



Lyons Engineering Pvt. Ltd.

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An ISO 9001:2015 Certified Co.

Reg. No.U74140DL2012PTC237859

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Ref: LEPL/GAIL/2022/40/4

19.01.2022

M/s GAIL (India) Limited,  
Jubilee Tower,  
B- 34 & 35, Sector - 01  
Noida, UP (India)

Kind Attention: Mr. Jagannath (DGM-PE)

Subject: Submission of Award Recommendation – ARC Laying Tender ref : 040-LYONS-GAIL-018 for Western Region

Dear Sir,

Please find enclosed herewith Award Recommendation for the subject Tender.

Lyons Engineering Pvt. Ltd.

M. Girish Kumar  
[GM – C&P]



Certificate Registration No. **99 100 20576**  
Date of Initial certification: **2019-12-20**



**AWARD RECOMMENDATION  
ARC LAYING TENDER FOR WESTERN REGION**

**AWARD RECOMMENDATION**

|      |            |                      |          |         |          |
|------|------------|----------------------|----------|---------|----------|
|      |            |                      |          |         |          |
| 0    | 19.01.2022 | Award Recommendation | AR       | GK      | SB       |
| Rev. | Date       | Subject of revision  | Prepared | Checked | Approved |

A handwritten signature in blue ink, appearing to be 'GK' followed by a flourish.



**AWARD RECOMMENDATION  
ARC LAYING TENDER FOR WESTERN REGION**

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A handwritten signature in blue ink, appearing to be 'D. N. S.', is located at the bottom left of the page.



**AWARD RECOMMENDATION  
ARC LAYING TENDER FOR WESTERN REGION**

**A. SUMMARY SHEET**

|     |                                                     |                                                                                                                                                                                                                                                                                                                         |
|-----|-----------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.  | Brief Description of Project                        | <b>ARC LAYING TENDER WESTERN REGION</b>                                                                                                                                                                                                                                                                                 |
| 2.  | Bid Document / Tender No. & date                    | E-TENDER REF : 2021_GAIL_100163_1 ; CONTRACT NO: 040-LYONS-GAIL-018                                                                                                                                                                                                                                                     |
| 3.  | Scope of Work                                       | LAYING OF PIPELINE AND ASSOCIATED WORKS FOR CGD CONNECTIVITIES IN WESTERN REGION                                                                                                                                                                                                                                        |
| 4.  | Mode of Tendering                                   | LIMITED Domestic Competitive Bidding                                                                                                                                                                                                                                                                                    |
| 5.  | Price Bid opening approval from GAIL                | Vide mail dtd. 18.1.2022                                                                                                                                                                                                                                                                                                |
| 6.  | Price Bid opening scheduled time and date           | At 11 Hrs on 18.1.2022 through Video Conference                                                                                                                                                                                                                                                                         |
| 7.  | Actual Price Bid opening time and date              | At 11.00 Hrs on 18.1.2022 through Video Conference                                                                                                                                                                                                                                                                      |
| 8.  | L1 Price Vs Cost Estimate                           | Placed at ANNEXURE -I                                                                                                                                                                                                                                                                                                   |
| 9.  | Original Price Bid of All Bidders                   | Placed at ANNEXURE – II- in Excel through E-Mail                                                                                                                                                                                                                                                                        |
| 10. | List of Bidders whose PBO was recommended by Lyons  | 1. MAS Constructions<br>2. Sakthi Engineers                                                                                                                                                                                                                                                                             |
| 11. | List of Bidders Whose PBO has been Approved by GAIL | 1. MAS Constructions<br>2. Sakthi Engineers                                                                                                                                                                                                                                                                             |
|     | List of Bidders Whose Price Bid was Opened          | 1. MAS Constructions<br>2. Sakthi Engineers                                                                                                                                                                                                                                                                             |
|     | Status of Bidders                                   | All the Bidders have submitted their Price Bid                                                                                                                                                                                                                                                                          |
|     | Validity of bid (3 months) i.e. till 9.4.2022       | Complied by the bidders                                                                                                                                                                                                                                                                                                 |
|     | Cost Estimate                                       | As per Annexure I                                                                                                                                                                                                                                                                                                       |
|     | Completion Period                                   | Contract Period : The proposed contract rate shall be for a period of two (02) years from the date of issue of Fax of Acceptance (FOA) and the same may be extended for Six (06) months thereafter at the same rates, terms and conditions.<br><br>Delivery period : Maximum 24 weeks from the date of issuance of LOI. |



**AWARD RECOMMENDATION  
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**B. APPROVAL FOR PRICE BID OPENING**

Based on the techno-commercial evaluation of the bids, PBO recommendation was forwarded to GAIL vide Email Dated 15.1.2022 for opening the price bid of above mentioned techno-commercially qualified bidders. GAIL's approval for Price Bid opening was received by email dtd. 18.1.2022 for opening of price bids. Accordingly, intimation was sent to all the bidders through email dated 18.1.2022 for attending the price bid opening, scheduled at 11 Hrs on 18.1.2022 through Video Conference. The price bid was opened on schedule date & time.

**C. PRICE EVALUATION OF BIDS**

Price bid evaluation has been done as per tender conditions.

The evaluation has been done based on clause no. clause no. 32 of ITB Section-II of tender document.

**D. PRICE QUOTED BY BIDDERS**

| SI. No. | BIDDER                   | PRICE QUOTED (INCLUSIVE OF ALL TAXES AND DUTIES AND GST) |
|---------|--------------------------|----------------------------------------------------------|
| 1       | <b>SAKTHI ENGINEERS</b>  | <b>7,29,97,089.20</b>                                    |
|         | <b>STATUS</b>            | <b>L1</b>                                                |
| 2       | <b>MAS CONSTRUCTIONS</b> | <b>12,64,32,221.00</b>                                   |
|         | <b>STATUS</b>            | <b>L2</b>                                                |

**E. COMPARISON OF L1 PRICE WITH COST ESTIMATE**

| SI. No. | Description                                      | L1 BIDDER PRICE (INCLUSIVE OF ALL TAXES AND DUTIES AND GST) | COST ESTIMATE (INCLUSIVE OF ALL TAXES AND DUTIES AND GST) | VARIANCE          | L1 Bidder               |
|---------|--------------------------------------------------|-------------------------------------------------------------|-----------------------------------------------------------|-------------------|-------------------------|
| 1.      | <b>Comparison of L1 Price with Cost Estimate</b> | <b>7,29,97,089.20</b>                                       | <b>11,12,67,318.85</b>                                    | <b>(-) 34.39%</b> | <b>SHAKTI ENGINEERS</b> |

The total approved Estimate for this Project is Rs. 11,15,03,318.85. For item No. B 006050 an amount of Rs. 2,00,000.00 is considered in Cost Estimate for which bidder was asked not to quote since the expenses are for Transportation of material for nominal quantities from despatch point to site on "TO PAY BASIS" and legal RTO



**AWARD RECOMMENDATION  
ARC LAYING TENDER FOR WESTERN REGION**

charges due to the ODC consignments. However as per Clause No. 2.5.7 of Tender, the amount mentioned is 1,00,000.00. In the earlier Tenders the amount was 1,00,000/- and for this Tender the amount was revised to 2,00,000 since with Rs. 1,00,000/- the expenses was getting covered. Inadvertently the same was not updated in Tender. Since bidder is not supposed to quote for this item, total estimate has been reduced by 2,36,000/- (inclusive of GST) for evaluation purpose to provide a realistic comparison.

L1 Bidder has quoted 34.39% lower than the Cost Estimate. Lyons Estimate is based on the past awarded rates of similar Tenders with same scope of work and hence the estimate is correct. Bidder have quoted very competitive rates to secure the order.

**F. INSUFFICIENT COMPETITION**

Since only 2 Bidders are there for this Tender insufficient competition is there. However since the price quoted by L1 bidder is very competitive and less than 34.39 of the cost estimate, order can be placed on the L1 Bidder thus complying with Clause 4.16 of C&P Procedure.

**G. PUBLIC PROCUREMENT POLICY**

Not applicable in this Tender.

**H. RECOMMENDATION**

Based on the above evaluation and tender clause No. 32 of ITB we hereby conclude as follows;

Order may be placed on L1 Bidder M/s Shakti Engineers for an amount of Rs. 6,18,61,940.00 without GST and Rs. 7,29,97,089.20 with GST@ 18%..

**For Lyons Engineering Pvt.Ltd.**

**M GIRISH KUMAR**  
**General Manager – C&P**

| <p align="center"> <b>Government eProcurement System</b><br/> <b>Created By: MALEPPURATH GIRISH KUMAR</b><br/> <b>Created Date/Time: 18-Jan-2022 11:21 AM</b><br/> <b>Tender Title: Construction of Steel Pipelines and Associated facilities for CGD Connectivities for Western Region (Gujarat, Madhya Pradesh and Maharashtra) on ARC Basis</b><br/> <b>Tender ID: 2021_GAIL_100163_1</b><br/> <b>Tender Inviting Authority: GAIL (India) Ltd.</b><br/> <b>Name of Work: Construction of Steel Pipelines and Associated facilities for CGD Connectivities in Western Region viz. Gujarat, Madhya Pradesh and Maharashtra on ARC Basis</b><br/> <b>Contract No: 040-LYONS-GAIL-018</b> </p> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |           |       |                |                                   |                              |               |        |           |
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| <b>SCHEDULE OF WORK / ITEM(S)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |           |       |                |                                   |                              |               |        |           |
| Sl.No                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Description of Work / Item(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | No.of Qty | Units | Estimated Rate | MAS<br>CONSTRUCTIONS(GSTN-<br>NA) | SHAKTI<br>ENGINEERS(GSTN-NA) | COST ESTIMATE |        | Variance  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |           |       |                | Rate                              | Amount                       | Rate          | Amount | AHR Items |
| 1.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | SECTION-A (MAIN LINE WORKS)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |           |       |                |                                   |                              |               |        |           |
| 2.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | PIPELINE LAYING / INSTALLATION (CARBON STEEL PIPES)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |           |       |                |                                   |                              |               |        |           |
| 3.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Receiving and taking over, as defined in the specifications, handling, loading, transportation and unloading of Owner-supplied 3-layer PE coated line pipes along with associated fittings and valves 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 Company-supplied materials, including line pipes, at the time of taking over, laying / installation of coated line pipes, associated fittings (I,J,barred tee etc) and accessories, including execution of all works, taking over, handling, including loading and unloading, arrangement of all additional land required for Contractor's storage, fabrication, procurement and supply of all 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 (EIC), including, but not limited to, carrying out following works: |           |       |                |                                   |                              |               |        |           |
| 4.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 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. Shifting of all obstructions within the ROU / pipeline route alignment, viz. electrical lines / poles, telephone lines / poles, coordination with concerned authorities and obtaining permissions from these authorities.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |           |       |                |                                   |                              |               |        |           |
| 5.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Trenching to all depths by excavation in all types of soils except hard rock, chiselling or otherwise cutting different types of pavement, footpath, roads 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 and optical fibre conduit as per the relevant standard / specification etc. [The minimum depth of the top of pipeline shall be 1.0m measured from top of pipeline coating to the top of undisturbed surface of the soil or as per Special Condition of Contract (SCC) / OSID - 141 OISD - 226]. Dewater of trenches if required as per site condition.<br>Note : Extra payment on account of excavation in hard rock will be as per SOR item No. A00120 based on actual measurement for hard rock encountered as certified by the EIC.                                                                                                                                                                                                                                                                                                                                                                                    |           |       |                |                                   |                              |               |        |           |

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| <p align="center"> <b>Government eProcurement System</b><br/> <b>Created By: MALEPPURATH GIRISH KUMAR</b><br/> <b>Created Date/Time: 18-Jan-2022 11:21 AM</b><br/> <b>Tender Title: Construction of Steel Pipelines and Associated facilities for CGD Connectivities for Western Region (Gujarat, Madhya Pradesh and Maharashtra) on ARC Basis</b><br/> <b>Tender ID: 2021_GAIL_100163_1</b><br/> <b>Tender Inviting Authority: GAIL (India) Ltd.</b><br/> <b>Name of Work: Construction of Steel Pipelines and Associated facilities for CGD Connectivities in Western Region viz. Gujarat, Madhya Pradesh and Maharashtra on ARC Basis</b><br/> <b>Contract No: 040-LYONS-GAIL-018</b> </p> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |           |       |                |                                   |                              |               |  |          |           |  |
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| <b>SCHEDULE OF WORK / ITEM(S)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |           |       |                |                                   |                              |               |  |          |           |  |
| Sl.No                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Description of Work / Item(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | No.of Qty | Units | Estimated Rate | MAS<br>CONSTRUCTIONS(GSTN-<br>NA) | SHAKTI<br>ENGINEERS(GSTN-NA) | COST ESTIMATE |  | Variance | AHR Items |  |
| 6.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 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.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |           |       |                |                                   |                              |               |  |          |           |  |
| 7.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Stringing of line pipes along ROU including providing straw / sand / soft soil bags, soft padding / sand padding.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |           |       |                |                                   |                              |               |  |          |           |  |
| 8.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Checking, cleaning, aligning, bending, cutting and bevelling (as required) of pipes for welding & field adjustments including pipe fittings, welding, carrying out non-destructive testing of welds as required including 100% radiography by X-ray/Gamma ray as per specifications in piping of all types and thickness and providing all requisite equipment, labour, supervision, materials, films, consumables, all facilities & personnel to process, develop, examine and interpret radiographs & other tests as required, carrying out repairs of weld-joints found defective by EIC, carrying out re-radiography and other tests as required on repaired joints, etc. as mentioned in SCC and particular job specifications. |           |       |                |                                   |                              |               |  |          |           |  |
| 9.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Installation of carrier line pipe at all crossings viz road, cartrack, pathway, drain, nallah & minor water crossings, etc. at designated depth by open cut (including laying of casing pipe) (except at HDD / Boring cased crossings which is covered separately elsewhere in this SOR).                                                                                                                                                                                                                                                                                                                                                                                                                                            |           |       |                |                                   |                              |               |  |          |           |  |
| 10.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Coating of all weld joints, long radius bends, etc.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |           |       |                |                                   |                              |               |  |          |           |  |
| 11.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Installation / lowering the pipeline in trench to required depth, placement of PE / PVC warning mat over the pipeline along the complete route, pre-padding and post padding around pipeline (as per standard) with soft soil/sand including supply of padding material/rock shield , PE / PVC warning mat, backfilling with available / borrowed earth, approved excavated material and /or other suitable soil by crowning.                                                                                                                                                                                                                                                                                                        |           |       |                |                                   |                              |               |  |          |           |  |
| 12.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Supply and installation of slope breakers, bank protection, wherever required and as directed by EIC.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |           |       |                |                                   |                              |               |  |          |           |  |
| 13.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | All tying-in, including the tie-ins with adjacent section of the pipeline.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |           |       |                |                                   |                              |               |  |          |           |  |
| 14.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Lowering the pipelines in trench, providing required depth and backfilling over and around the pipeline with available, approved excavated material as per specification and / or other suitable soil approved by EIC.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |           |       |                |                                   |                              |               |  |          |           |  |
| 15.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Select soil for backfilling, if required, as per specification including supply of graded sand / rock / other types of soil in place of available excavated material and / or other suitable soil, including transportation of such special backfill material over all distances, complete.                                                                                                                                                                                                                                                                                                                                                                                                                                          |           |       |                |                                   |                              |               |  |          |           |  |
| 16.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Protective coating of 450 microns thick 2-component high built coal tar epoxy (applied with the help of minimum 3 coats) including supply of coating & other materials duly approved by Owner for all piping valves, fittings, structural steels, etc. for buried installation and inside the valve-pit.                                                                                                                                                                                                                                                                                                                                                                                                                             |           |       |                |                                   |                              |               |  |          |           |  |



|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |           |       |                |                                   |            |                              |            |               |              |          |           |
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| SCHEDULE OF WORK / ITEM(S)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |           |       |                |                                   |            |                              |            |               |              |          |           |
| Sl.No                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Description of Work / Item(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | No.of Qty | Units | Estimated Rate | MAS<br>CONSTRUCTIONS(GSTN-<br>NA) |            | SHAKTI<br>ENGINEERS(GSTN-NA) |            | COST ESTIMATE |              | Variance | AHR Items |
| 17.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Carrying out air cleaning, pigging, flushing, cleaning and hydrostatic testing of complete pipeline with required quantity of corrosion inhibitor including pre-testing of designated sections complete as per specification and approved by EIC 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 SOR), re-testing after rectification, dewatering after successful completion of hydrotesting of entire section and as approved by EIC. |           |       |                |                                   |            |                              |            |               |              |          |           |
| 18.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Swabbing of the complete pipeline section and the associated facilities being installed to the specified acceptance criteria, carrying out pre-commissioning works, providing assistance during the complete duration of commissioning operations for entire pipeline and making the entire pipeline system ready for commissioning including supply of all equipment, manpower, consumables, pigging and Nitrogen purging and preservation maintaining Nitrogen column of minimum 5% of pipeline volume (payment for supply of Nitrogen shall be paid seperately as per SOR no-B0011000), Materials for all temporary works and performing all associated works, complete as per the relevant specifications, other provisions of Contract Document and instructions of EIC.                                                                                                                                                           |           |       |                |                                   |            |                              |            |               |              |          |           |
| 19.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Final clean-up of right-of-use and disposal of debris and surplus material to designated disposal areas and reinstalling the area to its earlier state as per satisfaction of concerned authority and as directed by EIC.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |           |       |                |                                   |            |                              |            |               |              |          |           |
| 20.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Preparation of as-built drawings, pipe-books (2 soft copy in AutoCad format in CD, 2 soft-copies in PDF format (in CD) and 4 hard-copies of pipe-book) All the works shall be executed in accordance with the provision of Contract including carrying out all temporary / ancillary / auxiliary works required for the performance of the works and all other acts, deeds, matters and things necessary to make the pipeline ready for precommissioning activities.                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |           |       |                |                                   |            |                              |            |               |              |          |           |
| 21.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Line pipe laying & installation with radiography                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |           |       |                |                                   |            |                              |            |               |              |          |           |
| 22.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Specified Size (NB)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |           |       |                |                                   |            |                              |            |               |              |          |           |
| 23.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 100 (4"), diff. grades & thickness (applicable for Connectivity cumulative length of mainline upto 200 meters)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 1000.00   | Meter |                | 4500.00                           | 4500000.00 | 2800.00                      | 2800000.00 | 5115.35       | 51,15,350.00 | -45%     |           |
| 24.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 100 (4"), diff. grades & thickness (applicable for Connectivity cumulative length of mainline upto 500 meters)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 250.00    | Meter |                | 4000.00                           | 1000000.00 | 2700.00                      | 675000.00  | 4603.81       | 11,50,952.50 | -41%     |           |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |           |               |                |                               |            |                              |            |               |              |          |           |
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| Government eProcurement System<br>Created By: MALEPPURATH GIRISH KUMAR<br>Created Date/Time: 18-Jan-2022 11:21 AM<br>Tender Title: Construction of Steel Pipelines and Associated facilities for CGD Connectivities for Western Region (Gujarat, Madhya Pradesh and Maharashtra) on ARC Basis<br>Tender ID: 2021_GAIL_100163_1<br>Tender Inviting Authority: GAIL (India) Ltd.<br>Name of Work: Construction of Steel Pipelines and Associated facilities for CGD Connectivities in Western Region viz. Gujarat, Madhya Pradesh and Maharashtra on ARC Basis<br>Contract No: 040-LYONS-GAIL-018 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |           |               |                |                               |            |                              |            |               |              |          |           |
| SCHEDULE OF WORK / ITEM(S)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |           |               |                |                               |            |                              |            |               |              |          |           |
| Sl.No                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Description of Work / Item(s)                                                                                                                                                                                                                                                                                                                                                                                                                                         | No.of Qty | Units         | Estimated Rate | MAS<br>CONSTRUCTIONS(GSTN-NA) |            | SHAKTI<br>ENGINEERS(GSTN-NA) |            | COST ESTIMATE |              | Variance | AHR Items |
| 25.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 100 (4"), diff. grades & thickness (applicable for Connectivity cumulative length of mainline upto 2000 meters)                                                                                                                                                                                                                                                                                                                                                       | 550.00    | Meter         |                | 3500.00                       | 1925000.00 | 2400.00                      | 1320000.00 | 4143.43       | 22,78,886.50 | -42%     |           |
| 26.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 100 (4"), diff. grades & thickness (applicable for Connectivity cumulative length of mainline beyond 2000 meters)                                                                                                                                                                                                                                                                                                                                                     | 2500.00   | Meter         |                | 3000.00                       | 7500000.00 | 1800.00                      | 4500000.00 | 3729.09       | 93,22,725.00 | -52%     |           |
| 27.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 200 (8"), diff. grades & thickness (applicable for Connectivity cumulative length of mainline upto 200 meters)                                                                                                                                                                                                                                                                                                                                                        | 20.00     | Meter         |                | 5000.00                       | 100000.00  | 3500.00                      | 70000.00   | 6974.53       | 1,39,490.60  | -50%     |           |
| 28.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 200 (8"), diff. grades & thickness (applicable for Connectivity cumulative length of mainline upto 500 meters)                                                                                                                                                                                                                                                                                                                                                        | 210.00    | Meter         |                | 4500.00                       | 945000.00  | 3000.00                      | 630000.00  | 6340.48       | 13,31,500.80 | -53%     |           |
| 29.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 200 (8"), diff. grades & thickness (applicable for Connectivity cumulative length of mainline beyond 500 meters)                                                                                                                                                                                                                                                                                                                                                      | 510.00    | Meter         |                | 4000.00                       | 2040000.00 | 2800.00                      | 1428000.00 | 5706.43       | 29,10,279.30 | -51%     |           |
| 30.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 300 (12"), diff. grades & thickness (applicable for Connectivity cumulative length of mainline upto 100 meters)                                                                                                                                                                                                                                                                                                                                                       | 10.00     | Meter         |                | 8000.00                       | 80000.00   | 5000.00                      | 50000.00   | 8808          | 88,080.00    | -43%     |           |
| 31.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 300 (12"), diff. grades & thickness (applicable for Connectivity cumulative length of mainline upto 300 meters)                                                                                                                                                                                                                                                                                                                                                       | 110.00    | Meter         |                | 7500.00                       | 825000.00  | 4500.00                      | 495000.00  | 8257.5        | 9,08,325.00  | -46%     |           |
| 32.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 300 (12"), diff. grades & thickness (applicable for Connectivity cumulative length of mainline beyond 300 meters)                                                                                                                                                                                                                                                                                                                                                     | 800.00    | Meter         |                | 6500.00                       | 5200000.00 | 3200.00                      | 2560000.00 | 6500          | 52,00,000.00 | -51%     |           |
| 33.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Note: (1) This item shall be applicable for the underground steel main pipeline & underground tap-off points (i.e. including arrangement for making provision for tap-off except hot tapping and their hook-up) on existing / proposed steel main pipeline to Insulating Joint at proposed Receiving / Dispatch Station;<br>(2) All crossings installed by HDD / jacking / boring shall be paid separately as per the rates quoted for the same elsewhere in the SOR. |           |               |                |                               |            |                              |            |               |              |          |           |
| 34.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Excavation in hard rock                                                                                                                                                                                                                                                                                                                                                                                                                                               | 30.00     | Cu. M         |                | 2500.00                       | 75000.00   | 1200.00                      | 36000.00   | 4052.06       | 1,21,561.80  | -70%     |           |
| 35.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Supply and installation of Concrete Slab / HT sheeting for Protection of Pipeline against underground HT cables /over head HT lines as per drawing and specification attached with tender document                                                                                                                                                                                                                                                                    | 20.00     | Running Meter |                | 650.00                        | 13000.00   | 800.00                       | 16000.00   | 3779.37       | 75,587.40    | -79%     |           |
| 36.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | INSTALLATION OF CARRIER PIPE CROSSINGS BY HDD METHOD AT CROSSING WITHOUT CASING PIPE in all types of soils i.e. normal soil/soft rock/murram etc. except hard rock                                                                                                                                                                                                                                                                                                    |           |               |                |                               |            |                              |            |               |              |          |           |

| Government eProcurement System<br>Created By: MALEPPURATH GIRISH KUMAR<br>Created Date/Time: 18-Jan-2022 11:21 AM<br>Tender Title: Construction of Steel Pipelines and Associated facilities for CGD Connectivities for Western Region (Gujarat, Madhya Pradesh and Maharashtra) on ARC Basis<br>Tender ID: 2021_GAIL_100163_1<br>Tender Inviting Authority: GAIL (India) Ltd.<br>Name of Work: Construction of Steel Pipelines and Associated facilities for CGD Connectivities in Western Region viz. Gujarat, Madhya Pradesh and Maharashtra on ARC Basis<br>Contract No: 040-LYONS-GAIL-018 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |           |       |                |                            |            |                           |            |               |              |          |           |
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| SCHEDULE OF WORK / ITEM(S)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |           |       |                |                            |            |                           |            |               |              |          |           |
| Sl.No                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Description of Work / Item(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | No.of Qty | Units | Estimated Rate | MAS CONSTRUCTIONS(GSTN-NA) |            | SHAKTI ENGINEERS(GSTN-NA) |            | COST ESTIMATE |              | Variance | AHR Items |
| 37.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | "Complete work of installation of carrier pipe at crossings (between the limits as defined in approved drawings. Drawing preparation and obtaining the approval on the same is included in the scope of Contractor) by HDD method for roads, nallahs, drains and canals, wherever required, in all types of soils i.e. normal soil/soft rock/murram etc. except hard rock, including "receiving and taking over" Owner-supplied 3-layer PE coated line pipes from Owner's designated place of issue / dump-site(s) and transportation to Contractor's stock-yard / workshop / work-site including all handling loading, unloading, aligning, etc. supply of all Contractor-supplied materials, manpower, equipment, consumable, other resources and acquiring the required land for storage, fabrication, including string preparation of pipes, welding, welding repair, radiography, coating of field joints with special type Heat Shrink Sleeve and repair of pipeline coating with special repair patch materials as per specification, strapping of HDPE conduit with main pipeline for laying / blowing of OFC cables, pre-testing, etc. of complete string made for crossing access for Contractor, etc. and execution of, but not limited to, following works in accordance with the specifications and instructions of EIC, and as per all provisions of Contract Document." |           |       |                |                            |            |                           |            |               |              |          |           |
| 38.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Pre-construction survey based on site-visit, carrying out all additional topographical, hydrological & geo-technical surveys as required for design & construction of crossing, collection of data (if reqd.) from concerned authority including design & detailed engineering and making of crossing drawings for getting their approval from concerned authority / EIC, getting work permit / NOC for crossings as well as utility crossings (if any) encountered during crossings prior to start the execution of work.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |           |       |                |                            |            |                           |            |               |              |          |           |
| 39.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Drilling to required depth including maintenance of drill hole in all types of strata (in all types of soils i.e. normal soil/soft rock/murram etc. except hard rock), all depth to accommodate the pipeline at all conditions encountered during crossing by approved HDD methods procedure for providing minimum cover specified in code / specification or as decided by concerned authority, whichever is more.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |           |       |                |                            |            |                           |            |               |              |          |           |
| 40.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Backfilling of the ditch / trench including restoration and cleanup of area and all other works including cleaning, final hydrotesting, etc. alongwith mainline works (as mentioned in clause no. A00100 above) required as per specification, approved drawings, calculations, methods and to the satisfaction of EIC and / or as directed by concerned authority.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |           |       |                |                            |            |                           |            |               |              |          |           |
| 41.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Installation of 4" NB 3LPE Coated Carbon Steel Pipeline by HDD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 200.00    | Meter |                | 20000.00                   | 4000000.00 | 15000.00                  | 3000000.00 | 16465.24      | 32,93,048.00 | -9%      |           |
| 42.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Installation of 8" NB 3LPE Coated Carbon Steel Pipeline by HDD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 50.00     | Meter |                | 25000.00                   | 1250000.00 | 18000.00                  | 900000.00  | 19509.92      | 9,75,496.00  | -8%      |           |

| <p style="text-align: center;">Government eProcurement System<br/> Created By: MALEPPURATH GIRISH KUMAR<br/> Created Date/Time: 18-Jan-2022 11:21 AM<br/> Tender Title: Construction of Steel Pipelines and Associated facilities for CGD Connectivities for Western Region (Gujarat, Madhya Pradesh and Maharashtra) on ARC Basis<br/> Tender ID: 2021_GAIL_100163_1<br/> Tender Inviting Authority: GAIL (India) Ltd.<br/> Name of Work: Construction of Steel Pipelines and Associated facilities for CGD Connectivities in Western Region viz. Gujarat, Madhya Pradesh and Maharashtra on ARC Basis<br/> Contract No: 040-LYONS-GAIL-018</p> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |           |       |                |                               |            |                              |           |               |              |          |
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| SCHEDULE OF WORK / ITEM(S)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |           |       |                |                               |            |                              |           |               |              |          |
| Sl.No                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Description of Work / Item(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | No.of Qty | Units | Estimated Rate | MAS<br>CONSTRUCTIONS(GSTN-NA) |            | SHAKTI<br>ENGINEERS(GSTN-NA) |           | COST ESTIMATE |              | Variance |
| 43.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Installation of 12" NB 3LPE Coated Carbon Steel Pipeline by HDD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 50.00     | Meter |                | 30000.00                      | 1500000.00 | 7000.00                      | 350000.00 | 21600         | 10,80,000.00 | -68%     |
| 44.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Note: (1) The length mentioned in SOR is indicative for all the crossing to be done by HDD & locations shall be decided by GAIL / Consultant prior to start of job depending upon site-condition; (2) Payment for the length of final tied in carrier pipeline string with mainline laid by HDD are inclusive in this above item rate. No any separate payment shall be made under other clauses mentioned elsewhere.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |           |       |                |                               |            |                              |           |               |              |          |
| 45.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | INSTALLATION OF CARRIER PIPE CROSSINGS BY HDD METHOD AT CROSSING WITHOUT CASING PIPE IN HARD ROCK                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |           |       |                |                               |            |                              |           |               |              |          |
| 46.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | "Complete work of installation of carrier pipe at crossings (between the limits as defined in approved drawings. Drawing preparation and obtaining the approval on the same is included in the scope of Contractor) by HDD method for roads, nallahs, drains and canals, wherever required, in Hard rock area, including "receiving and taking over" Owner-supplied 3-layer PE coated line pipes from Owner's designated place of issue / dump-site(s) and transportation to Contractor's stock-yard / workshop / work-site including all handling loading, unloading, aligning, etc. supply of all Contractor-supplied materials, , manpower, equipment, consumable, other resources and acquiring the required land for storage, fabrication, including string preparation of pipes, welding, welding repair, radiography, coating of field joints with special type Heat Shrink Sleeve and repair of pipeline coating with special repair patch materials as per specification, strapping of HDPE conduit with main pipeline for laying / blowing of OFC cables, pre-testing, etc. of complete string made for crossing access for Contractor, etc. and execution of, but not limited to, following works in accordance with the specifications and instructions of EIC, and as per all provisions of Contract Document." |           |       |                |                               |            |                              |           |               |              |          |
| 47.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Pre-construction survey based on site-visit, carrying out all additional topographical, hydrological & geo-technical surveys as required for design & construction of crossing, collection of data (if reqd.) from concerned authority including design & detailed engineering and making of crossing drawings for getting their approval from concerned authority / EIC, getting work permit / NOC for crossings as well as utility crossings (if any) encountered during crossings prior to start the execution of work.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |           |       |                |                               |            |                              |           |               |              |          |
| 48.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Drilling to required depth including maintenance of drill hole in Hard rock area, all depth to accommodate the pipeline at all conditions encountered during crossing by approved HDD methods procedure for providing minimum cover specified in code / specification or as decided by concerned authority, whichever is more.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |           |       |                |                               |            |                              |           |               |              |          |

| Government eProcurement System<br>Created By: MALEPPURATH GIRISH KUMAR<br>Created Date/Time: 18-Jan-2022 11:21 AM<br>Tender Title: Construction of Steel Pipelines and Associated facilities for CGD Connectivities for Western Region (Gujarat, Madhya Pradesh and Maharashtra) on ARC Basis<br>Tender ID: 2021_GAIL_100163_1<br>Tender Inviting Authority: GAIL (India) Ltd.<br>Name of Work: Construction of Steel Pipelines and Associated facilities for CGD Connectivities in Western Region viz. Gujarat, Madhya Pradesh and Maharashtra on ARC Basis<br>Contract No: 040-LYONS-GAIL-018 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |           |       |                |                            |           |                           |           |               |             |          |           |  |
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| SCHEDULE OF WORK / ITEM(S)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |           |       |                |                            |           |                           |           |               |             |          |           |  |
| Sl.No                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Description of Work / Item(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | No.of Qty | Units | Estimated Rate | MAS CONSTRUCTIONS(GSTN-NA) |           | SHAKTI ENGINEERS(GSTN-NA) |           | COST ESTIMATE |             | Variance | AHR Items |  |
| 49.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Backfilling of the ditch / trench including restoration and cleanup of area and all other works including cleaning, final hydrotesting, etc. alongwith mainline works (as mentioned in clause no. A00100 above) required as per specification, approved drawings, calculations, methods and to the satisfaction of EIC and / or as directed by concerned authority.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |           |       |                |                            |           |                           |           |               |             |          |           |  |
| 50.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Installation of 4" NB 3LPE Coated Carbon Steel Pipeline by HDD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 10.00     | Meter |                | 45000.00                   | 450000.00 | 32000.00                  | 320000.00 | 29426.73      | 2,94,267.30 | 9%       |           |  |
| 51.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Installation of 8" NB 3LPE Coated Carbon Steel Pipeline by HDD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 10.00     | Meter |                | 45000.00                   | 450000.00 | 7000.00                   | 70000.00  | 35312.08      | 3,53,120.80 | -80%     |           |  |
| 52.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Installation of 12" NB 3LPE Coated Carbon Steel Pipeline by HDD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 10.00     | Meter |                | 60000.00                   | 600000.00 | 7000.00                   | 70000.00  | 42000         | 4,20,000.00 | -83%     |           |  |
| 53.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Note: (1) The length mentioned in SOR is indicative for all the crossing to be done by HDD & locations shall be decided by GAIL / Consultant prior to start of job depending upon site-condition;<br>(2) Payment for the length of final tied in carrier pipeline string with mainline laid by HDD are inclusive in this above item rate. No any separate payment shall be made under other clauses mentioned elsewhere.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |           |       |                |                            |           |                           |           |               |             |          |           |  |
| 54.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | CROSSING (CASED / UNCASED) EXCEPT HARD ROCK                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |           |       |                |                            |           |                           |           |               |             |          |           |  |
| 55.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | CROSSING (CASED / UNCASED) EXCEPT HARD ROCK                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |           |       |                |                            |           |                           |           |               |             |          |           |  |
| 56.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Preparation of required length of carrier pipeline welded string including all other works as mentioned in Item No. A00100 above and specification / drawings. Insertion of carrier pipeline welded string including all other works as mentioned in Item No. A00100 above and as per specification / drawings. Insertion of carrier pipe in casing pipe after aboveground pretesting at specified test pressure and installation of casing insulators as per specification / drawings. Installation of vent and drain assembly, fixing of end seals, backfilling and restoration as original of the facilities crossed and performing all other works including pigging, cleaning, final hydrotesting, etc. alongwith mainline works (as mentioned in Item No. A00100 above) and as per specification, approved procedure, drawing, etc. and instructions of EIC and provision of contract document, getting NOC from all concerned authority of the facilities crossed. |           |       |                |                            |           |                           |           |               |             |          |           |  |
| 57.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | By Jacking / Boring Method with 8" Steel casing pipe along with 4" carrier pipe.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 5.00      | Mtr.  |                | 30000.00                   | 150000.00 | 2500.00                   | 12500.00  | 9600          | 48,000.00   | -74%     |           |  |
| 58.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | By Jacking / Boring Method with 14" Steel casing pipe along with 8" carrier pipe.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 5.00      | Mtr.  |                | 30000.00                   | 150000.00 | 2500.00                   | 12500.00  | 12000         | 60,000.00   | -79%     |           |  |
| 59.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | By Jacking / Boring Method with 18" Steel casing pipe along with 12" carrier pipe.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 5.00      | Mtr.  |                | 30000.00                   | 150000.00 | 2500.00                   | 12500.00  | 14400         | 72,000.00   | -83%     |           |  |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |           |       |                |                                   |           |                              |           |               |             |          |           |  |
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| Government eProcurement System<br>Created By: MALEPPURATH GIRISH KUMAR<br>Created Date/Time: 18-Jan-2022 11:21 AM<br>Tender Title: Construction of Steel Pipelines and Associated facilities for CGD Connectivities for Western Region (Gujarat, Madhya Pradesh and Maharashtra) on ARC Basis<br>Tender ID: 2021_GAIL_100163_1<br>Tender Inviting Authority: GAIL (India) Ltd.<br>Name of Work: Construction of Steel Pipelines and Associated facilities for CGD Connectivities in Western Region viz. Gujarat, Madhya Pradesh and Maharashtra on ARC Basis<br>Contract No: 040-LYONS-GAIL-018 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |           |       |                |                                   |           |                              |           |               |             |          |           |  |
| SCHEDULE OF WORK / ITEM(S)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |           |       |                |                                   |           |                              |           |               |             |          |           |  |
| Sl.No                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Description of Work / Item(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | No.of Qty | Units | Estimated Rate | MAS<br>CONSTRUCTIONS(GSTN-<br>NA) |           | SHAKTI<br>ENGINEERS(GSTN-NA) |           | COST ESTIMATE |             | Variance | AHR Items |  |
| 60.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Note: (1) The length mentioned in SOR is indicative for all the crossing to be done by Jacking / Boring numbers & locations shall be decided by GAIL / Consultant prior to start of job depending upon site-condition;<br>(2) Width of the above crossing mentioned is tentative. Actual length & cover from top of casing pipe string may vary depending upon site-conditions, crossing methods, approved drawings, etc. and / or decided by concerned Authority / EIC;<br>(3) Payment for the length of final tied-in carrier pipeline string with mainline laid by Jacking / Boring method are inclusive in this above item rate. No any separate payment shall be made under other clauses mentioned elsewhere. |           |       |                |                                   |           |                              |           |               |             |          |           |  |
| 61.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Supply of steel casing pipe                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |           |       |                |                                   |           |                              |           |               |             |          |           |  |
| 62.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 8" NB 6.4 mm W.T. API 5L Gr.B / IS 3589 / Equivalent                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 5.00      | Mtr.  |                | 16000.00                          | 80000.00  | 8000.00                      | 40000.00  | 3239.88       | 16,199.40   | 147%     | AHR Items |  |
| 63.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 14" NB 6.4 mm W.T. API 5L Gr.B / IS 3589 / Equivalent                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 2.00      | Mtr.  |                | 16000.00                          | 32000.00  | 12000.00                     | 24000.00  | 4319.84       | 8,639.68    | 178%     | AHR Items |  |
| 64.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | PERMANENT MARKERS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |           |       |                |                                   |           |                              |           |               |             |          |           |  |
| 65.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Supply, fabrication & installation of following types of permanent markers along the route including all associated civil works such as excavation in all types of soil, construction of pedestals & grouting with concrete, cleaning, supply & application of approved colour & quality of primer and paint, stencil letter cutting for numbers, direction, chainage, etc., restoration of area to original condition & performing all works as per drawings, specifications and instructions of EIC.                                                                                                                                                                                                              |           |       |                |                                   |           |                              |           |               |             |          |           |  |
| 66.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Pipeline Warning Signs                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 50.00     | No.   |                | 10000.00                          | 500000.00 | 8000.00                      | 400000.00 | 8187.34       | 4,09,367.00 | -2%      |           |  |
| 67.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Right-of-way Boundary Markers                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 100.00    | No.   |                | 8500.00                           | 850000.00 | 2000.00                      | 200000.00 | 2160.72       | 2,16,072.00 | -7%      |           |  |
| 68.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Kilometer Posts                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 15.00     | No.   |                | 10000.00                          | 150000.00 | 8000.00                      | 120000.00 | 11770.69      | 1,76,560.35 | -32%     |           |  |
| 69.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Direction Markers                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 50.00     | No.   |                | 8500.00                           | 425000.00 | 8000.00                      | 400000.00 | 9906.16       | 4,95,308.00 | -19%     |           |  |
| 70.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Pipeline laying liaisoning with statutory authorities / Permission Issuing Authorities                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |           |       |                |                                   |           |                              |           |               |             |          |           |  |
| 71.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Liaisoning with statutory Authority /Permission issuing Authorities for obtaining routine work permit for execution of work and NOC from various Statutory Authority having jurisdiction before/during execution of work and for complying with all stipulations/ conditions and recommendation of the said Authority.<br><br>Required Permission shall be arranged/obtained by the Owner.<br><br>(Note :- Payment shall be based on the actual length of pipeline laid).                                                                                                                                                                                                                                           | 50.00     | Mtr.  |                | 1500.00                           | 75000.00  | 300.00                       | 15000.00  | 175.44        | 8,772.00    | 71%      | AHR Items |  |
| 72.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | GPRS (Ground Penetration Raddar Survey) in all depth                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |           |       |                |                                   |           |                              |           |               |             |          |           |  |

| <p align="center"> <b>Government eProcurement System</b><br/> <b>Created By: MALEPPURATH GIRISH KUMAR</b><br/> <b>Created Date/Time: 18-Jan-2022 11:21 AM</b><br/> <b>Tender Title: Construction of Steel Pipelines and Associated facilities for CGD Connectivities for Western Region (Gujarat, Madhya Pradesh and Maharashtra) on ARC Basis</b><br/> <b>Tender ID: 2021_GAIL_100163_1</b><br/> <b>Tender Inviting Authority: GAIL (India) Ltd.</b><br/> <b>Name of Work: Construction of Steel Pipelines and Associated facilities for CGD Connectivities in Western Region viz. Gujarat, Madhya Pradesh and Maharashtra on ARC Basis</b><br/> <b>Contract No: 040-LYONS-GAIL-018</b> </p> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |           |       |                |                               |          |                              |         |               |          |          |           |
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| <b>SCHEDULE OF WORK / ITEM(S)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |           |       |                |                               |          |                              |         |               |          |          |           |
| Sl.No                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Description of Work / Item(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | No.of Qty | Units | Estimated Rate | MAS<br>CONSTRUCTIONS(GSTN-NA) |          | SHAKTI<br>ENGINEERS(GSTN-NA) |         | COST ESTIMATE |          | Variance | AHR Items |
| 73.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Locate Under ground services / utilities within the pipeline route.This shall include identification of under ground utilities by scanning with electromagnetic underground services locator / ground penetrating radar followed by hand excavation to expose the utilities with permission from concerned authorities.<br>laying agency shall prepare a methodology for Scanning and identify the probable areas and obtain prior permission from Engineer-in charge / Client before start of work. Such ground area where utilities are identified by scanning, shall be marked with Red paint.<br>Note:<br>1.These rates shall be applied only when explicitly permitted by Company.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 10.00     | M2    |                | 2000.00                       | 20000.00 | 100.00                       | 1000.00 | 321.65        | 3,216.50 | -69%     |           |
| 74.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | INSTALLATION OF CARRIER PIPE CROSSINGS BY MOILING METHOD AT CROSSING WITHOUT CASING PIPE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |           |       |                |                               |          |                              |         |               |          |          |           |
| 75.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | "Complete work of installation of carrier pipe at crossings (between the limits as defined in approved drawings) by moiling method for roads, nallahs, drains and Factory Gates etc., wherever required, in all types of soils, soft rock/ murram. This includes "receiving and taking over" Owner-supplied 3-layer PE coated line pipes from Owner's designated place of issue / dump-site(s) and transportation to Contractor's stock-yard / workshop / work-site including all handling loading, unloading, aligning, etc. supply of all Contractor-supplied materials, manpower, equipment, consumable, other resources and acquiring the required land for storage, fabrication, including string preparation of pipes, welding, welding repair, radiography, coating of field joints with special type Heat Shrink Sleeve and repair of pipeline coating with special repair patch materials as per specification, strapping of HDPE duct as the case may be with main pipeline for laying / blowing of OFC cables, pre-testing, etc. of complete string made for crossing access for Contractor, etc. and execution of, but not limited to, following works in accordance with the specifications and instructions of EIC, and as per all provisions of Contract Document." |           |       |                |                               |          |                              |         |               |          |          |           |
| 76.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Pre-construction survey based on site-visit, carrying out all additional topographical, hydrological & geo-technical surveys as required for design & construction of crossing, collection of data (if reqd.) from concerned authority including design & detailed engineering and making of crossing drawings for getting their approval from concerned authority / EIC, getting work permit / NOC for crossings as well as utility crossings (if any) encountered during crossings prior to start the execution of work.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |           |       |                |                               |          |                              |         |               |          |          |           |

| Government eProcurement System<br>Created By: MALEPPURATH GIRISH KUMAR<br>Created Date/Time: 18-Jan-2022 11:21 AM<br>Tender Title: Construction of Steel Pipelines and Associated facilities for CGD Connectivities for Western Region (Gujarat, Madhya Pradesh and Maharashtra) on ARC Basis<br>Tender ID: 2021_GAIL_100163_1<br>Tender Inviting Authority: GAIL (India) Ltd.<br>Name of Work: Construction of Steel Pipelines and Associated facilities for CGD Connectivities in Western Region viz. Gujarat, Madhya Pradesh and Maharashtra on ARC Basis<br>Contract No: 040-LYONS-GAIL-018 |                                                                                                                                                                                                                                                                                                                                                                                                                                       |           |       |                |                                   |            |                              |           |               |             |          |           |  |
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| SCHEDULE OF WORK / ITEM(S)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                       |           |       |                |                                   |            |                              |           |               |             |          |           |  |
| Sl.No                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Description of Work / Item(s)                                                                                                                                                                                                                                                                                                                                                                                                         | No.of Qty | Units | Estimated Rate | MAS<br>CONSTRUCTIONS(GSTN-<br>NA) |            | SHAKTI<br>ENGINEERS(GSTN-NA) |           | COST ESTIMATE |             | Variance | AHR Items |  |
| 77.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Drilling to required depth including maintenance of drill hole in all types of strata (in all types of soils, soft rock/ murram ), all depth to accommodate the pipeline at all conditions encountered during crossing and providing minimum cover specified in code / specification or as decided by concerned authority, whichever is more.                                                                                         |           |       |                |                                   |            |                              |           |               |             |          |           |  |
| 78.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Backfilling of the ditch / trench including restoration and cleanup of area and all other works including cleaning, final hydrotesting, etc. alongwith mainline works (as mentioned in clause no. A00100 above) required as per specification, approved drawings, calculations, methods and to the satisfaction of EIC and / or as directed by concerned authority.                                                                   |           |       |                |                                   |            |                              |           |               |             |          |           |  |
| 79.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Laying of 4" NB Carrier pipe without casing by Moiling method                                                                                                                                                                                                                                                                                                                                                                         | 75.00     | Mtr.  |                | 20000.00                          | 1500000.00 | 6000.00                      | 450000.00 | 4383.6        | 3,28,770.00 | 37%      |           |  |
| 80.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Laying of 8" NB Carrier pipe without casing by Moiling method                                                                                                                                                                                                                                                                                                                                                                         | 50.00     | Mtr.  |                | 20000.00                          | 1000000.00 | 6000.00                      | 300000.00 | 4546.43       | 2,27,321.50 | 32%      |           |  |
| 81.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Laying of 12" NB Carrier pipe without casing by Moiling method                                                                                                                                                                                                                                                                                                                                                                        | 25.00     | Mtr.  |                | 20000.00                          | 500000.00  | 4000.00                      | 100000.00 | 4200          | 1,05,000.00 | -5%      |           |  |
| 82.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Note:<br>i)The length mentioned in SOR is indicative for all the crossing to be done by Moiling & locations shall be decided by GAIL / Consultant prior to start of job depending upon site-condition.<br><br>ii) Payment for the length of final tied in carrier pipeline string with mainline laid by Moiling are inclusive in this above item rate. No any separate payment shall be made under other clauses mentioned elsewhere. |           |       |                |                                   |            |                              |           |               |             |          |           |  |
| 83.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Hiring and deploying of fire tenders along with accessories and operating crew. The rates quoted shall be inclusive of all expenses.                                                                                                                                                                                                                                                                                                  |           |       |                |                                   |            |                              |           |               |             |          |           |  |
| 84.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Deployment of Fire Tenders for 12 Hrs                                                                                                                                                                                                                                                                                                                                                                                                 | 4.00      | Nos.  |                | 150000.00                         | 600000.00  | 25000.00                     | 100000.00 | 24612.99      | 98,451.96   | 2%       |           |  |
| 85.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Hiring and deploying of FINAL HYDRO TEST EQUIPMENT along with accessories and operating crew. The rates quoted shall be inclusive of all expenses and consumable etc.<br>(Item to be claim seperately for project upto 500m length only and testing by dead weight test& graph), "" The payment of this item shall be made in addition to item No A00100 and associated Mainline items. "                                             |           |       |                |                                   |            |                              |           |               |             |          |           |  |
| 86.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Deployment and completion of post hdro testing of complete P/L project                                                                                                                                                                                                                                                                                                                                                                | 1.00      | Nos.  |                | 650000.00                         | 650000.00  | 60000.00                     | 60000.00  | 98989         | 98,989.00   | -39%     |           |  |
| 87.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Hot Tapping                                                                                                                                                                                                                                                                                                                                                                                                                           |           |       |                |                                   |            |                              |           |               |             |          |           |  |



| Government eProcurement System<br>Created By: MALEPPURATH GIRISH KUMAR<br>Created Date/Time: 18-Jan-2022 11:21 AM<br>Tender Title: Construction of Steel Pipelines and Associated facilities for CGD Connectivities for Western Region (Gujarat, Madhya Pradesh and Maharashtra) on ARC Basis<br>Tender ID: 2021_GAIL_100163_1<br>Tender Inviting Authority: GAIL (India) Ltd.<br>Name of Work: Construction of Steel Pipelines and Associated facilities for CGD Connectivities in Western Region viz. Gujarat, Madhya Pradesh and Maharashtra on ARC Basis<br>Contract No: 040-LYONS-GAIL-018 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |           |       |                |                            |            |                           |            |               |              |          |           |
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| SCHEDULE OF WORK / ITEM(S)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |           |       |                |                            |            |                           |            |               |              |          |           |
| Sl.No                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Description of Work / Item(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | No.of Qty | Units | Estimated Rate | MAS CONSTRUCTIONS(GSTN-NA) |            | SHAKTI ENGINEERS(GSTN-NA) |            | COST ESTIMATE |              | Variance | AHR Items |
| 88.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Design, Engineering, manufacture & Supply of Split Tee as mentioned in scope of work including transportation & delivery at GAIL designated store. Ascertain the thickness of the parent pipe at site before Hot Tap. Obtaining Hot work permits from owner. Transportation of free issued Valves(12", 10", 8" & 6") from GAIL designated storage yard/warehouse for installation to site including welding and all related activities as per specification.<br>Mobilization Hot Tapping machines, manpower to complete the Hot Tapping Works including welding, NDT, Hydro testing, NDT etc. for successful completion of work. Supply of necessary consumables to complete the job in all respect. Commissioning of complete works as per Specification and Standard. Demobilization of hot tapping machine tools & tackles etc. Mobilization, boarding and lodging and demobilization of all manpower are included in price quoted by the Bidder.<br><br>Complete Supply, Installation, Testing and Commissioning of, but not limited to, following works in accordance with the specifications and instructions of EIC, and as per all provisions of Contract Document. Drawing, document preparation and obtaining the approval on the same is included in the scope of Contractor. |           |       |                |                            |            |                           |            |               |              |          |           |
| 89.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Supply of Full Encirclement type Split Tee                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |           |       |                |                            |            |                           |            |               |              |          |           |
| 90.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 36"x36"x12" Reduced Branch Full Encirclement Type Butt Welded End Split Tee without Lock O-Ring RF Flange and without Guide Bar Assembly. Pressure Rating 600 #                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 1.00      | Nos.  |                | 6000000.00                 | 6000000.00 | 1800000.00                | 1800000.00 | 2880000       | 28,80,000.00 | -38%     |           |
| 91.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 24"x24"x8" Reduced Branch Full Encirclement Type Butt Welded End Split Tee without Lock O-Ring RF Flange and without Guide Bar Assembly Pressure Rating 600 #                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 1.00      | Nos.  |                | 5500000.00                 | 5500000.00 | 1500000.00                | 1500000.00 | 2400000       | 24,00,000.00 | -38%     |           |
| 92.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 18"x18"x6" Reduced Branch Full Encirclement Type Butt Welded End Split Tee without Lock O-Ring RF Flange and without Guide Bar Assembly Pressure Rating 600 #                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 1.00      | Nos.  |                | 4000000.00                 | 4000000.00 | 600000.00                 | 600000.00  | 2160000       | 21,60,000.00 | -72%     |           |
| 93.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Installation of Full Encirclement type Split Tee                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |           |       |                |                            |            |                           |            |               |              |          |           |
| 94.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 36"x36"x12" Reduced Branch Full Encirclement Type Butt Welded End Split Tee without Lock O-Ring RF Flange and without Guide Bar Assembly. Pressure Rating 600 #                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 1.00      | Nos.  |                | 2000000.00                 | 2000000.00 | 400000.00                 | 400000.00  | 1200000       | 12,00,000.00 | -67%     |           |
| 95.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 24"x24"x8" Reduced Branch Full Encirclement Type Butt Welded End Split Tee without Lock O-Ring RF Flange and without Guide Bar Assembly Pressure Rating 600 #                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 1.00      | Nos.  |                | 2000000.00                 | 2000000.00 | 300000.00                 | 300000.00  | 1020000       | 10,20,000.00 | -71%     |           |
| 96.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 18"x18"x6" Reduced Branch Full Encirclement Type Butt Welded End Split Tee without Lock O-Ring RF Flange and without Guide Bar Assembly Pressure Rating 600 #                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 1.00      | Nos.  |                | 2000000.00                 | 2000000.00 | 200000.00                 | 200000.00  | 960000        | 9,60,000.00  | -79%     |           |

| <p align="center"> <b>Government eProcurement System</b><br/> <b>Created By: MALEPPURATH GIRISH KUMAR</b><br/> <b>Created Date/Time: 18-Jan-2022 11:21 AM</b><br/> <b>Tender Title: Construction of Steel Pipelines and Associated facilities for CGD Connectivities for Western Region (Gujarat, Madhya Pradesh and Maharashtra) on ARC Basis</b><br/> <b>Tender ID: 2021_GAIL_100163_1</b><br/> <b>Tender Inviting Authority: GAIL (India) Ltd.</b><br/> <b>Name of Work: Construction of Steel Pipelines and Associated facilities for CGD Connectivities in Western Region viz. Gujarat, Madhya Pradesh and Maharashtra on ARC Basis</b><br/> <b>Contract No: 040-LYONS-GAIL-018</b> </p> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |           |       |                |                                   |                              |               |  |          |           |
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| <b>SCHEDULE OF WORK / ITEM(S)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |           |       |                |                                   |                              |               |  |          |           |
| Sl.No                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Description of Work / Item(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | No.of Qty | Units | Estimated Rate | MAS<br>CONSTRUCTIONS(GSTN-<br>NA) | SHAKTI<br>ENGINEERS(GSTN-NA) | COST ESTIMATE |  | Variance | AHR Items |
| 97.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Note: (1) The quantities given above against individual items are indicative and shall not be considered to be binding. The quantities may be increased, decreased or deleted at site at the time of actual execution. Procurement shall be done as per actual site condition, approved construction drawings and as per instruction of EIC. The unit rate shall be operated to work out the final payment to the contractor;<br>(2) In each area, quantities given against individual item may be utilised / used for other consumers in same area.                                                                                             |           |       |                |                                   |                              |               |  |          |           |
| 98.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | SECTION-B [MECHANICAL (PIPING & TERMINAL WORKS)]                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |           |       |                |                                   |                              |               |  |          |           |
| 99.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | PLANT PIPING (ABOVE GROUND)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |           |       |                |                                   |                              |               |  |          |           |
| 100.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Complete Carbon Steel Piping Work with painting including all fittings, flanges and supply of all required gaskets, studs bolts & nuts, etc., as described below                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |           |       |                |                                   |                              |               |  |          |           |
| 101.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Transportation of all piping items from Contractor's storage point to work site 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 indicated in particular job specification & scope of work indicated in SCC, drawings, specification and instructions of EIC and as per all provisions of the Contract Document. |           |       |                |                                   |                              |               |  |          |           |
| 102.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Fabrication including cutting, edge preparation, inclusive of grinding the edges of pipes, fittings, flanges, etc. to match with the matching edges of uneven / different thickness wherever required, welding, attachment of all pipe fittings like elbows, tees, reducers. Supply of nipples, couplings, caps, plugs, gasket, stud bolts, nuts, U-clamps, etc. as required for completion of job.All fittings installation shall be paid linear meter basis under this item only.                                                                                                                                                              |           |       |                |                                   |                              |               |  |          |           |
| 103.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Handling and installation of all types & size of valves including assembly of valve accessories/ Actuator, (if any) by bolting, threading or welding, supply and insertion of gaskets, nuts & bolts, nipples, tubing etc. at all elevations of pipe sleepers, supports or overhead on racks, equipments nozzle, skid & painting etc. supply of all consumables, manpower, equipment, etc. for completion of all works as per scope of work and as per drawings, specifications and instructions of EIC including servicing / cleaning of valve wherever required.                                                                                |           |       |                |                                   |                              |               |  |          |           |
| 104.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Installation of weldolets, sockolets, flanges, vent and drain point connection, etc., as required.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |           |       |                |                                   |                              |               |  |          |           |

| Government eProcurement System<br>Created By: MALEPPURATH GIRISH KUMAR<br>Created Date/Time: 18-Jan-2022 11:21 AM<br>Tender Title: Construction of Steel Pipelines and Associated facilities for CGD Connectivities for Western Region (Gujarat, Madhya Pradesh and Maharashtra) on ARC Basis<br>Tender ID: 2021_GAIL_100163_1<br>Tender Inviting Authority: GAIL (India) Ltd.<br>Name of Work: Construction of Steel Pipelines and Associated facilities for CGD Connectivities in Western Region viz. Gujarat, Madhya Pradesh and Maharashtra on ARC Basis<br>Contract No: 040-LYONS-GAIL-018 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |           |       |                |                            |           |                           |           |               |              |          |           |  |
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| SCHEDULE OF WORK / ITEM(S)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |           |       |                |                            |           |                           |           |               |              |          |           |  |
| Sl.No                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Description of Work / Item(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | No.of Qty | Units | Estimated Rate | MAS CONSTRUCTIONS(GSTN-NA) |           | SHAKTI ENGINEERS(GSTN-NA) |           | COST ESTIMATE |              | Variance | AHR Items |  |
| 105.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Erection including prior cleaning, lifting, placing on pipe sleepers and supports, overhead on racks, skids and at all elevations including installation, design & fabrication of all type of supports / jump-over and carrying out connected activities for all types of valves including supply & fixing of gaskets, studs / bolts, nuts wherever required for all sizes, leveling, aligning, joining of flanges, blind flanges, connecting with equipment, nozzles, strainers, tie-in with existing piping / facilities, etc. tapping for inline instruments like pressure gauges, thermowells, sample connection, etc. |           |       |                |                            |           |                           |           |               |              |          |           |  |
| 106.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Design and Residual Engineering                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |           |       |                |                            |           |                           |           |               |              |          |           |  |
| 107.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Preparation of bill of material(BOM)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |           |       |                |                            |           |                           |           |               |              |          |           |  |
| 108.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Preparation of Construction, Fabrication, GAD, isometric and As-built drawings                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |           |       |                |                            |           |                           |           |               |              |          |           |  |
| 109.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Carrying out all Non-destructive testing as required except Radiography.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |           |       |                |                            |           |                           |           |               |              |          |           |  |
| 110.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Surface preparation before application of primer by means of sand blasting including supply of approved quality of sand, manpower, machineries, tools & tackles to achieve required roughness as per specification and as per instruction of EIC.                                                                                                                                                                                                                                                                                                                                                                          |           |       |                |                            |           |                           |           |               |              |          |           |  |
| 111.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Painting of entire system (including aboveground all pipes fittings, flanges & accessories) suitable for Normal corrosive area environment including supply of approved paints & primers, application of primer & paints, identification lettering / numbering, color-coding, etc. as specified including rub-down & touch-up of shop primer or scrapping of shop primer wherever required by Company and providing scaffolding for all heights, etc.                                                                                                                                                                      |           |       |                |                            |           |                           |           |               |              |          |           |  |
| 112.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Cleaning and flushing by water / compressed air, testing of the systems including hydrostatic, pneumatic and any other types of testing as specified, draining, drying by compressed air / other methods approved by Company.                                                                                                                                                                                                                                                                                                                                                                                              |           |       |                |                            |           |                           |           |               |              |          |           |  |
| 113.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Precommissioning & making operational all piping system and equipments.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |           |       |                |                            |           |                           |           |               |              |          |           |  |
| 114.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Commissioning Contractor scope shall provide all necessary assistance in term of supply of manpower, equipment, tools and tackles required amount of nitrogen for purging of entire terminal piping system including equipments etc. to the company during commissioning activities.                                                                                                                                                                                                                                                                                                                                       |           |       |                |                            |           |                           |           |               |              |          |           |  |
| 115.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 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.                                                                                                                                                                                                                                                                                                                                                                                                  |           |       |                |                            |           |                           |           |               |              |          |           |  |
| 116.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 12" NB Piping different grades & thickness                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 20.00     | Mtr.  |                | 10000.00                   | 200000.00 | 15000.00                  | 300000.00 | 8773.83       | 1,75,476.60  | 71%      | AHR Items |  |
| 117.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 8" NB Piping different grades & thickness                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 20.00     | Mtr.  |                | 8000.00                    | 160000.00 | 8000.00                   | 160000.00 | 7732.69       | 1,54,653.80  | 3%       |           |  |
| 118.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 6" NB Piping different grades & thickness                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 10.00     | Mtr.  |                | 6000.00                    | 60000.00  | 5000.00                   | 50000.00  | 6882.87       | 68,828.70    | -27%     |           |  |
| 119.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 4" NB Piping different grades & thickness                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 180.00    | Mtr.  |                | 5000.00                    | 900000.00 | 5000.00                   | 900000.00 | 5964.18       | 10,73,552.40 | -16%     |           |  |

| Government eProcurement System<br>Created By: MALEPPURATH GIRISH KUMAR<br>Created Date/Time: 18-Jan-2022 11:21 AM<br>Tender Title: Construction of Steel Pipelines and Associated facilities for CGD Connectivities for Western Region (Gujarat, Madhya Pradesh and Maharashtra) on ARC Basis<br>Tender ID: 2021_GAIL_100163_1<br>Tender Inviting Authority: GAIL (India) Ltd.<br>Name of Work: Construction of Steel Pipelines and Associated facilities for CGD Connectivities in Western Region viz. Gujarat, Madhya Pradesh and Maharashtra on ARC Basis<br>Contract No: 040-LYONS-GAIL-018 |                                                                                                                                                                                                                                                                                                                                                       |           |       |                |                            |           |                           |           |               |             |          |           |  |
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| SCHEDULE OF WORK / ITEM(S)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                       |           |       |                |                            |           |                           |           |               |             |          |           |  |
| Sl.No                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Description of Work / Item(s)                                                                                                                                                                                                                                                                                                                         | No.of Qty | Units | Estimated Rate | MAS CONSTRUCTIONS(GSTN-NA) |           | SHAKTI ENGINEERS(GSTN-NA) |           | COST ESTIMATE |             | Variance | AHR Items |  |
| 120.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 2" NB Piping different grades & thickness                                                                                                                                                                                                                                                                                                             | 140.00    | Mtr.  |                | 3000.00                    | 420000.00 | 3500.00                   | 490000.00 | 4210.24       | 5,89,433.60 | -17%     |           |  |
| 121.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 1½" NB Piping different grades & thickness                                                                                                                                                                                                                                                                                                            | 10.00     | Mtr.  |                | 2500.00                    | 25000.00  | 1500.00                   | 15000.00  | 3509.78       | 35,097.80   | -57%     |           |  |
| 122.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 1" NB Piping different grades & thickness                                                                                                                                                                                                                                                                                                             | 10.00     | Mtr.  |                | 2500.00                    | 25000.00  | 1200.00                   | 12000.00  | 1765.6        | 17,656.00   | -32%     |           |  |
| 123.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | ¾" NB Piping different grades & thickness                                                                                                                                                                                                                                                                                                             | 40.00     | Mtr.  |                | 1500.00                    | 60000.00  | 1000.00                   | 40000.00  | 1461.29       | 58,451.60   | -32%     |           |  |
| 124.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Note: For Hook-up works at tap-off point, Despatch & Receiving Terminal including making provision for hooking up and carrying out shutdown activities at terminals if necessary shall be paid as per SOR number B008000                                                                                                                              |           |       |                |                            |           |                           |           |               |             |          |           |  |
| 125.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | INSTALLATION OF VALVES                                                                                                                                                                                                                                                                                                                                |           |       |                |                            |           |                           |           |               |             |          |           |  |
| 126.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | INSTALLATION OF ABOVE GROUND FLANGED VALVES (BALL / PLUG / CHECK / GATE / GLOBE) AS PER DETAILS GIVEN BELOW:                                                                                                                                                                                                                                          |           |       |                |                            |           |                           |           |               |             |          |           |  |
| 127.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Size - 2.0 Inch, Rating - 150#/300#/600#                                                                                                                                                                                                                                                                                                              | 25.00     | Nos   |                | 2500.00                    | 62500.00  | 5000.00                   | 125000.00 | 3859.75       | 96,493.75   | 30%      |           |  |
| 128.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Size - 3/4 Inch, Rating - 800#                                                                                                                                                                                                                                                                                                                        | 1.00      | Nos   |                | 2500.00                    | 2500.00   | 3000.00                   | 3000.00   | 1840.31       | 1,840.31    | 63%      | AHR Items |  |
| 129.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | INSTALLATION OF ABOVE GROUND BUTT WELDED/SOCKET WELDED VALVES (BALL / PLUG / CHECK / GATE / GLOBE) AS PER DETAILS GIVEN BELOW:                                                                                                                                                                                                                        |           |       |                |                            |           |                           |           |               |             |          |           |  |
| 130.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Size - 12.0 Inch, Rating - 150#/300#/600#                                                                                                                                                                                                                                                                                                             | 2.00      | Nos   |                | 60000.00                   | 120000.00 | 10000.00                  | 20000.00  | 24289.85      | 48,579.70   | -59%     |           |  |
| 131.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Size - 8.0 Inch, Rating - 150#/300#/600#                                                                                                                                                                                                                                                                                                              | 2.00      | Nos   |                | 30000.00                   | 60000.00  | 15000.00                  | 30000.00  | 17294.58      | 34,589.16   | -13%     |           |  |
| 132.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Size - 4.0 Inch, Rating - 150#/300#/600#                                                                                                                                                                                                                                                                                                              | 15.00     | Nos   |                | 10000.00                   | 150000.00 | 6000.00                   | 90000.00  | 10394.66      | 1,55,919.90 | -42%     |           |  |
| 133.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Size - 2.0 Inch, Rating -150#/300#/600#                                                                                                                                                                                                                                                                                                               | 30.00     | Nos   |                | 4000.00                    | 120000.00 | 2500.00                   | 75000.00  | 3040.62       | 91,218.60   | -18%     |           |  |
| 134.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Size - 3/4 Inch, Rating - 800#                                                                                                                                                                                                                                                                                                                        | 40.00     | Nos   |                | 1000.00                    | 40000.00  | 1500.00                   | 60000.00  | 1753.94       | 70,157.60   | -14%     |           |  |
| 135.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | INSTALLATION OF ABOVE GROUND GAS ACTUATED VALVES AS PER DETAILS GIVEN BELOW                                                                                                                                                                                                                                                                           |           |       |                |                            |           |                           |           |               |             |          |           |  |
| 136.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Size - 4 Inch,                                                                                                                                                                                                                                                                                                                                        | 8.00      | Nos   |                | 10000.00                   | 80000.00  | 12000.00                  | 96000.00  | 21599.22      | 1,72,793.76 | -44%     |           |  |
| 137.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Size - 8 Inch,                                                                                                                                                                                                                                                                                                                                        | 1.00      | Nos   |                | 25000.00                   | 25000.00  | 12000.00                  | 12000.00  | 44303.37      | 44,303.37   | -73%     |           |  |
| 138.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Size - 12 Inch,                                                                                                                                                                                                                                                                                                                                       | 1.00      | Nos   |                | 75000.00                   | 75000.00  | 8000.00                   | 8000.00   | 52500         | 52,500.00   | -85%     |           |  |
| 139.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | SUPPLY OF ASSORTED PIPE, VALVES , FITTINGS AND FLANGES                                                                                                                                                                                                                                                                                                |           |       |                |                            |           |                           |           |               |             | -        |           |  |
| 140.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Complete work of supply of pipes, valves, fittings and flanges including all taxes, duties, transportation and inspection charges but not limited to, the following items in accordance with relevant specifications indicated in scope of work , drawings, specification and instructions of EIC and as per all provisions of the Contract Document. |           |       |                |                            |           |                           |           |               |             | -        |           |  |
| 141.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Handling including lifting, transportation from Contractor Stores to Contractor's workshop for fabrication and/ or to work-site for field fabrication and erection for all piping items supplied by Contractor.                                                                                                                                       |           |       |                |                            |           |                           |           |               |             | -        |           |  |
| 142.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | CARBON STEEL (CS) PIPES (As per attached QAP in Tender)                                                                                                                                                                                                                                                                                               |           |       |                |                            |           |                           |           |               |             |          |           |  |
| 143.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | CS Pipes 2" NB Sch XS API 5L, Gr.B, Seamless, BE / A 106 Gr.B.                                                                                                                                                                                                                                                                                        | 150.00    | Mtr.  |                | 2000.00                    | 300000.00 | 2500.00                   | 375000.00 | 1084.56       | 1,62,684.00 | 131%     | AHR Items |  |
| 144.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | CS Pipes 1 1/2" NB Sch XS Seamless, BE / A 106 Gr.B.                                                                                                                                                                                                                                                                                                  | 5.00      | Mtr.  |                | 1500.00                    | 7500.00   | 800.00                    | 4000.00   | 647.98        | 3,239.90    | 23%      |           |  |

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| SCHEDULE OF WORK / ITEM(S)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                      |           |       |                |                            |           |                           |           |               |             |          |           |  |
| Sl.No                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Description of Work / Item(s)                                                                                        | No.of Qty | Units | Estimated Rate | MAS CONSTRUCTIONS(GSTN-NA) |           | SHAKTI ENGINEERS(GSTN-NA) |           | COST ESTIMATE |             | Variance | AHR Items |  |
| 145.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | CS Pipes 1 " NB Sch 160, A 106 Gr.B.                                                                                 | 5.00      | Mtr.  |                | 1500.00                    | 7500.00   | 1200.00                   | 6000.00   | 624.69        | 3,123.45    | 92%      | AHR Item  |  |
| 146.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | CS Pipes 3/4 " NB Sch 160 , A 106 Gr.B.                                                                              | 40.00     | Mtr.  |                | 800.00                     | 32000.00  | 1200.00                   | 48000.00  | 539.98        | 21,599.20   | 122%     | AHR Item  |  |
| 147.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | VALVES                                                                                                               |           |       |                |                            |           |                           |           |               |             |          |           |  |
| 148.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Supply of Butt/Socket Welded- Female (SW) Ends Ball Valves as per PMS and Data Sheet (As per attached QAP in Tender) |           |       |                |                            |           |                           |           |               |             |          |           |  |
| 149.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Size - 0.75 Inch, 800#, SW Ends, Design Standard - BS EN 15017, Floating type, Full Bore Ball Valve, Lever Operated  | 30.00     | Nos   |                | 13000.00                   | 390000.00 | 8000.00                   | 240000.00 | 4319.84       | 1,29,595.20 | 85%      | AHR Item  |  |
| 150.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Size - 1.0 Inch, 800#, SW Ends, Design Standard - BS EN 15017, Floating type, Full Bore Ball Valve, Lever Operated   | 1.00      | Nos   |                | 15000.00                   | 15000.00  | 7000.00                   | 7000.00   | 5399.8        | 5,399.80    | 30%      |           |  |
| 151.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Size - 1 1/2 Inch, 800#, SW Ends, Design Standard - BS EN 15017, Floating type, Full Bore Ball Valve, Lever Operated | 1.00      | Nos   |                | 18000.00                   | 18000.00  | 7000.00                   | 7000.00   | 10799.61      | 10,799.61   | -35%     |           |  |
| 152.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Size - 2 Inch, 600#, BW Ends, Design Standard - BS EN 15017, Floating type, Full Bore Ball Valve, Lever Operated     | 2.00      | Nos   |                | 25000.00                   | 50000.00  | 45000.00                  | 90000.00  | 34331.19      | 68,662.38   | 31%      |           |  |
| 153.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Supply of Globe Valves as per PMS, Data Sheet and QAP in Tender                                                      |           |       |                |                            |           |                           |           |               |             |          |           |  |
| 154.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Size - 0.75 Inch, 800#, SW Ends, Design Standard - BS EN 15017, Floating type, Full Bore Ball Valve, Lever Operated  | 1.00      | Nos   |                | 15000.00                   | 15000.00  | 8000.00                   | 8000.00   | 4319.84       | 4,319.84    | 85%      | AHR Item  |  |
| 155.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Size - 1 Inch, 800#, SW Ends, Design Standard - BS EN 15017, Floating type, Full Bore Ball Valve, Lever Operated     | 1.00      | Nos   |                | 25000.00                   | 25000.00  | 8000.00                   | 8000.00   | 6479.77       | 6,479.77    | 23%      |           |  |
| 156.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Size - 1 1/2 Inch, 800#, SW Ends, Design Standard - BS EN 15017, Floating type, Full Bore Ball Valve, Lever Operated | 1.00      | Nos   |                | 25000.00                   | 25000.00  | 8000.00                   | 8000.00   | 10799.61      | 10,799.61   | -26%     |           |  |
| 157.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Size - 2 Inch, 600#, Flange Ends, Design Standard - BS EN 15017, Floating type, Full Bore Ball Valve, Lever Operated | 2.00      | Nos   |                | 28000.00                   | 56000.00  | 50000.00                  | 100000.00 | 23415.79      | 46,831.58   | 114%     | AHR Item  |  |
| 158.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | FLANGES                                                                                                              |           |       |                |                            |           |                           |           |               |             |          |           |  |
| 159.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Supply of SW Raised Face (SWRF) Flanges as per details below: (As per attached QAP in Tender)                        |           |       |                |                            |           |                           |           |               |             |          |           |  |
| 160.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Size - 2 Inch, 600#, Thk/Sch - XS , Material - ASTM A105, Face/Finish - RF/125AARH , Dimn. Std. - ASME B16.5         | 1.00      | Nos   |                | 2000.00                    | 2000.00   | 4000.00                   | 4000.00   | 1637.47       | 1,637.47    | 144%     | AHR Item  |  |
| 161.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Size - 1 1/2 Inch, 600#, Thk/Sch - XS , Material - ASTM A105, Face/Finish - RF/125AARH , Dimn. Std. - ASME B16.5     | 1.00      | Nos   |                | 1800.00                    | 1800.00   | 1000.00                   | 1000.00   | 1407.26       | 1,407.26    | -29%     |           |  |
| 162.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Size - 1.0 Inch, 600#, Thk/Sch - XS , Material - ASTM A105, Face/Finish - RF/125AARH , Dimn. Std. - ASME B16.5       | 1.00      | Nos   |                | 1500.00                    | 1500.00   | 1000.00                   | 1000.00   | 1177.07       | 1,177.07    | -15%     |           |  |
| 163.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Size - 3/4 Inch, 600#, Thk/Sch - 160 , Material - ASTM A105, Face/Finish - RF/125AARH , Dimn. Std. - ASME B16.5      | 1.00      | Nos   |                | 1500.00                    | 1500.00   | 1000.00                   | 1000.00   | 1157.91       | 1,157.91    | -14%     |           |  |
| 164.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | FITTINGS                                                                                                             |           |       |                |                            |           |                           |           |               |             |          |           |  |
| 165.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Supply of R=1.5D 90o BW Elbow as per details given below: (As per attached QAP in Tender)                            |           |       |                |                            |           |                           |           |               |             |          |           |  |
| 166.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Size - 1 1/2 Inch, Thk/Sch - XS, Material - ASTM A 105, Dimn. Std. - ASME B 1611                                     | 1.00      | Nos   |                | 1000.00                    | 1000.00   | 600.00                    | 600.00    | 350.99        | 350.99      | 71%      | AHR Item  |  |
| 167.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Size - 1.0 Inch, Thk/Sch - XS, Material - ASTM A 105, Dimn. Std. - ASME B 1611                                       | 1.00      | Nos   |                | 800.00                     | 800.00    | 600.00                    | 600.00    | 226.8         | 226.80      | 165%     | AHR Item  |  |

| Government eProcurement System<br>Created By: MALEPPURATH GIRISH KUMAR<br>Created Date/Time: 18-Jan-2022 11:21 AM<br>Tender Title: Construction of Steel Pipelines and Associated facilities for CGD Connectivities for Western Region (Gujarat, Madhya Pradesh and Maharashtra) on ARC Basis<br>Tender ID: 2021_GAIL_100163_1<br>Tender Inviting Authority: GAIL (India) Ltd.<br>Name of Work: Construction of Steel Pipelines and Associated facilities for CGD Connectivities in Western Region viz. Gujarat, Madhya Pradesh and Maharashtra on ARC Basis<br>Contract No: 040-LYONS-GAIL-018 |                                                                                                                                                                                                                                                                                                                                                                   |           |       |                |                               |          |                              |          |               |             |          |           |  |
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| SCHEDULE OF WORK / ITEM(S)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                   |           |       |                |                               |          |                              |          |               |             |          |           |  |
| Sl.No                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Description of Work / Item(s)                                                                                                                                                                                                                                                                                                                                     | No.of Qty | Units | Estimated Rate | MAS<br>CONSTRUCTIONS(GSTN-NA) |          | SHAKTI<br>ENGINEERS(GSTN-NA) |          | COST ESTIMATE |             | Variance | AHR Items |  |
| 168.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Size - 3/4 Inch, Thk/Sch - 160, Material - ASTM A 105, Dimn. Std. - ASME B 16.11                                                                                                                                                                                                                                                                                  | 1.00      | Nos   |                | 500.00                        | 500.00   | 600.00                       | 600.00   | 215.99        | 215.99      | 178%     | AHR Item  |  |
| 169.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Supply of BW Un-equal Tee as per details given below: (As per attached QAP in Tender)                                                                                                                                                                                                                                                                             |           |       |                |                               |          |                              |          |               |             |          |           |  |
| 170.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Size - 2.0 Inch x 1.0 Inch, Thk/Sch - XS, Material - ASTM A 105 (CHARPY), Dimn. Std. - ASME B 16.9                                                                                                                                                                                                                                                                | 1.00      | Nos   |                | 2000.00                       | 2000.00  | 3000.00                      | 3000.00  | 593.98        | 593.98      | 405%     | AHR Item  |  |
| 171.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Size - 2.0 Inch x 3/4 Inch, Thk/Sch - XS x 160, Material - A105 (CHARPY), Dimn. Std. - ASME B 16.9                                                                                                                                                                                                                                                                | 1.00      | Nos   |                | 2000.00                       | 2000.00  | 3000.00                      | 3000.00  | 917.97        | 917.97      | 227%     | AHR Item  |  |
| 172.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Supply of Sockolet conforming to MSS-SP-97, Material - ASTM A105 and as per details given below: (As per attached QAP in Tender)                                                                                                                                                                                                                                  |           |       |                |                               |          |                              |          |               |             |          |           |  |
| 173.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 12" x 1 1/2", 3000#                                                                                                                                                                                                                                                                                                                                               | 1.00      | Nos   |                | 5000.00                       | 5000.00  | 10000.00                     | 10000.00 | 431.98        | 431.98      | 2215%    | AHR Item  |  |
| 174.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 12" x 1", 3000#                                                                                                                                                                                                                                                                                                                                                   | 1.00      | Nos   |                | 4500.00                       | 4500.00  | 10000.00                     | 10000.00 | 431.98        | 431.98      | 2215%    | AHR Item  |  |
| 175.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 12" x 3/4", 6000#                                                                                                                                                                                                                                                                                                                                                 | 1.00      | Nos   |                | 4000.00                       | 4000.00  | 10000.00                     | 10000.00 | 701.89        | 701.89      | 1325%    | AHR Item  |  |
| 176.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 8" x 1 1/2", 3000#                                                                                                                                                                                                                                                                                                                                                | 1.00      | Nos   |                | 4000.00                       | 4000.00  | 8000.00                      | 8000.00  | 431.98        | 431.98      | 1752%    | AHR Item  |  |
| 177.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 8" x 1", 3000#                                                                                                                                                                                                                                                                                                                                                    | 1.00      | Nos   |                | 3500.00                       | 3500.00  | 8000.00                      | 8000.00  | 431.98        | 431.98      | 1752%    | AHR Item  |  |
| 178.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 8" x 3/4", 6000#                                                                                                                                                                                                                                                                                                                                                  | 1.00      | Nos   |                | 3000.00                       | 3000.00  | 8000.00                      | 8000.00  | 647.98        | 647.98      | 1135%    | AHR Item  |  |
| 179.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 4" x 1 1/2", 3000#                                                                                                                                                                                                                                                                                                                                                | 1.00      | Nos   |                | 3500.00                       | 3500.00  | 6000.00                      | 6000.00  | 323.99        | 323.99      | 1752%    | AHR Item  |  |
| 180.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 4" x 1", 3000#                                                                                                                                                                                                                                                                                                                                                    | 1.00      | Nos   |                | 3000.00                       | 3000.00  | 6000.00                      | 6000.00  | 323.99        | 323.99      | 1752%    | AHR Item  |  |
| 181.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 4" x 3/4", 6000#                                                                                                                                                                                                                                                                                                                                                  | 1.00      | Nos   |                | 3000.00                       | 3000.00  | 6000.00                      | 6000.00  | 270           | 270.00      | 2122%    | AHR Item  |  |
| 182.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Supply of Weldolet conforming to MSS-SP-97, Material - ASTM A105 (CHARPY)-As per attached QAP in Tender and as per details given below:                                                                                                                                                                                                                           |           |       |                |                               |          |                              |          |               |             |          |           |  |
| 183.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 12" x 2", Thk/Sch - XS                                                                                                                                                                                                                                                                                                                                            | 1.00      | Nos   |                | 6000.00                       | 6000.00  | 15000.00                     | 15000.00 | 917.97        | 917.97      | 1534%    | AHR Item  |  |
| 184.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 8" x 2", Thk/Sch - XS                                                                                                                                                                                                                                                                                                                                             | 1.00      | Nos   |                | 5000.00                       | 5000.00  | 15000.00                     | 15000.00 | 701.98        | 701.98      | 2037%    | AHR Item  |  |
| 185.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | SUPPLY & INSTALLATION OF QOEC                                                                                                                                                                                                                                                                                                                                     |           |       |                |                               |          |                              |          |               |             |          |           |  |
| 186.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Supply and Installation of QOEC for ventline including all necessary piping fabrication works, including providing all necessary equipments, labour, materials, consumables and inputs other than Owner supplied materials and per forming all works as per drawings, data sheet, specifications enclosed with the Contract and directions of Engineer-in-Charge. |           |       |                |                               |          |                              |          |               |             |          |           |  |
| 187.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | QOEC 2" - 600 #                                                                                                                                                                                                                                                                                                                                                   | 1.00      | Nos.  |                | 85000.00                      | 85000.00 | 18000.00                     | 18000.00 | 134995.12     | 1,34,995.12 | -87%     |           |  |
| 188.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Supply of Reducer (CONCENTRIC) As per attached QAP in Tender and as per details given below:                                                                                                                                                                                                                                                                      |           |       |                |                               |          |                              |          |               |             |          |           |  |
| 189.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 2" X 3/4" 6A1 XS x XXS ASTM A 234 GR. WPB B.W, ASME B16.25                                                                                                                                                                                                                                                                                                        | 10.00     | Nos   |                | 3000.00                       | 30000.00 | 4000.00                      | 40000.00 | 829.17        | 8,291.70    | 382%     | AHR Item  |  |
| 190.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Nipple                                                                                                                                                                                                                                                                                                                                                            |           |       |                |                               |          |                              |          |               |             |          |           |  |
| 191.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Supply of Nipple 3/4 inch, ASTM-106, Sch- XXS ( One side Threaded (NPT)-Male, One side socket welded)- Length : 150MM                                                                                                                                                                                                                                             | 3.00      | Nos   |                | 1500.00                       | 4500.00  | 1500.00                      | 4500.00  | 375           | 1,125.00    | 300%     | AHR Item  |  |
| 192.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | RADIOGRAPHY                                                                                                                                                                                                                                                                                                                                                       |           |       |                |                               |          |                              |          |               |             |          |           |  |

| Government eProcurement System<br>Created By: MALEPPURATH GIRISH KUMAR<br>Created Date/Time: 18-Jan-2022 11:21 AM<br>Tender Title: Construction of Steel Pipelines and Associated facilities for CGD Connectivities for Western Region (Gujarat, Madhya Pradesh and Maharashtra) on ARC Basis<br>Tender ID: 2021_GAIL_100163_1<br>Tender Inviting Authority: GAIL (India) Ltd.<br>Name of Work: Construction of Steel Pipelines and Associated facilities for CGD Connectivities in Western Region viz. Gujarat, Madhya Pradesh and Maharashtra on ARC Basis<br>Contract No: 040-LYONS-GAIL-018 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |           |       |                |                                   |           |                              |           |               |             |          |           |  |
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| SCHEDULE OF WORK / ITEM(S)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |           |       |                |                                   |           |                              |           |               |             |          |           |  |
| Sl.No                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Description of Work / Item(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | No.of Qty | Units | Estimated Rate | MAS<br>CONSTRUCTIONS(GSTN-<br>NA) |           | SHAKTI<br>ENGINEERS(GSTN-NA) |           | COST ESTIMATE |             | Variance | AHR Items |  |
| 193.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Performance of radiographic inspection by gamma radiation as per scope of work and as per specifications in piping of all types and thickness including providing / hiring of all necessary equipments, supply of all consumables, and whatever else even though not expressly mentioned but required to perform the work as per specifications and instructions of EIC (full circle re-radiography of the repaired joint and additional radiography necessitated due to poor performance of contractor's welder shall be carried out by the Contractor at his own cost and shall not be paid extra by Company). Radiographs shall be submitted to the EIC for acceptance whose decision shall be final and binding.                                                                                                                                                                                                                                                                       |           |       |                |                                   |           |                              |           |               |             |          |           |  |
| 194.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Radiography 2" NB                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 200.00    | Each  |                | 2500.00                           | 500000.00 | 1000.00                      | 200000.00 | 1234.98       | 2,46,996.00 | -19%     |           |  |
| 195.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Radiography 4" NB                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 300.00    | Each  |                | 3000.00                           | 900000.00 | 1400.00                      | 420000.00 | 1543.23       | 4,62,969.00 | -9%      |           |  |
| 196.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Radiography 8" NB                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 50.00     | Each  |                | 4000.00                           | 200000.00 | 1800.00                      | 90000.00  | 2809.43       | 1,40,471.50 | -36%     |           |  |
| 197.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Radiography 6" NB                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 10.00     | Each  |                | 3500.00                           | 35000.00  | 1200.00                      | 12000.00  | 1778.4        | 17,784.00   | -33%     |           |  |
| 198.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Radiography 12" NB                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 20.00     | Each  |                | 5000.00                           | 100000.00 | 2800.00                      | 56000.00  | 4856.84       | 97,136.80   | -42%     |           |  |
| 199.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | HANDLING, LIFTING, TRANSPORTATION (INSTALLATION) OF EQUIPMENTS / VESSELS (Within Campus)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |           |       |                |                                   |           |                              |           |               |             |          |           |  |
| 200.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Handling, including lifting, transportation from Company's stores to Contractor's workshop for fabrication or/and to worksite for field fabrication, assembly of parts / sub-assemblies erection for all vessels, equipments supplied by company aboveground / underground at all elevation / depth, fixing of foundation bolts welding wherever required, aligning, grouting, hooking-up, cleaning and flushing by water draining, drying by compressed air providing all mountings, ancilliary, enabling works as required and completing in all respect as per drawings, specification and instruction of EIC. Contractor's scope shall include supply of all material and accessories including but not limited to any fixtures, clamps, gasket, nut bolts, finish coat of painting including rub-down and touch-up of shop primer / paint scrapping of shop primer / paint and further their painting after application of primer as per specification, wherever required by Company. | 10.00     | Ton   |                | 50000.00                          | 500000.00 | 4500.00                      | 45000.00  | 7719.1        | 77,191.00   | -42%     |           |  |
| 201.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | RECEIVING & TAKING OVER, HANDLING, TRANSPORTATION OF PIPES , FLANGES , FITTINGS , VALVES/ FILTERING/ METERING SKIDS/PRS /PIG TRAPS & OTHER EQUIPMENTS ETC (TERMINAL / MAINLINE MATERIAL / SURPLUS MATERIAL) - ANYWHERE IN INDIA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |           |       |                |                                   |           |                              |           |               |             |          |           |  |

| Government eProcurement System<br>Created By: MALEPPURATH GIRISH KUMAR<br>Created Date/Time: 18-Jan-2022 11:21 AM<br>Tender Title: Construction of Steel Pipelines and Associated facilities for CGD Connectivities for Western Region (Gujarat, Madhya Pradesh and Maharashtra) on ARC Basis<br>Tender ID: 2021_GAIL_100163_1<br>Tender Inviting Authority: GAIL (India) Ltd.<br>Name of Work: Construction of Steel Pipelines and Associated facilities for CGD Connectivities in Western Region viz. Gujarat, Madhya Pradesh and Maharashtra on ARC Basis<br>Contract No: 040-LYONS-GAIL-018 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |           |        |                |                                   |            |                              |           |               |              |          |           |
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| SCHEDULE OF WORK / ITEM(S)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |           |        |                |                                   |            |                              |           |               |              |          |           |
| Sl.No                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Description of Work / Item(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | No.of Qty | Units  | Estimated Rate | MAS<br>CONSTRUCTIONS(GSTN-<br>NA) |            | SHAKTI<br>ENGINEERS(GSTN-NA) |           | COST ESTIMATE |              | Variance | AHR Items |
| 202.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | The Contractor shall receive and take over, Handling including lifting, Owner-supplied bare / 3 LPE Coated line pipe / Ball Valves ,Flanges , Fittings, filtering, metering, prs skid, pig traps and any other material from GAIL's designated store, inspection of material at dispatch point as well as destination point and its transportation to work-site (including transit insurance) / return of project surplus / sparable material from Project site / Contractor's store to GAIL's store / warehouse including loading on trucks / trailers, transportation, unloading & stacking on wooden sleepers at Contractor's own stock-yard near work-site(s) / GAIL store (as applicable), including arrangement of truck / trailers / cranes / other material / machinery / manpower / consumables.                                                                                                                                                                                                                                            |           |        |                |                                   |            |                              |           |               |              |          |           |
| 203.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Transportation by Trailer Fix up to 0-50 KM (Weight up to 18 Ton) per trip                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 8.00      | Nos    |                | 100000.00                         | 800000.00  | 50000.00                     | 400000.00 | 73162.21      | 5,85,297.68  | -32%     |           |
| 204.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Transportation by Truck Fix up to 0-50 KM (Weight up to 10 Ton) per trip                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 8.00      | Nos    |                | 50000.00                          | 400000.00  | 25000.00                     | 200000.00 | 43897.32      | 3,51,178.56  | -43%     |           |
| 205.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Transportation by Trailer Capacoty 20 Ton (40' L X 8.6' W X 7' H) Beyond 50 KM in addition to SOR Item No. B006010.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 12500.00  | Per KM |                | 200.00                            | 2500000.00 | 35.00                        | 437500.00 | 128.77        | 16,09,625.00 | -73%     |           |
| 206.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Transportation by Truck (Weight up to 10 Ton) Beyond 50 KM in addition to SOR Item No. B006020.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 12500.00  | Per KM |                | 100.00                            | 1250000.00 | 28.00                        | 350000.00 | 52.68         | 6,58,500.00  | -47%     |           |
| 207.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Note:<br>(1) Transportation up to 50KM shall be paid by SOR no. B006010/B006020. Beyond 50KM transportation shall be paid by SOR no. B006030/B006040.<br>(2) The nominal quantity of pipes, fittings and valves must be accommodated with other material like M-skid, PRS, Pig Launcher / receiver etc. if feasible.<br>(3) 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;<br>(4) Above price shall be exclusive GST but inclusive of all type of toll taxes & duties, transit insurance during transportation & other insurance, etc. including all financial & commercial implication as per the tender document.<br>(5) The weightage of material may be varies as part load or full load as per the project requirement, Bidder to be quoted the price accordingly. |           |        |                |                                   |            |                              |           |               |              |          |           |



| Government eProcurement System<br>Created By: MALEPPURATH GIRISH KUMAR<br>Created Date/Time: 18-Jan-2022 11:21 AM<br>Tender Title: Construction of Steel Pipelines and Associated facilities for CGD Connectivities for Western Region (Gujarat, Madhya Pradesh and Maharashtra) on ARC Basis<br>Tender ID: 2021_GAIL_100163_1<br>Tender Inviting Authority: GAIL (India) Ltd.<br>Name of Work: Construction of Steel Pipelines and Associated facilities for CGD Connectivities in Western Region viz. Gujarat, Madhya Pradesh and Maharashtra on ARC Basis<br>Contract No: 040-LYONS-GAIL-018 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |           |       |                |                                   |          |                              |          |               |      |          |           |
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| SCHEDULE OF WORK / ITEM(S)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |           |       |                |                                   |          |                              |          |               |      |          |           |
| Sl.No                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Description of Work / Item(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | No.of Qty | Units | Estimated Rate | MAS<br>CONSTRUCTIONS(GSTN-<br>NA) |          | SHAKTI<br>ENGINEERS(GSTN-NA) |          | COST ESTIMATE |      | Variance | AHR Items |
| 208.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Transportation of material for nominal quantities from despatch point to site on "TO PAY BASIS" and legal RTO charges due to the ODC consignments. And payment shall be reimbursed as per SCC Clause no 2.5.7 of Tender Document. Bidder not to quote for this item.                                                                                                                                                                                                                                                                                                                                                                 | 10.00     | No.   |                |                                   |          |                              |          |               |      |          |           |
| 209.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | FIRE EXTINGUISHERS (Portable)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |           |       |                |                                   |          |                              |          |               |      |          |           |
| 210.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Supply, installation and commissioning of the following fire extinguishers:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |           |       |                |                                   |          |                              |          |               |      |          |           |
| 211.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | CO2 (10 Kg) considered 1 no. for each locations                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |           |       | 20000.00       | 200000.00                         | 15000.00 | 150000.00                    | 33333.68 | 3,33,336.80   | -55% |          |           |
| 212.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 10 kg capacity DCP fire extinguisher (portable) considered 1 no. for each locations                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |           |       | 8000.00        | 80000.00                          | 15000.00 | 150000.00                    | 29426.73 | 2,94,267.30   | -49% |          |           |
| 213.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 6 kg capacity DCP fire extinguisher (portable) considered 1 no. for each locations                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 10.00     | No.   | 7000.00        | 70000.00                          | 12000.00 | 120000.00                    | 17754.03 | 1,77,540.30   | -32% |          |           |
| 214.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 4 Nos. Sand Buckets with stand & canopy considered 1 set for each location                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 10.00     | Set   | 10000.00       | 100000.00                         | 25000.00 | 250000.00                    | 15438.2  | 1,54,382.00   | 62%  | AHR Item |           |
| 215.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Hook-up works at tap-off point, Despatch and Receiving Terminal including making provision for hooking up and carrying out shutdown activities at terminals if necessary                                                                                                                                                                                                                                                                                                                                                                                                                                                             |           |       |                |                                   |          |                              |          |               |      |          |           |
| 216.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Carbon Steel Piping Work with painting                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |           |       |                |                                   |          |                              |          |               |      |          |           |
| 217.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Transportation of all piping items from Contractor's storage point to work site complete work of fabrication, erection, painting, testing and making ready for further commissioning / start-up of carbon steel piping of all sizes and ratings including supply of all consumables, NDT (Radiography), equipment, manpower and other resources and execution of, but not limited to, the following works in accordance with relevant specifications indicated in particular job specification & scope of work indicated in SCC, drawings, specification and instructions of EIC and as per all provisions of the Contract Document. |           |       |                |                                   |          |                              |          |               |      |          |           |
| 218.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Fabrication including cutting, edge preparation, inclusive of grinding the edges of pipes, fittings, etc. to match with the matching edges of uneven / different thickness wherever required, welding, attachment of all pipe fittings including supply of all consumables required for completion of job.                                                                                                                                                                                                                                                                                                                           |           |       |                |                                   |          |                              |          |               |      |          |           |
| 219.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Supply of all manpower, equipment, etc. for completion of all works as per scope of work and as per drawings, specifications and instructions of EIC wherever required. Preparation of Construction, Fabrication, isometric and As-built drawings. Carrying out Non-destructive testing as required.                                                                                                                                                                                                                                                                                                                                 |           |       |                |                                   |          |                              |          |               |      |          |           |
| 220.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Surface preparation before application of primer by means of sand blasting including supply of approved quality of sand, manpower, machineries, tools & tackles to achieve required roughness as per specification and as per instruction of EIC.                                                                                                                                                                                                                                                                                                                                                                                    |           |       |                |                                   |          |                              |          |               |      |          |           |
| 221.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Testing/ drying/cleaning/Golden Tie -In with existing Pipeline                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |           |       |                |                                   |          |                              |          |               |      |          |           |
| 222.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Precommissioning & making operational all piping system and equipments.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |           |       |                |                                   |          |                              |          |               |      |          |           |

| Government eProcurement System<br>Created By: MALEPPURATH GIRISH KUMAR<br>Created Date/Time: 18-Jan-2022 11:21 AM<br>Tender Title: Construction of Steel Pipelines and Associated facilities for CGD Connectivities for Western Region (Gujarat, Madhya Pradesh and Maharashtra) on ARC Basis<br>Tender ID: 2021_GAIL_100163_1<br>Tender Inviting Authority: GAIL (India) Ltd.<br>Name of Work: Construction of Steel Pipelines and Associated facilities for CGD Connectivities in Western Region viz. Gujarat, Madhya Pradesh and Maharashtra on ARC Basis<br>Contract No: 040-LYONS-GAIL-018 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |           |           |                |                            |            |                           |            |               |              |          |           |  |
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| SCHEDULE OF WORK / ITEM(S)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |           |           |                |                            |            |                           |            |               |              |          |           |  |
| Sl.No                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Description of Work / Item(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | No.of Qty | Units     | Estimated Rate | MAS CONSTRUCTIONS(GSTN-NA) |            | SHAKTI ENGINEERS(GSTN-NA) |            | COST ESTIMATE |              | Variance | AHR Items |  |
| 223.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 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.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |           |           |                |                            |            |                           |            |               |              |          |           |  |
| 224.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Piping different grades & thickness upto 12" dia Pipe                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 150.00    | Inch- Dia |                | 2000.00                    | 300000.00  | 2800.00                   | 420000.00  | 2952.85       | 4,42,927.50  | -5%      |           |  |
| 225.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Piping different grades & thickness above 12" and upto 36" dia Pipe                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 50.00     | Inch- Dia |                | 2500.00                    | 125000.00  | 5000.00                   | 250000.00  | 4414.01       | 2,20,700.50  | 13%      |           |  |
| 226.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | INSTALLATION OF FILTERING/ METERING/ PRS SKID AND SCRAPER TRAPS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |           |           |                |                            |            |                           |            |               |              |          |           |  |
| 227.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Installtion of above ground owner supplied Filtering , Metering , PRS Skid, Pig traps and other equipment at work site up to mechanical completion in all respect, inclusive of painting suitable for Normal Corrosive Environment at all elevation , fixing of foundation bolts, welding wherever required, aligning, grouting, hooking-up, enabling works as required and completing in all respect as per drawings, specification and instruction of EIC.<br><br>Contractor scope also include to provide commissioning assitance during pre-commissing / commissioning of filtering skid/metering skid /PRS/pig trap and other equipments.<br><br>Note:<br>Installation and commssioning of Instrumentation items such as Gas Chromatograph (GC) & metering panel(flow computer panel), cable laying are seperately covered under Instrumentation SOR |           |           |                |                            |            |                           |            |               |              |          |           |  |
| 228.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Installation of above ground Flanged/ Welded Scraper Traps up to mechancial completion in all respectinclusive of painting suitable for Normal Corrosive Environment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 1.00      | No        |                | 300000.00                  | 300000.00  | 150000.00                 | 150000.00  | 245222.75     | 2,45,222.75  | -39%     |           |  |
| 229.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Installation of above ground Filtering/ Metering/ Pressure Reducing Skid up to mechanical completion in all respect inclusive of painting suitable for Normal Corrosive Environment at various loactions.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 8.00      | No        |                | 300000.00                  | 2400000.00 | 325000.00                 | 2600000.00 | 233923.96     | 18,71,391.68 | 39%      |           |  |
| 230.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | DISMANTLING AND CLEARING OF FILTERING/ METERING/ PRS SKID / SCRAPER TRAPS & OTHER EQUIPMENTS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |           |           |                |                            |            |                           |            |               |              |          |           |  |
| 231.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Dismantling and Clearing of old (presently installed) Skid / Scraper Traps and or other Equipments, as per instruction of EIC.<br><br>Contractor scope also include to provide necessary manpower, equipments & machinery for the above work.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 4.00      | Ton       |                | 15000.00                   | 60000.00   | 18000.00                  | 72000.00   | 53998.05      | 2,15,992.20  | -67%     |           |  |
| 232.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | PIPE SUPPORTS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |           |           |                |                            |            |                           |            |               |              |          |           |  |

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| Government eProcurement System<br>Created By: MALEPPURATH GIRISH KUMAR<br>Created Date/Time: 18-Jan-2022 11:21 AM<br>Tender Title: Construction of Steel Pipelines and Associated facilities for CGD Connectivities for Western Region (Gujarat, Madhya Pradesh and Maharashtra) on ARC Basis<br>Tender ID: 2021_GAIL_100163_1<br>Tender Inviting Authority: GAIL (India) Ltd.<br>Name of Work: Construction of Steel Pipelines and Associated facilities for CGD Connectivities in Western Region viz. Gujarat, Madhya Pradesh and Maharashtra on ARC Basis<br>Contract No: 040-LYONS-GAIL-018 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |           |       |                |                               |           |                              |           |               |             |          |           |
| SCHEDULE OF WORK / ITEM(S)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |           |       |                |                               |           |                              |           |               |             |          |           |
| Sl.No                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Description of Work / Item(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | No.of Qty | Units | Estimated Rate | MAS<br>CONSTRUCTIONS(GSTN-NA) |           | SHAKTI<br>ENGINEERS(GSTN-NA) |           | COST ESTIMATE |             | Variance | AHR Items |
| 233.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Supply, fabrication and erection of pipe/ equipment supports (for all sizes/ thickness) including shoes, pipes, cross-ivers, platforms, ladders, railings etc. as required, cradles, turn buckles, T-posts for all types of guides, anchors, special supports for cold/hot insulated pipes etc. if applicable, all necessary equipment, consumables, labour etc. for completing all works including supply of bolts, nuts, washers, U-clamps, wooden blocks etc. as required for supporting, supply and application of paints and primers suitable for normal corrosive painting environment as defined in contract document and as per standard specification for painting specification, Drawings, Specification, Standards, other provisions of Contract and instruction of Engineer-in-Charge. |           |       |                |                               |           |                              |           |               |             |          |           |
| 234.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | CS Structural Steel                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | .50       | ton   |                | 150000.00                     | 75000.00  | 200000.00                    | 100000.00 | 132909.59     | 66,454.80   | 50%      |           |
| 235.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | NITROGEN SUPPLY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |           |       |                |                               |           |                              |           |               |             |          |           |
| 236.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Supply of Nitrogen for preservation of Pipeline/ purging of pipeline / hookup & shut down activities .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 400.00    | m3    |                | 650.00                        | 260000.00 | 250.00                       | 100000.00 | 255.19        | 1,02,076.00 | -2%      |           |
| 237.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Note: (1) The quantities given above against individual items are indicative and shall not be considered to be binding. The quantities may be increased, decreased or deleted at site at the time of actual execution. Procurement shall be done as per actual site condition, approved construction drawings and as per instruction of EIC. The unit rate shall be operated to work out the final payment to the Contractor; a<br>(2) Quantities given against individual item may be utilised / used for other consumers in same area.                                                                                                                                                                                                                                                           |           |       |                |                               |           |                              |           |               |             |          |           |
| 238.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | INSTALLATION OF EQUIPMENT OTHER THAN ITEM NUMBER B009000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |           |       |                |                               |           |                              |           |               |             |          |           |
| 239.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Instaltion of above ground owner supplied equipment other than listed in item No B009000 at work site up to mechanical completion in all respect, inclusive of painting suitable for Normal Corrosive Environment at all elevation , fixing of foundation bolts, welding wherever required, aligning, grouting, hooking-up, enabling works as required and completing in all respect as per drawings, specification and instruction of EIC.<br><br>Contractor scope also include to provide commissioning assitance during pre-commissioning / commissioning of equipments                                                                                                                                                                                                                         | 1.00      | ton   |                | 15000.00                      | 15000.00  | 35000.00                     | 35000.00  | 98451.94      | 98,451.94   | -64%     |           |
| 240.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | SECTION-C [CIVIL / STRUCTURAL & ARCHITECTURAL]                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |           |       |                |                               |           |                              |           |               |             |          |           |
| 241.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | SURVEY WORKS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |           |       |                |                               |           |                              |           |               |             |          |           |

| <p style="text-align: center;">Government eProcurement System<br/> Created By: MALEPPURATH GIRISH KUMAR<br/> Created Date/Time: 18-Jan-2022 11:21 AM<br/> Tender Title: Construction of Steel Pipelines and Associated facilities for CGD Connectivities for Western Region (Gujarat, Madhya Pradesh and Maharashtra) on ARC Basis<br/> Tender ID: 2021_GAIL_100163_1<br/> Tender Inviting Authority: GAIL (India) Ltd.<br/> Name of Work: Construction of Steel Pipelines and Associated facilities for CGD Connectivities in Western Region viz. Gujarat, Madhya Pradesh and Maharashtra on ARC Basis<br/> Contract No: 040-LYONS-GAIL-018</p> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |           |       |                |                            |           |                           |           |               |           |          |           |
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| SCHEDULE OF WORK / ITEM(S)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |           |       |                |                            |           |                           |           |               |           |          |           |
| Sl.No                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Description of Work / Item(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | No.of Qty | Units | Estimated Rate | MAS CONSTRUCTIONS(GSTN-NA) |           | SHAKTI ENGINEERS(GSTN-NA) |           | COST ESTIMATE |           | Variance | AHR Items |
| 242.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Conducting topographical ground/land survey in the specified area as shown in the tender drawings by conventional/GPS or any other standard method, covering details of physical features like Rivers, Nallahs, Lakes, Ponds, wells, pits, Forest, Trees, Roads, culverts, transmission lines, telegraph/ telephone and electric poles, underground or any other services, cross drainage works including cross sectional details of nallah etc. including establishing high flood level with source of information, identification of any monument, historical structure, wild life sanctuary in the vicinity, storm water disposal point with levels, cross-section details of nallah, recording spot levels, including providing in tabulation girth wise no. of trees etc as specified, plotting and developing topographical contour maps, showing true north including establishing survey reference stations, key plan etc. including all equipment's, instruments, personnel's, clearing of bushes as per requirement for intervisibility to carry out survey work etc. , complete work in all respects as per drawings, specifications and directions of Engineer-in-Charge including submitting hard copies of drawings/map and supply of electronic files.<br>Note: Survey work shall be carried out by survey agency approved by Contractor and shall be submitted to PMC/EIC for review. | 200.00    | M2    |                | 300.00                     | 60000.00  | 78.00                     | 15600.00  | 110.12        | 22,024.00 | -29%     |           |
| 243.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | GEO TECHNICAL INVESTIGATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |           |       |                |                            |           |                           |           |               |           |          |           |
| 244.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Conducting soil investigation with boring of minimum150mm dia. boreholes of maximum 10m depth including all field tests and laboratory tests, mobilization and demobilization of equipments & personnel etc. for soil investigation for each borehole location . complete work in all respects as per drawings, specifications and directions of Engineer-in-Charge including submitting hard copies of Reports & recommendations and supply of electronic files.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 1.00      | each  |                | 100000.00                  | 100000.00 | 50000.00                  | 50000.00  | 70565.3       | 70,565.30 | -29%     |           |
| 245.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | FENCING & GATE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |           |       |                |                            |           |                           |           |               |           |          |           |
| 246.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Supplying, fixing and tensioning in position 2.5mm(12gauge), 2 ply, 4 points, GI Barbed wire designation A-1 conforming to IS:278 in horizontal rows and cross diagonals for compound wall "Y" shaped overhang etc. with necessary GI staples, clips and pins, GI straining bolts and binding wire with all labour and materials etc. complete as per drawings, specifications and directions of Engineer-in-Charge.(The barbed wire shall be measured in linear length of the barbed wire actually fixed).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 300.00    | RM    |                | 300.00                     | 90000.00  | 2300.00                   | 690000.00 | 243.87        | 73,161.00 | 843%     | AHR Item  |

| <p align="center"> <b>Government eProcurement System</b><br/> <b>Created By: MALEPPURATH GIRISH KUMAR</b><br/> <b>Created Date/Time: 18-Jan-2022 11:21 AM</b><br/> <b>Tender Title: Construction of Steel Pipelines and Associated facilities for CGD Connectivities for Western Region (Gujarat, Madhya Pradesh and Maharashtra) on ARC Basis</b><br/> <b>Tender ID: 2021_GAIL_100163_1</b><br/> <b>Tender Inviting Authority: GAIL (India) Ltd.</b><br/> <b>Name of Work: Construction of Steel Pipelines and Associated facilities for CGD Connectivities in Western Region viz. Gujarat, Madhya Pradesh and Maharashtra on ARC Basis</b><br/> <b>Contract No: 040-LYONS-GAIL-018</b> </p> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |           |       |                |                               |           |                              |           |               |             |          |           |
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| <b>SCHEDULE OF WORK / ITEM(S)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |           |       |                |                               |           |                              |           |               |             |          |           |
| Sl.No                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Description of Work / Item(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | No.of Qty | Units | Estimated Rate | MAS<br>CONSTRUCTIONS(GSTN-NA) |           | SHAKTI<br>ENGINEERS(GSTN-NA) |           | COST ESTIMATE |             | Variance | AHR Items |
| 247.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Supplying, fabricating and fixing in position structural steel line posts, straining posts, struts for 'Y' shaped overhang etc. conforming to IS:2062 over brick/stone Masonry/ RCC compound walls/ columns, cutting to required size as per drawings and specifications, welding where necessary, embedding in position, holding to correct level and line, any auxiliary structure for dummy supports, drilling holes and painting as per painting specification attached with tender, cutting brick/rubble/concrete surfaces if necessary, grouting with M20 grade concrete including cost of grout with all labour and material etc. complete as per drawings, specifications and directions of Engineer-in-Charge.( All materials including cement shall be supplied by contractor)<br>For Normal Industrial Environment. | 100.00    | KG    |                | 200.00                        | 20000.00  | 150.00                       | 15000.00  | 215.58        | 21,558.00   | -30%     |           |
| 248.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Supplying, fabricating and fixing G.I. chain link fencing with 3.15mm dia. wire, 50x50mm diamond mesh chain link fence fabric conforming to IS:2721 fixed to steel/RCC posts/struts above ground level, including supply of chain link fencing fabric, stretcher bars, staples, etc. required for fixing the fencing, fixing of chain link fencing between straining posts, fixing of bottom of fencing to a concrete sill beams by means of hairpin beams by means of hairpin staples, including supply and fixing line wires, complete as per drawings, specifications and directions of Engineer -in- Charge.                                                                                                                                                                                                               | 150.00    | Sqm.  |                | 1200.00                       | 180000.00 | 1400.00                      | 210000.00 | 1865.15       | 2,79,772.50 | -25%     |           |
| 249.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Providing and fixing in position Steel Entrance Gates consisting of MC- 75 framework for shutters, 20mm square M.S. vertical bars welded to the framework @100mm c/c, 3mm thick M.S. sheet boxing, locking arrangement, 25mm thick, 75mm dia M.S. wheel with ball bearing including fixing the gate to RCC/ masonry by M.S. hinge arrangement (75mm x 75mm x 6mm M.S. angles, bolt, washers) and M.S. hold fast grouted with M-15 grade concrete, providing and fixing M.S. pivot, 50mm x 50mm x 6mm M.S. Tee bent to shape and embedded in road surface for gate opening track, gate stopper, painting the gate with approved shade and quality synthetic enamel paint (two coats) and a coat of approved quality primer, ensuring smooth operation of the gate etc. all complete as per attached standard drawing.           | 700.00    | kg    |                | 200.00                        | 140000.00 | 150.00                       | 105000.00 | 209.73        | 1,46,811.00 | -28%     |           |
| 250.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | EARTHWORK IN SITE GRADING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |           |       |                |                               |           |                              |           |               |             |          |           |

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| Government eProcurement System<br>Created By: MALEPPURATH GIRISH KUMAR<br>Created Date/Time: 18-Jan-2022 11:21 AM<br>Tender Title: Construction of Steel Pipelines and Associated facilities for CGD Connectivities for Western Region (Gujarat, Madhya Pradesh and Maharashtra) on ARC Basis<br>Tender ID: 2021_GAIL_100163_1<br>Tender Inviting Authority: GAIL (India) Ltd.<br>Name of Work: Construction of Steel Pipelines and Associated facilities for CGD Connectivities in Western Region viz. Gujarat, Madhya Pradesh and Maharashtra on ARC Basis<br>Contract No: 040-LYONS-GAIL-018 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |           |       |                |                               |           |                              |           |               |             |          |           |  |
| SCHEDULE OF WORK / ITEM(S)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |           |       |                |                               |           |                              |           |               |             |          |           |  |
| Sl.No                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Description of Work / Item(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | No.of Qty | Units | Estimated Rate | MAS<br>CONSTRUCTIONS(GSTN-NA) |           | SHAKTI<br>ENGINEERS(GSTN-NA) |           | COST ESTIMATE |             | Variance | AHR Items |  |
| 251.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Earthwork in excavation and filling in all types of soil except soft rock and hard rock for general site grading for all heights and depths including clearing and stripping etc. in excavation areas, removing shrubs, grass, bushes, vegetable growth and other objectionable materials, trees upto and inclusive of a girth of 30 cms. (girth measured at a height of one metre above ground level) including uprooting of roots, etc., dewatering, if necessary, sorting out the excavated soil into serviceable and unserviceable materials in excavation areas and including filling in filling areas with serviceable material for general site grading and roads for all heights and depths to proper levels, slopes, grades and camber including clearing and stripping in filling areas as per specifications, consolidating exposed natural soil to 90% of max. laboratory dry density as per IS:2720 Part-VII, cutting of trees of girth upto and inclusive of 30 cms, removal of vegetation, breaking clods, spreading in layers not exceeding 30 cms loose thickness, watering, ramming and compacting with power road rollers to give at least 90% of max. laboratory dry density, dressing, leveling, testing, etc. and disposal of unserviceable materials/surplus earth if any, as directed by Engineer-in-Charge including stacking and/or dumping and dressing the same in demarcated areas etc. complete as per specifications, drawings and directions of Engineer-in-Charge. (The leads for the above mentioned operations shall be within the boundry limit of the plant and measurement shall be taken in the cutting area only). | 100.00    | M3    |                | 2500.00                       | 250000.00 | 150.00                       | 15000.00  | 444.34        | 44,434.00   | -66%     |           |  |
| 252.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | PAVER BLOCK Flooring                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |           |       |                |                               |           |                              |           |               |             | #VALUE!  |           |  |
| 253.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Supplying and placing in position as per approved pattern of Cement Concrete Inter locking paver block 80 mm thick of approved shape, rough finish, M-40 strength of approved brand laid over the sand bed of minimum 100 mm thick. The CC interlocking blocks to be of uniform Grey colour or as approved by EIC complete in all respects , as per technical specifications and directions of the Engineer-in-charge<br>Note :-<br>1. Rate to include cost of all labour, tools, tackles, equipment, hire charges, supply of all materials such paver blocks, sand, earth work in excavation in cutting earth in all conditions, shuttering with all bye works and sundry works.<br>2. To be read with in conjunction with Particular Job Specification<br>3. Supply of all materials and providing labour, tools and tackles are in contractor's scope                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 100.00    | M2    |                | 2700.00                       | 270000.00 | 2200.00                      | 220000.00 | 2819.56       | 2,81,956.00 | -22%     |           |  |
| 254.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | RCC HUME PIPE CULVERT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |           |       |                |                               |           |                              |           |               |             |          |           |  |

| <p style="text-align: center;">Government eProcurement System<br/> Created By: MALEPPURATH GIRISH KUMAR<br/> Created Date/Time: 18-Jan-2022 11:21 AM<br/> Tender Title: Construction of Steel Pipelines and Associated facilities for CGD Connectivities for Western Region (Gujarat, Madhya Pradesh and Maharashtra) on ARC Basis<br/> Tender ID: 2021_GAIL_100163_1<br/> Tender Inviting Authority: GAIL (India) Ltd.<br/> Name of Work: Construction of Steel Pipelines and Associated facilities for CGD Connectivities in Western Region viz. Gujarat, Madhya Pradesh and Maharashtra on ARC Basis<br/> Contract No: 040-LYONS-GAIL-018</p> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |           |       |                |                            |           |                           |          |               |             |          |           |
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| SCHEDULE OF WORK / ITEM(S)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |           |       |                |                            |           |                           |          |               |             |          |           |
| Sl.No                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Description of Work / Item(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | No.of Qty | Units | Estimated Rate | MAS CONSTRUCTIONS(GSTN-NA) |           | SHAKTI ENGINEERS(GSTN-NA) |          | COST ESTIMATE |             | Variance | AHR Items |
| 255.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Providing, laying, jointing and testing RCC hume pipes of 300mm dia. and np3 class for culverts, road crossing, incl. excavation in all strata up to an average depth of 1 m cutting, collars jointing in 1:2 cement mortar etc. complete as per specifications and as directed by the engineer-in charge.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 10.00     | M     |                | 5000.00                    | 50000.00  | 3000.00                   | 30000.00 | 4704.35       | 47,043.50   | -36%     |           |
| 256.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Providing, laying, jointing and testing RCC hume pipes of 500mm dia. and np3 class for culverts, road crossing, incl. excavation in all strata up to an average depth of 1 m cutting, collars jointing in 1:2 cement mortar etc. complete as per specifications and as directed by the engineer-in charge.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 2.00      | M     |                | 6500.00                    | 13000.00  | 4000.00                   | 8000.00  | 8337.57       | 16,675.14   | -52%     |           |
| 257.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | KERB STONE FIXING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |           |       |                |                            |           |                           |          |               |             |          |           |
| 258.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Providing and fixing precast concrete Kerb stones (125 wide X 300 deep) of M-30 grade or equivalent of approved make and shape at or near ground level as per approved pattern and setting in position with cement mortar 1:3 (1 cement : 3 coarse sand) including the cost of required centering, shuttering and finishing smooth with 6 mm thick cement plaster 1:3 (1 cement : 3 fine sand) wherever required over 75 mm thick PCC 1:4:8 levelling course, complete in all respects as per scope of work, detailed construction drawings, technical specifications and directions of the Engineer-In-Charge.<br>Note:-<br>1. Rate to include all labour, tools, tackles, factory manufactured & steam cured Kerb Stones, shuttering, transportation, water charges, earth work if any, PCC etc complete | 2.00      | M     |                | 10000.00                   | 20000.00  | 5000.00                   | 10000.00 | 980.89        | 1,961.78    | 410%     | AHR Item  |
| 259.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | VALVE PIT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |           |       |                |                            |           |                           |          |               |             |          |           |
| 260.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Supply, & Construction of Valve Pit-TYPE I (3.0m x 1.5 m x 1.5m) in size (internal dimension) as per attached tender drawing, technical specification and direction of Engineer-In-Charge complete in all respect.<br><br>Note: 1. Rate includes all the supply of material, labour, machinery etc. to complete the job in all respect. No any separate payment shall be made under other clauses mentioned elsewhere.<br>2. For stone breaking for making the pit separate payment shall be done as per SOR available in tender.                                                                                                                                                                                                                                                                          | 1.00      | Nos.  |                | 280000.00                  | 280000.00 | 60000.00                  | 60000.00 | 107996.1      | 1,07,996.10 | -44%     |           |
| 261.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | SAND FILLING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |           |       |                |                            |           |                           |          |               |             |          |           |

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| SCHEDULE OF WORK / ITEM(S)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |           |       |                |                            |           |                           |           |               |             |          |           |
| Sl.No                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Description of Work / Item(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | No.of Qty | Units | Estimated Rate | MAS CONSTRUCTIONS(GSTN-NA) |           | SHAKTI ENGINEERS(GSTN-NA) |           | COST ESTIMATE |             | Variance | AHR Items |
| 262.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Supplying and filling approved SAND of specified quality under floors, in foundations, plinths, tank foundations etc. for all depths and heights including cost of sand,royalties, transportation to site for all leads and lifts.including loading, unloading, spreading in layers of loose thickness not exceeding 150 mm,watering,ramming,compacting with mechanical compactors and/or other equipment to the specified levels to achieve 85% relative density as per IS:2720 Part XIV,including preparation of subgrade to the required slope,providing testing apparatus and testing the degree of consolidation all complete as per drawings, specifications and direction of Engineer-in-charge.The rates shall be inclusive of the cost of all labour,material,equipments etc. all complete . | 100.00    | M3    |                | 4000.00                    | 400000.00 | 3500.00                   | 350000.00 | 3242.19       | 3,24,219.00 | 8%       |           |
| 263.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | DEMOLITION OF R.C.C./BRICKS/STONE MASONRY/STEEL WORK                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |           |       |                |                            |           |                           |           |               |             |          |           |
| 264.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Site clearance by demolition of R.C.C./Brickwork/Stone Masonry/Stone Soling, Flexible pavements etc. along with removing the debris and disposal of unserviceable material to any lead and staking of serviceable materials, handing over serviceable material to concerned department if required as per technical specifications and direction of Engineer-in-charge.<br><br>Note:<br>1. Rate includes cost of all labour, tools, tackles, hire charges, royalties, levies, leads, loading/unloading, transportation, water, electric power, illumination etc. complete in all respects as per scope of work, detailed construction drawings, technical specifications and direction of Engineer-in-charge.<br>2. Demolition of RCC/PCC/Brick Masonry/Road will be paid in NET CUM as demolished.   | 2.00      | M3    |                | 2500.00                    | 5000.00   | 3000.00                   | 6000.00   | 4052.06       | 8,104.12    | -26%     |           |
| 265.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Site clearance by demolition of STEEL work etc. along with removing the disposal of unserviceable material to any lead and staking of serviceable materials, handing over serviceable material to concerned department if required as per technical specifications and direction of Engineer-in-charge.<br><br>Note:<br>1. Rate includes cost of all labour, tools, tackles, hire charges, royalties, levies, leads, loading/unloading, transportation, water, electric power, illumination etc. complete in all respects as per scope of work, detailed construction drawings, technical specifications and direction of Engineer-in-charge.<br>2. Demolition of steel work will be paid in NET Kg as demolished.                                                                                    | 50.00     | Kg    |                | 200.00                     | 10000.00  | 15.00                     | 750.00    | 188.99        | 9,449.50    | -92%     |           |
| 266.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | ERC/IRC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |           |       |                |                            |           |                           |           |               |             |          |           |



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| <b>SCHEDULE OF WORK / ITEM(S)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |           |       |                |                               |           |                              |           |               |             |          |           |
| Sl.No                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Description of Work / Item(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | No.of Qty | Units | Estimated Rate | MAS<br>CONSTRUCTIONS(GSTN-NA) |           | SHAKTI<br>ENGINEERS(GSTN-NA) |           | COST ESTIMATE |             | Variance | AHR Items |
| 267.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Construction of ERC/IRC as per Std. including supplying and laying in position PVC pipes conforming to IS:4985 Class-I for electrical and instrumentation Road Crossings as per standard drawing and its addendum, including cutting the pipes if necessary, lowering, laying in position to proper levels, etc. embedded in M-20 grade concrete, providing proper jointing as per code requirements or manufacturer's recommendations, etc. including earth work in excavation in all types of soil except soft and hard rock, backfilling and making good the surface, including cutting of new/ existing roads and making good the same including supply of any road material if required, (Back filling with road material shall be done in 150 mm thick layers well watered and compacted), including supplying and providing in the encasement concrete, cable crossing indicator made out of 4 mm thick MS circular plate of dia. 150mm welded to 16 mm dia. MS rod of approximately 1.0 m length and painting and lettering with 2 coats of approved enamel paint of approved colour over a coat of red oxide primer etc., supply and fixing of reinforcement as per drawing, including disposal of surplus earth anywhere within plant boundary limit etc. all complete as per drawings, specifications and instructions of Engineer-in-Charge. | 10.00     | M     |                | 2000.00                       | 20000.00  | 280.00                       | 2800.00   | 5645.22       | 56,452.20   | -95%     |           |
| 268.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | EARTH WORK IN FOUNDATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |           |       |                |                               |           |                              |           |               |             |          |           |
| 269.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Earth work in Excavation below ground level for all kinds of works in ALL TYPES OF SOIL as classified in specification for a depth upto 1.5m including removal of vegetation, shrubs and debris, cutting and dressing of sides in slopes, levelling, grading and ramming of bottoms, dewatering of accumulated water from any source and keeping the surface dry for subsequent works and disposal or stacking of excavated material within a lead of 100m, as directed including providing temporary supports to existing service lines like water pipes, sewage pipes, electric overhead and underground cables etc. all complete.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 300.00    | M3    |                | 800.00                        | 240000.00 | 600.00                       | 180000.00 | 449.7         | 1,34,910.00 | 33%      |           |
| 270.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | For depth beyond 1.5m and upto & inclusive of 3.0m.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 50.00     | M3    |                | 1000.00                       | 50000.00  | 650.00                       | 32500.00  | 694.55        | 34,727.50   | -6%      |           |
| 271.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Backfilling after execution of the WORK to proper grade and level with selected materials from available excavated soil from spoil heaps, including re-excavating the deposited soil excavated earlier, breaking clods, laying at all depths and heights in layers of thickness not exceeding 15 Cms. watering, rolling and ramming by manual methods/ mechanical compactors to achieve 90% laboratory maximum dry density, dressing, trimming etc. in foundations, plinths, trenches, pits etc. all complete.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 200.00    | M3    |                | 500.00                        | 100000.00 | 250.00                       | 50000.00  | 308.26        | 61,652.00   | -19%     |           |

| <p style="text-align: center;">Government eProcurement System<br/> Created By: MALEPPURATH GIRISH KUMAR<br/> Created Date/Time: 18-Jan-2022 11:21 AM<br/> Tender Title: Construction of Steel Pipelines and Associated facilities for CGD Connectivities for Western Region (Gujarat, Madhya Pradesh and Maharashtra) on ARC Basis<br/> Tender ID: 2021_GAIL_100163_1<br/> Tender Inviting Authority: GAIL (India) Ltd.<br/> Name of Work: Construction of Steel Pipelines and Associated facilities for CGD Connectivities in Western Region viz. Gujarat, Madhya Pradesh and Maharashtra on ARC Basis<br/> Contract No: 040-LYONS-GAIL-018</p> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |           |       |                |                            |           |                           |           |               |             |          |           |
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| SCHEDULE OF WORK / ITEM(S)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |           |       |                |                            |           |                           |           |               |             |          |           |
| Sl.No                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Description of Work / Item(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | No.of Qty | Units | Estimated Rate | MAS CONSTRUCTIONS(GSTN-NA) |           | SHAKTI ENGINEERS(GSTN-NA) |           | COST ESTIMATE |             | Variance | AHR Items |
| 272.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | EARTHWORK IN FILLING including supply by excavating the earth from BORROW AREAS arranged by CONTRACTOR for all leads, transporting the earth from borrow area including cleaning & stripping the earth at borrow areas, breaking clods, loading, unloading and laying at all depths and heights in layers of thickness not exceeding 15 cms., watering, rolling and ramming by manual methods/mechanical compactors to achieve 90% of the maximum laboratory dry density, dressing, trimming, levelling the top surface etc. in foundations, plinths, trenches etc. all complete.      | 50.00     | M3    |                | 2000.00                    | 100000.00 | 800.00                    | 40000.00  | 1513.9        | 75,695.00   | -47%     |           |
| 273.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Transporting and disposing the SURPLUS EARTH AND DEBRIS including shrubs and vegetations from construction area beyond the initial lead of 100M including re-excavating the deposited soil excavated earlier, transportation, loading, unloading, laying at all depths and heights, stacking, levelling and dressing both the area (viz. from where the earth is transported and where it is deposited) to required levels and slopes complete with all lifts as directed. For carting on the basis of truck measurements (volume of truck reduced by 30% for voids)<br>i) Upto 1.0Km. | 50.00     | M3    |                | 2500.00                    | 125000.00 | 300.00                    | 15000.00  | 444.6         | 22,230.00   | -33%     |           |
| 274.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | PLAIN & REINFORCED CEMENT CONCRETE:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |           |       |                |                            |           |                           |           |               |             |          |           |
| 275.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Providing and laying PLAIN CEMENT CONCRETE for all depths below and upto plinth level in foundations, drains, fillings, non-suspended floors, pavements & ramps or any other works etc. including shuttering, tamping, ramming, vibrating, curing, shuttering etc. all as specified in any shape, position, thickness and finishing the top surface rough or smooth as specified and directed all complete for concrete of nominal mix 1:4:8 by volume (1 Cement: 4 Coarse Sand: 8 Crushed Stone Aggregates/Gravels with 40mm and down size graded crushed stone aggregates.           | 40.00     | M3    |                | 8000.00                    | 320000.00 | 7200.00                   | 288000.00 | 8748.25       | 3,49,930.00 | -18%     |           |
| 276.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Concrete of nominal mix of 1:5:10 by volume (1 Cement :5 Coarse Sand : 10 Crushed Stone Aggregates/Gravels).                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 2.00      | M3    |                | 8000.00                    | 16000.00  | 5000.00                   | 10000.00  | 10299.36      | 20,598.72   | -51%     |           |

| <p align="center"> <b>Government eProcurement System</b><br/> <b>Created By: MALEPPURATH GIRISH KUMAR</b><br/> <b>Created Date/Time: 18-Jan-2022 11:21 AM</b><br/> <b>Tender Title: Construction of Steel Pipelines and Associated facilities for CGD Connectivities for Western Region (Gujarat, Madhya Pradesh and Maharashtra) on ARC Basis</b><br/> <b>Tender ID: 2021_GAIL_100163_1</b><br/> <b>Tender Inviting Authority: GAIL (India) Ltd.</b><br/> <b>Name of Work: Construction of Steel Pipelines and Associated facilities for CGD Connectivities in Western Region viz. Gujarat, Madhya Pradesh and Maharashtra on ARC Basis</b><br/> <b>Contract No: 040-LYONS-GAIL-018</b> </p> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |           |       |                |                               |            |                              |            |               |              |          |           |
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| <b>SCHEDULE OF WORK / ITEM(S)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |           |       |                |                               |            |                              |            |               |              |          |           |
| Sl.No                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Description of Work / Item(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | No.of Qty | Units | Estimated Rate | MAS<br>CONSTRUCTIONS(GSTN-NA) |            | SHAKTI<br>ENGINEERS(GSTN-NA) |            | COST ESTIMATE |              | Variance | AHR Items |
| 277.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Providing and laying PLAIN CEMENT CONCRETE for all depths below and upto plinth level in foundations,drains, fillings, non-suspended floors, pavements & ramps or any other works etc. including shuttering, tamping, ramming, vibrating, curing, etc. all as specified in any shape, position, thickness and finishing the top surface rough or smooth as specified and directed all complete for concrete grade M20 with 20mm and down size graded crushed stone aggregates/Gravels.                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 1.00      | M3    |                | 9500.00                       | 9500.00    | 7500.00                      | 7500.00    | 9087.96       | 9,087.96     | -17%     |           |
| 278.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Providing and laying REINFORCED CEMENT CONCRETE OF M-25 GRADE with 20mm and down size graded crushed stone aggregates/gravel in SUB-STRUCTURE of all types e.g. foundations, footings, raft, beams, slabs, pile caps, retaining walls, jambs, counterforts, buttresses, trenches, manholes,pipe encasement, catchpits, drains, RCC pits, equipment/machine foundations, pedestals, pipe sleepers, columns, plinth beams, suspended floors, beams, staircases, landings, steps, brackets etc. (including single pour concreting upto 250m3), including cost of admixtures if used,providing pockets, openings, recesses, chamfering etc., wherever required, vibrating, tamping, curing and rendering if required to give a smooth and even surface etc. all complete (excluding the Cost of Reinforcement and Shuttering) for all depths below and upto plinth level in any shape, position and thickness etc. all complete as specified, shown and directed. | 130.00    | M3    |                | 9500.00                       | 1235000.00 | 11000.00                     | 1430000.00 | 11579.14      | 15,05,288.20 | -5%      |           |
| 279.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Providing and laying REINFORCED CEMENT CONCRETE OF M-25 GRADE with 20mm and down size graded crushed stone aggregates/gravel in SUPER STRUCTURE in suspended floors, slabs, beams, columns, walls including counterforts, staircases, landings, steps, facias, fins, mouldings, gutters, shelves, windowsills, canopies, lintels, girders, ducts, brackets, chajjas with drip moulds, pedestals, posts, struts, equipment/machine foundations, ramps etc. (including single pour concreting upto 250m3) including cost of admixtures if used providing pockets, openings, recesses, chamfering wherever required, vibrating, tamping, curing and rendering if required to give a smooth and even surface etc. all complete (excluding the Cost of Reinforcement and Shuttering) for all heights above plinth level in any shape, position, thickness etc. all complete as specified, shown and directed.                                                      | 20.00     | M3    |                | 12000.00                      | 240000.00  | 11000.00                     | 220000.00  | 10584.79      | 2,11,695.80  | 4%       |           |

| <p align="center"> <b>Government eProcurement System</b><br/> <b>Created By: MALEPPURATH GIRISH KUMAR</b><br/> <b>Created Date/Time: 18-Jan-2022 11:21 AM</b><br/> <b>Tender Title: Construction of Steel Pipelines and Associated facilities for CGD Connectivities for Western Region (Gujarat, Madhya Pradesh and Maharashtra) on ARC Basis</b><br/> <b>Tender ID: 2021_GAIL_100163_1</b><br/> <b>Tender Inviting Authority: GAIL (India) Ltd.</b><br/> <b>Name of Work: Construction of Steel Pipelines and Associated facilities for CGD Connectivities in Western Region viz. Gujarat, Madhya Pradesh and Maharashtra on ARC Basis</b><br/> <b>Contract No: 040-LYONS-GAIL-018</b> </p> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |           |       |                |                               |            |                              |           |               |              |          |           |
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| <b>SCHEDULE OF WORK / ITEM(S)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |           |       |                |                               |            |                              |           |               |              |          |           |
| Sl.No                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Description of Work / Item(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | No.of Qty | Units | Estimated Rate | MAS<br>CONSTRUCTIONS(GSTN-NA) |            | SHAKTI<br>ENGINEERS(GSTN-NA) |           | COST ESTIMATE |              | Variance | AHR Items |
| 280.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Manufacturing, transporting, supplying and erecting in position Reinforced Cement Concrete PRECAST ELEMENTS such as columns, beams, cover slabs, lintels, louvers, fins, shelves etc. of M-25 grade with 20mm and down size graded crushed stone aggregates/gravel, for all leads, levels, shapes and thickness including all moulds, shuttering and centering, vibrating, tamping, curing, chamfering wherever required, finishing the top surface with cement mortar 1:3 ( 1 Cement : 3 Sand) to give a smooth and even surface, or non skid finish as specified, providing lifting hooks, metal inserts, making holes pockets, (only M.S. inserts to be measured & paid separately) transporting to site, erecting, levelling, aligning and fixing in position with cement mortar 1:3 (1Cement : 3 Coarse Sand), breaking bricks and/or concrete surfaces and making good the same etc. all complete (excluding the Cost of Reinforcement ) and as directed.<br>1) Each unit upto and inclusive of 500 Kg. | 1.00      | M3    |                | 50000.00                      | 50000.00   | 11000.00                     | 11000.00  | 14701.1       | 14,701.10    | -25%     |           |
| 281.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | CENTERING AND SHUTTERING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |           |       |                |                               |            |                              |           |               |              |          |           |
| 282.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Providing and fixing CENTERING AND SHUTTERING in foundations, footings, raft beams, slabs, pile caps, retaining walls, jambs, counter-forts, buttresses, trenches, equipment/machine foundations, pedestals, abutments, pipe sleepers, columns, plinth beams, lintels, suspended slabs, beams, staircases, landings, steps, non-circular tunnels/bunkers/silos/ shafts/ hoppers/liquid storage structures etc. including shuttering for single pour concreting, strutting, bracing, propping etc., keeping the same in position during concreting and removal of the same after specified period etc. for Straight/ Inclined Shuttering, keeping necessary provision for inserts, projecting dowels, anchor bolts or any other fixture etc. all complete and as specified and directed.                                                                                                                                                                                                                       |           |       |                |                               |            |                              |           |               |              |          |           |
| 283.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | i) For all depths below and upto & inclusive of plinth level.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 350.00    | M2    |                | 800.00                        | 280000.00  | 500.00                       | 175000.00 | 617.49        | 2,16,121.50  | -19%     |           |
| 284.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | ii) For all heights above plinth level.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 180.00    | M2    |                | 850.00                        | 153000.00  | 500.00                       | 90000.00  | 799.43        | 1,43,897.40  | -37%     |           |
| 285.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | REINFORCEMENT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |           |       |                |                               |            |                              |           |               |              |          |           |
| 286.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Supplying and placing in position HIGH STRENGTH DEFORMED STEEL BARS REINFORCEMENT (conforming to IS:1786, Grade Fe 415), for R.C.C. work including transporting the Steel, straightening, cleaning, decolling, cutting, bending to required shapes and lengths as per details, binding with contractor's own 16 SWG black soft annealed binding wire at every intersection, supplying and placing with proper cover blocks, supports, chairs, overlaps, welding, spacers, fanhooks etc. for all heights and depths etc. all complete as directed.                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 10.00     | MT    |                | 110000.00                     | 1100000.00 | 95000.00                     | 950000.00 | 120295.25     | 12,02,952.50 | -21%     |           |
| 287.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | STRUCTURAL STEEL WORKS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |           |       |                |                               |            |                              |           |               |              |          |           |

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| Government eProcurement System<br>Created By: MALEPPURATH GIRISH KUMAR<br>Created Date/Time: 18-Jan-2022 11:21 AM<br>Tender Title: Construction of Steel Pipelines and Associated facilities for CGD Connectivities for Western Region (Gujarat, Madhya Pradesh and Maharashtra) on ARC Basis<br>Tender ID: 2021_GAIL_100163_1<br>Tender Inviting Authority: GAIL (India) Ltd.<br>Name of Work: Construction of Steel Pipelines and Associated facilities for CGD Connectivities in Western Region viz. Gujarat, Madhya Pradesh and Maharashtra on ARC Basis<br>Contract No: 040-LYONS-GAIL-018 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |           |       |                |                               |           |                              |           |               |             |          |           |  |
| SCHEDULE OF WORK / ITEM(S)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |           |       |                |                               |           |                              |           |               |             |          |           |  |
| Sl.No                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Description of Work / Item(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | No.of Qty | Units | Estimated Rate | MAS<br>CONSTRUCTIONS(GSTN-NA) |           | SHAKTI<br>ENGINEERS(GSTN-NA) |           | COST ESTIMATE |             | Variance | AHR Items |  |
| 288.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Supplying, transporting, storing, fabricating in position and testing/examining bolted and/or welded STRUCTURAL STEEL WORKS at all levels and locations including all builtup sections/compound sections made out of rolled sections and/or plates/bent plates in trusses, purlins, wind ties, wind girders, columns, portals, racks, frameworks, crane gantries, surge girders, bracings, floor beams, lifting beams, monorails, platforms, staircases (excluding chequered plates and gratings), ladders, stoppers, brackets, side runners, sagrods, supports for equipment and technological accesories and process piping, hand railings, posts, conveyor galleries, trestles, towers, masts, junction houses etc., cutting to required size, straightening/bending if required, edge preparation, cleaning, preheating, bolting/welding of joints, (including sealing the joints of box sections with continuous welding), finishing edges by grinding, fixing in line and level with temporary staging & bracing and removal of the same after erection, grouting with Ordinary Grout or premix free flow Nonshrink Grout as specified, including preparation and submission of detailed fabrication drawings and applying primer after fabrication as per specification (for normal corrosive environment), etc. all complete | 1.00      | MT    |                | 135000.00                     | 135000.00 | 125000.00                    | 125000.00 | 128658.18     | 1,28,658.18 | -3%      |           |  |
| 289.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | MISCELLANEOUS STEEL WORKS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |           |       |                |                               |           |                              |           |               |             |          |           |  |
| 290.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Supplying, fabricating, fixing and keeping in position at all levels and locations THREADED ANCHOR BOLTS of all diameters and nomenclature including nuts, washers, anchor plates, pipe sleeves etc. in foundations, columns, pedestals, slabs, beams, walls etc. or any other place as directed including handling & transporting, straightening if required, turning from relevant size M.S. rounds to required diameter, threading, welding, providing necessary templates and auxilliary dummy structures, if any, necessary tying and welding with reinforcement, adjustment of shuttering & reinforcement/any other fixture, greasing exposed metal surfaces, covering bolts and packing the sleeves with jute cloth etc. all complete as specified and directed.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 1.00      | MT    |                | 150000.00                     | 150000.00 | 135000.00                    | 135000.00 | 231584.73     | 2,31,584.73 | -42%     |           |  |
| 291.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Supplying, transporting, storing, fabricating and fixing in position M.S. METAL INSERT (with lugs) of any shape made out of flats, plates, rolled sections, pipes etc. providing necessary templates, staging, cutting, straightening, if required, bolting, welding as required and embedding in position on both Plain and Reinforced Cement concrete members inclusive of adjusting shuttering & reinforcement/any other fixture, welding where necessary, tying and holding to correct level, line and position, any auxilliary dummy structures to support the heavy inserts, painting exposed surfaces with a coat of Red Oxide Zinc Chromate Primer etc. all complete for all depths and heights as specified and directed.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 1.00      | MT    |                | 150000.00                     | 150000.00 | 155000.00                    | 155000.00 | 167255.63     | 1,67,255.63 | -7%      |           |  |

| <p align="center"> <b>Government eProcurement System</b><br/> <b>Created By: MALEPPURATH GIRISH KUMAR</b><br/> <b>Created Date/Time: 18-Jan-2022 11:21 AM</b><br/> <b>Tender Title: Construction of Steel Pipelines and Associated facilities for CGD Connectivities for Western Region (Gujarat, Madhya Pradesh and Maharashtra) on ARC Basis</b><br/> <b>Tender ID: 2021_GAIL_100163_1</b><br/> <b>Tender Inviting Authority: GAIL (India) Ltd.</b><br/> <b>Name of Work: Construction of Steel Pipelines and Associated facilities for CGD Connectivities in Western Region viz. Gujarat, Madhya Pradesh and Maharashtra on ARC Basis</b><br/> <b>Contract No: 040-LYONS-GAIL-018</b> </p> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |           |       |                |                                   |           |                              |           |               |             |          |           |
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| <b>SCHEDULE OF WORK / ITEM(S)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |           |       |                |                                   |           |                              |           |               |             |          |           |
| Sl.No                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Description of Work / Item(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | No.of Qty | Units | Estimated Rate | MAS<br>CONSTRUCTIONS(GSTN-<br>NA) |           | SHAKTI<br>ENGINEERS(GSTN-NA) |           | COST ESTIMATE |             | Variance | AHR Items |
| 292.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Supplying, fabricating and erecting in position at all levels and locations bolted, clamped and/or welded GRATING (fabricated as per standards) made out of M.S. flats/M.S. flats with M.S. rounds in walkways, platforms, stair treads etc. including cutting to required size, shape, making holes, notches, openings of required size, nosing, straightening if required, making the edges smooth, removing the burrs, fabricating clamps, fixing, welding, preparation and submission of fabrication drawings and preparing the surfaces for painting, surface cleaning, wire brushing, removal of mill scale, dust, rust, oil or grease and applying one shop coat of Red Oxide Zinc Chromate Primer after fabrication etc. all complete as specified and directed. | 1.00      | MT    |                | 150000.00                         | 150000.00 | 155000.00                    | 155000.00 | 222677.62     | 2,22,677.62 | -30%     |           |
| 293.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Supplying, fabricating and erecting in position at all levels and locations bolted, clamped and/or welded GRATING (fabricated as per standards) made out of M.S. flats/M.S. flats with M.S. rounds in walkways, platforms, stair treads etc. including cutting to required size, shape, making holes, notches, openings of required size, nosing, straightening if required, making the edges smooth, removing the burrs, fabricating clamps, fixing, welding, preparation and submission of fabrication drawings and preparing the surfaces for painting, surface cleaning, wire brushing, removal of mill scale, dust, rust, oil or grease and applying one shop coat of Red Oxide Zinc Chromate Primer after fabrication etc. all complete as specified and directed. | 1.00      | MT    |                | 150000.00                         | 150000.00 | 150000.00                    | 150000.00 | 179624.48     | 1,79,624.48 | -16%     |           |
| 294.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | BRICK MASONRY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |           |       |                |                                   |           |                              |           |               |             |          |           |
| 295.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Providing and laying BRICK MASONRY WITH BRICKS OF CLASS 7.5 in cement mortar 1:6 (1 Cement : 6 Sand) in one or more brick thickness and in any shape (excluding circular/curved brick masonry) at all depths and height including the cost of materials, labour, scaffolding/ staging, sampling & testing, soaking of bricks, cutting and laying of bricks, providing recesses, making openings of any shape & size, finishing the joints flush below ground level and raking out the joints above ground level, sealing the gap between masonry and soffit of beam/slab, embedding the fittings & fixtures, curing, etc. all complete as per specifications.                                                                                                            | 80.00     | M3    |                | 9000.00                           | 720000.00 | 8000.00                      | 640000.00 | 10343.19      | 8,27,455.20 | -23%     |           |
| 296.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Providing and laying HALF BRICK MASONRY with bricks of CLASS 7.5 in cement mortar 1:4 (1 Cement : 4 Sand) in any shape, including the cost of materials, labour, scaffolding/staging, sampling and testing, soaking of bricks, cutting and laying of bricks, providing openings of any shape & size, raking out the joints, supplying and placing 2 Nos. 6mm dia. M.S. Bars at every fourth course, sealing the gap between masonry and soffit of beam/slab, embedding the fittings and fixtures, curing etc. all complete as per specification.ALL MATERIALS INCLUDING CEMENT SUPPLIED BY CONTRACTOR.                                                                                                                                                                   | 20.00     | M2    |                | 5000.00                           | 100000.00 | 2000.00                      | 40000.00  | 8099.71       | 1,61,994.20 | -75%     |           |

| <p style="text-align: center;">Government eProcurement System<br/> Created By: MALEPPURATH GIRISH KUMAR<br/> Created Date/Time: 18-Jan-2022 11:21 AM<br/> Tender Title: Construction of Steel Pipelines and Associated facilities for CGD Connectivities for Western Region (Gujarat, Madhya Pradesh and Maharashtra) on ARC Basis<br/> Tender ID: 2021_GAIL_100163_1<br/> Tender Inviting Authority: GAIL (India) Ltd.<br/> Name of Work: Construction of Steel Pipelines and Associated facilities for CGD Connectivities in Western Region viz. Gujarat, Madhya Pradesh and Maharashtra on ARC Basis<br/> Contract No: 040-LYONS-GAIL-018</p> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |           |       |                |                            |            |                           |            |               |              |          |           |
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| SCHEDULE OF WORK / ITEM(S)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |           |       |                |                            |            |                           |            |               |              |          |           |
| Sl.No                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Description of Work / Item(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | No.of Qty | Units | Estimated Rate | MAS CONSTRUCTIONS(GSTN-NA) |            | SHAKTI ENGINEERS(GSTN-NA) |            | COST ESTIMATE |              | Variance | AHR Items |
| 297.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | External Walls<br>plain cement plaster Average 18mm thick 1:4 (1 cement : 4 sand). Cement supplied by the Contractor at their cost.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 80.00     | M2    |                | 2000.00                    | 160000.00  | 450.00                    | 36000.00   | 443.04        | 35,443.20    | 2%       |           |
| 298.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Painting of Walls<br>External walls:- Providing & applying 3 coats of waterproof decorative cement paint of approved make and approved shade, cleaning, including preparation of surfaces,base primer, curing etc. all complete                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 1.00      | M2    |                | 2000.00                    | 2000.00    | 440.00                    | 440.00     | 205.2         | 205.20       | 114%     | AHR Item  |
| 299.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Supply & Installation of Porta Cabin                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |           |       |                |                            |            |                           |            |               |              |          |           |
| 300.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Supply and installation of Porta Cabin of size (4 mtr X 3 mtr ) as per drawing attached in bid document including associated civil foundation works.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 5.00      | Nos.  |                | 500000.00                  | 2500000.00 | 350000.00                 | 1750000.00 | 280416.11     | 14,02,080.55 | 25%      |           |
| 301.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Supplying and filling of Boulders                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |           |       |                |                            |            |                           |            |               |              |          |           |
| 302.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Supplying and filling of various sizes and type of boulders as per site requirement or as per direction of EIC.<br><br>Rate involves supply, transportation, unloading at site, laying, etc. to complete the work in all respect.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 100.00    | M3    |                | 2500.00                    | 250000.00  | 4500.00                   | 450000.00  | 659.84        | 65,984.00    | 582%     | AHR Item  |
| 303.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | SECTION-D [CATHODIC PROTECTION WORKS]                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |           |       |                |                            |            |                           |            |               |              |          |           |
| 304.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | CATHODIC PROTECTION SYSTEM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |           |       |                |                            |            |                           |            |               |              |          |           |
| 305.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | All works shall be carried out as per approved drawings and specifications. Work shall include design / residual engineering, preparation of CP schematic drawing, supply, installation, testing and commissioning of complete CP system, all related civil work, including providing foundations, supply of all materials as specified in SCC, instruments, consumables, touch-up epoxy paint as required, including supply of paint, tools, tackles, labor, transportation for satisfactory completion of work and as per directions of EIC. In addition to the items mentioned below the Contractor's scope shall include connecting the new pipelines to existing pipelines/cathode-points of TR units by means of jumpering/bonding. |           |       |                |                            |            |                           |            |               |              |          |           |
| 306.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Complete Detailed Survey, Engineering, Supply, laying, installation, termination, testing & commissioning of Cathodic Protection system complete Civil Works and all material and labour as per specifications, drawings and instruction of EIC. Work to be completed in all respects.                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 7.00      | KM    |                | 25000.00                   | 175000.00  | 60000.00                  | 420000.00  | 70177.19      | 4,91,240.33  | -15%     |           |
| 307.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Supply, laying & testing of 600 / 1100V grade single core, stranded tinned copper conductor cables, XLPE insulated / PVC sheathed, armoured as per IS of following sizes. The work shall include excavation for cable trenching at min. 1.2 m below GL in all types of soil including rock, backfilling of cable in trenches, lugging, ferrulling, making termination as per drawings & specification. Supply of all tools, tackles, consumables, etc. for completion of work, in all respect and as per directions of EIC.                                                                                                                                                                                                               |           |       |                |                            |            |                           |            |               |              |          |           |

| Government eProcurement System<br>Created By: MALEPPURATH GIRISH KUMAR<br>Created Date/Time: 18-Jan-2022 11:21 AM<br>Tender Title: Construction of Steel Pipelines and Associated facilities for CGD Connectivities for Western Region (Gujarat, Madhya Pradesh and Maharashtra) on ARC Basis<br>Tender ID: 2021_GAIL_100163_1<br>Tender Inviting Authority: GAIL (India) Ltd.<br>Name of Work: Construction of Steel Pipelines and Associated facilities for CGD Connectivities in Western Region viz. Gujarat, Madhya Pradesh and Maharashtra on ARC Basis<br>Contract No: 040-LYONS-GAIL-018 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |           |       |                |                               |           |                              |           |               |             |          |           |  |
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| SCHEDULE OF WORK / ITEM(S)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |           |       |                |                               |           |                              |           |               |             |          |           |  |
| Sl.No                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Description of Work / Item(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | No.of Qty | Units | Estimated Rate | MAS<br>CONSTRUCTIONS(GSTN-NA) |           | SHAKTI<br>ENGINEERS(GSTN-NA) |           | COST ESTIMATE |             | Variance | AHR Items |  |
| 308.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 35 mm2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 50.00     | Mtr.  |                | 400.00                        | 20000.00  | 600.00                       | 30000.00  | 648.7         | 32,435.00   | -8%      |           |  |
| 309.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 25 mm2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 100.00    | Mtr.  |                | 350.00                        | 35000.00  | 400.00                       | 40000.00  | 584.32        | 58,432.00   | -32%     |           |  |
| 310.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 10 mm2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 200.00    | Mtr.  |                | 280.00                        | 56000.00  | 325.00                       | 65000.00  | 467.26        | 93,452.00   | -30%     |           |  |
| 311.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 6 mm2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 200.00    | Mtr.  |                | 230.00                        | 46000.00  | 275.00                       | 55000.00  | 467.26        | 93,452.00   | -41%     |           |  |
| 312.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Making cable to pipe connections by thermit welding for following cables, including excavation for exposing pipe, removal of coating / wrapping, thermit welding recoating of the area of weld by epoxy filling, holiday testing, backfilling, supply of all tool, tackles, consumables thermit weld kits & labour for satisfactory completion of work.                                                                                                                                                                                                                      |           |       |                |                               |           |                              |           |               |             |          |           |  |
| 313.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 6 mm2 Cables                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 50.00     | No.   |                | 2500.00                       | 125000.00 | 1500.00                      | 75000.00  | 1169.62       | 58,481.00   | 28%      |           |  |
| 314.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 10 mm2 Cables                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 50.00     | No.   |                | 2500.00                       | 125000.00 | 1700.00                      | 85000.00  | 1169.62       | 58,481.00   | 45%      |           |  |
| 315.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 25 mm2 Cables                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 20.00     | No.   |                | 2500.00                       | 50000.00  | 5000.00                      | 100000.00 | 2339.24       | 46,784.80   | 114%     | AHR Item  |  |
| 316.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 35 mm2 Cables                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 5.00      | No.   |                | 2500.00                       | 12500.00  | 6000.00                      | 30000.00  | 3414.24       | 17,071.20   | 76%      | AHR Item  |  |
| 317.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Supply & installation of test station as per enclosed drawings and technical specifications. Work shall include all related civil works including foundation, termination of cables inside the test stations along with lugs & ferules sealing of cable entry space with bitumen compound supply of all materials, consumables, tools, tackles, etc. for satisfactory completion of work and as per directions of EIC.                                                                                                                                                       | 5.00      | No.   |                | 50000.00                      | 250000.00 | 25000.00                     | 125000.00 | 45029.88      | 2,25,149.40 | -44%     |           |  |
| 318.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Supply & installation of Zn anode at a depth of 1.5 - 2.0m on all type of soil including rock alongwith 10m tail cable of 25mm2 high conductivity, tinned, stranded copper conductor, 650 / 1100V grade, XLPE insulated, armoured, PVC sheathed for grounding electrical surges in the pipeline at HT crossings. The work includes excavation, laying of Zn anode of minimum 20 Kg weight, backfilling & all related civil work, complete in all respects. The work shall also include anode to tail cable connection, cable laying and termination inside the test station. | 10.00     | No.   |                | 25000.00                      | 250000.00 | 20000.00                     | 200000.00 | 33451.13      | 3,34,511.30 | -40%     |           |  |
| 319.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Supply, installation, testing and commissioning of surge diverter inside the manual test stations at terminal locations, complete in all respects as per the specifications and directions of EIC.                                                                                                                                                                                                                                                                                                                                                                           | 10.00     | No.   |                | 25000.00                      | 250000.00 | 15000.00                     | 150000.00 | 17852.22      | 1,78,522.20 | -16%     |           |  |
| 320.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Supply & installation of Mg anodes after pre-packaged with chemical backfill as per enclosed drawing. The anodes will have to be buried at a depth of 1.5 to 2m on all types of soil including rock at approved location. The work shall include all earth work, laying of anodes & cables in position and termination of cable inside test stations with lugs, shunt & variable resistors, supply of all tools, tackles, consumables, labour transportation of materials, etc. required for satisfactory completion of work and directions of EIC.                          | 10.00     | No.   |                | 10000.00                      | 100000.00 | 19000.00                     | 190000.00 | 28364.43      | 2,83,644.30 | -33%     |           |  |
| 321.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Supply, installation, testing and commissioning of spark-gap arrestors across insulating joints.                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 10.00     | No.   |                | 25000.00                      | 250000.00 | 27000.00                     | 270000.00 | 38597.45      | 3,85,974.50 | -30%     |           |  |



| <p align="center"> <b>Government eProcurement System</b><br/> <b>Created By: MALEPPURATH GIRISH KUMAR</b><br/> <b>Created Date/Time: 18-Jan-2022 11:21 AM</b><br/> <b>Tender Title: Construction of Steel Pipelines and Associated facilities for CGD Connectivities for Western Region (Gujarat, Madhya Pradesh and Maharashtra) on ARC Basis</b><br/> <b>Tender ID: 2021_GAIL_100163_1</b><br/> <b>Tender Inviting Authority: GAIL (India) Ltd.</b><br/> <b>Name of Work: Construction of Steel Pipelines and Associated facilities for CGD Connectivities in Western Region viz. Gujarat, Madhya Pradesh and Maharashtra on ARC Basis</b><br/> <b>Contract No: 040-LYONS-GAIL-018</b> </p> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |           |       |                |                            |           |                           |           |               |             |           |
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| <b>SCHEDULE OF WORK / ITEM(S)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |           |       |                |                            |           |                           |           |               |             |           |
| Sl.No                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Description of Work / Item(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | No.of Qty | Units | Estimated Rate | MAS CONSTRUCTIONS(GSTN-NA) |           | SHAKTI ENGINEERS(GSTN-NA) |           | COST ESTIMATE |             | Variance  |
| 322.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Supply, installation, testing and commissioning of Electrolytic Polarization cell (as per approved design)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 1.00      | No.   |                | 65000.00                   | 65000.00  | 80000.00                  | 80000.00  | 55153.05      | 55,153.05   | 45%       |
| 323.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Note: (1) The quantities given above against individual items are indicative and shall not be considered to be binding. The quantities may be increased, decreased or deleted at site at the time of actual execution. Procurement shall be done as per actual site condition, approved construction drawings and as per instruction of EIC. The unit rate shall be operated to work out the final payment to the contractor; (2) In each area, quantities given against individual item may be utilised / used for other consumers in same area.                                                                                                                                                                                                                                                                                                                                                                                                                                                       |           |       |                |                            |           |                           |           |               |             | AHR Items |
| 324.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | CATHODIC PROTECTION SYSTEM (PCP)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |           |       |                |                            |           |                           |           |               |             |           |
| 325.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Design, Engineering, Supply, Installation, Testing & Commissioning of Permanent Cathodic Protection (PCP) System (for 25 years) using LIDA single Electrodes or string (MMO) anodes with backfill, Junction Box, AJB, CJB, Cables, Monitoring System, any equipment and hardwares as per specification including Pre design surveys, Packing, Transportation to Project site, Post Commissioning Surveys of PCP system, system monitoring with other installation items required for completeness of the job. Design package including Site survey, formulae used, Design calculations, BOQ, Technical Specifications and data recording formats, Quality Assurance Control (QA/QC) methodology and submission of monitoring reports for owner evaluation, owner/consultant approved survey report, also includes all materials, equipments, consumables, start up/commissioning spares, etc., including transportation, storage of materials at site, As-built drawings, Documentation and O&M Manual. |           |       |                |                            |           |                           |           |               |             |           |
| 326.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Design Engineering, Soil Resistivity Measurement, Soil Chemical analysis , Testing and Commissioning of Pipeline length                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 3.50      | KM    |                | 150000.00                  | 525000.00 | 15000.00                  | 52500.00  | 4904.46       | 17,165.61   | 206%      |
| 327.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Transformer Rectifier Unit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |           |       |                |                            |           |                           |           |               |             | AHR Item  |
| 328.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Supply and Installation of GSM BASED TRU 10V/5A Transformer Rectifier Unit with operating range of 230 V AC and DC Output Rating - 10V/5A min, with GPS based current interrupter and full compliance to IEC specs exactly as per technical specification of tender document as per the detailed specifications, data sheet & approved drawings. It also including civil foundations, structural support etc. dual earthing of TR unit.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 1.00      | No.   |                | 565000.00                  | 565000.00 | 250000.00                 | 250000.00 | 480636.59     | 4,80,636.59 | -48%      |
| 329.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Anode Ground Bed Assemblies (Deep well)(to be decided on the basis of soil resistivity data)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |           |       |                |                            |           |                           |           |               |             |           |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |           |       |                |                            |           |                           |           |               |             |          |           |  |
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| Government eProcurement System<br>Created By: MALEPPURATH GIRISH KUMAR<br>Created Date/Time: 18-Jan-2022 11:21 AM<br>Tender Title: Construction of Steel Pipelines and Associated facilities for CGD Connectivities for Western Region (Gujarat, Madhya Pradesh and Maharashtra) on ARC Basis<br>Tender ID: 2021_GAIL_100163_1<br>Tender Inviting Authority: GAIL (India) Ltd.<br>Name of Work: Construction of Steel Pipelines and Associated facilities for CGD Connectivities in Western Region viz. Gujarat, Madhya Pradesh and Maharashtra on ARC Basis<br>Contract No: 040-LYONS-GAIL-018 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |           |       |                |                            |           |                           |           |               |             |          |           |  |
| SCHEDULE OF WORK / ITEM(S)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |           |       |                |                            |           |                           |           |               |             |          |           |  |
| Sl.No                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Description of Work / Item(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | No.of Qty | Units | Estimated Rate | MAS CONSTRUCTIONS(GSTN-NA) |           | SHAKTI ENGINEERS(GSTN-NA) |           | COST ESTIMATE |             | Variance | AHR Items |  |
| 330.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Supply and Installation of Deep well Anode Beds with dual anode tail cable (from top and bottom of the anode string) of suitable length upto Anode Junction Box) for permanent cathodic protection system by impressed current method to protect external surface of 3 layers PE coated pipeline,against corrosion as per specifications for minimum service life of 30 years by using deep well anode bed construction of minimum 50 meter deep,with minimum 8" (200 mm) Dia MS pipe filled with Petroleum Coke Breeze of resistance ≤ 5Ω ,vent pipe, dead weight & a cable string of 10 mm2 size contains minimum 6 nos. mixed metal oxide coated titanium tubular anodes of size ST 1.6/50 cm, each MMO anode has current output of 2.5 Amp and other accessories like vent pipe, Calcined petroleum coke breeze, Rigid PVC pipe of 12" (300mm) with minimum 15 mtrs in length (ie. 15 meter inactive anode bed), Nylon Rope, etc.from the approved vendor as per specification. | 1.00      | No.   |                | 400000.00                  | 400000.00 | 250000.00                 | 250000.00 | 686623.7      | 6,86,623.70 | -64%     |           |  |
| 331.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Supply and Installation Anode Junction Box with all accessories (Like variable resistor, shunt, bus bar etc.,)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 2.00      | No.   |                | 52500.00                   | 105000.00 | 18000.00                  | 36000.00  | 34331.19      | 68,662.38   | -48%     |           |  |
| 332.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Supply and Installation Cathode Junction Box with all accessories (Like shunt, bus bar etc.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 2.00      | No.   |                | 44000.00                   | 88000.00  | 15000.00                  | 30000.00  | 27464.95      | 54,929.90   | -45%     |           |  |
| 333.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Supply and Installation Reference Electrode Junction Box/test station with all accessories                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 2.00      | Nos.  |                | 35000.00                   | 70000.00  | 13500.00                  | 27000.00  | 26778.32      | 53,556.64   | -50%     |           |  |
| 334.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Supply and Installation Permanent Reference Cell with Special Backfill in Cotton bag                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 5.00      | Nos.  |                | 28000.00                   | 140000.00 | 18000.00                  | 90000.00  | 26778.32      | 1,33,891.60 | -33%     |           |  |
| 335.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Supply & Installation of cables – Annealed high conductivity, tinned, stranded copper conductor, XLPE insulated, 650/1100 V grade, PVC,FRLS sheathed or as per specification and Miscellaneous such as termination, tagging, excavating the trench for cable laying, backfilling, etc., including the cost of all labour, materials, tools and tackles.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |           |       |                |                            |           |                           |           |               |             |          |           |  |
| 336.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 1C x 6 sqmm armoured - Potential Measurement & ref. cell cable (RE/PE to REJB & REJB to CJB)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 50.00     | Mtrs  |                | 375.00                     | 18750.00  | 325.00                    | 16250.00  | 480.64        | 24,032.00   | -32%     |           |  |
| 337.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 10c x 2.5 sq mm measurement cable (from CJB to TRU)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 50.00     | Mtrs  |                | 560.00                     | 28000.00  | 470.00                    | 23500.00  | 961.27        | 48,063.50   | -51%     |           |  |
| 338.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 1C x 35 sqmm armoured (anode & cathode header cable)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 50.00     | Mtrs  |                | 750.00                     | 37500.00  | 390.00                    | 19500.00  | 652.29        | 32,614.50   | -40%     |           |  |
| 339.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 3C x 10 sqmm armoured conductor (AC incomer power supply cable from Main DB to TR unit - PVC/PVC, armoured)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 10.00     | Mtrs  |                | 560.00                     | 5600.00   | 550.00                    | 5500.00   | 480.64        | 4,806.40    | 14%      |           |  |
| 340.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Supply and Installation of pipe to cable connection by Pin Brazing Encapsulation method                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 5.00      | Nos.  |                | 5000.00                    | 25000.00  | 5000.00                   | 25000.00  | 4806.37       | 24,031.85   | 4%       |           |  |
| 341.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Polarisation Coupons                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 5.00      | Nos.  |                | 15000.00                   | 75000.00  | 5000.00                   | 25000.00  | 3433.12       | 17,165.60   | 46%      |           |  |
| 342.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Monitoring the Installed (PCP) System for three months after handing over the system. This includes monthly monitoring for PSP reading and weekly monitoring of TR unit for reading of TR parametres.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 5.00      | LS    |                | 32000.00                   | 160000.00 | 30000.00                  | 150000.00 | 41197.42      | 2,05,987.10 | -27%     |           |  |

| Government eProcurement System<br>Created By: MALEPPURATH GIRISH KUMAR<br>Created Date/Time: 18-Jan-2022 11:21 AM<br>Tender Title: Construction of Steel Pipelines and Associated facilities for CGD Connectivities for Western Region (Gujarat, Madhya Pradesh and Maharashtra) on ARC Basis<br>Tender ID: 2021_GAIL_100163_1<br>Tender Inviting Authority: GAIL (India) Ltd.<br>Name of Work: Construction of Steel Pipelines and Associated facilities for CGD Connectivities in Western Region viz. Gujarat, Madhya Pradesh and Maharashtra on ARC Basis<br>Contract No: 040-LYONS-GAIL-018 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |           |       |                |                               |           |                              |           |               |             |          |           |  |
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| SCHEDULE OF WORK / ITEM(S)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |           |       |                |                               |           |                              |           |               |             |          |           |  |
| Sl.No                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Description of Work / Item(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | No.of Qty | Units | Estimated Rate | MAS<br>CONSTRUCTIONS(GSTN-NA) |           | SHAKTI<br>ENGINEERS(GSTN-NA) |           | COST ESTIMATE |             | Variance | AHR Items |  |
| 343.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Interference and Mitigation Survey (Solid State decoupling device, Isolating Spark gap, zinc grounding cell and Test station at HT line locations have already been installed in the existing TCP system of the pipeline). However, if any other mitigation measures required then same will be in scope of PCP contractor.                                                                                                                                                                                                                       | 5.00      | Nos.  |                | 50000.00                      | 250000.00 | 20000.00                     | 100000.00 | 34331.19      | 1,71,655.95 | -42%     |           |  |
| 344.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Testing and commissioning of PCP system                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 5.00      | Lot   |                | 125000.00                     | 625000.00 | 50000.00                     | 250000.00 | 68662.37      | 3,43,311.85 | -27%     |           |  |
| 345.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | CIPL Survey                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 10.00     | km    |                | 22500.00                      | 225000.00 | 5000.00                      | 50000.00  | 16982.41      | 1,69,824.10 | -71%     |           |  |
| 346.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | DCVG Survey                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 10.00     | km    |                | 19000.00                      | 190000.00 | 5000.00                      | 50000.00  | 18526.62      | 1,85,266.20 | -73%     |           |  |
| 347.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Note: (1) The quantities given above against individual items are indicative and shall not be considered to be binding. The quantities may be increased, decreased or deleted at site at the time of actual execution. Procurement shall be done as per actual site condition, approved construction drawings and as per instruction of EIC. The unit rate shall be operated to work out the final payment to the contractor; (2) In each area, quantities given against individual item may be utilised / used for other consumers in same area. |           |       |                |                               |           |                              |           |               |             |          |           |  |
| 348.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | SECTION-E [ELECTRICAL WORKS]                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |           |       |                |                               |           |                              |           |               |             |          |           |  |
| 349.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Supply, installation, testing, commissioning of Street Lighting Fixture suitable for 250W HPMV or Equivalent LED Lamps on Lighting Poles (4mtr Height) with aluminium paint complete with mounting bracket, flameproof control gear box, internal cable from fitting to junction box, flameproof fittings etc. including civil foundation with pipe inserts for cables and connecting work, with all material and labour as per specifications, drawings and instruction of EIC. Work to be completed in all respects.                            | 10.00     | Nos.  |                | 17000.00                      | 170000.00 | 35000.00                     | 350000.00 | 35088.59      | 3,50,885.90 | 0%       |           |  |
| 350.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Supply, installation, testing, commissioning of Indoor Lighting Fixtures suitable for 26/36W LED Lamps for including all fixing arrangements and all material and labour as per specifications, drawings and instruction of EIC. Work to be completed in all respects.                                                                                                                                                                                                                                                                            | 1.00      | Nos.  |                | 8000.00                       | 8000.00   | 6000.00                      | 6000.00   | 8639.69       | 8,639.69    | -31%     |           |  |
| 351.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Supply, installation, testing, commissioning of Exhaust fans (safe area) for including all fixing arrangements and all material and labour as per specifications, drawings and instruction of EIC. Work to be completed in all respects.                                                                                                                                                                                                                                                                                                          | 1.00      | Nos.  |                | 4500.00                       | 4500.00   | 10000.00                     | 10000.00  | 9179.67       | 9,179.67    | 9%       |           |  |
| 352.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Supply, installation, testing, commissioning of Exhaust fans (Corrosion Proof Type) for including all fixing arrangements and all material and labour as per specifications, drawings and instruction of EIC. Work to be completed in all respects.                                                                                                                                                                                                                                                                                               | 1.00      | Nos.  |                | 6000.00                       | 6000.00   | 25000.00                     | 25000.00  | 13499.51      | 13,499.51   | 85%      |           |  |
| 353.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Floor mounted MEDB consisting of busbar chamber, cable alley, Incomer - 1 no. 200 Amp FP MCCB, Auto healthy phase selector & Outgoing - 2 nos. 100 Amp FP MCB, 9 nos. 63 Amp FP MCB, 3 nos. 32 Amp FP MCB(as per technical specification, data sheet & SLD enclosed with this tender), complete with ammeter, voltmeter, energy meter, voltage selector switch, indicating Lamps etc.                                                                                                                                                             | 1.00      | Nos.  |                | 210000.00                     | 210000.00 | 23000.00                     | 23000.00  | 26998.73      | 26,998.73   | -15%     | AHR Item  |  |

| <p align="center"> <b>Government eProcurement System</b><br/> <b>Created By: MALEPPURATH GIRISH KUMAR</b><br/> <b>Created Date/Time: 18-Jan-2022 11:21 AM</b><br/> <b>Tender Title: Construction of Steel Pipelines and Associated facilities for CGD Connectivities for Western Region (Gujarat, Madhya Pradesh and Maharashtra) on ARC Basis</b><br/> <b>Tender ID: 2021_GAIL_100163_1</b><br/> <b>Tender Inviting Authority: GAIL (India) Ltd.</b><br/> <b>Name of Work: Construction of Steel Pipelines and Associated facilities for CGD Connectivities in Western Region viz. Gujarat, Madhya Pradesh and Maharashtra on ARC Basis</b><br/> <b>Contract No: 040-LYONS-GAIL-018</b> </p> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |           |       |                |                                   |            |                              |           |               |              |          |           |
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| <b>SCHEDULE OF WORK / ITEM(S)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |           |       |                |                                   |            |                              |           |               |              |          |           |
| Sl.No                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Description of Work / Item(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | No.of Qty | Units | Estimated Rate | MAS<br>CONSTRUCTIONS(GSTN-<br>NA) |            | SHAKTI<br>ENGINEERS(GSTN-NA) |           | COST ESTIMATE |              | Variance | AHR Items |
| 354.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Recess/Surface mounted Indoor Lighting Panel(ILP) Consisting of 40 Amp FP MCB+ELCB as incomer and 12 nos. 10A DP MCBs as out goings.                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 1.00      | Nos.  |                | 25000.00                          | 25000.00   | 22000.00                     | 22000.00  | 17641.32      | 17,641.32    | 25%      |           |
| 355.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Recess/Surface mounted Power Panel(PP) Consisting of 63 Amp FP MCB as incomer and 9 nos. 20A DP MCBs as out goings.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 3.00      | Nos.  |                | 41000.00                          | 123000.00  | 30000.00                     | 90000.00  | 2159.92       | 6,479.76     | 1289%    | AHR Item  |
| 356.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Recess/Surface mounted Outdoor Lighting Panel OLP (For External Lighting) Consisting of 40 Amp FP MCB+ELCB as incomer, Contactor, timer, A/M switch, PB, indication Lamp etc<br>Outgoing Through Timer:<br>6 Nos. 16 Amp DP MCB                                                                                                                                                                                                                                                                                                                                                                     | 1.00      | Nos.  |                | 100000.00                         | 100000.00  | 6000.00                      | 6000.00   | 119537.51     | 1,19,537.51  | -95%     |           |
| 357.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Supply, installation, testing, commissioning of Flameproof Flood Lighting Fixtures suitable for 250/400W HPMV or Equivalent LED Lamps for including all fixing arrangements on top of terrace of container and all material and labour as per specifications, drawings and instruction of EIC. Work to be completed in all respects.                                                                                                                                                                                                                                                                | 1.00      | Nos.  |                | 21000.00                          | 21000.00   | 30000.00                     | 30000.00  | 3239.88       | 3,239.88     | 826%     | AHR Item  |
| 358.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Supply, installation, testing, commissioning of Modular Switch Board for including all fixing arrangements and all material and labour as per specifications, drawings and instruction of EIC. Work to be completed in all respects.                                                                                                                                                                                                                                                                                                                                                                | 1.00      | Nos.  |                | 2000.00                           | 2000.00    | 15000.00                     | 15000.00  | 2354.14       | 2,354.14     | 537%     | AHR Item  |
| 359.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Supply, installation, testing, commissioning of wall mounted 24V DCDB for including all fixing arrangements and all material and labour as per specifications, drawings and instruction of EIC. Work to be completed in all respects.                                                                                                                                                                                                                                                                                                                                                               | 1.00      | Nos.  |                | 60000.00                          | 60000.00   | 12000.00                     | 12000.00  | 41197.42      | 41,197.42    | -71%     |           |
| 360.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Supply, installation, testing, commissioning of 5/15A Switch Socket for including all fixing arrangements and all material and labour as per specifications, drawings and instruction of EIC. Work to be completed in all respects.                                                                                                                                                                                                                                                                                                                                                                 | 1.00      | Nos.  |                | 1500.00                           | 1500.00    | 8000.00                      | 8000.00   | 3239.88       | 3,239.88     | 147%     | AHR Item  |
| 361.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Design, manufacture, shop testing, inspection, packing, forwarding, delivery, installation, testing and commissioning at site of UPS systems as per specification, direction of Engineer-in-charge and following rating:<br>(a) 5 kVA, 230V Single Phase, 50 HZ, parallel redundant industrial type, UPS system suitable for input power supply voltage of 415 V, TPN,+/-10% output 230 V +/-1%, AC with solid state voltage stabilizer for bypass supply, ACDB/DCDB and 12 hrs. Battery(Ni-Cd) back-up<br>(b) All interconnecting cables(FRLS) among UPS, Rectifier, battery stand, ACDB/DCDB etc. | 1.00      | Nos.  |                | 2000000.00                        | 2000000.00 | 250000.00                    | 250000.00 | 4954500       | 49,54,500.00 | -95%     |           |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |           |       |                |                            |            |                           |           |               |              |          |           |  |
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| Government eProcurement System<br>Created By: MALEPPURATH GIRISH KUMAR<br>Created Date/Time: 18-Jan-2022 11:21 AM<br>Tender Title: Construction of Steel Pipelines and Associated facilities for CGD Connectivities for Western Region (Gujarat, Madhya Pradesh and Maharashtra) on ARC Basis<br>Tender ID: 2021_GAIL_100163_1<br>Tender Inviting Authority: GAIL (India) Ltd.<br>Name of Work: Construction of Steel Pipelines and Associated facilities for CGD Connectivities in Western Region viz. Gujarat, Madhya Pradesh and Maharashtra on ARC Basis<br>Contract No: 040-LYONS-GAIL-018 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |           |       |                |                            |            |                           |           |               |              |          |           |  |
| SCHEDULE OF WORK / ITEM(S)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |           |       |                |                            |            |                           |           |               |              |          |           |  |
| Sl.No                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Description of Work / Item(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | No.of Qty | Units | Estimated Rate | MAS CONSTRUCTIONS(GSTN-NA) |            | SHAKTI ENGINEERS(GSTN-NA) |           | COST ESTIMATE |              | Variance | AHR Items |  |
| 362.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Design, manufacture, shop testing, inspection, packing, forwarding, delivery, installation, testing and commissioning at site of UPS systems as per specification, direction of Engineer-in-charge and following rating:<br>(a) 2 kVA, 230V Single Phase, 50 HZ, parallel redundant industrial type, UPS system suitable for input power supply voltage of 415 V, TPN,+/-10% output 230 V +/-1%, AC with solid state voltage stabilizer for bypass supply, ACDB/DCDB and 12 hrs. Battery(Ni-Cd) back-up<br>(b) All interconnecting cables(FRLS) among UPS, Rectifier, battery stand, ACDB/DCDB etc. | 1.00      | Nos.  |                | 1500000.00                 | 1500000.00 | 275000.00                 | 275000.00 | 2752500       | 27,52,500.00 | -90%     |           |  |
| 363.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Design, manufacture, shop testing, inspection, packing, forwarding, delivery, installation, testing and commissioning at site of UPS systems as per specification, direction of Engineer-in-charge and following rating:<br>(a) 1 kVA, 230V Single Phase, 50 HZ, parallel redundant industrial type, UPS system suitable for input power supply voltage of 415 V, TPN,+/-10% output 230 V +/-1%, AC with solid state voltage stabilizer for bypass supply, ACDB/DCDB and 12 hrs. Battery(Ni-Cd) back-up<br>(b) All interconnecting cables(FRLS) among UPS, Rectifier, battery stand, ACDB/DCDB etc. | 1.00      | Nos.  |                | 1000000.00                 | 1000000.00 | 300000.00                 | 300000.00 | 1651500       | 16,51,500.00 | -82%     |           |  |
| 364.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Supply, installation, testing & commissioning of the complete earthing system, earth electrodes/pit, earth main ring, earthing of metering skid, electrical equipments, instrument panels, field instruments, process equipments & pipes / flanges including all associated civil work with all material & labour as per specification & drawings approved by the company. Each earthing system shall include the following.                                                                                                                                                                        |           |       |                |                            |            |                           |           |               |              | #VALUE!  |           |  |
| 365.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 65mm dia 3 Mtr. Long GI PIPE Electrode with 6mm thick chequered plate cover, display board etc                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 16.00     | Nos.  |                | 22000.00                   | 352000.00  | 20000.00                  | 320000.00 | 18526.62      | 2,96,425.92  | 8%       |           |  |
| 366.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 600x600x3mm copper plate Electrode with 6 mm thick chequered plate cover, display board etc                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 16.00     | Nos.  |                | 27000.00                   | 432000.00  | 35000.00                  | 560000.00 | 21614.07      | 3,45,825.12  | 62%      | AHR Item  |  |
| 367.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | GI Strip (50X6) mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 50.00     | Mtrs. |                | 500.00                     | 25000.00   | 275.00                    | 13750.00  | 408.73        | 20,436.50    | -33%     |           |  |
| 368.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | GI Strip (25X6) mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 400.00    | Mtrs. |                | 400.00                     | 160000.00  | 225.00                    | 90000.00  | 291.67        | 1,16,668.00  | -23%     |           |  |
| 369.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 1C 25 Sq.mm PVC insulated Cu Conductor                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 10.00     | Mtrs. |                | 450.00                     | 4500.00    | 225.00                    | 2250.00   | 488.72        | 4,887.20     | -54%     |           |  |
| 370.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 10 SWG GI wire                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 40.00     | Mtrs. |                | 75.00                      | 3000.00    | 15000.00                  | 600000.00 | 174.61        | 6,984.40     | 8491%    | AHR Item  |  |
| 371.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | GI Wire, Copper wire, wire rope and all balance earthing material including copper strip (50 mmX 2 mm thick) jumper for flanges etc.as per the specification.                                                                                                                                                                                                                                                                                                                                                                                                                                       | 1.00      | Lot   |                | 55000.00                   | 55000.00   | 25000.00                  | 25000.00  | 23158.28      | 23,158.28    | 8%       |           |  |
| 372.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Supply, laying, installation, termination, testing, commissioning of 1100 Volt PVC insulated, PVC sheathed and armoured / unarmoured cables in trenches, excavated underground / trays, pulling through pipes and its proper sealing including underground trench and supply of hume pipes for road crossing, etc. as required as per specifications and drawings approved by the company.                                                                                                                                                                                                          |           |       |                |                            |            |                           |           |               |              |          |           |  |

| <p style="text-align: center;">Government eProcurement System<br/> Created By: MALEPPURATH GIRISH KUMAR<br/> Created Date/Time: 18-Jan-2022 11:21 AM<br/> Tender Title: Construction of Steel Pipelines and Associated facilities for CGD Connectivities for Western Region (Gujarat, Madhya Pradesh and Maharashtra) on ARC Basis<br/> Tender ID: 2021_GAIL_100163_1<br/> Tender Inviting Authority: GAIL (India) Ltd.<br/> Name of Work: Construction of Steel Pipelines and Associated facilities for CGD Connectivities in Western Region viz. Gujarat, Madhya Pradesh and Maharashtra on ARC Basis<br/> Contract No: 040-LYONS-GAIL-018</p> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |           |       |                |                            |           |                           |           |               |             |          |
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| SCHEDULE OF WORK / ITEM(S)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |           |       |                |                            |           |                           |           |               |             |          |
| Sl.No                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Description of Work / Item(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                         | No.of Qty | Units | Estimated Rate | MAS CONSTRUCTIONS(GSTN-NA) |           | SHAKTI ENGINEERS(GSTN-NA) |           | COST ESTIMATE |             | Variance |
| 373.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 4C X 6 Sqmm Cu conductor XLPE Insulated Armoured Power Cable of 1100V Grade                                                                                                                                                                                                                                                                                                                                                                                                           | 200.00    | Mtrs. |                | 750.00                     | 150000.00 | 350.00                    | 70000.00  | 642.85        | 1,28,570.00 | -46%     |
| 374.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 3C X 2.5 Sqmm Cu conductor XLPE Insulated Armoured Power Cable of 1100V Grade                                                                                                                                                                                                                                                                                                                                                                                                         | 100.00    | Mtrs. |                | 480.00                     | 48000.00  | 325.00                    | 32500.00  | 467.26        | 46,726.00   | -30%     |
| 375.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | SECTION-F [INSTRUMENTATION WORKS]                                                                                                                                                                                                                                                                                                                                                                                                                                                     |           |       |                |                            |           |                           |           |               |             |          |
| 376.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Supply, Calibration and Installation of instrumentation items listed below:<br>(For details, refer instrumentation specifications)                                                                                                                                                                                                                                                                                                                                                    |           |       |                |                            |           |                           |           |               |             |          |
| 377.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Pressure Gauge of different Range and rating as per site requirement<br>Supply, testing, installation, erection and commissioning.<br>Also supply of erection material like, connector SS316 tube, SS316 fittings, manifold, mounting stand and all other required material. Bourdon type with 2-way manifold, direct mount, 150mm dial, wetted part SS316, IP 65 rated, blow out protection and shatter proof heavy duty glass. ( Refer the Data Sheet attached in Technical Volume) | 10.00     | Nos   |                | 4500.00                    | 45000.00  | 15000.00                  | 150000.00 | 23158.28      | 2,31,582.80 | -35%     |
| 378.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Pressure Transmitter of different Range and rating as per site requirement<br>Supply, testing, installation, erection and commissioning.<br>Also supply of erection material like connector, SS316 tube, SS fittings, manifold, mounting stand and all other required material. Smart HART, Ex'd, IP-65, 24 VDC 2-wire loop powered. (Refer the Data Sheet attached in Technical Volume)                                                                                              | 1.00      | Nos   |                | 15000.00                   | 15000.00  | 20000.00                  | 20000.00  | 24522.28      | 24,522.28   | -18%     |
| 379.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Temperature Gauge - skin type, direct mount as per site requirement<br>Supply, testing, installation, erection and commissioning.<br>Also supply of erection material like SS armoured capillary, mounting stand and all other required material. Skin type, direct mount, 150mm dial, wetted part SS316, IP 65 rated and shatter proof heavy duty glass. ( Refer the Data Sheet attached in Technical Volume)                                                                        | 10.00     | Nos   |                | 11500.00                   | 115000.00 | 75000.00                  | 750000.00 | 17544.3       | 1,75,443.00 | 327%     |
| 380.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Pressure Switch of different range<br>Supply of all consumable material, testing, installation, erection and commissioning.                                                                                                                                                                                                                                                                                                                                                           | 1.00      | Nos   |                | 25000.00                   | 25000.00  | 15000.00                  | 15000.00  | 8099.71       | 8,099.71    | 85%      |
| 381.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Valve Junction Bob - Gas Over Oil Actuated Valve (GOOV) of different size and rating as per site requirement<br>Installation of valve junction box and their accessories inclusive of supply of necessary cable glands,connector, tubing terminals and complete with cabling, glanding, termination and earthing followed by testing and commissioning of complete gas over oil actuated valve.                                                                                       | 8.00      | Nos   |                | 5000.00                    | 40000.00  | 35000.00                  | 280000.00 | 48774.8       | 3,90,198.40 | -28%     |

| Government eProcurement System<br>Created By: MALEPPURATH GIRISH KUMAR<br>Created Date/Time: 18-Jan-2022 11:21 AM<br>Tender Title: Construction of Steel Pipelines and Associated facilities for CGD Connectivities for Western Region (Gujarat, Madhya Pradesh and Maharashtra) on ARC Basis<br>Tender ID: 2021_GAIL_100163_1<br>Tender Inviting Authority: GAIL (India) Ltd.<br>Name of Work: Construction of Steel Pipelines and Associated facilities for CGD Connectivities in Western Region viz. Gujarat, Madhya Pradesh and Maharashtra on ARC Basis<br>Contract No: 040-LYONS-GAIL-018 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |           |       |                |                               |           |                              |            |               |              |          |           |
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| SCHEDULE OF WORK / ITEM(S)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |           |       |                |                               |           |                              |            |               |              |          |           |
| Sl.No                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Description of Work / Item(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | No.of Qty | Units | Estimated Rate | MAS<br>CONSTRUCTIONS(GSTN-NA) |           | SHAKTI<br>ENGINEERS(GSTN-NA) |            | COST ESTIMATE |              | Variance | AHR Items |
| 382.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Gas Detection System (GDS)<br>Supply, configuration, testing, installation, erection and commissioning of gas detection system including point gas detectors,control unit and junction boxes.<br>Gas detector control unit shall be installed inside the local control panel.<br>Supply, Laying of cable inside the cable trench, cable tray for hardwired signals and power cables from gas sensors to gas detectors control unit including glanding, termination, ferruling, dressing etc. at both ends.<br>Supply of cable trays, installation and erection of cable trays and, supply of erection materials, cable ferrules, cable lugs, cable tie.                                                                                                                                                                                                              |           |       |                |                               |           |                              |            |               |              |          |           |
| 383.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | IR type, Flame proof, IP-65, housing material SS316 without display, range 0-100% LEL point hydrocarbon gas detector.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 8.00      | Nos   |                | 17000.00                      | 136000.00 | 150000.00                    | 1200000.00 | 21053.16      | 1,68,425.28  | 612%     | AHR Item  |
| 384.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Junction box                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 5.00      | Nos   |                | 14000.00                      | 70000.00  | 18000.00                     | 90000.00   | 44912.82      | 2,24,564.10  | -60%     |           |
| 385.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Cables                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 100.00    | Mtr   |                | 400.00                        | 40000.00  | 300.00                       | 30000.00   | 560.91        | 56,091.00    | -47%     |           |
| 386.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Other accessories such erection Material, mounting pole etc.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 5.00      | LS    |                | 23000.00                      | 115000.00 | 50000.00                     | 250000.00  | 5678.52       | 28,392.60    | 781%     | AHR Item  |
| 387.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Gas detection system cabinet                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 5.00      | Nos   |                | 50000.00                      | 250000.00 | 100000.00                    | 500000.00  | 85200.19      | 4,26,000.95  | 17%      |           |
| 388.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Cables, Cables Trays and Junction boxes<br>Supply, laying, installation, erection of signals cable from pressure transmitters, temperature transmitter to junction boxes, junction boxes to local control panel (LCP) and LCP panel to RTU including glanding, termination, ferruling, dressing etc. at both ends.<br>Laying of cable from remote operated valve junction box to local control panel (LCP) and LCP panel to RTU including glanding, termination, ferruling, dressing etc. at both ends.<br>Supply of cable trays, cables glands, junction boxes, erection materials, cable ferrules, cable lugs, cable tie.<br>Installation and erection of cable trays and junction boxes<br>Preparation of cable trench for burying cable, excavation, restoration of trench and compacting. Supply and laying of bricks and sand, pipes at all the crossings etc. |           |       |                |                               |           |                              |            |               |              |          |           |
| 389.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 1P X 1.5 Sq. mm Over all Screened                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 150.00    | Mtr   |                | 450.00                        | 67500.00  | 300.00                       | 45000.00   | 462.39        | 69,358.50    | -35%     |           |
| 390.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 1Q X 1.5 Sq. mm Over all Screened                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 150.00    | Mtr   |                | 600.00                        | 90000.00  | 350.00                       | 52500.00   | 539.45        | 80,917.50    | -35%     |           |
| 391.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 12P X 0.5 Sq. mm Individual Screen & Over all Screened                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 300.00    | Mtr   |                | 750.00                        | 225000.00 | 500.00                       | 150000.00  | 701.38        | 2,10,414.00  | -29%     |           |
| 392.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 12P X 0.5 Sq. mm Over all Screened                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 300.00    | Mtr   |                | 750.00                        | 225000.00 | 600.00                       | 180000.00  | 983.98        | 2,95,194.00  | -39%     |           |
| 393.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 3C X 2.5 Sq. mm Power cable                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 400.00    | Mtr   |                | 500.00                        | 200000.00 | 350.00                       | 140000.00  | 787.62        | 3,15,048.00  | -56%     |           |
| 394.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Serial communication cable, Modbus RS - 485, PVC Sheathed, 4 pair                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 150.00    | Mtr   |                | 500.00                        | 75000.00  | 800.00                       | 120000.00  | 702.36        | 1,05,354.00  | 14%      |           |
| 395.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Junction Box                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 40.00     | Nos   |                | 14000.00                      | 560000.00 | 25000.00                     | 1000000.00 | 34142.36      | 13,65,694.40 | -27%     |           |
| 396.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Cable Trays (60 mm wide x 30 mm height)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 150.00    | Mtr   |                | 700.00                        | 105000.00 | 600.00                       | 90000.00   | 441.4         | 66,210.00    | 36%      |           |
| 397.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Cable Trays (100 mm wide x 30 mm height)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 200.00    | Mtr   |                | 700.00                        | 140000.00 | 800.00                       | 160000.00  | 539.49        | 1,07,898.00  | 48%      |           |

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| SCHEDULE OF WORK / ITEM(S)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |           |       |                |                                   |            |                              |            |               |             |          |           |  |
| Sl.No                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Description of Work / Item(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | No.of Qty | Units | Estimated Rate | MAS<br>CONSTRUCTIONS(GSTN-<br>NA) |            | SHAKTI<br>ENGINEERS(GSTN-NA) |            | COST ESTIMATE |             | Variance | AHR Items |  |
| 398.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Cable Trays (300 mm wide x 30 mm height)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 200.00    | Mtr   |                | 700.00                            | 140000.00  | 800.00                       | 160000.00  | 637.58        | 1,27,516.00 | 25%      |           |  |
| 399.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Metering skid installation, Testing & Commissioning assistance (For instrumentation part )<br>Installation of telemetry interface panel (TIC) , metering panel(flow computer panel) either in field or in control room, Laying, installation, erection of signals cable from pressure transmitters, temperature transmitter to junction boxes, junction boxes to local control panel (LCP) and LCP panel to RTU including glanding, termination, ferruling, dressing etc. at both ends.<br>Laying of cable from remote operated valve junction box to local control panel (LCP) and LCP panel to RTU including glanding, termination, ferruling, dressing etc. at both ends.<br>Supply of consumables used in cables glanding & junction boxes, erection materials, cable ferrules, cable lugs, cable tie.<br>Preparation of cable trench, excavation, restoration of trench etc. laying of bricks and sand, pipes at all the crossings of cable / tray etc.<br>Providing the resources/manpower for assistance to OEM of metering skid during comissioning of skid. | 10.00     | Nos   |                | 150000.00                         | 1500000.00 | 145000.00                    | 1450000.00 | 81873.39      | 8,18,733.90 | 77%      | AHR Item  |  |
| 400.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | PRS skid Testing & Commissioning (For instrumentation part )<br>Testing & Commissioning of JBs, cabling, glanding, termination and earthing cables within the skid.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 2.00      | Nos   |                | 70000.00                          | 140000.00  | 125000.00                    | 250000.00  | 73566.83      | 1,47,133.66 | 70%      | AHR Item  |  |
| 401.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | SECTION-G [TELECOM WORKS]                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |           |       |                |                                   |            |                              |            |               |             |          |           |  |
| 402.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | System design, Inspection & factory testing, FAT, SAT, training, installation, commissioning, Trial run, pre-factory tests, packing, forwarding and supply of all goods including commissioning spares & documentation, pre-commissioning activity for telecom                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |           |       |                |                                   |            |                              |            |               |             |          |           |  |
| 403.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Supply of 24 Fibre Composite armoured Optical Fibre Cable drum (6 fibre G-655 & 18 fibre G-652).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 5000.00   | Mtr   |                | 200.00                            | 1000000.00 | 150.00                       | 750000.00  | 174.61        | 8,73,050.00 | -14%     |           |  |
| 404.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Supply of jointing closure 24 Fiber, 2 way including all accessories (3M, Siemens, Raychem make only)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 14.00     | Nos   |                | 3500.00                           | 49000.00   | 8000.00                      | 112000.00  | 23158.28      | 3,24,215.92 | -65%     |           |  |



| Government eProcurement System<br>Created By: MALEPPURATH GIRISH KUMAR<br>Created Date/Time: 18-Jan-2022 11:21 AM<br>Tender Title: Construction of Steel Pipelines and Associated facilities for CGD Connectivities for Western Region (Gujarat, Madhya Pradesh and Maharashtra) on ARC Basis<br>Tender ID: 2021_GAIL_100163_1<br>Tender Inviting Authority: GAIL (India) Ltd.<br>Name of Work: Construction of Steel Pipelines and Associated facilities for CGD Connectivities in Western Region viz. Gujarat, Madhya Pradesh and Maharashtra on ARC Basis<br>Contract No: 040-LYONS-GAIL-018 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |           |       |                |                            |           |                           |           |               |             |          |           |  |
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| SCHEDULE OF WORK / ITEM(S)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |           |       |                |                            |           |                           |           |               |             |          |           |  |
| Sl.No                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Description of Work / Item(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | No.of Qty | Units | Estimated Rate | MAS CONSTRUCTIONS(GSTN-NA) |           | SHAKTI ENGINEERS(GSTN-NA) |           | COST ESTIMATE |             | Variance | AHR Items |  |
| 405.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Supply of 40mm OD permanently lubricated HDPE telecom duct as per technical specifications including manufacturing, factory testing, inspection, packaging, forwarding, transportation, insurance, receipt and storage at site.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 5000.00   | Mtr   |                | 100.00                     | 500000.00 | 90.00                     | 450000.00 | 135.59        | 6,77,950.00 | -34%     |           |  |
| 406.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Telecommunication Site Work                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |           |       |                |                            |           |                           |           |               |             |          |           |  |
| 407.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Laying of HDPE Telecom Duct: Laying of 40mm HDPE Ducts in same pipeline trench direct buried or cased crossing through CS / HDPE conduit in all type of soil & terrain, excavated as required, padding, backfilling, etc. including supply of HDPE Duct accessories required including plastic couplers, end plugs, cable sealing plugs, end caps, etc. suitable & sufficient for above supplied ducts, cleaning and sealing of ducts at the end laid drum lengths, preparation and supply of cable blowing pit at each Km jointing of HDPE conduit, testing OD HDPE Duct and accessories after laying preparation of report and final drawing and documents as per specification, joint location marking, erection accessories, as-built, etc. | 5000.00   | Mtr   |                | 25.00                      | 125000.00 | 40.00                     | 200000.00 | 63.41         | 3,17,050.00 | -37%     |           |  |
| 408.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Blowing of Optical Fibre Cable inside HDPE Duct: All activities pertaining to Blowing of Optical Fibre Cable in same pipeline trench directly (after testing drum at site), through CS / HDPE conduits along the pipeline also at crossing cable, sealing using all materials required, including laying of warning mats, etc. as per direction of EIC                                                                                                                                                                                                                                                                                                                                                                                          | 5000.00   | Mtr   |                | 100.00                     | 500000.00 | 65.00                     | 325000.00 | 69.26         | 3,46,300.00 | -6%      |           |  |
| 409.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Laying of OFC cable in same pipeline trench                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 40.00     | Mtr   |                | 100.00                     | 4000.00   | 45.00                     | 1800.00   | 108           | 4,320.00    | -58%     |           |  |
| 410.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Supply and laying of GI Pipe (4") at crossings for protection of OFC / HDPE duct                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 40.00     | Mtr   |                | 2000.00                    | 80000.00  | 1200.00                   | 48000.00  | 637.58        | 25,503.20   | 88%      | AHR Item  |  |
| 411.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Splicing, Jointing of Optical Fiber Cable (Including Supply and Installation of jointing pits including sand, etc. & joint markers)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 14.00     | Nos   |                | 25000.00                   | 350000.00 | 15000.00                  | 210000.00 | 23158.28      | 3,24,215.92 | -35%     |           |  |
| 412.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Supply of FTC with pig tails other accessories for termination of OFC - 24 Fibre in the Telecom Room                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 14.00     | Set   |                | 50000.00                   | 700000.00 | 24000.00                  | 336000.00 | 23392.4       | 3,27,493.60 | 3%       |           |  |
| 413.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Installation of FTC & Wire mesh, termination of OFC on FTC / DDF inside telecom room, splicing with steel fibre, fibre test, OTDR test, power testing of laid OFC, identification of fault, rectification, earthing, final testing and commissioning, preparation of reports, etc. work complete in all respect with all necessary accessories for all location till final Handing Over and Taking Over by Owner of laid OFC.                                                                                                                                                                                                                                                                                                                   | 14.00     | Set   |                | 50000.00                   | 700000.00 | 24000.00                  | 336000.00 | 29719.46      | 4,16,072.44 | -19%     |           |  |
| 414.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Supply, laying and termination of five pair armoured telephone cable 0.5 mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 10.00     | Mtr   |                | 1500.00                    | 15000.00  | 300.00                    | 3000.00   | 24.52         | 245.20      | 1123%    | AHR Item  |  |
| 415.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Supply, configuration, installation and commissioning of CCTV DVR 4 channel video & audio, 1 SATA interface, installed in terminal control room complete with power supply unit for cameras, 1TB HDD and accessories inclusive of power/ Ethernet cabling, installation, testing and commissioning.                                                                                                                                                                                                                                                                                                                                                                                                                                             | 1.00      | Nos   |                | 500000.00                  | 500000.00 | 35000.00                  | 35000.00  | 80997.07      | 80,997.07   | -57%     |           |  |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                             |           |                                           |                |                            |             |                           |             |                |                 |                |                |  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-------------------------------------------|----------------|----------------------------|-------------|---------------------------|-------------|----------------|-----------------|----------------|----------------|--|
| Government eProcurement System<br>Created By: MALEPPURATH GIRISH KUMAR<br>Created Date/Time: 18-Jan-2022 11:21 AM<br>Tender Title: Construction of Steel Pipelines and Associated facilities for CGD Connectivities for Western Region (Gujarat, Madhya Pradesh and Maharashtra) on ARC Basis<br>Tender ID: 2021_GAIL_100163_1<br>Tender Inviting Authority: GAIL (India) Ltd.<br>Name of Work: Construction of Steel Pipelines and Associated facilities for CGD Connectivities in Western Region viz. Gujarat, Madhya Pradesh and Maharashtra on ARC Basis<br>Contract No: 040-LYONS-GAIL-018 |                                                                                                                                                                             |           |                                           |                |                            |             |                           |             |                |                 |                |                |  |
| SCHEDULE OF WORK / ITEM(S)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                             |           |                                           |                |                            |             |                           |             |                |                 |                |                |  |
| Sl.No                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Description of Work / Item(s)                                                                                                                                               | No.of Qty | Units                                     | Estimated Rate | MAS CONSTRUCTIONS(GSTN-NA) |             | SHAKTI ENGINEERS(GSTN-NA) |             | COST ESTIMATE  |                 | Variance       | AHR Items      |  |
| 416.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Supply and installation of 2.0 MP 1080P, 20M IR, 25 FPS, fixed bullet cameras for outdoor (outside CCR building) installation, IP-65, complete with wiring and accessories. | 1.00      | Nos                                       |                | 200000.00                  | 200000.00   | 35000.00                  | 35000.00    | 13498.77       | 13,498.77       | 159%           | AHR Item       |  |
| 417.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Supply of coaxial cable with power for CCTVs, PVC insulated, SWA                                                                                                            | 5.00      | Mtr                                       |                | 50000.00                   | 250000.00   | 400.00                    | 2000.00     | 377.99         | 1,889.95        | 6%             | AHR Item       |  |
| 418.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | GST on total of the above items in Percentage (The Quantity mentioned in this row may be ignored)                                                                           | 1.00      | percentage                                |                | 18.00                      | 19286271.00 | 18.00                     | 11135149.20 |                |                 |                |                |  |
| Total in Figures                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                             |           |                                           |                |                            | 126432221   |                           | 72997089.2  |                | 9,42,94,338.01  |                |                |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                             |           |                                           |                |                            |             |                           |             |                | GST@18%         |                | 1,69,72,980.84 |  |
| Lowest Amount Quoted BY: SHAKTI ENGINEERS(72997089.20)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                             |           |                                           |                |                            |             |                           | 72997089.2  |                | 11,12,67,318.85 | TOTAL VARIANCE | -34.39%        |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                             |           | Total Item Nos.                           |                |                            |             |                           |             | 418            |                 |                |                |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                             |           | Total AHR Items                           |                |                            |             |                           |             | 54             |                 |                |                |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                             |           | Total Value of AHR items excluding GST    |                |                            |             |                           |             | 27,41,870.48   |                 |                |                |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                             |           | Recommended Contract Value excluding GST  |                |                            |             |                           |             | 6,18,61,940.00 |                 |                |                |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                             |           | AHR value as percentage of Contract Value |                |                            |             |                           |             | 4.43           |                 |                |                |  |



M. Girish Kumar (GM-C&P)  
Lyons Engineering Pvt. Ltd.  
New Delhi

**BOQ Summary Details**

**Tender Title: Construction of Steel Pipelines and Associated facilities for CGD Connectivities for Western Region  
(Gujarat, Madhya Pradesh and Maharashtra) on ARC Basis  
Tender ID: 2021\_GAIL\_100163\_1**

| Sheet Name | Sl.No | Bidder Name       | Amount       | Bid Rank |
|------------|-------|-------------------|--------------|----------|
| BoQ1       | 1     | SHAKTI ENGINEERS  | 72997089.20  | L1       |
|            | 2     | MAS CONSTRUCTIONS | 126432221.00 | L2       |



### ANNEXURE III

## CHECK LIST FOR RECOMMENDATION/ PROPOSAL FOR AWARD

Tender ref : 040-LYONS-GAIL-018 ARC LAYING TENDER FOR WESTERN REGION

| Sl. No. | Description                                                                                    | Compliance                                                                                                                                                                                   |
|---------|------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.      | Dealing the review of Estimate by Estimate Review Committee                                    | GAIL to mention                                                                                                                                                                              |
| 2.      | Summary of Price Comparison of evaluated prices & estimates and                                | Complied                                                                                                                                                                                     |
| 3.      | Analysis and review of estimate if L1 price is higher than estimates                           | L1 Price is lower than the estimate by 34.39 %.                                                                                                                                              |
| 4.      | Deliberation on insufficient competition (wherever applicable)                                 | Since there are only 2 Bidders for this Tender, insufficient competition is there. However the price quoted by L1 Bidder is very competitive and hence order can be placed on the L1 Bidder. |
| 5.      | Any suspicion regarding cartelization                                                          | No                                                                                                                                                                                           |
| 6.      | Recommendation on re-tendering (if applicable)                                                 | Not applicable                                                                                                                                                                               |
| 7.      | Impact on project cost (Not applicable for O&M)                                                | No impact                                                                                                                                                                                    |
| 8.      | Impact of delivery period on Project Schedule                                                  | No impact                                                                                                                                                                                    |
| 9.      | Details of total financial implication committed on the project (for projects)                 | GAIL may mention                                                                                                                                                                             |
| 10.     | Analysis of L1 price if it is higher than estimates                                            | L1 rates are lower than the estimate.                                                                                                                                                        |
| 11.     | Ordering Cycle time                                                                            | 9 days                                                                                                                                                                                       |
| 12.     | Past purchase price comparison for purchases                                                   | Past Purchase price also Considered.                                                                                                                                                         |
| 13.     | Clear recommendation for approval is to be submitted, no conditional recommendation.           | Clear recommendation provided                                                                                                                                                                |
| 14.     | Details of prices submitted after Reverse Auction and variations thereof (wherever applicable) | Not applicable                                                                                                                                                                               |

|     |                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                              |
|-----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 15. | <p>Verifying that name of recommended bidder (s) are not appearing in Holiday/ Banning list, available on Intranet</p> <p>Further the vendor code through which offer is submitted is same as the vendor code on which order/ contract is to be placed (mentioned in bid)</p> <p>Bill to and ship to details as per guidelines in this regard.</p> | <p>L1 bidder's name is not banned/black listed.</p> <p>Complied</p> <p>Complied</p> <p>Not applicable</p>                                                                                    |
| 16. | Total committed cost in project with the award of subject package (Not applicable for O&M). Head Wise (Approved/ Committed/Actual/ Anticipated) as per enclosed Appendix-I.                                                                                                                                                                        | GAIL to mention                                                                                                                                                                              |
| 17. | Dealing of purchase preference to MSEs (wherever applicable).                                                                                                                                                                                                                                                                                      | PPP for MSE is not applicable in this Tender.                                                                                                                                                |
| 18. | Dealing of purchase preference PP-LC (wherever applicable)                                                                                                                                                                                                                                                                                         | As per Form F-2 submitted by the bidders Bidders has declared themselves as Class 1 Supplier with local content of more than 50%.                                                            |
| 19. | Dealing of purchase preference to DMEPs (wherever applicable)                                                                                                                                                                                                                                                                                      | Not applicable                                                                                                                                                                               |
| 20. | Whether any order is placed on Startup. If yes, the safeguard mentioned in C&P Procedure is to be deliberated.                                                                                                                                                                                                                                     | Not applicable                                                                                                                                                                               |
| 21. | Dealing of insufficient competition in terms of clause no. 4.16 of C&P Procedure (wherever applicable).                                                                                                                                                                                                                                            | Since there are only 2 Bidders for this Tender, insufficient competition is there. However the price quoted by L1 Bidder is very competitive and hence order can be placed on the L1 Bidder. |
| 22. | Cost details showing all DFR heads in DFR vs committed vs actual (for Project cases)                                                                                                                                                                                                                                                               | GAIL to mention                                                                                                                                                                              |

|     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                 |
|-----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| 23. | <p>For the cases of Repeat Order</p> <p>(i) Confirmation that repeat order does not exceed 50% of Original Qty (or as mentioned in original PO) and is placed within 06 months from Notification of Award.</p> <p>(ii) Confirmation that repeat order is not being placed on an emergency purchase, negotiated purchase, sole acceptable offer basis and where the prices against original order were escalated to compensate for early delivery(ies)</p> <p>(iii) Confirmation from Indenter/ User/Project Department as per 3.5 (i) of Section-11 of C&amp;P Procedure</p> <p>(iv) Confirmation that repeat Order is not for any new location or Project other than that specified in tender document.</p> | Not applicable  |
| 24. | Relevant clauses of DoP and C&P Procedures (as applicable)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | GAIL to mention |
| 25. | Preparation of Draft ECPC Agenda as per format and keeping the same in file (for ECPC cases)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | GAIL to mention |
| 26. | Whether all the fact of case has been considered while preparing the Recommendations                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Yes             |
| 27. | Time taken from Price bid opening to Award recommendation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 2 days          |



M. Girish Kumar (GM-C&P)  
Lyons Engineering Pvt. Ltd.  
New Delhi

**From:** Ravi Shanker (रवि शंकर) <ravi.shanker@gail.co.in>  
**Sent:** 17 January 2022 21:26  
**To:** girish kumar  
**Cc:** Girjesh Kumar (गिरजेश कुमार); Jagannath (जगन्नाथ); vivek  
**Subject:** Fwd: Submission of PBO Recommendation - LAYING AND ASSOCIATED WORKS FOR WESTERN REGION (ARC)

Pls find enclosed the approval of PBO with comments in trailing mail.

Regards

Ravi Shankar

Sent from my iPhone

Begin forwarded message:

**From:** "SANDIP SUNDAR SAHOO (संदिप सुंदर साहु)" <sandip.sahoo@gail.co.in>  
**Date:** 17 January 2022 at 7:29:17 PM IST  
**To:** "Jagannath (जगन्नाथ)" <jagannath@gail.co.in>  
**Cc:** "Siddhartha Ghosh (सिद्धार्थ घोष)" <SG02492@gail.co.in>, "Kaladhar Narayan (कलाधर नारायण)" <kaladhar@gail.co.in>, "Girjesh Kumar (गिरजेश कुमार)" <girjesh.kumar@gail.co.in>, "Pushkar (पुष्कर)" <puskar@gail.co.in>, "Ravi Shanker (रवि शंकर)" <ravi.shanker@gail.co.in>, "Ravendra Singh (रवेन्द्र सिंह)" <ravendrasingh@gail.co.in>, girish.kumar@lyonsengineers.com  
**Subject:** RE: Submission of PBO Recommendation - LAYING AND ASSOCIATED WORKS FOR WESTERN REGION (ARC)

Dear Sir,

Competent Authority has accorded the approval of Price bid opening inline with PMC recommendation.

May please advise PMC for Price bid opening.

Further, Committee has deliberated regarding non participation of 11 bidders out of 13 empanelled contractors:

The empanelment contract have provisions regarding no response/non-submission of bid by empaneled contractors as under:

*"In case no response/regrets with specific reasons are received against 5 consecutive tender enquiries, it shall be presumed that the Vendor is no longer interested for business with GAIL and the empanelment of such Vendor is liable to be cancelled."*

Since, only two bids received out of total 13 empaneled bidders, PMC was asked to seek regret letter/reason for non participation from remaining bidders and Only two bidders have responded to PMC's mail for regret letter/ reason for non participation. It has been proposed to seek written response from remaining bidders by PMC so that any action/proposal, if required in terms of above mentioned provisions of empanelment process may be submitted accordingly.

The similar deliberation was also communicated during communication of PBO for Northern region vide mail dated 16.01.2022.

Rgds,  
Sandip Sundar Sahoo  
Sr. officer (C&P)

---

**From:** Jagannath (जगन्नाथ) <jagannath@gail.co.in>

**Sent:** 16 January 2022 10:48

**To:** SANDIP SUNDAR SAHOO (संदिप सुंदर साहू) <sandip.sahoo@gail.co.in>

**Cc:** Sanjay Singh (संजय सिंह) <sanjay\_singh@gail.co.in>; Girjesh Kumar (गिरजेश कुमार) <girjesh.kumar@gail.co.in>; Pushkar (पुष्कर) <puskar@gail.co.in>; Ravi Shanker (रवि शंकर) <ravi.shanker@gail.co.in>; Kaladhar Narayan (कलाधर नारायण) <kaladhar@gail.co.in>

**Subject:** FW: Submission of PBO Recommendation - LAYING AND ASSOCIATED WORKS FOR WESTERN REGION (ARC)

Dear Sir,

Please find the attached PBO recommendation of the tender ARC Western Region, for your needful please.

*Jagannath,  
DGM(PE),  
GAIL, Noida.*

---

**From:** girish.kumar@lyonsengineers.com <girish.kumar@lyonsengineers.com>

**Sent:** 15 January 2022 18:09

**To:** Jagannath (जगन्नाथ) <jagannath@gail.co.in>

**Cc:** Girjesh Kumar (गिरजेश कुमार) <girjesh.kumar@gail.co.in>; Pushkar (पुष्कर) <puskar@gail.co.in>; 'Sujit Biswas' <sujit.lyons@gmail.com>; 'vivek' <vivek.kulshrestha@lyonsengineers.com>

**Subject:** Submission of PBO Recommendation - LAYING AND ASSOCIATED WORKS FOR WESTERN REGION (ARC)

**CAUTION:** External Email. Do not click links or open attachment unless you trust the Sender and know the Content is safe. Report suspicious mails to "[cybersec@gail.co.in](mailto:cybersec@gail.co.in)".

Dear Sir.

Please find enclosed herewith PBO Recommendation for Western Region.  
Further please find the reply to points raised in the trailing mail,

Please expedite for PBO recommendation from PMC along with the following:

1. Bids – Being send separately
2. TQCQ and its reply (if any) -Enclosed



**MINUTES OF MEETING:**

**Sub : PRICE BID OPENING FOR ARC LAYING TENDER REF : 040-LYONS-GAIL-015 FOR WESTERN REGION HELD THROUGH VIDEO CONFERENCE ON 18.1.2022**

Client : GAIL officials present :

- Shri. Jagannath (PE)
- Shri. Sandeep Sahoo ( C&P)
- Shri. Alok Saxena (Finance)

PMC : Lyons Engineering : Mr. M Girish Kumar

Bidder: None

M/s. Lyons Engineering welcomed the participants.

Price Bid was opened on Scheduled date and time at 11.00 AM. Price details quoted by Bidder was read out which is as under;

|                   |              |
|-------------------|--------------|
| SHAKTI ENGINEERS  | 72997089.20  |
| MAS CONSTRUCTIONS | 126432221.00 |

Meeting was concluded at 11.30 AM

[illegible]

On behalf of  
Lyons Engineering Pvt. Ltd.  
Signed by  
M. Girish Kumar  
General Manager (C&P)

GAIL (India) Ltd.

Dt.18.1.2022