



MECON LIMITED

(A Government of India Enterprise)

SCOPE MINAR, 15th Floor, North Tower, Laxmi Nagar District Centre,

Delhi – 110 092

Phone No. : 22401129, 22447417

Corporate Identification No(CIN):U74140JH1973GOI001199

FAX OF ACCEPTANCE (FOA)

FOA NO. 05/51/Q7NT/GAIL/001-I-LVD/FOA-895

DATE: 29.10.2022

TO : M/S AKANSHA INFRACOM PVT. LTD.
FAX : -
EMAIL : info@akankshagroup.in
ATTN : MR. LAL BAHADUR SINGH, PROMOTER
FROM : SR. GM (CONTRACTS), MECON LIMITED, DELHI

PLEASE REFER TO YOUR OFFER NO. NIL DATED NIL AND ALL OTHER SUBSEQUENT CORRESPONDENCE AGAINST BIDDING DOCUMENT NO. 05/51/Q7NT/GAIL/001-I-LVD (TENDER ID : 2022_GAIL_110017) DATED 30.04.2022, COMM. CORR.#1 DATED 13.05.2022, COMM. CORR.#2 DATED 13.05.2022, RPBQ DATED 13.05.2022 & COMM. CORR.#3 DATED 20.05.2022 FOR LAYING OF UNDERGROUND STEEL PIPELINE INCLUDING ASSOCIATED WORKS IN CUTTACK/KHORDA (BHUBANESHWAR) GAS FOR GAIL (INDIA) LIMITED (.)

WE HEREBY ISSUE THIS FAX OF ACCEPTANCE (FOA) FOR **100% OF THE SCOPE OF WORK** OF SUBJECT TENDER AT AN ESTIMATED CONTRACT VALUE OF **RS. 1,63,36,844/-** (INDIAN RUPEES ONE CRORE SIXTY-THREE LAKH THIRTY-SIX THOUSAND EIGHT HUNDRED FORTY-FOUR ONLY) EXCL. GST. GST SHALL BE PAYABLE EXTRA AS PER TENDER PROVISIONS. (PRESENT RATE OF GST@18%) (.)

THE DETAILED BREAKUP OF ABOVE ORDER VALUE IS ENCLOSED AS ANNEX-I.(.)

THE COMPLETION SCHEDULE SHALL BE 3 1/2 (THREE & HALF) MONTHS FROM THE DATE OF FAX OF ACCEPTANCE (FOA) FOR MECHANICAL COMPLETION INCLUDING MOBILIZATION PERIOD OF 15(FIFTEEN) DAYS AND THEREAFTER 15 (FIFTEEN) DAYS FOR DRYING, COMMISSIONING/GAS-IN (.)

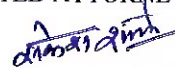
YOU ARE REQUESTED TO SUBMIT "CONTRACT PERFORMANCE GUARANTEE" @ 3% OF ORDER/CONTRACT VALUE [EXCLUDING GST] WITHIN 30 DAYS OF THIS FAX OF ACCEPTANCE AS PER TERMS AND CONDITIONS STIPULATED IN CLAUSE NO. 37 OF INSTRUCTIONS TO BIDDERS (ITB) OF BIDDING DOCUMENT(.)

YOU ARE REQUESTED TO CONTACT PROJECT COORDINATOR (MR. PRATEEK MAHESHWARI, MANAGER (CGD), MECON LIMITED, EMAIL ID: PMAHESHWARI@MECON.CO.IN) FOR FURTHER INSTRUCTIONS REGARDING EXECUTION OF THIS WORK (.)

ALL OTHER TERMS AND CONDITIONS SHALL BE AS PER BIDDING DOCUMENT & CORRIGENDUM THERE OF AS STATED ABOVE AND AS AGREED TILL DATE (.)

A DETAILED LETTER OF AWARD SHALL FOLLOW (.)

FOR & ON BEHALF OF GAIL (INDIA) LIMITED
(BY ITS CONSTITUTED ATTORNEY)


(RAKESH SHARMA)
SR. GM (CONTRACTS)
MECON LIMITED, DELHI

CC: BY COURIER TO:

M/s Akansha Infracom Pvt. Ltd.
Plot No.964, Saikrupa Complex, At- Pathargadia Road,
Patia, Bhubaneswar, Khordha- 751024
Tel No.: +91-022-40226179, 4979474



SCHEDULE OF RATES
LAYING OF UNDERGROUND STEEL PIPELINE INCLUDING ASSOCIATED WORKS IN CUTTACK / KHORDA (BHUBANESWAR) GAS UNDER CGD SIX CITIES PROJECT FOR M/s GAIL (I) LIMITED
M/s Akansha Infracore Pvt. Ltd., Bhubaneswar

Sl. No.	Item Description	Quantity	Units	Unit Rate (Excluding GST)	Amount (Excluding GST)
1	MAINLINE WORKS				
2	CARBON STEEL PIPES				
3	PIPELINE LAYING / INSTALLATION				
4	"Receiving and taking over" as defined in the specifications, handling, loading, transportation and unloading of Owner supplied 3-Layer PE coated and bare linepipes from Owner's designated stock-yard to Contractor's stock yard/workshop/work-site including preliminary activities, preparation of drawings, wherever required for crossing etc. including handling, stacking, stringing on the pipeline Right-of-Use/ pipeline route alignment, carrying out inspection of Owner supplied materials including linepipes at the time of taking over, laying/ installation of coated linepipes as per specification wherever required depending on site condition including execution of all works, "taking over", handling, including loading and unloading, transportation of Owner supplied materials other than linepipe from Owner's designated place (s) of issue to work site including arrangement of all as listed above..				
5	Additional lands required for Contractor's storage, fabrication, access for construction, procurement and supply of all materials (except Owner supplied materials), consumables, equipment, labour and other inputs, carrying out all temporary, ancillary, auxiliary works, ready for commissioning of pipeline as per drawings, specifications, other provisions of Contract document and instructions of Engineer-in-charge, including but not limited to carrying out the following works:				
6	Survey of route and detours required at the time of execution including preparation of construction drawings showing survey details, and submit same to GAIL/PMC for review / approval.				
7	Staking and installation of construction markers, clearing, fencing, grubbing, full filling all the requirements of various statutory/ environment authorities to the entire satisfaction of concerned authorities, grading of work area.				
8	Barricading the pipeline construction area prior to execution of the works as per drawings enclosed with tender document and to the entire satisfaction of Owner / Engineer-in-charge.				
9	Trenching to all depths by excavation and to a width to accommodate the carrier pipeline during lowering & backfilling in all types of soils and rocky strata including different type of pavement / footpath / roads (other than concrete roads) etc. including breaking, chiselling or otherwise cutting etc. as required and storing excavated soil, reusable materials at designated area as directed by Engineer in charge and to a width to accommodate the pipeline as per the relevant standard/ specification etc. [The minimum depth of the top of pipeline shall be 1 m measured from top of pipeline coating to the top of undisturbed surface of the soil or as per SCC/ relevant code, whichever is higher]. Dewatering of trenches if required as per site condition.				
10	Carrying out repairs of pipe defects/ replacement in case of irreparable defects and repairs of defects of pipe coating not attributable to Owner including defects/ damages occurring during transportation / handling.				
11	Stringing of line pipes along pipeline trench / ROU provided on sand/soft soil bags including all supplies, manpower & machinery etc.				
12	Aligning, bending, cutting and bevelling (as required) of pipes for welding and field adjustments including pipe fittings, welding, carrying out non-destructive testing of welds as required including 100% radiography by X-ray either by internal source or external source based on site conditions/front availability and in this regard decision of EIC shall be final and binding to the contractor (In case placement/installation of X-ray equipment is not feasible, in that case Gamma ray may be permitted as per decision of Engineer In-Charge(EIC) based on site conditions) and providing all requisite equipment, labour, supervision, materials, films, consumables, all facilities and personnel to process, develop, examine and interpret radiographs and other tests as required, carrying out repairs of weld joints found defective by Engineer-in-Charge, carrying out re-radiography and other tests as required on repaired joints and NDT of bevelled area as mentioned in SCC & Particular Jobs Specification.				
13	Carrying out installation of carrier line pipe at all minor crossing ie; road, cart track, pathway, water bodies etc. at required depth by open cut (except at crossing by Moleing & HDD method). Methodology to be adopted for crossing shall be decided by joint survey with Client/PMC & Contractor and based on the finalization of methodology crossing by HDD, Laying of pipeline through HDD, Moleing shall be payable through respective item available else where in the SOR.				
14	Coating of field weld joints, long radius bends (R=3D for 8 Inch), elbows... etc. including supply of coating materials etc. (i.e. heat shrinkable sleeves and high build epoxy etc.) as per PJS & Technical Specification compatible with 3 layer PE coating material of the line pipe.				
15	Installation of LR Bend (R=3D for 8 Inch), as per specification wherever required depending on site condition.				
16	Installation / lowering the pipeline in trench to required depth as per PJS, Technical Specification & drawings and providing required padding over and around the pipeline with sand/graded material approved by Engineer-In-Charge (in rocky areas) including padding around pipeline with suitable soil duly approved by EIC. Supply of padding material, backfilling and its compaction to the satisfaction of concerned authorities with excavated earth / borrowed select soil including supply of borrowed select soil duly approved by EIC before backfilling and make ready for restoration to be done by Owner / concerned authorities.				
17	Installation of warning mat on the entire length of the pipeline as per specification. Warning mat should have anti rodent properties.				
18	Crossing the all-foreign pipeline / HT line / cable / any other utilities etc. with necessary concrete / PVC protection including coordination with all agencies and obtaining NOC after completion of all the activities.				
19	Supply and installation of bank protection alongwith backfill materials duly approved by EIC for pipeline trench and banks falls under minor water body crossing as per technical specification & Std. Drg., wherever required or, as directed by Owner / EIC.				



SCHEDULE OF RATES
LAYING OF UNDERGROUND STEEL PIPELINE INCLUDING ASSOCIATED WORKS IN CUTTACK / KHORDA (BHUBANESWAR) GAS UNDER CGD SIX CITIES PROJECT FOR M/s GAIL (I) LIMITED
M/s Akansha Infracore Pvt. Ltd., Bhubaneswar

Sl. No.	Item Description	Quantity	Units	INR	
				Unit Rate (Excluding GST)	Amount (Excluding GST)
20	Carrying out air cleaning, gauging, pigging, flushing, cleaning and hydrostatic testing of complete pipeline, supply of required quantity of corrosion inhibitor, if required including pre-testing of designated sections complete as per specification and approved by Engineer-in-charge to specified pressures indicated elsewhere and duration after stabilization as per specification, providing all equipment, pumps, fittings, instruments, dead weight tester, pressure recorder, thermocouples etc., and services, supervision, labour, consumables, water including supply of corrosion inhibitor, air, etc. as required, locating of leaks and rectification of defect attributable to Contractor (rectification of defects in linepipe material not attributable to contractor shall be paid separately as per other item of schedule of rate), re-testing after rectification, dewatering after successful completion of hydrotesting of entire section and as approved by Engineer-in-Charge. Note : 1. Leak detection, its rectification and successfully re-hydrotesting shall be carried out by Contractor with a view that completion of all activity for successful hydrotesting should not be inordinately extended / delayed , which will hamper the overall project schedule. Further, no extra payment claim shall be entertained for re-hydrotesting, leak detection and their rectifications if defects found attributable to Contractor. 2. Payment for Gauging activity mentioned above shall be made under item mentioned else where in SOR. 3. Payment for hydrostatic testing activity mentioned above shall be made under item mentioned elsewhere in this SOR.				
21	All tie-in, including the tie-in(s) of the pipeline with the adjacent sections of pipeline including cutting of test header, rebeveling as required, radiography and other NDT examination, joint coating as per specification.				
22	Final clean-up & restoration of right-of-use or area disturbed by contractor including obtaining NOC from respective land owner and statutory authorities during their construction activities for laying of pipeline works and disposal of debris and returning all surplus material to designated disposal areas / storage yard as and backfilling of trench and compaction of the same as per satisfaction of Owner and / Or as directed by Engineer-in-charge.				
23	Carrying out all temporary, ancillary, auxiliary works and all incidental works required to make the pipeline ready for pre-commissioning.				
24	Restoration of land, facilities and boundary wall etc. and associated facilities dismantled/damaged by the Contractor during construction;				
25	Hook-up work with existing pipelines including pit excavation & other associated work (If any). Payment for Hook up shall be made under item mentioned elsewhere in SOR				
26	Protective coating of 500 micron thick two component (applied with the help of minimum three coats) liquid epoxy including supply of materials duly approved by Owner for all piping valves, fittings, structural steels etc. for buried installation and inside the valve pit as approved by the Engineer-in-charge.				
27	Carrying out all temporary, ancillary, auxiliary works and all incidental works required to make the pipeline ready for pre-commissioning;				
28	Obtaining work permits/ NOC from various statutory authorities having jurisdiction, before and after execution of the work, and complying with all stipulation/conditions/recommendation of the said authorities;				
29	Preparation of as-built drawings, pipe-book and other records as specified in the specifications. SOR shall be read in conjunction with job specific requirements, specifications, standards, drawings and other provision of contract document. All above works line pipe laying and installation all above works for buried pipeline as per following details:				
30	Installation of Coated Line Pipes as per following details:				
31	Specified dia Thk (mm) Material Coating Type Length of each pipe (mm) NB				
32	For All Type of Soil				
33	200 6.4 API 5L Gr. X-52/56 3 Layer PE Double random Coating (Externally) (approx. 11.5 m to 12.5 m)	820.00	Meter	1,448.40	1,187,688
34	For Rocky Strata (Refer Notes)				
35	200 6.4 API 5L Gr. X-52/56 3 Layer PE Double random Coating (Externally) (approx. 11.5 m to 12.5 m)	180.00	Meter	2,328.80	419,184
36	Note:				
37	The lengths of pipelines are tentative and for various locations. Quantities may increase/decrease or delete based on site requirement/Joint Survey/Change in requirement of Owner.				
38	The above item rate is exclusive of crossings by HDD and Moiling (which are covered separately in relevant SOR items). For other crossings, it is deemed to be inclusive in above item rate.				
39	This item shall be applicable for the underground steel grid main pipeline & branch pipeline including , insulating joints, bends (3D for 8"), flanges & fittings, underground valves if required, accessories etc. , Installation of valves including other fittings & pipes for Sectionalizing & Tap Off if required shall be paid separately through item available else where in SOR.				
40	The above rate shall be exclusive of hydrotesting of complete pipeline including hydrotesting of all crossing sections along-with the mainline. However, payment for pre- testing as required, are inclusive in above items rate.				
41	In above item, backfilling of pipeline trench by borrowed select soil duly approved by Owner / EIC shall be paid by separate item mentioned elsewhere in the SOR.				
42	Contractor shall not perform any pipeline activities along ROU/Corridor without specified barricading as per Std. Drg. and other safety measures.				
43	Proposed pipeline route is passing through MDR/ Asphalt Road / concrete roads (RCC/PCC) etc. However, in case of non-availability of ROU along MDR/ Asphalt Road / concrete roads (RCC/PCC) etc., the pipeline route may change and this may also require a new tap-off point at suitable location on Pipeline . This may cause increase / decrease in SOR quantities.				
44	The rates shall be applicable for the work within at all locations / with in GA- Khorda/Cuttack .				

SCHEDULE OF RATES
LAYING OF UNDERGROUND STEEL PIPELINE INCLUDING ASSOCIATED WORKS IN CUTTACK / KHORDA (BHUBANESWAR) GAS UNDER CGD SIX CITIES PROJECT FOR M/s GAIL (I) LIMITED
M/s Akansha Infracore Pvt. Ltd., Bhubaneswar

Sl. No.	Item Description	Quantity	Units	INR	
				Unit Rate (Excluding GST)	Amount (Excluding GST)
45	The above rate is excluding of crossings by HDD, Boring, moiling, open cut conventional Method mentioned under separate item.				
46	In congested area trenching shall be made manually for pipeline laying further Contractor shall ensure that no tree/plant cutting shall be carried out during Pipe Line Laying operations.Trenching shall be carried out manually if needed, so as to ensure no damage to plant/tree/OFC /water pipe line /telephone line/sewage line/electric cable and other under ground utilities.				
47	Quantity indicated above is tentative. Execution of pipeline laying in rocky strata(if encountered during execution) shall be jointly recorded.				
48	Bifurcation of Soil & Rocky strata shall be done based on the equipments used in trenching the pipeline section. For Rocky strata contractor have to use of rock breaking tool / rock hammer or other equivalent tools for preparation of trench with due approval of EIC. Supply and installation of rock shield as per specification including padding through sand/soft soil is inclusive in above item.Bidder have to quote accordingly.				
49	Excavation of hard rock strata, wherever hard rock of single piece exceeding 1.5 meter in any direction within the trench dimension with respect to length, width & depth and removal only by pneumatic chisel/ drill/ rock-breaking tool/rock hammer or other equivalent tools. The rates are payable over and above the laying rates as per relevant SOR items mentioned elsewhere in SOR.				
50	Fabrication of Sectionalizing Valves(SV) and Tap-off including pipes & fittings shall be paid separately.				
51	For Tie-in and other locations wherein NDT through X-ray is not feasible NDT by Gamma ray shall be permitted with due permission of EIC.				
52	Payment for Preparation of as-built drawings, pipe-book and other records as specified in the specifications is to be covered in this SOR rate.				
53	Contractor shall return all surplus material to designated storage yard as mentioned in Annexure-2 to SCC, as directed by Engineer-In-Charge.				
54	Owner supplied 3 LPE Line Pipe & Bare Pipe required for pipeline laying activity shall be shifted from owner designated store located within Cuttack / Khorda (Bhubaneswar) GAS and payment are inclusive in above items rate. Bidder has to quote accordingly.				
55	Contractor shall ensure that no tree/plant cutting shall be carried out during Pipe Line Laying operations.Trenching shall be carried out manually if needed, so as to ensure no damage to plant/tree/OFC /water pipe line /foreign pipeline/telephone line/sewage line/electric cable and other under ground utilities.				
56	Bidder has to familiarise himself the entire pipeline route and all locations /region/ charge area within the GA and ascertain all type of eventuality/uncertainty before gouting their bid.				
57	End cap / blind (Temporary during construction of pipeline) at both the ends for carrier pipeline as per specification is included in above quoted rates, However after completion of pipeline End Cap shall be provided to contractor as free issue.				
58	Payment for carrying out liaisoning & co-ordination utility/foreign pipeline crossings (if any) and obtaining permission / NOC from these authorities including assistance in ROU/Corridor opening & closing and their maintenance/ management both side of the crossings shall be made under item mentioned elsewhere in SOR.				
59	Excavation- Hard Rock				
60	Excavation of hard rock only, wherever hard rock of single piece exceeding 1.5 meter in any direction within the trench dimension with respect to length, width & depth and removal only by pneumatic chisel/ drill/ rock-breaker.	180.00	CUM	1,363.20	245,376
61	Note: i) Quantity indicated above is tentative and may increase/ decrease or delete as per site requirement. ii) Above item is for laying of pipeline through open cut method only.				
62	PIPELINE LAYING/INSTALLATION BY HDD METHOD				
63	Complete work of laying of pipeline in restricted ROU along with adjacent road/nala (if minor road/nala falling under the laying profile and not considered under separate crossing) by HDD method including "Receiving and taking over" owner supplied 3LPE coated line pipes from owner's designated place to issue/dump site(s) and transportation to contractor's stock yard/work site including all handling, loading, uploading, aligning etc. supply of all contractor supplied material including consumables, manpower, equipment, other resources to work site(s) and acquiring the required land for storage. Execution of, but not limited to, following works in accordance with specifications and instruction of engineer-in-charge and as per all provision of Contract Document.				
64	Pre-construction survey, necessary cover required over the carrier pipeline, based on site visit, collection of data (if required) from concerned Authority including design and detail engineering and making of drawings for getting their approval from concerned Authority/Engineer-in-charge, getting work permit/NOC for utilities crossings (if any) encountered prior to start the execution of work.				
65	Digging of entry and exit Pits,Pre hydrotesting at specified pressure , Drilling to required depth from top of ground (min 2.0 mtrs.) including maintenance of drill hole in all types of soil including pebbels, cobbles, boulders, structures etc. and all types of rocky strata, all depth to accommodate the pipeline at all conditions encountered by approved HDD methods for providing minimum cover specified in code/specification or the actual depth as decided by concerned authority, whichever is more				
66	Digging of entry and exit Pits,Laying of the pipeline(as per approved HDD profile) by the approved HDD method including pipeline string preparation, welding, testing, 100% radiography by X-ray, welding repair and retest, coating of field joints with special type Dirax Heat Shrink Sleeve or equivalent (including supply of coating material) and repair of pipeline coating with special PERP-60E repair patch or equivalent material (including supply of repair patch) as per specification, pre-hydrotest of complete strings made for laying etc.Backfilling of entry and exit pits and its levelling.				

SCHEDULE OF RATES

LAYING OF UNDERGROUND STEEL PIPELINE INCLUDING ASSOCIATED WORKS IN CUTTACK / KHORDA (BHUBANESWAR) GAS UNDER CGD SIX CITIES PROJECT FOR M/s GAIL (I) LIMITED
M/s Akansha Infracore Pvt. Ltd., Bhubaneswar

Sl. No.	Item Description	Quantity	Units	INR	
				Unit Rate (Excluding GST)	Amount (Excluding GST)
67	Backfilling of the ditch/trench pits including restoration and clean-up of area, disposal of drilling fluid & waste etc. to the satisfaction of Engineer-in-charge and/or as directed by concerned Authority.				
68	Carrying out cleaning, gauging, water filling, post-hydrotesting, of complete pipeline string in one section/ test sections as approved by EIC/RCM to specified test pressures (i.e. 1.5 times of Design pressure) for 24 hours hold period; providing all equipment, pumps, test headers, fittings, pressure & temperature instruments etc., and services, supervision, labour, consumables, water, air, etc. as required; detection of leaks, if any occurred during post-hydrotesting, attributable to Contractor and rectification of defects, re-testing after rectification with due approval of Owner, successful completion of post-hydrotesting including dewatering of pipeline to acceptance criteria defined in the specifications. Note : 1. Leak detection, its rectification and successfully re-hydrotesting shall be carried out by Contractor with a view that completion of all activity for successful pre-hydrotesting should not be inordinately extended / delayed , which will hamper the overall project schedule. Further, no extra payment claim shall be entertained for re-hydrotesting, leak detection and their rectifications if defects found attributable to Contractor. 2. Payment for Gauging activity mentioned above shall be made under item mentioned elsewhere in SOR. 3. Payment for Post hydrostatic testing activity shall be made under item elsewhere in SOR, however pre hydrotesting is inclusive in the above SOR item rates.				
69	Installation/laying of Coated Line Pipes as per following details:				
70	Specified dia Thk (mm) Material Coating Type Length of each pipe (mm) NB				
71	For all types of Soil other than Rocky Starta				
72	200 6.4 API 5L Gr. X-52/56 3 Layer PE Double random Coating (Externally) (approx. 11.5 m to 12.5 m)	900.00	Meter	5,396.00	4,856,400
73	For all types of Rocky Starta				
74	200 6.4 API 5L Gr. X-52/56 3 Layer PE Double random Coating (Externally) (approx. 11.5 m to 12.5 m)	180.00	Meter	8,804.00	1,584,720
75	Note: (i) Pipeline length are tentative and for various crossings/site locations wherein laying through open cut is not feasible. Tenderer are advised to visit the site for actual assessment of extent of laying and to access the maximum extent of cover which may have to be provided. Actual string length for HDD shall be as per design calculations so that pipe is not under stress as permitted by codes/ specifications. Final length of string shall be decided after decision of minimum cover requirement by concerned Authority/ Engineer-in-charge.				
76	(ii) The quantities mentioned above are tentative and may increase or decrease depending upon the site conditions/requirements. The quantity indicated against each item are for multiple shots/Multiple entry & exit pits and shall be as per requirement at site for laying at different locations.				
77	(iii) Contractor shall not perform any pipeline related activities along the ROU without specified barricading/permission of EIC/RCM as per Std. Drg. and other safety measures.				
78	(iv) Payment for the length of final tied-in carrier pipeline string are inclusive in the above item rate and no separate payment shall be made under other item mentioned elsewhere.				
79	(v) Width of above laying indicated are tentative. The width indicated are not for any single laying. This shall be as per requirement at site for laying at different locations.				
80	(vi) Contractor have to use rock cutting tool and all other accessories as required to make drill hole in rocky starta based on requirement. However no extra/additional claim on account of same is permitted. Contractors are advised to quote accordingly.				
81	vii) The above items rate shall be applicable for all locations / region/ charge area within & around the GA of Khorda/Cuttack.				
82	viii) Payment for carrying out liaisoning & co-ordination works for utility/foreign pipeline crossings (if any) and obtaining permission / NOC from these authorities including assistance in ROU opening & closing and their maintenance/ management both side of the crossings shall be made under item mentioned elsewhere in SOR.				
83	ix) Rock drilling shall be considered at location/strata for which the core recovery is min 25%. Expenditure to establish the Starta as rock through lab test or any other approved methodology shall be paid through item rate available else where in SOR.				
84	PIPELINE LAYING / INSTALLATION IN A BUILT-UP SURFACE/ HARD SURFACE				
85	Raking up of hard surface of any type including bituminous, asphalt, concrete, tiled, brick lined soft/ hard rock which is breakable in pieces manually (without use of pneumatic machine) etc. All tiles/ slabs/ curb stones etc. removed during excavation shall be placed properly. The other activities are as per SOR item no. A00101 including its notes.				
86	200 6.4 API 5L Gr. X-52/56 3 Layer PE Double random Coating (Externally) (approx. 11.5 m to 12.5 m)	72.00	Meter	1,988.00	143,136
87	Note: The above rate is inclusive of all other activities as per SOR item no. A00101 including its notes.				
88	REMOVAL & RESTORATION OF CONTINUOUS CONCRETE (RCC/PCC) FOR PIPELINE INSTALLATION				
89	Removal of concrete (RCC/PCC etc) for preparation of pipeline trench (by using pneumatic machine or other approved method) including restoration of same as previous by providing the RCC/PCC...etc up to satisfaction of EIC and concern authority. Shifting & disposing of debris material at suitable location as per direction of EIC. The other activities are as per SOR item no. A00101 including its notes.				
90	200 6.4 API 5L Gr. X-52/56 3 Layer PE Double random Coating (Externally) (approx. 11.5 m to 12.5 m)	72.00	Meter	624.80	44,986
91	RESTORATION OF ROADS				

SCHEDULE OF RATES
LAYING OF UNDERGROUND STEEL PIPELINE INCLUDING ASSOCIATED WORKS IN CUTTACK / KHORDA (BHUBANESWAR) GAS UNDER CGD SIX CITIES PROJECT FOR M/s GAIL (I) LIMITED
M/s Akansha Infracore Pvt. Ltd., Bhubaneswar

Sl. No.	Item Description	Quantity	Units	INR	
				Unit Rate (Excluding GST)	Amount (Excluding GST)
92	Restoration of asphalt / concrete / red stone roads / pavement/ pavor block including compaction of soil, to original condition as per requirement and to the entire satisfaction of EIC and / or concerned Owners having jurisdiction for following thickness.				
93	Restoration of Asphalt road upto 10 cm thickness	84.00	Sq. Metre	511.20	42,941
94	Restoration of Asphalt road beyond 10 cm upto 20 cm thickness	48.00	Sq. Metre	795.20	38,170
95	Restoration of Concrete road upto 10 cm thickness	60.00	Sq. Metre	624.80	37,488
96	Restoration of Concrete road 10 cm to 20cm thickness	48.00	Sq. Metre	908.80	43,622
97	Restoration of red stone road / footpath / pavement upto 4 inch thickness	48.00	Sq. Metre	426.00	20,448
98	Restoration of red stone road / footpath / pavement upto 4 to 8 inch thickness	36.00	Sq. Metre	624.80	22,493
99	BORROWED SELECT SOIL FOR BACKFILLING				
100	Additional work over and above item no. A00100 for supply of specified and approved quality of borrowed local soft, graded soil / sand in place of available excavated material and / or other suitable soil as per applicable standards / specifications, including backfilling of excavated trench for specified length after laying and padding of pipeline, including local transportation of such special backfill material over all distances, complete.	50.00	M3	284.00	14,200
101	PIPING WORKS FOR SECTIONALISING VALVE STATION (SV STATION)(Fabrication at Ground and then installation in the Pit)				
102	SECTIONALISING VALVE STATION - UNDER GROUND				
103	All works for installation of all piping Underground at all depth for Vent Type/ No Vent Type Valve Station along with/without future tap-off (as required) in Valve Chamber in all type of terrains and soils including transportation and handling of all owner/contractor supplied materials i.e. full bore 8" butt welded Ball valve, Plug Valves, all types of other valves of all sizes, Weldolet of all sizes, Insulating Joint, vent line pipes for mainline, assorted pipes and all flanges and fittings from designated places(s) of issue to work site. Supply of gaskets, studs, nuts, nipples & coupling, consumables, Liquid penetrant kit, Cotton cloth ...etc. Installation / Erection of instrumentation items i.e. pressure gauge, consumables, manpower, machineries, tools & tackles for carrying out all mechanical works of underground and above ground piping including fabrication, welding, nondestructive testing of welds, weld repairs/ Pretesting, cleaning/ flushing, pre-hydrotesting & hydrostatic testing, dewatering, functional testing, cutting of mainline and bevelling (if required), tie-in of valve assembly, including radiography & joint coating of tie-in joints, external painting for buried fittings by high build epoxy of min. 500 micron of R-95 or equivalent as required, obtaining all statutory clearances, approvals and permissions for the works (wherever required), making of valve pit (for detail refer relevant drawings (i.e. P&ID, Plot Plan) for SV Station point enclosed with tender. pipe supports including all associated civil works (pertaining to supports only); painting, finishing, clean-up and restoration of site; preparation of as-built drawings, documents and project records and performing all works as per drawings, specifications, other provisions of Contract document and instructions of Engineer-in-charge.				
104	Sectionalising Valve Station (8") with Tap Off valves	1.00	Lumpsum	99,400.00	99,400
105	Sectionalising Valve Station (8") without Tap Off valves	1.00	Lumpsum	99,400.00	99,400
106	Notes: 1. This work is exclusive of all works associated with main pipeline covered at SOR item no. A00100 below. 2. All Civil/ structural works except for piping supports will be paid separately as per rates provided elsewhere. 3. Work is inclusive of receiving, taking over, loading & unloading of company supplied material and return of surplus material to Company's designated stockyard/store. 4. Valves, Assorted Pipe, fittings & Flanges, any type of tee, instrumentation items ..etc as required for construction of SV station shall be made available to contractor as free issue material. Fabrication of SV, Tap-Off Point (if required) , erection, Testing & commissioning is inbuilt in above item rates, hence contractor have to quote accordingly. 5. Civil Work for Valve Pit and its upper slab for under ground SV stations shall be payable through item available else where in SOR. 6. NDT of Joints is inclusive in above item rate. For 1/2" to 1.5" contractor have to carry out NDT by DP test, however for 2" to 8" NDT by X-ray/Gamma ray is required. Bidder have to quote accordingly.				
107	(Refer plot plan drawing and other relevant drawings for Sectionalising Valve Stations enclosed with tender document for ascertaining quantum of mechanical work associated with SV Station).				
108	PIPING WORKS FOR TAP-OFF POINT(Fabrication at Ground and then installation in the Pit)				

SCHEDULE OF RATES
LAYING OF UNDERGROUND STEEL PIPELINE INCLUDING ASSOCIATED WORKS IN CUTTACK / KHORDA (BHUBANESWAR) GAS UNDER CGD SIX CITIES PROJECT FOR M/s GAIL (I) LIMITED
M/s Akansha Infracore Pvt. Ltd., Bhubaneswar

Sl. No.	Item Description	Quantity	Units	Unit Rate (Excluding GST)	Amount (Excluding GST)
109	All works for installation of all piping and valves assembly on above/below ground at all depth for Tap-off in all type of terrains and soils including transportation and handling of all owner/contractor supplied materials built welded Ball valve, all valves of all types and sizes, Barred tees of all sizes and all fittings from designated places(s) of issue to work site. Supply of assorted pipes, consumable, Liquid penetrant kit, Cotton cloth...etc, manpower, machineries, tools & tackles for carrying out all mechanical works of underground/aboveground piping including fabrication, welding, nondestructive testing of welds, weld repairs/ retesting, cleaning/ flushing, pre-hydrotesting & hydrostatic testing, dewatering, functional testing, cutting of mainline and bevelling (if required), tie-in of valve assembly, including radiography of tie-in joints, corrosion coating (by heat shrink sleeves) for buried piping and external painting for buried fittings by high build epoxy of min. 500 micron of R-95 or equivalent as required, obtaining all statutory clearances, approvals and permissions for the works (wherever required), excavation and filling in all types of soils including soft/ hard rock for installation of piping, painting, finishing, clean-up and restoration of site; preparation of as-built drawings, documents and project records and performing all works as per drawings, specifications, other provisions of Contract document and instructions of Engineer-in-charge.				
110	4" Tap-off Point	1.00	Nos	113,600.00	113,600
111	Notes: 1. This work is exclusive of all works associated with main pipeline covered at SOR item no. A00100 below.. 2. All others works pertaining to Tap-off (Instrumentation works) (if any) shall be as per rates indicated elsewhere in the tender document. 3. Work is inclusive of receiving, taking over, loading & unloading of company supplied material and return of surplus material to Company's designated stockyard/store.				
112	(Refer plot plan drawing and relevant drawings for Tap-off Station enclosed with tender document for ascertaining quantum of mechanical work associated with Tap-off Station).				
113	4. Valves, Assorted Pipe, fittings & Flanges, any type of tee, instrumentation items (if any) etc as required for construction of Tap-off point shall be made available to contractor as free issue material. Fabrication of Tap-Off Point (if required), erection, Testing & commissioning is inbuilt in above item rates, hence contractor have to quote accordingly. 5. Qty of tapp off points is tentative and may differ as per site requirement.				
114	6. Qty for tapp-off point mentioned above is excluding quantities mentioned in SV station and for separate locations than SV station. 7. NDT of Joints is inclusive in above item rate. For 1/2" to 1.5" contractor have to carry out NDT by DP test, however for 2" to 8" NDT by X-ray/Gamma ray is required. Bidder have to quote accordingly.				
115	Station piping works(Above Ground)				
116	Transportation including loading, unloading & handling of all piping items from Owner's and/ or Contractor's storage point to work site/ workshop as applicable, complete work of fabrication, erection, painting, testing of pipes, flanges and fittings and making ready for further Commissioning / Start-up of carbon steel piping of all sizes and ratings including supply of all consumables, equipment, manpower and other resources and execution of, but not limited to, the following works in accordance with relevant specifications & scope of work, drawings, specification and instructions of Engineer-in-charge and as per all provisions of the CONTRACT DOCUMENT.				
117	Fabrication including cutting, edge preparation, welding of pipe, valves, fittings & flanges, IJ etc in above ground/underground. Supply of nipples, couplings, caps, plugs, gasket, stud bolts, nuts, U Clamps etc. as required for completion of job.				
118	Erection including supply and fixing of gaskets, studs/ bolts, nuts wherever required for all sizes, levelling, aligning, joining of flanges, blind flanges, connecting with equipment, nozzles, tie-in with existing piping/facilities, etc. tapping for inline instruments like pressure gauges, thermowells, sample connection, etc.				
119	Preparation of final bill of material based on piping GADs.				
120	Preparation of isometric and fabrication drawings.				
121	Carrying out 100 % Non-destructive testing				
122	Surface preparation, Painting of piping system as per specification.				
123	Cleaning and flushing by water/ compressed air, testing of the systems including hydrostatic, pneumatic and any other type of testing as specified, draining, drying by compressed air/other methods approved by COMPANY.				
124	Precommissioning & making operational all piping system and equipments and provide all necessary assistance in term of supply of man-power, equipment, tools and tackles required amount of nitrogen for purging of entire terminal piping system including equipments etc. to the company during commissioning activities.				
125	Clean-up and restoration of site, preparation of as built drawings, documents and project records; transportation of surplus free issue material to Owner's designated plac(s); completing all works in all respects as per the AFC drawing, specifications, standards and other provisions of Contract and instruction of Engineer-in-charge.				
126	Completion of all such work in all respects as per scope of work and as per drawings, specifications and instructions of the COMPANY and keeping the system ready in all respects for further commissioning and start up.				
127	Hook-up works including making provision for hooking up and carrying out shutdown activities at terminals if necessary.				
128	Pipeline size 1/2" to 8" NB dia	100.00	Inch-dia	482.80	48,280

SCHEDULE OF RATES
LAYING OF UNDERGROUND STEEL PIPELINE INCLUDING ASSOCIATED WORKS IN CUTTACK / KHORDA (BHUBANESWAR) GAS UNDER CGD SIX CITIES PROJECT FOR M/s GAIL (I) LIMITED
M/s Akansha Infracore Pvt. Ltd., Bhubaneswar

Sl. No.	Item Description	Quantity	Units	INR	
				Unit Rate (Excluding GST)	Amount (Excluding GST)
129	1) Pipe Specification and thickness may vary depending upon availability of pipe. No extra payment shall be made for this. 2) All butt welded fittings end shall generally match with connecting pipe wall thickness. However, in case of misalignment, Contractor shall have to do end preparation without any extra cost. 3) All coupling, nipples etc. as required shall be supplied by contractor but no separate payments shall be made as it is covered under erection rate. 4) NDT of Joints is inclusive in above item rate. For 1/2" to 1.5" contractor have to carry out NDT by DP test, however for 2" to 8" NDT by X-ray/Gamma ray is required. Bidder have to quote accordingly. 5) Item mentioned is for other station piping works (excluding item no.A00900 above) and shall be operated based on site requirement as per the decision of EIC. 6. Nitrogen requirement for pre-commissioning/commissioning shall be paid through item available else where in SOR. 7. Material as required for fabrication shall be made available to contractor as free issue material.				
130	OTHERS CROSSING (by HDD Method)				
131	Complete work for installation of carrier pipeline (between the ROW/Corridor limits as per approved drawing) by HDD method including "Receiving and taking over" owner supplied three layer PE coated line pipes from Owner's designated place to issue/ dump site(s) and transportation to Contractor's stock yard/ work shop/ work site including all handling, loading, unloading, aligning etc. supply of all Contractor supplied material including consumables, manpower, equipment, other resources to work site(s) and acquiring the required land for storage., Execution of, but not limited to, following works in accordance with specifications and instruction of Engineer-in-charge and as per all provision of Contract Document.				
132	Pre-construction survey, necessary cover required over the carrier pipeline from lowest bed level of the stipulated water crossing to be obtained from concerned authority, bed strata data including design & detail engineering and making of crossing drawing for getting their approval from concerned Authority/ Engineer-in-charge, getting work permit/ NOC for water crossings as well as utility crossings (if any) encountered during water crossing prior to start the execution of work. getting work permit/ NOC for water crossings as well as utility crossings (if any) encountered during water crossing prior to start the execution of work.; obtaining historical data/ scour depth (for river) from concerned authority, if required, ascertaining under neath soil & strata, necessary cover required over the carrier pipeline from lowest bed level of the stipulated water crossing including design & calculation and detail engineering and making of crossing drawing for getting the approval from concerned Authority/ Engineer-in-charge, getting work permit/ NOC for water crossings as well as utility crossings (if any) encountered during water crossing prior to start the execution of work. For road crossings, pre-construction survey based on site visit, collection of data (if required) from concerned Authority including design and detail engineering and making of crossing drawings for getting their approval from concerned Authority/ Engineer-in-charge, getting work permit/ NOC for the crossing as well as utility crossings (if any) encountered during crossing prior to start the execution of work.				
133	In case of water body crossings other than river Drilling to the required depth on the banks and bed including maintenance of drill hole in all types of strata (i.e; soft/hard soil, soft/hard rock.....etc), all depth to accommodate the pipeline at all conditions of the waterbody crossings by HDD methods for providing with minimum cover either (i) 1.5m below the scour level / profile, duly approved/ accepted by concerned authority (under whose jurisdictions the crossing lies)---- For rivers with rocky bed or (ii) 2.5m below the scour level / profile, duly approved/ accepted by concerned authority (under whose jurisdictions the crossing lies)---- For major rivers. or (iii) 1.5 m below the bed level / profile, duly approved/ accepted by concerned authority (under whose jurisdictions the crossing lies)---- For minor waterbody crossings. and (iii) In addition to point (i) & (ii), In case of multiple combined X-ing i.e. river alongwith road/ drain, minimum cover requirement as per specification/ concerned authority for each type of x-ing has also to be fulfilled.				
134	In case of road crossing, drilling to required depth from top of road including maintenance of drill hole in all types of strata (i.e; soft/hard soil, soft/hard rock.....etc), all depth to accommodate the pipeline at all conditions encountered during road crossing by approved HDD methods for providing minimum cover specified in code/ specification or the actual depth as decided by concerned authority, whichever is more.				
135	Laying of the carrier pipeline (for both water body and road crossing) by the approved HDD method across the crossing including, strings preparation of carrier , welding, testing, 100% radiography by x-ray, welding repair and retest, coating of field joints with special type Dirax Heat Shrink Sleeve or equivalent (including supply of coating material) and repair of pipeline coating with special PERP-80 repair patch or equivalent material (including supply of repair patch) as per specification, pre-hydrotest of complete strings made for crossing as per specification etc.				
136	Preparation of string (as per requirement), fabrication and welding as per specification and laying of carrier pipeline across the crossing as per approved profile.				
137	Backfilling of the ditch/ trench including restoration and clean-up of area, disposal of drilling fluid & waste etc. to the satisfaction of Engineer-in-charge and /or as directed by Concerned Authority.				



SCHEDULE OF RATES
LAYING OF UNDERGROUND STEEL PIPELINE INCLUDING ASSOCIATED WORKS IN CUTTACK / KHORDA (BHUBANESWAR) GAS UNDER CGD SIX CITIES PROJECT FOR M/s GAIL (I) LIMITED
M/s Akansha Infracore Pvt. Ltd., Bhubaneswar

					INR
Sl. No.	Item Description	Quantity	Units	Unit Rate (Excluding GST)	Amount (Excluding GST)
138	Gauging, Pigging, Cleaning, Post installation hydrotest, dewatering and tie-in with pipeline at either banks etc. all other works including pigging, cleaning, final hydrotesting etc. alongwith mainline works (as mentioned in item no. A00100 above) required as per specifications, codes, approved drawings, calculations, methods and as directed by Engineer-in-charge and provision of contract document; getting NOC from all concerned authority of the facilities crossed.				
139	Details of Crossings				
140	For Other than Rocky Strata				
141	Any type of Crossing viz. Canal / Distributary/ Drain / River / Nala/Road/Pond/ Railway /Culvert Crossings for carrier pipeline of size 200 mm NB x 6.4mm Thk. of API 5L Grade X-52/56	240.00	Meter	5,680.00	1,363,200
142	For Rocky Strata				
143	Any type of Crossing viz. Canal / Distributary/ Drain / River / Nala/Road/Pond/ Railway /Culvert Crossings for carrier pipeline of size 200 mm NB x 6.4mm Thk. of API 5L Grade X-52/56	240.00	Meter	9,372.00	2,249,280
144	Note: (i) Crossing width is tentative and for various crossings. Quantities may increase/decrease or delete as per site situation. Bidder's are advised to visit the site for actual assessment of extent of crossing and to access the maximum extent of cover which may have to be provided. Actual string length for HDD shall be as per design calculations so that pipe is not under stress as permitted by codes/ specifications. Final length of string shall be decided after decision of minimum cover requirement by concerned Authority/ Engineer-in-charge. (ii) Payment for the length of final tied-in carrier pipeline string are inclusive in the above item rate and no separate payment shall be made under other item mentioned elsewhere. (iii) The Contractor has to quote on running meter basis for X-ing. No any extra payment shall be made against this item. (iv) Width of above crossings indicated are tentative and for multiple crossings. This shall be as per requirement at site for crossing at different locations. ix) Rock drilling shall be considered at location/strata for which the core recovery is min 25%. Expenditure to establish the Strata as rock through lab test or any other approved methodology shall be paid through item available else where in SOR.				
145	GEOTECHNICAL INVESTIGATION, HYDROGRAPHICAL & HYDROLOGICAL SURVEY OF RIVER/CANAL/NALA/ WATERBODIES				
146	Carrying out Pre-construction survey and detail survey for crossings after liaisoning & coordination from concerned authority. Detail survey includes minimum but not limited to carrying out complete Geotechnical Investigation (including all laboratory test & field test), Hydrographical & Hydrological Survey of River / Canal/Nala/Waterbodies for the purpose of crossing the River / Canal/Nala/Waterbodies by HDD method including obtaining work permit / NOC from concerned authority complete in all respect as per Scope of Work & Technical Specification and instruction of Engineer-In-Charge (EIC)/RCM and submitting Final Report & Drawing (along with soft copy) incorporating all field and laboratory data, Drawings, Maps, Data etc. (One Lot) in an approved format with full scale for Soil Investigation, Scour Depth etc. in accordance with the Technical Specification, Drawings, approved QAP, implementation schedule and other provisions of the Tender Document and instructions of the Engineer-in-charge (EIC)/RCM.				
147	For road/rail crossings, pre-construction survey based on site visit, topographical survey, geotechnical investigation to establish bed strata upto sufficient depth, collection of data (if required) from concerned Authority including design and detail engineering and making of HDD Profile drawings for crossing and getting their approval from concerned Authority/ Engineer-in-charge including carrying out liaisoning & co-ordination works and obtaining permission / NOC from these authorities for the crossing as well as utility/foreign pipeline crossings (if any) prior to start the execution of work.				
148	GEOTECHNICAL INVESTIGATION, HYDROGRAPHICAL & HYDROLOGICAL SURVEY OF RIVER/CANAL/NALA/ WATERBODIES				
149	Crossing of NALA/WATERBODIES in single stretch / shot (Size 8" NB) -(Measurement will be carried out on the basis of individual crossing profile width and payment will be done accordingly)	840.00	Meter	852.00	715,680
150	Crossing of RIVER/CANAL in Single stretch / shot (Size 8" NB)(Measurement will be carried out on the basis of individual crossing profile width and payment will be done accordingly)	240.00	Meter	1,022.40	245,376
151	GEOTECHNICAL INVESTIGATION & CROSSING SURVEY OF RAILWAY / ROAD CROSSING				
152	Crossing of Road/Railway in single stretch / shot (Size 8" NB)(Measurement will be carried out on the basis of individual crossing Profile width and payment will be done accordingly)	240.00	Meter	852.00	204,480
153	Note : (i) For Nala/Water Bodies/River/Canal etc Bidder/contractor have to execute Geo-technical, hydrological & hygraphical survey as per technical specification and direction of EIC ii)for railway/ road crossings contractor have to execute geotechnical & crossing survey as per technical specification and direction of EIC.				



SCHEDULE OF RATES
LAYING OF UNDERGROUND STEEL PIPELINE INCLUDING ASSOCIATED WORKS IN CUTTACK / KHORDA (BHUBANESWAR) GAS UNDER CGD SIX CITIES PROJECT FOR M/s GAIL (I) LIMITED
M/s Akansha Infracore Pvt. Ltd., Bhubaneswar

Sl. No.	Item Description	Quantity	Units	INR	
				Unit Rate (Excluding GST)	Amount (Excluding GST)
154	(ii) For geotechnical survey/investigation: 1. For River/Canal - Two Nos Bore holes each at both banks of depth 15 meter and in river bed bore holes of depth 25 m at a distance of 75 meter centre to centre. 2. For Nala/Other Water Body Crossings..etc - One No Bore holes each at both banks of depth 15 meter and on bed bore holes of depth 15 m at a distance of 75 meter centre to centre. 3. For Railway Crossings/Road Crossings ..etc - One No Bore holes each at both sides of depth 10 meter. 4.Laboratory test & field test shall be as per technical specification & tender documents. 5. Bank width for Canal/nala/other water body crossings and survey length for railway crossings/road etc will be as per site conditions. Survey has to be done of bank width/survey width and minimum 50 meter at both end expect at river Crossings. For River crossing survey has to be done of bank width and minimum 100 meter at both end. 6. Rock shall be considered at location at which the core recovery is min 25%. 7. Quantity indicative above is tentative and for multiple crossings of size 8"NB dia pipeline with in the GA. 8. Payment for carrying out liaisoning & co-ordination works for Crossings and obtaining permission / NOC from these authorities is in-built in above item rate				
155	Pipe Laying using Manual / Machine Moiling technique (without Casing) for CS pipe				
156	Survey of under ground utilities, execution of the work as per specification, including excavation of pits moiling with the hole size not exceeding 20% of the pipe dia, jointing and insertion of carrier pipe and restoration of the pits to original condition, submission of As-Built Graph as per specifications and the instruction of Engineer-in-charge.				
157	Laying of 8" (219.1 mm) OD, 6.4 mm wall thk of API 5L Grade X-52/56 carrier pipe	72.00	Meter	3,692.00	265,824
158	Note-(i) Payment for the length carrier pipeline string shall be moiled carrier pipeline length plus two meters. Payment for additional length of carrier pipeline string shall be paid under SOR item no.A00101 (ii) Width of above crossings indicated are tentative. The width indicated are not for any single crossings. This shall be as per requirement at site for crossing at different locations. (iii) Adopting the manual or machine moiling shall be decided at site based on the width to be crossed.Ideally 2.0 meter or more width to be crossed through machine moiling.In this regard decision of EIC shall be final and binding to the contractor. (iv) payment for Post hydrotest shall be done through relevant SOR item mentioned elsewhere.				
159	Excavation beyond 1.5m depth in case of crossing of utilities/ drain/ culverts etc. through open cut upto the following depth (including restoration of the damaged area to its original condition and satisfaction of the Engineer-in-charge / concerned authorities) .The other activities are as per A00101				
160	In Normal Surface / Unprepared surface (Katcha Surface)				
161	Deeper than 1.5 m & upto 2.5 m below existing level (for 200 mm NB Pipeline)	60.00	Meter	454.40	27,264
162	Deeper than 2.5 m & upto 4.5 m below existing level (for 200 mm NB Pipeline)	48.00	Meter	624.80	29,990
163	In a built-up surface / Hard surface of any type including metal, concrete, bituminous, tiled, brick lined soft/ hard rock which is breakable in pieces manually (without use of pneumatic machine) etc. All tiles/ slabs/ curb stones etc. removed during excavation shall be placed properly. The other activities are as per A00101				
164	Deeper than 1.5 m & upto 2.5 m below existing level (for 200 mm NB Pipeline)	60.00	Meter	624.80	37,488
165	Deeper than 2.5 m & upto 4.5 m below existing level (for 200 mm NB Pipeline)	48.00	Meter	795.20	38,170
166	Note: (i) Quantities indicated in tentative and for various locations. (ii) Prior permission from EIC is required before execution of above item.				
167	REPAIR OF DEFECT IN PIPES (NOT ATTRIBUTED TO CONTRACTOR)				
168	Repair of defects on Owner supplied linepipes of all grades and wall thickness as specified in following items, noted and recorded at the time of "receiving and taking over" by Contractor in the presence of Engineer-in-charge.				
169	Cutting and rebeveling for dents in bevels exceeding 3 mm in depth for pipe sizes:				
170	Specified OD, mm				
171	219.1	2.00	Nos.	198.80	398
172	Jack out of dents in bevels ranging between 1 mm and 3 mm in depth for pipe sizes:				
173	Specified OD, mm				
174	219.1	2.00	Nos.	227.20	454
175	REPAIR OF COATING DEFECTS (NOT ATTRIBUTED TO CONTRACTOR)				
176	Repair of Holiday in Coating (Noted and recorded at the time of "receiving and taking over")				
177	Supply of all coating repair materials as per requirements of specification to be compatible with line pipe coating material, supply of all consumables, utilities, equipments and all manpower required, pipe cleaning and surface preparation, repairing of coating defects (resulting in holiday) and testing including all handling, transportation, etc. for line pipes, performing all works necessary for the completion of the works strictly in accordance with relevant specification and instructions of Engineer-In-Charge. This rate shall be applicable per sq. cm of the exposed steel area exposed steel area.	50.00	Sq. cm	312.40	15,620
178	PERMANENT MARKERS				
179	Supply, fabrication and installation of all types of permanent markers along the route including all associated civil works such as excavation in all types of soil, construction in all types of soil, construction of pedestals and grouting with concrete, clearing, supply and application of approved colour and quality of primer and paint, stencil letter cutting for numbers, direction, change etc., restoration of area to original condition and performing all works as per drawing, specification and instruction of engineer-in-charge.				
180	Pipeline RCC boundary / route marker as per drawing	50.00	Nos.	568.00	28,400
181	Pipeline warning markers with post & foundations	10.00	Nos.	3,408.00	34,080
182	Pipeline direction marker with post & foundations	10.00	Nos.	3,976.00	39,760
183	Pipeline KM with post & foundations	3.00	Nos.	3,692.00	11,076
184	Navigable Waterway Markers	2.00	Nos.	22,720.00	45,440

SCHEDULE OF RATES
LAYING OF UNDERGROUND STEEL PIPELINE INCLUDING ASSOCIATED WORKS IN CUTTACK / KHORDA (BHUBANESWAR) GAS UNDER CGD SIX CITIES PROJECT FOR M/s GAIL (I) LIMITED
M/s Akansha Infracore Pvt. Ltd., Bhubaneswar

Sl. No.	Item Description	Quantity	Units	INR	
				Unit Rate (Excluding GST)	Amount (Excluding GST)
185	Note: Qty of above markers are tentative and may increase or decrease as per site situation. Contractor have to take prior approval from EIC before fabrication or order placement.				
186	LEAK / BURST (ATTRIBUTABLE TO OWNER)				
187	All works for locating leak / burst in Company's supplied material only (occurred during hydro-static testing) including necessary repairing/replacing defective pipe lengths including cutting and out and removing the defective pipe, pre-testing and welding of replacement pipe, NDT of welds, repair and retesting of defective welds, coating/painting of replacement pipe, pretesting the replacement pipe into mainline/branch line, coating/painting of welding joints, cleanup, retesting including cost of all labour materials, consumables and performing all works in accordance with the provisions of the Contract document and as directed by Owner /Engineer-in-charge/ Engineer in-charge				
188	For 8" NB Line	1.00	Lumpsum	28,400.00	28,400
189	Note: i) This rate is applicable for manufacturing defects in Owner supplied material only. ii) Leak detection, its rectification and successfully re-hydrotesting shall be carried out as per approved procedure by Contractor with a view that completion of all activity for successful hydrotesting is not inordinately extended which will hamper the overall project schedule.				
190	Gauging (Applicable for main steel pipeline hydrostatic test, Pre & Post installation hydrostatic test for crossings)				
191	As per specification and procedure approved by Engineer-in-charge (EIC)/ RCM.				
192	200 6.4 API 5L Gr. X-52/56 3 Layer PE Double random Coating (Externally) (approx. 11.5 m to 12.5 m)	3000.00	Meter	22.72	68,160
193	NOTE- (i) The quantities mentioned against the above SOR items are tentative and may vary depending upon the site condition during execution stage. (ii) The total quantities mentioned against the above SOR items are applicable for main steel pipeline and multiple/various crossings at different location within GA. (iii) Payment for above item shall be made only for the certified executed length of pipeline by Engineer-in-charge (EIC)/ RCM. (iv) The requirement of gauging of main steel pipeline, prehydrotest & after pulling of HDD section shall be carried out as per MECO specification / OISD / PNGRB and same shall be approved by Engineer-in-charge (EIC)/ RCM.				
194	Post Hydrostatic testing of Buried Pipeline				
195	Carrying out cleaning, gauging, pigging and hydrostatic testing of complete pipeline section laid by HDD/Open cut method as approved by EIC/RCM to specified pressures (i.e. 1.5 times of the design pressure) for 24 hours holding period; providing all equipment, pumps, test headers, fittings, instruments, dead weight tester, pressure recorder, temperature recorder, pressure & temperature gauge etc., and services, supervision, labour, consumables, water including supply of corrosion inhibitor, air, etc. as required for successful completion of hydrotesting of pipeline to acceptance criteria as per specifications, codes, approved drawings, calculations, methods and as directed by Engineer-in-charge and provision of contract document. Complete dewatering and swabbing of the pipeline as per specification and to the entire satisfaction of the EIC/RCM.				
196	For 8" NB Line	2500.00	Meter	136.32	340,800
197	Notes: i) The above quantity is not for a single section but for no. of sections for pipeline laying. ii) The quantities mentioned against the above SOR items are tentative and may vary depending upon the site condition during execution stage. iii) Payment for Gauging activity mentioned above shall be made under SOR item No.A002000 mentioned elsewhere in this SOR.				
198	Drying by Vacuum drying / Super air drying / Super dry nitrogen				
199	Complete work of carrying out drying by Vacuum drying / Super air drying / Super dry nitrogen & commissioning of pipeline section including supply of manpower, equipments & consumables (nitrogen required for purging etc.), materials for all temporary works and performing all associated works, complete as per the relevant specifications, other provisions of Contract document and instructions of Engineer-in-Charge.				
200	For 8" NB Line	2500.00	Meter	23.86	59,640
201	Note: The quantities mentioned above for various pipeline sections. Final methodology of drying shall be decided by EIC at the time of execution.				
202	Commissioning assistance / commissioning for underground pipeline length and stations				
203	For 8" NB Line	2500.00	Meter	10.22	25,560
204	Supply of Nitrogen & Purging in pipeline system				
205	Supply of nitrogen in gaseous form and its Purging in aboveground /underground pipeline network to the specified acceptance criteria, including supply of all equipment, man-power, consumables materials for all temporary works and performing all associated works, complete as per the relevant specifications, other provisions of Contract document and instructions of Engineer-in-charge.	100.00	M3	227.20	22,720
206	Preservation of Pipeline				
207	Preservation of pipeline sections and associated facilities (in event of delay in ROU acquisition/statutory permissions, commissioning, other unforeseen reasons) including supply of nitrogen, all consumables, all equipment, man-power, etc. complete as per the requirements of specifications, other provisions of Contract document and instructions of Engineer-in-charge.				
208	By filling and pressurizing with nitrogen to a pressure of 2 bar(g) for a period of one month.				
209	For 8" NB Line	2500.00	Meter	10.22	25,560
210	For every additional period of one month or part thereof				
211	For 8" NB Line	2500.00	Meter	6.82	17,040
212	Notes: i) All accessories i.e. Two nos. of dished end caps and two nos. of 3/4" PG to be considered per section and rate for the same shall be quoted by bidder under this item. ii) If month is partially complete, payment shall be made on prorata basis.				
213	LONG RADIUS BENDS				
214	Supply of Long Radius Bends (R = 3D) for 8" dia pipe, X-52/56 (thk. 6.4 mm) as per specification enclosed in Tender Document.				

SCHEDULE OF RATES
LAYING OF UNDERGROUND STEEL PIPELINE INCLUDING ASSOCIATED WORKS IN CUTTACK / KHORDA (BHUBANESWAR) GAS UNDER CGD SIX CITIES PROJECT FOR M/s GAIL (I) LIMITED
M/s Akansha Infracore Pvt. Ltd., Bhubaneswar

INR

Sl. No.	Item Description	Quantity	Units	Unit Rate (Excluding GST)	Amount (Excluding GST)
215	20° - 30°	8.00	Nos.	11,360.00	90,880
216	31° - 45°	12.00	Nos.	12,780.00	153,360
217	46° - 60°	6.00	Nos.	14,200.00	85,200
218	61° - 90°	8.00	Nos.	17,040.00	136,320
219	Note : The quantities of LR Bends may vary. For final quantity, approval shall be taken by EIC before order placement.				
220	SUPPLY OF WARNING MAT Supply of warning mat for pipeline as per the technical specification enclosed in the bid document. The material of warning mat shall be of high density polyethylene and non biodegradable type. It shall have non-toxic and anti rodent properties.				
221	8" NB Pipeline	2250.00	Meter	39.76	89,460
222	Note: Quantity mentioned above is tentative and may increase/decrease based on site requirement. Bidder have to take prior approval from EIC, before placement of order.				
223	DIGITIZATION OF RADIOGRAPHY FILMS:				
224	Carrying out digitization of all radiographic films (mainline and terminal piping) in the form of digital images (which can then be archived safely for long life and electronic retrieval) complying to all the legal local rules, codes and international standards. Submission of digital images of radiographic film along with compatible software in 6 sets of CD/DVD/Pendrive for electronic viewing /retrieval.				
225	For 8" NB Line	1.00	Lumsum	142,000.00	142,000
226	VIDEOGRAPHY & PHOTOGRAPHY				
227	Carrying out the videography & Photography of the pipeline section construction activities. The work shall be carried out in two phases.				
228	Videography & photography of the entire route prior to construction activities i.e. pipeline route, location of various stations, TOP, all crossing like road / railways, river, etc.				
229	Videography & photography during construction activities of Mainline Works i.e. Stringing, Welding, Radiography, Joint Coating, Lowering, Backfilling, etc. performing all works as per specification of EIC and other provision of contract document.				
230	For 8" NB Line	1.00	Lumsum	85,200.00	85,200
231	TRANSPORTATION OF FITTINGS, FLANGES, VALVES, BARREL ETC.				
232	"Receiving and taking over", handling, lifting, loading on truck, transportation and unloading of Company supplied DRS/MRS/, Metering Skids, fittings, flanges and valves ...etc from any storage yard (other than the designated storage yard for the project) to worksite / contractor's storage yard/ any other storage yard or as decided by EIC. The above work also includes stacking the DRS/MRS/Metering Skids, flanges, fittings and valves etc. properly. Above work shall be carried out as per standard drawing, specification, instruction of Owner and other provision of contract document.	400.00	MT-Km	15.34	6,134
233	Notes: i) The quantities given in above item no. are tentative only and shall not be considered to be binding. The quantities may be increased, decreased or deleted as per the actual site requirement and instructions / recommendations of Owner. The unit rate shall be operated to work out the final payment to the contractor. ii) Above price shall be inclusive of all type of taxes & duties, transit insurance during transportation & other insurance etc. including all financial & commercial implication as per the tender document. No other payment except as per quoted unit rate & executed quantities will be payable by the Owner. iii) Safe storage of transported material till installation shall be part of the above item. Contractor has been advised to quote accordingly.				
234	TRANSPORTATION OF LINE PIPE				
235	"Receiving and taking over", handling, lifting, loading on trailers, transportation and unloading of Company supplied line pipe from any storage yard (other than the designated storage yard for the project) to worksite / contractor's storage yard/ any other storage yard or as decided by EIC. The above work also includes stacking the pipes on wooden sleepers/ sand pads. Above work shall be carried out as per standard drawing, specification, instruction of Owner and other provision of contract document.	5000.00	MT-Km	12.50	62,480
236	Notes: i) The quantities given in above item no. are tentative only and shall not be considered to be binding. The quantities may be increased, decreased or deleted as per the actual site requirement and instructions / recommendations of Owner. The unit rate shall be operated to work out the final payment to the contractor. ii) Above price shall be inclusive of all type of taxes & duties, transit insurance during transportation & other insurance etc. including all financial & commercial implication as per the tender document. No other payment except as per quoted unit rate & executed quantities will be payable by the Owner. iii) Safe storage of transported linepipe till installation, reconciliation & handingover to client shall be part of the above item. Contractor has been advised to quote accordingly.				
237	Pipeline Laying Liaisoning & Co-ordination (including utility crossing) and obtaining permission / NOC from the statutory / concerned authorities. Assistance in ROU opening & closing and their maintenance/ management.				
238	Submitting request for (after obtaining the letter from client) permission, follow up, assisting in site inspections / route survey / site report making/making site inspection drawings, submitting at designated offices, resubmission after correction, modification if required, soft and hard copy in nos. as required /if required in sizes, and collecting permission from the statutory authorities including NHAI, PWD, Railways, Irrigation, Forest, Municipal Corporation, District administration, River Authority, SEZ etc. Obtaining work permits /NOC from various statutory authorities having jurisdiction before execution of the work and complying with all stipulations /conditions/recommendations of the said authorities. Only statutory fees shall be paid by the owner. Assistance in required length and width/restricted width of ROU opening & closing and their maintenance/ management both side of the crossings.				
239	For 8" Pipeline	2500.00	Meter	28.40	71,000
240	Note : Execution of above item is subjected to the requirement of site.				



SCHEDULE OF RATES
LAYING OF UNDERGROUND STEEL PIPELINE INCLUDING ASSOCIATED WORKS IN CUTTACK / KHORDA (BHUBANESWAR) GAS UNDER CGD SIX CITIES PROJECT FOR M/s GAIL (I) LIMITED
M/s Akansha Infracore Pvt. Ltd., Bhubaneswar

Sl. No.	Item Description	Quantity	Units	INR	
				Unit Rate (Excluding GST)	Amount (Excluding GST)
241	CIVIL WORKS				
242	EARTH WORK IN EXCAVATION/ SITE GRADING AND BACKFILLING				
243	Earth work in excavation /site grading in all kinds of soil including soft rock in any plan dimension up to required depth including backfilling of excavated earth at any location in layers of 300mm and compacted up to 95% to its MDD at all heights and depths. Surplus and unserviceable earth shall be disposed up to any lead in all conditions. Soil to be levelled and neatly dressed complete in all respect as per scope of work, detailed construction drawings, technical specifications and direction of the Engineer-in-Charge.	2.00	CUM	426.00	852
244	Note:- 1. This Rate shall be applicable only for excavation which are not included as a part of respective SOR Item. 2.The Contractor shall take into account in his quoted rate the provision for excess excavation required for necessary working space, cutting in slopes etc., which may be required for excavation and other allied works and refilling the side slopes and working space in layers as per requirement. 3.Rate to include cost of all labour, tools, tackles, equipment, hire charges, shoring, bailing and pumping out water as required etc. with all bye works and sundry works complete in all respects. 4.NET CUM of excavated quantity in CUM shall be measured for payment. 5. To be read in conjunction with Particular Job Specification.				
245	BRICK WORK				
246	Providing and laying brick work with brick class designation M-5.0 of IS:1077 in Cement Mortar 1:4 (1cement : 4 sand) in steps, load bearing structures, drains, or at any other location at all depths & height for all leads including providing required finishes, curing, scaffolding, etc., complete as per specifications and drawings with all bye-works as per direction of the Engineer-in-charge.	2.00	CUM	4,118.00	8,236
247	Note:- 1.Rate to include cost of all labour, tools, tackles, equipment, hire charges, supply of all materials such as minimum 43 grade cement (OPC), bricks, finishes, bitumen, other minor construction materials, shuttering, staging, masonry work, excavation, PCC M10, plastering with 15 mm thick cement plaster on exposed faces with 1:4 cement mortar(1 cement : 4 Sand) , painting with bitumen etc. as per requirement with all bye-works and sundry works complete as per drawings. 2. To be read in conjunction with Particular Job Specification.				
248	PLAIN CEMENT CONCRETE				
249	Supplying and laying plain cement concrete of grade M 10 with stone aggregate 40mm down grade (including shuttering if required) in all types of concrete works including levelling courses below foundations, mass concrete works, chambers, cable trench, under floors and any other locations, at all levels and locations (which are not covered as part of composite items) as per drawings, specifications and directions of the Engineer-in-charge.	2.00	CUM	4,146.40	8,293
250	Note :- 1.Rate to include cost of all labour, tools, tackles, equipment, hire charges, supply of all materials, shuttering in all conditions etc. with all bye works and sundry works. 2. To be read in conjunction with Particular Job Specification.				
251	REINFORCED CEMENT CONCRETE				
252	Providing and laying Reinforced Cement Concrete of grade M-25 with 20mm and down grade crushed stone aggregate in all types of structures like foundations, beam, columns, pedestals, pedestal bases, pipe supports, sleepers, cable trench, RCC retaining wall foundation for boundary wall etc. including excavation, PCC M10 in mud mat, shuttering, construction joints, bitumen painting on surfaces in contact with soil, supplying and fixing MS inserts, finishes etc. at all depths and levels complete as per drawings, specifications and directions of the Engineer-in-charge.	2.00	CUM	5,964.00	11,928
253	Note :- 1. Rate to include cost of all labour, tools, tackles, equipment, hire charges, supply of all materials such as minimum 43 grade OPC cement including sulphate resistant cement for sub-structures, inserts, bolts, conduits, bitumen, excavation, PCC M-10 in mud mat, other minor construction materials, shuttering , staging, testing of concrete, curing etc. except reinforcement steel with all bye works and sundry works complete. 2. To be read in conjunction with Particular Job Specification.				
254	REINFORCEMENT STEEL				
255	Supplying and Fabricating and Fixing in position HYSD Steel Reinforcements/ TMT Grade Fe-415/Fe 500D conforming to IS1786-2008 at all levels and positions including the Cost of transportation, Straightening, Cutting, Bending, Cranking, Binding, Welding, Provision of necessary Chairs and Spacers, Preparation of bar bending schedule, getting the same approved by EIC etc., complete as per Drawings and Specifications and including Cost of binding wire, Labour etc., all complete in all respects as per scope of work, detailed construction drawings, technical specifications and direction of Engineer-in-charge. The Chairs and Spacer Bars provided will not be measured for payment.	0.50	MT	59,640.00	29,820
256	Note :- 1. Rate to include cost of all labour, tools, tackles, equipment, hire charges, supply of all materials such as steel Reinforcement, binding wire and other minor construction materials, testing etc. all bye works and sundry works. 2. Chairs, Laps, Spacers, Wastage etc. shall be to contractor's account. 3. To be read in conjunction with Particular Job Specification.				
257	CONCRETE PAVEMENT				
258	Providing and laying reinforced cement concrete pavement 150 mm thick in M-25 grade with 20 mm and down grade crushed stone aggregate in pavement, including earthwork in excavation, preparation of base (i.e. compacted subgrade, 200 thk sand and 100 thk PCC M-10 grade), leaving pockets if necessary, making recess, projections, fixing inserts conduit pipes (GI, PVC, HDPE, etc.) laying in alternate panels, filling the gaps between the panels with bitumen sand mix filler material etc., making slopes, finishing edges, leaving bars for pedestals & sleepers including providing sand fill isolation , shuttering, providing and fixing reinforcing steel, curing, chipping and modification works etc. as specified in any shape, thickness, position and finishing the top surface smooth as per requirement etc. all complete as per drawings, specifications and directions of the Engineer-in-charge.				
259	150mm thick in Pavements in Process Areas (Type - I)	25.00	SQM	1,505.20	37,630



SCHEDULE OF RATES

**LAYING OF UNDERGROUND STEEL PIPELINE INCLUDING ASSOCIATED WORKS IN CUTTACK / KHORDA (BHUBANESWAR) GAS UNDER CGD SIX CITIES PROJECT FOR M/s GAIL (I) LIMITED
M/s Akansha Infracore Pvt. Ltd., Bhubaneswar**

Sl. No.	Item Description	Quantity	Units	INR	
				Unit Rate (Excluding GST)	Amount (Excluding GST)
260	Note :- 1. Rate to include cost of all labour, tools, tackles, equipment, hire charges, supply of all materials, providing and fixing reinforcement steel, shuttering, earthwork in excavation and backfilling using serviceable earth in all conditions, preparation of base, etc. with all bye works and sundry works. Cost of works towards pipe supports & sleepers being raised from pavement is covered under respective RCC items. 2. To be read in conjunction with Particular Job Specification.				
261	VALVE PIT				
262	Construction and handing over of Brick Valve Pit as per tender drawing, technical specification and direction of engineer-in-charge complete in all respect. Scope of work shall be as per tender drawing.				
263	Construction and handing over of RCC Valve Pit of approx. 1.8m x 1.8 m in size (internal dimension) as per technical specification and direction of engineer-in-charge complete in all respect. Scope of work shall be as per Sketch attached with the tender.	1.00	Nos	88,040.00	88,040
264	Construction and handing over of RCC Valve Pit of approx. 2.0m x 2.0 m in size (internal dimension) as per technical specification and direction of engineer-in-charge complete in all respect. Scope of work shall be as per Sketch attached with the tender.	1.00	Nos	110,760.00	110,760
265	STEEL STRUCTURAL WORKS				
266	Steel structure Fabrication				
267	Supplying, Fabricating & Erecting in position steel structures fabricated out of MS Girders, channels, Tees, angle, flats, plate, square hollow sections pipes etc. conforming to IS:2062 and/or from pipes conforming to IS:1161 for structural purpose for cascade supporting structure, loading/unloading platform, Gratings for platform, catladder, handrails, hoardings for sinages, Lcv stand, etc. of any size/dia for required design including cutting, welding, bolting, hoisting, fixing in position, including application of one coat of primer at shop and second coat of primer at site after erection and two coats of finishing paint at site. The work is to be completed in all respect as per specification, scope of work, detailed construction drawings and directions of the Engineer-in-charge.	200.00	KG	71.00	14,200
268	[Rate to include cost of all labour, nut, bolts, tools, tackles, hire charges royalties, levies, transportation, scrap value, gas cutting, welding, other consumables, paints, compressed air, water, electric power etc. all complete.]				
269	Providing and fixing Fencing Structure				
270	Supplying, fabricating & fixing steel structural fencing fabricated from pipes conforming to IS:1161 and plates conforming to IS:2062 & fixing of GI weldmesh made from 3mm GI wire @ 75 mm bothways to structural steel frame by means of welding/bolting, including applying two coats of approved quality of synthetic enamel paint over a priming coat of in approved shade including supply of all raw materials, bolts, electrodes, transportation, including making pokets & pouring with PCC (1:2:4) in of block 500x500x500 for fixing of posts etc complete as per enclosed drawing, technical specifications, scope of works and directions of the Engineer-In-Charge.				
271	Fencing height 2.1m	50.00	RM	2,073.20	103,660
272	Notes:- 1) The quantities indicated are estimated values and hence are approximate. Final payment will be made based on actual quantities to be certified by the Purchaser. 2) The cost of MS bolts (permanent and service), washers, electrodes, putty, gases, cost of straightening the raw materials, cutting of flats from plates and providing splices, paints, tools, plants, etc., as required for the work shall be deemed to be included in the quoted rates. 3) All handling and transport charges of raw materials and fabricated structures including double handling, as required, for completion of work in accordance with 4) Time schedule, are deemed to be included in the quoted rates 5) All accessories like MS tower bolts, MS Pivot, MS Wheels, MS Tee section, locking arrangement etc. shall be measured by weight only. 6) Contractor shall ensure proper alignment and smooth operation of Gate				
	Total Excluding GST				16,336,844
	Total Including GST				19,277,476



MECON LIMITED

(A Government of India Enterprise)

SCOPE MINAR, 15th Floor, North Tower, Laxmi Nagar District Centre,

Delhi – 110 092

Phone No. : 22401129, 22447417

Corporate Identification No(CIN):U74140JH1973GOI001199

FAX OF ACCEPTANCE (FOA)

FOA NO. 05/51/Q7NT/GAIL/001-I-LVD/FOA-892

DATE: 29.10.2022

TO : M/S AMRITA AND ASSOCIATES
FAX : -
EMAIL : amritaassociates@yahoo.com
ATTN : MR. VINOD CHANDRAKUMAR, PROPRIETOR
FROM : SR. GM (CONTRACTS), MECON LIMITED, DELHI

PLEASE REFER TO YOUR OFFER NO. NIL DATED NIL AND ALL OTHER SUBSEQUENT CORRESPONDENCE AGAINST BIDDING DOCUMENT NO. 05/51/Q7NT/GAIL/001-I-LVD (TENDER ID : 2022_GAIL_110017) DATED 30.04.2022, COMM. CORR.#1 DATED 13.05.2022, COMM. CORR.#2 DATED 13.05.2022, RPBQ DATED 13.05.2022 & COMM. CORR.#3 DATED 20.05.2022 FOR LAYING OF UNDERGROUND STEEL PIPELINE INCLUDING ASSOCIATED WORKS IN CUTTACK/KHORDA (BHUBANESHWAR) GAS FOR GAIL (INDIA) LIMITED (.)

WE HEREBY ISSUE THIS FAX OF ACCEPTANCE (FOA) FOR **100% OF THE SCOPE OF WORK** OF SUBJECT TENDER AT AN ESTIMATED CONTRACT VALUE OF **RS. 1,63,36,844/-** (INDIAN RUPEES ONE CRORE SIXTY-THREE LAKH THIRTY-SIX THOUSAND EIGHT HUNDRED FORTY-FOUR ONLY) EXCL. GST. GST SHALL BE PAYABLE EXTRA AS PER TENDER PROVISIONS. (PRESENT RATE OF GST@18%) (.)

THE DETAILED BREAKUP OF ABOVE ORDER VALUE IS ENCLOSED AS ANNEX-1(.)

THE COMPLETION SCHEDULE SHALL BE 3 1/2 (THREE & HALF) MONTHS FROM THE DATE OF FAX OF ACCEPTANCE (FOA) FOR MECHANICAL COMPLETION INCLUDING MOBILIZATION PERIOD OF 15(FIFTEEN) DAYS AND THEREAFTER 15 (FIFTEEN) DAYS FOR DRYING, COMMISSIONING/GAS-IN (.)

YOU ARE REQUESTED TO SUBMIT "CONTRACT PERFORMANCE GUARANTEE" @ 3% OF ORDER/CONTRACT VALUE [EXCLUDING GST] WITHIN 30 DAYS OF THIS FAX OF ACCEPTANCE AS PER TERMS AND CONDITIONS STIPULATED IN CLAUSE NO. 37 OF INSTRUCTIONS TO BIDDERS (ITB) OF BIDDING DOCUMENT(.)

YOU ARE REQUESTED TO CONTACT PROJECT COORDINATOR (MR. PRATEEK MAHESHWARI, MANAGER (CGD), MECON LIMITED, EMAIL ID: PMAHESHWARI@MECON.CO.IN) FOR FURTHER INSTRUCTIONS REGARDING EXECUTION OF THIS WORK (.)

ALL OTHER TERMS AND CONDITIONS SHALL BE AS PER BIDDING DOCUMENT & CORRIGENDUM THERE OF AS STATED ABOVE AND AS AGREED TILL DATE (.)

A DETAILED LETTER OF AWARD SHALL FOLLOW (.)

FOR & ON BEHALF OF GAIL (INDIA) LIMITED
(BY ITS CONSTITUTED ATTORNEY)

(RAKESH SHARMA)
SR. GM (CONTRACTS)
MECON LIMITED, DELHI

CC: BY COURIER TO:

M/s Amrita and Associates

IRC Village, N5/147, Nayapalli, Bhubaneswar,
Khordha, Odisha-751015

Tel No.: +91-9324702956

SCHEDULE OF RATES
LAYING OF UNDERGROUND STEEL PIPELINE INCLUDING ASSOCIATED WORKS IN CUTTACK / KHORDA (BHUBANESWAR) GAS UNDER CGD SIX CITIES PROJECT FOR M/s GAIL (I) LIMITED
M/s Amrita and Associates, Bhubaneswar

Sl. No.	Item Description	Quantity	Units	INR	
				Unit Rate (Excluding GST)	Amount (Excluding GST)
1	MAINLINE WORKS				
2	CARBON STEEL PIPES				
3	PIPELINE LAYING / INSTALLATION				
4	"Receiving and taking over" as defined in the specifications, handling, loading, transportation and unloading of Owner supplied 3-Layer PE coated and bare linepipes from Owner's designated stock-yard to Contractor's stock yard/workshop/work-site including preliminary activities, preparation of drawings, wherever required for crossing etc. including handling, stacking, stringing on the pipeline Right-of-Use/ pipeline route alignment, carrying out inspection of Owner supplied materials including linepipes at the time of taking over, laying/ installation of coated linepipes as per specification wherever required depending on site condition including execution of all works, "taking over", handling, including loading and unloading, transportation of Owner supplied materials other than linepipe from Owner's designated place (s) of issue to work site including arrangement of all as listed above..				
5	Additional lands required for Contractor's storage, fabrication, access for construction, procurement and supply of all materials (except Owner supplied materials), consumables, equipment, labour and other inputs, carrying out all temporary, ancillary, auxiliary works, ready for commissioning of pipeline as per drawings, specifications, other provisions of Contract document and instructions of Engineer-in-charge, including but not limited to carrying out the following works:				
6	Survey of route and detours required at the time of execution including preparation of construction drawings showing survey details, and submit same to GAIL/PMC for review / approval.				
7	Staking and installation of construction markers, clearing, fencing, grubbing, full filling all the requirements of various statutory/ environment authorities to the entire satisfaction of concerned authorities, grading of work area.				
8	Barricading the pipeline construction area prior to execution of the works as per drawings enclosed with tender document and to the entire satisfaction of Owner / Engineer-in-charge.				
9	Trenching to all depths by excavation and to a width to accommodate the carrier pipeline during lowering & backfilling in all types of soils and rocky strata including different type of pavement / footpath / roads (other than concrete roads) etc. including breaking, chiselling or otherwise cutting etc. as required and storing excavated soil, reusable materials at designated area as directed by Engineer in charge and to a width to accommodate the pipeline as per the relevant standard/ specification etc. [The minimum depth of the top of pipeline shall be 1 m measured from top of pipeline coating to the top of undisturbed surface of the soil or as per SCC/ relevant code, whichever is higher]. Dewatering of trenches if required as per site condition.				
10	Carrying out repairs of pipe defects/ replacement in case of irreparable defects and repairs of defects of pipe coating not attributable to Owner including defects/ damages occurring during transportation / handling.				
11	Stringing of line pipes along pipeline trench / ROU provided on sand/soft soil bags including all supplies, manpower & machinery etc.				
12	Aligning, bending, cutting and bevelling (as required) of pipes for welding and field adjustments including pipe fittings, welding, carrying out non-destructive testing of welds as required including 100% radiography by X-ray either by internal source or external source based on site conditions/front availability and in this regard decision of EIC shall be final and binding to the contractor (In case placement/installation of X-ray equipment is not feasible, in that case Gamma ray may be permitted as per decision of Engineer In-Charge(EIC) based on site conditions) and providing all requisite equipment, labour, supervision, materials, films, consumables, all facilities and personnel to process, develop, examine and interpret radiographs and other tests as required, carrying out repairs of weld joints found defective by Engineer-in-Charge, carrying out re-radiography and other tests as required on repaired joints and NDT of rebevelled area as mentioned in SCC & Particular Jobs Specification.				
13	Carrying out installation of carrier line pipe at all minor crossing ie; road, cart track, pathway, water bodies etc. at required depth by open cut (except at crossing by Moleing & HDD method). Methodology to be adopted for crossing shall be decided by joint survey with Client/PMC & Contractor and based on the finalization of methodology crossing by HDD, Laying of pipeline through HDD, Moleing shall be payable through respective item available else where in the SOR.				
14	Coating of field weld joints, long radius bends (R=3D for 8 Inch), elbows... etc. including supply of coating materials etc. (i.e. heat shrinkable sleeves and high build epoxy etc.) as per PJS & Technical Specification compatible with 3 layer PE coating material of the line pipe.				
15	Installation of LR Bend (R=3D for 8 Inch) , as per specification wherever required depending on site condition.				
16	Installation / lowering the pipeline in trench to required depth as per PJS, Technical Specification & drawings and providing required padding over and around the pipeline with sand/graded material approved by Engineer-In-Charge (in rocky areas) including padding around pipeline with suitable soil duly approved by EIC. Supply of padding material, backfilling and its compaction to the satisfaction of concerned authorities with excavated earth / borrowed select soil including supply of borrowed select soil duly approved by EIC before backfilling and make ready for restoration to be done by Owner / concerned authorities.				
17	Installation of warning mat on the entire length of the pipeline as per specification. Warning mat should have anti rodent properties.				
18	Crossing the all-foreign pipeline / HT line / cable / any other utilities etc. with necessary concrete / PVC protection including coordination with all agencies and obtaining NOC after completion of all the activities.				
19	Supply and installation of bank protection alongwith backfill materials duly approved by EIC for pipeline trench and banks falls under minor water body crossing as per technical specification & Std. Drg., wherever required or, as directed by Owner / EIC.				

SCHEDULE OF RATES
LAYING OF UNDERGROUND STEEL PIPELINE INCLUDING ASSOCIATED WORKS IN CUTTACK / KHORDA (BHUBANESWAR) GAS UNDER CGD SIX CITIES PROJECT FOR M/s GAIL (I) LIMITED
M/s Amrita and Associates, Bhubaneswar

Sl. No.	Item Description	Quantity	Units	INR	
				Unit Rate (Excluding GST)	Amount (Excluding GST)
20	Carrying out air cleaning, gauging, pigging, flushing, cleaning and hydrostatic testing of complete pipeline, supply of required quantity of corrosion inhibitor, if required including pre-testing of designated sections complete as per specification and approved by Engineer-in-charge to specified pressures indicated elsewhere and duration after stabilization as per specification, providing all equipment, pumps, fittings, instruments, dead weight tester, pressure recorder, thermocouples etc., and services, supervision, labour, consumables, water including supply of corrosion inhibitor, air, etc. as required, locating of leaks and rectification of defect attributable to Contractor (rectification of defects in linepipe material not attributable to contractor shall be paid separately as per other item of schedule of rate), re-testing after rectification, dewatering after successful completion of hydrotesting of entire section and as approved by Engineer-in-Charge. Note : 1. Leak detection, its rectification and successfully re-hydrotesting shall be carried out by Contractor with a view that completion of all activity for successful hydrotesting should not be inordinately extended / delayed, which will hamper the overall project schedule. Further, no extra payment claim shall be entertained for re-hydrotesting, leak detection and their rectifications if defects found attributable to Contractor. 2. Payment for Gauging activity mentioned above shall be made under item mentioned else where in SOR. 3. Payment for hydrostatic testing activity mentioned above shall be made under item mentioned elsewhere in this SOR.				
21	All tie-in, including the tie-in(s) of the pipeline with the adjacent sections of pipeline including cutting of test header, rebeveling as required, radiography and other NDT examination, joint coating as per specification.				
22	Final clean-up & restoration of right-of-use or area disturbed by contractor including obtaining NOC from respective land owner and statutory authorities during their construction activities for laying of pipeline works and disposal of debris and returning all surplus material to designated disposal areas / storage yard as and backfilling of trench and compaction of the same as per satisfaction of Owner and / Or as directed by Engineer-in-charge.				
23	Carrying out all temporary, ancillary, auxiliary works and all incidental works required to make the pipeline ready for pre-commissioning.				
24	Restoration of land, facilities and boundary wall etc. and associated facilities dismantled/damaged by the Contractor during construction;				
25	Hook-up work with existing pipelines including pit excavation & other associated work (if any). Payment for Hook up shall be made under item mentioned elsewhere in SOR				
26	Protective coating of 500 micron thick two component (applied with the help of minimum three coats) liquid epoxy including supply of materials duly approved by Owner for all piping valves, fittings, structural steels etc. for buried installation and inside the valve pit as approved by the Engineer-in-charge.				
27	Carrying out all temporary, ancillary, auxiliary works and all incidental works required to make the pipeline ready for pre-commissioning;				
28	Obtaining work permits/ NOC from various statutory authorities having jurisdiction, before and after execution of the work, and complying with all stipulation/conditions/recommendation of the said authorities;				
29	Preparation of as-built drawings, pipe-book and other records as specified in the specifications. SOR shall be read in conjunction with job specific requirements, specifications, standards, drawings and other provision of contract document. All above works line pipe laying and installation all above works for buried pipeline as per following details:				
30	Installation of Coated Line Pipes as per following details:				
31	Specified dia Thk (mm) Material Coating Type Length of each pipe				
32	For All Type of Soil				
33	200 6.4 API 5L Gr. X-52/56 3 Layer PE Double random Coating (Externally) (approx. 11.5 m to 12.5 m)	820.00	Meter	1,448.40	1,187,688
34	For Rocky Strata (Refer Notes)				
35	200 6.4 API 5L Gr. X-52/56 3 Layer PE Double random Coating (Externally) (approx. 11.5 m to 12.5 m)	180.00	Meter	2,328.80	419,184
36	Note:				
37	The lengths of pipelines are tentative and for various locations. Quantities may increase/decrease or delete based on site requirement/Joint Survey/Change in requirement of Owner.				
38	The above item rate is exclusive of crossings by HDD and Moiling (which are covered separately in relevant SOR items). For other crossings, it is deemed to be inclusive in above item rate.				
39	This item shall be applicable for the underground steel grid main pipeline & branch pipeline including , insulating joints, bends (3D for 8"), flanges & fittings, underground valves if required, accessories etc. , Installation of valves including other fittings & pipes for Sectionalizing & Tap Off if required shall be paid separately through item available else where in SOR.				
40	The above rate shall be exclusive of hydrotesting of complete pipeline including hydrotesting of all crossing sections along-with the mainline. However, payment for pre- testing as required, are inclusive in above items rate.				
41	In above item, backfilling of pipeline trench by borrowed select soil duly approved by Owner / EIC shall be paid by separate item mentioned elsewhere in the SOR.				
42	Contractor shall not perform any pipeline activities along ROU/Corridor without specified barricading as per Std. Drg. and other safety measures.				
43	Proposed pipeline route is passing through MDR/ Asphalt Road / concrete roads (RCC/PCC) etc. However, in case of non-availability of ROU along MDR/ Asphalt Road / concrete roads (RCC/PCC) etc., the pipeline route may change and this may also require a new tap-off point at suitable location on Pipeline . This may cause increase / decrease in SOR quantities.				
44	The rates shall be applicable for the work within at all locations / with in GA- Khorda/Cuttack .				

SCHEDULE OF RATES
LAYING OF UNDERGROUND STEEL PIPELINE INCLUDING ASSOCIATED WORKS IN CUTTACK / KHORDA (BHUBANESWAR) GAS UNDER CGD SIX CITIES PROJECT FOR M/s GAIL (I) LIMITED
M/s Amrita and Associates, Bhubaneswar

Sl. No.	Item Description	Quantity	Units	INR	
				Unit Rate (Excluding GST)	Amount (Excluding GST)
45	The above rate is excluding of crossings by HDD, Boring, moiling, open cut conventional Method mentioned under separate item.				
46	In congested area trenching shall be made manually for pipeline laying further Contractor shall ensure that no tree/plant cutting shall be carried out during Pipe Line Laying operations. Trenching shall be carried out manually if needed, so as to ensure no damage to plant/tree/OFC /water pipe line /telephone line/sewage line/electric cable and other under ground utilities.				
47	Quantity indicated above is tentative. Execution of pipeline laying in rocky strata(if encountered during execution) shall be jointly recorded.				
48	Bifurcation of Soil & Rocky strata shall be done based on the equipments used in trenching the pipeline section. For Rocky strata contractor have to use of rock breaking tool / rock hammer or other equivalent tools for preparation of trench with due approval of EIC. Supply and installation of rock shield as per specification including padding through sand/soft soil is inclusive in above item. Bidder have to quote accordingly.				
49	Excavation of hard rock strata, wherever hard rock of single piece exceeding 1.5 meter in any direction within the trencnch dimension with respect to length, width & depth and removal only by pneumatic chisel/ drill/ rock-breaking tool/rock hammer or other equivalent tools. The rates are payable over and above the laying rates as per relevant SOR items mentioned elsewhere in SOR.				
50	Fabrication of Sectionalizing Valves(SV) and Tap-off including pipes & fittings shall be paid separately.				
51	For Tie-in and other locations wherein NDT through X-ray is not feasible NDT by Gamma ray shall be permitted with due permission of EIC.				
52	Payment for Preparation of as-built drawings, pipe-book and other records as specified in the specifications is to be covered in this SOR rate.				
53	Contractor shall return all surplus material to designated storage yard as mentioned in Annexure-2 to SCC, as directed by Engineer-In-Charge.				
54	Owner supplied 3 LPE Line Pipe & Bare Pipe required for pipeline laying activity shall be shifted from owner designated store located within Cuttack / Khorda (Bhubaneswar) GAs and payment are inculsive in above items rate. Bidder has to quote accordingly.				
55	Contractor shall ensure that no tree/plant cutting shall be carried out during Pipe Line Laying operations. Trenching shall be carried out manually if needed, so as to ensure no damage to plant/tree/OFC /water pipe line /foreign pipeline/telephone line/sewage line/electric cable and other under ground utilities.				
56	Bidder has to familiarise themself the entire pipeline route and all locations /region/ charge area within the GA and ascertain all type of eventuality/uncertainty before gouting their bid.				
57	End cap / blind (Temporary during construction of pipeline) at both the ends for carrier pipeline as per specification is included in above quoted rates, However after completion of pipeline End Cap shall be provided to contractor as free issue.				
58	Payment for carrying out liasioning & co-odrination utility/foreign pipeline crossings (if any) and obtaining permission / NOC from these authorities including assistance in ROU/Corridor opening & closing and their maintenance/ management both side of the crossings shall be made under item mentioned elsewhere in SOR.				
59	Excavation- Hard Rock				
60	Excavation of hard rock only, wherever hard rock of single piece exceeding 1.5 meter in any direction within the trencnch dimension with respect to length, width & depth and removal only by pneumatic chisel/ drill/ rock-breaker.	180.00	CUM	1,363.20	245,376
61	Note: i) Quantity indicated above is tentative and may increase/ decrease or delete as per site requirement. ii) Above item is for laying of pipeline through open cut method only.				
62	PIPELINE LAYING/INSTALLATION BY HDD METHOD				
63	Complete work of laying of pipeline in restricted ROU along with adjacent road/nala (if minor road/nala falling under the laying profile and not considered under separate crossing) by HDD method including "Receiving and taking over" owner supplied 3LPE coated line pipes from owner's designated place to issue/dump site(s) and transportation to contractor's stock yard/work site including all handling, loading, uploading, aligning etc. supply of all contractor supplied material including consumables, manpower, equipment, other resources to work site(s) and acquiring the required land for storage. Execution of, but not limited to, following works in accordance with specifications and instruction of engineer-in-charge and as per all provision of Contract Document.				
64	Pre-construction survey, necessary cover required over the carrier pipeline, based on site visit, collection of data (if required) from concerned Authority including design and detail engineering and making of drawings for getting their approval from concerned Authority/Engineer-in-charge, getting work permit/NOC for utilities crossings (if any) encountered prior to start the execution of work.				
65	Digging of entry and exit Pits, Pre hydrotesting at specified pressure, Drilling to required depth from top of ground (min 2.0 mtrs.) including maintenance of drill hole in all types of soil including pebbles, cobbles, boulders, structures etc. and all types of rocky starta, all depth to accommodate the pipeline at all conditions encountered by approved HDD methods for providing minimum cover specified in code/specification or the actual depth as decided by concerned authority, whichever is more				
66	Digging of entry and exit Pits, Laying of the pipeline(as per approved HDD profile) by the approved HDD method including pipeline string preparation, welding, testing, 100% radiography by X-ray, welding repair and retest, coating of field joints with special type Dirax Heat Shrink Sleeve or equivalent (including supply of coating material) and repair of pipeline coating with special PERP-50E repair patch or equivalent material (including supply of repair patch) as per specification, pre-hydrotest of complete strings made for laying etc. Backfilling of entry and exit pits and its levelling.				

SCHEDULE OF RATES
LAYING OF UNDERGROUND STEEL PIPELINE INCLUDING ASSOCIATED WORKS IN CUTTACK / KHORDA (BHUBANESWAR) GAS UNDER CGD SIX CITIES PROJECT FOR M/s GAIL (I) LIMITED
M/s Amrita and Associates, Bhubaneswar

Sl. No.	Item Description	Quantity	Units	INR	
				Unit Rate (Excluding GST)	Amount (Excluding GST)
67	Backfilling of the ditch/trench pits including restoration and clean-up of area, disposal of drilling fluid & waste etc. to the satisfaction of Engineer-in-charge and/or as directed by concerned Authority.				
68	Carrying out cleaning, gauging, water filling, post-hydrotesting, of complete pipeline string in one section/ test sections as approved by EIC/RCM to specified test pressures (i.e. 1.5 times of Design pressure) for 24 hours hold period; providing all equipment, pumps, test headers, fittings, pressure & temperature instruments etc., and services, supervision, labour, consumables, water, air, etc. as required; detection of leaks, if any occurred during post-hydrotesting, attributable to Contractor and rectification of defects, re-testing after rectification with due approval of Owner, successful completion of post-hydrotesting including dewatering of pipeline to acceptance criteria defined in the specifications. Note : 1. Leak detection, its rectification and successfully re-hydrotesting shall be carried out by Contractor with a view that completion of all activity for successful pre-hydrotesting should not be inordinately extended / delayed, which will hamper the overall project schedule. Further, no extra payment claim shall be entertained for re-hydrotesting, leak detection and their rectifications if defects found attributable to Contractor. 2. Payment for Gauging activity mentioned above shall be made under item mentioned elsewhere in SOR. 3. Payment for Post hydrostatic testing activity shall be made under item elsewhere in SOR, however pre hydrotesting is inclusive in the above SOR item rates.				
69	Installation/Laying of Coated Line Pipes as per following details:				
70	Specified dia Thk (mm) Material Coating Type Length of each pipe (mm) NB				
71	For all types of Soil other than Rocky Starta				
72	200 6.4 API 5L Gr. X-52/56 3 Layer PE Double random Coating (Externally) (approx. 11.5 m to 12.5 m)	900.00	Meter	5,396.00	4,856,400
73	For all types of Rocky Starta				
74	200 6.4 API 5L Gr. X-52/56 3 Layer PE Double random Coating (Externally) (approx. 11.5 m to 12.5 m)	180.00	Meter	8,804.00	1,584,720
75	Note: (i) Pipeline length are tentative and for various crossings/site locations wherein laying through open cut is not feasible. Tenderer are advised to visit the site for actual assessment of extent of laying and to access the maximum extent of cover which may have to be provided. Actual string length for HDD shall be as per design calculations so that pipe is not under stress as permitted by codes/ specifications. Final length of string shall be decided after decision of minimum cover requirement by concerned Authority/ Engineer-in-charge.				
76	(ii) The quantities mentioned above are tentative and may increase or decrease depending upon the site conditions/requirements. The quantity indicated against each item are for multiple shots/Multiple entry & exit pits and shall be as per requirement at site for laying at different locations.				
77	(iii) Contractor shall not perform any pipeline related activities along the ROU without specified barricading/permission of EIC/RCM as per Std. Org. and other safety measures.				
78	(iv) Payment for the length of final tied-in carrier pipeline string are inclusive in the above item rate and no separate payment shall be made under other item mentioned elsewhere.				
79	(v) Width of above laying indicated are tentative. The width indicated are not for any single laying. This shall be as per requirement at site for laying at different locations.				
80	(vi) Contractor have to use rock cutting tool and all other accessories as required to make drill hole in rocky starta based on requirement. However no extra/additional claim on account of same is permitted. Contractors are advised to quote accordingly.				
81	vii) The above items rate shall be applicable for all locations / region/ charge area within & around the GA of Khorda/Cuttack.				
82	viii) Payment for carrying out lashing and co-ordination works for utility/foreign pipeline crossings (if any) and obtaining permission / NOC from these authorities including assistance in ROU opening & closing and their maintenance/ management both side of the crossings shall be made under item mentioned elsewhere in SOR.				
83	ix) Rock drilling shall be considered at location/strata for which the core recovery is min 25%. Expenditure to establish the Starta as rock through lab test or any other approved methodology shall be paid through item rate available else where in SOR.				
84	PIPELINE LAYING / INSTALLATION IN A BUILT-UP SURFACE/ HARD SURFACE				
85	Raking up of hard surface of any type including bituminous, asphalt, concrete, tiled, brick lined soft/ hard rock which is breakable in pieces manually (without use of pneumatic machine) etc. All tiles/ slabs/ curb stones etc. removed during excavation shall be placed properly. The other activities are as per SOR item no. A00101 including its notes.				
86	200 6.4 API 5L Gr. X-52/56 3 Layer PE Double random Coating (Externally) (approx. 11.5 m to 12.5 m)	72.00	Meter	1,988.00	143,136
87	Note: The above rate is inclusive of all other activities as per SOR item no. A00101 including its notes.				
88	REMOVAL & RESTORATION OF CONTINUOUS CONCRETE (RCC/PCC) FOR PIPELINE INSTALLATION				
89	Removal of concrete (RCC/PCC etc) for preparation of pipeline trench (by using pneumatic machine or other approved method) including restoration of same as previous by providing the RCC/PCC...etc up to satisfaction of EIC and concern authority. Shifting & disposing of debris material at suitable location as per direction of EIC. The other activities are as per SOR item no. A00101 including its notes.				
90	200 6.4 API 5L Gr. X-52/56 3 Layer PE Double random Coating (Externally) (approx. 11.5 m to 12.5 m)	72.00	Meter	624.80	44,986
91	RESTORATION OF ROADS				

SCHEDULE OF RATES
LAYING OF UNDERGROUND STEEL PIPELINE INCLUDING ASSOCIATED WORKS IN CUTTACK / KHORDA (BHUBANESWAR) GAS UNDER CGD SIX CITIES PROJECT FOR M/s GAIL (I) LIMITED
M/s Amrita and Associates, Bhubaneswar

Sl. No.	Item Description	Quantity	Units	INR	
				Unit Rate (Excluding GST)	Amount (Excluding GST)
92	Restoration of asphalt / concrete / red stone roads / pavement/ pavor block including compaction of soil, to original condition as per requirement and to the entire satisfaction of EIC and / or concerned Owners having jurisdiction for following thickness.				
93	Restoration of Asphalt road upto 10 cm thickness	84.00	Sq. Metre	511.20	42,941
94	Restoration of Asphalt road beyond 10 cm upto 20 cm thickness	48.00	Sq. Metre	795.20	38,170
95	Restoration of Concrete road upto 10 cm thickness	60.00	Sq. Metre	624.80	37,488
96	Restoration of Concrete road 10 cm to 20cm thickness	48.00	Sq. Metre	908.80	43,622
97	Restoration of red stone road / footpath / pavement upto 4 inch thickness	48.00	Sq. Metre	426.00	20,448
98	Restoration of red stone road / footpath / pavement upto 4 to 8 inch thickness	36.00	Sq. Metre	624.80	22,493
99	BORROWED SELECT SOIL FOR BACKFILLING				
100	Additional work over and above item no. A00100 for supply of specified and approved quality of borrowed local soft graded soil / sand in place of available excavated material and / or other suitable soil as per applicable standards / specifications, including backfilling of excavated trench for specified length after laying and padding of pipeline, including local transportation of such special backfill material over all distances, complete.	50.00	M3	284.00	14,200
101	PIPING WORKS FOR SECTIONALISING VALVE STATION (SV STATION)(Fabrication at Ground and then installation in the Pit)				
102	SECTIONALISING VALVE STATION - UNDER GROUND				
103	All works for installation of all piping Underground at all depth for Vent Type/ No Vent Type Valve Station along with/without future tap-off (as required) in Valve Chamber in all type of terrains and soils including transportation and handling of all owner/contractor supplied materials i.e. full bore 8" butt welded Ball valve, Plug Valves, all types of other valves of all sizes, Weldolet of all sizes, Insulating Joint, vent line pipes for mainline, assorted pipes and all flanges and fittings from designated places(s) of issue to work site. Supply of gaskets, studs, nuts, nipples & coupling, consumables, Liquid penetrant kit, Cotton cloth ...etc. Installation / Erection of instrumentation items i.e. pressure gauge, consumables, manpower, machineries, tools & tackles for carrying out all mechanical works of underground and above ground piping including fabrication, welding, nondestructive testing of welds, weld repairs/ Pretesting, clearing/ flushing, pre-hydrotesting & hydrostatic testing, dewatering, functional testing, cutting of mainline and beveling (if required), tie-in of valve assembly, including radiography & joint coating of tie-in joints, external painting for buried fittings by high build epoxy of min. 500 micron of R-95 or equivalent as required, obtaining all statutory clearances, approvals and permissions for the works (wherever required), making of valve pit (for detail refer relevant drawings (i.e. P&ID, Plot Plan) for SV Station point enclosed with tender. pipe supports including all associated civil works (pertaining to supports only); painting, finishing, clean-up and restoration of site; preparation of as-built drawings, documents and project records and performing all works as per drawings, specifications, other provisions of Contract document and instructions of Engineer-in-charge.				
104	Sectionalising Valve Station (8") with Tap Off valves	1.00	Lumpsum	99,400.00	99,400
105	Sectionalising Valve Station (8") without Tap Off valves	1.00	Lumpsum	99,400.00	99,400
106	Notes: 1. This work is exclusive of all works associated with main pipeline covered at SOR item no. A00100 below. 2. All Civil/ structural works except for piping supports will be paid separately as per rates provided elsewhere. 3. Work is inclusive of receiving, taking over, loading & unloading of company supplied material and return of surplus material to Company's designated stockyard/store. 4. Valves, Assorted Pipe, fittings & Flanges, any type of tee, instrumentation items ..etc as required for construction of SV station shall be made available to contractor as free issue material. Fabrication of SV, Tap-Off Point (if required) , erection, Testing & commissioning is inbuilt in above item rates, hence contractor have to quote accordingly. 5. Civil Work for Valve Pit and its upper slab for under ground SV stations shall be payable through item available else where in SOR. 6. NDT of Joints is inclusive in above item rate. For 1/2" to 1.5" contractor have to carry out NDT by DP test, however for 2" to 8" NDT by X-ray/Gamma ray is required. Bidder have to quote accordingly.				
107	(Refer plot plan drawing and other relevant drawings for Sectionalising Valve Stations enclosed with tender document for ascertaining quantum of mechanical work associated with SV Station).				
108	PIPING WORKS FOR TAP-OFF POINT(Fabrication at Ground and then installation in the Pit)				

SCHEDULE OF RATES
LAYING OF UNDERGROUND STEEL PIPELINE INCLUDING ASSOCIATED WORKS IN CUTTACK / KHORDA (BHUBANESWAR) GAS UNDER CGD SIX CITIES PROJECT FOR M/s GAIL (I) LIMITED
M/s Amrita and Associates, Bhubaneswar

Sl. No.	Item Description	Quantity	Units	INR	
				Unit Rate (Excluding GST)	Amount (Excluding GST)
109	All works for installation of all piping and valves assembly on above/below ground at all depth for Tap-off in all type of terrains and soils including transportation and handling of all owner/contractor supplied materials butt welded Ball valve, all valves of all types and sizes, Barred tees of all sizes and all fittings from designated places(s) of issue to work site. Supply of assorted pipes, consumable, Liquid penetrant kit, Cotton cloth...etc, manpower, machineries, tools & tackles for carrying out all mechanical works of underground/aboveground piping including fabrication, welding, nondestructive testing of welds, weld repairs/ retesting, cleaning/ flushing, pre-hydrotesting & hydrostatic testing, dewatering, functional testing, cutting of mainline and bevelling (if required), tie-in of valve assembly, including radiography of tie-in joints, corrosion coating (by heat shrink sleeves) for buried piping and external painting for buried fittings by high build epoxy of min. 500 micron of R-95 or equivalent as required, obtaining all statutory clearances, approvals and permissions for the works (wherever required), excavation and filling in all types of soils including soft/ hard rock for installation of piping, painting, finishing, clean-up and restoration of site; preparation of as-built drawings, documents and project records and performing all works as per drawings, specifications, other provisions of Contract document and instructions of Engineer-in-charge.				
110	4" Tap-off Point	1.00	Nos	113,600.00	113,600
111	Notes: 1. This work is exclusive of all works associated with main pipeline covered at SOR item no. A00100 below.. 2. All others works pertaining to Tap-off (Instrumentation works) (if any) shall be as per rates indicated elsewhere in the tender document. 3. Work is inclusive of receiving, taking over, loading & unloading of company supplied material and return of surplus material to Company's designated stockyard/store.				
112	(Refer plot plan drawing and relevant drawings for Tap-off Station enclosed with tender document for ascertaining quantum of mechanical work associated with Tap-off Station).				
113	4. Valves, Assorted Pipe, fittings & Flanges, any type of tee, instrumentation items (if any) etc as required for construction of Tap-off point shall be made available to contractor as free issue material. Fabrication of Tap-Off Point (if required), erection, Testing & commissioning is inbuilt in above item rates, hence contractor have to quote accordingly. 5. Qty of tapp off points is tentative and may differ as per site requirement.				
114	6. Qty for tapp-off point mentioned above is excluding quantities mentioned in SV station and for separate locations than SV station. 7. NDT of Joints is inclusive in above item rate. For 1/2" to 1.5" contractor have to carry out NDT by DP test, however for 2" to 8" NDT by X-ray/Gamma ray is required. Bidder have to quote accordingly.				
115	Station piping works(Above Ground)				
116	Transportation including loading, unloading & handling of all piping items from Owner's and/ or Contractor's storage point to work site/ workshop as applicable, complete work of fabrication, erection, painting, testing of pipes, flanges and fittings and making ready for further Commissioning / Start-up of carbon steel piping of all sizes and ratings including supply of all consumables, equipment, manpower and other resources and execution of, but not limited to, the following works in accordance with relevant specifications & scope of work, drawings, specification and instructions of Engineer-in-charge and as per all provisions of the CONTRACT DOCUMENT.				
117	Fabrication including cutting, edge preparation, welding of pipe, valves, fittings & flanges, IJ ...etc in above ground/underground. Supply of nipples, couplings, caps, plugs, gasket, stud bolts, nuts, U Clamps etc. as required for completion of job.				
118	Erection including supply and fixing of gaskets, studs/ bolts, nuts wherever required for all sizes, levelling, aligning, joining of flanges, blind flanges, connecting with equipment, nozzles, tie-in with existing piping/facilities, etc. tapping for inline instruments like pressure gauges, thermowells, sample connection, etc.				
119	Preparation of final bill of material based on piping GADs.				
120	Preparation of isometric and fabrication drawings.				
121	Carrying out 100 % Non-destructive testing				
122	Surface preparation, Painting of piping system as per specification.				
123	Cleaning and flushing by water/ compressed air, testing of the systems including hydrostatic, pneumatic and any other type of testing as specified, draining, drying by compressed air/other methods approved by COMPANY.				
124	Precommissioning & making operational all piping system and equipments and provide all necessary assistance in term of supply of man-power, equipment, tools and tackles required amount of nitrogen for purging of entire terminal piping system including equipments etc. to the company during commissioning activities.				
125	Clean-up and restoration of site, preparation of as built drawings, documents and project records; transportation of surplus free issue material to Owner's designated plac(s); completing all works in all respects as per the AFC drawing, specifications, standards and other provisions of Contract and instruction of Engineer-in-charge.				
126	Completion of all such work in all respects as per scope of work and as per drawings, specifications and instructions of the COMPANY and keeping the system ready in all respects for further commissioning and start up.				
127	Hook-up works including making provision for hooking up and carrying out shutdown activities at terminals if necessary.				
128	Pipeline size 1/2" to 8" NB dia	100.00	Inch-dia	482.80	48,280



SCHEDULE OF RATES
LAYING OF UNDERGROUND STEEL PIPELINE INCLUDING ASSOCIATED WORKS IN CUTTACK / KHORDA (BHUBANESWAR) GAS UNDER CGD SIX CITIES PROJECT FOR M/s GAIL (I) LIMITED
M/s Amrita and Associates, Bhubaneswar

Sl. No.	Item Description	Quantity	Units	INR	
				Unit Rate (Excluding GST)	Amount (Excluding GST)
129	1) Pipe Specification and thickness may vary depending upon availability of pipe. No extra payment shall be made for this. 2) All butt welded fittings end shall generally match with connecting pipe wall thickness. However, in case of misalignment, Contractor shall have to do end preparation without any extra cost. 3) All coupling, nipples etc. as required shall be supplied by contractor but no separate payments shall be made as it is covered under erection rate. 4) NDT of Joints is inclusive in above item rate. For 1/2" to 1.5" contractor have to carry out NDT by DP test, however for 2" to 8" NDT by X-ray/Gamma ray is required. Bidder have to quote accordingly. 5) Item mentioned is for other station piping works (excluding item no.A00900 above) and shall be operated based on site requirement as per the decision of EIC. 6. Nitrogen requirement for pre-commissioning/commissioning shall be paid through item available else where in SOR. 7. Material as required for fabrication shall be made available to contractor as free issue material.				
130	OTHERS CROSSING (by HDD Method)				
131	Complete work for installation of carrier pipeline (between the ROW/Corridor limits as per approved drawing) by HDD method including "Receiving and taking over" owner supplied three layer PE coated line pipes from Owner's designated place to issue/ dump site(s) and transportation to Contractor's stock yard/ work shop/ work site including all handling, loading, unloading, aligning etc. supply of all Contractor supplied material including consumables, manpower, equipment, other resources to work site(s) and acquiring the required land for storage., Execution of, but not limited to, following works in accordance with specifications and instruction of Engineer-in-charge and as per all provision of Contract Document.				
132	Pre-construction survey, necessary cover required over the carrier pipeline from lowest bed level of the stipulated water crossing to be obtained from concerned authority, bed strata data including design & detail engineering and making of crossing drawing for getting their approval from concerned Authority/ Engineer-in-charge, getting work permit/ NOC for water crossings as well as utility crossings (if any) encountered during water crossing prior to start the execution of work. getting work permit/ NOC for water crossings as well as utility crossings (if any) encountered during water crossing prior to start the execution of work.; obtaining historical data/ scour depth (for river) from concerned authority, if required, ascertaining under neath soil & strata, necessary cover required over the carrier pipeline from lowest bed level of the stipulated water crossing including design & calculation and detail engineering and making of crossing drawing for getting the approval from concerned Authority/ Engineer-in-charge, getting work permit/ NOC for water crossings as well as utility crossings (if any) encountered during water crossing prior to start the execution of work. For road crossings,pre-construction survey based on site visit, collection of data (if required) from concerned Authority including design and detail engineering and making of crossing drawings for getting their approval from concerned Authority/ Engineer-in-charge, getting work permit/ NOC for the crossing as well as utility crossings (if any) encountered during crossing prior to start the execution of work.				
133	In case of water body crossings other than river Drilling to the required depth on the banks and bed including maintenance of drill hole in all types of strata (ie; soft/hard soil, soft/hard rock....etc), all depth to accommodate the pipeline at all conditions of the waterbody crossings by HDD methods for providing with minimum cover either (i) 1.5m below the scour level / profile, duly approved/ accepted by concerned authority (under whose jurisdictions the crossing lies)---- For rivers with rocky bed or (ii) 2.5m below the scour level / profile, duly approved/ accepted by concerned authority (under whose jurisdictions the crossing lies)---- For major rivers. or (iii) 1.5 m below the bed level / profile, duly approved/ accepted by concerned authority (under whose jurisdictions the crossing lies)---- For minor waterbody crossings. and (iii) In addition to point (i) & (ii), In case of multiple combined X-ing i.e. river alongwith road/ drain, minimum cover requirement as per specification/ concerned authority for each type of x-ing has also to be fulfilled.				
134	In case of road crossing, drilling to required depth from top of road including maintenance of drill hole in all types of strata (i.e; soft/hard soil, soft/hard rock....etc), all depth to accommodate the pipeline at all conditions encountered during road crossing by approved HDD methods for providing minimum cover specified in code/ specification or the actual depth as decided by concerned authority, whichever is more.				
135	Laying of the carrier pipeline (for both water body and road crossing) by the approved HDD method across the crossing including, strings preparation of carrier , welding, testing, 100% radiography by x-ray, welding repair and retest, coating of field joints with special type Dirax Heat Shrink Sleeve or equivalent (including supply of coating material) and repair of pipeline coating with special PERP-80 repair patch or equivalent material (including supply of repair patch) as per specification, pre-hydrotest of complete strings made for crossing as per specification etc.				
136	Preparation of string (as per requirement), fabrication and welding as per specification and laying of carrier pipeline across the crossing as per approved profile.				
137	Backfilling of the ditch/ trench including restoration and clean-up of area, disposal of drilling fluid & waste etc. to the satisfaction of Engineer-in-charge and /or as directed by Concerned Authority.				

SCHEDULE OF RATES
LAYING OF UNDERGROUND STEEL PIPELINE INCLUDING ASSOCIATED WORKS IN CUTTACK / KHORDA (BHUBANESWAR) GAS UNDER CGD SIX CITIES PROJECT FOR M/s GAIL (I) LIMITED
M/s Amrita and Associates, Bhubaneswar

Sl. No.	Item Description	Quantity	Units	INR	
				Unit Rate (Excluding GST)	Amount (Excluding GST)
138	Gauging, Pigging, Cleaning, Post installation hydrotest, dewatering and tie-in with pipeline at either banks etc. all other works including pigging, cleaning, final hydrotesting etc. alongwith mainline works (as mentioned in item no. A00100 above) required as per specifications, codes, approved drawings, calculations, methods and as directed by Engineer-in-charge and provision of contract document; getting NOC from all concerned authority of the facilities crossed.				
139	Details of Crossings				
140	For Other than Rocky Strata				
141	Any type of Crossing viz. Canal / Distributary/ Drain / River / Nala/Road/Pond/ Railway /Culvert Crossings for carrier pipeline of size 200 mm NB x 6.4mm Thk. of API 5L Grade X-52/56	240.00	Meter	5,680.00	1,363,200
142	For Rocky Strata				
143	Any type of Crossing viz. Canal / Distributary/ Drain / River / Nala/Road/Pond/ Railway /Culvert Crossings for carrier pipeline of size 200 mm NB x 6.4mm Thk. of API 5L Grade X-52/56	240.00	Meter	9,372.00	2,249,280
144	Note: (i) Crossing width is tentative and for various crossings. Quantities may increase/decrease or delete as per site situation. Bidder's are advised to visit the site for actual assessment of extent of crossing and to access the maximum extent of cover which may have to be provided. Actual string length for HDD shall be as per design calculations so that pipe is not under stress as permitted by codes/ specifications. Final length of string shall be decided after decision of minimum cover requirement by concerned Authority/ Engineer-in-charge. (ii) Payment for the length of final tied-in carrier pipeline string are inclusive in the above item rate and no separate payment shall be made under other item mentioned elsewhere. (iii) The Contractor has to quote on running meter basis for X-ing. No any extra payment shall be made against this item. (iv) Width of above crossings indicated are tentative and for multiple crossings. This shall be as per requirement at site for crossing at different locations. ix) Rock drilling shall be considered at location/strata for which the core recovery is min 25%. Expenditure to establish the Strata as rock through lab test or any other approved methodology shall be paid through item available else where in SOR.				
145	GEOTECHNICAL INVESTIGATION, HYDROGRAPHICAL & HYDROLOGICAL SURVEY OF RIVER/CANAL/NALA/ WATERBODIES				
146	Carrying out Pre-construction survey and detail survey for crossings after liaisoning & coordination from concerned authority. Detail survey includes minimum but not limited to carrying out complete Geotechnical Investigation (including all laboratory test & field test), Hydrographical & Hydrological Survey of River / Canal/Nala/Waterbodies for the purpose of crossing the River / Canal/Nala/Waterbodies by HDD method including obtaining work permit / NOC from concerned authority complete in all respect as per Scope of Work & Technical Specification and instruction of Engineer-In-Charge (EIC)/RCM and submitting Final Report & Drawing (along with soft copy) incorporating all field and laboratory data, Drawings, Maps, Data etc. (One Lot) in an approved format with full scale for Soil Investigation, Scour Depth etc. in accordance with the Technical Specification, Drawings, approved QAP, implementation schedule and other provisions of the Tender Document and instructions of the Engineer-in-charge (EIC)/RCM.				
147	For road/rail crossings, pre-construction survey based on site visit, topographical survey, geotechnical investigation to establish bed strata upto sufficient depth, collection of data (if required) from concerned Authority including design and detail engineering and making of HDD Profile drawings for crossing and getting their approval from concerned Authority/ Engineer-in-charge including carrying out liaisoning & co-ordination works and obtaining permission / NOC from these authorities for the crossing as well as utility/foreign pipeline crossings (if any) prior to start the execution of work.				
148	GEOTECHNICAL INVESTIGATION, HYDROGRAPHICAL & HYDROLOGICAL SURVEY OF RIVER/CANAL/NALA/ WATERBODIES				
149	Crossing of NALA/WATERBODIES in single stretch / shot (Size 8" NB) -(Meaurement will be carried out on the basis of individual crossing profile width and payment will be done accordingly)	840.00	Meter	852.00	715,680
150	Crossing of RIVER/CANAL in Single stretch / shot (Size 8" NB)(Meaurement will be carried out on the basis of individual crossing profile width and payment will be done accordingly)	240.00	Meter	1,022.40	245,376
151	GEOTECHNICAL INVESTIGATION & CROSSING SURVEY OF RAILWAY / ROAD CROSSING				
152	Crossing of Road/Railway in single stretch / shot (Size 8" NB)(Meaurement will be carried out on the basis of individual crossing Profile width and payment will be done accordingly)	240.00	Meter	852.00	204,480
153	Note : (i) For Nala/Water Bodies/River/Canal etc Bidder/contractor have to execute Geo-technical, hydrological & hygraphical survey as per technical specification and direction of EIC ii)for railway/ road crossings contractor have to execute geotechnical & crossing survey as per technical specification and direction of EIC.				

SCHEDULE OF RATES
LAYING OF UNDERGROUND STEEL PIPELINE INCLUDING ASSOCIATED WORKS IN CUTTACK / KHORDA (BHUBANESWAR) GAS UNDER CGD SIX CITIES PROJECT FOR M/s GAIL (I) LIMITED
M/s Amrita and Associates, Bhubaneswar

Sl. No.	Item Description	Quantity	Units	INR	
				Unit Rate (Excluding GST)	Amount (Excluding GST)
154	(ii) For geotechnical survey/investigation: 1. For River/Canal - Two Nos Bore holes each at both banks of depth 15 meter and in river bed bore holes of depth 25 m at a distance of 75 meter centre to centre. 2. For Nala/Other Water Body Crossings .etc - One No Bore holes each at both banks of depth 15 meter and on bed bore holes of depth 15 m at a distance of 75 meter centre to centre. 3. For Railway Crossings/Road Crossings .etc - One No Bore holes each at both sides of depth 10 meter. 4.Laboratory test & field test shall be as per technical specification & tender documents. 5. Bank width for Canal/nala/other water body crossings and survey length for railway crossings/road etc will be as per site conditions. Survey has to be done of bank width/survey width and minimum 50 meter at both end expect at river Crossings. For River crossing survey has to be done of bank width and minimum 100 meter at both end. 6. Rock shall be considered at location at which the core recovery is min 25%. 7. Quantity indicative above is tentative and for multiple crossings of size 8"NB dia pipeline with in the GA. 8. Payment for carrying out liasioning & co-ordination works for Crossings and obtaining permission / NOC from these authorities is in-built in above item rate				
155	Pipe Laying using Manual / Machine Moiling technique (without Casing) for CS pipe				
156	Survey of under ground utilities, execution of the work as per specification, including excavation of pits moling with the hole size not exceeding 20% of the pipe dia, jointing and insertion of carrier pipe and restoration of the pits to original condition, submission of As-Built Graph as per specifications and the instruction of Engineer-in-charge.				
157	Laying of 8" (219.1 mm) OD, 6.4 mm wall thk of API 5L Grade X-52/56 carrier pipe	72.00	Meter	3,692.00	265,824
158	Note-(i) Payment for the length carrier pipeline string shall be moiled carrier pipeline length plus two meters. Payment for additional length of carrier pipeline string shall be paid under SOR item no.A00101 (ii) Width of above crossings indicated are tentative. The width indicated are not for any single crossings. This shall be as per requirement at site for crossing at different locations. (iii) Adopting the manual or machine moiling shall be decided at site based on the width to be crossed.Ideally 2.0 meter or more width to be crossed through machine moiling.In this regard decision of EIC shall be final and binding to the contractor. (iv) payment for Post hydrotest shall be done through relevant SOR item mentioned elsewhere.				
159	Excavation beyond 1.5m depth in case of crossing of utilities/ drain/ culverts etc. through open cut upto the following depth (including restoration of the damaged area to its original condition and satisfaction of the Engineer-in-charge / concerned authorities) .The other activities are as per A00101				
160	In Normal Surface / Unprepared surface (Katcha Surface)				
161	Deeper than 1.5 m & upto 2.5 m below existing level (for 200 mm NB Pipeline)	60.00	Meter	454.40	27,264
162	Deeper than 2.5 m & upto 4.5 m below existing level (for 200 mm NB Pipeline)	48.00	Meter	624.80	29,990
163	In a built-up surface / Hard surface of any type including metal, concrete, bituminous, tiled, brick lined soft/ hard rock which is breakable in pieces manually (without use of pneumatic machine) etc. All tiles/ slabs/ curb stones etc. removed during excavation shall be placed properly. The other activities are as per A00101				
164	Deeper than 1.5 m & upto 2.5 m below existing level (for 200 mm NB Pipeline)	60.00	Meter	624.80	37,488
165	Deeper than 2.5 m & upto 4.5 m below existing level (for 200 mm NB Pipeline)	48.00	Meter	795.20	38,170
166	Note: (i) Quantities indicated in tentative and for various locations. (ii) Prior permission from EIC is required before execution of above item.				
167	REPAIR OF DEFECT IN PIPES (NOT ATTRIBUTED TO CONTRACTOR)				
168	Repair of defects on Owner supplied linepipes of all grades and wall thickness as specified in following items, noted and recorded at the time of "receiving and taking over" by Contractor in the presence of Engineer-in-charge.				
169	Cutting and rebeveling for dents in bevels exceeding 3 mm in depth for pipe sizes:				
170	Specified OD, mm				
171	219.1	2.00	Nos.	198.80	398
172	Jack out of dents in bevels ranging between 1 mm and 3 mm in depth for pipe sizes:				
173	Specified OD, mm				
174	219.1	2.00	Nos.	227.20	454
175	REPAIR OF COATING DEFECTS (NOT ATTRIBUTED TO CONTRACTOR)				
176	Repair of Holiday in Coating (Noted and recorded at the time of "receiving and taking over")				
177	Supply of all coating repair materials as per requirements of specification to be compatible with line pipe coating material, supply of all consumables, utilities, equipments and all manpower required, pipe cleaning and surface preparation, repairing of coating defects (resulting in holiday) and testing including all handling, transportation, etc. for line pipes, performing all works necessary for the completion of the works strictly in accordance with relevant specification and instructions of Engineer-In-Charge. This rate shall be applicable per sq. cm of the exposed steel area exposed steel area.	50.00	Sq. cm	312.40	15,620
178	PERMANENT MARKERS				
179	Supply, fabrication and installation of all types of permanent markers along the route including all associated civil works such as excavation in all types of soil, construction in all types of soil, construction of pedestals and grouting with concrete, clearing, supply and application of approved colour and quality of primer and paint, stencil letter cutting for numbers, direction, change etc., restoration of area to original condition and performing all works as per drawing, specification and instruction of engineer-in-charge.				
180	Pipeline RCC boundary / route marker as per drawing	50.00	Nos.	568.00	28,400
181	Pipeline warning markers with post & foundations	10.00	Nos.	3,408.00	34,080
182	Pipeline direction marker with post & foundations	10.00	Nos.	3,976.00	39,760
183	Pipeline KM with post & foundations	3.00	Nos.	3,692.00	11,076
184	Navigable Waterway Markers	2.00	Nos.	22,720.00	45,440

SCHEDULE OF RATES
LAYING OF UNDERGROUND STEEL PIPELINE INCLUDING ASSOCIATED WORKS IN CUTTACK / KHORDA (BHUBANESWAR) GAS UNDER CGD SIX CITIES PROJECT FOR M/s GAIL (I) LIMITED
M/s Amrita and Associates, Bhubaneswar

Sl. No.	Item Description	Quantity	Units	INR	
				Unit Rate (Excluding GST)	Amount (Excluding GST)
185	Note: Qty of above markers are tentative and may increase or decrease as per site situation. Contractor have to take prior approval from EIC before fabrication or order placement.				
186	LEAK / BURST (ATTRIBUTABLE TO OWNER)				
187	All works for locating leak / burst in Company's supplied material only (occurred during hydro-static testing) including necessary repairing/replacing defective pipe lengths including cutting and out and removing the defective pipe, pre-testing and welding of replacement pipe, NDT of welds, repair and retesting of defective welds, coating/painting of replacement pipe, pretesting the replacement pipe into mainline/branch line, coating/painting of welding joints, cleanup, retesting including cost of all labour materials, consumables and performing all works in accordance with the provisions of the Contract document and as directed by Owner /Engineer-in-charge/ Engineer in-charge				
188	For 8" NB Line	1.00	Lumpsum	28,400.00	28,400
189	Note: i) This rate is applicable for manufacturing defects in Owner supplied material only. ii) Leak detection, its rectification and successfully re-hydrotesting shall be carried out as per approved procedure by Contractor with a view that completion of all activity for successful hydrotesting is not inordinately extended which will hamper the overall project schedule.				
190	Gauging (Applicable for main steel pipeline hydrostatic test, Pre & Post installation hydrostatic test for crossings)				
191	As per specification and procedure approved by Engineer-in-charge (EIC)/ RCM.				
192	200 6.4 API 5L Gr. X-52/56 3 Layer PE Double random Coating (Externally) (approx. 11.5 m to 12.5 m)	3000.00	Meter	22.72	68,160
193	NOTE- (i) The quantities mentioned against the above SOR items are tentative and may vary depending upon the site condition during execution stage. (ii) The total quantities mentioned against the above SOR items are applicable for main steel pipeline and multiple/ various crossings at different location within GA. (iii) Payment for above item shall be made only for the certified executed length of pipeline by Engineer-in-charge (EIC)/ RCM. (iv) The requirement of gauging of main steel pipeline, prehydrotest & after pulling of HDD section shall be carried out as per MECON specification / OISD / PNGRB and same shall be approved by Engineer-in-charge (EIC)/ RCM.				
194	Post Hydrostatic testing of Buried Pipeline				
195	Carrying out cleaning, gauging, pigging and hydrostatic testing of complete pipeline section laid by HDD/Open cut method as approved by EIC/RCM to specified pressures (i.e. 1.5 times of the design pressure) for 24 hours holding period; providing all equipment, pumps, test headers, fittings, instruments, dead weight tester, pressure recorder, temperature recorder, pressure & temperature gauge etc., and services, supervision, labour, consumables, water including supply of corrosion inhibitor, air, etc. as required for successful completion of hydrotesting of pipeline to acceptance criteria as per specifications, codes, approved drawings, calculations, methods and as directed by Engineer-in-charge and provision of contract document. Complete dewatering and swabbing of the pipeline as per specification and to the entire satisfaction of the EIC/RCM.				
196	For 8" NB Line	2500.00	Meter	136.32	340,800
197	Notes: i) The above quantity is not for a single section but for no. of sections for pipeline laying. ii) The quantities mentioned against the above SOR items are tentative and may vary depending upon the site condition during execution stage. iii) Payment for Gauging activity mentioned above shall be made under SOR item No.A002000 mentioned elsewhere in this SOR.				
198	Drying by Vacuum drying / Super air drying / Super dry nitrogen				
199	Complete work of carrying out drying by Vacuum drying / Super air drying / Super dry nitrogen & commissioning of pipeline section including supply of manpower, equipments & consumables (nitrogen required for purging etc.), materials for all temporary works and performing all associated works, complete as per the relevant specifications, other provisions of Contract document and instructions of Engineer-in-Charge.				
200	For 8" NB Line	2500.00	Meter	23.86	59,640
201	Note: The quantities mentioned above for various pipeline sections. Final methodology of drying shall be decided by EIC at the time of execution.				
202	Commissioning assistance / commissioning for underground pipeline length and stations				
203	For 8" NB Line	2500.00	Meter	10.22	25,560
204	Supply of Nitrogen & Purging in pipeline system				
205	Supply of nitrogen in gaseous form and its Purging in aboveground /underground pipeline network to the specified acceptance criteria, including supply of all equipment, man-power, consumables materials for all temporary works and performing all associated works, complete as per the relevant specifications, other provisions of Contract document and instructions of Engineer-in-charge.	100.00	M3	227.20	22,720
206	Preservation of Pipeline				
207	Preservation of pipeline sections and associated facilities (in event of delay in ROU acquisition/statutory permissions, commissioning, other unforeseen reasons) including supply of nitrogen, all consumables, all equipment, man-power, etc. complete as per the requirements of specifications, other provisions of Contract document and instructions of Engineer-in-charge.				
208	By filling and pressurizing with nitrogen to a pressure of 2 bar(g) for a period of one month.				
209	For 8" NB Line	2500.00	Meter	10.22	25,560
210	For every additional period of one month or part thereof				
211	For 8" NB Line	2500.00	Meter	6.82	17,040
212	Notes: i) All accessories ie; Two nos. of dished end caps and two nos. tappings of 3/4 inches, PG to be considered per section and rate for the same shall be quoted by bidder under this item. ii) If month is partially complete, payment shall be made on prorata basis.				
213	LONG RADIUS BENDS				
214	Supply of Long Radius Bends (R = 3D) for 8" dia. pipe, X-52/56 (thk. 6.4 mm) as per specification enclosed in Tender Document.				

SCHEDULE OF RATES
LAYING OF UNDERGROUND STEEL PIPELINE INCLUDING ASSOCIATED WORKS IN CUTTACK / KHORDA (BHUBANESWAR) GAS UNDER CGD SIX CITIES PROJECT FOR M/s GAIL (I) LIMITED
M/s Amrita and Associates, Bhubaneswar

Sl. No.	Item Description	Quantity	Units	INR	
				Unit Rate (Excluding GST)	Amount (Excluding GST)
215	20° - 30°	8.00	Nos.	11,360.00	90,880
216	31° - 45°	12.00	Nos.	12,780.00	153,360
217	46° - 60°	6.00	Nos.	14,200.00	85,200
218	61° - 90°	8.00	Nos.	17,040.00	136,320
219	Note : The quantities of LR Bends may vary. For final quantity, approval shall be taken by EIC before order placement.				
220	SUPPLY OF WARNING MAT Supply of warning mat for pipeline as per the technical specification enclosed in the bid document. The material of warning mat shall be of high density polyethylene and non biodegradable type. It shall have non-toxic and anti rodent properties.				
221	8" NB Pipeline	2250.00	Meter	39.76	89,460
222	Note: Quantity mentioned above is tentative and may increase/decrease based on site requirement. Bidder have to take prior approval from EIC, before placement of order.				
223	DIGITIZATION OF RADIOGRAPHY FILMS:				
224	Carrying out digitization of all radiographic films (mainline and terminal piping) in the form of digital images (which can then be archived safely for long life and electronic retrieval) complying to all the legal local rules, codes and international standards. Submission of digital images of radiographic film along with compatible software in 6 sets of CD/DVD/Pendrive for electronic viewing /retrieval.				
225	For 8" NB Line	1.00	Lumsum	142,000.00	142,000
226	VIDEOGRAPHY & PHOTOGRAPHY				
227	Carrying out the videography & Photography of the pipeline section construction activities. The work shall be carried out in two phases.				
228	Videography & photography of the entire route prior to construction activities i.e. pipeline route, location of various stations, TOP, all crossing like road / railways, river, etc.				
229	Videography & photography during construction activities of Mainline Works i.e. Stringing, Welding, Radiography, Joint Coating, Lowering, Backfilling, etc. performing all works as per specification of EIC and other provision of contract document.				
230	For 8" NB Line	1.00	Lumsum	85,200.00	85,200
231	TRANSPORTATION OF FITTINGS, FLANGES, VALVES, BARREL ETC.				
232	"Receiving and taking over", handling, lifting, loading on truck, transportation and unloading of Company supplied DRS/MRS/, Metering Skids, fittings, flanges and valves ...etc from any storage yard (other than the designated storage yard for the project) to worksite / contractor's storage yard/ any other storage yard or as decided by EIC. The above work also includes stacking the DRS/MRS/Metering Skids, flanges, fittings and valves etc. properly. Above work shall be carried out as per standard drawing, specification, instruction of Owner and other provision of contract document.	400.00	MT-Km	15.34	6,134
233	Notes: i) The quantities given in above item no. are tentative only and shall not be considered to be binding. The quantities may be increased, decreased or deleted as per the actual site requirement and instructions / recommendations of Owner. The unit rate shall be operated to work out the final payment to the contractor. ii) Above price shall be inclusive of all type of taxes & duties, transit insurance during transportation & other insurance etc. including all financial & commercial implication as per the tender document. No other payment except as per quoted unit rate & executed quantities will be payable by the Owner. iii) Safe storage of transported material till installation shall be part of the above item. Contractor has been advised to quote accordingly.				
234	TRANSPORTATION OF LINE PIPE				
235	"Receiving and taking over", handling, lifting, loading on trailers, transportation and unloading of Company supplied line pipe from any storage yard (other than the designated storage yard for the project) to worksite / contractor's storage yard/ any other storage yard or as decided by EIC. The above work also includes stacking the pipes on wooden sleepers/ sand pads. Above work shall be carried out as per standard drawing, specification, instruction of Owner and other provision of contract document.	5000.00	MT-Km	12.50	62,480
236	Notes: i) The quantities given in above item no. are tentative only and shall not be considered to be binding. The quantities may be increased, decreased or deleted as per the actual site requirement and instructions / recommendations of Owner. The unit rate shall be operated to work out the final payment to the contractor. ii) Above price shall be inclusive of all type of taxes & duties, transit insurance during transportation & other insurance etc. including all financial & commercial implication as per the tender document. No other payment except as per quoted unit rate & executed quantities will be payable by the Owner. iii) Safe storage of transported linepipe till installation, reconciliation & handingover to client shall be part of the above item. Contractor has been advised to quote accordingly.				
237	Pipeline Laying Liaisoning & Co-ordination (including utility crossing) and obtaining permission / NOC from the statutory / concerned authorities. Assistance in ROU opening & closing and their maintenance/ management.				
238	Submitting request for (after obtaining the letter from client) permission, follow up, assisting in site inspections / route survey / site report making/making site inspection drawings, submitting at designated offices, resubmission after correction, modification if required, soft and hard copy in nos. as required /if required in sizes, and collecting permission from the statutory authorities including NHAI, PWD, Railways, Irrigation, Forest, Municipal Corporation, District administration, River Authority, SEZ etc. Obtaining work permits /NOC from various statutory authorities having jurisdiction before execution of the work and complying with all stipulations /conditions/recommendations of the said authorities. Only statutory fees shall be paid by the owner. Assistance in required length and width/restricted width of ROU opening & closing and their maintenance/ management both side of the crossings.				
239	For 8" Pipeline	2500.00	Meter	28.40	71,000
240	Note : Execution of above item is subjected to the requirement of site.				

SCHEDULE OF RATES
LAYING OF UNDERGROUND STEEL PIPELINE INCLUDING ASSOCIATED WORKS IN CUTTACK / KHORDA (BHUBANESWAR) GAS UNDER CGD SIX CITIES PROJECT FOR M/s GAIL (I) LIMITED
M/s Amrita and Associates, Bhubaneswar

Sl. No.	Item Description	Quantity	Units	INR	
				Unit Rate (Excluding GST)	Amount (Excluding GST)
241	CIVIL WORKS				
242	EARTH WORK IN EXCAVATION/ SITE GRADING AND BACKFILLING				
243	Earth work in excavation /site grading in all kinds of soil including soft rock in any plan dimension up to required depth including backfilling of excavated earth at any location in layers of 300mm and compacted up to 95% to its MDD at all heights and depths. Surplus and unserviceable earth shall be disposed up to any lead in all conditions. Soil to be levelled and neatly dressed complete in all respect as per scope of work, detailed construction drawings, technical specifications and direction of the Engineer-in-Charge.	2.00	CUM	426.00	852
244	Note:- 1. This Rate shall be applicable only for excavation which are not included as a part of respective SOR Item. 2. The Contractor shall take into account in his quoted rate the provision for excess excavation required for necessary working space, cutting in slopes etc., which may be required for excavation and other allied works and refilling the side slopes and working space in layers as per requirement. 3. Rate to include cost of all labour, tools, tackles, equipment, hire charges, shoring, bailing and pumping out water as required etc. with all bye works and sundry works complete in all respects. 4. NET CUM of excavated quantity in CUM shall be measured for payment. 5. To be read in conjunction with Particular Job Specification.				
245	BRICK WORK				
246	Providing and laying brick work with brick class designation M-5.0 of IS:1077 in Cement Mortar 1:4 (1 cement : 4 sand) in steps, load bearing structures, drains, or at any other location at all depths & height for all leads including providing required finishes, curing, scaffolding, etc., complete as per specifications and drawings with all bye-works as per direction of the Engineer-in-charge.	2.00	CUM	4,118.00	8,236
247	Note:- 1. Rate to include cost of all labour, tools, tackles, equipment, hire charges, supply of all materials such as minimum 43 grade cement (OPC), bricks, finishes, bitumen, other minor construction materials, shuttering, staging, masonry work, excavation, PCC M10, plastering with 15 mm thick cement plaster on exposed faces with 1:4 cement mortar (1 cement : 4 Sand), painting with bitumen etc. as per requirement with all bye-works and sundry works complete as per drawings. 2. To be read in conjunction with Particular Job Specification.				
248	PLAIN CEMENT CONCRETE				
249	Supplying and laying plain cement concrete of grade M 10 with stone aggregate 40mm down grade (including shuttering if required) in all types of concrete works including levelling courses below foundations, mass concrete works, chambers, cable trench, under floors and any other locations, at all levels and locations (which are not covered as part of composite items) as per drawings, specifications and directions of the Engineer-in-charge.	2.00	CUM	4,146.40	8,293
250	Note :- 1. Rate to include cost of all labour, tools, tackles, equipment, hire charges, supply of all materials, shuttering in all conditions etc. with all bye works and sundry works. 2. To be read in conjunction with Particular Job Specification.				
251	REINFORCED CEMENT CONCRETE				
252	Providing and laying Reinforced Cement Concrete of grade M-25 with 20mm and down grade crushed stone aggregate in all types of structures like foundations, beam, columns, pedestals, pedestal bases, pipe supports, sleepers, cable trench, RCC retaining wall foundation for boundary wall etc. including excavation, PCC M10 in mud mat, shuttering, construction joints, bitumen painting on surfaces in contact with soil, supplying and fixing MS inserts, finishes etc. at all depths and levels complete as per drawings, specifications and directions of the Engineer-in-charge.	2.00	CUM	5,964.00	11,928
253	Note :- 1. Rate to include cost of all labour, tools, tackles, equipment, hire charges, supply of all materials such as minimum 43 grade OPC cement including sulphate resistant cement for sub-structures, inserts, bolts, conduits, bitumen, excavation, PCC M-10 in mud mat, other minor construction materials, shuttering, staging, testing of concrete, curing etc. except reinforcement steel with all bye works and sundry works complete. 2. To be read in conjunction with Particular Job Specification.				
254	REINFORCEMENT STEEL				
255	Supplying and Fabricating and Fixing in position HYSD Steel Reinforcements/ TMT Grade Fe-415/Fe 500D conforming to IS1786-2008 at all levels and positions including the Cost of transportation, Straightening, Cutting, Bending, Cranking, Binding, Welding, Provision of necessary Chairs and Spacers, Preparation of bar bending schedule, getting the same approved by EIC etc., complete as per Drawings and Specifications and including Cost of binding wire, Labour etc., all complete in all respects as per scope of work, detailed construction drawings, technical specifications and direction of Engineer-in-charge. The Chairs and Spacer Bars provided will not be measured for payment.	0.50	MT	59,640.00	29,820
256	Note :- 1. Rate to include cost of all labour, tools, tackles, equipment, hire charges, supply of all materials such as steel Reinforcement, binding wire and other minor construction materials, testing etc. all bye works and sundry works. 2. Chairs, Laps, Spacers, Wastage etc. shall be to contractor's account. 3. To be read in conjunction with Particular Job Specification.				
257	CONCRETE PAVEMENT				
258	Providing and laying reinforced cement concrete pavement 150 mm thick in M-25 grade with 20 mm and down grade crushed stone aggregate in pavement, including earthwork in excavation, preparation of base (i.e. compacted subgrade, 200 thk sand and 100 thk PCC M-10 grade), leaving pockets if necessary, making recess, projections, fixing inserts conduit pipes (GI, PVC, HDPE, etc.) laying in alternate panels, filling the gaps between the panels with bitumen sand mix filler material etc., making slopes, finishing edges, leaving bars for pedestals & sleepers including providing sand fill isolation, shuttering, providing and fixing reinforcing steel, curing, chipping and modification works etc. as specified in any shape, thickness, position and finishing the top surface smooth as per requirement etc. all complete as per drawings, specifications and directions of the Engineer-in-charge.				
259	150mm thick in Pavements in Process Areas (Type - I)	25.00	SQM	1,505.20	37,630



SCHEDULE OF RATES
LAYING OF UNDERGROUND STEEL PIPELINE INCLUDING ASSOCIATED WORKS IN CUTTACK / KHORDA (BHUBANESWAR) GAS UNDER CGD SIX CITIES PROJECT FOR M/s GAIL (I) LIMITED
M/s Amrita and Associates, Bhubaneswar

Sl. No.	Item Description	Quantity	Units	INR	
				Unit Rate (Excluding GST)	Amount (Excluding GST)
260	Note :- 1. Rate to include cost of all labour, tools, tackles, equipment, hire charges, supply of all materials, providing and fixing reinforcement steel, shuttering, earthwork in excavation and backfilling using serviceable earth in all conditions, preparation of base, etc. with all bye works and sundry works. Cost of works towards pipe supports & sleepers being raised from pavement is covered under respective RCC items. 2. To be read in conjunction with Particular Job Specification.				
261	VALVE PIT				
262	Construction and handing over of Brick Valve Pit as per tender drawing, technical specification and direction of engineer-in-charge complete in all respect. Scope of work shall be as per tender drawing.				
263	Construction and handing over of RCC Valve Pit of approx. 1.8m x 1.8 m in size (internal dimension) as per technical specification and direction of engineer-in-charge complete in all respect. Scope of work shall be as per Sketch attached with the tender.	1.00	Nos	88,040.00	88,040
264	Construction and handing over of RCC Valve Pit of approx. 2.0m x 2.0 m in size (internal dimension) as per technical specification and direction of engineer-in-charge complete in all respect. Scope of work shall be as per Sketch attached with the tender.	1.00	Nos	110,760.00	110,760
265	STEEL STRUCTURAL WORKS				
266	Steel structure Fabrication				
267	Supplying, Fabricating & Erecting in position steel structures fabricated out of MS Girders, channels, Tees, angle, flats, plate, square hollow sections pipes etc. conforming to IS:2062 and/or from pipes conforming to IS:1161 for structural purpose for cascade supporting structure, loading/unloading platform, Gratings for platform, catladder, handrails, hoardings for sinages, Lcv stand, etc. of any size/dia for required design including cutting, welding, bolting, hoisting, fixing in position, including application of one coat of primer at shop and second coat of primer at site after erection and two coats of finishing paint at site. The work is to be completed in all respect as per specification, scope of work, detailed construction drawings and directions of the Engineer-in-charge.	200.00	KG	71.00	14,200
268	[Rate to include cost of all labour, nut, bolts, tools, tackles, hire charges royalties, levies, transportation, scrap value, gas cutting, welding, other consumables, paints, compressed air, water, electric power etc. all complete.]				
269	Providing and fixing Fencing Structure				
270	Supplying, fabricating & fixing steel structural fencing fabricated from pipes conforming to IS:1161 and plates conforming to IS:2062 & fixing of GI weldmesh made from 3mm GI wire @ 75 mm bothways to structural steel frame by means of welding/bolting, including applying two coats of approved quality of synthetic enamel paint over a priming coat of in approved shade including supply of all raw materials, bolts, electrodes, transportation, including making pokets & pouring with PCC (1:2:4) in of block 500x500x500 for fixing of posts etc complete as per enclosed drawing, technical specifications, scope of works and directions of the Engineer-In-Charge.				
271	Fencing height 2.1m	50.00	RM	2,073.20	103,660
272	Notes:- 1) The quantities indicated are estimated values and hence are approximate. Final payment will be made based on actual quantities to be certified by the Purchaser. 2) The cost of MS bolts (permanent and service), washers, electrodes, putty, gases, cost of straightening the raw materials, cutting of flats from plates and providing splices, paints, tools, plants, etc., as required for the work shall be deemed to be included in the quoted rates. 3) All handling and transport charges of raw materials and fabricated structures including double handling, as required, for completion of work in accordance with 4) Time schedule, are deemed be included in the quoted rates 5) All accessories like MS tower bolts, MS Pivot, MS Wheels, MS Tee section, locking arrangement etc. shall be measured by weight only. 6) Contractor shall ensure proper alignment and smooth operation of Gate				
	Total Excluding GST				16,336,844
	Total Including GST				19,272,476



MECON LIMITED

(A Government of India Enterprise)

SCOPE MINAR, 15th Floor, North Tower, Laxmi Nagar District Centre,

Delhi - 110 092

Phone No. : 22401129, 22447417

Corporate Identification No(CIN):U74140JH1973GOI001199

FAX OF ACCEPTANCE (FOA)

FOA NO. 05/51/Q7NT/GAIL/001-I-LVD/FOA-894

DATE: 29.10.2022

TO : M/S BHOLENATH ENTERPRISES
FAX : -
EMAIL : yogesh_bbsr@yahoo.co.in
ATTN : MR. YOGESH KUMAR GUPTA, PROPRIETOR
FROM: SR. GM (CONTRACTS), MECON LIMITED, DELHI

PLEASE REFER TO YOUR OFFER NO. NIL DATED NIL AND ALL OTHER SUBSEQUENT CORRESPONDENCE AGAINST BIDDING DOCUMENT NO. 05/51/Q7NT/GAIL/001-I-LVD (TENDER ID : 2022 GAIL 110017) DATED 30.04.2022, COMM. CORR.#1 DATED 13.05.2022, COMM. CORR.#2 DATED 13.05.2022, RPBQ DATED 13.05.2022 & COMM. CORR.#3 DATED 20.05.2022 FOR LAYING OF UNDERGROUND STEEL PIPELINE INCLUDING ASSOCIATED WORKS IN CUTTACK/KHORDA (BHUBANESHWAR) GAS FOR GAIL (INDIA) LIMITED (.)

WE HEREBY ISSUE THIS FAX OF ACCEPTANCE (FOA) FOR 100% OF THE SCOPE OF WORK OF SUBJECT TENDER AT AN ESTIMATED CONTRACT VALUE OF RS. 1,63,36,844/- (INDIAN RUPEES ONE CRORE SIXTY-THREE LAKH THIRTY-SIX THOUSAND EIGHT HUNDRED FORTY-FOUR ONLY) EXCL. GST. GST SHALL BE PAYABLE EXTRA AS PER TENDER PROVISIONS. (PRESENT RATE OF GST@18%) (.)

THE DETAILED BREAKUP OF ABOVE ORDER VALUE IS ENCLOSED AS ANNEX-1(.)

THE COMPLETION SCHEDULE SHALL BE 3 1/2 (THREE & HALF) MONTHS FROM THE DATE OF FAX OF ACCEPTANCE (FOA) FOR MECHANICAL COMPLETION INCLUDING MOBILIZATION PERIOD OF 15(FIFTEEN) DAYS AND THEREAFTER 15 (FIFTEEN) DAYS FOR DRYING, COMMISSIONING/GAS-IN (.)

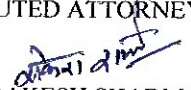
YOU ARE REQUESTED TO SUBMIT "CONTRACT PERFORMANCE GUARANTEE" @ 3% OF ORDER/CONTRACT VALUE [EXCLUDING GST] WITHIN 30 DAYS OF THIS FAX OF ACCEPTANCE AS PER TERMS AND CONDITIONS STIPULATED IN CLAUSE NO. 37 OF INSTRUCTIONS TO BIDDERS (ITB) OF BIDDING DOCUMENT(.)

YOU ARE REQUESTED TO CONTACT PROJECT COORDINATOR (MR. PRATEEK MAHESHWARI, MANAGER (CGD), MECON LIMITED, EMAIL ID: PMAHESHWARI@MECON.CO.IN) FOR FURTHER INSTRUCTIONS REGARDING EXECUTION OF THIS WORK (.)

ALL OTHER TERMS AND CONDITIONS SHALL BE AS PER BIDDING DOCUMENT & CORRIGENDUM THERE OF AS STATED ABOVE AND AS AGREED TILL DATE (.)

A DETAILED LETTER OF AWARD SHALL FOLLOW (.)

FOR & ON BEHALF OF GAIL (INDIA) LIMITED
(BY ITS CONSTITUTED ATTORNEY)


(RAKESH SHARMA)
SR. GM (CONTRACTS)
MECON LIMITED, DELHI

CC: BY COURIER TO:

M/s Bholenath Enterprises

Plot no. 33/C, Nicco Park Road, Madhusudan Nagar,
Bhubneswar-751012

Tel No.: +91-9238034200



SCHEDULE OF RATES
LAYING OF UNDERGROUND STEEL PIPELINE INCLUDING ASSOCIATED WORKS IN CUTTACK / KHORDA (BHUBANESWAR) GAS UNDER CGD SIX CITIES PROJECT FOR M/s GAIL (I) LIMITED
M/s Bholenath Enterprises, Bhubaneswar

Sl. No.	Item Description	Quantity	Units	Unit Rate (Excluding GST)	Amount (Excluding GST)
1	MAINLINE WORKS				
2	CARBON STEEL PIPES				
3	PIPELINE LAYING / INSTALLATION				
4	"Receiving and taking over" as defined in the specifications, handling, loading, transportation and unloading of Owner supplied 3-Layer PE coated and bare linepipes from Owner's designated stock-yard to Contractor's stock yard/workshop/work-site including preliminary activities, preparation of drawings, wherever required for crossing etc. including handling, stacking, stringing on the pipeline Right-of-Use/ pipeline route alignment, carrying out inspection of Owner supplied materials including linepipes at the time of taking over, laying/ installation of coated linepipes as per specification wherever required depending on site condition including execution of all works, "taking over", handling, including loading and unloading, transportation of Owner supplied materials other than linepipe from Owner's designated place (s) of issue to work site including arrangement of all as listed above..				
5	Additional lands required for Contractor's storage, fabrication, access for construction, procurement and supply of all materials (except Owner supplied materials), consumables, equipment, labour and other inputs, carrying out all temporary, ancillary, auxiliary works, ready for commissioning of pipeline as per drawings, specifications, other provisions of Contract document and instructions of Engineer-in-charge, including but not limited to carrying out the following works:				
6	Survey of route and detours required at the time of execution including preparation of construction drawings showing survey details, and submit same to GAIL/PMC for review / approval.				
7	Staking and installation of construction markers, clearing, fencing, grubbing, full filling all the requirements of various statutory/ environment authorities to the entire satisfaction of concerned authorities, grading of work area.				
8	Barricading the pipeline construction area prior to execution of the works as per drawings enclosed with tender document and to the entire satisfaction of Owner / Engineer-in-charge.				
9	Trenching to all depths by excavation and to a width to accommodate the carrier pipeline during lowering & backfilling in all types of soils and rocky strata including different type of pavement / footpath / roads (other than concrete roads) etc. including breaking, chiselling or otherwise cutting etc. as required and storing excavated soil, reusable materials at designated area as directed by Engineer in charge and to a width to accommodate the pipeline as per the relevant standard/ specification etc. [The minimum depth of the top of pipeline shall be 1 m measured from top of pipeline coating to the top of undisturbed surface of the soil or as per SCC/ relevant code, whichever is higher]. Dewatering of trenches if required as per site condition.				
10	Carrying out repairs of pipe defects/ replacement in case of irreparable defects and repairs of defects of pipe coating not attributable to Owner including defects/ damages occurring during transportation / handling.				
11	Stringing of line pipes along pipeline trench / ROU provided on sand/soft soil bags including all supplies, manpower & machinery etc.				
12	Aligning, bending, cutting and bevelling (as required) of pipes for welding and field adjustments including pipe fittings, welding, carrying out non-destructive testing of welds as required including 100% radiography by X-ray either by internal source or external source based on site conditions/front availability and in this regard decision of EIC shall be final and binding to the contractor (In case placement/Installation of X-ray equipment is not feasible, in that case Gamma ray may be permitted as per decision of Engineer In-Charge(EIC) based on site conditions) and providing all requisite equipment, labour, supervision, materials, films, consumables, all facilities and personnel to process, develop, examine and interpret radiographs and other tests as required, carrying out repairs of weld joints found defective by Engineer-in-Charge, carrying out re-radiography and other tests as required on repaired joints and NDT of rebevelled area as mentioned in SCC & Particular Jobs Specification.				
13	Carrying out installation of carrier line pipe at all minor crossing ie; road, cart track, pathway, water bodies etc. at required depth by open cut (except at crossing by Molding & HDD method). Methodology to be adopted for crossing shall be decided by joint survey with Client/PMC & Contractor and based on the finalization of methodology crossing by HDD, Laying of pipeline through HDD, Molding shall be payable through respective item available else where in the SOR.				
14	Coating of field weld joints, long radius bends (R=3D for 8 Inch), elbows... etc. including supply of coating materials etc. (i.e. heat shrinkable sleeves and high build epoxy etc.) as per PJS & Technical Specification compatible with 3 layer PE coating material of the line pipe.				
15	Installation of LR Bend (R=3D for 8 Inch) , as per specification wherever required depending on site condition.				
16	Installation / lowering the pipeline in trench to required depth as per PJS, Technical Specification & drawings and providing required padding over and around the pipeline with sand/graded material approved by Engineer-In-Charge (in rocky areas) including padding around pipeline with suitable soil duly approved by EIC. Supply of padding material, backfilling and its compaction to the satisfaction of concerned authorities with excavated earth / borrowed select soil including supply of borrowed select soil duly approved by EIC before backfilling and make ready for restoration to be done by Owner / concerned authorities.				
17	Installation of warning mat on the entire length of the pipeline as per specification. Warning mat should have anti rodent properties.				
18	Crossing the all-foreign pipeline / HT line / cable / any other utilities etc. with necessary concrete / PVC protection including coordination with all agencies and obtaining NOC after completion of all the activities.				
19	Supply and installation of bank protection alongwith backfill materials duly approved by EIC for pipeline trench and banks falls under minor water body crossing as per technical specification & Std. Org., wherever required or, as directed by Owner / EIC.				



SCHEDULE OF RATES
LAYING OF UNDERGROUND STEEL PIPELINE INCLUDING ASSOCIATED WORKS IN CUTTACK / KHORDA (BHUBANESWAR) GAS UNDER CGD SIX CITIES PROJECT FOR M/s GAIL (I) LIMITED
M/s Bholenath Enterprises, Bhubaneswar

Sl. No.	Item Description	Quantity	Units	INR	
				Unit Rate (Excluding GST)	Amount (Excluding GST)
20	Carrying out air cleaning, gauging, pigging, flushing, cleaning and hydrostatic testing of complete pipeline, supply of required quantity of corrosion inhibitor, if required including pre-testing of designated sections complete as per specification and approved by Engineer-in-charge to specified pressures indicated elsewhere and duration after stabilization as per specification, providing all equipment, pumps, fittings, instruments, dead weight tester, pressure recorder, thermocouples etc., and services, supervision, labour, consumables, water including supply of corrosion inhibitor, air, etc. as required, locating of leaks and rectification of defect attributable to Contractor (rectification of defects in linepipe material not attributable to contractor shall be paid separately as per other item of schedule of rate), re-testing after rectification, dewatering after successful completion of hydrotesting of entire section and as approved by Engineer-in-Charge. Note : 1. Leak detection, its rectification and successfully re-hydrotesting shall be carried out by Contractor with a view that completion of all activity for successful hydrotesting should not be inordinately extended / delayed , which will hamper the overall project schedule. Further, no extra payment claim shall be entertained for re-hydrotesting, leak detection and their rectifications if defects found attributable to Contractor. 2.Payment for Gauging activity mentioned above shall be made under item mentioned else where in SOR. 3.Payment for hydrostatic testing activity mentioned above shall be made under item mentioned elsewhere in this SOR.				
21	All tie-in, including the tie-in(s) of the pipeline with the adjacent sections of pipeline including cutting of test header, rebeveling as required, radiography and other NDT examination, joint coating as per specification.				
22	Final clean-up & restoration of right-of-use or area disturbed by contractor including obtaining NOC from respective land owner and statutory authorities during their construction activities for laying of pipeline works and disposal of debris and returning all surplus material to designated disposal areas / storage yard as and backfilling of trench and compaction of the same as per satisfaction of Owner and / Or as directed by Engineer-in-charge.				
23	Carrying out all temporary, ancillary, auxiliary works and all incidental works required to make the pipeline ready for pre-commissioning.				
24	Restoration of land, facilities and boundary wall etc. and associated facilities dismantled/damaged by the Contractor during construction.				
25	Hook-up work with existing pipelines including pit excavation & other associated work (If any).Payment for Hook up shall be made under item mentioned elsewhere in SOR				
26	Protective coating of 500 micron thick two component (applied with the help of minimum three coats) liquid epoxy including supply of materials duly approved by Owner for all piping valves, fittings, structural steels etc. for buried installation and inside the valve pit as approved by the Engineer-in-charge.				
27	Carrying out all temporary, ancillary, auxiliary works and all incidental works required to make the pipeline ready for pre-commissioning.				
28	Obtaining work permits/ NOC from various statutory authorities having jurisdiction, before and after execution of the work, and complying with all stipulation/conditions/recommendation of the said authorities;				
29	Preparation of as-built drawings, pipe-book and other records as specified in the specifications. SOR shall be read in conjunction with job specific requirements, specifications, standards, drawings and other provision of contract document. All above works line pipe laying and installation all above works for buried pipeline as per following details:				
30	Installation of Coated Line Pipes as per following details:				
31	Specified dia Thk (mm) Material Coating Type Length of each pipe (mm) NB				
32	For All Type of Soil				
33	200 6.4 API 5L Gr. X-52/56 3 Layer PE Double random 820.00 Meter 1,448.40 1,187,688 Coating (Externally) (approx. 11.5 m to 12.5 m)				
34	For Rocky Strata (Refer Notes)				
35	200 6.4 API 5L Gr. X-52/56 3 Layer PE Double random 180.00 Meter 2,328.80 419,184 Coating (Externally) (approx. 11.5 m to 12.5 m)				
36	Note:				
37	The lengths of pipelines are tentative and for various locations. Quantities may increase/decrease or delete based on site requirement/Joint Survey/Change in requirement of Owner.				
38	The above item rate is exclusive of crossings by HDD and Moiling (which are covered separately in relevant SOR items). For other crossings, it is deemed to be inclusive in above item rate.				
39	This item shall be applicable for the underground steel grid main pipeline & branch pipeline including , insulating joints, bends (3D for 8") , flanges & fittings, underground valves if required, accessories etc. , Installation of valves including other fittings & pipes for Sectionalizing & Tap Off if required shall be paid separately through item available else where in SOR.				
40	The above rate shall be exclusive of hydrotesting of complete pipeline including hydrotesting of all crossing sections along-with the mainline. However, payment for pre- testing as required, are inclusive in above items rate.				
41	In above item, backfilling of pipeline trench by borrowed select soil duly approved by Owner / EIC shall be paid by separate item mentioned elsewhere in the SOR.				
42	Contractor shall not perform any pipeline activities along ROU/Corridor without specified barricading as per Std. Drg. and other safety measures.				
43	Proposed pipeline route is passing through MDR/ Asphalt Road / concrete roads (RCC/PCC) etc. However, in case of non-availability of ROU along MDR/ Asphalt Road / concrete roads (RCC/PCC) etc., the pipeline route may change and this may also require a new tap-off point at suitable location on Pipeline . This may cause increase / decrease in SOR quantities.				
44	The rates shall be applicable for the work within at all locations / with in GA- Khorda/Cuttack .				



SCHEDULE OF RATES
LAYING OF UNDERGROUND STEEL PIPELINE INCLUDING ASSOCIATED WORKS IN CUTTACK / KHORDA (BHUBANESWAR) GAS UNDER CGD SIX CITIES PROJECT FOR M/s GAIL (I) LIMITED
M/s Bholenath Enterprises, Bhubaneswar

Sl. No.	Item Description	Quantity	Units	INR	
				Unit Rate (Excluding GST)	Amount (Excluding GST)
45	The above rate is excluding of crossings by HDD, Boring, moiling, open cut conventional Method mentioned under separate item.				
46	In congested area trenching shall be made manually for pipeline laying further Contractor shall ensure that no tree/plant cutting shall be carried out during Pipe Line Laying operations.Trenching shall be carried out manually if needed, so as to ensure no damage to plant/tree/OFC /water pipe line /telephone line/sewage line/electric cable and other under ground utilities.				
47	Quantity indicated above is tentative. Execution of pipeline laying in rocky strata(if encountered during execution) shall be jointly recorded.				
48	Bifurcation of Soil & Rocky strata shall be done based on the equipments used in trenching the pipeline section. For Rocky strata contractor have to use of rock breaking tool / rock hammer or other equivalent tools for preparation of trench with due approval of EIC. Supply and installation of rock shield as per specification including padding through sand/soft soil is inclusive in above item.Bidder have to quote accordingly.				
49	Excavation of hard rock strata, wherever hard rock of single piece exceeding 1.5 meter in any direction within the trencn dimension with respect to length, width & depth and removal only by pneumatic chisel/ drill/ rock-breaking tool/rock hammer or other equivalent tools. The rates are payable over and above the laying rates as per relevent SOR items mentioned elsewhere in SOR.				
50	Fabrication of Sectionalizing Valves(SV) and Tap-off including pipes & fittings shall be paid separately.				
51	For Tie-in and other locations wherein NDT through X-ray is not feasible NDT by Gamma ray shall be permitted with due permission of EIC.				
52	Payment for Preparation of as-built drawings, pipe-book and other records as specified in the specifications is to be covered in this SOR rate.				
53	Contractor shall return all surplus material to designated storage yard as mentioned in Annexure-2 to SCC, as directed by Engineer-In-Charge.				
54	Owner supplied 3 LPE Line Pipe & Bare Pipe required for pipeline laying activity shall be shifted from owner designated store located within Cuttack / Khorda (Bhubaneswar) GAs and payment are inculsive in above items rate. Bidder has to quote accordingly.				
55	Contractor shall ensure that no tree/plant cutting shall be carried out during Pipe Line Laying operations.Trenching shall be carried out manually if needed, so as to ensure no damage to plant/tree/OFC /water pipe line /foreign pipeline/telephone line/sewage line/electric cable and other under ground utilities.				
56	Bidder has to familiarise themself the entire pipeline route and all locations /region/ charge area within the GA and ascertain all type of eventuality/uncertainty before gouting their bid.				
57	End cap / blind (Temporary during construction of pipeline) at both the ends for carrier pipeline as per specification is included in above quoted rates, However after completion of pipeline End Cap shall be provided to contractor as free issue.				
58	Payment for carrying out liasioning & co-odrination utility/foreign pipeline crossings (if any) and obtaining permission / NOC from these authorities including assistance in ROU/Corridor opening & closing and their maintainence/ management both side of the crossings shall be made under item mentioned elsewhere in SOR.				
59	Excavation- Hard Rock				
60	Excavation of hard rock only, wherever hard rock of single piece exceeding 1.5 meter in any direction within the trencn dimension with respect to length, width & depth and removal only by pneumatic chisel/ drill/ rock-breaker.	180.00	CUM	1,363.20	245,376
61	Note: i) Quantity indicated above is tentative and may increase/ decrease or delete as per site requirement. ii) Above item is for laying of pipeline through open cut method only.				
62	PIPELINE LAYING/INSTALLATION BY HDD METHOD				
63	Complete work of laying of pipeline in restricted ROU along with adjacent road/nala (if minor road/nala falling under the laying profile and not considered under separate crossing) by HDD method including "Receiving and taking over" owner supplied 3LPE coated line pipes from owner's designated place to issue/dump site(s) and transportation to contractor's stock yard/work site including all handling, loading, uploading, aligning etc. supply of all contractor supplied material including consumables, manpower, equipment, other resources to work site(s) and aquiring the required land for storage. Execution of, but not limited to, following works in accordance with specifications and instruction of engineer-in-charge and as per all provision of Contract Document.				
64	Pre-construction survey, necessary cover required over the carrier pipeline, based on site visit, collection of data (if required) from concerned Authority including design and detail engineering and making of drawings for getting their approval from concerned Authority/Engineer-in-charge, getting work permit/NOC for utilities crossings (if any) encountered prior to start the execution of work.				
65	Digging of entry and exit Pits,Pre hydrotesting at specified pressure , Drilling to required depth from top of ground (min 2.0 mtrs.) including maintenance of drill hole in all types of soil including pebbets, cobbles, boulders, structures etc. and all types of rocky starta, all depth to accommodate the pipeline at all conditions encountered by approved HDD methods for providing minimum cover specified in code/specification or the actual depth as decided by concerned authority, whichever is more				
66	Digging of entry and exit Pits,Laying of the pipeline(as per approved HDD profile) by the approved HDD method including pipeline string preparation, welding, testing, 100% radiography by X-ray, welding repair and retest, coating of field joints with special type Dirax Heat Shrink Sleeve or equivalent (including supply of coating material) and repair of pipeline coating with special PERP-60E repair patch or equivalent material (including supply of repair patch) as per specification, pre-hydrotest of complete strings made for laying etc.Backfilling of entry and exit pits and its levelling.				



SCHEDULE OF RATES
LAYING OF UNDERGROUND STEEL PIPELINE INCLUDING ASSOCIATED WORKS IN CUTTACK / KHORDA (BHUBANESWAR) GAS UNDER CGD SIX CITIES PROJECT FOR M/s GAIL (I) LIMITED
M/s Bholenath Enterprises, Bhubaneswar

Sl. No.	Item Description	Quantity	Units	Unit Rate (Excluding GST)	INR	
					Amount (Excluding GST)	
67	Backfilling of the ditch/trench pits including restoration and clean-up of area, disposal of drilling fluid & waste etc. to the satisfaction of Engineer-in-charge and/or as directed by concerned Authority.					
68	Carrying out cleaning, gauging, water filling, post-hydrotesting, of complete pipeline string in one section/ test sections as approved by EIC/RCM to specified test pressures (i.e.1.5 times of Design pressure) for 24 hours hold period; providing all equipment, pumps, test headers, fittings, pressure & temperature instruments etc., and services, supervision, labour, consumables, water, air, etc. as required; detection of leaks, if any occurred during post-hydrotesting, attributable to Contractor and rectification of defects, re-testing after rectification with due approval of Owner, successful completion of post-hydrotesting including dewatering of pipeline to acceptance criteria defined in the specifications. Note : 1. Leak detection, its rectification and successfully re-hydrotesting shall be carried out by Contractor with a view that completion of all activity for successful pre-hydrotesting should not be inordinately extended / delayed , which will hamper the overall project schedule. Further, no extra payment claim shall be entertained for re-hydrotesting, leak detection and their rectifications if defects found attributable to Contractor. 2. Payment for Gauging activity mentioned above shall be made under item mentioned elsewhere in SOR. 3. Payment for Post hydrostatic testing activity shall be made under item elsewhere in SOR, however pre hydrotesting is inclusive in the above SOR item rates.					
69	Installation/laying of Coated Line Pipes as per following details:					
70	Specified dia Thk (mm) Material Coating Type Length of each pipe (mm) NB					
71	For all types of Soil other than Rocky Starta					
72	200 6.4 API 5L Gr. X-52/56 3 Layer PE Double random Coating (Externally) (approx. 11.5 m to 12.5 m)	900.00	Meter	5,396.00		4,856,400
73	For all types of Rocky Starta					
74	200 6.4 API 5L Gr. X-52/56 3 Layer PE Double random Coating (Externally) (approx. 11.5 m to 12.5 m)	180.00	Meter	8,804.00		1,584,720
75	Note: (i) Pipeline length are tentative and for various crossings/site locations wherein laying through open cut is not feasible. Tenderer are advised to visit the site for actual assessment of extent of laying and to access the maximum extent of cover which may have to be provided. Actual string length for HDD shall be as per design calculations so that pipe is not under stress as permitted by codes/ specifications. Final length of string shall be decided after decision of minimum cover requirement by concerned Authority/ Engineer-in-charge.					
76	(ii) The quantities mentioned above are tentative and may increase or decrease depending upon the site conditions/requirements. The quantity indicated against each item are for multiple shots/Multiple entry & exit pits and shall be as per requirement at site for laying at different locations.					
77	(iii) Contractor shall not perform any pipeline related activities along the ROU without specified barricading/permission of EIC/RCM as per Std. Drg. and other safety measures.					
78	(iv) Payment for the length of final tied-in carrier pipeline string are inclusive in the above item rate and no separate payment shall be made under other item mentioned elsewhere.					
79	(v) Width of above laying indicated are tentative. The width indicated are not for any single laying. This shall be as per requirement at site for laying at different locations.					
80	(vi) Contractor have to use rock cutting tool and all other accessories as required to make drill hole in rocky starta based on requirement. However no extra/additional claim on account of same is permitted. Contractors are advised to quote accordingly.					
81	vii) The above items rate shall be applicable for all locations / region/ charge area within & around the GA of Khorda/Cuttack.					
82	Viii) Payment for carrying out liaisoning & co-ordination works for utility/foreign pipeline crossings (if any) and obtaining permission / NOC from these authorities including assistance in ROU opening & closing and their maintenance/ management both side of the crossings shall be made under item mentioned elsewhere in SOR.					
83	ix) Rock drilling shall be considered at location/strata for which the core recovery is min 25%. Expenditure to establish the Starta as rock through lab test or any other approved methodology shall be paid through item rate available else where in SOR.					
84	PIPELINE LAYING / INSTALLATION IN A BUILT-UP SURFACE/ HARD SURFACE					
85	Raking up of hard surface of any type including bituminous, asphalt, concrete, tiled, brick lined soft/ hard rock which is breakable in pieces manually (without use of pneumatic machine) etc. All tiles/ slabs/ curb stones etc. removed during excavation shall be placed properly. The other activities are as per SOR item no. A00101 including its notes.					
86	200 6.4 API 5L Gr. X-52/56 3 Layer PE Double random Coating (Externally) (approx. 11.5 m to 12.5 m)	72.00	Meter	1,988.00		143,136
87	Note: The above rate is inclusive of all other activities as per SOR item no. A00101 including its notes.					
88	REMOVAL & RESTORATION OF CONTINUOUS CONCRETE (RCC/PCC) FOR PIPELINE INSTALLATION					
89	Removal of concrete (RCC/PCC etc) for preparation of pipeline trench (by using pneumatic machine or other approved method) including restoration of same as previous by providing the RCC/PCC...etc up to satisfaction of EIC and concern authority. Shifting & disposing of debris material at suitable location as per direction of EIC. The other activities are as per SOR item no. A00101 including its notes.					
90	200 6.4 API 5L Gr. X-52/56 3 Layer PE Double random Coating (Externally) (approx. 11.5 m to 12.5 m)	72.00	Meter	624.80		44,986
91	RESTORATION OF ROADS					

SCHEDULE OF RATES
LAYING OF UNDERGROUND STEEL PIPELINE INCLUDING ASSOCIATED WORKS IN CUTTACK / KHORDA (BHUBANESWAR) GAS UNDER CGD SIX CITIES PROJECT FOR M/s GAIL (I) LIMITED
M/s Bholenath Enterprises, Bhubaneswar

INR					
Sl. No.	Item Description	Quantity	Units	Unit Rate (Excluding GST)	Amount (Excluding GST)
92	Restoration of asphalt / concrete / red stone roads / pavement/ pavor block including compaction of soil, to original condition as per requirement and to the entire satisfaction of EIC and / or concerned Owners having jurisdiction for following thickness.				
93	Restoration of Asphalt road upto 10 cm thickness	84.00	Sq. Metre	511.20	42,941
94	Restoration of Asphalt road beyond 10 cm upto 20 cm thickness	48.00	Sq. Metre	795.20	38,170
95	Restoration of Concrete road upto 10 cm thickness	60.00	Sq. Metre	624.80	37,488
96	Restoration of Concrete road 10 cm to 20cm thickness	48.00	Sq. Metre	908.80	43,622
97	Restoration of red stone road / footpath / pavement upto 4 inch thickness	48.00	Sq. Metre	426.00	20,448
98	Restoration of red stone road / footpath / pavement upto 4 to 8 inch thickness	36.00	Sq. Metre	624.80	22,493
99	BORROWED SELECT SOIL FOR BACKFILLING				
100	Additional work over and above item no. A00100 for supply of specified and approved quality of borrowed local soft graded soil / sand in place of available excavated material and / or other suitable soil as per applicable standards / specifications, including backfilling of excavated trench for specified length after laying and padding of pipeline, including local transportation of such special backfill material over all distances, complete.	50.00	M3	284.00	14,200
101	PIPING WORKS FOR SECTIONALISING VALVE STATION (SV STATION)(Fabrication at Ground and then installation in the Pit)				
102	SECTIONALISING VALVE STATION - UNDER GROUND				
103	All works for installation of all piping Underground at all depth for Vent Type/ No Vent Type Valve Station along with/without future tap-off (as required) in Valve Chamber in all type of terrains and soils including transportation and handling of all owner/contractor supplied materials i.e. full bore 8" butt welded Ball valve, Plug Valves, all types of other valves of all sizes, Weldolet of all sizes, Insulating Joint, vent line pipes for mainline, assorted pipes and all flanges and fittings from designated places(s) of issue to work site. Supply of gaskets, studs, nuts, nipples & coupling, consumables, Liquid penetrant kit, Cotton cloth ...etc. Installation / Erection of instrumentation items i.e. pressure gauge, consumables, manpower, machineries, tools & tackles for carrying out all mechanical works of underground and above ground piping including fabrication, welding, nondestructive testing of welds, weld repairs/ Pretesting, cleaning/ flushing, pre-hydrotesting & hydrostatic testing, dewatering, functional testing, cutting of mainline and bevelling (if required), tie-in of valve assembly, including radiography & joint coating of tie-in joints, external painting for buried fittings by high build epoxy of min. 500 micron of R-95 or equivalent as required, obtaining all statutory clearances, approvals and permissions for the works (wherever required), making of valve pit [for detail refer relevant drawings (i.e. P&ID, Plot Plan) for SV Station point enclosed with tender. pipe supports including all associated civil works (pertaining to supports only); painting, finishing, clean-up and restoration of site; preparation of as-built drawings, documents and project records and performing all works as per drawings, specifications, other provisions of Contract document and instructions of Engineer-in-charge.				
104	Sectionalising Valve Station (8") with Tap Off valves	1.00	Lumpsum	99,400.00	99,400
105	Sectionalising Valve Station (8") without Tap Off valves	1.00	Lumpsum	99,400.00	99,400
106	Notes: 1. This work is exclusive of all works associated with main pipeline covered at SOR item no. A00100 below. 2. All Civil/ structural works except for piping supports will be paid separately as per rates provided elsewhere. 3. Work is inclusive of receiving, taking over, loading & unloading of company supplied material and return of surplus material to Company's designated stockyard/store. 4. Valves, Assorted Pipe, fittings & Flanges, any type of tee, instrumentation items ...etc as required for construction of SV station shall be made available to contractor as free issue material. Fabrication of SV, Tap-Off Point (if required) , erection, Testing & commissioning is inbuilt in above item rates, hence contractor have to quote accordingly. 5. Civil Work for Valve Pit and its upper slab for under ground SV stations shall be payable through item available else where in SOR. 6. NDT of Joints is inclusive in above item rate. For 1/2" to 1.5" contractor have to carry out NDT by DP test, however for 2" to 8" NDT by X-ray/Gamma ray is required. Bidder have to quote accordingly.				
107	(Refer plot plan drawing and other relevant drawings for Sectionalising Valve Stations enclosed with tender document for ascertaining quantum of mechanical work associated with SV Station).				
108	PIPING WORKS FOR TAP-OFF POINT(Fabrication at Ground and then installation in the Pit)				

SCHEDULE OF RATES
LAYING OF UNDERGROUND STEEL PIPELINE INCLUDING ASSOCIATED WORKS IN CUTTACK / KHORDA (BHUBANESWAR) GAS UNDER CGD SIX CITIES PROJECT FOR M/s GAIL (I) LIMITED
M/s Bholenath Enterprises, Bhubaneswar

Sl. No.	Item Description	Quantity	Units	Unit Rate (Excluding GST)	INR
					Amount (Excluding GST)
109	All works for installation of all piping and valves assembly on above/below ground at all depth for Tap-off in all type of terrains and soils including transportation and handling of all owner/contractor supplied materials butt welded Ball valve, all valves of all types and sizes, Barred tees of all sizes and all fittings from designated places(s) of issue to work site. Supply of assorted pipes, consumable, Liquid penetrant kit, Cotton cloth...etc, manpower, machineries, tools & tackles for carrying out all mechanical works of underground/aboveground piping including fabrication, welding, nondestructive testing of welds, weld repairs/ retesting, cleaning/ flushing, pre-hydrotesting & hydrostatic testing, dewatering, functional testing, cutting of mainline and bevelling (if required), tie-in of valve assembly, including radiography of tie-in joints, corrosion coating (by heat shrink sleeves) for buried piping and external painting for buried fittings by high build epoxy of min. 500 micron of R-95 or equivalent as required, obtaining all statutory clearances, approvals and permissions for the works (wherever required), excavation and filling in all types of soils including soft/ hard rock for installation of piping, painting, finishing, clean-up and restoration of site; preparation of as-built drawings, documents and project records and performing all works as per drawings, specifications, other provisions of Contract document and instructions of Engineer-in-charge.				
110	4" Tap-off Point	1.00	Nos	113,600.00	113,600
111	Notes: 1. This work is exclusive of all works associated with main pipeline covered at SOR item no. A00100 below.. 2. All others works pertaining to Tap-off (Instrumentation works) (if any) shall be as per rates indicated elsewhere in the tender document. 3. Work is inclusive of receiving, taking over, loading & unloading of company supplied material and return of surplus material to Company's designated stockyard/store.				
112	(Refer plot plan drawing and relevant drawings for Tap-off Station enclosed with tender document for ascertaining quantum of mechanical work associated with Tap-off Station).				
113	4. Valves, Assorted Pipe, fittings & Flanges, any type of tee, instrumentation items (if any) etc as required for construction of Tap-off point shall be made available to contractor as free issue material. Fabrication of Tap-Off Point (if required), erection, Testing & commissioning is inbuilt in above item rates, hence contractor have to quote accordingly. 5. Qty of tapp off points is tentative and may differ as per site requirement.				
114	6. Qty for tapp-off point mentioned above is excluding quantities mentioned in SV station and for separate locations than SV station. 7. NDT of Joints is inclusive in above item rate. For 1/2" to 1.5" contractor have to carry out NDT by DP test, however for 2" to 8" NDT by X-ray/Gamma ray is required. Bidder have to quote accordingly.				
115	Station piping works(Above Ground)				
116	Transportation including loading, unloading & handling of all piping items from Owner's and/ or Contractor's storage point to work site/ workshop as applicable, complete work of fabrication, erection, painting, testing of pipes, flanges and fittings and making ready for further Commissioning / Start-up of carbon steel piping of all sizes and ratings including supply of all consumables, equipment, manpower and other resources and execution of, but not limited to, the following works in accordance with relevant specifications & scope of work, drawings, specification and instructions of Engineer-in-charge and as per all provisions of the CONTRACT DOCUMENT.				
117	Fabrication including cutting, edge preparation, welding of pipe, valves, fittings & flanges, IJ ... etc in above ground/underground. Supply of nipples, couplings, caps, plugs, gasket, stud bolts, nuts, U Clamps etc. as required for completion of job.				
118	Erection including supply and fixing of gaskets, studs/ bolts, nuts wherever required for all sizes, levelling, aligning, joining of flanges, blind flanges, connecting with equipment, nozzles, tie-in with existing piping/facilities, etc. tapping for inline instruments like pressure gauges, thermowells, sample connection, etc.				
119	Preparation of final bill of material based on piping GADs.				
120	Preparation of isometric and fabrication drawings.				
121	Carrying out 100 % Non-destructive testing				
122	Surface preparation, Painting of piping system as per specification.				
123	Cleaning and flushing by water/ compressed air, testing of the systems including hydrostatic, pneumatic and any other type of testing as specified, draining, drying by compressed air/other methods approved by COMPANY.				
124	Precommissioning & making operational all piping system and equipments and provide all necessary assistance in term of supply of man-power, equipment, tools and tackles required amount of nitrogen for purging of entire terminal piping system including equipments etc. to the company during commissioning activities.				
125	Clean-up and restoration of site, preparation of as built drawings, documents and project records; transportation of surplus free issue material to Owner's designated plac(s); completing all works in all respects as per the AFC drawing, specifications, standards and other provisions of Contract and instruction of Engineer-in-charge.				
126	Completion of all such work in all respects as per scope of work and as per drawings, specifications and instructions of the COMPANY and keeping the system ready in all respects for further commissioning and start up.				
127	Hook-up works including making provision for hooking up and carrying out shutdown activities at terminals if necessary.				
128	Pipeline size 1/2" to 8" NB dia	100.00	Inch-dia	482.80	48,280

SCHEDULE OF RATES
LAYING OF UNDERGROUND STEEL PIPELINE INCLUDING ASSOCIATED WORKS IN CUTTACK / KHORDA (BHUBANESWAR) GAS UNDER CGD SIX CITIES PROJECT FOR M/s GAIL (I) LIMITED
M/s Bholenath Enterprises, Bhubaneswar

Sl. No.	Item Description	Quantity	Units	Unit Rate (Excluding GST)	INR
					Amount (Excluding GST)
129	1) Pipe Specification and thickness may vary depending upon availability of pipe. No extra payment shall be made for this. 2) All butt welded fittings end shall generally match with connecting pipe wall thickness. However, in case of misalignment, Contractor shall have to do end preparation without any extra cost. 3) All coupling, nipples etc. as required shall be supplied by contractor but no separate payments shall be made as it is covered under erection rate. 4) NDT of Joints is inclusive in above item rate. For 1/2" to 1.5" contractor have to carry out NDT by DP test, however for 2" to 8" NDT by X-ray/Gamma ray is required. Bidder have to quote accordingly. 5) Item mentioned is for other station piping works (excluding item no.A00900 above) and shall be operated based on site requirement as per the decision of EIC. 6. Nitrogen requirement for pre-commissioning/commissioning shall be paid through item available else where in SOR. 7. Material as required for fabrication shall be made available to contractor as free issue material.				
130	OTHERS CROSSING (by HDD Method)				
131	Complete work for installation of carrier pipeline (between the ROW/Corridor limits as per approved drawing) by HDD method including "Receiving and taking over" owner supplied three layer PE coated line pipes from Owner's designated place to issue/ dump site(s) and transportation to Contractor's stock yard/ work shop/ work site including all handling, loading, unloading, aligning etc. supply of all Contractor supplied material including consumables, manpower, equipment, other resources to work site(s) and acquiring the required land for storage., Execution of, but not limited to, following works in accordance with specifications and instruction of Engineer-in-charge and as per all provision of Contract Document.				
132	Pre-construction survey, necessary cover required over the carrier pipeline from lowest bed level of the stipulated water crossing to be obtained from concerned authority, bed strata data including design & detail engineering and making of crossing drawing for getting their approval from concerned Authority/ Engineer-in-charge, getting work permit/ NOC for water crossings as well as utility crossings (if any) encountered during water crossing prior to start the execution of work. getting work permit/ NOC for water crossings as well as utility crossings (if any) encountered during water crossing prior to start the execution of work.; obtaining historical data/ scour depth (for river) from concerned authority, if required, ascertaining under neath soil & strata, necessary cover required over the carrier pipeline from lowest bed level of the stipulated water crossing including design & calculation and detail engineering and making of crossing drawing for getting the approval from concerned Authority/ Engineer-in-charge, getting work permit/ NOC for water crossings as well as utility crossings (if any) encountered during water crossing prior to start the execution of work. For road crossings, pre-construction survey based on site visit, collection of data (if required) from concerned Authority including design and detail engineering and making of crossing drawings for getting their approval from concerned Authority/ Engineer-in-charge, getting work permit/ NOC for the crossing as well as utility crossings (if any) encountered during crossing prior to start the execution of work.				
133	In case of water body crossings other than river Drilling to the required depth on the banks and bed including maintenance of drill hole in all types of strata (i.e; soft/hard soil, soft/hard rock....etc), all depth to accommodate the pipeline at all conditions of the waterbody crossings by HDD methods for providing with minimum cover either (i) 1.5m below the scour level / profile, duly approved/ accepted by concerned authority (under whose jurisdictions the crossing lies)—— For rivers with rocky bed or (ii) 2.5m below the scour level / profile, duly approved/ accepted by concerned authority (under whose jurisdictions the crossing lies)—— For major rivers. or (iii) 1.5 m below the bed level / profile, duly approved/ accepted by concerned authority (under whose jurisdictions the crossing lies)—— For minor waterbody crossings. and (iii) In addition to point (i) & (ii), in case of multiple combined X-ing i.e. river alongwith road/ drain, minimum cover requirement as per specification/ concerned authority for each type of x-ing has also to be fulfilled.				
134	In case of road crossing, drilling to required depth from top of road including maintenance of drill hole in all types of strata (i.e; soft/hard soil, soft/hard rock....etc), all depth to accommodate the pipeline at all conditions encountered during road crossing by approved HDD methods for providing minimum cover specified in code/ specification or the actual depth as decided by concerned authority, whichever is more.				
135	Laying of the carrier pipeline (for both water body and road crossing) by the approved HDD method across the crossing including, strings preparation of carrier , welding, testing, 100% radiography by x-ray, welding repair and retest, coating of field joints with special type Dirax Heat Shrink Sleeve or equivalent (including supply of coating material) and repair of pipeline coating with special PERP-80 repair patch or equivalent material (including supply of repair patch) as per specification, pre-hydrotest of complete strings made for crossing as per specification etc.				
136	Preparation of string (as per requirement), fabrication and welding as per specification and laying of carrier pipeline across the crossing as per approved profile.				
137	Backfilling of the ditch/ trench including restoration and clean-up of area, disposal of drilling fluid & waste etc. to the satisfaction of Engineer-in-charge and /or as directed by Concerned Authority.				



SCHEDULE OF RATES
LAYING OF UNDERGROUND STEEL PIPELINE INCLUDING ASSOCIATED WORKS IN CUTTACK / KHORDA (BHUBANESWAR) GAS UNDER CGD SIX CITIES PROJECT FOR M/s GAIL (I) LIMITED
M/s Bholenath Enterprises, Bhubaneswar

Sl. No.	Item Description	Quantity	Units	INR	
				Unit Rate (Excluding GST)	Amount (Excluding GST)
138	Gauging, Pigging, Cleaning, Post installation hydrotest, dewatering and tie-in with pipeline at either banks etc. all other works including pigging, cleaning, final hydrotesting etc. alongwith mainline works (as mentioned in item no. A00100 above) required as per specifications, codes, approved drawings, calculations, methods and as directed by Engineer-in-charge and provision of contract document; getting NOC from all concerned authority of the facilities crossed.				
139	Details of Crossings				
140	For Other than Rocky Starta				
141	Any type of Crossing viz. Canal / Distributary/ Drain / River / Nala/Road/Pond/ Railway /Culvert Crossings for carrier pipeline of size 200 mm NB x 6.4mm Thk. of API 5L Grade X-52/56	240.00	Meter	5,680.00	1,363,200
142	For Rocky Starta				
143	Any type of Crossing viz. Canal / Distributary/ Drain / River / Nala/Road/Pond/ Railway /Culvert Crossings for carrier pipeline of size 200 mm NB x 6.4mm Thk. of API 5L Grade X-52/56	240.00	Meter	9,372.00	2,249,280
144	Note: (i) Crossing width is tentative and for various crossings. Quantities may increase/decrease or delete as per site situation. Bidder's are advised to visit the site for actual assessment of extent of crossing and to access the maximum extent of cover which may have to be provided. Actual string length for HDD shall be as per design calculations so that pipe is not under stress as permitted by codes/ specifications. Final length of string shall be decided after decision of minimum cover requirement by concerned Authority/ Engineer-in-charge. (ii) Payment for the length of final tied-in carrier pipeline string are inclusive in the above item rate and no separate payment shall be made under other item mentioned elsewhere. (iii) The Contractor has to quote on running meter basis for X-ing. No any extra payment shall be made against this item. (iv) Width of above crossings indicated are tentative and for multiple crossings. This shall be as per requirement at site for crossing at different locations. (v) Rock drilling shall be considered at location/strata for which the core recovery is min 25%. Expenditure to establish the Starta as rock through lab test or any other approved methodology shall be paid through item available else where in SOR.				
145	GEOTECHNICAL INVESTIGATION, HYDROGRAPHICAL & HYDROLOGICAL SURVEY OF RIVER/CANAL/NALA/ WATERBODIES				
146	Carrying out Pre-construction survey and detail survey for crossings after liaisoning & coordination from concerned authority. Detail survey includes minimum but not limited to carrying out complete Geotechnical Investigation (including all laboratory test & field test), Hydrographical & Hydrological Survey of River / Canal/Nala/Waterbodies for the purpose of crossing the River / Canal/Nala/Waterbodies by HDD method including obtaining work permit / NOC from concerned authority complete in all respect as per Scope of Work & Technical Specification and instruction of Engineer-In-Charge (EIC)/RCM and submitting Final Report & Drawing (along with soft copy) incorporating all field and laboratory data, Drawings, Maps, Data etc. (One Lot) in an approved format with full scale for Soil Investigation, Scour Depth etc. in accordance with the Technical Specification, Drawings, approved QAP, implementation schedule and other provisions of the Tender Document and instructions of the Engineer-in-charge (EIC)/RCM.				
147	For road/rail crossings, pre-construction survey based on site visit, topographical survey, geotechnical investigation to establish bed strata upto sufficient depth, collection of data (if required) from concerned Authority including design and detail engineering and making of HDD Profile drawings for crossing and getting their approval from concerned Authority/ Engineer-in-charge including carrying out liaisoning & co-ordination works and obtaining permission / NOC from these authorities for the crossing as well as utility/foreign pipeline crossings (if any) prior to start the execution of work.				
148	GEOTECHNICAL INVESTIGATION, HYDROGRAPHICAL & HYDROLOGICAL SURVEY OF RIVER/CANAL/NALA/ WATERBODIES				
149	Crossing of NALA/WATERBODIES in single stretch / shot (Size 8" NB) -(Measurement will be carried out on the basis of individual crossing profile width and payment will be done accordingly)	840.00	Meter	852.00	715,680
150	Crossing of RIVER/CANAL in single stretch / shot (Size 8" NB)(Measurement will be carried out on the basis of individual crossing profile width and payment will be done accordingly)	240.00	Meter	1,022.40	245,376
151	GEOTECHNICAL INVESTIGATION & CROSSING SURVEY OF RAILWAY / ROAD CROSSING				
152	Crossing of Road/Railway in single stretch / shot (Size 8" NB)(Measurement will be carried out on the basis of individual crossing Profile width and payment will be done accordingly)	240.00	Meter	852.00	204,480
153	Note : (i) For Nala/Water Bodies/River/Canal etc Bidder/contractor have to execute Geo-technical, hydrological & hygraphical survey as per technical specification and direction of EIC ii)for railway/ road crossings contractor have to execute geotechnical & crossing survey as per technical specification and direction of EIC.				

SCHEDULE OF RATES
LAYING OF UNDERGROUND STEEL PIPELINE INCLUDING ASSOCIATED WORKS IN CUTTACK / KHORDA (BHUBANESWAR) GAS UNDER CGD SIX CITIES PROJECT FOR M/s GAIL (I) LIMITED
M/s Bholenath Enterprises, Bhubaneswar

Sl. No.	Item Description	Quantity	Units	INR	
				Unit Rate (Excluding GST)	Amount (Excluding GST)
154	(ii) For geotechnical survey/investigation: 1. For River/Canal - Two Nos Bore holes each at both banks of depth 15 meter and in river bed bore holes of depth 25 m at a distance of 75 meter centre to centre. 2. For Nala/Other Water Body Crossings..etc - One No Bore holes each at both banks of depth 15 meter and on bed bore holes of depth 15 m at a distance of 75 meter centre to centre. 3. For Railway Crossings/Road Crossings ..etc - One No Bore holes each at both sides of depth 10 meter. 4. Laboratory test & field test shall be as per technical specification & tender documents. 5. Bank width for Canal/nala/other water body crossings and survey length for railway crossings/road etc will be as per site conditions. Survey has to be done of bank width/survey width and minimum 50 meter at both end expect at river Crossings. For River crossing survey has to be done of bank width and minimum 100 meter at both end. 6. Rock shall be considered at location at which the core recovery is min 25%. 7. Quantity indicative above is tentative and for multiple crossings of size 8"NB dia pipeline with in the GA. 8. Payment for carrying out liaisoning & co-ordination works for Crossings and obtaining permission / NOC from these authorities is in-built in above item rate				
155	Pipe Laying using Manual / Machine Moiling technique (without Casing) for CS pipe				
156	Survey of under ground utilities, execution of the work as per specification, including excavation of pits moiling with the hole size not exceeding 20% of the pipe dia, jointing and insertion of carrier pipe and restoration of the pits to original condition, submission of As-Built Graph as per specifications and the instruction of Engineer-in-charge.				
157	Laying of 8" (219.1 mm) OD, 6.4 mm wall thk of API 5L Grade X-52/56 carrier pipe	72.00	Meter	3,692.00	265,824
158	Note-(i) Payment for the length carrier pipeline string shall be moiled carrier pipeline length plus two meters. Payment for additional length of carrier pipeline string shall be paid under SOR item no.A00101 (ii) Width of above crossings indicated are tentative. The width indicated are not for any single crossings. This shall be as per requirement at site for crossing at different locations. (iii) Adopting the manual or machine moiling shall be decided at site based on the width to be crossed. Ideally 2.0 meter or more width to be crossed through machine moiling. In this regard decision of EIC shall be final and binding to the contractor. (iv) payment for Post hydrotest shall be done through relevant SOR item mentioned elsewhere.				
159	Excavation beyond 1.5m depth in case of crossing of utilities/ drain/ culverts etc. through open cut upto the following depth (including restoration of the damaged area to its original condition and satisfaction of the Engineer-in-charge / concerned authorities) .The other activities are as per A00101				
160	In Normal Surface / Unprepared surface (Katcha Surface)				
161	Deeper than 1.5 m & upto 2.5 m below existing level (for 200 mm NB Pipeline)	60.00	Meter	454.40	27,264
162	Deeper than 2.5 m & upto 4.5 m below existing level (for 200 mm NB Pipeline)	48.00	Meter	624.80	29,990
163	In a built-up surface / Hard surface of any type including metal, concrete, bituminous, tiled, brick lined soft/ hard rock which is breakable in pieces manually (without use of pneumatic machine) etc. All tiles/ slabs/ curb stones etc. removed during excavation shall be placed properly. The other activities are as per A00101				
164	Deeper than 1.5 m & upto 2.5 m below existing level (for 200 mm NB Pipeline)	60.00	Meter	624.80	37,488
165	Deeper than 2.5 m & upto 4.5 m below existing level (for 200 mm NB Pipeline)	48.00	Meter	795.20	38,170
166	Note: (i) Quantities indicated in tentative and for various locations. (ii) Prior permission from EIC is required before execution of above item.				
167	REPAIR OF DEFECT IN PIPES (NOT ATTRIBUTED TO CONTRACTOR)				
168	Repair of defects on Owner supplied linepipes of all grades and wall thickness as specified in following items, noted and recorded at the time of "receiving and taking over" by Contractor in the presence of Engineer-in-charge.				
169	Cutting and rebeveling for dents in bevels exceeding 3 mm in depth for pipe sizes:				
170	Specified OD, mm				
171	219.1	2.00	Nos.	198.80	398
172	Jack out of dents in bevels ranging between 1 mm and 3 mm in depth for pipe sizes:				
173	Specified OD, mm				
174	219.1	2.00	Nos.	227.20	454
175	REPAIR OF COATING DEFECTS (NOT ATTRIBUTED TO CONTRACTOR)				
176	Repair of Holiday in Coating (Noted and recorded at the time of "receiving and taking over")				
177	Supply of all coating repair materials as per requirements of specification to be compatible with line pipe coating material, supply of all consumables, utilities, equipments and all manpower required, pipe cleaning and surface preparation, repairing of coating defects (resulting in holiday) and testing including all handling, transportation, etc. for line pipes, performing all works necessary for the completion of the works strictly in accordance with relevant specification and instructions of Engineer-In-Charge. This rate shall be applicable per sq. cm of the exposed steel area exposed steel area.	50.00	Sq. cm	312.40	15,620
178	PERMANENT MARKERS				
179	Supply, fabrication and installation of all types of permanent markers along the route including all associated civil works such as excavation in all types of soil, construction in all types of soil, construction of pedestals and grouting with concrete, clearing, supply and application of approved colour and quality of primer and paint, stencil letter cutting for numbers, direction, change etc., restoration of area to original condition and performing all works as per drawing, specification and instruction of engineer-in-charge.				
180	Pipeline RCC boundary / route marker as per drawing	50.00	Nos.	568.00	28,400
181	Pipeline warning markers with post & foundations	10.00	Nos.	3,408.00	34,080
182	Pipeline direction marker with post & foundations	10.00	Nos.	3,976.00	39,760
183	Pipeline KM with post & foundations	3.00	Nos.	3,692.00	11,076
184	Navigable Waterway Markers	2.00	Nos.	22,720.00	45,440

SCHEDULE OF RATES
LAYING OF UNDERGROUND STEEL PIPELINE INCLUDING ASSOCIATED WORKS IN CUTTACK / KHORDA (BHUBANESWAR) GAS UNDER CGD SIX CITIES PROJECT FOR M/s GAIL (I) LIMITED
M/s Bholenath Enterprises, Bhubaneswar

Sl. No.	Item Description	Quantity	Units	INR	
				Unit Rate (Excluding GST)	Amount (Excluding GST)
185	Note: Qty of above markers are tentative and may increase or decrease as per site situation. Contractor have to take prior approval from EIC before fabrication or order placement.				
186	LEAK / BURST (ATTRIBUTABLE TO OWNER)				
187	All works for locating leak / burst in Company's supplied material only (occurred during hydro-static testing) including necessary repairing/replacing defective pipe lengths including cutting and out and removing the defective pipe, pre-testing and welding of replacement pipe, NDT of welds, repair and retesting of defective welds, coating/painting of replacement pipe, pretesting the replacement pipe into mainline/branch line, coating/painting of welding joints, cleanup, retesting including cost of all labour materials, consumables and performing all works in accordance with the provisions of the Contract document and as directed by Owner /Engineer-in-charge/ Engineer in-charge				
188	For 8" NB Line	1.00	Lumpsum	28,400.00	28,400
189	Note: i) This rate is applicable for manufacturing defects in Owner supplied material only. ii) Leak detection, its rectification and successfully re-hydrotesting shall be carried out as per approved procedure by Contractor with a view that completion of all activity for successful hydrotesting is not inordinately extended which will hamper the overall project schedule.				
190	Gauging (Applicable for main steel pipeline hydrostatic test, Pre & Post installation hydrostatic test for crossings)				
191	As per specification and procedure approved by Engineer-in-charge (EIC)/ RCM.				
192	200 6.4 API 5L Gr. X-52/56 3 Layer PE Double random Coating (Externally) (approx. 11.5 m to 12.5 m)	3000.00	Meter	22.72	68,160
193	NOTE:- (i) The quantities mentioned against the above SOR items are tentative and may vary depending upon the site condition during execution stage. (ii) The total quantities mentioned against the above SOR items are applicable for main steel pipeline and multiple/ various crossings at different location within GA. (iii) Payment for above item shall be made only for the certified executed length of pipeline by Engineer-in-charge (EIC)/ RCM. (iv) The requirement of gauging of main steel pipeline, prehydrotest & after pulling of HDD section shall be carried out as per MECON specification / OISD / PNGRB and same shall be approved by Engineer-in-charge (EIC)/ RCM.				
194	Post Hydrostatic testing of Buried Pipeline				
195	Carrying out cleaning, gauging, pigging and hydrostatic testing of complete pipeline section laid by HDD/Open cut method as approved by EIC/RCM to specified pressures (i.e. 1.5 times of the design pressure) for 24 hours holding period; providing all equipment, pumps, test headers, fittings, instruments, dead weight tester, pressure recorder, temperature recorder, pressure & temperature gauge etc., and services, supervision, labour, consumables, water including supply of corrosion inhibitor, air, etc. as required for successful completion of hydrotesting of pipeline to acceptance criteria as per specifications, codes, approved drawings, calculations, methods and as directed by Engineer-in-charge and provision of contract document. Complete dewatering and swabbing of the pipeline as per specification and to the entire satisfaction of the EIC/RCM.				
196	For 8" NB Line	2500.00	Meter	136.32	340,800
197	Notes: i) The above quantity is not for a single section but for no. of sections for pipeline laying. ii) The quantities mentioned against the above SOR items are tentative and may vary depending upon the site condition during execution stage. iii) Payment for Gauging activity mentioned above shall be made under SOR item No.A002000 mentioned elsewhere in this SOR.				
198	Drying by Vacuum drying / Super air drying / Super dry nitrogen				
199	Complete work of carrying out drying by Vacuum drying / Super air drying / Super dry nitrogen & commissioning of pipeline section including supply of manpower, equipments & consumables (nitrogen required for purging etc.), materials for all temporary works and performing all associated works, complete as per the relevant specifications, other provisions of Contract document and instructions of Engineer-in-Charge.				
200	For 8" NB Line	2500.00	Meter	23.86	59,640
201	Note: The quantities mentioned above for various pipeline sections. Final methodology of drying shall be decided by EIC at the time of execution.				
202	Commissioning assistance / commissioning for underground pipeline length and stations				
203	For 8" NB Line	2500.00	Meter	10.22	25,560
204	Supply of Nitrogen & Purging in pipeline system				
205	Supply of nitrogen in gaseous form and its Purging in aboveground /underground pipeline network to the specified acceptance criteria, including supply of all equipment, man-power, consumables materials for all temporary works and performing all associated works, complete as per the relevant specifications, other provisions of Contract document and instructions of Engineer-in-charge.	100.00	M3	227.20	22,720
206	Preservation of Pipeline				
207	Preservation of pipeline sections and associated facilities (in event of delay in ROU acquisition/statutory permissions, commissioning, other unforeseen reasons) including supply of nitrogen, all consumables, all equipment, man-power, etc. complete as per the requirements of specifications, other provisions of Contract document and instructions of Engineer-in-charge.				
208	By filling and pressurizing with nitrogen to a pressure of 2 bar(g) for a period of one month.				
209	For 8" NB Line	2500.00	Meter	10.22	25,560
210	For every additional period of one month or part thereof				
211	For 8" NB Line	2500.00	Meter	6.82	17,040
212	Notes: i) All accessories ie; Two nos. of dished end caps and two nos. of 3/4 inches, PG to be considered per section and rate for the same shall be quoted by bidder under this item. ii) If month is partially complete, payment shall be made on prorata basis.				
213	LONG RADIUS BENDS				
214	Supply of Long Radius Bends (R = 3D) for 8" dia. pipe, X-52/56 (thk. 6.4 mm) as per specification enclosed in Tender Document.				

SCHEDULE OF RATES
LAYING OF UNDERGROUND STEEL PIPELINE INCLUDING ASSOCIATED WORKS IN CUTTACK / KHORDA (BHUBANESWAR) GAS UNDER CGD SIX CITIES PROJECT FOR M/s GAIL (I) LIMITED
M/s Bholenath Enterprises, Bhubaneswar

Sl. No.	Item Description	Quantity	Units	INR	
				Unit Rate (Excluding GST)	Amount (Excluding GST)
215	20° - 30°	8.00	Nos.	11,360.00	90,880
216	31° - 45°	12.00	Nos.	12,780.00	153,360
217	46° - 60°	6.00	Nos.	14,200.00	85,200
218	61° - 90°	8.00	Nos.	17,040.00	136,320
219	Note : The quantities of LR Bends may vary. For final quantity, approval shall be taken by EIC before order placement.				
220	SUPPLY OF WARNING MAT Supply of warning mat for pipeline as per the technical specification enclosed in the bid document. The material of warning mat shall be of high density polyethylene and non biodegradable type. It shall have non-toxic and anti rodent properties.				
221	8" NB Pipeline	2250.00	Meter	39.76	89,460
222	Note: Quantity mentioned above is tentative and may increase/decrease based on site requirement. Bidder have to take prior approval from EIC, before placement of order.				
223	DIGITIZATION OF RADIOGRAPHY FILMS:				
224	Carrying out digitization of all radiographic films (mainline and terminal piping) in the form of digital images (which can then be archived safely for long life and electronic retrieval) complying to all the legal local rules, codes and international standards. Submission of digital images of radiographic film along with compatible software in 6 sets of CD/DVD/Pendrive for electronic viewing /retrieval.				
225	For 8" NB Line	1.00	Lumsum	142,000.00	142,000
226	VIDEOGRAPHY & PHOTOGRAPHY				
227	Carrying out the videography & Photography of the pipeline section construction activities. The work shall be carried out in two phases.				
228	Videography & photography of the entire route prior to construction activities i.e. pipeline route, location of various stations, TOP, all crossing like road / railways, river, etc.				
229	Videography & photography during construction activities of Mainline Works i.e. Stringing, Welding, Radiography, Joint Coating, Lowering, Backfilling, etc. performing all works as per specification of EIC and other provision of contract document.				
230	For 8" NB Line	1.00	Lumsum	85,200.00	85,200
231	TRANSPORTATION OF FITTINGS, FLANGES, VALVES, BARREL ETC.				
232	"Receiving and taking over", handling, lifting, loading on truck, transportation and unloading of Company supplied DRS/MRS/, Metering Skids, fittings, flanges and valves ...etc from any storage yard (other than the designated storage yard for the project) to worksite / contractor's storage yard/ any other storage yard or as decided by EIC. The above work also includes stacking the DRS/MRS/Metering Skids, flanges, fittings and valves etc. properly. Above work shall be carried out as per standard drawing, specification, instruction of Owner and other provision of contract document.				
233	Notes: i) The quantities given in above item no. are tentative only and shall not be considered to be binding. The quantities may be increased, decreased or deleted as per the actual site requirement and instructions / recommendations of Owner. The unit rate shall be operated to work out the final payment to the contractor. ii) Above price shall be inclusive of all type of taxes & duties, transit insurance during transportation & other insurance etc. including all financial & commercial implication as per the tender document. No other payment except as per quoted unit rate & executed quantities will be payable by the Owner. iii) Safe storage of transported material till installation shall be part of the above item. Contractor has been advised to quote accordingly.				
234	TRANSPORTATION OF LINE PIPE				
235	"Receiving and taking over", handling, lifting, loading on trailers, transportation and unloading of Company supplied line pipe from any storage yard (other than the designated storage yard for the project) to worksite / contractor's storage yard/ any other storage yard or as decided by EIC. The above work also includes stacking the pipes on wooden sleepers/ sand pads. Above work shall be carried out as per standard drawing, specification, instruction of Owner and other provision of contract document.				
236	Notes: i) The quantities given in above item no. are tentative only and shall not be considered to be binding. The quantities may be increased, decreased or deleted as per the actual site requirement and instructions / recommendations of Owner. The unit rate shall be operated to work out the final payment to the contractor. ii) Above price shall be inclusive of all type of taxes & duties, transit insurance during transportation & other insurance etc. including all financial & commercial implication as per the tender document. No other payment except as per quoted unit rate & executed quantities will be payable by the Owner. iii) Safe storage of transported linepipe till installation, reconciliation & handingover to client shall be part of the above item. Contractor has been advised to quote accordingly.				
237	Pipeline Laying Liaisoning & Co-ordination (including utility crossing) and obtaining permission / NOC from the statutory / concerned authorities. Assistance in ROU opening & closing and their maintenance/ management.				
238	Submitting request for (after obtaining the letter from client) permission, follow up, assisting in site inspections / route survey / site report making/making site inspection drawings, submitting at designated offices, resubmission after correction, modification if required, soft and hard copy in nos. as required /if required in sizes, and collecting permission from the statutory authorities including NHAI, PWD, Railways, Irrigation, Forest, Municipal Corporation, District administration, River Authority, SEZ etc. Obtaining work permits /NOC from various statutory authorities having jurisdiction before execution of the work and complying with all stipulations /conditions/recommendations of the said authorities. Only statutory fees shall be paid by the owner. Assistance in required length and width/restricted width of ROU opening & closing and their maintenance/ management both side of the crossings.				
239	For 8" Pipeline	2500.00	Meter	28.40	71,000
240	Note : Execution of above item is subjected to the requirement of site.				



SCHEDULE OF RATES
LAYING OF UNDERGROUND STEEL PIPELINE INCLUDING ASSOCIATED WORKS IN CUTTACK / KHORDA (BHUBANESWAR) GAS UNDER CGD SIX CITIES PROJECT FOR M/s GAIL (I) LIMITED
M/s Bholenath Enterprises, Bhubaneswar

Sl. No.	Item Description	Quantity	Units	INR	
				Unit Rate (Excluding GST)	Amount (Excluding GST)
241	CIVIL WORKS				
242	EARTH WORK IN EXCAVATION/ SITE GRADING AND BACKFILLING				
243	Earth work in excavation /site grading in all kinds of soil including soft rock in any plan dimension up to required depth including backfilling of excavated earth at any location in layers of 300mm and compacted up to 95% to its MDD at all heights and depths. Surplus and unserviceable earth shall be disposed up to any lead in all conditions. Soil to be levelled and neatly dressed complete in all respect as per scope of work, detailed construction drawings, technical specifications and direction of the Engineer-in-Charge.	2.00	CUM	426.00	852
244	Note:- 1. This Rate shall be applicable only for excavation which are not included as a part of respective SOR Item. 2. The Contractor shall take into account in his quoted rate the provision for excess excavation required for necessary working space, cutting in slopes etc., which may be required for excavation and other allied works and refilling the side slopes and working space in layers as per requirement. 3. Rate to include cost of all labour, tools, tackles, equipment, hire charges, shoring, bailing and pumping out water as required etc. with all bye works and sundry works complete in all respects. 4. NET CUM of excavated quantity in CUM shall be measured for payment. 5. To be read in conjunction with Particular Job Specification.				
245	BRICK WORK				
246	Providing and laying brick work with brick class designation M-5.0 of IS:1077 in Cement Mortar 1:4 (1 cement : 4 sand) in steps, load bearing structures, drains, or at any other location at all depths & height for all leads including providing required finishes, curing, scaffolding, etc., complete as per specifications and drawings with all bye-works as per direction of the Engineer-in-charge.	2.00	CUM	4,118.00	8,236
247	Note:- 1. Rate to include cost of all labour, tools, tackles, equipment, hire charges, supply of all materials such as minimum 43 grade cement (OPC), bricks, finishes, bitumen, other minor construction materials, shuttering, staging, masonry work, excavation, PCC M10, plastering with 15 mm thick cement plaster on exposed faces with 1:4 cement mortar (1 cement : 4 Sand), painting with bitumen etc. as per requirement with all bye-works and sundry works complete as per drawings. 2. To be read in conjunction with Particular Job Specification.				
248	PLAIN CEMENT CONCRETE				
249	Supplying and laying plain cement concrete of grade M 10 with stone aggregate 40mm down grade (including shuttering if required) in all types of concrete works including levelling courses below foundations, mass concrete works, chambers, cable trench, under floors and any other locations, at all levels and locations (which are not covered as part of composite items) as per drawings, specifications and directions of the Engineer-in-charge.	2.00	CUM	4,146.40	8,293
250	Note :- 1. Rate to include cost of all labour, tools, tackles, equipment, hire charges, supply of all materials, shuttering in all conditions etc. with all bye works and sundry works. 2. To be read in conjunction with Particular Job Specification.				
251	REINFORCED CEMENT CONCRETE				
252	Providing and laying Reinforced Cement Concrete of grade M-25 with 20mm and down grade crushed stone aggregate in all types of structures like foundations, beam, columns, pedestals, pedestal bases, pipe supports, sleepers, cable trench, RCC retaining wall foundation for boundary wall etc. including excavation, PCC M10 in mud mat, shuttering, construction joints, bitumen painting on surfaces in contact with soil, supplying and fixing MS inserts, finishes etc. at all depths and levels complete as per drawings, specifications and directions of the Engineer-in-charge.	2.00	CUM	5,964.00	11,928
253	Note :- 1. Rate to include cost of all labour, tools, tackles, equipment, hire charges, supply of all materials such as minimum 43 grade OPC cement including sulphate resistant cement for sub-structures, inserts, bolts, conduits, bitumen, excavation, PCC M-10 in mud mat, other minor construction materials, shuttering, staging, testing of concrete, curing etc. except reinforcement steel with all bye works and sundry works complete. 2. To be read in conjunction with Particular Job Specification.				
254	REINFORCEMENT STEEL				
255	Supplying and Fabricating and Fixing in position HYSD Steel Reinforcements/ TMT Grade Fe-415/Fe 500D conforming to IS1786-2008 at all levels and positions including the Cost of transportation, Straightening, Cutting, Bending, Cranking, Binding, Welding, Provision of necessary Chairs and Spacers, Preparation of bar bending schedule, getting the same approved by EIC etc., complete as per Drawings and Specifications and including Cost of binding wire, Labour etc., all complete in all respects as per scope of work, detailed construction drawings, technical specifications and direction of Engineer-in-charge. The Chairs and Spacer Bars provided will not be measured for payment.	0.50	MT	59,640.00	29,820
256	Note :- 1. Rate to include cost of all labour, tools, tackles, equipment, hire charges, supply of all materials such as steel Reinforcement, binding wire and other minor construction materials, testing etc. all bye works and sundry works. 2. Chairs, Laps, Spacers, Wastage etc. shall be to contractor's account. 3. To be read in conjunction with Particular Job Specification.				
257	CONCRETE PAVEMENT				
258	Providing and laying reinforced cement concrete pavement 150 mm thick in M-25 grade with 20 mm and down grade crushed stone aggregate in pavement, including earthwork in excavation, preparation of base (i.e. compacted subgrade, 200 thk sand and 100 thk PCC M-10 grade), leaving pockets if necessary, making recess, projections, fixing inserts conduit pipes (GI, PVC, HDPE, etc.) laying in alternate panels, filling the gaps between the panels with bitumen sand mix filler material etc., making slopes, finishing edges, leaving bars for pedestals & sleepers including providing sand fill isolation, shuttering, providing and fixing reinforcing steel, curing, chipping and modification works etc. as specified in any shape, thickness, position and finishing the top surface smooth as per requirement etc. all complete as per drawings, specifications and directions of the Engineer-in-charge.				
259	150mm thick in Pavements in Process Areas (Type - I)	25.00	SQM	1,505.20	37,630



SCHEDULE OF RATES
LAYING OF UNDERGROUND STEEL PIPELINE INCLUDING ASSOCIATED WORKS IN CUTTACK / KHORDA (BHUBANESWAR) GAS UNDER CGD SIX CITIES PROJECT FOR M/s GAIL (I) LIMITED
M/s Bholenath Enterprises, Bhubaneswar

Sl. No.	Item Description	Quantity	Units	INR	
				Unit Rate (Excluding GST)	Amount (Excluding GST)
260	Note :- 1. Rate to include cost of all labour, tools, tackles, equipment, hire charges, supply of all materials, providing and fixing reinforcement steel, shuttering, earthwork in excavation and backfilling using serviceable earth in all conditions, preparation of base, etc. with all bye works and sundry works. Cost of works towards pipe supports & sleepers being raised from pavement is covered under respective RCC items. 2. To be read in conjunction with Particular Job Specification.				
261	VALVE PIT				
262	Construction and handing over of Brick Valve Pit as per tender drawing, technical specification and direction of engineer-in-charge complete in all respect. Scope of work shall be as per tender drawing.				
263	Construction and handing over of RCC Valve Pit of approx. 1.8m x 1.8 m in size (internal dimension) as per technical specification and direction of engineer-in-charge complete in all respect. Scope of work shall be as per Sketch attached with the tender.	1.00	Nos	88,040.00	88,040
264	Construction and handing over of RCC Valve Pit of approx. 2.0m x 2.0 m in size (internal dimension) as per technical specification and direction of engineer-in-charge complete in all respect. Scope of work shall be as per Sketch attached with the tender.	1.00	Nos	110,760.00	110,760
265	STEEL STRUCTURAL WORKS				
266	Steel structure Fabrication				
267	Supplying, Fabricating & Erecting in position steel structures fabricated out of MS Girders, channels, Tees, angle, flats, plate, square hollow sections pipes etc. conforming to IS:2062 and/or from pipes conforming to IS:1161 for structural purpose for cascade supporting structure, loading/unloading platform, Gratings for platform, catladder, handrails, hoardings for sinages, Lcv stand, etc. of any size/dia for required design including cutting, welding, bolting, hoisting, fixing in position, including application of one coat of primer at shop and second coat of primer at site after erection and two coats of finishing paint at site. The work is to be completed in all respect as per specification, scope of work, detailed construction drawings and directions of the Engineer-in-charge.	200.00	KG	71.00	14,200
268	[Rate to include cost of all labour, nut, bolts, tools, tackles, hire charges royalties, levies, transportation, scrap value, gas cutting, welding, other consumables, paints, compressed air, water, electric power etc. all complete.]				
269	Providing and fixing Fencing Structure				
270	Supplying, fabricating & fixing steel structural fencing fabricated from pipes conforming to IS:1161 and plates conforming to IS:2062 & fixing of GI weldmesh made from 3mm GI wire @ 75 mm bothways to structural steel frame by means of welding/bolting, including applying two coats of approved quality of synthetic enamel paint over a priming coat of in approved shade including supply of all raw materials, bolts, electrodes, transportation, including making pokets & pouring with PCC (1:2:4) in of block 500x500x500 for fixing of posts etc complete as per enclosed drawing, technical specifications, scope of works and directions of the Engineer-In-Charge.				
271	Fencing height 2.1m	50.00	RM	2,073.20	103,660
272	Notes:- 1) The quantities indicated are estimated values and hence are approximate. Final payment will be made based on actual quantities to be certified by the Purchaser. 2) The cost of MS bolts (permanent and service), washers, electrodes, putty, gases, cost of straightening the raw materials, cutting of flats from plates and providing splices, paints, tools, plants, etc., as required for the work shall be deemed to be included in the quoted rates. 3) All handling and transport charges of raw materials and fabricated structures including double handling, as required, for completion of work in accordance with 4) Time schedule, are deemed be included in the quoted rates 5) All accessories like MS tower bolts, MS Pivot, MS Wheels, MS Tee section, locking arrangement etc. shall be measured by weight only. 6) Contractor shall ensure proper alignment and smooth operation of Gate				
	Total Excluding GST				16,336,844
	Total Including GST				19,277,476



MECON LIMITED

(A Government of India Enterprise)

SCOPE MINAR, 15th Floor, North Tower, Laxmi Nagar District Centre,

Delhi – 110 092

Phone No. : 22401129, 22447417

Corporate Identification No(CIN):U74140JH1973GOI001199

FAX OF ACCEPTANCE (FOA)

FOA NO. 05/51/Q7NT/GAIL/001-I-LVD/FOA-893

DATE: 29.10.2022

TO : M/S GYANAJIT PATTANAİK
FAX : -
EMAIL : gyanajitpattanaik@gmail.com
ATTN : MR. GYANAJIT PATTANAİK, PROPRIETOR
FROM : SR. GM (CONTRACTS), MECON LIMITED, DELHI

PLEASE REFER TO YOUR OFFER NO. NIL DATED NIL AND ALL OTHER SUBSEQUENT CORRESPONDENCE AGAINST BIDDING DOCUMENT NO. 05/51/Q7NT/GAIL/001-I-LVD (TENDER ID : 2022_GAIL_110017) DATED 30.04.2022, COMM. CORR.#1 DATED 13.05.2022, COMM. CORR.#2 DATED 13.05.2022, RPBQ DATED 13.05.2022 & COMM. CORR.#3 DATED 20.05.2022 FOR LAYING OF UNDERGROUND STEEL PIPELINE INCLUDING ASSOCIATED WORKS IN CUTTACK/KHORDA (BHUBANESHWAR) GAS FOR GAIL (INDIA) LIMITED (.)

WE HEREBY ISSUE THIS FAX OF ACCEPTANCE (FOA) FOR **100% OF THE SCOPE OF WORK** OF SUBJECT TENDER AT AN ESTIMATED CONTRACT VALUE OF **RS. 1,63,36,844/-** (INDIAN RUPEES ONE CRORE SIXTY-THREE LAKH THIRTY-SIX THOUSAND EIGHT HUNDRED FORTY-FOUR ONLY) EXCL. GST. GST SHALL BE PAYABLE EXTRA AS PER TENDER PROVISIONS. (PRESENT RATE OF GST@18%) (.)

THE DETAILED BREAKUP OF ABOVE ORDER VALUE IS ENCLOSED AS ANNEX-1(.)

THE COMPLETION SCHEDULE SHALL BE 3 1/2 (THREE & HALF) MONTHS FROM THE DATE OF FAX OF ACCEPTANCE (FOA) FOR MECHANICAL COMPLETION INCLUDING MOBILIZATION PERIOD OF 15(FIFTEEN) DAYS AND THEREAFTER 15 (FIFTEEN) DAYS FOR DRYING, COMMISSIONING/GAS-IN (.)

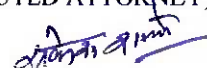
YOU ARE REQUESTED TO SUBMIT "CONTRACT PERFORMANCE GUARANTEE" @ 3% OF ORDER/CONTRACT VALUE [EXCLUDING GST] WITHIN 30 DAYS OF THIS FAX OF ACCEPTANCE AS PER TERMS AND CONDITIONS STIPULATED IN CLAUSE NO. 37 OF INSTRUCTIONS TO BIDDERS (ITB) OF BIDDING DOCUMENT(.)

YOU ARE REQUESTED TO CONTACT PROJECT COORDINATOR (MR. PRATEEK MAHESHWARI, MANAGER (CGD), MECON LIMITED, EMAIL ID: PMAHESHWARI@MECON.CO.IN) FOR FURTHER INSTRUCTIONS REGARDING EXECUTION OF THIS WORK (.)

ALL OTHER TERMS AND CONDITIONS SHALL BE AS PER BIDDING DOCUMENT & CORRIGENDUM THERE OF AS STATED ABOVE AND AS AGREED TILL DATE (.)

A DETAILED LETTER OF AWARD SHALL FOLLOW (.)

FOR & ON BEHALF OF GAIL (INDIA) LIMITED
(BY ITS CONSTITUTED ATTORNEY)


(RAKESH SHARMA)
SR. GM (CONTRACTS)
MECON LIMITED, DELHI

CC: BY COURIER TO:

M/s Gyanajit Pattanaik

AT/PO-Boinda, Kishoreganj, Anagul-759127, Odisha

Tel No.: +91-9438117899, 9437331195



SCHEDULE OF RATES
LAYING OF UNDERGROUND STEEL PIPELINE INCLUDING ASSOCIATED WORKS IN CUTTACK / KHORDA (BHUBANESWAR) GAS UNDER CGD SIX CITIES PROJECT FOR M/s GAIL (I) LIMITED
M/s Gyanajit Pattanaik, Bhubaneswar

Sl. No.	Item Description	Quantity	Units	Unit Rate (Excluding GST)	Amount (Excluding GST)
1	MAINLINE WORKS				
2	CARBON STEEL PIPES				
3	PIPELINE LAYING / INSTALLATION				
4	"Receiving and taking over" as defined in the specifications, handling, loading, transportation and unloading of Owner supplied 3-Layer PE coated and bare linepipes from Owner's designated stock-yard to Contractor's stock yard/workshop/work-site including preliminary activities, preparation of drawings, wherever required for crossing etc. including handling, stacking, stringing on the pipeline Right-of-Use/ pipeline route alignment, carrying out inspection of Owner supplied materials including linepipes at the time of taking over, laying/ installation of coated linepipes as per specification wherever required depending on site condition including execution of all works, "taking over", handling, including loading and unloading, transportation of Owner supplied materials other than linepipe from Owner's designated place (s) of issue to work site including arrangement of all as listed above..				
5	Additional lands required for Contractor's storage, fabrication, access for construction, procurement and supply of all materials (except Owner supplied materials), consumables, equipment, labour and other inputs, carrying out all temporary, ancillary, auxiliary works, ready for commissioning of pipeline as per drawings, specifications, other provisions of Contract document and instructions of Engineer-in-charge, including but not limited to carrying out the following works:				
6	Survey of route and detours required at the time of execution including preparation of construction drawings showing survey details, and submit same to GAIL/PMC for review / approval.				
7	Staking and installation of construction markers, clearing, fencing, grubbing, full filling all the requirements of various statutory/ environment authorities to the entire satisfaction of concerned authorities, grading of work area.				
8	Barricading the pipeline construction area prior to execution of the works as per drawings enclosed with tender document and to the entire satisfaction of Owner / Engineer-in-charge.				
9	Trenching to all depths by excavation and to a width to accommodate the carrier pipeline during lowering & backfilling in all types of soils and rocky strata including different type of pavement / footpath / roads (other than concrete roads) etc. including breaking, chiselling or otherwise cutting etc. as required and storing excavated soil, reusable materials at designated area as directed by Engineer in charge and to a width to accommodate the pipeline as per the relevant standard/ specification etc. [The minimum depth of the top of pipeline shall be 1 m measured from top of pipeline coating to the top of undisturbed surface of the soil or as per SCC/ relevant code, whichever is higher]. Dewatering of trenches if required as per site condition.				
10	Carrying out repairs of pipe defects/ replacement in case of irreparable defects and repairs of defects of pipe coating not attributable to Owner including defects/ damages occurring during transportation / handling.				
11	Stringing of line pipes along pipeline trench / ROU provided on sand/soft soil bags including all supplies, manpower & machinery etc.				
12	Aligning, bending, cutting and bevelling (as required) of pipes for welding and field adjustments including pipe fittings, welding, carrying out non-destructive testing of welds as required including 100% radiography by X-ray either by internal source or external source based on site conditions/front availability and in this regard decision of EIC shall be final and binding to the contractor (In case placement/installation of X-ray equipment is not feasible, in that case Gamma ray may be permitted as per decision of Engineer In-Charge(EIC) based on site conditions) and providing all requisite equipment, labour, supervision, materials, films, consumables, all facilities and personnel to process, develop, examine and interpret radiographs and other tests as required, carrying out repairs of weld joints found defective by Engineer-in-Charge, carrying out re-radiography and other tests as required on repaired joints and NDT of rebevelled area as mentioned in SCC & Particular Jobs Specification.				
13	Carrying out installation of carrier line pipe at all minor crossing ie: road, cart track, pathway, water bodies etc. at required depth by open cut (except at crossing by Moring & HDD method). Methodology to be adopted for crossing shall be decided by joint survey with Client/PMC & Contractor and based on the finalization of methodology crossing by HDD, Laying of pipeline through HDD, Moring shall be payable through respective item available else where in the SOR.				
14	Coating of field weld joints, long radius bends (R=3D for 8 Inch), elbows... etc. including supply of coating materials etc. (i.e. heat shrinkable sleeves and high build epoxy etc.) as per PJS & Technical Specification compatible with 3 layer PE coating material of the line pipe.				
15	Installation of LR Bend (R=3D for 8 Inch), as per specification wherever required depending on site condition.				
16	Installation / lowering the pipeline in trench to required depth as per PJS, Technical Specification & drawings and providing required padding over and around the pipeline with sand/graded material approved by Engineer-In-Charge (in rocky areas) including padding around pipeline with suitable soil duly approved by EIC. Supply of padding material, backfilling and its compaction to the satisfaction of concerned authorities with excavated earth / borrowed select soil including supply of borrowed select soil duly approved by EIC before backfilling and make ready for restoration to be done by Owner / concerned authorities.				
17	Installation of warning mat on the entire length of the pipeline as per specification. Warning mat should have anti rodent properties.				
18	Crossing the all-foreign pipeline / HT line / cable / any other utilities etc. with necessary concrete / PVC protection including coordination with all agencies and obtaining NOC after completion of all the activities.				
19	Supply and installation of bank protection alongwith backfill materials duly approved by EIC for pipeline trench and banks falls under minor water body crossing as per technical specification & Std. Drg., wherever required or, as directed by Owner / EIC.				

SCHEDULE OF RATES
LAYING OF UNDERGROUND STEEL PIPELINE INCLUDING ASSOCIATED WORKS IN CUTTACK / KHORDA (BHUBANESWAR) GAS UNDER CGD SIX CITIES PROJECT FOR M/s GAIL (I) LIMITED
M/s Gyanajit Pattanaik, Bhubaneswar

Sl. No.	Item Description	Quantity	Units	INR	
				Unit Rate (Excluding GST)	Amount (Excluding GST)
20	Carrying out air cleaning, gauging, pigging, flushing, cleaning and hydrostatic testing of complete pipeline, supply of required quantity of corrosion inhibitor, if required including pre-testing of designated sections complete as per specification and approved by Engineer-in-charge to specified pressures indicated elsewhere and duration after stabilization as per specification, providing all equipment, pumps, fittings, instruments, dead weight tester, pressure recorder, thermocouples etc., and services, supervision, labour, consumables, water including supply of corrosion inhibitor, air, etc. as required, locating of leaks and rectification of defect attributable to Contractor (rectification of defects in linepipe material not attributable to contractor shall be paid separately as per other item of schedule of rate), re-testing after rectification, dewatering after successful completion of hydrotesting of entire section and as approved by Engineer-in-Charge. Note : 1. Leak detection, its rectification and successfully re-hydrotesting shall be carried out by Contractor with a view that completion of all activity for successful hydrotesting should not be inordinately extended / delayed , which will hamper the overall project schedule. Further, no extra payment claim shall be entertained for re-hydrotesting, leak detection and their rectifications if defects found attributable to Contractor. 2. Payment for Gauging activity mentioned above shall be made under item mentioned else where in SOR. 3. Payment for hydrostatic testing activity mentioned above shall be made under item mentioned elsewhere in this SOR.				
21	All tie-in, including the tie-in(s) of the pipeline with the adjacent sections of pipeline including cutting of test header, rebeveling as required, radiography and other NDT examination, joint coating as per specification.				
22	Final clean-up & restoration of right-of-use or area disturbed by contractor including obtaining NOC from respective land owner and statutory authorities during their construction activities for laying of pipeline works and disposal of debris and returning all surplus material to designated disposal areas / storage yard as and backfilling of trench and compaction of the same as per satisfaction of Owner and / Or as directed by Engineer-in-charge.				
23	Carrying out all temporary, ancillary, auxiliary works and all incidental works required to make the pipeline ready for pre-commissioning.				
24	Restoration of land, facilities and boundary wall etc. and associated facilities dismantled/damaged by the Contractor during construction;				
25	Hook-up work with existing pipelines including pit excavation & other associated work (if any). Payment for Hook up shall be made under item mentioned elsewhere in SOR				
26	Protective coating of 500 micron thick two component (applied with the help of minimum three coats) liquid epoxy including supply of materials duly approved by Owner for all piping valves, fittings, structural steels etc. for buried installation and inside the valve pit as approved by the Engineer-in-charge.				
27	Carrying out all temporary, ancillary, auxiliary works and all incidental works required to make the pipeline ready for pre-commissioning;				
28	Obtaining work permits/ NOC from various statutory authorities having jurisdiction, before and after execution of the work, and complying with all stipulation/conditions/recommendation of the said authorities;				
29	Preparation of as-built drawings, pipe-book and other records as specified in the specifications. SOR shall be read in conjunction with job specific requirements, specifications, standards, drawings and other provision of contract document. All above works line pipe laying and installation all above works for buried pipeline as per following details:				
30	Installation of Coated Line Pipes as per following details:				
31	Specified dia Thk (mm) Material Coating Type Length of each pipe (mm) NB				
32	For All Type of Soil				
33	200 6.4 API 5L Gr. X-52/56 3 Layer PE Double random Coating (Externally) (approx. 11.5 m to 12.5 m)	820.00	Meter	1,448.40	1,187,688
34	For Rocky Strata (Refer Notes)				
35	200 6.4 API 5L Gr. X-52/56 3 Layer PE Double random Coating (Externally) (approx. 11.5 m to 12.5 m)	180.00	Meter	2,328.80	419,184
36	Note:				
37	The lengths of pipelines are tentative and for various locations. Quantities may increase/decrease or delete based on site requirement/Joint Survey/Change in requirement of Owner.				
38	The above item rate is exclusive of crossings by HDD and Moiling (which are covered separately in relevant SOR items). For other crossings, it is deemed to be inclusive in above item rate.				
39	This item shall be applicable for the underground steel grid main pipeline & branch pipeline including , insulating joints, bends (3D for 8"), flanges & fittings, underground valves if required, accessories etc. . Installation of valves including other fittings & pipes for Sectionalizing & Tap Off if required shall be paid separately through item available else where in SOR.				
40	The above rate shall be exclusive of hydrotesting of complete pipeline including hydrotesting of all crossing sections along-with the mainline. However, payment for pre- testing as required, are inclusive in above items rate.				
41	In above item, backfilling of pipeline trench by borrowed select soil duly approved by Owner / EIC shall be paid by separate item mentioned elsewhere in the SOR.				
42	Contractor shall not perform any pipeline activities along ROU/Corridor without specified barricading as per Std. Drg. and other safety measures.				
43	Proposed pipeline route is passing through MDR/ Asphalt Road / concrete roads (RCC/PCC) etc. However, in case of non-availability of ROU along MDR/ Asphalt Road / concrete roads (RCC/PCC) etc., the pipeline route may change and this may also require a new tap-off point at suitable location on Pipeline . This may cause increase / decrease in SOR quantities.				
44	The rates shall be applicable for the work within at all locations / with in GA- Khorda/Cuttack .				
45	The above rate is excluding of crossings by HDD, Boring, moiling, open cut conventional Method mentioned under separate item.				

SCHEDULE OF RATES
LAYING OF UNDERGROUND STEEL PIPELINE INCLUDING ASSOCIATED WORKS IN CUTTACK / KHORDA (BHUBANESWAR) GAS UNDER CGD SIX CITIES PROJECT FOR M/s GAIL (I) LIMITED
M/s Gyanajit Pattanaik, Bhubaneswar

Sl. No.	Item Description	Quantity	Units	Unit Rate (Excluding GST)	Amount (Excluding GST)
46	In congested area trenching shall be made manually for pipeline laying further Contractor shall ensure that no tree/plant cutting shall be carried out during Pipe Line Laying operations. Trenching shall be carried out manually if needed, so as to ensure no damage to plant/tree/OFC /water pipe line /telephone line/sewage line/electric cable and other under ground utilities.				
47	Quantity indicated above is tentative. Execution of pipeline laying in rocky strata(if encountered during execution) shall be jointly recorded.				
48	Bifurcation of Soil & Rocky strata shall be done based on the equipments used in trenching the pipeline section. For Rocky strata contractor have to use of rock breaking tool / rock hammer or other equivalent tools for preparation of trench with due approval of EIC. Supply and installation of rock shield as per specification including padding through sand/soft soil is inclusive in above item. Bidder have to quote accordingly.				
49	Excavation of hard rock strata, wherever hard rock of single piece exceeding 1.5 meter in any direction within the trench dimension with respect to length, width & depth and removal only by pneumatic chisel/ drill/ rock-breaking tool/rock hammer or other equivalent tools. The rates are payable over and above the laying rates as per relevant SOR items mentioned elsewhere in SOR.				
50	Fabrication of Sectionalizing Valves(SV) and Tap-off including pipes & fittings shall be paid separately.				
51	For Tie-in and other locations wherein NDT through X-ray is not feasible NDT by Gamma ray shall be permitted with due permission of EIC.				
52	Payment for Preparation of as-built drawings, pipe-book and other records as specified in the specifications is to be covered in this SOR rate.				
53	Contractor shall return all surplus material to designated storage yard as mentioned in Annexure-2 to SCC, as directed by Engineer-In-Charge.				
54	Owner supplied 3 LPE Line Pipe & Bare Pipe required for pipeline laying activity shall be shifted from owner designated store located within Cuttack / Khorda (Bhubaneswar) GAs and payment are inclusive in above items rate. Bidder has to quote accordingly.				
55	Contractor shall ensure that no tree/plant cutting shall be carried out during Pipe Line Laying operations. Trenching shall be carried out manually if needed, so as to ensure no damage to plant/tree/OFC /water pipe line /foreign pipeline/telephone line/sewage line/electric cable and other under ground utilities.				
56	Bidder has to familiarise himself the entire pipeline route and all locations /region/ charge area within the GA and ascertain all type of eventuality/uncertainty before quoting their bid.				
57	End cap / blind (Temporary during construction of pipeline) at both the ends for carrier pipeline as per specification is included in above quoted rates, However after completion of pipeline End Cap shall be provided to contractor as free issue.				
58	Payment for carrying out liaisoning & co-ordination utility/foreign pipeline crossings (if any) and obtaining permission / NOC from these authorities including assistance in ROU/Corridor opening & closing and their maintenance/ management both side of the crossings shall be made under item mentioned elsewhere in SOR.				
59	Excavation- Hard Rock				
60	Excavation of hard rock only, wherever hard rock of single piece exceeding 1.5 meter in any direction within the trench dimension with respect to length, width & depth and removal only by pneumatic chisel/ drill/ rock-breaker.	180.00	CUM	1,363.20	245,376
61	Note: i) Quantity indicated above is tentative and may increase/ decrease or delete as per site requirement. ii) Above item is for laying of pipeline through open cut method only.				
62	PIPELINE LAYING/INSTALLATION BY HDD METHOD				
63	Complete work of laying of pipeline in restricted ROU along with adjacent road/nala (if minor road/nala falling under the laying profile and not considered under separate crossing) by HDD method including "Receiving and taking over" owner supplied 3LPE coated line pipes from owner's designated place to issue/dump site(s) and transportation to contractor's stock yard/work site including all handling, loading, uploading, aligning etc. supply of all contractor supplied material including consumables, manpower, equipment, other resources to work site(s) and acquiring the required land for storage. Execution of, but not limited to, following works in accordance with specifications and instruction of engineer-in-charge and as per all provision of Contract Document.				
64	Pre-construction survey, necessary cover required over the carrier pipeline, based on site visit, collection of data (if required) from concerned Authority including design and detail engineering and making of drawings for getting their approval from concerned Authority/Engineer-in-charge, getting work permit/NOC for utilities crossings (if any) encountered prior to start the execution of work.				
65	Digging of entry and exit Pits. Pre hydrotesting at specified pressure, Drilling to required depth from top of ground (min 2.0 mtrs.) including maintenance of drill hole in all types of soil including pebbles, cobbles, boulders, structures etc. and all types of rocky strata, all depth to accommodate the pipeline at all conditions encountered by approved HDD methods for providing minimum cover specified in code/specification or the actual depth as decided by concerned authority, whichever is more				
66	Digging of entry and exit Pits. Laying of the pipeline(as per approved HDD profile) by the approved HDD method including pipeline string preparation, welding, testing, 100% radiography by X-ray, welding repair and retest, coating of field joints with special type Dirax Heat Shrink Sleeve or equivalent (including supply of coating material) and repair of pipeline coating with special PERP-60E repair patch or equivalent material (including supply of repair patch) as per specification, pre-hydrotest of complete strings made for laying etc. Backfilling of entry and exit pits and its levelling.				
67	Backfilling of the ditch/trench pits including restoration and clean-up of area, disposal of drilling fluid & waste etc. to the satisfaction of Engineer-in-charge and/or as directed by concerned Authority.				



SCHEDULE OF RATES
LAYING OF UNDERGROUND STEEL PIPELINE INCLUDING ASSOCIATED WORKS IN CUTTACK / KHORDA (BHUBANESWAR) GAS UNDER CGD SIX CITIES PROJECT FOR M/s GAIL (I) LIMITED
M/s Gyanajit Pattanaik, Bhubaneswar

Sl. No.	Item Description	Quantity	Units	INR	
				Unit Rate (Excluding GST)	Amount (Excluding GST)
68	Carrying out cleaning, gauging, water filling, post-hydrotesting, of complete pipeline string in one section/ test sections as approved by EIC/RCM to specified test pressures (i.e. 1.5 times of Design pressure) for 24 hours hold period; providing all equipment, pumps, test headers, fittings, pressure & temperature instruments etc., and services, supervision, labour, consumables, water, air, etc. as required; detection of leaks, if any occurred during post-hydrotesting, attributable to Contractor and rectification of defects, re-testing after rectification with due approval of Owner, successful completion of post-hydrotesting including dewatering of pipeline to acceptance criteria defined in the specifications. Note : 1. Leak detection, its rectification and successfully re-hydrotesting shall be carried out by Contractor with a view that completion of all activity for successful pre-hydrotesting should not be inordinately extended / delayed, which will hamper the overall project schedule. Further, no extra payment claim shall be entertained for re-hydrotesting, leak detection and their rectifications if defects found attributable to Contractor. 2. Payment for Gauging activity mentioned above shall be made under item mentioned elsewhere in SOR. 3. Payment for Post hydrostatic testing activity shall be made under item elsewhere in SOR, however pre hydrotesting is inclusive in the above SOR item rates.				
69	Installation/Laying of Coated Line Pipes as per following details:				
70	Specified dia Thk (mm) Material Coating Type Length of each pipe (mm) NB				
71	For all types of Soil other than Rocky Starta				
72	200 6.4 API 5L Gr. X-52/56 3 Layer PE Double random Coating (Externally) (approx. 11.5 m to 12.5 m)	900.00	Meter	5,396.00	4,856,400
73	For all types of Rocky Starta				
74	200 6.4 API 5L Gr. X-52/56 3 Layer PE Double random Coating (Externally) (approx. 11.5 m to 12.5 m)	180.00	Meter	8,804.00	1,584,720
75	Note: (i) Pipeline length are tentative and for various crossings/site locations wherein laying through open cut is not feasible. Tenderer are advised to visit the site for actual assessment of extent of laying and to access the maximum extent of cover which may have to be provided. Actual string length for HDD shall be as per design calculations so that pipe is not under stress as permitted by codes/ specifications. Final length of string shall be decided after decision of minimum cover requirement by concerned Authority/ Engineer-in-charge.				
76	(ii) The quantities mentioned above are tentative and may increase or decrease depending upon the site conditions/requirements. The quantity indicated against each item are for multiple shots/Multiple entry & exit pits and shall be as per requirement at site for laying at different locations.				
77	(iii) Contractor shall not perform any pipeline related activities along the ROU without specified barricading/permission of EIC/RCM as per Std. Drg. and other safety measures.				
78	(iv) Payment for the length of final tied-in carrier pipeline string are inclusive in the above item rate and no separate payment shall be made under other item mentioned elsewhere.				
79	(v) Width of above laying indicated are tentative. The width indicated are not for any single laying. This shall be as per requirement at site for laying at different locations.				
80	(vi) Contractor have to use rock cutting tool and all other accessories as required to make drill hole in rocky starta based on requirement. However no extra/additional claim on account of same is permitted. Contractors are advised to quote accordingly.				
81	vii) The above items rate shall be applicable for all locations / region/ charge area within & around the GA of Khorda/Cuttack.				
82	Viii) Payment for carrying out liaisoning & co-ordination works for utility/foreign pipeline crossings (if any) and obtaining permission / NOC from these authorities including assistance in ROU opening & closing and their maintenance/ management both side of the crossings shall be made under item mentioned elsewhere in SOR.				
83	ix) Rock drilling shall be considered at location/strata for which the core recovery is min 25%. Expenditure to establish the Starta as rock through lab test or any other approved methodology shall be paid through item rate available else where in SOR.				
84	PIPELINE LAYING / INSTALLATION IN A BUILT-UP SURFACE/ HARD SURFACE				
85	Raking up of hard surface of any type including bituminous, asphalt, concrete, tiled, brick lined soft/ hard rock which is breakable in pieces manually (without use of pneumatic machine) etc. All tiles/ slabs/ curb stones etc. removed during excavation shall be placed properly. The other activities are as per SOR item no. A00101 including its notes.				
86	200 6.4 API 5L Gr. X-52/56 3 Layer PE Double random Coating (Externally) (approx. 11.5 m to 12.5 m)	72.00	Meter	1,988.00	143,136
87	Note: The above rate is inclusive of all other activities as per SOR item no. A00101 including its notes.				
88	REMOVAL & RESTORATION OF CONTINUOUS CONCRETE (RCC/PCC) FOR PIPELINE INSTALLATION				
89	Removal of concrete (RCC/PCC etc) for preparation of pipeline trench (by using pneumatic machine or other approved method) including restoration of same as previous by providing the RCC/PCC...etc up to satisfaction of EIC and concern authority. Shifting & disposing of debris material at suitable location as per direction of EIC. The other activities are as per SOR item no. A00101 including its notes.				
90	200 6.4 API 5L Gr. X-52/56 3 Layer PE Double random Coating (Externally) (approx. 11.5 m to 12.5 m)	72.00	Meter	624.80	44,986
91	RESTORATION OF ROADS				
92	Restoration of asphalt / concrete / red stone roads / pavement/ pavor block including compaction of soil, to original condition as per requirement and to the entire satisfaction of EIC and / or concerned Owners having jurisdiction for following thickness.				
93	Restoration of Asphalt road upto 10 cm thickness	84.00	Sq. Metre	511.20	42,941
94	Restoration of Asphalt road beyond 10 cm upto 20 cm thickness	48.00	Sq. Metre	795.20	38,170
95	Restoration of Concrete road upto 10 cm thickness	60.00	Sq. Metre	624.80	37,488

SCHEDULE OF RATES
LAYING OF UNDERGROUND STEEL PIPELINE INCLUDING ASSOCIATED WORKS IN CUTTACK / KHORDA (BHUBANESWAR) GAS UNDER CGD SIX CITIES PROJECT FOR M/s GAIL (I) LIMITED
M/s Gyanajit Pattanaik, Bhubaneswar

Sl. No.	Item Description	Quantity	Units	INR	
				Unit Rate (Excluding GST)	Amount (Excluding GST)
96	Restoration of Concrete road 10 cm to 20cm thickness	48.00	Sq. Metre	908.80	43,622
97	Restoration of red stone road / footpath / pavement upto 4 inch thickness	48.00	Sq. Metre	426.00	20,448
98	Restoration of red stone road / footpath / pavement upto 4 to 8 inch thickness	36.00	Sq. Metre	624.80	22,493
99	BORROWED SELECT SOIL FOR BACKFILLING				
100	Additional work over and above item no. A00100 for supply of specified and approved quality of borrowed local soft graded soil / sand in place of available excavated material and / or other suitable soil as per applicable standards / specifications, including backfilling of excavated trench for specified length after laying and padding of pipeline, including local transportation of such special backfill material over all distances, complete.	50.00	M3	284.00	14,200
101	PIPING WORKS FOR SECTIONALISING VALVE STATION (SV STATION)(Fabrication at Ground and then installation in the Pit)				
102	SECTIONALISING VALVE STATION - UNDER GROUND				
103	All works for installation of all piping Underground at all depth for Vent Type/ No Vent Type Valve Station along with/without future tap-off (as required) in Valve Chamber in all type of terrains and soils including transportation and handling of all owner/contractor supplied materials i.e. full bore 8" butt welded Ball valve, Plug Valves, all types of other valves of all sizes, Weldolet of all sizes, Insulating Joint, vent line pipes for mainline, assorted pipes and all flanges and fittings from designated places(s) of issue to work site. Supply of gaskets, studs, nuts, nipples & coupling, consumables, Liquid penetrant kit, Cotton cloth ...etc. Installation / Erection of instrumentation items i.e. pressure gauge, consumables, manpower, machineries, tools & tackles for carrying out all mechanical works of underground and above ground piping including fabrication, welding, nondestructive testing of welds, weld repairs/ Pretesting, cleaning/ flushing, pre-hydrotesting & hydrostatic testing, dewatering, functional testing, cutting of mainline and bevelling (if required), tie-in of valve assembly, including radiography & joint coating of tie-in joints, external painting for buried fittings by high build epoxy of min. 500 micron of R-95 or equivalent as required, obtaining all statutory clearances, approvals and permissions for the works (wherever required), making of valve pit (for detail refer relevant drawings (i.e. P&ID, Plot Plan) for SV Station point enclosed with tender. pipe supports including all associated civil works (pertaining to supports only); painting, finishing, clean-up and restoration of site; preparation of as-built drawings, documents and project records and performing all works as per drawings, specifications, other provisions of Contract document and instructions of Engineer-in-charge.				
104	Sectionalising Valve Station (8") with Tap Off valves	1.00	Lumpsum	99,400.00	99,400
105	Sectionalising Valve Station (8") without Tap Off valves	1.00	Lumpsum	99,400.00	99,400
106	Notes: 1. This work is exclusive of all works associated with main pipeline covered at SOR item no. A00100 below. 2. All Civil/ structural works except for piping supports will be paid separately as per rates provided elsewhere. 3. Work is inclusive of receiving, taking over, loading & unloading of company supplied material and return of surplus material to Company's designated stockyard/store. 4. Valves, Assorted Pipe, fittings & Flanges, any type of tee, instrumentation items ...etc as required for construction of SV station shall be made available to contractor as free issue material. Fabrication of SV, Tap-Off Point (if required) , erection, Testing & commissioning is inbuilt in above item rates, hence contractor have to quote accordingly. 5. Civil Work for Valve Pit and its upper slab for under ground SV stations shall be payable through item available else where in SOR. 6. NDT of Joints is inclusive in above item rate. For 1/2" to 1.5" contractor have to carry out NDT by DP test, however for 2" to 8" NDT by X-ray/Gamma ray is required. Bidder have to quote accordingly.				
107	(Refer plot plan drawing and other relevant drawings for Sectionalising Valve Stations enclosed with tender document for ascertaining quantum of mechanical work associated with SV Station).				
108	PIPING WORKS FOR TAP-OFF POINT(Fabrication at Ground and then installation in the Pit)				
109	All works for installation of all piping and valves assembly on above/below ground at all depth for Tap-off in all type of terrains and soils including transportation and handling of all owner/contractor supplied materials butt welded Ball valve, all valves of all types and sizes , Barred tees of all sizes and all fittings from designated places(s) of issue to work site. Supply of assorted pipes, consumable, Liquid penetrant kit, Cotton cloth...etc, manpower, machineries, tools & tackles for carrying out all mechanical works of underground/aboveground piping including fabrication, welding, nondestructive testing of welds, weld repairs/ retesting, cleaning/ flushing, pre-hydrotesting & hydrostatic testing, dewatering, functional testing, cutting of mainline and bevelling (if required), tie-in of valve assembly, including radiography of tie-in joints, corrosion coating (by heat shrink sleeves) for buried piping and external painting for buried fittings by high build epoxy of min. 500 micron of R-95 or equivalent as required, obtaining all statutory clearances, approvals and permissions for the works (wherever required), excavation and filling in all types of soils including soft/ hard rock for installation of piping, painting, finishing, clean-up and restoration of site; preparation of as-built drawings, documents and project records and performing all works as per drawings, specifications, other provisions of Contract document and instructions of Engineer-in-charge.				
110	4" Tap-off Point	1.00	Nos	113,600.00	113,600
111	Notes: 1. This work is exclusive of all works associated with main pipeline covered at SOR item no. A00100 below.. 2. All others works pertaining to Tap-off (Instrumentation works) (if any) shall be as per rates indicated elsewhere in the tender document. 3. Work is inclusive of receiving, taking over, loading & unloading of company supplied material and return of surplus material to Company's designated stockyard/store.				



SCHEDULE OF RATES
LAYING OF UNDERGROUND STEEL PIPELINE INCLUDING ASSOCIATED WORKS IN CUTTACK / KHORDA (BHUBANESWAR) GAS UNDER CGD SIX CITIES PROJECT FOR M/s GAIL (I) LIMITED
M/s Gyanajit Pattanaik, Bhubaneswar

Sl. No.	Item Description	Quantity	Units	INR	
				Unit Rate (Excluding GST)	Amount (Excluding GST)
112	(Refer plot plan drawing and relevant drawings for Tap-off Station enclosed with tender document for ascertaining quantum of mechanical work associated with Tap-off Station).				
113	4. Valves, Assorted Pipe, fittings & Flanges, any type of tee, instrumentation items (if any) etc as required for construction of Tap-off point shall be made available to contractor as free issue material. Fabrication of Tap-Off Point (if required), erection, Testing & commissioning is inbuilt in above item rates, hence contractor have to quote accordingly. 5. Qty of tapp off points is tentative and may differ as per site requirement.				
114	6. Qty for tapp-off point mentioned above is excluding quantities mentioned in SV station and for separate locations than SV station. 7. NDT of Joints is inclusive in above item rate. For 1/2" to 1.5" contractor have to carry out NDT by DP test, however for 2" to 8" NDT by X-ray/Gamma ray is required. Bidder have to quote accordingly.				
115	Station piping works(Above Ground)				
116	Transportation including loading, unloading & handling of all piping items from Owner's and/or Contractor's storage point to work site/ workshop as applicable, complete work of fabrication, erection, painting, testing of pipes, flanges and fittings and making ready for further Commissioning / Start-up of carbon steel piping of all sizes and ratings including supply of all consumables, equipment, manpower and other resources and execution of, but not limited to, the following works in accordance with relevant specifications & scope of work, drawings, specification and instructions of Engineer-in-charge and as per all provisions of the CONTRACT DOCUMENT.				
117	Fabrication including cutting, edge preparation, welding of pipe, valves, fittings & flanges, IJ ... etc in above ground/underground. Supply of nipples, couplings, caps, plugs, gasket, stud bolts, nuts, U Clamps etc. as required for completion of job.				
118	Erection including supply and fixing of gaskets, studs/ bolts, nuts wherever required for all sizes, levelling, aligning, joining of flanges, blind flanges, connecting with equipment, nozzles, tie-in with existing piping/facilities, etc. tapping for inline instruments like pressure gauges, thermowells, sample connection, etc.				
119	Preparation of final bill of material based on piping GADs.				
120	Preparation of isometric and fabrication drawings.				
121	Carrying out 100 % Non-destructive testing				
122	Surface preparation, Painting of piping system as per specification.				
123	Cleaning and flushing by water/ compressed air, testing of the systems including hydrostatic, pneumatic and any other type of testing as specified, draining, drying by compressed air/other methods approved by COMPANY.				
124	Precommissioning & making operational all piping system and equipments and provide all necessary assistance in term of supply of man-power, equipment, tools and tackles required amount of nitrogen for purging of entire terminal piping system including equipments etc. to the company during commissioning activities.				
125	Clean-up and restoration of site, preparation of as built drawings, documents and project records; transportation of surplus free issue material to Owner's designated place(s); completing all works in all respects as per the AFC drawing, specifications, standards and other provisions of Contract and instruction of Engineer-in-charge.				
126	Completion of all such work in all respects as per scope of work and as per drawings, specifications and instructions of the COMPANY and keeping the system ready in all respects for further commissioning and start up.				
127	Hook-up works including making provision for hooking up and carrying out shutdown activities at terminals if necessary.				
128	Pipeline size 1/2" to 8" NB dia	100.00	Inch-dia	482.80	48,280
129	1) Pipe Specification and thickness may vary depending upon availability of pipe. No extra payment shall be made for this. 2) All butt welded fittings end shall generally match with connecting pipe wall thickness. However, in case of misalignment, Contractor shall have to do end preparation without any extra cost. 3) All coupling, nipples etc. as required shall be supplied by contractor but no separate payments shall be made as it is covered under erection rate. 4) NDT of Joints is inclusive in above item rate. For 1/2" to 1.5" contractor have to carry out NDT by DP test, however for 2" to 8" NDT by X-ray/Gamma ray is required. Bidder have to quote accordingly. 5) Item mentioned is for other station piping works (excluding item no.A00900 above) and shall be operated based on site requirement as per the decision of EIC. 6. Nitrogen requirement for pre-commissioning/commissioning shall be paid through item available else where in SOR. 7. Material as required for fabrication shall be made available to contractor as free issue material.				
130	OTHERS CROSSING (by HDD Method)				
131	Complete work for installation of carrier pipeline (between the ROW/Corridor limits as per approved drawing) by HDD method including "Receiving and taking over" owner supplied three layer PE coated line pipes from Owner's designated place to issue/ dump site(s) and transportation to Contractor's stock yard/ work shop/ work site including all handling, loading, unloading, aligning etc. supply of all Contractor supplied material including consumables, manpower, equipment, other resources to work site(s) and acquiring the required land for storage., Execution of, but not limited to, following works in accordance with specifications and instruction of Engineer-in-charge and as per all provision of Contract Document.				

SCHEDULE OF RATES
LAYING OF UNDERGROUND STEEL PIPELINE INCLUDING ASSOCIATED WORKS IN CUTTACK / KHORDA (BHUBANESWAR) GAS UNDER CGO SIX CITIES PROJECT FOR M/s GAIL (I) LIMITED
M/s Gyanajit Pattanaik, Bhubaneswar

Sl. No.	Item Description	Quantity	Units	INR	
				Unit Rate (Excluding GST)	Amount (Excluding GST)
132	Pre-construction survey, necessary cover required over the carrier pipeline from lowest bed level of the stipulated water crossing to be obtained from concerned authority, bed strata data including design & detail engineering and making of crossing drawing for getting their approval from concerned Authority/ Engineer-in-charge, getting work permit/ NOC for water crossings as well as utility crossings (if any) encountered during water crossing prior to start the execution of work. getting work permit/ NOC for water crossings as well as utility crossings (if any) encountered during water crossing prior to start the execution of work.; obtaining historical data/ scour depth (for river) from concerned authority, if required, ascertaining under neath soil & strata, necessary cover required over the carrier pipeline from lowest bed level of the stipulated water crossing including design & calculation and detail engineering and making of crossing drawing for getting the approval from concerned Authority/ Engineer-in-charge, getting work permit/ NOC for water crossings as well as utility crossings (if any) encountered during water crossing prior to start the execution of work. For road crossings, pre-construction survey based on site visit, collection of data (if required) from concerned Authority including design and detail engineering and making of crossing drawings for getting their approval from concerned Authority/ Engineer-in-charge, getting work permit/ NOC for the crossing as well as utility crossings (if any) encountered during crossing prior to start the execution of work.				
133	In case of water body crossings other than river Drilling to the required depth on the banks and bed including maintenance of drill hole in all types of strata (i.e; soft/hard soil, soft/hard rock.....etc), all depth to accommodate the pipeline at all conditions of the waterbody crossings by HDD methods for providing with minimum cover either (i) 1.5m below the scour level / profile, duly approved/ accepted by concerned authority (under whose jurisdictions the crossing lies)—— For rivers with rocky bed or (ii) 2.5m below the scour level / profile, duly approved/ accepted by concerned authority (under whose jurisdictions the crossing lies)—— For major rivers. or (iii) 1.5 m below the bed level / profile, duly approved/ accepted by concerned authority (under whose jurisdictions the crossing lies)—— For minor waterbody crossings. and (iii) In addition to point (i) & (ii), In case of multiple combined X-ing i.e. river alongwith road/ drain, minimum cover requirement as per specification/ concerned authority for each type of x-ing has also to be fulfilled.				
134	In case of road crossing, drilling to required depth from top of road including maintenance of drill hole in all types of strata (i.e; soft/hard soil, soft/hard rock.....etc), all depth to accommodate the pipeline at all conditions encountered during road crossing by approved HDD methods for providing minimum cover specified in code/ specification or the actual depth as decided by concerned authority, whichever is more.				
135	Laying of the carrier pipeline (for both water body and road crossing) by the approved HDD method across the crossing including, strings preparation of carrier , welding, testing, 100% radiography by x-ray, welding repair and retest, coating of field joints with special type Dirax Heat Shrink Sleeve or equivalent (including supply of coating material) and repair of pipeline coating with special PERP-80 repair patch or equivalent material (including supply of repair patch) as per specification, pre-hydrotest of complete strings made for crossing as per specification etc.				
136	Preparation of string (as per requirement), fabrication and welding as per specification and laying of carrier pipeline across the crossing as per approved profile.				
137	Backfilling of the ditch/ trench including restoration and clean-up of area, disposal of drilling fluid & waste etc. to the satisfaction of Engineer-in-charge and /or as directed by Concerned Authority.				
138	Gauging , Pigging, Cleaning, Post installation hydrotest, dewatering and tie-in with pipeline at either banks etc. all other works including pigging, cleaning, final hydrotesting etc. alongwith mainline works (as mentioned in item no. A00100 above) required as per specifications, codes, approved drawings, calculations, methods and as directed by Engineer-in-charge and provision of contract document; getting NOC from all concerned authority of the facilities crossed.				
139	Details of Crossings				
140	For Other than Rocky Starta				
141	Any type of Crossing viz. Canal / Distributary/ Drain / River / Nala/Road/Pond/ Railway /Culvert Crossings for carrier pipeline of size 200 mm NB x 6.4mm Thk. of API 5L Grade X-52/56	240.00	Meter	5,680.00	1,363,200
142	For Rocky Starta				
143	Any type of Crossing viz. Canal / Distributary/ Drain / River / Nala/Road/Pond/ Railway /Culvert Crossings for carrier pipeline of size 200 mm NB x 6.4mm Thk. of API 5L Grade X-52/56	240.00	Meter	9,372.00	2,249,280
144	Note: (i) Crossing width is tentative and for various crossings. Quantities may increase/decrease or delete as per site situation. Bidder's are advised to visit the site for actual assessment of extent of crossing and to access the maximum extent of cover which may have to be provided. Actual string length for HDD shall be as per design calculations so that pipe is not under stress as permitted by codes/ specifications. Final length of string shall be decided after decision of minimum cover requirement by concerned Authority/ Engineer-in-charge. (ii) Payment for the length of final tied-in carrier pipeline string are inclusive in the above item rate and no separate payment shall be made under other item mentioned elsewhere. (iii) The Contractor has to quote on running meter basis for X-ing. No any extra payment shall be made against this item. (iv) Width of above crossings indicated are tentative and for multiple crossings. This shall be as per requirement at site for crossing at different locations. ix) Rock drilling shall be considered at location/strata for which the core recovery is min 25%. Expenditure to establish the Starta as rock through lab test or any other approved methodology shall be paid through item available else where in SOR.				



SCHEDULE OF RATES
LAYING OF UNDERGROUND STEEL PIPELINE INCLUDING ASSOCIATED WORKS IN CUTTACK / KHORDA (BHUBANESWAR) GAS UNDER CGD SIX CITIES PROJECT FOR M/s GAIL (I) LIMITED
M/s Gyanajit Pattanaik, Bhubaneswar

Sl. No.	Item Description	Quantity	Units	Unit Rate (Excluding GST)	Amount (Excluding GST)
145	GEOTECHNICAL INVESTIGATION, HYDROGRAPHICAL & HYDROLOGICAL SURVEY OF RIVER/CANAL/NALA/ WATERBODIES				
146	Carrying out Pre-construction survey and detail survey for crossings after liaisoning & coordination from concerned authority. Detail survey includes minimum but not limited to carrying out complete Geotechnical Investigation (including all laboratory test & field test) , Hydrographical & Hydrological Survey of River / Canal/Nala/Waterbodies for the purpose of crossing the River / Canal/Nala/Waterbodies by HDD method including obtaining work permit / NOC from concerned authority complete in all respect as per Scope of Work & Technical Specification and instruction of Engineer-In-Charge (EIC)/RCM and submitting Final Report & Drawing (along with soft copy) incorporating all field and laboratory data, Drawings, Maps, Data etc. (One Lot) in an approved format with full scale for Soil Investigation, Scour Depth etc. in accordance with the Technical Specification, Drawings, approved QAP, implementation schedule and other provisions of the Tender Document and instructions of the Engineer-in-charge (EIC)/RCM.				
147	For road/rail crossings, pre-construction survey based on site visit, topographical survey, geotechnical investigation to establish bed strata upto sufficient depth, collection of data (if required) from concerned Authority including design and detail engineering and making of HDD Profile drawings for crossing and getting their approval from concerned Authority/ Engineer-in-charge including carrying out liaisoning & co-ordination works and obtaining permission / NOC from these authorities for the crossing as well as utility/foreign pipeline crossings (if any) prior to start the execution of work.				
148	GEOTECHNICAL INVESTIGATION, HYDROGRAPHICAL & HYDROLOGICAL SURVEY OF RIVER/CANAL/NALA/ WATERBODIES				
149	Crossing of NALA/WATERBODIES in single stretch / shot (Size 8" NB) -(Measurement will be carried out on the basis of individual crossing profile width and payment will be done accordingly)	840.00	Meter	852.00	715,680
150	Crossing of RIVER/CANAL in Single stretch / shot (Size 8" NB)(Measurement will be carried out on the basis of individual crossing profile width and payment will be done accordingly)	240.00	Meter	1,022.40	245,376
151	GEOTECHNICAL INVESTIGATION & CROSSING SURVEY OF RAILWAY / ROAD CROSSING				
152	Crossing of Road/Railway in single stretch / shot (Size 8" NB)(Measurement will be carried out on the basis of individual crossing Profile width and payment will be done accordingly)	240.00	Meter	852.00	204,480
153	Note : (i) For Nala/Water Bodies/River/Canal etc Bidder/contractor have to execute Geo-technical, hydrological & hygraphical survey as per technical specification and direction of EIC ii)for railway/ road crossings contractor have to execute geotechnical & crossing survey as per technical specification and direction of EIC.				
154	(ii) For geotechnical survey/investigation: 1. For River/Canal - Two Nos Bore holes each at both banks of depth 15 meter and in river bed bore holes of depth 25 m at a distance of 75 meter centre to centre. 2. For Nala/Other Water Body Crossings...etc - One No Bore holes each at both banks of depth 15 meter and on bed bore holes of depth 15 m at a distance of 75 meter centre to centre. 3. For Railway Crossings/Road Crossings ...etc - One No Bore holes each at both sides of depth 10 meter. 4.Laboratory test & field test shall be as per technical specification & tender documents. 5. Bank width for Canal/nala/other water body crossings and survey length for railway crossings/road etc will be as per site conditions. Survey has to be done of bank width/survey width and minimum 50 meter at both end expect at river Crossings. For River crossing survey has to be done of bank width and minimum 100 meter at both end. 6. Rock shall be considered at location at which the core recovery is min 25%. 7. Quantity indicative above is tentative and for multiple crossings of size 8"NB dia pipeline with in the GA. 8. Payment for carrying out liaisoning & co-ordination works for Crossings and obtaining permission / NOC from these authorities is in-built in above item rate				
155	Pipe Laying using Manual / Machine Moiling technique (without Casing) for CS pipe				
156	Survey of under ground utilities, execution of the work as per specification, including excavation of pits moiling with the hole size not exceeding 20% of the pipe dia, jointing and insertion of carrier pipe and restoration of the pits to original condition, submission of As-Built Graph as per specifications and the instruction of Engineer-in-charge.				
157	Laying of 8" (219.1 mm) OD, 6.4 mm wall thk of API 5L Grade X-52/56 carrier pipe	72.00	Meter	3,692.00	265,824
158	Note-(i) Payment for the length carrier pipeline string shall be moiled carrier pipeline length plus two meters. Payment for additional length of carrier pipeline string shall be paid under SOR item no.A00101 (ii) Width of above crossings indicated are tentative. The width indicated are not for any single crossings. This shall be as per requirement at site for crossing at different locations. (iii) Adopting the manual or machine moiling shall be decided at site based on the width to be crossed.Ideally 2.0 meter or more width to be crossed through machine moiling.In this regard decision of EIC shall be final and binding to the contractor. (iv) payment for Post hydrotest shall be done through relevant SOR item mentioned elsewhere.				
159	Excavation beyond 1.5m depth in case of crossing of utilities/ drain/ culverts etc. through open cut upto the following depth (including restoration of the damaged area to its original condition and satisfaction of the Engineer-in-charge / concerned authorities) .The other activities are as per A00101				
160	In Normal Surface / Unprepared surface (Katcha Surface)				
161	Deeper than 1.5 m & upto 2.5 m below existing level (for 200 mm NB Pipeline)	60.00	Meter	454.40	27,264
162	Deeper than 2.5 m & upto 4.5 m below existing level (for 200 mm NB Pipeline)	48.00	Meter	624.80	29,990
163	In a built-up surface / Hard surface of any type including metal, concrete, bituminous, tiled, brick lined soft/ hard rock which is breakable in pieces manually (without use of pneumatic machine) etc. All tiles/ slabs/ curb stones etc. removed during excavation shall be placed properly. The other activities are as per A00101				
164	Deeper than 1.5 m & upto 2.5 m below existing level (for 200 mm NB Pipeline)	60.00	Meter	624.80	37,488
165	Deeper than 2.5 m & upto 4.5 m below existing level (for 200 mm NB Pipeline)	48.00	Meter	795.20	38,170
166	Note: (i) Quantities indicated in tentative and for various locations. (ii) Prior permission from EIC is required before execution of above item.				

SCHEDULE OF RATES
LAYING OF UNDERGROUND STEEL PIPELINE INCLUDING ASSOCIATED WORKS IN CUTTACK / KHORDA (BHUBANESWAR) GAS UNDER CGD SIX CITIES PROJECT FOR M/s GAIL (I) LIMITED
M/s Gyanajit Pattanaik, Bhubaneswar

Sl. No.	Item Description	Quantity	Units	Unit Rate (Excluding GST)	Amount (Excluding GST)
167	REPAIR OF DEFECT IN PIPES (NOT ATTRIBUTED TO CONTRACTOR)				
168	Repair of defects on Owner supplied pipelines of all grades and wall thickness as specified in following items, noted and recorded at the time of "receiving and taking over" by Contractor in the presence of Engineer-in-charge.				
169	Cutting and rebeveling for dents in bevels exceeding 3 mm in depth for pipe sizes:				
170	Specified OD, mm				
171	219.1	2.00	Nos.	198.80	398
172	Jack out of dents in bevels ranging between 1 mm and 3 mm in depth for pipe sizes:				
173	Specified OD, mm				
174	219.1	2.00	Nos.	227.20	454
175	REPAIR OF COATING DEFECTS (NOT ATTRIBUTED TO CONTRACTOR)				
176	Repair of Holiday in Coating (Noted and recorded at the time of "receiving and taking over")				
177	Supply of all coating repair materials as per requirements of specification to be compatible with line pipe coating material, supply of all consumables, utilities, equipments and all manpower required, pipe cleaning and surface preparation, repairing of coating defects (resulting in holiday) and testing including all handling, transportation, etc. for line pipes, performing all works necessary for the completion of the works strictly in accordance with relevant specification and instructions of Engineer-In-Charge. This rate shall be applicable per sq. cm of the exposed steel area exposed steel area.	50.00	Sq. cm	312.40	15,620
178	PERMANENT MARKERS				
179	Supply, fabrication and installation of all types of permanent markers along the route including all associated civil works such as excavation in all types of soil, construction in all types of soil, construction of pedestals and grouting with concrete, clearing, supply and application of approved colour and quality of primer and paint, stencil letter cutting for numbers, direction, change etc., restoration of area to original condition and performing all works as per drawing, specification and instruction of engineer-in-charge.				
180	Pipeline RCC boundary / route marker as per drawing	50.00	Nos.	568.00	28,400
181	Pipeline warning markers with post & foundations	10.00	Nos.	3,408.00	34,080
182	Pipeline direction marker with post & foundations	10.00	Nos.	3,976.00	39,760
183	Pipeline KM with post & foundations	3.00	Nos.	3,692.00	11,076
184	Navigable Waterway Markers	2.00	Nos.	22,720.00	45,440
185	Note: Qty of above markers are tentative and may increase or decrease as per site situation. Contractor have to take prior approval from EIC before fabrication or order placement.				
186	LEAK / BURST (ATTRIBUTABLE TO OWNER)				
187	All works for locating leak / burst in Company's supplied material only (occurred during hydro-static testing) including necessary repairing/replacing defective pipe lengths including cutting and out and removing the defective pipe, pre-testing and welding of replacement pipe, NDT of welds, repair and retesting of defective welds, coating/painting of replacement pipe, pretesting the replacement pipe into mainline/branch line, coating/painting of welding joints, cleanup, retesting including cost of all labour materials, consumables and performing all works in accordance with the provisions of the Contract document and as directed by Owner /Engineer-in-charge/ Engineer in-charge				
188	For 8" NB Line	1.00	Lumpsum	28,400.00	28,400
189	Note: i) This rate is applicable for manufacturing defects in Owner supplied material only. ii) Leak detection, its rectification and successfully re-hydrotesting shall be carried out as per approved procedure by Contractor with a view that completion of all activity for successful hydrotesting is not inordinately extended which will hamper the overall project schedule.				
190	Gauging (Applicable for main steel pipeline hydrostatic test, Pre & Post installation hydrostatic test for crossings)				
191	As per specification and procedure approved by Engineer-in-charge (EIC)/ RCM.				
192	200 6.4 API 5L Gr. X-52/56 3 Layer PE Double random Coating (Externally) (approx. 11.5 m to 12.5 m)	3000.00	Meter	22.72	68,160
193	NOTE- (i) The quantities mentioned against the above SOR items are tentative and may vary depending upon the site condition during execution stage. (ii) The total quantities mentioned against the above SOR items are applicable for main steel pipeline and multiple/various crossings at different location within GA. (iii) Payment for above item shall be made only for the certified executed length of pipeline by Engineer-in-charge (EIC)/ RCM. (iv) The requirement of gauging of main steel pipeline, prehydrotest & after pulling of HDD section shall be carried out as per MECO specification / OISD / PNGRB and same shall be approved by Engineer-in-charge (EIC)/ RCM.				
194	Post Hydrostatic testing of Buried Pipeline				
195	Carrying out cleaning, gauging, pigging and hydrostatic testing of complete pipeline section laid by HDD/Open cut method as approved by EIC/RCM to specified pressures (i.e. 1.5 times of the design pressure) for 24 hours holding period; providing all equipment, pumps, test headers, fittings, instruments, dead weight tester, pressure recorder, temperature recorder, pressure & temperature gauge etc., and services, supervision, labour, consumables, water including supply of corrosion inhibitor, air, etc. as required for successful completion of hydrotesting of pipeline to acceptance criteria as per specifications, codes, approved drawings, calculations, methods and as directed by Engineer-in-charge and provision of contract document. Complete dewatering and swabbing of the pipeline as per specification and to the entire satisfaction of the EIC/RCM.				
196	For 8" NB Line	2500.00	Meter	136.32	340,800
197	Notes: i) The above quantity is not for a single section but for no. of sections for pipeline laying. ii) The quantities mentioned against the above SOR items are tentative and may vary depending upon the site condition during execution stage. iii) Payment for Gauging activity mentioned above shall be made under SOR item No.A002000 mentioned elsewhere in this SOR.				
198	Drying by Vacuum drying / Super air drying / Super dry nitrogen				

SCHEDULE OF RATES
LAYING OF UNDERGROUND STEEL PIPELINE INCLUDING ASSOCIATED WORKS IN CUTTACK / KHORDA (BHUBANESWAR) GAS UNDER CGD SIX CITIES PROJECT FOR M/s GAIL (I) LIMITED
M/s Gyanajit Pattanaik, Bhubaneswar

Sl. No.	Item Description	Quantity	Units	Unit Rate (Excluding GST)	Amount (Excluding GST)
199	Complete work of carrying out drying by Vacuum drying / Super air drying / Super dry nitrogen & commissioning of pipeline section including supply of manpower, equipments & consumables (nitrogen required for purging etc.), materials for all temporary works and performing all associated works, complete as per the relevant specifications, other provisions of Contract document and instructions of Engineer-in-Charge.				
200	For 8" NB Line	2500.00	Meter	23.86	59,640
201	Note: The quantities mentioned above for various pipeline sections. Final methodology of drying shall be decided by EIC at the time of execution.				
202	Commissioning assistance / commissioning for underground pipeline length and stations				
203	For 8" NB Line	2500.00	Meter	10.22	25,560
204	Supply of Nitrogen & Purging in pipeline system				
205	Supply of nitrogen in gaseous form and its Purging in aboveground /underground pipeline network to the specified acceptance criteria, including supply of all equipment, man-power, consumables materials for all temporary works and performing all associated works, complete as per the relevant specifications, other provisions of Contract document and instructions of Engineer-in-charge.	100.00	M3	227.20	22,720
206	Preservation of Pipeline				
207	Preservation of pipeline sections and associated facilities (in event of delay in ROU acquisition/statutory permissions, commissioning, other unforeseen reasons) including supply of nitrogen, all consumables, all equipment, man-power, etc. complete as per the requirements of specifications, other provisions of Contract document and instructions of Engineer-in-charge.				
208	By filling and pressurizing with nitrogen to a pressure of 2 bar(g) for a period of one month.				
209	For 8" NB Line	2500.00	Meter	10.22	25,560
210	For every additional period of one month or part thereof				
211	For 8" NB Line	2500.00	Meter	6.82	17,040
212	Notes: i) All accessories ie; Two nos. of dished end caps and two nos. of 3/4 inches PG to be considered per section and rate for the same shall be quoted by bidder under this item. ii) If month is partially complete, payment shall be made on prorata basis.				
213	LONG RADIUS BENDS				
214	Supply of Long Radius Bends (R = 3D) for 8" dia. pipe, X-52/56 (thk. 6.4 mm) as per specification enclosed in Tender Document.				
215	20° - 30°	8.00	Nos.	11,360.00	90,880
216	31° - 45°	12.00	Nos.	12,780.00	153,360
217	46° - 60°	6.00	Nos.	14,200.00	85,200
218	61° - 90°	8.00	Nos.	17,040.00	136,320
219	Note: The quantities of LR Bends may vary. For final quantity, approval shall be taken by EIC before order placement.				
220	SUPPLY OF WARNING MAT Supply of warning mat for pipeline as per the technical specification enclosed in the bid document. The material of warning mat shall be of high density polyethylene and non biodegradable type. It shall have non-toxic and anti rodent properties.				
221	8" NB Pipeline	2250.00	Meter	39.76	89,460
222	Note: Quantity mentioned above is tentative and may increase/decrease based on site requirement. Bidder have to take prior approval from EIC, before placement of order.				
223	DIGITIZATION OF RADIOGRAPHY FILMS:				
224	Carrying out digitization of all radiographic films (mainline and terminal piping) in the form of digital images (which can then be archived safely for long life and electronic retrieval) complying to all the legal local rules, codes and international standards. Submission of digital images of radiographic film along with compatible software in 6 sets of CD/DVD/Pendrive for electronic viewing /retrieval.				
225	For 8" NB Line	1.00	Lumsum	142,000.00	142,000
226	VIDEOGRAPHY & PHOTOGRAPHY				
227	Carrying out the videography & Photography of the pipeline section construction activities. The work shall be carried out in two phases.				
228	Videography & photography of the entire route prior to construction activities i.e. pipeline route, location of various stations, TOP, all crossing like road / railways, river, etc.				
229	Videography & photography during construction activities of Mainline Works i.e. Stringing, Welding, Radiography, Joint Coating, Lowering, Backfilling, etc. performing all works as per specification of EIC and other provision of contract document.				
230	For 8" NB Line	1.00	Lumsum	85,200.00	85,200
231	TRANSPORTATION OF FITTINGS, FLANGES, VALVES, BARREL ETC.				
232	"Receiving and taking over", handling, lifting, loading on truck, transportation and unloading of Company supplied DRS/MRS/, Metering Skids, fittings, flanges and valves ...etc from any storage yard (other than the designated storage yard for the project) to worksite / contractor's storage yard/ any other storage yard or as decided by EIC. The above work also includes stacking the DRS/MRS/Metering Skids, flanges, fittings and valves etc. properly. Above work shall be carried out as per standard drawing, specification, instruction of Owner and other provision of contract document.	400.00	MT-Km	15.34	6,134
233	Notes: i) The quantities given in above item no. are tentative only and shall not be considered to be binding. The quantities may be increased, decreased or deleted as per the actual site requirement and instructions / recommendations of Owner. The unit rate shall be operated to work out the final payment to the contractor. ii) Above price shall be inclusive of all type of taxes & duties, transit insurance during transportation & other insurance etc. including all financial & commercial implication as per the tender document. No other payment except as per quoted unit rate & executed quantities will be payable by the Owner. iii) Safe storage of transported material till installation shall be part of the above item. Contractor has been advised to quote accordingly.				
234	TRANSPORTATION OF LINE PIPE				

SCHEDULE OF RATES
LAYING OF UNDERGROUND STEEL PIPELINE INCLUDING ASSOCIATED WORKS IN CUTTACK / KHORDA (BHUBANESWAR) GAS UNDER CGD SIX CITIES PROJECT FOR M/s GAIL (I) LIMITED
M/s Gyanajit Pattanaik, Bhubaneswar

Sl. No.	Item Description	Quantity	Units	Unit Rate (Excluding GST)	Amount (Excluding GST)
235	"Receiving and taking over", handling, lifting, loading on trailers, transportation and unloading of Company supplied line pipe from any storage yard (other than the designated storage yard for the project) to worksite / contractor's storage yard/ any other storage yard or as decided by EIC. The above work also includes stacking the pipes on wooden sleepers/ sand pads. Above work shall be carried out as per standard drawing, specification, instruction of Owner and other provision of contract document.	5000.00	MT-Km	12.50	62,480
236	Notes: i) The quantities given in above item no. are tentative only and shall not be considered to be binding. The quantities may be increased, decreased or deleted as per the actual site requirement and instructions / recommendations of Owner. The unit rate shall be operated to work out the final payment to the contractor. ii) Above price shall be inclusive of all type of taxes & duties, transit insurance during transportation & other insurance etc. including all financial & commercial implication as per the tender document. No other payment except as per quoted unit rate & executed quantities will be payable by the Owner. iii) Safe storage of transported linepipe till installation, reconciliation & handingover to client shall be part of the above item. Contractor has been advised to quote accordingly.				
237	Pipeline Laying Liaisoning & Co-ordination (including utility crossing) and obtaining permission / NOC from the statutory / concerned authorities. Assistance in ROU opening & closing and their maintenance/ management.				
238	Submitting request for (after obtaining the letter from client) permission, follow up, assisting in site inspections / route survey / site report making/making site inspection drawings, submitting at designated offices, resubmission after correction, modification if required, soft and hard copy in nos. as required /if required in sizes, and collecting permission from the statutory authorities including NHAI, PWD, Railways, Irrigation, Forest, Municipal Corporation, District administration, River Authority, SEZ etc. Obtaining work permits /NOC from various statutory authorities having jurisdiction before execution of the work and complying with all stipulations /conditions/recommendations of the said authorities. Only statutory fees shall be paid by the owner. Assistance in required length and width/restricted width of ROU opening & closing and their maintenance/ management both side of the crossings.				
239	For 8" Pipeline	2500.00	Meter	28.40	71,000
240	Note : Execution of above item is subjected to the requirement of site.				
241	CIVIL WORKS				
242	EARTH WORK IN EXCAVATION/ SITE GRADING AND BACKFILLING				
243	Earth work in excavation /site grading in all kinds of soil including soft rock in any plan dimension up to required depth including backfilling of excavated earth at any location in layers of 300mm and compacted up to 95% to its MDD at all heights and depths. Surplus and unserviceable earth shall be disposed up to any lead in all conditions. Soil to be levelled and neatly dressed complete in all respect as per scope of work, detailed construction drawings, technical specifications and direction of the Engineer-in-Charge.	2.00	CUM	426.00	852
244	Note:- 1. This Rate shall be applicable only for excavation which are not included as a part of respective SOR Item. 2. The Contractor shall take into account in his quoted rate the provision for excess excavation required for necessary working space, cutting in slopes etc., which may be required for excavation and other allied works and refilling the side slopes and working space in layers as per requirement. 3. Rate to include cost of all labour, tools, tackles, equipment, hire charges, shoring, bailing and pumping out water as required etc. with all bye works and sundry works complete in all respects. 4. NET CUM of excavated quantity in CUM shall be measured for payment. 5. To be read in conjunction with Particular Job Specification.				
245	BRICK WORK				
246	Providing and laying brick work with brick class designation M-5.0 of IS:1077 in Cement Mortar 1:4 (1cement : 4 sand) in steps, load bearing structures, drains, or at any other location at all depths & height for all leads including providing required finishes, curing, scaffolding, etc., complete as per specifications and drawings with all bye-works as per direction of the Engineer-in-charge.	2.00	CUM	4,118.00	8,236
247	Note:- 1. Rate to include cost of all labour, tools, tackles, equipment, hire charges, supply of all materials such as minimum 43 grade cement (OPC), bricks, finishes, bitumen, other minor construction materials, shuttering, staging, masonry work, excavation, PCC M10, plastering with 15 mm thick cement plaster on exposed faces with 1:4 cement mortar (1 cement : 4 Sand) , painting with bitumen etc. as per requirement with all bye-works and sundry works complete as per drawings. 2. To be read in conjunction with Particular Job Specification.				
248	PLAIN CEMENT CONCRETE				
249	Supplying and laying plain cement concrete of grade M 10 with stone aggregate 40mm down grade (including shuttering if required) in all types of concrete works including levelling courses below foundations, mass concrete works, chambers, cable trench, under floors and any other locations, at all levels and locations (which are not covered as part of composite items) as per drawings, specifications and directions of the Engineer-in-charge.	2.00	CUM	4,146.40	8,293
250	Note :- 1. Rate to include cost of all labour, tools, tackles, equipment, hire charges, supply of all materials, shuttering in all conditions etc. with all bye works and sundry works. 2. To be read in conjunction with Particular Job Specification.				
251	REINFORCED CEMENT CONCRETE				
252	Providing and laying Reinforced Cement Concrete of grade M-25 with 20mm and down grade crushed stone aggregate in all types of structures like foundations, beam, columns, pedestals, pedestal bases, pipe supports, sleepers, cable trench, RCC retaining wall foundation for boundary wall etc. including excavation, PCC M10 in mud mat, shuttering, construction joints, bitumen painting on surfaces in contact with soil, supplying and fixing MS inserts, finishes etc. at all depths and levels complete as per drawings, specifications and directions of the Engineer-in-charge.	2.00	CUM	5,964.00	11,928
253	Note :- 1. Rate to include cost of all labour, tools, tackles, equipment, hire charges, supply of all materials such as minimum 43 grade OPC cement including sulphate resistant cement for sub-structures, inserts, bolts, conduits, bitumen, excavation, PCC M-10 in mud mat, other minor construction materials, shuttering, staging, testing of concrete, curing etc. except reinforcement steel with all bye works and sundry works complete. 2. To be read in conjunction with Particular Job Specification.				



SCHEDULE OF RATES
LAYING OF UNDERGROUND STEEL PIPELINE INCLUDING ASSOCIATED WORKS IN CUTTACK / KHORDA (BHUBANESWAR) GAS UNDER CGD SIX CITIES PROJECT FOR M/s GAIL (I) LIMITED
M/s Gyanajit Pattanaik, Bhubaneswar

Sl. No.	Item Description	Quantity	Units	Unit Rate (Excluding GST)	Amount (Excluding GST)
254	REINFORCEMENT STEEL				
255	Supplying and Fabricating and Fixing in position HYSD Steel Reinforcements/ TMT Grade Fe-415/Fe 500D conforming to IS1786-2008 at all levels and positions including the Cost of transportation, Straightening, Cutting, Bending, Cranking, Binding, Welding, Provision of necessary Chairs and Spacers, Preparation of bar bending schedule, getting the same approved by EIC etc., complete as per Drawings and Specifications and including Cost of binding wire, Labour etc., all complete in all respects as per scope of work, detailed construction drawings, technical specifications and direction of Engineer-in-charge. The Chairs and Spacer Bars provided will not be measured for payment.	0.50	MT	59,640.00	29,820
256	Note :- 1. Rate to include cost of all labour, tools, tackles, equipment, hire charges, supply of all materials such as steel Reinforcement, binding wire and other minor construction materials, testing etc. all bye works and sundry works. 2. Chairs, Laps, Spacers, Wastage etc. shall be to contractor's account. 3. To be read in conjunction with Particular Job Specification.				
257	CONCRETE PAVEMENT				
258	Providing and laying reinforced cement concrete pavement 150 mm thick in M-25 grade with 20 mm and down grade crushed stone aggregate in pavement, including earthwork in excavation, preparation of base (i.e. compacted subgrade, 200 thk sand and 100 thk PCC M-10 grade), leaving pockets if necessary, making recess, projections, fixing inserts conduit pipes (GI, PVC, HDPE, etc.) laying in alternate panels, filling the gaps between the panels with bitumen sand mix filler material etc., making slopes, finishing edges, leaving bars for pedestals & sleepers including providing sand fill isolation, shuttering, providing and fixing reinforcing steel, curing, chipping and modification works etc. as specified in any shape, thickness, position and finishing the top surface smooth as per requirement etc. all complete as per drawings, specifications and directions of the Engineer-in-charge.				
259	150mm thick in Pavements in Process Areas (Type - I)	25.00	SQM	1,505.20	37,630
260	Note :- 1. Rate to include cost of all labour, tools, tackles, equipment, hire charges, supply of all materials, providing and fixing reinforcement steel, shuttering, earthwork in excavation and backfilling using serviceable earth in all conditions, preparation of base, etc. with all bye works and sundry works. Cost of works towards pipe supports & sleepers being raised from pavement is covered under respective RCC items. 2. To be read in conjunction with Particular Job Specification.				
261	VALVE PIT				
262	Construction and handing over of Brick Valve Pit as per tender drawing, technical specification and direction of engineer-in-charge complete in all respect. Scope of work shall be as per tender drawing.				
263	Construction and handing over of RCC Valve Pit of approx. 1.8m x 1.8 m in size (internal dimension) as per technical specification and direction of engineer-in-charge complete in all respect. Scope of work shall be as per Sketch attached with the tender.	1.00	Nos	88,040.00	88,040
264	Construction and handing over of RCC Valve Pit of approx. 2.0m x 2.0 m in size (internal dimension) as per technical specification and direction of engineer-in-charge complete in all respect. Scope of work shall be as per Sketch attached with the tender.	1.00	Nos	110,760.00	110,760
265	STEEL STRUCTURAL WORKS				
266	Steel structure Fabrication				
267	Supplying & Erecting in position steel structures fabricated out of MS Girders, channels, Tees, angle, flats, plate, square hollow sections pipes etc. conforming to IS:2062 and/or from pipes conforming to IS:1161 for structural purpose for cascade supporting structure, loading/unloading platform, Gratings for platform, catladder, handrails, hoardings for sinages, Lcv stand, etc. of any size/dia for required design including cutting, welding, bolting, hoisting, fixing in position, including application of one coat of primer at shop and second coat of primer at site after erection and two coats of finishing paint at site. The work is to be completed in all respect as per specification, scope of work, detailed construction drawings and directions of the Engineer-in-charge.	200.00	KG	71.00	14,200
268	[Rate to include cost of all labour, nut, bolts, tools, tackles, hire charges royalties, levies, transportation, scrap value, gas cutting, welding, other consumables, paints, compressed air, water, electric power etc. all complete.]				
269	Providing and fixing Fencing Structure				
270	Supplying, fabricating & fixing steel structural fencing fabricated from pipes conforming to IS:1161 and plates conforming to IS:2062 & fixing of GI weldmesh made from 3mm GI wire @ 75 mm bothways to structural steel frame by means of welding/bolting, including applying two coats of approved quality of synthetic enamel paint over a priming coat of in approved shade including supply of all raw materials, bolts, electrodes, transportation, including making pokets & pouring with PCC (1:2:4) in of block 500x500x500 for fixing of posts etc complete as per enclosed drawing, technical specifications, scope of works and directions of the Engineer-in-Charge.				
271	Fencing height 2.1m	50.00	RM	2,073.20	103,660
272	Notes:- 1) The quantities indicated are estimated values and hence are approximate. Final payment will be made based on actual quantities to be certified by the Purchaser. 2) The cost of MS bolts (permanent and service), washers, electrodes, putty, gases, cost of straightening the raw materials, cutting of flats from plates and providing splices, paints, tools, plants, etc., as required for the work shall be deemed to be included in the quoted rates. 3) All handling and transport charges of raw materials and fabricated structures including double handling, as required, for completion of work in accordance with 4) Time schedule, are deemed to be included in the quoted rates 5) All accessories like MS tower bolts, MS Pivot, MS Wheels, MS Tee section, locking arrangement etc. shall be measured by weight only. 6) Contractor shall ensure proper alignment and smooth operation of Gate				
	Total Excluding GST				16,336,844
	Total including GST				19,277,476



MECON LIMITED

(A Government of India Enterprise)

SCOPE MINAR, 15th Floor, North Tower, Laxmi Nagar District Centre,

Delhi - 110 092

Phone No. : 22401129, 22447417

Corporate Identification No(CIN):U74140JH1973GOI001199

FAX OF ACCEPTANCE (FOA)

FOA NO. 05/51/Q7NT/GAIL/001-I-LVD/FOA-891

DATE: 29.10.2022

TO : M/S M G S GROUP
FAX : -
EMAIL : surajsinghnp@gmail.com
ATTN : MR. SURAJ SINGH, PARTNER
FROM : SR. GM (CONTRACTS), MECON LIMITED, DELHI

PLEASE REFER TO YOUR OFFER NO. NIL DATED NIL AND ALL OTHER SUBSEQUENT CORRESPONDENCE AGAINST BIDDING DOCUMENT NO. 05/51/Q7NT/GAIL/001-I-LVD (TENDER ID : 2022_GAIL_110017) DATED 30.04.2022, COMM. CORR.#1 DATED 13.05.2022, COMM. CORR.#2 DATED 13.05.2022, RPBQ DATED 13.05.2022 & COMM. CORR.#3 DATED 20.05.2022 FOR LAYING OF UNDERGROUND STEEL PIPELINE INCLUDING ASSOCIATED WORKS IN CUTTACK/ KHORDA (BHUBANESHWAR) GAS FOR GAIL (INDIA) LIMITED (.)

WE HEREBY ISSUE THIS FAX OF ACCEPTANCE (FOA) FOR **100% OF THE SCOPE OF WORK** OF SUBJECT TENDER AT AN ESTIMATED CONTRACT VALUE OF RS. 1,63,36,844/- (INDIAN RUPEES ONE CRORE SIXTY-THREE LAKH THIRTY-SIX THOUSAND EIGHT HUNDRED FORTY-FOUR ONLY) EXCL. GST. GST SHALL BE PAYABLE EXTRA AS PER TENDER PROVISIONS. (PRESENT RATE OF GST@18%) (.)

THE DETAILED BREAKUP OF ABOVE ORDER VALUE IS ENCLOSED AS ANNEX-I(.)

THE COMPLETION SCHEDULE SHALL BE 3 1/2 (THREE & HALF) MONTHS FROM THE DATE OF FAX OF ACCEPTANCE (FOA) FOR MECHANICAL COMPLETION INCLUDING MOBILIZATION PERIOD OF 15(FIFTEEN) DAYS AND THEREAFTER 15 (FIFTEEN) DAYS FOR DRYING, COMMISSIONING/GAS-IN (.)

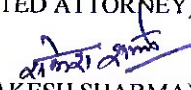
YOU ARE REQUESTED TO SUBMIT "CONTRACT PERFORMANCE GUARANTEE" @ 3% OF ORDER/CONTRACT VALUE [EXCLUDING GST] WITHIN 30 DAYS OF THIS FAX OF ACCEPTANCE AS PER TERMS AND CONDITIONS STIPULATED IN CLAUSE NO. 37 OF INSTRUCTIONS TO BIDDERS (ITB) OF BIDDING DOCUMENT(.)

YOU ARE REQUESTED TO CONTACT PROJECT COORDINATOR (MR. PRATEEK MAHESHWARI, MANAGER (CGD), MECON LIMITED, EMAIL ID: PMAHESHWARI@MECON.CO.IN) FOR FURTHER INSTRUCTIONS REGARDING EXECUTION OF THIS WORK (.)

ALL OTHER TERMS AND CONDITIONS SHALL BE AS PER BIDDING DOCUMENT & CORRIGENDUM THERE OF AS STATED ABOVE AND AS AGREED TILL DATE (.)

A DETAILED LETTER OF AWARD SHALL FOLLOW (.)

FOR & ON BEHALF OF GAIL (INDIA) LIMITED
(BY ITS CONSTITUTED ATTORNEY)


(RAKESH SHARMA)
SR. GM (CONTRACTS)
MECON LIMITED, DELHI

CC: BY COURIER TO:

M/s M G S Group

2nd Floor, Khata No. 138, C/o- Ajit Sahoo,
NA Ranppur, Naranpur, Kendujhar-758014, Odisha
Tel No.: +91-9696560009



SCHEDULE OF RATES
LAYING OF UNDERGROUND STEEL PIPELINE INCLUDING ASSOCIATED WORKS IN CUTTACK / KHORDA (BHUBANESWAR) GAS UNDER CGD SIX CITIES PROJECT FOR M/s GAIL (I) LIMITED
M/s MGS Group, Bhubaneswar

Sl. No.	Item Description	Quantity	Units	Unit Rate (Excluding GST)	Amount (Excluding GST)
1	MAINLINE WORKS				
2	CARBON STEEL PIPES				
3	PIPELINE LAYING / INSTALLATION				
4	"Receiving and taking over" as defined in the specifications, handling, loading, transportation and unloading of Owner supplied 3-Layer PE coated and bare linepipes from Owner's designated stock-yard to Contractor's stock yard/workshop/work-site including preliminary activities, preparation of drawings, wherever required for crossing etc. including handling, stacking, stringing on the pipeline Right-of-Use/ pipeline route alignment, carrying out inspection of Owner supplied materials including linepipes at the time of taking over, laying/ installation of coated linepipes as per specification wherever required depending on site condition including execution of all works, "taking over", handling, including loading and unloading, transportation of Owner supplied materials other than linepipe from Owner's designated place (s) of issue to work site including arrangement of all as listed above..				
5	Additional lands required for Contractor's storage, fabrication, access for construction, procurement and supply of all materials (except Owner supplied materials), consumables, equipment, labour and other inputs, carrying out all temporary, ancillary, auxiliary works, ready for commissioning of pipeline as per drawings, specifications, other provisions of Contract document and instructions of Engineer-in-charge, including but not limited to carrying out the following works:				
6	Survey of route and detours required at the time of execution including preparation of construction drawings showing survey details, and submit same to GAIL/PMC for review / approval.				
7	Staking and installation of construction markers, clearing, fencing, grubbing, full filling all the requirements of various statutory/ environment authorities to the entire satisfaction of concerned authorities, grading of work area.				
8	Barricading the pipeline construction area prior to execution of the works as per drawings enclosed with tender document and to the entire satisfaction of Owner / Engineer-in-charge.				
9	Trenching to all depths by excavation and to a width to accommodate the carrier pipeline during lowering & backfilling in all types of soils and rocky strata including different type of pavement / footpath / roads (other than concrete roads) etc. including breaking, chiselling or otherwise cutting etc. as required and storing excavated soil, reusable materials at designated area as directed by Engineer in charge and to a width to accommodate the pipeline as per the relevant standard/ specification etc. [The minimum depth of the top of pipeline shall be 1 m measured from top of pipeline coating to the top of undisturbed surface of the soil or as per SCC/ relevant code, whichever is higher]. Dewatering of trenches if required as per site condition.				
10	Carrying out repairs of pipe defects/ replacement in case of irreparable defects and repairs of defects of pipe coating not attributable to Owner including defects/ damages occurring during transportation / handling.				
11	Stringing of line pipes along pipeline trench / ROU provided on sand/soft soil bags including all supplies, manpower & machinery etc.				
12	Aligning, bending, cutting and bevelling (as required) of pipes for welding and field adjustments including pipe fittings, welding, carrying out non-destructive testing of welds as required including 100% radiography by X-ray either by internal source or external source based on site conditions/front availability and in this regard decision of EIC shall be final and binding to the contractor (in case placement/installation of X-ray equipment is not feasible, in that case Gamma ray may be permitted as per decision of Engineer In-Charge(EIC) based on site conditions) and providing all requisite equipment, labour, supervision, materials, films, consumables, all facilities and personnel to process, develop, examine and interpret radiographs and other tests as required, carrying out repairs of weld joints found defective by Engineer-in-Charge, carrying out re-radiography and other tests as required on repaired joints and NDT of rebevelled area as mentioned in SCC & Particular Jobs Specification.				
13	Carrying out installation of carrier line pipe at all minor crossing i.e. road, cart track, pathway, water bodies etc. at required depth by open cut (except at crossing by Moling & HDD method). Methodology to be adopted for crossing shall be decided by joint survey with Client/PMC & Contractor and based on the finalization of methodology crossing by HDD, Laying of pipeline through HDD, Moling shall be payable through respective item available else where in the SOR.				
14	Coating of field weld joints, long radius bends (R=3D for 8 Inch), elbows... etc. including supply of coating materials etc. (i.e. heat shrinkable sleeves and high build epoxy etc.) as per PJS & Technical Specification compatible with 3 layer PE coating material of the line pipe.				
15	Installation of LR Bend (R=3D for 8 Inch) , as per specification wherever required depending on site condition.				
16	Installation / lowering the pipeline in trench to required depth as per PJS, Technical Specification & drawings and providing required padding over and around the pipeline with sand/graded material approved by Engineer-In-Charge (in rocky areas) including padding around pipeline with suitable soil duly approved by EIC. Supply of padding material, backfilling and its compaction to the satisfaction of concerned authorities with excavated earth / borrowed select soil including supply of borrowed select soil duly approved by EIC before backfilling and make ready for restoration to be done by Owner / concerned authorities.				
17	Installation of warning mat on the entire length of the pipeline as per specification. Warning mat should have anti rodent properties.				
18	Crossing the all-foreign pipeline / HT line / cable / any other utilities etc. with necessary concrete / PVC protection including coordination with all agencies and obtaining NOC after completion of all the activities.				
19	Supply and installation of bank protection alongwith backfill materials duly approved by EIC for pipeline trench and banks falls under minor water body crossing as per technical specification & Std. Org., wherever required or, as directed by Owner / EIC.				

SCHEDULE OF RATES
LAYING OF UNDERGROUND STEEL PIPELINE INCLUDING ASSOCIATED WORKS IN CUTTACK / KHORDA (BHUBANESWAR) GAS UNDER CGD SIX CITIES PROJECT FOR M/s GAIL (I) LIMITED
M/s MGS Group, Bhubaneswar

Sl. No.	Item Description	Quantity	Units	INR	
				Unit Rate (Excluding GST)	Amount (Excluding GST)
20	Carrying out air cleaning, gauging, pigging, flushing, cleaning and hydrostatic testing of complete pipeline, supply of required quantity of corrosion inhibitor, if required including pre-testing of designated sections complete as per specification and approved by Engineer-in-charge to specified pressures indicated elsewhere and duration after stabilization as per specification, providing all equipment, pumps, fittings, instruments, dead weight tester, pressure recorder, thermocouples etc., and services, supervision, labour, consumables, water including supply of corrosion inhibitor, air, etc. as required, locating of leaks and rectification of defect attributable to Contractor (rectification of defects in linepipe material not attributable to contractor shall be paid separately as per other item of schedule of rate), re-testing after rectification, dewatering after successful completion of hydrotesting of entire section and as approved by Engineer-in-Charge. Note : 1. Leak detection, its rectification and successfully re-hydrotesting shall be carried out by Contractor with a view that completion of all activity for successful hydrotesting should not be inordinately extended / delayed , which will hamper the overall project schedule. Further, no extra payment claim shall be entertained for re-hydrotesting, leak detection and their rectifications if defects found attributable to Contractor. 2.Payment for Gauging activity mentioned above shall be made under item mentioned else where in SOR. 3.Payment for hydrostatic testing activity mentioned above shall be made under item mentioned elsewhere in this SOR.				
21	All tie-in, including the tie-in(s) of the pipeline with the adjacent sections of pipeline including cutting of test header, rebeveling as required, radiography and other NDT examination, joint coating as per specification.				
22	Final clean-up & restoration of right-of-use or area disturbed by contractor including obtaining NOC from respective land owner and statutory authorities during their construction activities for laying of pipeline works and disposal of debris and returning all surplus material to designated disposal areas / storage yard as and backfilling of trench and compaction of the same as per satisfaction of Owner and / Or as directed by Engineer-in-charge.				
23	Carrying out all temporary, ancillary, auxiliary works and all incidental works required to make the pipeline ready for pre-commissioning.				
24	Restoration of land, facilities and boundary wall etc. and associated facilities dismantled/damaged by the Contractor during construction;				
25	Hook-up work with existing pipelines including pit excavation & other associated work (If any).Payment for Hook up shall be made under item mentioned elsewhere in SOR				
26	Protective coating of 500 micron thick two component (applied with the help of minimum three coats) liquid epoxy including supply of materials duly approved by Owner for all piping valves, fittings, structural steels etc. for buried installation and inside the valve pit as approved by the Engineer-in-charge.				
27	Carrying out all temporary, ancillary, auxiliary works and all incidental works required to make the pipeline ready for pre-commissioning;				
28	Obtaining work permits/ NOC from various statutory authorities having jurisdiction, before and after execution of the work, and complying with all stipulation/conditions/recommendation of the said authorities;				
29	Preparation of as-built drawings, pipe-book and other records as specified in the specifications. SOR shall be read in conjunction with job specific requirements, specifications, standards, drawings and other provision of contract document. All above works line pipe laying and installation all above works for buried pipeline as per following details:				
30	Installation of Coated Line Pipes as per following details:				
31	Specified dia Thk (mm) Material Coating Type Length of each pipe (mm) NB				
32	For All Type of Soil				
33	200 6.4 API 5L Gr. X-52/56 3 Layer PE Double random Coating (Externally) (approx. 11.5 m to 12.5 m)	820.00	Meter	1,448.40	1,187,688
34	For Rocky Strata (Refer Notes)				
35	200 6.4 API 5L Gr. X-52/56 3 Layer PE Double random Coating (Externally) (approx. 11.5 m to 12.5 m)	180.00	Meter	2,328.80	419,184
36	Note:				
37	The lengths of pipelines are tentative and for various locations. Quantities may increase/decrease or delete based on site requirement/Joint Survey/Change in requirement of Owner.				
38	The above item rate is exclusive of crossings by HDD and Moiling (which are covered separately in relevant SOR items). For other crossings, it is deemed to be inclusive in above item rate.				
39	This item shall be applicable for the underground steel grid main pipeline & branch pipeline including , insulating joints, bends (3D for 8"), flanges & fittings, underground valves if required, accessories etc. , Installation of valves including other fittings & pipes for Sectionalizing & Tap Off if required shall be paid separately through item available else where in SOR.				
40	The above rate shall be exclusive of hydrotesting of complete pipeline including hydrotesting of all crossing sections along-with the mainline. However, payment for pre- testing as required, are inclusive in above items rate.				
41	In above item, backfilling of pipeline trench by borrowed select soil duly approved by Owner / EIC shall be paid by separate item mentioned elsewhere in the SOR.				
42	Contractor shall not perform any pipeline activities along ROU/Corridor without specified barricading as per Std. Drg. and other safety measures.				
43	Proposed pipeline route is passing through MDR/ Asphalt Road / concrete roads (RCC/PCC) etc. However, in case of non-availability of ROU along MDR/ Asphalt Road / concrete roads (RCC/PCC) etc., the pipeline route may change and this may also require a new tap-off point at suitable location on Pipeline . This may cause increase / decrease in SOR quantities.				
44	The rates shall be applicable for the work within at all locations / with in GA- Khorda/Cuttack .				



SCHEDULE OF RATES
LAYING OF UNDERGROUND STEEL PIPELINE INCLUDING ASSOCIATED WORKS IN CUTTACK / KHORDA (BHUBANESWAR) GAS UNDER CGD SIX CITIES PROJECT FOR M/s GAIL (I) LIMITED
M/s MGS Group, Bhubaneswar

Sl. No.	Item Description	Quantity	Units	INR	
				Unit Rate (Excluding GST)	Amount (Excluding GST)
45	The above rate is excluding of crossings by HDD, Boring, moiling, open cut conventional Method mentioned under separate item.				
46	In congested area trenching shall be made manually for pipeline laying further Contractor shall ensure that no tree/plant cutting shall be carried out during Pipe Line Laying operations. Trenching shall be carried out manually if needed, so as to ensure no damage to plant/tree/OFC /water pipe line /telephone line/sewage line/electric cable and other under ground utilities.				
47	Quantity indicated above is tentative. Execution of pipeline laying in rocky strata(if encountered during execution) shall be jointly recorded.				
48	Bifurcation of Soil & Rocky strata shall be done based on the equipments used in trenching the pipeline section. For Rocky strata contractor have to use of rock breaking tool / rock hammer or other equivalent tools for preparation of trench with due approval of EIC. Supply and installation of rock shield as per specification including padding through sand/soft soil is inclusive in above item. Bidder have to quote accordingly.				
49	Excavation of hard rock strata, wherever hard rock of single piece exceeding 1.5 meter in any direction within the trencn dimension with respect to length, width & depth and removal only by pneumatic chisel/ drill/ rock-breaking tool/rock hammer or other equivalent tools. The rates are payable over and above the laying rates as per relevent SOR items mentioned elsewhere in SOR.				
50	Fabrication of Sectionalizing Valves(SV) and Tap-off including pipes & fittings shall be paid separately.				
51	For Tie-in and other locations wherein NDT through X-ray is not feasible NDT by Gamma ray shall be permitted with due permission of EIC.				
52	Payment for Preparation of as-built drawings, pipe-book and other records as specified in the specifications is to be covered in this SOR rate.				
53	Contractor shall return all surplus material to designated storage yard as mentioned in Annexure-2 to SCC, as directed by Engineer-In-Charge.				
54	Owner supplied 3 LPE Line Pipe & Bare Pipe required for pipeline laying activity shall be shifted from owner designated store located within Cuttack / Khorda (Bhubaneswar) GAS and payment are inculsive in above items rate. Bidder has to quote accordingly.				
55	Contractor shall ensure that no tree/plant cutting shall be carried out during Pipe Line Laying operations. Trenching shall be carried out manually if needed, so as to ensure no damage to plant/tree/OFC /water pipe line /foreign pipeline/telephone line/sewage line/electric cable and other under ground utilities.				
56	Bidder has to familiarise themself the entire pipeline route and all locations /region/ charge area within the GA and ascertain all type of eventuality/uncertainty before quoting their bid.				
57	End cap / blind (Temporary during construction of pipeline) at both the ends for carrier pipeline as per specification is included in above quoted rates, However after completion of pipeline End Cap shall be provided to contractor as free issue.				
58	Payment for carrying out liasioning & co-odrination utility/foreign pipeline crossings (if any) and obtaining permission / NOC from these authorities including assistance in ROU/Corridor opening & closing and their maintenance/ management both side of the crossings shall be made under item mentioned elsewhere in SOR.				
59	Excavation- Hard Rock				
60	Excavation of hard rock only, wherever hard rock of single piece exceeding 1.5 meter in any direction within the trencn dimension with respect to length, width & depth and removal only by pneumatic chisel/ drill/ rock-breaker.	180.00	CUM	1,363.20	245,376
61	Note: i) Quantity indicated above is tentative and may increase/ decrease or delete as per site requirement. ii) Above item is for laying of pipeline through open cut method only.				
62	PIPELINE LAYING/INSTALLATION BY HDD METHOD				
63	Complete work of laying of pipeline in restricted ROU along with adjacent road/nala (if minor road/nala falling under the laying profile and not considered under separate crossing) by HDD method including "Receiving and taking over" owner supplied 3LPE coated line pipes from owner's designated place to issue/dump site(s) and transportation to contractor's stock yard/work site including all handling, loading, uploading, aligning etc. supply of all contractor supplied material including consumables, manpower, equipment, other resources to work site(s) and aquiring the required land for storage. Execution of, but not limited to, following works in accordance with specifications and instruction of engineer-in-charge and as per all provision of Contract Document.				
64	Pre-construction survey, necessary cover required over the carrier pipeline, based on site visit, collection of data (if required) from concerned Authority including design and detail engineering and making of drawings for getting their approval from concerned Authority/Engineer-in-charge, getting work permit/NOC for utilities crossings (if any) encountered prior to start the execution of work.				
65	Digging of entry and exit Pits, Pre hydrotesting at specified pressure, Drilling to required depth from top of ground (min 2.0 mtrs.) including maintenance of drill hole in all types of soil including pebbels, cobbles, boulders, structures etc. and all types of rocky starta, all depth to accommodate the pipeline at all conditions encountered by approved HDD methods for providing minimum cover specified in code/specification or the actual depth as decided by concerned authority, whichever is more				
66	Digging of entry and exit Pits, Laying of the pipeline(as per approved HDD profile) by the approved HDD method including pipeline string preparation, welding, testing, 100% radiography by X-ray, welding repair and retest, coating of field joints with special type Dirax Heat Shrink Sleeve or equivalent (including supply of coating material) and repair of pipeline coating with special PERP-60E repair patch or equivalent material (including supply of repair patch) as per specification, pre-hydrotest of complete strings made for laying etc. Backfilling of entry and exit pits and its levelling.				

SCHEDULE OF RATES
LAYING OF UNDERGROUND STEEL PIPELINE INCLUDING ASSOCIATED WORKS IN CUTTACK / KHORDA (BHUBANESWAR) GAS UNDER CGD SIX CITIES PROJECT FOR M/s GAIL (I) LIMITED
M/s MGS Group, Bhubaneswar

Sl. No.	Item Description	Quantity	Units	INR	
				Unit Rate (Excluding GST)	Amount (Excluding GST)
67	Backfilling of the ditch/trench pits including restoration and clean-up of area, disposal of drilling fluid & waste etc. to the satisfaction of Engineer-in-charge and/or as directed by concerned Authority.				
68	Carrying out cleaning, gauging, water filling, post-hydrotesting, of complete pipeline string in one section/ test sections as approved by EIC/RCM to specified test pressures (i.e.1.5 times of Design pressure) for 24 hours hold period; providing all equipment, pumps, test headers, fittings, pressure & temperature instruments etc., and services, supervision, labour, consumables, water, air, etc. as required; detection of leaks, if any occurred during post-hydrotesting, attributable to Contractor and rectification of defects, re-testing after rectification with due approval of Owner, successful completion of post-hydrotesting including dewatering of pipeline to acceptance criteria defined in the specifications. Note : 1. Leak detection, its rectification and successfully re-hydrotesting shall be carried out by Contractor with a view that completion of all activity for successful pre-hydrotesting should not be inordinately extended / delayed , which will hamper the overall project schedule. Further, no extra payment claim shall be entertained for re-hydrotesting, leak detection and their rectifications if defects found attributable to Contractor. 2. Payment for Gauging activity mentioned above shall be made under item mentioned elsewhere in SOR. 3. Payment for Post hydrostatic testing activity shall be made under item elsewhere in SOR, however pre hydrotesting is inclusive in the above SOR item rates.				
69	Installation/Laying of Coated Line Pipes as per following details:				
70	Specified dia Thk (mm) Material Coating Type Length of each pipe (mm) NB				
71	For all types of Soil other than Rocky Starta				
72	200 6.4 API 5L Gr. X-52/56 3 Layer PE Double random Coating (Externally) (approx. 11.5 m to 12.5 m)	900.00	Meter	5,396.00	4,856,400
73	For all types of Rocky Starta				
74	200 6.4 API 5L Gr. X-52/56 3 Layer PE Double random Coating (Externally) (approx. 11.5 m to 12.5 m)	180.00	Meter	8,804.00	1,584,720
75	Note: (i) Pipeline length are tentative and for various crossings/site locations wherein laying through open cut is not feasible. Tenderer are advised to visit the site for actual assessment of extent of laying and to access the maximum extent of cover which may have to be provided. Actual string length for HDD shall be as per design calculations so that pipe is not under stress as permitted by codes/ specifications. Final length of string shall be decided after decision of minimum cover requirement by concerned Authority/ Engineer-in-charge.				
76	(ii) The quantities mentioned above are tentative and may increase or decrease depending upon the site conditions/requirements. The quantity indicated against each item are for multiple shots/Multiple entry & exit pits and shall be as per requirement at site for laying at different locations.				
77	(iii) Contractor shall not perform any pipeline related activities along the ROU without specified barricading/permission of EIC/RCM as per Std. Drg. and other safety measures.				
78	(iv) Payment for the length of final tied-in carrier pipeline string are inclusive in the above item rate and no separate payment shall be made under other item mentioned elsewhere.				
79	(v) Width of above laying indicated are tentative. The width indicated are not for any single laying. This shall be as per requirement at site for laying at different locations.				
80	(vi) Contractor have to use rock cutting tool and all other accessories as required to make drill hole in rocky starta based on requirement. However no extra/additional claim on account of same is permitted. Contractors are advised to quote accordingly.				
81	(vii) The above items rate shall be applicable for all locations / region/ charge area within & around the GA of Khorda/Cuttack.				
82	(viii) Payment for carrying out flasioning & co-odrination works for utility/foreign pipeline crossings (if any) and obtaining permission / NOC from these authorities including assistance in ROU opening & closing and their maintenance/ management both side of the crossings shall be made under item mentioned elsewhere in SOR.				
83	(ix) Rock drilling shall be considered at location/strata for which the core recovery is min 25%. Expenditure to establish the Starta as rock through lab test or any other approved methodology shall be paid through item rate available else where in SOR.				
84	PIPELINE LAYING / INSTALLATION IN A BUILT-UP SURFACE/ HARD SURFACE				
85	Raking up of hard surface of any type including bituminous, asphalt, concrete, tiled, brick lined soft/ hard rock which is breakable in pieces manually (without use of pneumatic machine) etc. All tiles/ slabs/ curb stones etc. removed during excavation shall be placed properly. The other activities are as per SOR item no. A00101 including its notes.				
86	200 6.4 API 5L Gr. X-52/56 3 Layer PE Double random Coating (Externally) (approx. 11.5 m to 12.5 m)	72.00	Meter	1,988.00	143,136
87	Note: The above rate is inclusive of all other activities as per SOR item no. A00101 including its notes.				
88	REMOVAL & RESTORATION OF CONTINUOUS CONCRETE (RCC/PCC) FOR PIPELINE INSTALLATION				
89	Removal of contrete (RCC/PCC etc) for prepration of pipeline trench (by using pneumatic machine or other approved method) including restoration of same as previous by providing the RCC/PCC...etc up to satisfaction of EIC and concern authority. Shifting & disposing of debrish material at suitable location as per direction of EIC. The other activities are as per SOR item no. A00101 including its notes.				
90	200 6.4 API 5L Gr. X-52/56 3 Layer PE Double random Coating (Externally) (approx. 11.5 m to 12.5 m)	72.00	Meter	624.80	44,986
91	RESTORATION OF ROADS				

SCHEDULE OF RATES
LAYING OF UNDERGROUND STEEL PIPELINE INCLUDING ASSOCIATED WORKS IN CUTTACK / KHORDA (BHUBANESWAR) GAS UNDER CGD SIX CITIES PROJECT FOR M/s GAIL (I) LIMITED
M/s MGS Group, Bhubaneswar

Sl. No.	Item Description	Quantity	Units	INR	
				Unit Rate (Excluding GST)	Amount (Excluding GST)
92	Restoration of asphalt / concrete / red stone roads / pavement/ pavor block including compaction of soil, to original condition as per requirement and to the entire satisfaction of EIC and / or concerned Owners having jurisdiction for following thickness.				
93	Restoration of Asphalt road upto 10 cm thickness	84.00	Sq. Metre	511.20	42,941
94	Restoration of Asphalt road beyond 10 cm upto 20 cm thickness	48.00	Sq. Metre	795.20	38,170
95	Restoration of Concrete road upto 10 cm thickness	60.00	Sq. Metre	624.80	37,488
96	Restoration of Concrete road 10 cm to 20cm thickness	48.00	Sq. Metre	908.80	43,622
97	Restoration of red stone road / footpath / pavement upto 4 inch thickness	48.00	Sq. Metre	426.00	20,448
98	Restoration of red stone road / footpath / pavement upto 4 to 8 inch thickness	36.00	Sq. Metre	624.80	22,493
99	BORROWED SELECT SOIL FOR BACKFILLING				
100	Additional work over and above item no. A00100 for supply of specified and approved quality of borrowed local soft graded soil / sand in place of available excavated material and / or other suitable soil as per applicable standards / specifications, including backfilling of excavated trench for specified length after laying and padding of pipeline, including local transportation of such special backfill material over all distances, complete.	50.00	M3	284.00	14,200
101	PIPING WORKS FOR SECTIONALISING VALVE STATION (SV STATION)(Fabrication at Ground and then installation in the Pit)				
102	SECTIONALISING VALVE STATION - UNDER GROUND				
103	All works for installation of all piping Underground at all depth for Vent Type/ No Vent Type Valve Station along with/without future tap-off (as required) in Valve Chamber in all type of terrains and soils including transportation and handling of all owner/contractor supplied materials i.e. full bore 8" butt welded Ball valve, Plug Valves, all types of other valves of all sizes, Weldolet of all sizes, Insulating Joint, vent line pipes for mainline, assorted pipes and all flanges and fittings from designated places(s) of issue to work site. Supply of gaskets, studs, nuts, nipples & coupling, consumables, Liquid penetrant kit, Cotton cloth ...etc. Installation / Erection of instrumentation items i.e. pressure gauge, consumables, manpower, machineries, tools & tackles for carrying out all mechanical works of underground and above ground piping including fabrication, welding, nondestructive testing of welds, weld repairs/ Pretesting, cleaning/ flushing, pre-hydrotesting & hydrostatic testing, dewatering, functional testing, cutting of mainline and bevelling (if required), tie-in of valve assembly, including radiography & joint coating of tie-in joints, external painting for buried fittings by high build epoxy of min. 500 micron of R-95 or equivalent as required, obtaining all statutory clearances, approvals and permissions for the works (wherever required), making of valve pit (for detail refer relevant drawings (i.e. P&ID, Plot Plan) for SV Station point enclosed with tender. pipe supports including all associated civil works (pertaining to supports only); painting, finishing, clean-up and restoration of site; preparation of as-built drawings, documents and project records and performing all works as per drawings, specifications, other provisions of Contract document and instructions of Engineer-in-charge.				
104	Sectionalising Valve Station (8") with Tap Off valves	1.00	Lumpsum	99,400.00	99,400
105	Sectionalising Valve Station (8") without Tap Off valves	1.00	Lumpsum	99,400.00	99,400
106	Notes: 1. This work is exclusive of all works associated with main pipeline covered at SOR item no. A00100 below. 2. All Civil/ structural works except for piping supports will be paid separately as per rates provided elsewhere. 3. Work is inclusive of receiving, taking over, loading & unloading of company supplied material and return of surplus material to Company's designated stockyard/store. 4. Valves, Assorted Pipe, fittings & Flanges, any type of tee, instrumentation items ..etc as required for construction of SV station shall be made available to contractor as free issue material. Fabrication of SV, Tap-Off Point (if required) , erection, Testing & commissioning is inbuilt in above item rates, hence contractor have to quote accordingly. 5. Civil Work for Valve Pit and its upper slab for under ground SV stations shall be payable through item available else where in SOR. 6. NDT of Joints is inclusive in above item rate. For 1/2" to 1.5" contractor have to carry out NDT by DP test, however for 2" to 8" NDT by X-ray/Gamma ray is required. Bidder have to quote accordingly.				
107	(Refer plot plan drawing and other relevant drawings for Sectionalising Valve Stations enclosed with tender document for ascertaining quantum of mechanical work associated with SV Station).				
108	PIPING WORKS FOR TAP-OFF POINT(Fabrication at Ground and then installation in the Pit)				

SCHEDULE OF RATES
LAYING OF UNDERGROUND STEEL PIPELINE INCLUDING ASSOCIATED WORKS IN CUTTACK / KHORDA (BHUBANESWAR) GAS UNDER CGD SIX CITIES PROJECT FOR M/s GAIL (I) LIMITED
M/s MGS Group, Bhubaneswar

Sl. No.	Item Description	Quantity	Units	Unit Rate (Excluding GST)	Amount (Excluding GST)
109	All works for installation of all piping and valves assembly on above/below ground at all depth for Tap-off in all type of terrains and soils including transportation and handling of all owner/contractor supplied materials butt welded Ball valve, all valves of all types and sizes, Barred tees of all sizes and all fittings from designated places(s) of issue to work site. Supply of assorted pipes, consumable, Liquid penetrant kit, Colton cloth...etc, manpower, machineries, tools & tackles for carrying out all mechanical works of underground/aboveground piping including fabrication, welding, nondestructive testing of welds, weld repairs/ retesting, cleaning/ flushing, pre-hydrotesting & hydrostatic testing, dewatering, functional testing, cutting of mainline and bevelling (if required), tie-in of valve assembly, including radiography of tie-in joints, corrosion coating (by heat shrink sleeves) for buried piping and external painting for buried fittings by high build epoxy of min. 500 micron of R-95 or equivalent as required, obtaining all statutory clearances, approvals and permissions for the works (wherever required), excavation and filling in all types of soils including soft/ hard rock for installation of piping, painting, finishing, clean-up and restoration of site; preparation of as-built drawings, documents and project records and performing all works as per drawings, specifications, other provisions of Contract document and instructions of Engineer-in-charge.				
110	4" Tap-off Point	1.00	Nos	113,600.00	113,600
111	Notes: 1. This work is exclusive of all works associated with main pipeline covered at SOR item no. A00100 below.. 2. All others works pertaining to Tap-off (Instrumentation works) (if any) shall be as per rates indicated elsewhere in the tender document. 3. Work is inclusive of receiving, taking over, loading & unloading of company supplied material and return of surplus material to Company's designated stockyard/store.				
112	(Refer plot plan drawing and relevant drawings for Tap-off Station enclosed with tender document for ascertaining quantum of mechanical work associated with Tap-off Station).				
113	4. Valves, Assorted Pipe, fittings & Flanges, any type of tee, instrumentation items (if any) etc as required for construction of Tap-off point shall be made available to contractor as free issue material. Fabrication of Tap-Off Point (if required), erection, Testing & commissioning is inbuilt in above item rates, hence contractor have to quote accordingly. 5. Qty of tapp off points is tentative and may differ as per site requirement.				
114	6. Qty for tapp-off point mentioned above is excluding quantities mentioned in SV station and for separate locations than SV station. 7. NDT of Joints is inclusive in above item rate. For 1/2" to 1.5" contractor have to carry out NDT by DP test, however for 2" to 8" NDT by X-ray/Gamma ray is required. Bidder have to quote accordingly.				
115	Station piping works(Above Ground)				
116	Transportation including loading, unloading & handling of all piping items from Owner's and/ or Contractor's storage point to work site/ workshop as applicable, complete work of fabrication, erection, painting, testing of pipes, flanges and fittings and making ready for further Commissioning / Start-up of carbon steel piping of all sizes and ratings including supply of all consumables, equipment, manpower and other resources and execution of, but not limited to, the following works in accordance with relevant specifications & scope of work, drawings, specification and instructions of Engineer-in-charge and as per all provisions of the CONTRACT DOCUMENT.				
117	Fabrication including cutting, edge preparation, welding of pipe, valves, fittings & flanges, U ...etc in above ground/underground. Supply of nipples, couplings, caps, plugs, gasket, stud bolts, nuts, U Clamps etc. as required for completion of job.				
118	Erection including supply and fixing of gaskets, studs/ bolts, nuts wherever required for all sizes, levelling, aligning, joining of flanges, blind flanges, connecting with equipment, nozzles, tie-in with existing piping/facilities, etc. tapping for inline instruments like pressure gauges, thermowells, sample connection, etc.				
119	Preparation of final bill of material based on piping GADs.				
120	Preparation of isometric and fabrication drawings.				
121	Carrying out 100 % Non-destructive testing				
122	Surface preparation, Painting of piping system as per specification.				
123	Cleaning and flushing by water/ compressed air, testing of the systems including hydrostatic, pneumatic and any other type of testing as specified, draining, drying by compressed air/other methods approved by COMPANY.				
124	Precommissioning & making operational all piping system and equipments and provide all necessary assistance in term of supply of man-power, equipment, tools and tackles required amount of nitrogen for purging of entire terminal piping system including equipments etc. to the company during commissioning activities.				
125	Clean-up and restoration of site, preparation of as built drawings, documents and project records; transportation of surplus free issue material to Owner's designated plac(s); completing all works in all respects as per the AFC drawing, specifications, standards and other provisions of Contract and instruction of Engineer-in-charge.				
126	Completion of all such work in all respects as per scope of work and as per drawings, specifications and instructions of the COMPANY and keeping the system ready in all respects for further commissioning and start up.				
127	Hook-up works including making provision for hooking up and carrying out shutdown activities at terminals if necessary.				
128	Pipeline size 1/2" to 8" NB dia	100.00	Inch-dia	482.80	48,280

SCHEDULE OF RATES
LAYING OF UNDERGROUND STEEL PIPELINE INCLUDING ASSOCIATED WORKS IN CUTTACK / KHORDA (BHUBANESWAR) GAS UNDER CGD SIX CITIES PROJECT FOR M/s GAIL (I) LIMITED
M/s MGS Group, Bhubaneswar

Sl. No.	Item Description	Quantity	Units	INR	
				Unit Rate (Excluding GST)	Amount (Excluding GST)
129	1) Pipe Specification and thickness may vary depending upon availability of pipe. No extra payment shall be made for this. 2) All butt welded fittings end shall generally match with connecting pipe wall thickness. However, in case of misalignment, Contractor shall have to do end preparation without any extra cost. 3) All coupling, nipples etc. as required shall be supplied by contractor but no separate payments shall be made as it is covered under erection rate. 4) NDT of Joints is inclusive in above item rate. For 1/2" to 1.5" contractor have to carry out NDT by DP test, however for 2" to 8" NDT by X-ray/Gamma ray is required. Bidder have to quote accordingly. 5) Item mentioned is for other station piping works (excluding item no.A00900 above) and shall be operated based on site requirement as per the decision of EIC. 6. Nitrogen requirement for pre-commissioning/commissioning shall be paid through item available else where in SOR. 7. Material as required for fabrication shall be made available to contractor as free issue material.				
130	OTHERS CROSSING (by HDD Method)				
131	Complete work for installation of carrier pipeline (between the ROW/Corridor limits as per approved drawing) by HDD method including "Receiving and taking over" owner supplied three layer PE coated line pipes from Owner's designated place to issue/ dump site(s) and transportation to Contractor's stock yard/ work shop/ work site including all handling, loading, unloading, aligning etc. supply of all Contractor supplied material including consumables, manpower, equipment, other resources to work site(s) and acquiring the required land for storage., Execution of, but not limited to, following works in accordance with specifications and instruction of Engineer-in-charge and as per all provision of Contract Document.				
132	Pre-construction survey, necessary cover required over the carrier pipeline from lowest bed level of the stipulated water crossing to be obtained from concerned authority, bed strata data including design & detail engineering and making of crossing drawing for getting their approval from concerned Authority/ Engineer-in-charge, getting work permit/ NOC for water crossings as well as utility crossings (if any) encountered during water crossing prior to start the execution of work. getting work permit/ NOC for water crossings as well as utility crossings (if any) encountered during water crossing prior to start the execution of work.; obtaining historical data/ scour depth (for river) from concerned authority, if required, ascertaining under neath soil & strata, necessary cover required over the carrier pipeline from lowest bed level of the stipulated water crossing including design & calculation and detail engineering and making of crossing drawing for getting the approval from concerned Authority/ Engineer-in-charge, getting work permit/ NOC for water crossings as well as utility crossings (if any) encountered during water crossing prior to start the execution of work. For road crossings,pre-construction survey based on site visit, collection of data (if required) from concerned Authority including design and detail engineering and making of crossing drawings for getting their approval from concerned Authority/ Engineer-in-charge, getting work permit/ NOC for the crossing as well as utility crossings (if any) encountered during crossing prior to start the execution of work.				
133	In case of water body crossings other than river Drilling to the required depth on the banks and bed including maintenance of drill hole in all types of strata (ie; soft/hard soil, soft/hard rock....etc), all depth to accommodate the pipeline at all conditions of the waterbody crossings by HDD methods for providing with minimum cover either (i) 1.5m below the scour level / profile, duly approved/ accepted by concerned authority (under whose jurisdictions the crossing lies)--- For rivers with rocky bed or (ii) 2.5m below the scour level / profile, duly approved/ accepted by concerned authority (under whose jurisdictions the crossing lies)--- For major rivers. or (iii) 1.5 m below the bed level / profile, duly approved/ accepted by concerned authority (under whose jurisdictions the crossing lies)--- For minor waterbody crossings. and (iii) In addition to point (i) & (ii), In case of multiple combined X-ing i.e. river alongwith road/ drain, minimum cover requirement as per specification/ concerned authority for each type of x-ing has also to be fulfilled.				
134	In case of road crossing, drilling to required depth from top of road including maintenance of drill hole in all types of strata (i.e; soft/hard soil, soft/hard rock....etc), all depth to accommodate the pipeline at all conditions encountered during road crossing by approved HDD methods for providing minimum cover specified in code/ specification or the actual depth as decided by concerned authority, whichever is more.				
135	Laying of the carrier pipeline (for both water body and road crossing) by the approved HDD method across the crossing including, strings preparation of carrier , welding, testing, 100% radiography by x-ray, welding repair and retest, coating of field joints with special type Dirax Heat Shrink Sleeve or equivalent (including supply of coating material) and repair of pipeline coating with special PERP-80 repair patch or equivalent material (including supply of repair patch) as per specification, pre-hydrotest of complete strings made for crossing as per specification etc.				
136	Preparation of string (as per requirement), fabrication and welding as per specification and laying of carrier pipeline across the crossing as per approved profile.				
137	Backfilling of the ditch/ trench including restoration and clean-up of area, disposal of drilling fluid & waste etc. to the satisfaction of Engineer-in-charge and /or as directed by Concerned Authority.				



SCHEDULE OF RATES
LAYING OF UNDERGROUND STEEL PIPELINE INCLUDING ASSOCIATED WORKS IN CUTTACK / KHORDA (BHUBANESWAR) GAS UNDER CGD SIX CITIES PROJECT FOR M/s GAIL (I) LIMITED
M/s MGS Group, Bhubaneswar

Sl. No.	Item Description	Quantity	Units	INR	
				Unit Rate (Excluding GST)	Amount (Excluding GST)
138	Gauging, Pigging, Cleaning, Post installation hydrotest, dewatering and tie-in with pipeline at either banks etc. all other works including pigging, cleaning, final hydrotesting etc. alongwith mainline works (as mentioned in item no. A00100 above) required as per specifications, codes, approved drawings, calculations, methods and as directed by Engineer-in-charge and provision of contract document; getting NOC from all concerned authority of the facilities crossed.				
139	Details of Crossings				
140	For Other than Rocky Strata				
141	Any type of Crossing viz. Canal / Distributary/ Drain / River / Nala/Road/Pond/ Railway /Culvert Crossings for carrier pipeline of size 200 mm NB x 6.4mm Thk. of API 5L Grade X-52/56	240.00	Meter	5,680.00	1,363,200
142	For Rocky Strata				
143	Any type of Crossing viz. Canal / Distributary/ Drain / River / Nala/Road/Pond/ Railway /Culvert Crossings for carrier pipeline of size 200 mm NB x 6.4mm Thk. of API 5L Grade X-52/56	240.00	Meter	9,372.00	2,249,280
144	Note: (i) Crossing width is tentative and for various crossings. Quantities may increase/decrease or delete as per site situation. Bidder's are advised to visit the site for actual assessment of extent of crossing and to access the maximum extent of cover which may have to be provided. Actual string length for HDD shall be as per design calculations so that pipe is not under stress as permitted by codes/ specifications. Final length of string shall be decided after decision of minimum cover requirement by concerned Authority/ Engineer-in-charge. (ii) Payment for the length of final tied-in carrier pipeline string are inclusive in the above item rate and no separate payment shall be made under other item mentioned elsewhere. (iii) The Contractor has to quote on running meter basis for X-ing. No any extra payment shall be made against this item. (iv) Width of above crossings indicated are tentative and for multiple crossings. This shall be as per requirement at site for crossing at different locations. (ix) Rock drilling shall be considered at location/strata for which the core recovery is min 25%. Expenditure to establish the Strata as rock through lab test or any other approved methodology shall be paid through item available else where in SOR.				
145	GEOTECHNICAL INVESTIGATION, HYDROGRAPHICAL & HYDROLOGICAL SURVEY OF RIVER/CANAL/NALA/ WATERBODIES				
146	Carrying out Pre-construction survey and detail survey for crossings after liasioning & coordination from concerned authority. Detail survey includes minimum but not limited to carrying out complete Geotechnical Investigation (including all laboratory test & field test), Hydrographical & Hydrological Survey of River / Canal/Nala/Waterbodies for the purpose of crossing the River / Canal/Nala/Waterbodies by HDD method including obtaining work permit / NOC from concerned authority complete in all respect as per Scope of Work & Technical Specification and instruction of Engineer-In-Charge (EIC)/RCM and submitting Final Report & Drawing (along with soft copy) incorporating all field and laboratory data, Drawings, Maps, Data etc. (One Lot) in an approved format with full scale for Soil Investigation, Scour Depth etc. in accordance with the Technical Specification, Drawings, approved QAP, implementation schedule and other provisions of the Tender Document and instructions of the Engineer-in-charge (EIC)/RCM.				
147	For road/rail crossings, pre-construction survey based on site visit, topographical survey, geotechnical investigation to establish bed strata upto sufficient depth, collection of data (if required) from concerned Authority including design and detail engineering and making of HDD Profile drawings for crossing and getting their approval from concerned Authority/ Engineer-in-charge including carrying out liasioning & co-ordination works and obtaining permission / NOC from these authorities for the crossing as well as utility/foreign pipeline crossings (if any) prior to start the execution of work.				
148	GEOTECHNICAL INVESTIGATION, HYDROGRAPHICAL & HYDROLOGICAL SURVEY OF RIVER/CANAL/NALA/ WATERBODIES				
149	Crossing of NALA/WATERBODIES in single stretch / shot (Size 8" NB) -(Meaurement will be carried out on the basis of individual crossing profile width and payment will be done accordingly)	840.00	Meter	852.00	715,680
150	Crossing of RIVER/CANAL in Single stretch / shot (Size 8" NB)(Meaurement will be carried out on the basis of individual crossing profile width and payment will be done accordingly)	240.00	Meter	1,022.40	245,376
151	GEOTECHNICAL INVESTIGATION & CROSSING SURVEY OF RAILWAY / ROAD CROSSING				
152	Crossing of Road/Railway in single stretch / shot (Size 8" NB)(Meaurement will be carried out on the basis of individual crossing Profile width and payment will be done accordingly)	240.00	Meter	852.00	204,480
153	Note : (i) For Nala/Water Bodies/River/Canal etc Bidder/contractor have to execute Geo-technical, hydrological & hygraphical survey as per technical specification and direction of EIC. ii)for railway/ road crossings contractor have to execute geotechnical & crossing survey as per technical specification and direction of EIC.				

SCHEDULE OF RATES
LAYING OF UNDERGROUND STEEL PIPELINE INCLUDING ASSOCIATED WORKS IN CUTTACK / KHORDA (BHUBANESWAR) GAS UNDER CGD SIX CITIES PROJECT FOR M/s GAIL (I) LIMITED
M/s MGS Group, Bhubaneswar

Sl. No.	Item Description	Quantity	Units	Unit Rate (Excluding GST)	Amount (Excluding GST)
154	(ii) For geotechnical survey/investigation: 1. For River/Canal - Two Nos Bore holes each at both banks of depth 15 meter and in river bed bore holes of depth 25 m at a distance of 75 meter centre to centre. 2. For Nala/Other Water Body Crossings..etc - One No Bore holes each at both banks of depth 15 meter and on bed bore holes of depth 15 m at a distance of 75 meter centre to centre. 3. For Railway Crossings/Road Crossings ..etc - One No Bore holes each at both sides of depth 10 meter. 4. Laboratory test & field test shall be as per technical specification & tender documents. 5. Bank width for Canal/nala/other water body crossings and survey length for railway crossings/road etc will be as per site conditions. Survey has to be done of bank width/survey width and minimum 50 meter at both end expect at river Crossings. For River crossing survey has to be done of bank width and minimum 100 meter at both end. 6. Rock shall be considered at location at which the core recovery is min 25%. 7. Quantity indicative above is tentative and for multiple crossings of size 8"NB dia pipeline with in the GA. 8. Payment for carrying out liasoning & co-ordination works for Crossings and obtaining permission / NOC from these authorities is in-built in above item rate				
155	Pipe Laying using Manual / Machine Moiling technique (without Casing) for CS pipe				
156	Survey of under ground utilities, execution of the work as per specification, including excavation of pits moiling with the hole size not exceeding 20% of the pipe dia, jointing and insertion of carrier pipe and restoration of the pits to original condition, submission of As-Built Graph as per specifications and the instruction of Engineer-in-charge.				
157	Laying of 8" (219.1 mm) OD, 6.4 mm wall thk of API 5L Grade X-52/56 carrier pipe	72.00	Meter	3,692.00	265,824
158	Note-(i) Payment for the length carrier pipeline string shall be moiled carrier pipeline length plus two meters. Payment for additional length of carrier pipeline string shall be paid under SOR item no.A00101 (ii) Width of above crossings indicated are tentative. The width indicated are not for any single crossings. This shall be as per requirement at site for crossing at different locations. (iii) Adopting the manual or machine moiling shall be decided at site based on the width to be crossed.Ideally 2.0 meter or more width to be crossed through machine moiling.In this regard decesion of EIC shall be final and binding to the contractor. (iv) payment for Post hydrotest shall be done through relevant SOR item mentioned elsewhere.				
159	Excavation beyond 1.5m depth in case of crossing of utilities/ drain/ culverts etc. through open cut upto the following depth (including restoration of the damaged area to its original condition and satisfaction of the Engineer-in-charge / concerned authorities) .The other activities are as per A00101				
160	In Normal Surface / Unprepared surface (Katcha Surface)				
161	Deeper than 1.5 m & upto 2.5 m below existing level (for 200 mm NB Pipeline)	60.00	Meter	454.40	27,264
162	Deeper than 2.5 m & upto 4.5 m below existing level (for 200 mm NB Pipeline)	48.00	Meter	624.80	29,990
163	In a built-up surface / Hard surface of any type including metal, concrete, bituminous, tiled, brick lined soft/ hard rock which is breakable in pieces manually (without use of pneumatic machine) etc. All tiles/ slabs/ curb stones etc. removed during excavation shall be placed properly. The other activities are as per A00101				
164	Deeper than 1.5 m & upto 2.5 m below existing level (for 200 mm NB Pipeline)	60.00	Meter	624.80	37,488
165	Deeper than 2.5 m & upto 4.5 m below existing level (for 200 mm NB Pipeline)	48.00	Meter	795.20	38,170
166	Note: (i) Quantities indicated in tentative and for various locations. (ii) Prior permission from EIC is required before execution of above item.				
167	REPAIR OF DEFECT IN PIPES (NOT ATTRIBUTED TO CONTRACTOR)				
168	Repair of defects on Owner supplied linepipes of all grades and wall thickness as specified in following items, noted and recorded at the time of "receiving and taking over" by Contractor in the presence of Engineer-in-charge.				
169	Cutting and rebeveling for dents in bevels exceeding 3 mm in depth for pipe sizes:				
170	Specified OD, mm				
171	219.1	2.00	Nos.	198.80	398
172	Jack out of dents in bevels ranging between 1 mm and 3 mm in depth for pipe sizes:				
173	Specified OD, mm				
174	219.1	2.00	Nos.	227.20	454
175	REPAIR OF COATING DEFECTS (NOT ATTRIBUTED TO CONTRACTOR)				
176	Repair of Holiday in Coating (Noted and recorded at the time of "receiving and taking over")				
177	Supply of all coating repair materials as per requirements of specification to be compatible with line pipe coating material, supply of all consumables, utilities, equipments and all manpower required, pipe cleaning and surface preparation, repairing of coating defects (resulting in holiday) and testing including all handling, transportation, etc. for line pipes, performing all works necessary for the completion of the works strictly in accordance with relevant specification and instructions of Engineer-In-Charge. This rate shall be applicable per sq. cm of the exposed steel area exposed steel area.	50.00	Sq. cm	312.40	15,620
178	PERMANENT MARKERS				
179	Supply, fabrication and installation of all types of permanent markers along the route including all associated civil works such as excavation in all types of soil, construction in all types of soil, construction of pedestals and grouting with concrete, clearing, supply and application of approved colour and quality of primer and paint, stencil letter cutting for numbers, direction, change etc., restoration of area to original condition and performing all works as per drawing, specification and instruction of engineer-in-charge.				
180	Pipeline RCC boundary / route marker as per drawing	50.00	Nos.	568.00	28,400
181	Pipeline warning markers with post & foundations	10.00	Nos.	3,408.00	34,080
182	Pipeline direction marker with post & foundations	10.00	Nos.	3,976.00	39,760
183	Pipeline KM with post & foundations	3.00	Nos.	3,692.00	11,076
184	Navigable Waterway Markers	2.00	Nos.	22,720.00	45,440

SCHEDULE OF RATES
LAYING OF UNDERGROUND STEEL PIPELINE INCLUDING ASSOCIATED WORKS IN CUTTACK / KHORDA (BHUBANESWAR) GAS UNDER CGD SIX CITIES PROJECT FOR M/s GAIL (I) LIMITED
M/s MGS Group, Bhubaneswar

Sl. No.	Item Description	Quantity	Units	Unit Rate (Excluding GST)	Amount (Excluding GST)
185	Note: Qty of above markers are tentative and may increase or decrease as per site situation. Contractor have to take prior approval from EIC before fabrication or order placement.				
186	LEAK / BURST (ATTRIBUTABLE TO OWNER)				
187	All works for locating leak / burst in Company's supplied material only (occurred during hydro-static testing) including necessary repairing/replacing defective pipe lengths including cutting and out and removing the defective pipe, pre-testing and welding of replacement pipe, NDT of welds, repair and retesting of defective welds, coating/painting of replacement pipe, pretesting the replacement pipe into mainline/branch line, coating/painting of welding joints, cleanup, retesting including cost of all labour materials, consumables and performing all works in accordance with the provisions of the Contract document and as directed by Owner /Engineer-in-charge/ Engineer in-charge				
188	For 8" NB Line	1.00	Lumpsum	28,400.00	28,400
189	Note: i) This rate is applicable for manufacturing defects in Owner supplied material only. ii) Leak detection, its rectification and successfully re-hydrotesting shall be carried out as per approved procedure by Contractor with a view that completion of all activity for successful hydrotesting is not inordinately extended which will hamper the overall project schedule.				
190	Gauging (Applicable for main steel pipeline hydrostatic test, Pre & Post installation hydrostatic test for crossings)				
191	As per specification and procedure approved by Engineer-in-charge (EIC)/ RCM.				
192	200 6.4 API 5L Gr. X-52/56 3 Layer PE Double random Coating (Externally) (approx. 11.5 m to 12.5 m)	3000.00	Meter	22.72	68,160
193	NOTE- (i) The quantities mentioned against the above SOR items are tentative and may vary depending upon the site condition during execution stage. (ii) The total quantities mentioned against the above SOR items are applicable for main steel pipeline and multiple/various crossings at different location within GA. (iii) Payment for above item shall be made only for the certified executed length of pipeline by Engineer-in-charge (EIC)/ RCM. (iv) The requirement of gauging of main steel pipeline, prehydrotest & after pulling of HDD section shall be carried out as per MECON specification / OISD / PNGRB and same shall be approved by Engineer-in-charge (EIC)/ RCM.				
194	Post Hydrostatic testing of Buried Pipeline				
195	Carrying out cleaning, gauging, pigging and hydrostatic testing of complete pipeline section laid by HDD/Open cut method as approved by EIC/RCM to specified pressures (i.e. 1.5 times of the design pressure) for 24 hours holding period; providing all equipment, pumps, test headers, fittings, instruments, dead weight tester, pressure recorder, temperature recorder, pressure & temperature gauge etc., and services, supervision, labour, consumables, water including supply of corrosion inhibitor, air, etc. as required for successful completion of hydrotesting of pipeline to acceptance criteria as per specifications, codes, approved drawings, calculations, methods and as directed by Engineer-in-charge and provision of contract document. Complete dewatering and swabbing of the pipeline as per specification and to the entire satisfaction of the EIC/RCM.				
196	For 8" NB Line	2500.00	Meter	136.32	340,800
197	Notes: i) The above quantity is not for a single section but for no. of sections for pipeline laying. ii) The quantities mentioned against the above SOR items are tentative and may vary depending upon the site condition during execution stage. iii) Payment for Gauging activity mentioned above shall be made under SOR item No.A002000 mentioned elsewhere in this SOR.				
198	Drying by Vacuum drying / Super air drying / Super dry nitrogen				
199	Complete work of carrying out drying by Vacuum drying / Super air drying / Super dry nitrogen & commissioning of pipeline section including supply of manpower, equipments & consumables (nitrogen required for purging etc.), materials for all temporary works and performing all associated works, complete as per the relevant specifications, other provisions of Contract document and instructions of Engineer-in-Charge.				
200	For 8" NB Line	2500.00	Meter	23.86	59,640
201	Note: The quantities mentioned above for various pipeline sections. Final methodology of drying shall be decided by EIC at the time of execution.				
202	Commissioning assistance / commissioning for underground pipeline length and stations				
203	For 8" NB Line	2500.00	Meter	10.22	25,560
204	Supply of Nitrogen & Purging in pipeline system				
205	Supply of nitrogen in gaseous form and its Purging in aboveground /underground pipeline network to the specified acceptance criteria, including supply of all equipment, man-power, consumables materials for all temporary works and performing all associated works, complete as per the relevant specifications, other provisions of Contract document and instructions of Engineer-in-charge.	100.00	M3	227.20	22,720
206	Preservation of Pipeline				
207	Preservation of pipeline sections and associated facilities (in event of delay in ROU acquisition/statutory permissions, commissioning, other unforeseen reasons) including supply of nitrogen, all consumables, all equipment, man-power, etc. complete as per the requirements of specifications, other provisions of Contract document and instructions of Engineer-in-charge.				
208	By filling and pressurizing with nitrogen to a pressure of 2 bar(g) for a period of one month.				
209	For 8" NB Line	2500.00	Meter	10.22	25,560
210	For every additional period of one month or part thereof				
211	For 8" NB Line	2500.00	Meter	6.82	17,040
212	Notes: i) All accessories ie; Two nos. of dished end caps and two nos. tappings of 3/4 inches, PG to be considered per section and rate for the same shall be quoted by bidder under this item. ii) If month is partially complete, payment shall be made on prorata basis.				
213	LONG RADIUS BENDS				
214	Supply of Long Radius Bends (R = 3D) for 8" dia pipe, X-52/56 (thk. 6.4 mm) as per specification enclosed in Tender Document.				

SCHEDULE OF RATES
LAYING OF UNDERGROUND STEEL PIPELINE INCLUDING ASSOCIATED WORKS IN CUTTACK / KHORDA (BHUBANESWAR) GAS UNDER CGD SIX CITIES PROJECT FOR M/s GAIL (I) LIMITED
M/s MGS Group, Bhubaneswar

Sl. No.	Item Description	Quantity	Units	INR	
				Unit Rate (Excluding GST)	Amount (Excluding GST)
215	20° - 30°	8.00	Nos.	11,360.00	90,880
216	31° - 45°	12.00	Nos.	12,780.00	153,360
217	46° - 60°	6.00	Nos.	14,200.00	85,200
218	61° - 90°	8.00	Nos.	17,040.00	136,320
219	Note : The quantities of LR Bends may vary. For final quantity, approval shall be taken by EIC before order placement.				
220	SUPPLY OF WARNING MAT Supply of warning mat for pipeline as per the technical specification enclosed in the bid document. The material of warning mat shall be of high density polyethylene and non biodegradable type. It shall have non-toxic and anti rodent properties.				
221	8" NB Pipeline	2250.00	Meter	39.76	89,460
222	Note: Quantity mentioned above is tentative and may increase/decrease based on site requirement. Bidder have to take prior approval from EIC, before placement of order.				
223	DIGITIZATION OF RADIOGRAPHY FILMS:				
224	Carrying out digitization of all radiographic films (mainline and terminal piping) in the form of digital images (which can then be archived safely for long life and electronic retrieval) complying to all the legal local rules, codes and international standards. Submission of digital images of radiographic film along with compatible software in 6 sets of CD/DVD/Pendrive for electronic viewing /retrieval.				
225	For 8" NB Line	1.00	Lumsum	142,000.00	142,000
226	VIDEOGRAPHY & PHOTOGRAPHY				
227	Carrying out the videography & Photography of the pipeline section construction activities. The work shall be carried out in two phases.				
228	Videography & photography of the entire route prior to construction activities i.e. pipeline route, location of various stations, TOP, all crossing like road / railways, river, etc.				
229	Videography & photography during construction activities of Mainline Works i.e. Stringing, Welding, Radiography, Joint Coating, Lowering, Backfilling, etc. performing all works as per specification of EIC and other provision of contract document.				
230	For 8" NB Line	1.00	Lumsum	85,200.00	85,200
231	TRANSPORTATION OF FITTINGS, FLANGES, VALVES, BARREL ETC.				
232	"Receiving and taking over", handling, lifting, loading on truck, transportation and unloading of Company supplied DRS/MRS/, Metering Skids, fittings, flanges and valves ...etc from any storage yard (other than the designated storage yard for the project) to worksite / contractor's storage yard/ any other storage yard or as decided by EIC. The above work also includes stacking the DRS/MRS/Metering Skids, flanges, fittings and valves etc. properly. Above work shall be carried out as per standard drawing, specification, instruction of Owner and other provision of contract document.	400.00	MT-Km	15.34	6,134
233	Notes: i) The quantities given in above item no. are tentative only and shall not be considered to be binding. The quantities may be increased, decreased or deleted as per the actual site requirement and instructions / recommendations of Owner. The unit rate shall be operated to work out the final payment to the contractor. ii) Above price shall be inclusive of all type of taxes & duties, transit insurance during transportation & other insurance etc. including all financial & commercial implication as per the tender document. No other payment except as per quoted unit rate & executed quantities will be payable by the Owner. iii) Safe storage of transported material till installation shall be part of the above item. Contractor has been advised to quote accordingly.				
234	TRANSPORTATION OF LINE PIPE				
235	"Receiving and taking over", handling, lifting, loading on trailers, transportation and unloading of Company supplied line pipe from any storage yard (other than the designated storage yard for the project) to worksite / contractor's storage yard/ any other storage yard or as decided by EIC. The above work also includes stacking the pipes on wooden sleepers/ sand pads. Above work shall be carried out as per standard drawing, specification, instruction of Owner and other provision of contract document.	5000.00	MT-Km	12.50	62,480
236	Notes: i) The quantities given in above item no. are tentative only and shall not be considered to be binding. The quantities may be increased, decreased or deleted as per the actual site requirement and instructions / recommendations of Owner. The unit rate shall be operated to work out the final payment to the contractor. ii) Above price shall be inclusive of all type of taxes & duties, transit insurance during transportation & other insurance etc. including all financial & commercial implication as per the tender document. No other payment except as per quoted unit rate & executed quantities will be payable by the Owner. iii) Safe storage of transported linepipe till installation, reconciliation & handingover to client shall be part of the above item. Contractor has been advised to quote accordingly.				
237	Pipeline Laying Liaisoning & Co-ordination (including utility crossing) and obtaining permission / NOC from the statutory / concerned authorities. Assistance in ROU opening & closing and their maintenance/ management.				
238	Submitting request for (after obtaining the letter from client) permission, follow up, assisting in site inspections / route survey / site report making/making site inspection drawings, submitting at designated offices, resubmission after correction, modification if required, soft and hard copy in nos. as required / if required in sizes, and collecting permission from the statutory authorities including NHAI, PWD, Railways, Irrigation, Forest, Municipal Corporation, District administration, River Authority, SEZ etc. Obtaining work permits /NOC from various statutory authorities having jurisdiction before execution of the work and complying with all stipulations /conditions/recommendations of the said authorities. Only statutory fees shall be paid by the owner. Assistance in required length and width/restricted width of ROU opening & closing and their maintenance/ management both side of the crossings.				
239	For 8" Pipeline	2500.00	Meter	28.40	71,000
240	Note : Execution of above item is subjected to the requirement of site.				

SCHEDULE OF RATES
LAYING OF UNDERGROUND STEEL PIPELINE INCLUDING ASSOCIATED WORKS IN CUTTACK / KHORDA (BHUBANESWAR) GAS UNDER CGD SIX CITIES PROJECT FOR M/s GAIL (I) LIMITED
M/s MGS Group, Bhubaneswar

Sl. No.	Item Description	Quantity	Units	Unit Rate (Excluding GST)	Amount (Excluding GST)
241	CIVIL WORKS				
242	EARTH WORK IN EXCAVATION/ SITE GRADING AND BACKFILLING				
243	Earth work in excavation /site grading in all kinds of soil including soft rock in any plan dimension up to required depth including backfilling of excavated earth at any location in layers of 300mm and compacted up to 95% to its MDD at all heights and depths. Surplus and unserviceable earth shall be disposed up to any lead in all conditions. Soil to be levelled and neatly dressed complete in all respect as per scope of work, detailed construction drawings, technical specifications and direction of the Engineer-in-Charge.	2.00	CUM	426.00	852
244	Note:- 1. This Rate shall be applicable only for excavation which are not included as a part of respective SOR Item. 2. The Contractor shall take into account in his quoted rate the provision for excess excavation required for necessary working space, cutting in slopes etc., which may be required for excavation and other allied works and refilling the side slopes and working space in layers as per requirement. 3. Rate to include cost of all labour, tools, tackles, equipment, hire charges, shoring, bailing and pumping out water as required etc. with all bye works and sundry works complete in all respects. 4. NET CUM of excavated quantity in CUM shall be measured for payment. 5. To be read in conjunction with Particular Job Specification.				
245	BRICK WORK				
246	Providing and laying brick work with brick class designation M-5.0 of IS:1077 in Cement Mortar 1:4 (1cement : 4 sand) in steps, load bearing structures, drains, or at any other location at all depths & height for all leads including providing required finishes, curing, scaffolding, etc., complete as per specifications and drawings with all bye-works as per direction of the Engineer-in-charge.	2.00	CUM	4,118.00	8,236
247	Note:- 1. Rate to include cost of all labour, tools, tackles, equipment, hire charges, supply of all materials such as minimum 43 grade cement (OPC), bricks, finishes, bitumen, other minor construction materials, shuttering, staging, masonry work, excavation, PCC M10, plastering with 15 mm thick cement plaster on exposed faces with 1:4 cement mortar (1 cement : 4 Sand), painting with bitumen etc. as per requirement with all bye-works and sundry works complete as per drawings. 2. To be read in conjunction with Particular Job Specification.				
248	PLAIN CEMENT CONCRETE				
249	Supplying and laying plain cement concrete of grade M 10 with stone aggregate 40mm down grade (including shuttering if required) in all types of concrete works including levelling courses below foundations, mass concrete works, chambers, cable trench, under floors and any other locations, at all levels and locations (which are not covered as part of composite items) as per drawings, specifications and directions of the Engineer-in-charge.	2.00	CUM	4,146.40	8,293
250	Note :- 1. Rate to include cost of all labour, tools, tackles, equipment, hire charges, supply of all materials, shuttering in all conditions etc. with all bye works and sundry works. 2. To be read in conjunction with Particular Job Specification.				
251	REINFORCED CEMENT CONCRETE				
252	Providing and laying Reinforced Cement Concrete of grade M-25 with 20mm and down grade crushed stone aggregate in all types of structures like foundations, beam, columns, pedestals, pedestal bases, pipe supports, sleepers, cable trench, RCC retaining wall foundation for boundary wall etc. including excavation, PCC M10 in mud mat, shuttering, construction joints, bitumen painting on surfaces in contact with soil, supplying and fixing MS inserts, finishes etc. at all depths and levels complete as per drawings, specifications and directions of the Engineer-in-charge.	2.00	CUM	5,964.00	11,928
253	Note :- 1. Rate to include cost of all labour, tools, tackles, equipment, hire charges, supply of all materials such as minimum 43 grade OPC cement including sulphate resistant cement for sub-structures, inserts, bolts, conduits, bitumen, excavation, PCC M-10 in mud mat, other minor construction materials, shuttering, staging, testing of concrete, curing etc. except reinforcement steel with all bye works and sundry works complete. 2. To be read in conjunction with Particular Job Specification.				
254	REINFORCEMENT STEEL				
255	Supplying and Fabricating and Fixing in position HYSD Steel Reinforcements/ TMT Grade Fe-415/Fe 500D conforming to IS1786-2008 at all levels and positions including the Cost of transportation, Straightening, Cutting, Bending, Cranking, Binding, Welding, Provision of necessary Chairs and Spacers, Preparation of bar bending schedule, getting the same approved by EIC etc., complete as per Drawings and Specifications and including Cost of binding wire, Labour etc., all complete in all respects as per scope of work, detailed construction drawings, technical specifications and direction of Engineer-in-charge. The Chairs and Spacer Bars provided will not be measured for payment.	0.50	MT	59,640.00	29,820
256	Note :- 1. Rate to include cost of all labour, tools, tackles, equipment, hire charges, supply of all materials such as steel Reinforcement, binding wire and other minor construction materials, testing etc. all bye works and sundry works. 2. Chairs, Laps, Spacers, Wastage etc. shall be to contractor's account. 3. To be read in conjunction with Particular Job Specification.				
257	CONCRETE PAVEMENT				
258	Providing and laying reinforced cement concrete pavement 150 mm thick in M-25 grade with 20 mm and down grade crushed stone aggregate in pavement, including earthwork in excavation, preparation of base (i.e. compacted subgrade, 200 thk sand and 100 thk PCC M-10 grade), leaving pockets if necessary, making recess, projections, fixing inserts conduit pipes (GI, PVC, HDPE, etc.) laying in alternate panels, filling the gaps between the panels with bitumen sand mix filler material etc., making slopes, finishing edges, leaving bars for pedestals & sleepers including providing sand fill isolation, shuttering, providing and fixing reinforcing steel, curing, chipping and modification works etc. as specified in any shape, thickness, position and finishing the top surface smooth as per requirement etc. all complete as per drawings, specifications and directions of the Engineer-in-charge.				
259	150mm thick in Pavements in Process Areas (Type - I)	25.00	SQM	1,505.20	37,630

SCHEDULE OF RATES
LAYING OF UNDERGROUND STEEL PIPELINE INCLUDING ASSOCIATED WORKS IN CUTTACK / KHORDA (BHUBANESWAR) GAS UNDER CGD SIX CITIES PROJECT FOR M/s GAIL (I) LIMITED
M/s MGS Group, Bhubaneswar

Sl. No.	Item Description	Quantity	Units	INR	
				Unit Rate (Excluding GST)	Amount (Excluding GST)
260	Note :- 1. Rate to include cost of all labour, tools, tackles, equipment, hire charges, supply of all materials, providing and fixing reinforcement steel, shuttering, earthwork in excavation and backfilling using serviceable earth in all conditions, preparation of base, etc. with all bye works and sundry works. Cost of works towards pipe supports & sleepers being raised from pavement is covered under respective RCC items. 2. To be read in conjunction with Particular Job Specification.				
261	VALVE PIT				
262	Construction and handing over of Brick Valve Pit as per tender drawing, technical specification and direction of engineer-in-charge complete in all respect. Scope of work shall be as per tender drawing.				
263	Construction and handing over of RCC Valve Pit of approx. 1.8m x 1.8 m in size (internal dimension) as per technical specification and direction of engineer-in-charge complete in all respect. Scope of work shall be as per Sketch attached with the tender.	1.00	Nos	88,040.00	88,040
264	Construction and handing over of RCC Valve Pit of approx. 2.0m x 2.0 m in size (internal dimension) as per technical specification and direction of engineer-in-charge complete in all respect. Scope of work shall be as per Sketch attached with the tender.	1.00	Nos	110,760.00	110,760
265	STEEL STRUCTURAL WORKS				
266	Steel structure Fabrication				
267	Supplying, Fabricating & Erecting in position steel structures fabricated out of MS Girders, channels, Tees, angle, flats, plate, square hollow sections pipes etc. conforming to IS:2062 and/or from pipes conforming to IS:1161 for structural purpose for cascade supporting structure, loading/unloading platform, Gratings for platform, catladder, handrails, hoardings for sinages, Lcv stand, etc. of any size/dia for required design including cutting, welding, bolting, hoisting, fixing in position, including application of one coat of primer at shop and second coat of primer at site after erection and two coats of finishing paint at site. The work is to be completed in all respect as per specification, scope of work, detailed construction drawings and directions of the Engineer-in-charge.	200.00	KG	71.00	14,200
268	[Rate to include cost of all labour, nut, bolts, tools, tackles, hire charges royalties, levies, transportation, scrap value, gas cutting, welding, other consumables, paints, compressed air, water, electric power etc. all complete.]				
269	Providing and fixing Fencing Structure				
270	Supplying, fabricating & fixing steel structural fencing fabricated from pipes conforming to IS:1161 and plates conforming to IS:2062 & fixing of GI weldmesh made from 3mm GI wire @ 75 mm bothways to structural steel frame by means of welding/bolting, including applying two coats of approved quality of synthetic enamel paint over a priming coat of in approved shade including supply of all raw materials, bolts, electrodes, transportation, including making pokets & pouring with PCC (1:2:4) in of block 500x500x500 for fixing of posts etc complete as per enclosed drawing, technical specifications, scope of works and directions of the Engineer-in-Charge.				
271	Fencing height 2.1m	50.00	RM	2,073.20	103,660
272	Notes:- 1) The quantities indicated are estimated values and hence are approximate. Final payment will be made based on actual quantities to be certified by the Purchaser. 2) The cost of MS bolts (permanent and service), washers, electrodes, putty, gases, cost of straightening the raw materials, cutting of flats from plates and providing splices, paints, tools, plants, etc., as required for the work shall be deemed to be included in the quoted rates. 3) All handling and transport charges of raw materials and fabricated structures including double handling, as required, for completion of work in accordance with 4) Time schedule, are deemed be included in the quoted rates 5) All accessories like MS tower bolts, MS Pivot, MS Wheels, MS Tee section, locking arrangement etc. shall be measured by weight only. 6) Contractor shall ensure proper alignment and smooth operation of Gate				
	Total Excluding GST				16,336,844
	Total Including GST				19,277,476



MECON LIMITED

(A Government of India Enterprise)

SCOPE MINAR, 15th Floor, North Tower, Laxmi Nagar District Centre,

Delhi – 110 092

Phone No. : 22401129, 22447417

Corporate Identification No(CIN):U74140JH1973GOI001199

FAX OF ACCEPTANCE (FOA)

FOA NO. 05/51/Q7NT/GAIL/001-I-LVD/FOA-890

DATE: 29.10.2022

TO : M/S RITU ENGINEERING & CONSTRUCTION
FAX : -
EMAIL : project@rituengineering.com, engineeringritu@gmail.com
ATTN : MS. SASMITA PADHI, PARTNER
FROM: SR. GM (CONTRACTS), MECON LIMITED, DELHI

PLEASE REFER TO YOUR OFFER NO. NIL DATED NIL AND ALL OTHER SUBSEQUENT CORRESPONDENCE AGAINST BIDDING DOCUMENT NO. 05/51/Q7NT/GAIL/001-I-LVD (TENDER ID : 2022_GAIL_110017) DATED 30.04.2022, COMM. CORR.#1 DATED 13.05.2022, COMM. CORR.#2 DATED 13.05.2022, RPBQ DATED 13.05.2022 & COMM. CORR.#3 DATED 20.05.2022 FOR LAYING OF UNDERGROUND STEEL PIPELINE INCLUDING ASSOCIATED WORKS IN CUTTACK/KHORDA (BHUBANESHWAR) GAS FOR GAIL (INDIA) LIMITED (.)

WE HEREBY ISSUE THIS FAX OF ACCEPTANCE (FOA) FOR 100% OF THE SCOPE OF WORK OF SUBJECT TENDER AT AN ESTIMATED CONTRACT VALUE OF RS. 1,63,36,844/- (INDIAN RUPEES ONE CRORE SIXTY-THREE LAKH THIRTY-SIX THOUSAND EIGHT HUNDRED FORTY-FOUR ONLY) EXCL. GST. GST SHALL BE PAYABLE EXTRA AS PER TENDER PROVISIONS. (PRESENT RATE OF GST@18%) (.)

THE DETAILED BREAKUP OF ABOVE ORDER VALUE IS ENCLOSED AS ANNEX-1(.)

THE COMPLETION SCHEDULE SHALL BE 3 1/2 (THREE & HALF) MONTHS FROM THE DATE OF FAX OF ACCEPTANCE (FOA) FOR MECHANICAL COMPLETION INCLUDING MOBILIZATION PERIOD OF 15(FIFTEEN) DAYS AND THEREAFTER 15 (FIFTEEN) DAYS FOR DRYING, COMMISSIONING/GAS-IN (.)

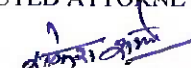
YOU ARE REQUESTED TO SUBMIT "CONTRACT PERFORMANCE GUARANTEE" @ 3% OF ORDER/CONTRACT VALUE [EXCLUDING GST] WITHIN 30 DAYS OF THIS FAX OF ACCEPTANCE AS PER TERMS AND CONDITIONS STIPULATED IN CLAUSE NO. 37 OF INSTRUCTIONS TO BIDDERS (ITB) OF BIDDING DOCUMENT(.)

YOU ARE REQUESTED TO CONTACT PROJECT COORDINATOR (MR. PRATEEK MAHESHWARI, MANAGER (CGD), MECON LIMITED, EMAIL ID: PMAHESHWARI@MECON.CO.IN) FOR FURTHER INSTRUCTIONS REGARDING EXECUTION OF THIS WORK (.)

ALL OTHER TERMS AND CONDITIONS SHALL BE AS PER BIDDING DOCUMENT & CORRIGENDUM THERE OF AS STATED ABOVE AND AS AGREED TILL DATE (.)

A DETAILED LETTER OF AWARD SHALL FOLLOW (.)

FOR & ON BEHALF OF GAIL (INDIA) LIMITED
(BY ITS CONSTITUTED ATTORNEY)


(RAKESH SHARMA)
SR. GM (CONTRACTS)
MECON LIMITED, DELHI

CC: BY COURIER TO:
M/s Ritu Engineering & Construction
Plot No. 632, Sabara Sahi Chhak,
Rasulgarh, Bhubaneswar-751010
Tel No.: +91-06803563196



Annex 1 to FOA No. 05/51/BTNT/GAIL/
001-I-LVD/FOA-890 dtd 29.10.22

SCHEDULE OF RATES

LAYING OF UNDERGROUND STEEL PIPELINE INCLUDING ASSOCIATED WORKS IN CUTTACK / KHORDA (BHUBANESWAR) GAS UNDER CGD SIX CITIES PROJECT FOR M/s GAIL (I) LIMITED
M/s Ritu Engineering & Construction, Bhubaneswar

Sl. No.	Item Description	Quantity	Units	Unit Rate (Excluding GST)	Amount (Excluding GST)
1	MAINLINE WORKS				
2	CARBON STEEL PIPES				
3	PIPELINE LAYING / INSTALLATION				
4	"Receiving and taking over" as defined in the specifications, handling, loading, transportation and unloading of Owner supplied 3-Layer PE coated and bare linepipes from Owner's designated stock-yard to Contractor's stock yard/workshop/work-site including preliminary activities, preparation of drawings, wherever required for crossing etc. including handling, stacking, stringing on the pipeline Right-of-Use/ pipeline route alignment, carrying out inspection of Owner supplied materials including linepipes at the time of taking over, laying/ installation of coated linepipes as per specification wherever required depending on site condition including execution of all works, "taking over", handling, including loading and unloading, transportation of Owner supplied materials other than linepipe from Owner's designated place (s) of issue to work site including arrangement of all as listed above..				
5	Additional lands required for Contractor's storage, fabrication, access for construction, procurement and supply of all materials (except Owner supplied materials), consumables, equipment, labour and other inputs, carrying out all temporary, ancillary, auxiliary works, ready for commissioning of pipeline as per drawings, specifications, other provisions of Contract document and instructions of Engineer-in-charge, including but not limited to carrying out the following works:				
6	Survey of route and detours required at the time of execution including preparation of construction drawings showing survey details, and submit same to GAIL/PMC for review / approval.				
7	Staking and installation of construction markers, clearing, fencing, grubbing, full filling all the requirements of various statutory/ environment authorities to the entire satisfaction of concerned authorities, grading of work area.				
8	Barricading the pipeline construction area prior to execution of the works as per drawings enclosed with tender document and to the entire satisfaction of Owner / Engineer-in-charge.				
9	Trenching to all depths by excavation and to a width to accommodate the carrier pipeline during lowering & backfilling in all types of soils and rocky strata including different type of pavement / footpath / roads (other than concrete roads) etc. including breaking, chiselling or otherwise cutting etc. as required and storing excavated soil, reusable materials at designated area as directed by Engineer in charge and to a width to accommodate the pipeline as per the relevant standard/ specification etc. [The minimum depth of the top of pipeline shall be 1 m measured from top of pipeline coating to the top of undisturbed surface of the soil or as per SCC/ relevant code, whichever is higher]. Dewatering of trenches if required as per site condition.				
10	Carrying out repairs of pipe defects/ replacement in case of irreparable defects and repairs of defects of pipe coating not attributable to Owner including defects/ damages occurring during transportation / handling.				
11	Stringing of line pipes along pipeline trench / ROU provided on sand/soft soil bags including all supplies, manpower & machinery etc.				
12	Aligning, bending, cutting and bevelling (as required) of pipes for welding and field adjustments including pipe fittings, welding, carrying out non-destructive testing of welds as required including 100% radiography by X-ray either by internal source or external source based on site conditions/front availability and in this regard decision of EIC shall be final and binding to the contractor (In case placement/installation of X-ray equipment is not feasible, in that case Gamma ray may be permitted as per decision of Engineer In-Charge(EIC) based on site conditions) and providing all requisite equipment, labour, supervision, materials, films, consumables, all facilities and personnel to process, develop, examine and interpret radiographs and other tests as required, carrying out repairs of weld joints found defective by Engineer-in-Charge, carrying out re-radiography and other tests as required on repaired joints and NDT of rebevelled area as mentioned in SCC & Particular Jobs Specification.				
13	Carrying out installation of carrier line pipe at all minor crossing i.e. road, cart track, pathway, water bodies etc. at required depth by open cut (except at crossing by Moleing & HDD method). Methodology to be adopted for crossing shall be decided by joint survey with Client/PMC & Contractor and based on the finalization of methodology crossing by HDD, Laying of pipeline through HDD, Moleing shall be payable through respective item available else where in the SOR.				
14	Coating of field weld joints, long radius bends (R=3D for 8 Inch), elbows... etc. including supply of coating materials etc. (i.e. heat shrinkable sleeves and high build epoxy etc.) as per PJS & Technical Specification compatible with 3 layer PE coating material of the line pipe.				
15	Installation of LR Bend (R=3D for 8 Inch), as per specification wherever required depending on site condition.				
16	Installation / lowering the pipeline in trench to required depth as per PJS, Technical Specification & drawings and providing required padding over and around the pipeline with sand/graded material approved by Engineer-In-Charge (in rocky areas) including padding around pipeline with suitable soil duly approved by EIC. Supply of padding material, backfilling and its compaction to the satisfaction of concerned authorities with excavated earth / borrowed select soil including supply of borrowed select soil duly approved by EIC before backfilling and make ready for restoration to be done by Owner / concerned authorities.				
17	Installation of warning mat on the entire length of the pipeline as per specification. Warning mat should have anti rodent properties.				
18	Crossing the all-foreign pipeline / HT line / cable / any other utilities etc. with necessary concrete / PVC protection including coordination with all agencies and obtaining NOC after completion of all the activities.				
19	Supply and installation of bank protection alongwith backfill materials duly approved by EIC for pipeline trench and banks falls under minor water body crossing as per technical specification & Std. Drg., wherever required or, as directed by Owner / EIC.				

SCHEDULE OF RATES
LAYING OF UNDERGROUND STEEL PIPELINE INCLUDING ASSOCIATED WORKS IN CUTTACK / KHORDA (BHUBANESWAR) GAS UNDER CGD SIX CITIES PROJECT FOR M/s GAIL (I) LIMITED
M/s Ritu Engineering & Construction, Bhubaneswar

Sl. No.	Item Description	Quantity	Units	INR	
				Unit Rate (Excluding GST)	Amount (Excluding GST)
20	Carrying out air cleaning, gauging, pigging, flushing, cleaning and hydrostatic testing of complete pipeline, supply of required quantity of corrosion inhibitor, if required including pre-testing of designated sections complete as per specification and approved by Engineer-in-charge to specified pressures indicated elsewhere and duration after stabilization as per specification, providing all equipment, pumps, fittings, instruments, dead weight tester, pressure recorder, thermocouples etc., and services, supervision, labour, consumables, water including supply of corrosion inhibitor, air, etc. as required, locating of leaks and rectification of defect attributable to Contractor (rectification of defects in linepipe material not attributable to contractor shall be paid separately as per other item of schedule of rate), re-testing after rectification, dewatering after successful completion of hydrotesting of entire section and as approved by Engineer-in-Charge. Note : 1. Leak detection, its rectification and successfully re-hydrotesting shall be carried out by Contractor with a view that completion of all activity for successful hydrotesting should not be inordinately extended / delayed , which will hamper the overall project schedule. Further, no extra payment claim shall be entertained for re-hydrotesting, leak detection and their rectifications if defects found attributable to Contractor. 2.Payment for Gauging activity mentioned above shall be made under item mentioned else where in SOR. 3.Payment for hydrostatic testing activity mentioned above shall be made under item mentioned elsewhere in this SOR.				
21	All tie-in, including the tie-in(s) of the pipeline with the adjacent sections of pipeline including cutting of test header, rebeveling as required, radiography and other NDT examination, joint coating as per specification.				
22	Final clean-up & restoration of right-of-use or area disturbed by contractor including obtaining NOC from respective land owner and statutory authorities during their construction activities for laying of pipeline works and disposal of debris and returning all surplus material to designated disposal areas / storage yard as and backfilling of trench and compaction of the same as per satisfaction of Owner and / Or as directed by Engineer-in-charge.				
23	Carrying out all temporary, ancillary, auxiliary works and all incidental works required to make the pipeline ready for pre-commissioning.				
24	Restoration of land, facilities and boundary wall etc. and associated facilities dismantled/damaged by the Contractor during construction.				
25	Hook-up work with existing pipelines including pit excavation & other associated work (If any). Payment for Hook up shall be made under item mentioned elsewhere in SOR				
26	Protective coating of 500 micron thick two component (applied with the help of minimum three coats) liquid epoxy including supply of materials duly approved by Owner for all piping valves, fittings, structural steels etc. for buried installation and inside the valve pit as approved by the Engineer-in-charge.				
27	Carrying out all temporary, ancillary, auxiliary works and all incidental works required to make the pipeline ready for pre-commissioning.				
28	Obtaining work permits/ NOC from various statutory authorities having jurisdiction, before and after execution of the work, and complying with all stipulation/conditions/recommendation of the said authorities;				
29	Preparation of as-built drawings, pipe-book and other records as specified in the specifications. SOR shall be read in conjunction with job specific requirements, specifications, standards, drawings and other provision of contract document. All above works line pipe laying and installation all above works for buried pipeline as per following details:				
30	Installation of Coated Line Pipes as per following details:				
31	Specified dia Thk (mm) Material Coating Type Length of each pipe (mm) NB				
32	For All Type of Soil				
33	200 6.4 API 5L Gr. X-52/56 3 Layer PE Double random Coating (Externally) (approx. 11.5 m to 12.5 m)	820.00	Meter	1,448.40	1,187,688
34	For Rocky Strata (Refer Notes)				
35	200 6.4 API 5L Gr. X-52/56 3 Layer PE Double random Coating (Externally) (approx. 11.5 m to 12.5 m)	180.00	Meter	2,328.80	419,184
36	Note:				
37	The lengths of pipelines are tentative and for various locations. Quantities may increase/decrease or delete based on site requirement/Joint Survey/Change in requirement of Owner.				
38	The above item rate is exclusive of crossings by HDD and Moiling (which are covered separately in relevant SOR items) For other crossings, it is deemed to be inclusive in above item rate.				
39	This item shall be applicable for the underground steel grid main pipeline & branch pipeline including , insulating joints, bends (3D for 8"), flanges & fittings, underground valves if required, accessories etc. , Installation of valves including other fittings & pipes for Sectionalizing & Tap Off if required shall be paid separately through item available else where in SOR.				
40	The above rate shall be exclusive of hydrotesting of complete pipeline including hydrotesting of all crossing sections along-with the mainline. However, payment for pre- testing as required, are inclusive in above items rate.				
41	In above item, backfilling of pipeline trench by borrowed select soil duly approved by Owner / EIC shall be paid by separate item mentioned elsewhere in the SOR.				
42	Contractor shall not perform any pipeline activities along ROU/Corridor without specified barricading as per Std. Drq. and other safety measures.				
43	Proposed pipeline route is passing through MDR/ Asphalt Road / concrete roads (RCC/PCC) etc. However, in case of non-availability of ROU along MDR/ Asphalt Road / concrete roads (RCC/PCC) etc., the pipeline route may change and this may also require a new tap-off point at suitable location on Pipeline . This may cause increase / decrease in SOR quantities.				
44	The rates shall be applicable for the work within at all locations / with in GA- Khorda/Cuttack .				
45	The above rate is excluding of crossings by HDD, Boring, moiling, open cut conventional Method mentioned under separate item.				

SCHEDULE OF RATES
LAYING OF UNDERGROUND STEEL PIPELINE INCLUDING ASSOCIATED WORKS IN CUTTACK / KHORDA (BHUBANESWAR) GAS UNDER CGD SIX CITIES PROJECT FOR M/s GAIL (I) LIMITED
M/s Ritu Engineering & Construction, Bhubaneswar

Sl. No.	Item Description	Quantity	Units	INR	
				Unit Rate (Excluding GST)	Amount (Excluding GST)
46	In congested area trenching shall be made manually for pipeline laying further Contractor shall ensure that no tree/plant cutting shall be carried out during Pipe Line Laying operations. Trenching shall be carried out manually if needed, so as to ensure no damage to plant/tree/OFC /water pipe line /telephone line/sewage line/electric cable and other under ground utilities.				
47	Quantity indicated above is tentative. Execution of pipeline laying in rocky strata (if encountered during execution) shall be jointly recorded.				
48	Bifurcation of Soil & Rocky strata shall be done based on the equipments used in trenching the pipeline section. For Rocky strata contractor have to use of rock breaking tool / rock hammer or other equivalent tools for preparation of trench with due approval of EIC. Supply and installation of rock shield as per specification including padding through sand/soft soil is inclusive in above item. Bidder have to quote accordingly.				
49	Excavation of hard rock strata, wherever hard rock of single piece exceeding 1.5 meter in any direction within the trench dimension with respect to length, width & depth and removal only by pneumatic chisel/ drill/ rock-breaking tool/rock hammer or other equivalent tools. The rates are payable over and above the laying rates as per relevant SOR items mentioned elsewhere in SOR.				
50	Fabrication of Sectionalizing Valves (SV) and Tap-off including pipes & fittings shall be paid separately.				
51	For Tie-in and other locations wherein NDT through X-ray is not feasible NDT by Gamma ray shall be permitted with due permission of EIC.				
52	Payment for Preparation of as-built drawings, pipe-book and other records as specified in the specifications is to be covered in this SOR rate.				
53	Contractor shall return all surplus material to designated storage yard as mentioned in Annexure-2 to SCC, as directed by Engineer-In-Charge.				
54	Owner supplied 3 LPE Line Pipe & Bare Pipe required for pipeline laying activity shall be shifted from owner designated store located within Cuttack / Khorda (Bhubaneswar) GAS and payment are inclusive in above items rate. Bidder has to quote accordingly.				
55	Contractor shall ensure that no tree/plant cutting shall be carried out during Pipe Line Laying operations. Trenching shall be carried out manually if needed, so as to ensure no damage to plant/tree/OFC /water pipe line /foreign pipeline/telephone line/sewage line/electric cable and other under ground utilities.				
56	Bidder has to familiarise himself the entire pipeline route and all locations /region/ charge area within the GA and ascertain all type of eventuality/uncertainty before quoting their bid.				
57	End cap / blind (Temporary during construction of pipeline) at both the ends for carrier pipeline as per specification is included in above quoted rates, However after completion of pipeline End Cap shall be provided to contractor as free issue.				
58	Payment for carrying out liaisoning & co-ordination utility/foreign pipeline crossings (if any) and obtaining permission / NOC from these authorities including assistance in ROU/Corridor opening & closing and their maintenance/ management both side of the crossings shall be made under item mentioned elsewhere in SOR.				
59	Excavation- Hard Rock				
60	Excavation of hard rock only, wherever hard rock of single piece exceeding 1.5 meter in any direction within the trench dimension with respect to length, width & depth and removal only by pneumatic chisel/ drill/ rock-breaker.	180.00	CUM	1,363.20	245,376
61	Note: i) Quantity indicated above is tentative and may increase/ decrease or delete as per site requirement. ii) Above item is for laying of pipeline through open cut method only.				
62	PIPELINE LAYING/INSTALLATION BY HDD METHOD				
63	Complete work of laying of pipeline in restricted ROU along with adjacent road/nala (if minor road/nala falling under the laying profile and not considered under separate crossing) by HDD method including "Receiving and taking over" owner supplied 3LPE coated line pipes from owner's designated place to issue/dump site(s) and transportation to contractor's stock yard/work site including all handling, loading, unloading, aligning etc. supply of all contractor supplied material including consumables, manpower, equipment, other resources to work site(s) and acquiring the required land for storage. Execution of, but not limited to, following works in accordance with specifications and instruction of engineer-in-charge and as per all provision of Contract Document.				
64	Pre-construction survey, necessary cover required over the carrier pipeline, based on site visit, collection of data (if required) from concerned Authority including design and detail engineering and making of drawings for getting their approval from concerned Authority/Engineer-in-charge, getting work permit/NOC for utilities crossings (if any) encountered prior to start the execution of work.				
65	Digging of entry and exit Pits, Pre hydrotesting at specified pressure, Drilling to required depth from top of ground (min 2.0 mtrs.) including maintenance of drill hole in all types of soil including pebbles, cobbles, boulders, structures etc. and all types of rocky strata, all depth to accommodate the pipeline at all conditions encountered by approved HDD methods for providing minimum cover specified in code/specification or the actual depth as decided by concerned authority, whichever is more.				
66	Digging of entry and exit Pits, Laying of the pipeline (as per approved HDD profile) by the approved HDD method including pipeline string preparation, welding, testing, 100% radiography by X-ray, welding repair and retest, coating of field joints with special type Dirax Heat Shrink Sleeve or equivalent (including supply of coating material) and repair of pipeline coating with special PERP-60E repair patch or equivalent material (including supply of repair patch) as per specification, pre-hydrotest of complete strings made for laying etc. Backfilling of entry and exit pits and its levelling.				
67	Backfilling of the ditch/trench pits including restoration and clean-up of area, disposal of drilling fluid & waste etc. to the satisfaction of Engineer-in-charge and/or as directed by concerned Authority.				

SCHEDULE OF RATES
LAYING OF UNDERGROUND STEEL PIPELINE INCLUDING ASSOCIATED WORKS IN CUTTACK / KHORDA (BHUBANESWAR) GAS UNDER CGD SIX CITIES PROJECT FOR M/s GAIL (I) LIMITED
M/s Ritu Engineering & Construction, Bhubaneswar

Sl. No.	Item Description	Quantity	Units	Unit Rate (Excluding GST)	INR Amount (Excluding GST)
68	Carrying out cleaning, gauging, water filling, post-hydrotesting, of complete pipeline string in one section/ test sections as approved by EIC/RCM to specified test pressures (i.e. 1.5 times of Design pressure) for 24 hours hold period; providing all equipment, pumps, test headers, fittings, pressure & temperature instruments etc., and services, supervision, labour, consumables, water, air, etc. as required; detection of leaks, if any occurred during post-hydrotesting, attributable to Contractor and rectification of defects, re-testing after rectification with due approval of Owner, successful completion of post-hydrotesting including dewatering of pipeline to acceptance criteria defined in the specifications. Note : 1. Leak detection, its rectification and successfully re-hydrotesting shall be carried out by Contractor with a view that completion of all activity for successful pre-hydrotesting should not be inordinately extended / delayed, which will hamper the overall project schedule. Further, no extra payment claim shall be entertained for re-hydrotesting, leak detection and their rectifications if defects found attributable to Contractor. 2. Payment for Gauging activity mentioned above shall be made under item mentioned elsewhere in SOR. 3. Payment for Post hydrostatic testing activity shall be made under item elsewhere in SOR, however pre hydrotesting is inclusive in the above SOR item rates.				
69	Installation/Laying of Coated Line Pipes as per following details:				
70	Specified dia Thk (mm) Material Coating Type Length of each pipe (mm) NB				
71	For all types of Soil other than Rocky Starta				
72	200 6.4 API 5L Gr. X-52/56 3 Layer PE Double random Coating (Externally) (approx. 11.5 m to 12.5 m)	900.00	Meter	5,396.00	4,856,400
73	For all types of Rocky Starta				
74	200 6.4 API 5L Gr. X-52/56 3 Layer PE Double random Coating (Externally) (approx. 11.5 m to 12.5 m)	180.00	Meter	8,804.00	1,584,720
75	Note: (i) Pipeline length are tentative and for various crossings/site locations wherein laying through open cut is not feasible. Tenderer are advised to visit the site for actual assessment of extent of laying and to access the maximum extent of cover which may have to be provided. Actual string length for HDD shall be as per design calculations so that pipe is not under stress as permitted by codes/ specifications. Final length of string shall be decided after decision of minimum cover requirement by concerned Authority/ Engineer-in-charge.				
76	(ii) The quantities mentioned above are tentative and may increase or decrease depending upon the site conditions/requirements. The quantity indicated against each item are for multiple shots/Multiple entry & exit pits and shall be as per requirement at site for laying at different locations.				
77	(iii) Contractor shall not perform any pipeline related activities along the ROU without specified barricading/permission of EIC/RCM as per Std. Drg. and other safety measures.				
78	(iv) Payment for the length of final tied-in carrier pipeline string are inclusive in the above item rate and no separate payment shall be made under other item mentioned elsewhere.				
79	(v) Width of above laying indicated are tentative. The width indicated are not for any single laying. This shall be as per requirement at site for laying at different locations.				
80	(vi) Contractor have to use rock cutting tool and all other accessories as required to make drill hole in rocky starta based on requirement. However no extra/additional claim on account of same is permitted. Contractors are advised to quote accordingly.				
81	vii) The above items rate shall be applicable for all locations / region/ charge area within & around the GA of Khorda/Cuttack.				
82	viii) Payment for carrying out liaisoning & co-ordination works for utility/foreign pipeline crossings (if any) and obtaining permission / NOC from these authorities including assistance in ROU opening & closing and their maintenance/ management both side of the crossings shall be made under item mentioned elsewhere in SOR.				
83	ix) Rock drilling shall be considered at location/strata for which the core recovery is min 25%. Expenditure to establish the Starta as rock through lab test or any other approved methodology shall be paid through item rate available else where in SOR.				
84	PIPELINE LAYING / INSTALLATION IN A BUILT-UP SURFACE/ HARD SURFACE				
85	Raking up of hard surface of any type including bituminous, asphalt, concrete, tiled, brick lined soft/ hard rock which is breakable in pieces manually (without use of pneumatic machine) etc. All tiles/ slabs/ curb stones etc. removed during excavation shall be placed properly. The other activities are as per SOR item no. A00101 including its notes.				
86	200 6.4 API 5L Gr. X-52/56 3 Layer PE Double random Coating (Externally) (approx. 11.5 m to 12.5 m)	72.00	Meter	1,988.00	143,136
87	Note: The above rate is inclusive of all other activities as per SOR item no. A00101 including its notes.				
88	REMOVAL & RESTORATION OF CONTINUOUS CONCRETE (RCC/PCC) FOR PIPELINE INSTALLATION				
89	Removal of concrete (RCC/PCC etc) for preparation of pipeline trench (by using pneumatic machine or other approved method) including restoration of same as previous by providing the RCC/PCC...etc up to satisfaction of EIC and concern authority. Shifting & disposing of debris material at suitable location as per direction of EIC. The other activities are as per SOR item no. A00101 including its notes.				
90	200 6.4 API 5L Gr. X-52/56 3 Layer PE Double random Coating (Externally) (approx. 11.5 m to 12.5 m)	72.00	Meter	624.80	44,986
91	RESTORATION OF ROADS				
92	Restoration of asphalt / concrete / red stone roads / pavement/ pavor block including compaction of soil, to original condition as per requirement and to the entire satisfaction of EIC and / or concerned Owners having jurisdiction for following thickness.				
93	Restoration of Asphalt road upto 10 cm thickness	84.00	Sq. Metre	511.20	42,941
94	Restoration of Asphalt road beyond 10 cm upto 20 cm thickness	48.00	Sq. Metre	795.20	38,170
95	Restoration of Concrete road upto 10 cm thickness	60.00	Sq. Metre	624.80	37,488
96	Restoration of Concrete road 10 cm to 20cm thickness	48.00	Sq. Metre	908.80	43,622

SCHEDULE OF RATES
LAYING OF UNDERGROUND STEEL PIPELINE INCLUDING ASSOCIATED WORKS IN CUTTACK / KHORDA (BHUBANESWAR) GAS UNDER CGD SIX CITIES PROJECT FOR M/s GAIL (I) LIMITED
M/s Ritu Engineering & Construction, Bhubaneswar

Sl. No.	Item Description	Quantity	Units	INR	
				Unit Rate (Excluding GST)	Amount (Excluding GST)
97	Restoration of red stone road / footpath / pavement upto 4 inch thickness	48.00	Sq. Metre	426.00	20,448
98	Restoration of red stone road / footpath / pavement upto 4 to 8 inch thickness	36.00	Sq. Metre	624.80	22,493
99	BORROWED SELECT SOIL FOR BACKFILLING				
100	Additional work over and above item no. A00100 for supply of specified and approved quality of borrowed local soft graded soil / sand in place of available excavated material and / or other suitable soil as per applicable standards / specifications, including backfilling of excavated trench for specified length after laying and padding of pipeline, including local transportation of such special backfill material over all distances, complete.	50.00	M3	284.00	14,200
101	PIPING WORKS FOR SECTIONALISING VALVE STATION (SV STATION)(Fabrication at Ground and then installation in the Pit)				
102	SECTIONALISING VALVE STATION - UNDER GROUND				
103	All works for installation of all piping Underground at all depth for Vent Type/ No Vent Type Valve Station along with/without future tap-off (as required) in Valve Chamber in all type of terrains and soils including transportation and handling of all owner/contractor supplied materials i.e. full bore 8" butt welded Ball valve, Plug Valves, all types of other valves of all sizes, Weldolet of all sizes, Insulating Joint, vent line pipes for mainline, assorted pipes and all flanges and fittings from designated places(s) of issue to work site. Supply of gaskets, studs, nuts, nipples & coupling, consumables, Liquid penetrant kit, Cotton cloth ...etc. Installation / Erection of instrumentation items i.e. pressure gauge, consumables, manpower, machineries, tools & tackles for carrying out all mechanical works of underground and above ground piping including fabrication, welding, nondestructive testing of welds, weld repairs/ Pretesting, cleaning/ flushing, pre-hydrotesting & hydrostatic testing, dewatering, functional testing, cutting of mainline and bevelling (if required), tie-in of valve assembly, including radiography & joint coating of tie-in joints, external painting for buried fittings by high build epoxy of min. 500 micron of R-95 or equivalent as required, obtaining all statutory clearances, approvals and permissions for the works (wherever required), making of valve pit (for detail refer relevant drawings (i.e. P&ID, Plot Plan) for SV Station point enclosed with tender. pipe supports including all associated civil works (pertaining to supports only); painting, finishing, clean-up and restoration of site; preparation of as-built drawings, documents and project records and performing all works as per drawings, specifications, other provisions of Contract document and instructions of Engineer-in-charge.				
104	Sectionalising Valve Station (8") with Tap Off valves	1.00	Lumpsum	99,400.00	99,400
105	Sectionalising Valve Station (8") without Tap Off valves	1.00	Lumpsum	99,400.00	99,400
106	Notes: 1. This work is exclusive of all works associated with main pipeline covered at SOR item no. A00100 below. 2. All Civil/ structural works except for piping supports will be paid separately as per rates provided elsewhere. 3. Work is inclusive of receiving, taking over, loading & unloading of company supplied material and return of surplus material to Company's designated stockyard/store. 4. Valves, Assorted Pipe, fittings & Flanges, any type of tee, instrumentation items ..etc as required for construction of SV station shall be made available to contractor as free issue material. Fabrication of SV, Tap-Off Point (if required) , erection, Testing & commissioning is inbuilt in above item rates, hence contractor have to quote accordingly. 5. Civil Work for Valve Pit and its upper slab for under ground SV stations shall be payable through item available else where in SOR. 6. NDT of Joints is inclusive in above item rate. For 1/2" to 1.5" contractor have to carry out NDT by DP test, however for 2" to 8" NDT by X-ray/Gamma ray is required. Bidder have to quote accordingly.				
107	(Refer plot plan drawing and other relevant drawings for Sectionalising Valve Stations enclosed with tender document for ascertaining quantum of mechanical work associated with SV Station).				
108	PIPING WORKS FOR TAP-OFF POINT(Fabrication at Ground and then installation in the Pit)				
109	All works for installation of all piping and valves assembly on above/below ground at all depth for Tap-off in all type of terrains and soils including transportation and handling of all owner/contractor supplied materials butt welded Ball valve, all valves of all types and sizes , Barred tees of all sizes and all fittings from designated places(s) of issue to work site. Supply of assorted pipes, consumable, Liquid penetrant kit, Cotton cloth...etc, manpower, machineries, tools & tackles for carrying out all mechanical works of underground/aboveground piping including fabrication, welding, nondestructive testing of welds, weld repairs/ retesting, cleaning/ flushing, pre-hydrotesting & hydrostatic testing, dewatering, functional testing, cutting of mainline and bevelling (if required), tie-in of valve assembly, including radiography of tie-in joints, corrosion coating (by heat shrink sleeves) for buried piping and external painting for buried fittings by high build epoxy of min. 500 micron of R-95 or equivalent as required, obtaining all statutory clearances, approvals and permissions for the works (wherever required), excavation and filling in all types of soils including soft/ hard rock for installation of piping, painting, finishing, clean-up and restoration of site; preparation of as-built drawings, documents and project records and performing all works as per drawings, specifications, other provisions of Contract document and instructions of Engineer-in-charge.				
110	4" Tap-off Point	1.00	Nos	113,600.00	113,600
111	Notes: 1. This work is exclusive of all works associated with main pipeline covered at SOR item no. A00100 below.. 2. All others works pertaining to Tap-off (Instrumentation works) (if any) shall be as per rates indicated elsewhere in the tender document. 3. Work is inclusive of receiving, taking over, loading & unloading of company supplied material and return of surplus material to Company's designated stockyard/store.				
112	(Refer plot plan drawing and relevant drawings for Tap-off Station enclosed with tender document for ascertaining quantum of mechanical work associated with Tap-off Station).				

SCHEDULE OF RATES
LAYING OF UNDERGROUND STEEL PIPELINE INCLUDING ASSOCIATED WORKS IN CUTTACK / KHORDA (BHUBANESWAR) GAS UNDER CGD SIX CITIES PROJECT FOR M/s GAIL (I) LIMITED
M/s Ritu Engineering & Construction, Bhubaneswar

Sl. No.	Item Description	Quantity	Units	INR	
				Unit Rate (Excluding GST)	Amount (Excluding GST)
113	4. Valves, Assorted Pipe, fittings & Flanges, any type of tee, instrumentation items (if any) etc as required for construction of Tap-off point shall be made available to contractor as free issue material. Fabrication of Tap-Off Point (if required), erection, Testing & commissioning is inbuilt in above item rates, hence contractor have to quote accordingly. 5. Qty of tapp off points is tentative and may differ as per site requirement.				
114	6. Qty for tapp-off point mentioned above is excluding quantities mentioned in SV station and for separate locations than SV station. 7. NDT of Joints is inclusive in above item rate. For 1/2" to 1.5" contractor have to carry out NDT by DP test, however for 2" to 8" NDT by X-ray/Gamma ray is required. Bidder have to quote accordingly.				
115	Station piping works(Above Ground)				
116	Transportation including loading, unloading & handling of all piping items from Owner's and/ or Contractor's storage point to work site/ workshop as applicable, complete work of fabrication, erection, painting, testing of pipes, flanges and fittings and making ready for further Commissioning / Start-up of carbon steel piping of all sizes and ratings including supply of all consumables, equipment, manpower and other resources and execution of, but not limited to, the following works in accordance with relevant specifications & scope of work, drawings, specification and instructions of Engineer-in-charge and as per all provisions of the CONTRACT DOCUMENT.				
117	Fabrication including cutting, edge preparation, welding of pipe, valves, fittings & flanges, IJ etc in above ground/underground. Supply of nipples, couplings, caps, plugs, gasket, stud bolts, nuts, U Clamps etc. as required for completion of job.				
118	Erection including supply and fixing of gaskets, studs/ bolts, nuts wherever required for all sizes, levelling, aligning, joining of flanges, blind flanges, connecting with equipment, nozzles, tie-in with existing piping/facilities, etc. tapping for inline instruments like pressure gauges, thermowells, sample connection, etc.				
119	Preparation of final bill of material based on piping GADs.				
120	Preparation of isometric and fabrication drawings.				
121	Carrying out 100 % Non-destructive testing				
122	Surface preparation, Painting of piping system as per specification.				
123	Cleaning and flushing by water/ compressed air, testing of the systems including hydrostatic, pneumatic and any other type of testing as specified, draining, drying by compressed air/other methods approved by COMPANY.				
124	Precommissioning & making operational all piping system and equipments and provide all necessary assistance in term of supply of man-power, equipment, tools and tackles required amount of nitrogen for purging of entire terminal piping system including equipments etc. to the company during commissioning activities.				
125	Clean-up and restoration of site, preparation of as built drawings, documents and project records; transportation of surplus free issue material to Owner's designated place(s); completing all works in all respects as per the AFC drawing, specifications, standards and other provisions of Contract and instruction of Engineer-in-charge.				
126	Completion of all such work in all respects as per scope of work and as per drawings, specifications and instructions of the COMPANY and keeping the system ready in all respects for further commissioning and start up.				
127	Hook-up works including making provision for hooking up and carrying out shutdown activities at terminals if necessary.				
128	Pipeline size 1/2" to 8" NB dia	100.00	Inch-dia	482.80	48,280
129	1) Pipe Specification and thickness may vary depending upon availability of pipe. No extra payment shall be made for this. 2) All butt welded fittings end shall generally match with connecting pipe wall thickness. However, in case of misalignment, Contractor shall have to do end preparation without any extra cost. 3) All coupling, nipples etc. as required shall be supplied by contractor but no separate payments shall be made as it is covered under erection rate. 4) NDT of Joints is inclusive in above item rate. For 1/2" to 1.5" contractor have to carry out NDT by DP test, however for 2" to 8" NDT by X-ray/Gamma ray is required. Bidder have to quote accordingly. 5) Item mentioned is for other station piping works (excluding item no.A00900 above) and shall be operated based on site requirement as per the decision of EIC. 6. Nitrogen requirement for pre-commissioning/commissioning shall be paid through item available else where in SOR. 7. Material as required for fabrication shall be made available to contractor as free issue material.				
130	OTHERS CROSSING (by HDD Method)				
131	Complete work for installation of carrier pipeline (between the ROW/Corridor limits as per approved drawing) by HDD method including "Receiving and taking over" owner supplied three layer PE coated line pipes from Owner's designated place to issue/ dump site(s) and transportation to Contractor's stock yard/ work shop/ work site including all handling, loading, unloading, aligning etc. supply of all Contractor supplied material including consumables, manpower, equipment, other resources to work site(s) and acquiring the required land for storage., Execution of, but not limited to, following works in accordance with specifications and instruction of Engineer-in-charge and as per all provision of Contract Document.				

SCHEDULE OF RATES
LAYING OF UNDERGROUND STEEL PIPELINE INCLUDING ASSOCIATED WORKS IN CUTTACK / KHORDA (BHUBANESWAR) GAs UNDER CGD SIX CITIES PROJECT FOR M/s GAIL (I) LIMITED
M/s Ritu Engineering & Construction, Bhubaneswar

Sl. No.	Item Description	Quantity	Units	INR	
				Unit Rate (Excluding GST)	Amount (Excluding GST)
132	Pre-construction survey, necessary cover required over the carrier pipeline from lowest bed level of the stipulated water crossing to be obtained from concerned authority, bed strata data including design & detail engineering and making of crossing drawing for getting their approval from concerned Authority/ Engineer-in-charge, getting work permit/ NOC for water crossings as well as utility crossings (if any) encountered during water crossing prior to start the execution of work. getting work permit/ NOC for water crossings as well as utility crossings (if any) encountered during water crossing prior to start the execution of work.; obtaining historical data/ scour depth (for river) from concerned authority, if required, ascertaining under neath soil & strata, necessary cover required over the carrier pipeline from lowest bed level of the stipulated water crossing including design & calculation and detail engineering and making of crossing drawing for getting the approval from concerned Authority/ Engineer-in-charge, getting work permit/ NOC for water crossings as well as utility crossings (if any) encountered during water crossing prior to start the execution of work. For road crossings, pre-construction survey based on site visit, collection of data (if required) from concerned Authority including design and detail engineering and making of crossing drawings for getting their approval from concerned Authority/ Engineer-in-charge, getting work permit/ NOC for the crossing as well as utility crossings (if any) encountered during crossing prior to start the execution of work.				
133	In case of water body crossings other than river Drilling to the required depth on the banks and bed including maintenance of drill hole in all types of strata (ie; soft/hard soil, soft/hard rock....etc), all depth to accommodate the pipeline at all conditions of the waterbody crossings by HDD methods for providing with minimum cover either (i) 1.5m below the scour level / profile, duly approved/ accepted by concerned authority (under whose jurisdictions the crossing lies)--- For rivers with rocky bed or (ii) 2.5m below the scour level / profile, duly approved/ accepted by concerned authority (under whose jurisdictions the crossing lies)--- For major rivers. or (iii) 1.5 m below the bed level / profile, duly approved/ accepted by concerned authority (under whose jurisdictions the crossing lies)--- For minor waterbody crossings. and (iii) In addition to point (i) & (ii), In case of multiple combined X-ing i.e. river alongwith road/ drain, minimum cover requirement as per specification/ concerned authority for each type of x-ing has also to be fulfilled.				
134	In case of road crossing, drilling to required depth from top of road including maintenance of drill hole in all types of strata (i.e; soft/hard soil, soft/hard rock....etc), all depth to accommodate the pipeline at all conditions encountered during road crossing by approved HDD methods for providing minimum cover specified in code/ specification or the actual depth as decided by concerned authority, whichever is more.				
135	Laying of the carrier pipeline (for both water body and road crossing) by the approved HDD method across the crossing including, strings preparation of carrier , welding, testing, 100% radiography by x-ray, welding repair and retest, coating of field joints with special type Dirax Heat Shrink Sleeve or equivalent (including supply of coating material) and repair of pipeline coating with special PERP-80 repair patch or equivalent material (including supply of repair patch) as per specification, pre-hydrotest of complete strings made for crossing as per specification etc.				
136	Preparation of string (as per requirement), fabrication and welding as per specification and laying of carrier pipeline across the crossing as per approved profile.				
137	Backfilling of the ditch/ trench including restoration and clean-up of area, disposal of drilling fluid & waste etc. to the satisfaction of Engineer-in-charge and for as directed by Concerned Authority.				
138	Gauging , Pigging, Cleaning, Post installation hydrotest, dewatering and tie-in with pipeline at either banks etc. all other works including pigging, cleaning, final hydrotesting etc. alongwith mainline works (as mentioned in item no. A00100 above) required as per specifications, codes, approved drawings, calculations, methods and as directed by Engineer-in-charge and provision of contract document; getting NOC from all concerned authority of the facilities crossed.				
139	Details of Crossings				
140	For Other than Rocky Starta				
141	Any type of Crossing viz. Canal / Distributary/ Drain / River / Nala/Road/Pond/ Railway /Culvert Crossings for carrier pipeline of size 200 mm NB x 6.4mm Thk. of API 5L Grade X-52/56	240.00	Meter	5,680.00	1,363,200
142	For Rocky Starta				
143	Any type of Crossing viz. Canal / Distributary/ Drain / River / Nala/Road/Pond/ Railway /Culvert Crossings for carrier pipeline of size 200 mm NB x 6.4mm Thk. of API 5L Grade X-52/56	240.00	Meter	9,372.00	2,249,280
144	Note: (i) Crossing width is tentative and for various crossings. Quantities may increase/decrease or delete as per site situation. Bidder's are advised to visit the site for actual assessment of extent of crossing and to access the maximum extent of cover which may have to be provided. Actual string length for HDD shall be as per design calculations so that pipe is not under stress as permitted by codes/ specifications. Final length of string shall be decided after decision of minimum cover requirement by concerned Authority/ Engineer-in-charge. (ii) Payment for the length of final tied-in carrier pipeline string are inclusive in the above item rate and no separate payment shall be made under other item mentioned elsewhere. (iii) The Contractor has to quote on running meter basis for X-ing. No any extra payment shall be made against this item. (iv) Width of above crossings indicated are tentative and for multiple crossings. This shall be as per requirement at site for crossing at different locations. ix) Rock drilling shall be considered at location/strata for which the core recovery is min 25%. Expenditure to establish the Starta as rock through lab test or any other approved methodology shall be paid through item available else where in SOR.				
145	GEOTECHNICAL INVESTIGATION, HYDROGRAPHICAL & HYDROLOGICAL SURVEY OF RIVER/CANAL/NALA/ WATERBODIES				

SCHEDULE OF RATES
LAYING OF UNDERGROUND STEEL PIPELINE INCLUDING ASSOCIATED WORKS IN CUTTACK / KHORDA (BHUBANESWAR) GAS UNDER CGD SIX CITIES PROJECT FOR M/s GAIL (I) LIMITED
M/s Ritu Engineering & Construction, Bhubaneswar

Sl. No.	Item Description	Quantity	Units	Unit Rate (Excluding GST)	Amount (Excluding GST)
146	Carrying out Pre-construction survey and detail survey for crossings after liaisoning & coordination from concerned authority. Detail survey includes minimum but not limited to carrying out complete Geotechnical Investigation (including all laboratory test & field test), Hydrographical & Hydrological Survey of River / Canal/Nala/Waterbodies for the purpose of crossing the River / Canal/Nala/Waterbodies by HDD method including obtaining work permit / NOC from concerned authority complete in all respect as per Scope of Work & Technical Specification and instruction of Engineer-In-Charge (EIC)/RCM and submitting Final Report & Drawing (along with soft copy) incorporating all field and laboratory data, Drawings, Maps, Data etc. (One Lot) in an approved format with full scale for Soil Investigation, Scour Depth etc. in accordance with the Technical Specification, Drawings, approved QAP, implementation schedule and other provisions of the Tender Document and instructions of the Engineer-in-charge (EIC)/RCM.				
147	For road/rail crossings, pre-construction survey based on site visit, topographical survey, geotechnical investigation to establish bed strata upto sufficient depth, collection of data (if required) from concerned Authority including design and detail engineering and making of HDD Profile drawings for crossing and getting their approval from concerned Authority/ Engineer-in-charge including carrying out liaisoning & co-ordination works and obtaining permission / NOC from these authorities for the crossing as well as utility/foreign pipeline crossings (if any) prior to start the execution of work.				
148	GEOTECHNICAL INVESTIGATION, HYDROGRAPHICAL & HYDROLOGICAL SURVEY OF RIVER/CANAL/NALA/ WATERBODIES				
149	Crossing of NALA/WATERBODIES in single stretch / shot (Size 8" NB) -(Measurement will be carried out on the basis of individual crossing profile width and payment will be done accordingly)	840.00	Meter	852.00	715,680
150	Crossing of RIVER/CANAL in Single stretch / shot (Size 8" NB)(Measurement will be carried out on the basis of individual crossing profile width and payment will be done accordingly)	240.00	Meter	1,022.40	245,376
151	GEOTECHNICAL INVESTIGATION & CROSSING SURVEY OF RAILWAY / ROAD CROSSING				
152	Crossing of Road/Railway in single stretch / shot (Size 8" NB)(Measurement will be carried out on the basis of individual crossing Profile width and payment will be done accordingly)	240.00	Meter	852.00	204,480
153	Note : (i) For Nala/Water Bodies/River/Canal etc Bidder/contractor have to execute Geo-technical, hydrological & hygraphical survey as per technical specification and direction of EIC ii)for railway/ road crossings contractor have to execute geotechnical & crossing survey as per technical specification and direction of EIC.				
154	(ii) For geotechnical survey/investigation: 1. For River/Canal - Two Nos Bore holes each at both banks of depth 15 meter and in river bed bore holes of depth 25 m at a distance of 75 meter centre to centre. 2. For Nala/Other Water Body Crossings..etc - One No Bore holes each at both banks of depth 15 meter and on bed bore holes of depth 15 m at a distance of 75 meter centre to centre. 3. For Railway Crossings/Road Crossings ..etc - One No Bore holes each at both sides of depth 10 meter. 4.Laboratory test & field test shall be as per technical specification & tender documents 5. Bank width for Canal/nala/other water body crossings and survey length for railway crossings/road etc will be as per site conditions. Survey has to be done of bank width/survey width and minimum 50 meter at both end expect at river Crossings. For River crossing survey has to be done of bank width and minimum 100 meter at both end. 6. Rock shall be considered at location at which the core recovery is min 25%. 7. Quantity indicative above is tentative and for multiple crossings of size 8"NB dia pipeline with in the GA. 8. Payment for carrying out liaisoning & co-ordination works for Crossings and obtaining permission / NOC from these authorities is in-built in above item rate				
155	Pipe Laying using Manual / Machine Moiling technique (without Casing) for CS pipe				
156	Survey of under ground utilities, execution of the work as per specification, including excavation of pits moiling with the hole size not exceeding 20% of the pipe dia, jointing and insertion of carrier pipe and restoration of the pits to original condition, submission of As-Built Graph as per specifications and the instruction of Engineer-in-charge.				
157	Laying of 8" (219.1 mm) OD, 6.4 mm wall thk of API 5L Grade X-52/56 carrier pipe	72.00	Meter	3,692.00	265,824
158	Note-(i) Payment for the length carrier pipeline string shall be moiled carrier pipeline length plus two meters. Payment for additional length of carrier pipeline string shall be paid under SOR item no.A00101 (ii) Width of above crossings indicated are tentative. The width indicated are not for any single crossings. This shall be as per requirement at site for crossing at different locations. (iii) Adopting the manual or machine moiling shall be decided at site based on the width to be crossed.Ideally 2.0 meter or more width to be crossed through machine moiling.In this regard decession of EIC shall be final and binding to the contractor. (iv) payment for Post hydrotest shall be done through relevant SOR item mentioned elsewhere.				
159	Excavation beyond 1.5m depth in case of crossing of utilities/ drain/ culverts etc. through open cut upto the following depth (including restoration of the damaged area to its original condition and satisfaction of the Engineer-in-charge / concerned authorities) .The other activities are as per A00101				
160	In Normal Surface / Unprepared surface (Katcha Surface)				
161	Deeper than 1.5 m & upto 2.5 m below existing level (for 200 mm NB Pipeline)	60.00	Meter	454.40	27,264
162	Deeper than 2.5 m & upto 4.5 m below existing level (for 200 mm NB Pipeline)	48.00	Meter	624.80	29,990
163	In a built-up surface / Hard surface of any type including metal, concrete, bituminous, tiled, brick lined soft/ hard rock which is breakable in pieces manually (without use of pneumatic machine) etc. All tiles/ slabs/ curb stones etc. removed during excavation shall be placed properly. The other activities are as per A00101				
164	Deeper than 1.5 m & upto 2.5 m below existing level (for 200 mm NB Pipeline)	60.00	Meter	624.80	37,488
165	Deeper than 2.5 m & upto 4.5 m below existing level (for 200 mm NB Pipeline)	48.00	Meter	795.20	38,170
166	Note: (i) Quantities indicated in tentative and for various locations. (ii) Prior permission from EIC is required before execution of above item.				
167	REPAIR OF DEFECT IN PIPES (NOT ATTRIBUTED TO CONTRACTOR)				
168	Repair of defects on Owner supplied linepipes of all grades and wall thickness as specified in following items, noted and recorded at the time of "receiving and taking over" by Contractor in the presence of Engineer-in-charge.				

SCHEDULE OF RATES
LAYING OF UNDERGROUND STEEL PIPELINE INCLUDING ASSOCIATED WORKS IN CUTTACK / KHORDA (BHUBANESWAR) GAS UNDER CGD SIX CITIES PROJECT FOR M/s GAIL (I) LIMITED
M/s Ritu Engineering & Construction, Bhubaneswar

Sl. No.	Item Description	Quantity	Units	INR	
				Unit Rate (Excluding GST)	Amount (Excluding GST)
169	Cutting and rebeveling for dents in bevels exceeding 3 mm in depth for pipe sizes:				
170	Specified OD, mm				
171	219.1	2.00	Nos.	198.80	398
172	Jack out of dents in bevels ranging between 1 mm and 3 mm in depth for pipe sizes:				
173	Specified OD, mm				
174	219.1	2.00	Nos.	227.20	454
175	REPAIR OF COATING DEFECTS (NOT ATTRIBUTED TO CONTRACTOR)				
176	Repair of Holiday in Coating (Noted and recorded at the time of "receiving and taking over")				
177	Supply of all coating repair materials as per requirements of specification to be compatible with line pipe coating material, supply of all consumables, utilities, equipments and all manpower required, pipe cleaning and surface preparation, repairing of coating defects (resulting in holiday) and testing including all handling, transportation, etc. for line pipes, performing all works necessary for the completion of the works strictly in accordance with relevant specification and instructions of Engineer-In-Charge. This rate shall be applicable per sq. cm of the exposed steel area exposed steel area.	50.00	Sq. cm	312.40	15,620
178	PERMANENT MARKERS				
179	Supply, fabrication and installation of all types of permanent markers along the route including all associated civil works such as excavation in all types of soil, construction in all types of soil, construction of pedestals and grouting with concrete, clearing, supply and application of approved colour and quality of primer and paint, stencil letter cutting for numbers, direction, change etc., restoration of area to original condition and performing all works as per drawing, specification and instruction of engineer-in-charge.				
180	Pipeline RCC boundary / route marker as per drawing	50.00	Nos.	568.00	28,400
181	Pipeline warning markers with post & foundations	10.00	Nos.	3,408.00	34,080
182	Pipeline direction marker with post & foundations	10.00	Nos.	3,976.00	39,760
183	Pipeline KM with post & foundations	3.00	Nos.	3,692.00	11,076
184	Navigable Waterway Markers	2.00	Nos.	22,720.00	45,440
185	Note: Qty of above markers are tentative and may increase or decrease as per site situation. Contractor have to take prior approval from EIC before fabrication or order placement.				
186	LEAK / BURST (ATTRIBUTABLE TO OWNER)				
187	All works for locating leak / burst in Company's supplied material only (occurred during hydro-static testing) including necessary repairing/replacing defective pipe lengths including cutting and out and removing the defective pipe, pre-testing and welding of replacement pipe, NDT of welds, repair and retesting of defective welds, coating/painting of replacement pipe, pretesting the replacement pipe into mainline/branch line, coating/painting of welding joints, cleanup, retesting including cost of all labour materials, consumables and performing all works in accordance with the provisions of the Contract document and as directed by Owner /Engineer-in-charge/ Engineer in-charge				
188	For 8" NB Line	1.00	Lumpsum	28,400.00	28,400
189	Note: i) This rate is applicable for manufacturing defects in Owner supplied material only. ii) Leak detection, its rectification and successfully re-hydrotesting shall be carried out as per approved procedure by Contractor with a view that completion of all activity for successful hydrotesting is not inordinately extended which will hamper the overall project schedule.				
190	Gauging (Applicable for main steel pipeline hydrostatic test, Pre & Post installation hydrostatic test for crossings)				
191	As per specification and procedure approved by Engineer-in-charge (EIC)/ RCM.				
192	200 6.4 API 5L Gr. X-52/56 3 Layer PE Double random Coating (Externally) (approx. 11.5 m to 12.5 m)	3000.00	Meter	22.72	68,160
193	NOTE- (i) The quantities mentioned against the above SOR items are tentative and may vary depending upon the site condition during execution stage. (ii) The total quantities mentioned against the above SOR items are applicable for main steel pipeline and multiple/various crossings at different location within GA. (iii) Payment for above item shall be made only for the certified executed length of pipeline by Engineer-in-charge (EIC)/ RCM. (iv) The requirement of gauging of main steel pipeline, prehydrotest & after pulling of HDD section shall be carried out as per MECON specification / OISD / PNGRB and same shall be approved by Engineer-in-charge (EIC)/ RCM.				
194	Post Hydrostatic testing of Buried Pipeline				
195	Carrying out cleaning, gauging, pigging and hydrostatic testing of complete pipeline section laid by HDD/Open-cut method as approved by EIC/RCM to specified pressures (i.e. 1.5 times of the design pressure) for 24 hours holding period; providing all equipment, pumps, test headers, fittings, instruments, dead weight tester, pressure recorder, temperature recorder, pressure & temperature gauge etc., and services, supervision, labour, consumables, water including supply of corrosion inhibitor, air, etc. as required for successful completion of hydrotesting of pipeline to acceptance criteria as per specifications, codes, approved drawings, calculations, methods and as directed by Engineer-in-charge and provision of contract document. Complete dewatering and swabbing of the pipeline as per specification and to the entire satisfaction of the EIC/RCM.				
196	For 8" NB Line	2500.00	Meter	136.32	340,800
197	Notes: i) The above quantity is not for a single section but for no. of sections for pipeline laying. ii) The quantities mentioned against the above SOR items are tentative and may vary depending upon the site condition during execution stage. iii) Payment for Gauging activity mentioned above shall be made under SOR item No.A002000 mentioned elsewhere in this SOR.				
198	Drying by Vacuum drying / Super air drying / Super dry nitrogen				
199	Complete work of carrying out drying by Vacuum drying / Super air drying / Super dry nitrogen & commissioning of pipeline section including supply of manpower, equipments & consumables (nitrogen required for purging etc.), materials for all temporary works and performing all associated works, complete as per the relevant specifications, other provisions of Contract document and instructions of Engineer-in-Charge.				
200	For 8" NB Line	2500.00	Meter	23.86	59,640

SCHEDULE OF RATES
LAYING OF UNDERGROUND STEEL PIPELINE INCLUDING ASSOCIATED WORKS IN CUTTACK / KHORDA (BHUBANESWAR) GAS UNDER CGD SIX CITIES PROJECT FOR M/s GAIL (I) LIMITED
M/s Ritu Engineering & Construction, Bhubaneswar

Sl. No.	Item Description	Quantity	Units	INR	
				Unit Rate (Excluding GST)	Amount (Excluding GST)
201	Note: The quantities mentioned above for various pipeline sections. Final methodology of drying shall be decided by EIC at the time of execution.				
202	Commissioning assistance / commissioning for underground pipeline length and stations				
203	For 8" NB Line	2500.00	Meter	10.22	25,560
204	Supply of Nitrogen & Purging in pipeline system				
205	Supply of nitrogen in gaseous form and its Purging in aboveground /underground pipeline network to the specified acceptance criteria, including supply of all equipment, man-power, consumables materials for all temporary works and performing all associated works, complete as per the relevant specifications, other provisions of Contract document and instructions of Engineer-in-charge.	100.00	M3	227.20	22,720
206	Preservation of Pipeline				
207	Preservation of pipeline sections and associated facilities (in event of delay in ROU acquisition/statutory permissions, commissioning, other unforeseen reasons) including supply of nitrogen, all consumables, all equipment, man-power, etc. complete as per the requirements of specifications, other provisions of Contract document and instructions of Engineer-in-charge.				
208	By filling and pressurizing with nitrogen to a pressure of 2 bar(g) for a period of one month.				
209	For 8" NB Line	2500.00	Meter	10.22	25,560
210	For every additional period of one month or part thereof				
211	For 8" NB Line	2500.00	Meter	6.82	17,040
212	Notes: i) All accessories ie: Two nos. of dished end caps and two nos. of 3/4 inches PG to be considered per section and rate for the same shall be quoted by bidder under this item. ii) If month is partially complete, payment shall be made on prorata basis.				
213	LONG RADIUS BENDS				
214	Supply of Long Radius Bends (R = 3D) for 8" dia. pipe, X-52/56 (thk. 6.4 mm) as per specification enclosed in Tender Document.				
215	20° - 30°	8.00	Nos.	11,360.00	90,880
216	31° - 45°	12.00	Nos.	12,780.00	153,360
217	46° - 60°	6.00	Nos.	14,200.00	85,200
218	61° - 90°	8.00	Nos.	17,040.00	136,320
219	Note: The quantities of LR Bends may vary. For final quantity, approval shall be taken by EIC before order placement.				
220	SUPPLY OF WARNING MAT Supply of warning mat for pipeline as per the technical specification enclosed in the bid document. The material of warning mat shall be of high density polyethylene and non biodegradable type. It shall have non-toxic and anti rodent properties.				
221	8" NB Pipeline	2250.00	Meter	39.76	89,460
222	Note: Quantity mentioned above is tentative and may increase/decrease based on site requirement. Bidder have to take prior approval from EIC, before placement of order.				
223	DIGITIZATION OF RADIOGRAPHY FILMS:				
224	Carrying out digitization of all radiographic films (mainline and terminal piping) in the form of digital images (which can then be archived safely for long life and electronic retrieval) complying to all the legal local rules, codes and international standards. Submission of digital images of radiographic film along with compatible software in 6 sets of CD/DVD/Pendrive for electronic viewing /retrieval.				
225	For 8" NB Line	1.00	Lumsum	142,000.00	142,000
226	VIDEOGRAPHY & PHOTOGRAPHY				
227	Carrying out the videography & Photography of the pipeline section construction activities. The work shall be carried out in two phases.				
228	Videography & photography of the entire route prior to construction activities i.e. pipeline route, location of various stations, TOP, all crossing like road / railways, river, etc.				
229	Videography & photography during construction activities of Mainline Works i.e. Stringing, Welding, Radiography, Joint Coating, Lowering, Backfilling, etc. performing all works as per specification of EIC and other provision of contract document.				
230	For 8" NB Line	1.00	Lumsum	85,200.00	85,200
231	TRANSPORTATION OF FITTINGS, FLANGES, VALVES, BARREL ETC.				
232	"Receiving and taking over", handling, lifting, loading on truck, transportation and unloading of Company supplied DRS/MRS/ Metering Skids, fittings, flanges and valves etc from any storage yard (other than the designated storage yard for the project) to worksite / contractor's storage yard/ any other storage yard or as decided by EIC. The above work also includes stacking the DRS/MRS/Metering Skids, flanges, fittings and valves etc. properly. Above work shall be carried out as per standard drawing, specification, instruction of Owner and other provision of contract document.	400.00	MT-Km	15.34	6,134
233	Notes: i) The quantities given in above item no. are tentative only and shall not be considered to be binding. The quantities may be increased, decreased or deleted as per the actual site requirement and instructions / recommendations of Owner. The unit rate shall be operated to work out the final payment to the contractor. ii) Above price shall be inclusive of all type of taxes & duties, transit insurance during transportation & other insurance etc. including all financial & commercial implication as per the tender document. No other payment except as per quoted unit rate & executed quantities will be payable by the Owner. iii) Safe storage of transported material till installation shall be part of the above item. Contractor has been advised to quote accordingly.				
234	TRANSPORTATION OF LINE PIPE				
235	"Receiving and taking over", handling, lifting, loading on trailers, transportation and unloading of Company supplied line pipe from any storage yard (other than the designated storage yard for the project) to worksite / contractor's storage yard/ any other storage yard or as decided by EIC. The above work also includes stacking the pipes on wooden sleepers/ sand pads. Above work shall be carried out as per standard drawing, specification, instruction of Owner and other provision of contract document.	5000.00	MT-Km	12.50	62,480

SCHEDULE OF RATES
LAYING OF UNDERGROUND STEEL PIPELINE INCLUDING ASSOCIATED WORKS IN CUTTACK / KHORDA (BHUBANESWAR) GAS UNDER CGD SIX CITIES PROJECT FOR M/s GAIL (I) LIMITED
M/s Ritu Engineering & Construction, Bhubaneswar

Sl. No.	Item Description	Quantity	Units	Unit Rate (Excluding GST)	Amount (Excluding GST)
236	Notes: i) The quantities given in above item no. are tentative only and shall not be considered to be binding. The quantities may be increased, decreased or deleted as per the actual site requirement and instructions / recommendations of Owner. The unit rate shall be operated to work out the final payment to the contractor. ii) Above price shall be inclusive of all type of taxes & duties, transit insurance during transportation & other insurance etc. including all financial & commercial implication as per the tender document. No other payment except as per quoted unit rate & executed quantities will be payable by the Owner. iii) Safe storage of transported linepipe till installation, reconciliation & handingover to client shall be part of the above item. Contractor has been advised to quote accordingly.				
237	Pipeline Laying Liaisoning & Co-ordination (including utility crossing) and obtaining permission / NOC from the statutory / concerned authorities. Assistance in ROU opening & closing and their maintenance/ management.				
238	Submitting request for (after obtaining the letter from client) permission, follow up, assisting in site inspections / route survey / site report making/making site inspection drawings, submitting at designated offices, resubmission after correction, modification if required, soft and hard copy in nos. as required /if required in sizes, and collecting permission from the statutory authorities including NHAI, PWD, Railways, Irrigation, Forest, Municipal Corporation, District administration, River Authority, SEZ etc. Obtaining work permits /NOC from various statutory authorities having jurisdiction before execution of the work and complying with all stipulations /conditions/recommendations of the said authorities. Only statutory fees shall be paid by the owner. Assistance in required length and width/restricted width of ROU opening & closing and their maintenance/ management both side of the crossings.				
239	For 8" Pipeline	2500.00	Meter	28.40	71,000
240	Note : Execution of above item is subjected to the requirement of site.				
241	CIVIL WORKS				
242	EARTH WORK IN EXCAVATION/ SITE GRADING AND BACKFILLING				
243	Earth work in excavation /site grading in all kinds of soil including soft rock in any plan dimension up to required depth including backfilling of excavated earth at any location in layers of 300mm and compacted up to 95% to its MDD at all heights and depths. Surplus and unserviceable earth shall be disposed up to any lead in all conditions. Soil to be levelled and neatly dressed complete in all respect as per scope of work, detailed construction drawings, technical specifications and direction of the Engineer-in-Charge.	2.00	CUM	426.00	852
244	Note:- 1. This Rate shall be applicable only for excavation which are not included as a part of respective SOR Item. 2. The Contractor shall take into account in his quoted rate the provision for excess excavation required for necessary working space, cutting in slopes etc., which may be required for excavation and other allied works and refilling the side slopes and working space in layers as per requirement. 3. Rate to include cost of all labour, tools, tackles, equipment, hire charges, shoring, bailing and pumping out water as required etc. with all bye works and sundry works complete in all respects. 4. NET CUM of excavated quantity in CUM shall be measured for payment. 5. To be read in conjunction with Particular Job Specification.				
245	BRICK WORK				
246	Providing and laying brick work with brick class designation M-5.0 of IS:1077 in Cement Mortar 1:4 (Cement : 4 sand) in steps, load bearing structures, drains, or at any other location at all depths & height for all leads including providing required finishes, curing, scaffolding, etc., complete as per specifications and drawings with all bye-works as per direction of the Engineer-in-charge.	2.00	CUM	4,118.00	8,236
247	Note:- 1. Rate to include cost of all labour, tools, tackles, equipment, hire charges, supply of all materials such as minimum 43 grade cement (OPC), bricks, finishes, bitumen, other minor construction materials, shuttering, staging, masonry work, excavation, PCC M10, plastering with 15 mm thick cement plaster on exposed faces with 1:4 cement mortar (1 cement : 4 Sand), painting with bitumen etc. as per requirement with all bye-works and sundry works complete as per drawings. 2. To be read in conjunction with Particular Job Specification.				
248	PLAIN CEMENT CONCRETE				
249	Supplying and laying plain cement concrete of grade M 10 with stone aggregate 40mm down grade (including shuttering if required) in all types of concrete works including levelling courses below foundations, mass concrete works, chambers, cable trench, under floors and any other locations, at all levels and locations (which are not covered as part of composite items) as per drawings, specifications and directions of the Engineer-in-charge.	2.00	CUM	4,146.40	8,293
250	Note :- 1. Rate to include cost of all labour, tools, tackles, equipment, hire charges, supply of all materials, shuttering in all conditions etc. with all bye works and sundry works. 2. To be read in conjunction with Particular Job Specification.				
251	REINFORCED CEMENT CONCRETE				
252	Providing and laying Reinforced Cement Concrete of grade M-25 with 20mm and down grade crushed stone aggregate in all types of structures like foundations, beam, columns, pedestals, pedestal bases, pipe supports, sleepers, cable trench, RCC retaining wall foundation for boundary wall etc. including excavation, PCC M10 in mud mat, shuttering, construction joints, bitumen painting on surfaces in contact with soil, supplying and fixing MS inserts, finishes etc. at all depths and levels complete as per drawings, specifications and directions of the Engineer-in-charge.	2.00	CUM	5,964.00	11,928
253	Note :- 1. Rate to include cost of all labour, tools, tackles, equipment, hire charges, supply of all materials such as minimum 43 grade OPC cement including sulphate resistant cement for sub-structures, inserts, bolts, conduits, bitumen, excavation, PCC M-10 in mud mat, other minor construction materials, shuttering, staging, testing of concrete, curing etc. except reinforcement steel with all bye works and sundry works complete. 2. To be read in conjunction with Particular Job Specification.				
254	REINFORCEMENT STEEL				



SCHEDULE OF RATES
LAYING OF UNDERGROUND STEEL PIPELINE INCLUDING ASSOCIATED WORKS IN CUTTACK / KHORDA (BHUBANESWAR) GAS UNDER CGO SIX CITIES PROJECT FOR M/s GAIL (I) LIMITED
M/s Ritu Engineering & Construction, Bhubaneswar

Sl. No.	Item Description	Quantity	Units	INR	
				Unit Rate (Excluding GST)	Amount (Excluding GST)
255	Supplying and Fabricating and Fixing in position HYSD Steel Reinforcements/ TMT Grade Fe-415/Fe 500D conforming to IS1786-2008 at all levels and positions including the Cost of transportation, Straightening, Cutting, Bending, Cranking, Binding, Welding, Provision of necessary Chairs and Spacers, Preparation of bar bending schedule, getting the same approved by EIC etc., complete as per Drawings and Specifications and including Cost of binding wire, Labour etc., all complete in all respects as per scope of work, detailed construction drawings, technical specifications and direction of Engineer-in-charge. The Chairs and Spacer Bars provided will not be measured for payment.	0.50	MT	59,640.00	29,820
256	Note :- 1. Rate to include cost of all labour, tools, tackles, equipment, hire charges, supply of all materials such as steel Reinforcement, binding wire and other minor construction materials, testing etc. all bye works and sundry works. 2. Chairs, Laps, Spacers, Wastage etc. shall be to contractor's account. 3. To be read in conjunction with Particular Job Specification.				
257	CONCRETE PAVEMENT				
258	Providing and laying reinforced cement concrete pavement 150 mm thick in M-25 grade with 20 mm and down grade crushed stone aggregate in pavement, including earthwork in excavation, preparation of base (i.e. compacted subgrade, 200 thk sand and 100 thk PCC M-10 grade), leaving pockets if necessary, making recess, projections, fixing inserts conduit pipes (GI, PVC, HDPE, etc.) laying in alternate panels, filling the gaps between the panels with bitumen sand mix filler material etc., making slopes, finishing edges, leaving bars for pedestals & sleepers including providing sand fill isolation, shuttering, providing and fixing reinforcing steel, curing, chipping and modification works etc. as specified in any shape, thickness, position and finishing the top surface smooth as per requirement etc. all complete as per drawings, specifications and directions of the Engineer-in-charge.				
259	150mm thick in Pavements in Process Areas (Type - I)	25.00	SQM	1,505.20	37,630
260	Note :- 1. Rate to include cost of all labour, tools, tackles, equipment, hire charges, supply of all materials, providing and fixing reinforcement steel, shuttering, earthwork in excavation and backfilling using serviceable earth in all conditions, preparation of base, etc. with all bye works and sundry works. Cost of works towards pipe supports & sleepers being raised from pavement is covered under respective RCC items. 2. To be read in conjunction with Particular Job Specification.				
261	VALVE PIT				
262	Construction and handing over of Brick Valve Pit as per tender drawing, technical specification and direction of engineer-in-charge complete in all respect. Scope of work shall be as per tender drawing.				
263	Construction and handing over of RCC Valve Pit of approx. 1.8m x 1.8 m in size (internal dimension) as per technical specification and direction of engineer-in-charge complete in all respect. Scope of work shall be as per Sketch attached with the tender.	1.00	Nos	88,040.00	88,040
264	Construction and handing over of RCC Valve Pit of approx. 2.0m x 2.0 m in size (internal dimension) as per technical specification and direction of engineer-in-charge complete in all respect. Scope of work shall be as per Sketch attached with the tender.	1.00	Nos	110,760.00	110,760
265	STEEL STRUCTURAL WORKS				
266	Steel structure Fabrication				
267	Supplying, Fabricating & Erecting in position steel structures fabricated out of MS Girders, channels, Tees, angle, flats, plate, square hollow sections pipes etc. conforming to IS:2062 and/or from pipes conforming to IS:1161 for structural purpose for cascade supporting structure, loading/unloading platform, Gratings for platform, catladder, handrails, hoardings for sinages, Lcv stand, etc. of any size/dia for required design including cutting, welding, bolting, hoisting, fixing in position, including application of one coat of primer at shop and second coat of primer at site after erection and two coats of finishing paint at site. The work is to be completed in all respect as per specification, scope of work, detailed construction drawings and directions of the Engineer-in-charge.	200.00	KG	71.00	14,200
268	[Rate to include cost of all labour, nut, bolts, tools, tackles, hire charges royalties, levies, transportation, scrap value, gas cutting, welding, other consumables, paints, compressed air, water, electric power etc. all complete.]				
269	Providing and fixing Fencing Structure				
270	Supplying, fabricating & fixing steel structural fencing fabricated from pipes conforming to IS:1161 and plates conforming to IS:2062 & fixing of GI weldmesh made from 3mm GI wire @ 75 mm bothways to structural steel frame by means of welding/bolting, including applying two coats of approved quality of synthetic enamel paint over a priming coat of in approved shade including supply of all raw materials, bolts, electrodes, transportation, including making pokets & pouring with PCC (1:2:4) in of block 500x500x500 for fixing of posts etc complete as per enclosed drawing, technical specifications, scope of works and directions of the Engineer-In-Charge.				
271	Fencing height 2.1m	50.00	RM	2,073.20	103,660
272	Notes:- 1) The quantities indicated are estimated values and hence are approximate. Final payment will be made based on actual quantities to be certified by the Purchaser. 2) The cost of MS bolts (permanent and service), washers, electrodes, putty, gases, cost of straightening the raw materials, cutting of flats from plates and providing splices, paints, tools, plants, etc., as required for the work shall be deemed to be included in the quoted rates. 3) All handling and transport charges of raw materials and fabricated structures including double handling, as required, for completion of work in accordance with 4) Time schedule, are deemed to be included in the quoted rates 5) All accessories like MS tower bolts, MS Pivot, MS Wheels, MS Tee section, locking arrangement etc. shall be measured by weight only. 6) Contractor shall ensure proper alignment and smooth operation of Gate				
	Total Excluding GST				16,336,844
	Total Including GST				19,277,476