3.00	38,290.00	1,14,870.00
29	CIVIL WORK,A/G,U/G PRS,UPTO 5000 SCMH	CIVIL WORKS FOR ABOVE GROUND / UNDER GROUND INSTALLATION OF DRS/PRS/CPRS	Cubic Meter (M3)	100.00	8,710.00	8,71,000.00
INSTALLATION OF VALVES						

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30	CHAMBER,PIPING,INSTALL,VALVE,12"	INSTALLATION / CONSTRUCTION OF ISOLATING / SECTIONALIZING / TAP OFF VALVE INCLUDING CONSTRUCTION OF RCC VALVE CHAMBER_ 12" SIZE_ ALL PRESSURE CLASS"	Each (EA)	11.00	1,68,958.00	18,58,538.00
31	CHAMBER,PIPING,INSTALL,VALVE,8"	INSTALLATION / CONSTRUCTION OF ISOLATING / SECTIONALIZING / TAP OFF VALVE INCLUDING CONSTRUCTION OF RCC VALVE CHAMBER_ 8" SIZE_ ALL PRESSURE CLASS"	Each (EA)	1.00	1,47,262.00	1,47,262.00
32	CHAMBER,PIPING,INSTALL,VALVE,6"	INSTALLATION / CONSTRUCTION OF ISOLATING / SECTIONALIZING / TAP OFF VALVE INCLUDING CONSTRUCTION OF RCC VALVE CHAMBER_ 6" SIZE_ ALL PRESSURE CLASS"	Each (EA)	5.00	1,35,597.00	6,77,985.00
33	CHAMBER,PIPING,INSTALL,VALVE,4"	INSTALLATION / CONSTRUCTION OF ISOLATING / SECTIONALIZING / TAP OFF VALVE INCLUDING CONSTRUCTION OF RCC VALVE CHAMBER_ 4" SIZE_ ALL PRESSURE CLASS"	Each (EA)	3.00	1,21,669.00	3,65,007.00
PIPELINE END CONNECTION						
34	END CONNECTIVITY,WITH PIPE/VALVE,12"	PIPELINE END CONNECTIVITY WITH EXISTING PIPELINE OR EXISTING TAP OFF VALVE_PIPELINE SIZE 12" NB WT 6.4 MM OR TAP OFF VALVE 12" NB Including Pit Excavation, Valve greasing, Welding, N2 Purging, NDT, Coating, Backfilling, Supply of Manpower and Machinery etc.	Inch Dia. (IDI)	24.00	8,576.00	2,05,824.00
35	END CONNECTIVITY,WITH PIPE/VALVE,8"	PIPELINE END CONNECTIVITY WITH EXISTING PIPELINE OR EXISTING TAP OFF VALVE_PIPELINE SIZE 8" NB WT 6.4 MM OR TAP OFF VALVE 8" NB Including Pit Excavation, Valve greasing, Welding, N2 Purging, NDT, Coating, Backfilling, Supply of Manpower and Machinery etc.	Inch Dia. (IDI)	1.00	7,522.00	7,522.00
36	END CONNECTIVITY,WITH PIPE/VALVE,6"	PIPELINE END CONNECTIVITY WITH EXISTING PIPELINE OR EXISTING TAP OFF VALVE_PIPELINE SIZE 6" NB WT 6.4 MM OR TAP OFF VALVE 6" NB Including Pit Excavation, Valve greasing, Welding, N2 Purging, NDT, Coating, Backfilling, Supply of Manpower and Machinery etc.	Inch Dia. (IDI)	12.00	7,389.00	88,668.00
37	END CONNECTIVITY,WITH PIPE/VALVE,4"	PIPELINE END CONNECTIVITY WITH EXISTING PIPELINE OR EXISTING TAP OFF VALVE_PIPELINE SIZE 4" NB WT 6.4 MM OR TAP OFF VALVE 4" NB Including Pit Excavation, Valve greasing, Welding, N2 Purging, NDT, Coating, Backfilling, Supply of Manpower and Machinery etc.	Inch Dia. (IDI)	8.00	7,265.00	58,120.00
38	END CONNECTIVITY,WITH SHUTDOWN,PIPE,12"	PIPELINE END CONNECTIVITY WITH EXISTING PIPELINE WITH SHUTDOWN ACTIVITY IN EXISTING PIPELINE_PIPELINE SIZE 12" NB Including Pit Excavation, Valve greasing, Welding, N2 Purging, NDT, Coating, Backfilling, Supply of Manpower and Machinery etc.	Inch Dia. (IDI)	1.00	9,158.00	9,158.00
39	END CONNECTIVITY,WITH SHUTDOWN,PIPE,8"	PIPELINE END CONNECTIVITY WITH EXISTING PIPELINE WITH SHUTDOWN ACTIVITY IN EXISTING PIPELINE_PIPELINE SIZE 8" NB Including Pit Excavation, Valve greasing, Welding, N2 Purging, NDT, Coating, Backfilling, Supply of Manpower and Machinery etc.	Inch Dia. (IDI)	1.00	8,130.00	8,130.00
40	END CONNECTIVITY,HOT-TAP ASSISTANCE,12"	PIPELINE CONNECTIVITY WITH EXISTING PIPELINE BY HOT TAP_ASSISTANCE ONLY _PIPELINE SIZE 12" NB	Each (EA)	1.00	97,114.00	97,114.00
INSTALLATION OF PIPELINE MARKERS						
41	S&I,ROUTE MARKER,RCC	SUPPLY / INSTALLATION OF PERMANENT MARKERS_ RCC ROUTE MARKER	Each (EA)	340.00	1,510.00	5,13,400.00
42	S&I,ROUTE MARKER,KM POST	SUPPLY / INSTALLATION OF PERMANENT MARKERS_ ROUTE MARKER KILOMETER POST	Each (EA)	30.00	5,890.00	1,76,700.00
43	S&I,WARNING MARKER,W/POST,FOUNDATION	SUPPLY / INSTALLATION OF PERMANENT MARKERS_ WARNING MARKER WITH POST & FOUNDATION	Each (EA)	78.00	4,897.00	3,81,966.00
44	S&I,WARNING MARKER,W/O POST,FOUNDATION	SUPPLY / INSTALLATION OF PERMANENT MARKERS_ WARNING PLATE MARKER WITHOUT POST & FOUNDATION	Each (EA)	10.00	2,632.00	26,320.00
45	S&I,DIRECTION MARKER,RCC	SUPPLY / INSTALLATION OF PERMANENT MARKERS_ DIRECTION MARKER	Each (EA)	40.00	3,891.00	1,55,640.00
46	S&I,ROW,BOUNDARY,MARKER,RCC	SUPPLY / INSTALLATION OF PERMANENT MARKERS_ ROW BOUNDARY MARKER	Each (EA)	10.00	1,713.00	17,130.00
47	S&I,MARKER,CROSSING,NAVIGABLE,WATERWAY	SUPPLY / INSTALLATION OF PERMANENT MARKERS_ NAVIGABLE WATERWAY CROSSING WARNING MARKER	Each (EA)	1.00	55,592.00	55,592.00
PRE COMMISSIONING & COMMISSIONING						
48	PRE-COMM,PRESERVATION,COMMISSIONING,W/N2	PRE-COMMISSIONING, PRESERVATION & COMMISSIONING OF PIPELINE WITH NITROGEN	Cubic Meter (M3)	4,250.00	114.00	4,84,500.00
TEMPORARY CATHODIC PROTECTION SYSTEM						
49	SURVEY,SOIL,RESISTIVITY	Soil resistivity measurement at 1KM interval at depth of 1M, 2M and 5M approx depths and additional data collection as per TCP specification	KM	30.00	3,702.00	1,11,060.00
50	ANALYSIS,CHEMICAL,SOIL,SAMPLE	Chemical analysis of Soil / Water samples along ROU as per TCP specification per location	Each (EA)	7.00	12,743.00	89,201.00
51	DESIGN,DETAIL,ENGG,TCP,SYSTEM	Design, detail engineering of TCP System based on Soil Resistivity Measured from pipeline ROW, Soil Ionic & Microbial Loading,Interfering Elements surveys from pipeline ROW conforming to the Scope of work, Design Basis, Data Sheets, specification, standard and vendor list attached and provisions of GCC, SCC including Technical specifications	KM	30.00	3,500.00	1,05,000.00
52	S&I,STATION,TEST,A-TYPE	Type A for Potential Measurement with two cables of 1c x 6 sq mm from pipeline to the TLP. The minimum number of terminals on the terminal plate is four (4). Two for connection of cable and two spare.	Each (EA)	25.00	21,946.00	5,48,650.00
53	S&I,STATION,TEST,B-TYPE	Type B for Current Measurement with minimum four cables including 1Cx 6 sq.mm & 1Cx10 Sq.mm un- armoured.	Each (EA)	2.00	42,548.00	85,096.00
54	S&I,STATION,TEST,C-TYPE	Type C - Foreign Pipeline Crossing TLP/Bond Box with one cable of 1c x 6 sq mm from each pipeline to the TLP and one cable of 1c x 25 sq mm from pipeline to TLP for bonding with resistors and shunts.	Each (EA)	1.00	31,402.00	31,402.00
55	S&I,STATION,TEST,D-TYPE	Type D for Cased Crossing with minimum two cables of 1c x 6 sq mm from carrier pipeline to the TLP and two cables of 1c x 6 sq mm from casing pipe to TLP.	Each (EA)	2.00	25,841.00	51,682.00
56	S&I,STATION,TEST,E-TYPE	Type E- Insulating Joint TLP with two cables of 1c x 6 sq mm , one from underground section of the pipeline and other from the above ground side of the pipeline to the TLP and one 1c x 25 sq mm from the above ground side of the pipeline to the TLP.	Each (EA)	10.00	38,864.00	3,88,640.00
57	S&I,STATION,TEST,H-TYPE	Type H - for HT Line Crossing, this TLP shall be vandal proof type and the size should be suitable to install solid state dc decoupling device(SSD) in it.	Each (EA)	7.00	28,536.00	1,99,752.00
58	S&I,ANODE,MG,SKGS	Supply & Installation of pre-packed Mg Anode (5 Kg) with one 1C x 10 Sq.mm un-armoured tail cable (with sufficient length) & encapsulation kit for cable connection termination of Anode tail cable in the TLP etc.	Each (EA)	25.00	9,304.00	2,32,600.00
59	S&I,DC,COUPON,W/CABLE	Supply & Installation of DC coupons (polaization/corrosion) with two cables of 1c x 6 sq mm and 1c x 10 sq mm XLPE/PVC unarmoured of suitable length such as to reach TLP connected to the coupon and permanent Cu/CuSO4 reference electrode with 1c x 6 sq mm XLPE/PVC unarmoured cable of suitable length such as to reach the TLP	Each (EA)	6.00	7,724.00	46,344.00
60	S&I,PERMENANT,REFERENCE,CELL,CU/CUSO4	Supply & Installation of Cu/CuSO4 Permanent Reference Electrodes with 1c x 10 sq mm XLPE/PVC un-armoured of suitable length such as to reach TLP.	Each (EA)	6.00	21,924.00	1,31,544.00
61	S&I,DIVERTER,SURGE,IJ	Supply and Installation of Surge Divertor , directly mounted on MIJ without any joint/extension	Each (EA)	10.00	16,826.00	1,68,260.00
62	S&I,CELL,GROUNDING,ZINC,20+20KGS	Supply & Installation of Pre-packaged Zinc grounding cell- 20 kg +20 kg with 1c x 25 sq mm XLPE/PVC unarmoured cable terminated at TLP connected to the unprotected side of MIJ	Each (EA)	10.00	35,282.00	3,52,820.00

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63	MONITORING,TLP,SYSTEM,MONTHLY	Monthly Basis-Monitoring of Temporary Cathodic Protection System for 2 years of till commissioning of PCP whichever is later. Monitoring of health of installed TCP including measurement of pipe to soil potential (PSP) reading on monthly basis. The scope of work include collection / measurement of parameters of test stations of PCP and TCP sections and IJ, submission of reports to Owner & PMC as detailed in technical specifications and rectification/repair of defects/abnormalities to keep the system in healthy position complete in all respects as per direction of Engineer-In-Charge.	KM	720.00	800.00	5,76,000.00
64	TEST,COATING,CONDUCTANCE	Coating conductance test at all the HDD crossings prior to hookup with the main-line and B type TLP locations	Each (EA)	42.00	15,000.00	6,30,000.00
65	STUDY,AC,INTERFERENCE,MITIGATION	AC Interference and mitigation, Study by specialist agency whose scope would include: Collection of data from the field by visual inspection of ROW, taking GPS coordinates of tower foundations, data collection from powerline operators for operating characteristics of the power line which includes rated design current,operating current, fault current , fault clearing time, tower footing resistnace ,substauion location and ground resistance , type of phase conductor and phase arrangement, location of transposition of the phase conductors, ttype and number of shield wire etc. Conducting multilayer soil resistivity survey at various depth upto 100 mtr	Each (EA)	7.00	30,000.00	2,10,000.00
66	S&I,DECOUPLER,SOLID,STATE,3.7KA	Supply & Installation of Solid state decoupler -3.7 KA	Each (EA)	7.00	1,22,590.00	8,58,130.00
67	S&I,DECOUPLER,SOLID,STATE,5.0KA	Supply & Installation of Solid state decoupler -5 KA	Each (EA)	7.00	1,52,834.00	10,69,838.00
68	S&I,AC,COUPON,W/CABLE	Supply & Installation of AC coupons (Corrossion) with 1c x 6 sq mm cable of suitable length such as to reach test station	Each (EA)	5.00	7,724.00	38,620.00
69	S&I,ELECTRODE,GROUNDING,LINEAR	Supply & Installation of linear copper based grounding electrode for HT line crossing locations with 1Cx25 Sq.mm un-armoured cable (with sufficient length), encapsulation kit termination	Meter (M)	140.00	4,500.00	6,30,000.00
70	S&I,ANODE,ZINC,20KGS	Supply & Installation of pre-packaged Zinc Anode- 20 kg with 1c x 25 sq mm XLPE/PVC unarmoured cable terminated at TLP	Each (EA)	14.00	17,641.00	2,46,974.00
71	DATA,LOGGING,AC/DC	Conducting AC / DC data logging at installed TLP's with AC corrosion coupons for 24 hours or more as directed by PMC / Owner to check the effectiveness of the mitigation measures and ensuring that induced potential / current densities do not exceed the safe limits as mentioned in the relevant clauses in the tender	Each (EA)	7.00	4,500.00	31,500.00
GPR SURVEY						
72	SURVEY,GROUND PENETRATING RADAR(GPR)	GROUND PENETRATING RADAR (GPR) SURVEY	Meter (M)	3,000.00	10.00	30,000.00
LIAISONING						
73	LIAISONING,LOCAL,AUTHORITIES	LIAISONING WITH LOCAL AUTHORITIES ALL ACTIVITIES RELATED TO LIAISONING, CO-ORDINATION ETC WITH LOCAL AUTHORITIES INCLUDING BUT NOT LIMITED TO NAGARPALIKA, MAHANAGARPALIKA, PANCHAYAT, RAILWAYS, R&B, R&B PANCHAYAT, GRAM PANCHAYAT, NHAI, SOCIAL FOREST AND OTHER PRIVATE PARTIES AS APPLICABLE, ACTIVITIES INCLUDING BUT NOT LIMITED TO OBTAINING WORK PERMIT, DIGGING PERMIT, INFORMATION TO APPLICABLE AUTHORITIES/PARTIES FOR COMMENCEMENT AND PROGRESS OF WORK, JOINT VISIT, OTHER DOCUMENTATION AND PAPER WORK ETC	Meter (M)	12,000.00	68.15	8,17,800.00
74	LIAISONING,PROTECTETD,FOREST,AUTHORITY	LIAISONING WITH FOREST DEPARTMENT ALL ACTIVITIES RELATED TO LIAISONING, CO-ORDINATION ETC WITH FOREST DEPARTMENT AS APPLICABLE, ACTIVITIES INCLUDING BUT NOT ASSISTANCE TO GET THE PERMISSION, NECESSARY LIAISON, CO-ORDINATION ETC.	Meter (M)	18,000.00	80.01	14,40,180.00
Estimate Contract Value (in Rs Cr.; Excl. GST)						11,13,45,999.00