

**SUPPLY, LAYING, INSTALLATION,
TESTING & COMMISSIONING INCLUDING
ALL FITTINGS, CROSSINGS FOR 1500MM
DIA. PCCP PIPELINE FOR WATER
SUPPLY PROJECT AT GIDC JHAGADIA
ESTATE**

**TENDER No: E-TENDER NOTICE NO. 01
OF 2026-27 SR. NO. 22 .**

RELEASE DATE: 29.04.2026

Signature of Contractor:

Executive Engineer
GIDC, Ankleshwar

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**MASTER LIST OF ATTACHMENTS FOR SUPPLY, LAYING,
INSTALLATION, TESTING & COMMISSIONING INCLUDING
ALL FITTINGS, CROSSINGS FOR 1500MM DIA. PCCP
PIPELINE FOR WATER SUPPLY PROJECT AT GIDC
JHAGADIA ESTATE
(PIPELINE ENGINEERING)**

PROJECT : SUPPLY, LAYING, INSTALLATION, TESTING
& COMMISSIONING INCLUDING ALL
FITTINGS, CROSSINGS FOR 1500MM DIA.
PCCP PIPELINE FOR WATER SUPPLY
PROJECT AT GIDC JHAGADIA ESTATE

OWNER : GIDC, JHAGADIA

JOB NO. : B828

2	29.04.2026	REVISED & RE-ISSUED WITH TENDER	AJ/ RB	RB	NR
1	30.09.2024	REVISED & RE-ISSUED WITH TENDER	AJ/ RB	RB	NR
0	19.04.2024	ISSUED WITH TENDER	AJ/ RB	RB	NR
Rev. No	Date	Purpose	Prepared by	Checked by	Approved by

1.0 MASTER LIST OF ATTACHMENTS (PIPELINE ENGG.)

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3.0 STRUCTURES INPUTS

4.0 CONSTRUCTION INPUTS

5.0 PROCESS INPUTS

6.0 GEOTECHNICAL INPUTS

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SCOPE OF WORK FOR SUPPLY, LAYING, INSTALLATION, TESTING & COMMISSIONING INCLUDING ALL FITTINGS, CROSSINGS FOR 1500MM DIA. PCCP PIPELINE FOR WATER SUPPLY PROJECT AT GIDC JHAGADIA ESTATE (PIPELINE ENGINEERING)

PROJECT : SUPPLY, LAYING, INSTALLATION,
TESTING & COMMISSIONING INCLUDING
ALL FITTINGS, CROSSINGS FOR 1500MM
DIA. PCCP PIPELINE FOR WATER SUPPLY
PROJECT AT GIDC JHAGADIA ESTATE

OWNER : GIDC, JHAGADIA

EIL JOB NO. : B828

2	29.04.2026	REVISED & RE-ISSUED FOR BIDS	AJ/ RB	RB	NR/MSG
1	30.09.2024	REVISED & RE-ISSUED FOR BIDS	AJ/ RB	RB	NR/MSG
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1.0 INTRODUCTION

- 1.1** M/s GIDC, Jhagadia, Gujarat intends to install a PCCP water pipeline from Rundh, Gujarat to Jhagadia, Gujarat.
- 1.2** The PCCP pipeline length is approx. 24.5 km long and internal diameter is 1500 mm. The pipeline runs from well intake terminal in Rundh, Gujarat to Receipt terminal in Jhagadia, Gujarat.
- 1.3** This document covers details of work tendered, scope of work, and scope of supply pertaining to pipeline and associated facilities for Detailed Engineering, Procurement, Construction, Inspection, Testing, Pre-Commissioning and Commissioning of the water pipeline, and associated facilities.
- 1.4** The overall scheme of the water pipeline is indicated in the schematic drawing no. B828-000-83-44-30001 attached with the Tender. The Schematic indicates the overall details of the water pipeline system in brief and is for reference purpose. Contractor's quotation shall be based on complete scope of work and all documents/ drawings form part to the tender document.
- 1.5** Details of associated scope of work pertaining to civil, structural, cathodic protection works, etc. are covered elsewhere in the Tender document.
- 1.6** This document shall be read in conjunction with bill of quantities (BOQ)/ schedule of prices (SOP)/ schedule of rates (SOR), master index, specifications, standards, drawings, and other documents forming part of Tender document.

2.0 WORK TENDERED

- 2.1** Work tendered as part of this bid document consists of design and detailed engineering, procurement and supply of all materials, installation, testing, Non-destructive testing, pre-commissioning and commissioning of the complete pipeline system including, all associated facilities and associated works. The pipeline system includes main pipeline, mainline isolation valves in valve chambers, combination type air valves, scour/ drain valves, highway & railway crossings, river crossings, and all associated facilities. The brief details are as under:

Pipeline Parameters	Detail
Line size (ID)	60" (1500 mm)
Linepipe Material	PCCP as per IS 784: 2001
Design Working Pressure	10 kg/ cm ² (g)
Approx. Length (km)	24.373 km
Air valve	As per the engineering design basis
Scour/ Drain valve	As per the engineering design basis
Mainline isolation valve	As per the engineering design basis

- 2.2** The works pertaining to the pipelines and associated facilities shall be as under:

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- a) Design & Detailed engineering for the complete pipeline system including associated facilities.
- b) Co-ordination, interface, as required, with other contractor(s)/ agencies, as applicable.
- c) Procurement & supply of all items.
- d) Installation of Pipeline.
- e) Fabrication, Installation, testing of pipeline, including all crossings. Non-destructive testing.
- f) Installation of Pipeline for all crossings such as roads/ highways, railways, utilities, underground pipelines, underground cables, overhead powerline, water crossings (river, canal, stream and nalla), etc.
- g) All works related to pre-testing, cleaning, flushing, hydrostatic testing, and tie-in with adjoining pipeline / station piping sections including tie-in with adjoining section, as applicable.
- h) Pre-commissioning and Commissioning.
- i) Carrying out Cathodic Protection Works, as mentioned elsewhere in the bid document.
- j) All associated civil, structural, etc. works, as mentioned elsewhere in the bid document.
- k) All such works that are not indicated herein but are otherwise required to complete the work in all respects shall form part of work tendered.
- l) Contractor shall mobilize and provide all equipments, manpower (skilled and semi-skilled), consumables and other resources etc. as required.
- m) Contractor shall be responsible for the successful and timely execution of the complete job defined in the Tender document.
- n) Bidder's quotation shall be based on complete scope of work and all documents/ drawings forming part of tender documents.

Contractor shall deploy independent construction crew for carrying out construction activities simultaneously at minimum two spreads as informed/ identified by M/s GIDC, EIL, & Engineer-In-Charge. Each spread shall be fully equipped, maintained and functional including requisite skilled/ semiskilled manpower. The construction spreads shall work simultaneously. In addition, contractor shall deploy mini-spreads for rail, road, water crossings, hilly areas, sand dunes areas and restricted areas. Contractor shall also mobilize separate teams for mechanical works at various critical locations.

2.3 Pre-Commissioning and Commissioning

Carrying out Pre-commissioning & Commissioning works including and supply of all materials and consumables as per the specification enclosed elsewhere in the bid package.

2.4 Contractor shall adopt suitable method of construction/ execution of work for restricted ROU and deploy adequate equipment & manpower, number of mini- spreads etc. as required. Contractor shall provide complete details of manpower, equipment etc. to be deployed. Contractor shall mobilize and provide all equipment, manpower (skilled and

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unskilled), consumable and other resources etc. for each part and spread as required for the execution of the complete job.

3.0 SCOPE OF WORK (ENGINEERING, PROCUREMENT, & CONSTRUCTION)

The scope of work detailed herein shall be read in conjunction with the Engineering Design Basis document no. B828-000-83-44-EDB-0001, Master Index, P&IDs, specifications, standards, drawings, BOQ, other documents enclosed with the bid package.

The detailed scope of work tendered shall consist of, but not limited to, design and detailed engineering, procurement and supply of all items, fabrication, installation, testing, Non-destructive testing, pre-commissioning and commissioning along with all associated works as described herein. However, all such works which are not indicated here below but are otherwise required to complete the work in all respects in accordance with specifications, drawings and other requirements of bid package shall also form part of Contractor's Scope of Work.

The detailed scope of work pertaining to the water pipeline and all associated facilities shall be in general but not limited to the following.

The word "ROU" as mentioned anywhere in the tender document shall be read as following:

"Pipeline corridor/ Construction ROU/ Permission to lay, provided by M/s GIDC for the installation of the water pipeline".

3.1 Topographical Survey and Design & Engineering

- 3.1.1 The detailed route survey for pipeline has been included in the bid package. Review of the data provided in the bid document shall be carried out by the contractor before commencement of the detailed engineering / construction work. Contractor shall carryout additional survey & geotechnical investigation, if required, for Pipeline Installation including all local detouring, crossings etc.
- 3.1.2 Collection of data at site and compilation of all data/ information furnished in the bid package and additionally collected/ generated by Contractor. Firming up of route survey drawings considering rerouted sections and additional surveys, if any.
- 3.1.3 Necessary interface with other contractor(s), as applicable.
- 3.1.4 Design & Detailed Engineering for the pipeline system. Preparation of drawings/ documents, calculations for engineering and construction such as Piping General Arrangement Drawings (GADs), Piping Supports, Pipeline Approach Drawings, Crossing Drawings, Route maps, Alignment Sheets, thrust blocks, air valves, scour/ drain valves and valve chambers, mainline isolation valve and valve chambers, etc.
- 3.1.5 All detailed engineering activities such as Material Take offs (MTOs), detailed design, engineering & construction drawings, calculations for PCCP pipeline, Pipe specials, thrust blocks, Mainline isolation valves and valve chambers, man-ways at tie-ins, Scour/ drain valves and valve chambers, combination type tamper proof air valves, anti-buoyancy measures for river crossings, water body crossings, cased crossing, cathodic protection for cased crossings, etc.
- 3.1.6 All necessary Interface, co-ordination & liaison with the other contractor as required to complete the work seamlessly shall be carried out by the contractor.

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- 3.1.7 Contractor shall carry out analysis for the pipeline w.r.t. thrust force generating due to internal pressure of the pipeline and submit the analysis report for review. Suitable measures (thrust restraint) shall be designed and provided as per the requirements of AWWA M11/ IS standards.
- 3.1.8 The requirements for PCCP pipeline, Pipe specials, thrust blocks, Mainline isolation valves and valve chambers, man-ways at tie-ins, Scour/ drain valves and valve chambers, combination type tamper proof air valves, anti-buoyancy measures for river crossings, water body crossings, cased crossing, cathodic protection for cased crossings, etc. are indicated in the engineering design basis. The requirements indicated in the engineering design basis and in this document are minimum. The contractor shall carryout all engineering works as per the industry practices and Indian standards with out any additional cost and time implication. The engineering services are part of the items indicated in the schedule of rates (SOR)/ schedule of prices (SOP)/ bill of quantities (BOQ), and no separate payment shall be done for the engineering services.
- 3.1.9 Any requirements of extra cover, select soil backfill, any other mitigation measures etc. along the pipeline route for the safety of pipeline shall be provided by the contractor without any extra cost and time implications.
- 3.1.10 Providing man-way at tie in joints to carryout internal lining at the joints of PCCP pipes. Minimum 36-inch size of man-way shall be provided at top of the pipe with branch fitting, pipe, flange and blind flange assembly, stud bolts & gasket.

Contractor shall ensure the minimum cover requirement at top of man-way flange and accordingly maintain the trench depth at tie-in locations. Contractor shall plan and lay the pipeline in such a manner to minimize the number of tie-in joints. 100% solid high build epoxy (minimum 800 micron thick) (Duracoat/ Epigen or equivalent) or PU Coating of thickness DFT 1.5 mm (min.) shall be applied for underground piping, Man way assembly etc.
- 3.1.11 Carrying out detailed engineering in accordance with design basis, codes & standards and project specifications enclosed in this bid package.
- 3.1.12 The list of drawing and documents to be submitted to M/s GIDC, EIL, & Engineer-In-Charge for review/ information is detailed in document no. B828-000-83-44-VDR-9510 enclosed with the bid package.
- 3.1.13 Preparation of pipeline/ piping drawings such as pipeline approach drawings, alignment sheets, crossing details & drawings and piping general arrangement drawings (GADs), valve chamber drawings, valve assembly GADs for mainline isolation valve, scour/ drain valve, combination type tamper proof air valves, etc. The typical drawings attached along with the bid package are for reference purpose only. All drawings/ methodology shall be subject to review and approval by M/s GIDC, EIL, & Engineer-In-Charge. The construction shall be carried out based on the Approved for Construction (AFC) drawings.
- 3.1.14 Carrying out Material Take off (MTO) for all items.
- 3.1.15 The detailed design shall take into consideration of stipulations, standard practices followed by various authorities for all types of crossings and laying along ROW of roads and specifically all the factors that are agreed upon between M/s GIDC and state/local authorities as per agreements reached as a part of permissions for various crossings. Contractor shall prepare all design data/ drawings/ calculations/ reports as required for statutory clearances including obtaining necessary engineering and construction approvals.

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- 3.1.16 Installation of pipeline at River crossings are intended to be installed by open cut method with Anti buoyance measures in the form of concrete weight coating.
- 3.1.17 Carrying out crossings of Canal, Highway, Expressway, Railways by boring/ jacking with casing pipe. The annular space between the carrier pipe and the casing pipe shall be filled with cement grout/ mortar.

3.2 Procurement

- 3.2.1 Procurement and supply of all materials, equipments, transportation of all materials from manufacturer's works including loading, unloading, handling, storing and transportation to store/ work site(s)/ workshop(s) including arranging all necessary intermediate storage area(s) thereof, as required. Contractor shall procure and supply all materials, in sequence and at appropriate time for successful completion of the work. All equipments, materials, consumables, components, etc. shall be new and suitable for the intended service. Approved vendor list has been enclosed with the Tender Document for various items. Contractor shall strictly follow the approved vendor list enclosed with the tender. However, if the contractor proposes a vendor not from the vendor list, the vendor shall submit past track record in the form of work order/ purchase order & IRN for a similar item. The proposed vendor shall be evaluated & approved by M/s GIDC, & EIL. M/s GIDC, & EIL's decision shall be final on approval of the proposed vendor. The contractor shall not source/ place order to a vendor, not in the approved vendor list, before taking M/ GIDC, & EIL's approval. For items, which are not covered in the vendor list, Contractor shall obtain M/s GIDC, & EIL's prior approval for the vendor. Necessary details i.e. data sheets & specifications, as required, are enclosed with the Tender Document. Contractor shall also procure and supply mandatory spares and spares required for commissioning/ start-up as recommended by the vendor for all items and as per specifications & details provided in the Tender Document.
- 3.2.2 Contractor shall also procure and supply spares required for pre-commissioning and commissioning/ start up as recommended for all items as per specifications provided in the bid package. Where no specification is available in the contract, the same shall be prepared by the Contractor and shall be subjected to M/s GIDC, EIL, & Engineer-In-Charge's approval.
- 3.2.3 Contractor to ensure compliance with Vendor's and supplier's instructions, procedures and recommendations for transportation, handling, installation, testing and commissioning.
- 3.2.4 Maintaining and operating an adequate material control procedure at worksite.
- 3.2.5 Contactor shall prepare material take-off with complete description of size, rating, material, thickness and specifications.
- 3.2.6 Contractor shall prepare material/ purchase requisitions, review of vendor data/ drawings and calculations, approval of manufacturing procedures wherever necessary, and third-party inspection at manufacturer's works of the materials by internationally reputed agencies as required. Quality control and expediting of all procured items at Vendor's shop or at fabrication yard. Third party inspection agency shall be engaged by the Contractor. Third party inspection shall be to Contractor's account. M/s GIDC, EIL, & Engineer-In-Charge's Representative shall be provided with access to all manufacturing works, Quality control and expediting of all procured items at Vendor's shop or at fabrication yard.
- 3.2.7 All materials shall be procured strictly in compliance with the tender requirement.

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- 3.2.8 Stores management including receipt, warehousing, preserving the material in good condition, issue of material to construction site, reconciliation etc.
- 3.2.9 Contractor shall arrange Storage yard for linepipe storage including stores management, receipt, warehousing, preserving the material in good condition, issue of material to construction site and material reconciliation, at his own cost till completion in all respect.
- 3.2.10 Contractor shall carryout proper documentation of inspection and quality assurance programs for all materials, duly approved by M/s GIDC, EIL, & Engineer-In-Charge. Contractor shall maintain an accurate and traceable listing of procurement records for the location, quality and character of all permanent materials in the Project.
- 3.2.11 Contractor shall submit periodic manufacturing progress reports highlighting hold ups and slippages, if any, to M/s GIDC, EIL, & Engineer-In-Charge and take remedial measures.
- 3.2.12 **Materials to be Supplied by M/s GIDC**

M/s GIDC shall not supply any material what-so-ever required for successful completion of pipeline system. All materials, equipment, components & consumables shall be supplied by the contractor.

3.2.13 **Materials to be Supplied by Contractor**

All materials required for successful execution of the project shall be provided by the Contractor, including any additional materials required for completion of the work. The materials supplied shall meet the requirements of the Tender document. The procurement and supply, in sequence and at appropriate time and place, including inspection and expediting, of all materials and consumables required for completion of the work as defined in the Tender document shall be entirely the Contractor's responsibility. All materials supplied by the Contractor shall be strictly in accordance with the requirements of relevant material specifications, data sheets & other relevant documents enclosed with the Contract document. All equipments, materials, components, etc. shall be new and specifically purchased for this project from EIL approved vendors, duly inspected by third party inspection agency.

As a minimum, the materials to be supplied by the Contractor shall include, but not limited to, the following:

- PCCP linepipes
- Pipe specials (including non standard length straights, bends, branch fittings, for flange connection, etc.)
- MS pipes & casing pipes
- All materials for cement mortar, grout, etc.
- All materials for thrust blocks.
- All materials for field joint coatings
- All materials for valve chambers
- Mainline isolation valves
- Scour/ Drain valves
- Combination type tamper proof air valves
- Stand pipe for air valves

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- Isolation valve for air valves
- Flanges
- Gaskets
- Fasteners
- Materials for surface preparation
- Materials for painting/ coating including primer
- Materials for pipeline markers such as KM marker, Warning sign, Ariel Markers, Direction marker, etc.
- Materials for anti-buoyancy coating-Continuous concrete weight coating
- Deployment of all equipments, machinery, skilled & un-skilled manpower.
- Deployment of all materials, equipments, machinery, pumps, etc. for hydrostatic testing
- Welding equipments, electrodes, consumables, as required.
- All equipment, consumables, machinery, etc. for Non-destructive testing including but not limited to films, die penetrant testing materials, etc.
- Pipeline warning tape/ mesh.
- All materials not specified above but required for successful completion of the entire work whether temporary or permanent in nature.

3.2.14 Storage of Materials

- 3.2.14.1 All materials shall be preserved against deterioration and corrosion due to poor or improper storage while under the custody of the Contractor.
- 3.2.14.2 Linepipe shall be stored in storage yard. Linepipe storage yard shall be developed and maintained by the contractor.
- 3.2.14.3 All materials shall be duly protected by the Contractor at his own cost with the appropriate preservatives like primer, lacquer, coating, grease etc. and shall be covered with suitable material to prevent them from direct exposure to sun, rain, wind and dust.
- 3.2.14.4 Pipes shall be stacked according to the identification marks and stacks shall be arranged on sleepers / sand bags at least 300 mm above ground.
- 3.2.14.5 The Contractor shall check that valves, fittings, specials etc. are not subjected to corrosion from hydrostatic test water remaining in the piping. Any such condition when detected should be brought to the notice of M/s GIDC, EIL, & Engineer-In-Charge and remedial measures taken as directed.
- 3.2.14.6 All machined surface shall be properly greased and should be maintained and protected from damages.
- 3.2.14.7 Openings of equipment, machinery, valves etc. shall be kept blocked / covered with blinds to prevent entry of foreign matter.
- 3.2.14.8 As far as possible materials shall be transported to the site of erection only just prior to the actual erection and shall not be left around indefinitely on ground but kept on packing/sleepers etc. to maintain the minimum distance from the ground as specified and/or as per directions of M/s GIDC, EIL, & Engineer-In-Charge.

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3.3 Construction

- 3.3.1 All construction works shall be carried out as per "Approved for Construction" drawings, procedures, specifications and applicable regulations, codes and standards. Any changes at site shall also need prior approval from the M/s GIDC, EIL, & Engineer-In-Charge and revision of drawings.
- 3.3.2 Hinderance free pipeline route RoU and all necessary approval for pipeline RoU & crossing shall be arranged by M/s GIDC. The tree cutting permissions shall be arranged by M/s GIDC. All necessary in principle approvals for RoU, tree cutting, statutory clearance, & crossings shall be arranged by M/s GIDC. Further responsibility for obtaining all work permits from concerned authorities having jurisdiction, as applicable for performing the work including shifting/ relocation and restoration of telephone/ electrical poles, hume pipes and underground pipes and other utilities etc., as required by local authorities and as directed by M/s GIDC shall be in the scope of the contractor. Contractor shall inform all local authorities in advance and obtain all work permits from concerned authorities having jurisdiction for crossing underground utilities/ pipelines wherever encountered along the pipeline route. Contractor shall be required to carry out all the works/ measures as mentioned in the work permit. The scope of Contractor would include implementation of all the conditions/ requirements of statutory approval.
- 3.3.3 Contractor shall perform all liaisoning and coordination activities with all agencies of Central & State Govt. Authorities such as Irrigation department, revenue development officer, private land owners/ farmers and any other authority or local body etc. at no time & cost to M/s GIDC.
- 3.3.4 Immediately after award of work, Contractor shall make visit to the entire pipeline route for establishing the route and familiarize with the working conditions so as to plan for deployment of man and machinery.
- 3.3.5 Cutting/ up-rooting of trees within RoU, counting the number and type of trees to be cut (before cutting) during pipeline laying works in presence of DFO/ concerned authorities keeping record thereof and handing over the cut trees as directed by concerned authorities/ M/s GIDC.
- 3.3.6 All requirements and stipulations of statutory authorities shall be adhered.
- 3.3.7 Mobilizing specialized machinery and manpower for execution of cross-country pipeline in Sandy terrain.
- 3.3.8 Contractor shall be responsible for claims if any arising out of damage/obstruction to public utilities like Water Pipelines, OFC lines of Telecom operators etc. where the claims will cover the restoration costs as well as loss of revenue due to down time.
- 3.3.9 Contractor shall adopt suitable method of construction/ execution of work for restricted RoU and deploy adequate equipment & manpower, number of mini-spreads etc. as required. Contractor shall provide complete details of manpower, equipment etc. to be deployed. Contractor shall mobilize and provide all equipments, manpower (skilled and unskilled), consumable and other resources etc. for each section and spread as required for the execution of the complete job defined herein.
- 3.3.10 Providing all equipments, manpower, machinery, consumables, apparatus, tools and tackles including ladders and scaffolding etc. for fabrication, installation, inspection, testing, pre-commissioning and commissioning as required including facilities for inspection and interpretation of testing results by M/s GIDC, EIL, & Engineer-In-Charge; providing all types of safety tools, tackles, devices and apparatus, equipment etc.

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- 3.3.11 Providing schedules, progress reports, organization chart at construction site, quality assurance plan and developing quality control procedures, as per requirements indicated elsewhere in the bid package.
- 3.3.12 Coordination and supervising the work of other agencies appointed by contractor for completion of Project.
- 3.3.13 Fabrication of all piping, structural components as per approved drawings.
- 3.3.14 All associated civil, structural, cathodic protection shall be performed in accordance with relevant specifications and requirements enclosed elsewhere in the bid package.
- 3.3.15 Provide, maintain and operate all temporary facilities required for the construction related works and remove the same after completion of work.
- 3.3.16 Hook up/tie-in of pipeline.
- 3.3.17 All works related to testing, pre-commissioning and commissioning of the work tendered.

3.4 Pipeline Laying Works

- 3.4.1 The contractor shall maintain a storage yard/ Store for storing and maintaining the items for the pipeline & associated facilities such as PCCP pipes, pipe specials, valves, flanges, fittings, gaskets, fasteners, materials, consumables, machinery & equipment, etc. The land for the storage yard/ Store shall be arranged by the contractor. The storage yard/ Store shall be maintained for the entire duration of the project. Adequate lighting facilities shall also be ensured for the storage yard.
- 3.4.2 Supply & transportation including unloading, handling, stacking, hauling and stringing of line pipes from storage yard/ Store to worksite(s)/ workshop(s)/ pipeline right-of-way/use, including arranging all pipe trailers, cranes etc., arranging all necessary intermediate storage area(s) thereof till the pipes are installed in permanent installation.
- 3.4.3 **Minimum one no. storage yard/ Store** shall be maintained by the contractor along the pipeline route. Locations of storage yard/ Store(s) shall be decided by the contractor with prior approval from M/s GIDC, EIL, & Engineer-In-Charge. Location and numbers of storage yards/ Stores shall be decided judiciously by the contractor and it shall be ensured that the transportation of linepipes from supplier to the storage yards/ Stores and from storage yards/ Stores to construction site shall be optimum and continuous. The storage yards/ Stores shall be located at approachable area with well-connected roads &/ or with nearby railway siding. Contractor shall make all the arrangement for loading and unloading, handling from the Pipe manufacturing unit & designated storage yard/ Store location to Work site. Contractor shall provide proper upkeep of pipes & maintain the storage yard/ store up to permanent pipeline installation.
- 3.4.4 The PCCP pipes & other materials shall be inspected before installation and only defect free PCCP pipes & other materials shall only be installed for permanent installation.
- 3.4.5 Loading, unloading, handling, stacking, storing and transportation to workshop/work site of all materials for the construction of pipeline system.
- 3.4.6 Carrying out all additional topographic, geo-technical survey and/or soil investigations required for the pipeline route including local detours, crossings and elsewhere during execution including preparing plan and profile drawings as directed by Engineer-in-Charge.

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- 3.4.7 Mobilizing and providing all equipments, manpower (skilled and unskilled), consumables and other resources etc. as required for the execution of complete work and thereafter demobilizing the same upon completion of work.
- 3.4.8 Thorough internal cleaning of all pipes to remove debris, shots, grit etc. to the satisfaction of M/s GIDC, EIL, & Engineer-In-Charge. Adequate care shall be taken so as to avoid damage to the internal lining.
- 3.4.9 Installation of all in-line/ on-line items, valves, appurtenances, etc.
- 3.4.10 Contractor to obtain specific permissions from M/s GIDC / concerned authorities for carrying out hook-up works, if any.
- 3.4.11 Staking, clearing, grading, fencing of pipeline RoU as required, trenching to required depths in all types of soils including special techniques, chiseling or otherwise cutting etc. to a width as per relevant standards, drawings, specifications etc., transportation of pipes to Pipeline RoU, stringing, aligning, jointing, field joint coating & internal lining, sand padding including supply of sand/ soft soil, laying and lowering of the pipeline, back filling including supply of select backfill wherever required, cased crossings, open-cut river crossing with anti-buoyancy measures, wherever required, bank stabilization of water course crossings as required, arranging all additional temporary land/area required for construction purposes. Supply and installation of anti-buoyancy measures viz. continuous concrete coating on pipeline as directed by M/s GIDC, EIL, & Engineer-In-Charge, supply of select backfill material as required, clean-up, flushing, hydrostatic testing, pre-commissioning, commissioning and all associated works for complete pipeline systems as applicable as per relevant specifications, standards and approved drawings.
- 3.4.12 Carrying out welding including cutting, edge preparation (inclusive of grinding the edges of pipe, fittings, flanges, etc. to match with the matching edges of different thickness wherever required), fit-up, bending, etc.
- 3.4.13 Contractor shall ensure that the pipes, coating and internal lining should not get damage during handling, transportation and installation. All the measures required to ensure the same shall be implemented from manufacturing till installations of pipe.
- 3.4.14 Contractor shall carry out analysis for the entire pipeline w.r.t. thrust force generated due to internal pressure of the pipeline and submit the analysis report for review. Suitable measures (thrust restraint) including thrust block, if any shall be designed and provided as per the requirements of AWWA M11.
- 3.4.15 Installation of casing pipe by boring, jacking, & pushing for road & railway casing. Filling of the annular space between the carrier pipe & casing pipe with cement mortar & grout.
- 3.4.16 Installation of all types of pipeline markers including their painting as per specification enclosed with the bid document and all associated civil works. Location of markers shall be as per specification/ standard and as directed by M/s GIDC, EIL, & Engineer-In-Charge.
- 3.4.17 Supply and installation of warning tape/ mesh over entire pipeline with the details of the pipeline, details of M/s GIDC & contact details. The details shall be finalized after award of work. Warning tape/ mesh shall be laid 200 mm above the top of pipeline. The material of warning tape/mesh shall be of high-density polyethylene and non-biodegradable type. It shall have non-toxic and anti-rodent properties. The width of the warning tape/ mesh shall PCCP pipeline OD + 200 mm.

The warning tape/ mesh shall be supplied either in single piece or maximum in two pieces. In case the warning tape/ mesh are supplied in two pieces, the same shall be

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jointed together before installation ensuring that the two pieces shall not be separated with each other during installation and service life.

- 3.4.18 The pipeline shall be buried normally at a depth of 1.2 meter below natural ground level except river, nala, drain or marshy area, road crossing, railway crossing, Salt Pits where minimum cover shall be as per Engineering Design Basis, Document No. B828-000-83-44-EDB-0001.
- 3.4.19 Carrying out pipeline installation at Overhead power cable crossing, existing above ground/ buried pipeline crossing.
- 3.4.20 Wherever the proposed pipeline alignment traversing closer to existing facilities, pipelines, the contractor may have to resort to trenching by manual trenching methods. Contractor shall not be entitled for any time & cost compensation for the same.
- 3.4.21 Sand/ soft soil padding around pipe wherever required in areas where trenching has been done in rock including supply of sand/ soft soil. The thickness of sand/soft soil padding at the bottom of pipe as well as all around the pipe shall be 300 mm in rocky areas.
- 3.4.22 Contractor is required to mobilise construction equipments suitable for sandy terrain such as chain mounted equipments, extended side booms etc. catering for deeper & wider trench. Special measures shall be taken to protect welding works from heavy winds & dust storms which is a normal phenomenon during summer season.

Contractor shall grade the RoU through sloping sand dune (including ascend & descend) to appropriate gradient suitable for mobilization of construction equipment & pipeline installation. Trench shall follow the general profile of the RoU whilst maintaining the minimum cover requirement of 1.5m from the existing ground or grade whichever is lower. Grading shall be performed so as to allow movement of equipment, stringing and trenching operation.

Following methodology shall be adopted for installation of pipeline passing through sloping/ elevated dunes:

- Slope stabilization measures shall be adopted wherever gradient (slope generally 10% and more) is steep.
- 250 mm layer of gravel of size 150 mm and down in entire trench width so as to avoid erosion of soil.
- Contractor shall perform restoration of dune to the extent to match the adjoining topography.
- Maintenance of RoU for elevated dunes including the stability of the backfilled trench by means of plantation of shrubs of local variety, watering and protecting them for a period of 2 years from the date of handing over the RoU back to owner.

Contractor shall ensure that disturbance to ground flora including the small shrubs is minimum. This will help in regeneration of vegetation & stabilization of disturbed sand dunes. Plantation wherever damaged during construction shall be restored back by re-plantation/ vegetation of local special breeds. Backfilling of dug-out material shall be in such a manner that gravels percentage is more near the surface.

- 3.4.23 Installation of pipeline at salt pits area but not limited to excavation, cutting of bunds, trenching, lowering, backfilling etc.; Contractor shall install the pipeline at minimum 1.2 m cover from bottom level of salt pits and minimum 2.0 m cover from the N.G.L in areas in vicinity to salt pits. Contractor shall restore the salt pits to its original condition without any extra cost to M/s GIDC.

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- 3.4.24 Installation of all inline/online valves/ appurtenances etc. as per requirements of approved drawings.
- 3.4.25 All associated pipeline work w.r.t. cathodic protection for cased crossing as mentioned elsewhere in bid document.
- 3.4.26 Clean-up and restoration of RoU and other conveniences like road, rail, cultivable land, water facilities, irrigation facilities, boundary wall/fence etc. to original condition as per specification and drawings to the entire satisfaction of M/s GIDC, EIL, & Engineer-In-Charge and/or Authorities having jurisdiction over the same, including disposal of surplus excavated soil and other construction materials to a location identified by Contractor and approved by local authority without causing any disturbance to environment and to the entire satisfaction of M/s GIDC, EIL, & Engineer-In-Charge. Contractor shall arrange necessary clearance from the concerned authorities/ land owners to the effect that ROU/ ROW has been restored back to original condition. Contractor shall carry out joint survey with M/s GIDC, EIL, & Engineer-In-Charge and obtain clearance/NOC in writing from authority/ land owner that ROU has been restored to original condition. Necessary clearance from statutory authority / NOC for restoring the ROU to original condition shall be in Contractor's scope. Claims if any thereafter shall be settled/ borne by the Contractor.
- 3.4.27 Pipe special shall be provided with inside lining & outside coating.
- 3.4.28 Supply and installation of anti-buoyancy measures viz. continuous concrete coating on pipeline as directed by M/s GIDC, EIL, & Engineer-In-Charge for water crossing, marshy areas, river catchment area and all other areas prone to flooding, etc. The net specific gravity of empty pipeline with the anti-buoyancy measure considering pipeline as empty shall be minimum 1.1.
- 3.4.29 Carrying out cleaning, flushing, testing, pre-commissioning and commissioning of pipeline and all associated facilities, locating all major and minor leaks during hydrostatic testing, if any.
- 3.4.30 Repair/ replacement of any leaks/bursts occurring during testing of main pipeline. Contractor shall also submit report for failure to M/s GIDC, EIL, & Engineer-In-Charge.
- 3.4.31 Tie-in with the pipeline at rail, road and other crossings including cutting of test headers as required.
- 3.4.32 Preparation of as built drawings, pipe books, documents, photographs, project records as per specification and instructions of the M/s GIDC, EIL, & Engineer-In-Charge including furnishing of all Test Certificates/Inspection Reports for all materials used for permanent installation.
- 3.4.33 Locating all existing nearby pipelines by pipe locator and by manually dug slit trenches and marking/ flagging-off their location suitably before starting any pipeline installation works, such that no existing pipeline gets damaged. Any damage to the existing pipelines in the vicinity due to the constructional activities shall be the attributable to the Contractor.
- 3.4.34 All incidental and associated works and any other works not specifically listed herein but are required to be carried out to complete entire work related to pipelines and the associated facilities and making the entire pipeline system ready for operation.
- 3.4.35 Installation of carrier pipe in Road/ Railway crossings by Boring method, as directed by concerned authority having jurisdiction thereof and M/s GIDC, EIL, & Engineer-In-Charge.

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- 3.4.36 Supply & Installation of air valves assembly i.e. Combination type Air valve, Branch connection, Pipe, flanges, stud bolts & gasket at maximum interval of 500 to 600 m along the pipeline route and also at high points of pipeline profile.

Contractor shall provide encasing for Air valves assembly for the protection against the theft.

Air valve shall be of combination type i.e. Air inlet and release valve. The size of the valve is 8 inch. An isolation gate valve of size 8 inch shall be provided between the air valve and stand/ riser pipe to isolate the air valve from the pipeline service and carry out necessary maintenance as required. Material of the air valve, internals, floats, seat, etc. shall be suitable for the intended service and entire service life of the pipeline. All air valves shall be internal epoxy lined. Contractor shall develop the Air valve data sheet for M/s GIDC, EIL, & Engineer-In-Charge review and approval.

Air valves internals shall be sized for the operating and designed conditions. The orifice size of the air valves shall be designed in accordance with AWWA manual for the operating and designed conditions ensuring that there should not be any clogging and surge in the pipeline.

Material of the isolation valve shall be suitable for the intended service and entire service life of the pipeline.

Air valve shall be installed over branch connection from main pipeline. The branch connection shall be extended aboveground to minimum 2.5 m from N.G.L. Branch piping assembly shall be painted as per specification enclosed with Tender. Contractor shall provide concrete encasing around the branch pipe, starting from branch connection at run pipe to inlet flange of air valve. Details for concrete encasing are covered elsewhere in the tender document.

There are no vendors in approved vendor list for the supply of air valve in the tender document. Contractor shall propose the name of Air valve vendors along with relevant Past track records documents (i.e. Purchase order, Inspection release note, approved drawings etc.) for supply of similar type of valve in last Ten (10) years after award of work, for M/s GIDC, EIL, & Engineer-In-Charge review & approval. Contractor shall not be eligible for any compensation in terms of cost and/ or time, on account of change due to comments /approval from M/s GIDC, EIL, & Engineer-In-Charge.

- 3.4.37 Contractor shall develop & submit welding chart & welding specification to M/s GIDC, EIL, & Engineer-In-Charge for review & approval for all the field welds. Contractor shall not be eligible for any compensation in terms of cost and/ or time, on account of change due to comments /approval from M/s GIDC, EIL, & Engineer-In-Charge.
- 3.4.38 All associated Civil, Structural, cathodic protection works, as mentioned elsewhere in the bid document.
- 3.4.39 It is Contractor's sole responsibility to carry out all works in safe and efficient manner and in strict compliance to the Contractual requirements.

3.5 Pre-Commissioning

Contractor shall be responsible for pre-commissioning of the pipeline & associated facilities, including supply of manpower, materials, equipment along with necessary piping and instrumentation connections for monitoring flow rate, pressure, temperature etc. temporary venting along with necessary piping, valves and instrumentation as well as consumables.

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3.6 Commissioning

Commissioning of pipeline system & associated facilities including supply of manpower, materials, equipment along with necessary piping and instrumentation connections for monitoring flow rate, pressure, temperature etc. temporary venting along with necessary piping, valves and instrumentation as well as consumables.

4.0 OTHER CONDITIONS OF BID

4.1 Site Visit

Bidders as a part of bid requirement shall make site visits along the pipeline route prior to quoting to familiarize themselves with all the salient features of terrain, availability of ROU and infrastructure along the pipeline route. Contractor shall be deemed to have considered all constraints and eventualities on account of site conditions along pipeline route while formulating his bid. Contractor shall not be eligible for any compensation in terms of cost and/or time, on account of site conditions along pipeline route varying to any extent from whatever is described in the bid package and the survey drawings/data furnished along with the bid package.

4.2 Survey

4.2.1 M/s GIDC has got the detailed survey carried out for the entire pipeline route & the same is enclosed with bid package. All survey drawings and reports are being enclosed with the Bid document for Contractor's information and reference only.

4.2.2 It shall be the Contractor's responsibility to verify the pipeline route. Wherein Contractor's opinion the survey and investigation data is not found to be sufficient in detail, it shall be the responsibility of the Contractor to collect/arrange and provide such additional data/information/topographic surveys. Contractor shall also perform during execution of work, any additional topographic surveys and geotechnical investigations that may be required for local detours or at crossings or at any other location during execution of the project. Contractor shall be deemed to have considered such eventualities while formulating his bid. Pipeline alignment shall be marked on village maps wherever detouring is beyond existing ROU.

4.2.3 The surveyed pipeline alignment has been staked on ground. However, on mobilization it shall be the responsibility of the Contractor to re-establish the missing stakes, if any from the survey data made available by M/s GIDC. Contractor shall maintain and preserve survey bench marks (staked on ground) and intersection points, till construction is completed.

4.3 Environmental Restrictions

The following measures shall be adopted during pipeline construction in order to minimize the impact of pipeline construction activities on the environment.

- While working in plantation areas, Contractor shall take due care to minimize the damage of trees. The number of trees felled shall be restricted to minimum based on working requirement for pipeline installation. In the paddy field area, Contractor shall exercise maximum care not to damage the crop outside the RoU. The compensation for damage of crop outside RoU, if any, shall be to the Contractor's account. Damage to any obstruction, temporary/permanent structure, boundary walls etc. within RoU shall be repaired, restored and shall be to Contractor's account.

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- During RoU clearance, the vegetation shall be cut off at ground level leaving the roots intact to the extent possible. Only stumps and roots directly over the trench shall be removed for pipeline installation.
- Intake and discharge of water required/used for line flushing and testing should not cause unacceptable environmental disturbance. During dewatering process, proper drainage arrangement shall be made to discharge the hydro-test water to avoid flooding of the nearby area. Before discharging, the corrosion inhibited water shall be treated as directed by Engineer-in-charge.

In addition to above, relevant requirements of Ministry of Environment and Forests (MOEF), Pollution Control Board (PCB), forest department etc. (as applicable) and NOCs shall be complied with.

4.4 Pipeline ROU

- 4.4.1 For pipeline construction purposes, the RoU of varying width shall be made available depending upon site conditions. In general, the RoU width is 10 meters for normal terrain along the pipeline route.
- 4.4.2 It shall be Contractor's responsibility to make arrangement for any additional land required for fabrication, construction, storage and all other work areas, if required. Damage to any obstruction, temporary/permanent structure, boundary walls etc. within pipeline corridor shall be repaired and restored and the same shall be in the Contractor's account.
- 4.4.3 In case of forest, contractor shall restrict the pipeline laying activities within the RoU acquired. No additional land in forest area shall be used. Contractor shall clear only the minimum width required for laying of pipeline. Number of trees/ plants felled shall be kept a minimum based on construction requirements.
- 4.4.4 Full care shall be taken to ensure that no damage is caused to the adjoining forest area while carrying out the work. However, in case of any damage, Contractor shall be liable to pay suitable compensation as per requirement of forest department.
- 4.4.5 Contractor shall ensure all HSE and safety requirements for all man-power machinery, livestock etc. as required for the safe construction of pipeline due to deep excavation. Contractor shall also provide the safety barriers all along the trench at location where deep excavation of pipeline trench will be envisaged.
- 4.4.6 The Contractor must ensure that during laying of the pipeline minimum damage occurs to the land. The land has to be restored to original condition. All construction activities shall be in accordance with the local Government regulations and shall be performed by the competent and qualified persons for providing adequate protection to the general public, livestock, wild life, forest, power lines, buildings etc. in the vicinity of the pipeline.
- 4.4.7 During pipeline construction, measures shall be adopted in order to minimize the impact of pipeline construction activities on the environment. During RoU clearance, the vegetation shall be cut off at ground level leaving the roots intact. Only stumps and roots directly over the trench shall be removed for pipeline installation.
- 4.4.8 M/s GIDC has acquired the RoU free of any encroachments/ temporary/ permanent structures. However, in case any such encroachments or structures are encountered during execution, the same shall be got removed/ avoided by the Contractor as per the instructions of M/s GIDC.

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- 4.4.9 RoU shall be opened in stretches and may not be continuous. In such an event contractor shall skip the section and jump over to next stretch where RoU is available, without any cost & time implication to M/s GIDC.

4.5 Crossings

For all railways, roads, rivers & nala/ drain crossings, Contractor shall liaison with relevant authorities and intimate them well in advance about the schedule and methodology of crossing. It shall be obligatory on the part of the Contractor to ensure that Authorized Representative of the authority under whose jurisdiction the crossing falls should be made available at site at the time of making crossing. After completion of works and complete restoration of ROU, Contractor shall obtain NOC from the relevant official pertaining to complete restoration to their satisfaction and certification in respect of no other damage caused to their property outside the earmarked ROU. Crossing methodology shall be prepared by the CONTRACTOR for M/s GIDC, EIL, & Engineer-In-Charge review and approval. The CONTRACTOR shall ensure the integrity of the pipeline, coating, and other associated parts during installation so that there should not be any damage to pipeline coating and associated parts.

4.5.1 Railway Crossings

The railways crossings shall be done by trenchless method only (i.e. cased crossing). In cased crossings, the casing pipe shall be three nominal pipe sizes larger than carrier and shall be installed by boring/ jacking. Casing pipe shall be internally coated with two component epoxy coating wherever required by statutory authorities. The cathodic protection works for the crossing shall be as per the relevant specification as enclosed elsewhere in tender document. RoW limit shall be defined by Railway authorities. Casing pipe shall be extended for a distance of 0.6 meter beyond the RoW limits of Railways on either side. All railway crossings shall be cased crossings. The railway crossing shall comply with the requirements of API RP-1102 and Indian Railways regulations. The crossing angle shall be as close to 90° as possible. Cover of casing pipe for railway crossings shall be minimum 3.0 m. Care shall be taken to isolate the pipeline crossing installation from aerial electrical wires and shall be suitably insulated from underground conduits carrying electrical wires. Casing pipe should be so placed and oriented so as to prevent any leakage inside railway boundary. The casing pipes shall be installed with even bearing throughout the length.

All requirements as per RDSO & BS-105 shall also be complied with. The crossing drawing shall be subject to approval of concerned Railway Authorities prior to implementation

4.5.2 Road Crossings

The method of crossing for roads shall be cased crossing. The casing pipe shall be installed by jacking, boring, & pushing. In cased crossings, the casing pipe shall be three nominal pipe sizes larger than carrier and shall be installed by boring/ jacking. Casing pipe shall be internally coated with two component epoxy coating wherever required by statutory authorities. The cathodic protection works for the crossing shall be as per the relevant specification as enclosed elsewhere in tender document. The Contractor shall also take due care to identify and take due precautions so as not to disturb or damage the utilities like cables, water lines and other structures.

The Contractor shall provide proper caution boards during daytime and danger lights during night time when the cutting operation of the road is going on.

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For cased crossings, the top of pipeline casing shall be at least 3.0 meters below the road top as specified or as per the requirements of the local authorities, whichever is higher.

4.5.3 River crossings/ Water body:

The river crossings & water body crossing shall be done by open cut method with anti-buoyancy measures. The anti-buoyancy measure shall be in the form of continuous concrete weight coating. The minimum cover shall be 2.5 m below scour level of the river or 5 m below the river bed whichever is high.

4.6 Cathodic Protection Works

Cathodic Protection (PCP) works for the cased crossings shall be carried out by contractor as per the requirements stipulated elsewhere in the bid document.

4.7 Internal lining of Tie-in Joints and Provision of Man-way assembly

Man-way of size-36" shall be provided at Tie-in Locations for Internal Coating of Tie-in Joints. The man-way fitting shall be internal lined in line with pipe specials.

4.8 Site Hydrostatic Testing

Site Hydrostatic testing of the entire pipeline & associated facilities shall be carried at 15 kg/cm²(g). The water for hydrostatic testing shall be arranged by the contractor. The hydrostatic water shall be dosed with corrosion inhibitor & biocide etc. as required. The detailed scheme shall be developed by the contractor & submitted to M/s GIDC, EIL, & Engineer-In-Charge for review & approval.

4.9 Direction of Construction

The direction of construction shall be in the direction of flow, unless specified otherwise. In case the Contractor proposes to carry out construction in direction opposite to direction of flow, the Contractor may do so at no extra time and cost to M/s GIDC and subject to M/s GIDC Approval.

4.10 Priorities

M/s GIDC may, at its sole option, assign priority of construction to any part of the total pipeline or station works. Contractor shall comply with such priority of execution without any time and cost implication to M/s GIDC.

4.11 Works Associated with Storage yard/ Store

Contractor shall arrange for land for storage yard/ Store adjacent to State highway/ National highway/ Railway approach and near to pipeline RoU, adequate to store pipes as per the requirements stipulated. The area of storage yard/ Store and number of layers for pipes shall be chosen so as to ensure safe handling of pipes and free movement of trailers. Layout & stacking calculation shall be submitted for review.

Contractor shall develop the storage yard/ Store required for stacking/ storing of pipes, valves, materials, & other items. Contractor shall carry out in this regard all civil works within the storage yard/ Store required for temporary storage of pipes in all types of soils such as site grading, clearing, cutting, levelling, filling-up, providing temporary internal roads duly compacted for movement of cranes/ trailers within the storage yard/ Store, providing temporary fencing and gates/ barrier, cabins.

Contractor shall provide adequate drainage within the storage yard/ Store.

The pipes within the storage yard/ Store may be stacked by placing them on ridges of sand free from stones and covered with a plastic film or on wooden supports provided

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with suitable cover. The support shall be spaced in such a manner as to avoid permanent bending of the pipes. Pipe stacks shall consist of limited number of layers so that overstressing & deformation of the pipe is avoided. Also, stacks shall consist of limited number of layers so that the pressure exercised by the pipe's own weight does not cause deformation of the pipe/ damages to coating. Suitable soft soil packing/ rubber shall be provided in-between pipes.

Contractor shall also be responsible for providing adequate illumination at the Storage yard/ Store.

4.12 Pre-Commissioning

Contractor shall be responsible for pre-commissioning of the pipeline & associated facilities, including supply of manpower, materials, equipment along with necessary piping and instrumentation connections for monitoring flow rate, pressure, temperature etc. temporary venting along with necessary piping, valves and instrumentation as well as consumables.

4.13 Commissioning

Contractor shall be responsible for commissioning of the pipeline & associated facilities, including supply of manpower, materials, equipment along with necessary piping and instrumentation connections for monitoring flow rate, pressure, temperature etc. temporary venting along with necessary piping, valves and instrumentation as well as consumables.

5.0 ENGINEERING REVIEW

Contractor shall submit all proposed designs, analysis, drawings, installation and testing procedures, work instructions with ITPs and inspection formats for review and approval by M/s GIDC, EIL, & Engineer-In-Charge as mentioned in scope of work. The work shall begin only after M/s GIDC, EIL, & Engineer-In-Charge's approval has been obtained. Calculations shall also be submitted for any other factors not listed in the bid package but which are necessary to prove validity for contractor's design or proposed construction methods. Contractor shall furnish his document schedule clearly indicating sequence of documents. As part of detailed engineering, contractor shall as a minimum, provide following deliverables for M/s GIDC, EIL, & Engineer-In-Charge's review and approval.

- Detailed list and schedule of submission of relevant documents including drawings and procedures such as Document Control Index (DCI) and Material Control Index (MCI)
- Piping/ Equipment General Arrangement drawings
- Design, analysis, methodology and cross section drawings for major crossings of the pipelines
- Pipeline Alignment Sheets
- Pipeline Alignment Drawings for detoured areas
- Pipeline approach at Stations
- Material and Purchase Requisitions for pipeline items such as PCCP linepipe, Valves, etc.
- Vendor documents (i.e. GA & Cross-sectional details) for critical pipeline items such as Valves, etc.
- Any other drawing/ sketches

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In addition to above list, Contractor shall as a minimum, provide the drawings and documents as listed in document no. B828-000-83-44-VDR-9510 enclosed with the bid package, for M/s GIDC, EIL, & Engineer-In-Charge's information, review and approval as classified therein. All documents/drawings submitted for M/s GIDC, EIL, & Engineer-In-Charge approval shall be duly checked & approved internally, including inter-disciplinary coordination by the EPC contractor before submission. After incorporating all the M/s GIDC, EIL, & Engineer-In-Charge's comments, Contractor shall furnish revised document along with comments resolution sheets (CRS).

6.0 CONTRACTOR'S RESPONSIBILITIES

Contractor's responsibilities, besides the scope of work to be performed by him defined earlier, shall also include the following:

- a) Appraisal and taking cognizance of site-conditions, pipeline corridor, Central Government, Gujarat State Government rules and regulations/ bye-laws, applicable Standards and Codes, authorities having jurisdiction over the work site(s), environmental and pollution concerns including conditions/ stipulations laid down by the concerned authorities etc. The Contractor is deemed to have recognized any restrictive features and constraints of the site(s), pipeline route and /or specific requirements of the work and made due allowance for it in the work to be performed by him.
- b) M/s GIDC has provided the available information and survey data along pipeline route and crossings. It is the Contractor's sole responsibility to visit the pipeline route and obtain sufficient information / data along pipeline route such as constraints, availability of space, additional requirements, space for equipment mobility etc. including methodology for crossings to allow safe and sound design and installation of the proposed pipeline.
- c) Interpretation and verification of data/information furnished by M/s GIDC in respect of pipeline route surveys, crossing details and geo-technical surveys contained in the bid package. Any additional information/data/surveys etc. required by Contractor for detailed engineering and execution of the works shall be obtained by him.
- d) Drawings and installation procedures, engineering for procurement & fabrication, engineering for installation including drawings, QA/QC procedures, etc. performed by the Contractor for complete pipeline system shall be reviewed and approved by M/s GIDC, EIL, & Engineer-In-Charge.
- e) Contractor shall submit all the documents/ deliverables for M/s GIDC, EIL, & Engineer-In-Charge's review. All the submission of deliverables shall follow M/s GIDC, EIL, & Engineer-In-Charge's procedures as enclosed elsewhere in tender document.
- f) Contractor shall submit all the documents/ drawings / deliverables in native format. All the drawings (Alignment sheet, Crossing Drawings, Layouts, GADs etc. shall be submitted in 3 sets of hard copies as well).
- g) Contractor shall submit engineering documents, drawings, procedures as described in this document for M/s GIDC, EIL, & Engineer-In-Charge's review and approval. All works shall be executed based on approved documents only.
- h) Review and approval of Contractor's work(s) by M/s GIDC, EIL, & Engineer-In-Charge shall in no way relieve the Contractor of his sole responsibility for safe and efficient design, engineering, installation and subsequent operation of pipeline system.

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- i) Furnishing and mobilizing at site(s) all construction equipment, manpower, tools and tackles, fully equipped and fully manned with other required support facilities etc.
- j) Pre-commissioning/ commissioning of pipeline & associated systems.
- k) Preparing and furnishing calculation books, pipe books, material/ purchase requisitions, final purchase orders including specifications, Vendor's data books (including Guarantees), fabrication and construction drawings, all survey reports, inspection and testing reports, as-built records for all phases of work.
- l) The Contractor is cautioned to exercise extreme care and take necessary precautions to prevent damage to the existing pipeline(s), facilities, electrical and other cables during execution of the entire works. Restoration/ reconstruction of all structures/ facilities affected during pipeline construction shall be carried out by Contractor.
- m) Wherever Contractor comes across water lines/open channels/drainage in the fields used for cultivation, suitable arrangements similar to or better than the existing type shall be made by the Contractor for ensuring water supplies across the fields and maintain the same till construction is completed in that stretch. Any claims arising out of non-compliance to the above requirements, as granted by competent authorities shall be to Contractor's account.
- n) Contractor shall carry out all testing and inspection of materials, etc. in independent testing institutions, laboratories, if so desired by M/s GIDC, EIL, & Engineer-In-Charge.
- o) Disposal and treatment of treated hydro-testing water as applicable, excavated materials and surplus materials etc. as per specification and local authority's requirements.
- p) Any other work not specifically listed but required for successful completion of entire pipeline system.
- q) It shall be Contractor's responsibility to obtain all NOCs, regulations, stipulations, bye-laws of concerned authorities/ state PCBs and carry out the work in accordance with the same.
- r) Contractor shall restore all facilities and other conveniences like temporary approach roads/ temporary works, structures, road, etc to original condition to the entire satisfaction of M/s GIDC, EIL, & Engineer-In-Charge and/or authorities having jurisdiction over the same. Contractor shall arrange necessary clearance from the concerned authorities/ land owners, as applicable.
- s) Contractor shall be responsible for the successful & timely execution of the complete job defined in the Tender Document.
- t) It is the responsibility of the Contractor to execute the project in full compliance to the "Contract".

7.0 AS BUILT DOCUMENT/ DRAWINGS

The Contractor shall prepare As Built drawings / reports for entire pipeline/piping system as specified here-in & as per requirements the Contract document. All "As Built" drawings / reports shall be submitted as below:

- All documents shall be submitted in soft CDs/DVD as well as hard spiral bound copies.
- All As-built documents (native and PDF) to be uploaded in vendor portal by CONTRACTOR.

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- As laid alignment sheets and crossing drawings/details, Pipeline Approach Drawings.
- All Inspection, Testing and NDT records.
- Pipe and calculation books/records.
- All inspection & testing documents.
- All purchase specification & procurement documents.
- Photographs of all activities from grading to completion/restoration in six sets.
- All piping GA drawings of valve chambers.
- Vendor Drawings and Documents

Software's used for the presentation of above documents shall be as follows:

S. No.	Type of document	Software
1	Reports	MS Office (Word / Excel)
2	Drawings	AutoCAD-2010

8.0 DOCUMENTS TO BE SUBMITTED AT THE TIME OF BIDDING

No technical documents are required to be submitted at the time of bidding. Bidder shall comply with all the requirements of Tender Document without any deviations. M/s GIDC, & EIL reserves the right to reject any bid with deviations without making any reference to bidder. Bidder shall furnish signed & stamped copy of technical compliance format & no deviation certificate.

9.0 GENERAL

In case of conflict between the requirements given in this document and the requirements of other specifications enclosed with the tender document, the requirements specified in this document shall govern.

Should there be conflict, discrepancy, inconsistency or dispute between the various documents, they shall be referred in order of priority as given below:

- Scope of Work
- Design Basis
- P&IDs
- Job specifications
- Job Standards
- Standards
- Standard Specifications
- Drawings

If any dispute arises with regards to the interpretation of any of the clauses/ detail of the Tender Document, the decision of the M/s GIDC, & EIL shall be final.

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GIDC, JHAGADIA

SUPPLY, LAYING, INSTALLATION, TESTING & COMMISSIONING INCLUDING ALL FITTINGS, CROSSINGS FOR 1500MM DIA. PCCP PIPELINE FOR WATER SUPPLY PROJECT AT GIDC JHAGADIA ESTATE (PIPELINE ENGINEERING)

PROJECT : ENGINEERING, PROCUREMENT, &
CONSTRUCTION WORKS FOR PCCP
WATER PIPELINE AND ASSOCIATED
WORKS- GIDC, JHAGADIA

OWNER : GIDC, JHAGADIA

JOB NO. : B828

2	29.04.2026	REVISED & ISSUED WITH TENDER	AJ/RB	RB	NR/MSG
1	30.09.2024	REVISED & ISSUED WITH TENDER	AJ/ RB	RB	NR/MSG
0	19.04.2024	ISSUED WITH TENDER	AJ/ RB	RB	NR/MSG
Rev. No	Date	Purpose	Prepared by	Checked by	Approved by

Signature of Contractor:

Executive Engineer
GIDC, Ankleshwar

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1.0 INTRODUCTION

1.1 M/s GIDC, Jhagadia, Gujarat intends to install a PCCP water pipeline from Rundh, Gujarat to Jhagadia, Gujarat.

1.2 The PCCP pipeline length is approx.. 24.5 km long and internal diameter is 1500 mm. The pipeline runs from well intake terminal in Rundh, Gujarat to receipt terminal in Jhagadia, Gujarat. The pipeline also has associated facilities like mainline isolation valves, combination type tamper proof air valves, drain/ scour valves, etc.

2.0 SCOPE

This document establishes minimum design parameters and basis for design and detailed engineering of the water pipelines and associated facilities covered under this project as defined in this document. The requirements indicated in here are the minimum requirements only & the contractor shall design the pipeline system with best industry practices, engineering practices, value addition, superior quality, & intended purpose.

3.0 DESIGN CODES

S.NO.	DESCRIPTION
1.	IS 784-Prestressed Concrete Pipes (Including Specials)-Specification
2.	IS 783-Code of Practice for Laying of Concrete Pipes
3.	IS 5822-Code of Practice for Laying of Electrically Welded Steel Pipes for Water Supply. The code is for reference only
4.	CPHEEO-Manual on Water Supply and Treatment
5.	All applicable IS standards
6.	All Gujarat state authority guidelines, requirements, codes, regulations

4.0 INSTALLATION REQUIREMENTS

4.1 PIPELINE

S.NO.	REQUIREMENTS
1.	Pipeline Type-PCCP pipes as per IS 784
2.	Pipeline cover: The cover shall be measured from the natural ground level. Barren & agricultural land-1.2 m Road/ High way crossing (cased crossing)-3.0 m Railway crossing (cased crossing)-3.0 m River crossing & water body crossing-2.5 m below scour level or 5 m below river bed whichever is high; with Continuous Concrete Weight Coating (i.e. CCW coating) Marshy/ water log prone area-1.5 m with CCW coating

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3.	RoU- Approx. 10 m wide
4.	Field joints of PCCP pipeline shall be cement lined internally & cement coated externally
5.	Design requirements of IS 783 shall be taken care.
6.	Warning mat shall be installed as per 7-71-0031

4.2 ROAD/ HIGHWAY CROSSING

S.NO.	REQUIREMENTS
1.	Type-Cased crossing
2.	Casing pipe-OD 2032 mm, 20 mm, IS 3589, FE 450 GRADE, SAWL/ SAWH
3.	Cover-3.0 m
4.	Exent of crossing-upto 0.6 m on either side of the RoW
5.	The casing pipe shall be coated/ painted on inside & outside as per the instructions of M/s GIDC, EIL, Engineer-In-Charge, & the authority
6.	The annular space between the carrier pipe (i.e. PCCP pipeline) & the casing pipe shall be filled with grout/ mortar
7.	Cathodic protection shall be done for casing pipe as per the provision of the tender

4.3 RAILWAY CROSSING

S.NO.	REQUIREMENTS
1.	Type-Cased crossing
2.	Casing pipe-OD 2032 mm, 20 mm, IS 3589, FE 450 GRADE, SAWL/ SAWH
3.	Cover-3.0 m
4.	Exent of crossing-upto 0.6 m on either side of the RoW
5.	The casing pipe shall be coated/ painted on inside & outside as per the instructions of M/s GIDC & JIA, EIL, Engineer-In-Charge, & the authority
6.	The annular space between the carrier pipe (i.e. PCCP pipeline) & the casing pipe shall be filled with grout/ mortar
7.	Cathodic protection shall be done for casing pipe as per the provision of the tender

4.4 RIVER CROSSING & WATER BODY CROSSING

S.NO.	REQUIREMENTS
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1.	Type-Open Cut with CCW coating
2.	Cover-2.5 m below scour level or 5 m below river bed; with Continuous Concrete Weight Coating (i.e. CCW coating)
3.	Extent of crossing-upto 30 m on either side of the bank of the river
4.	Scour level calculation shall be carried out by the contractor. All necessary soil parameters, geo-technical investigation, hydrological data, etc. shall be collected by the contractor.

4.5 CONTINUOUS CONCRETE WEIGHT COATING

S.NO.	REQUIREMENTS
1.	Density-2200 kg/m ³
2.	Thickness-280 mm
3.	Necessary reinforcement in the form of mesh at required layers shall also be provided.

4.6 MAINLINE ISOLATION VALVE

S.NO.	REQUIREMENTS
1.	Valve type-Butterfly valve
2.	Valve size-60 inch
3.	Installation in valve chamber. Approx. valve chamber size=4 m X 4 m X 4m. The top of the valve chamber shall be provided with a slab.
4.	Interval-at every 5 km. In no case the distance between the two mainline isolation valves shall exceed 6 km
5.	It shall be ensured that there is a straight pipeline section of 150 m on the upstream & downstream of the mainline isolation valve

4.7 AIR VALVE

S.NO.	REQUIREMENTS
1.	Valve type-Combination type tamper proof air valves i.e. Air inlet & release type
2.	Valve size-8 inch
3.	Installed on a stand pipe of minimum 2500 mm height above the natural ground level
4.	The stand pipe shall be concrete coated of 100 mm thickness
5.	Interval-at every 500 m. Also, every peak of the pipeline alignment shall have an air valve.
6.	In no case the distance between the two air valves shall exceed 600 m

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7.	The air valve shall also be provided with a gate valve for isolation
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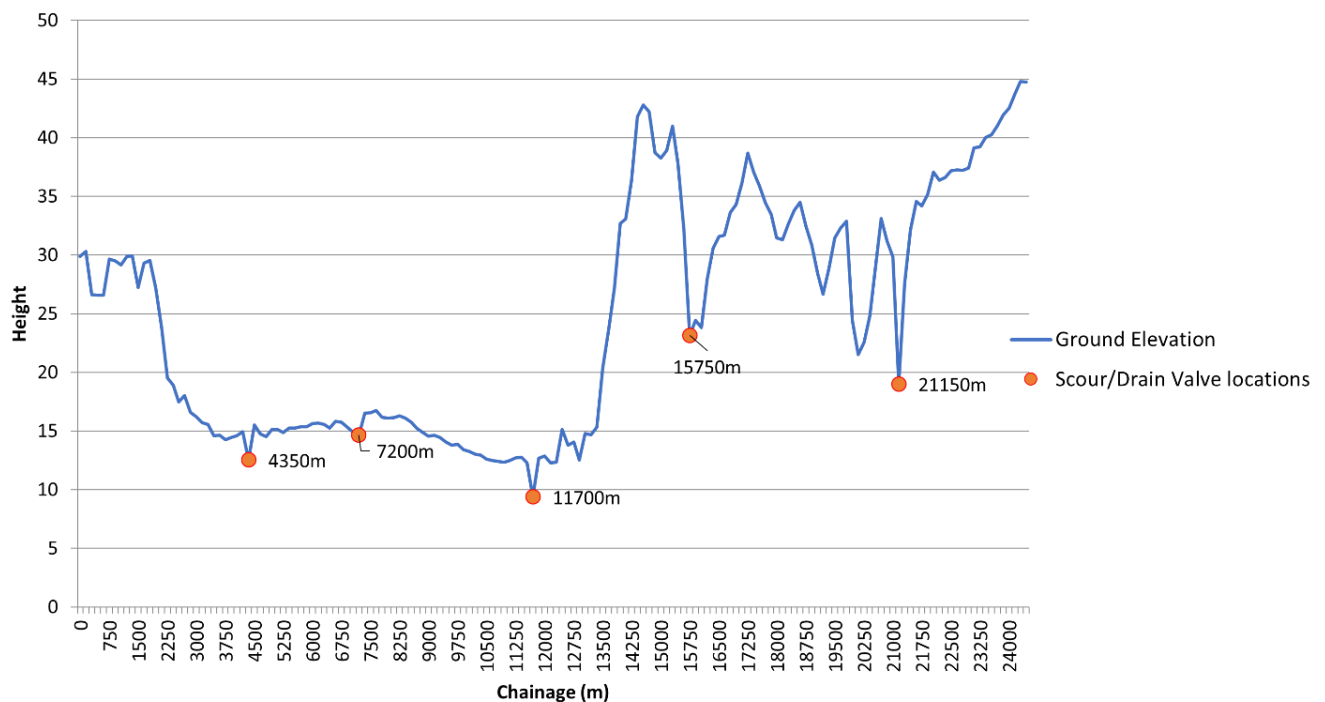
4.8 DRAIN/ SCOUR VALVE

S.NO.	REQUIREMENTS
1.	Valve type-Two gate valve in series
2.	Valve size-32 inch
3.	Installation in valve chamber. Approx. valve chamber size=4 m X 4 m X 4m. The top of the valve chamber shall be provided with a slab.
4.	Interval-as indicated in clause no. 4.9 (Tentative Drain/ Scour Valve Locations). The locations of the drain/ scour valves were optimized & finalized by the client, GIDC)

4.9 TENTATIVE DRAIN/ SCOUR VALVE LOCATIONS

Exact location shall be finalized by the EPC contractor

Ground Elevation profile of Pipeline route



4.10 MAN-WAYS

S.NO.	REQUIREMENTS
1.	36 man-way with flange & blind flange assembly

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2.	Inside is cement lined in line with pipe specials
3.	Outside is cement coated in line with pipe specials. Wherever cement coating not possible 100% solid high build epoxy (minimum 800 micron thick) (Duracoat/ Epigen or equivalent) or PU Coating of thickness DFT 1.5 mm (min.) shall be applied
4.	Minimum cover at the location of man-way shall be 1.2 m

4.11 THRUST BLOCKS

S.NO.	REQUIREMENTS
1.	Thrust block shall be provided for pipeline direction deflections of 22.5 degree & above
2.	Thrust block shall be provided for branched in the pipeline, as required.

4.12 SURFACE PREPARATION

S.NO.	REQUIREMENTS
1.	The surface cleanliness, roughness, & surface preparation for lining, coating, & painting shall be as per 6-79-0020

4.13 NON-DESTRUCTIVE TESTING

S.NO.	REQUIREMENTS
1.	10% of girth welds in miter bends, flange to pipe/ pipe special connections, MS pipe/ pipe specials to MS pipe/ pipe specials shall be radiographic tested. The requirements indicated in 6-44-0016 shall be complied with.
2.	10% of branch fabrication welds, & 10% of PCCP pipe to PCCP pipe weld connections shall be liquid penetrant tested. The requirements indicated in 6-44-0016 shall be complied with.

5.0 PIPELINE ITEMS-PROCUREMENT & SUPPLY

5.1 PCCP LINEPIPE

S.NO.	REQUIREMENTS
1.	PCCP Linepipe as per IS 784
2.	Internal Diameter=1500 mm
3.	Length of each line pipe= 6 m
4.	- Working pressure=10 kg/cm²(g) - The PCCP pipeline shall take care of 25% of working pressure additionally generated due to surge condition. i.e. 12.5 kg/sq.cm(g) in line with IS 784.

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	- Site test pressure=1.5 times the working pressure. i.e. 15 kg/cm²(g) - Factory test pressure=Site test pressure + 1 kg/cm²(g). i.e. 16 kg/cm²(g)
5.	Design calculation for the PCCP linepipe duly approved by a Government technical education institute (such as IIT, NIT, etc.) shall be submitted
6.	Field joints shall be cement lined internally & cement coated externally

5.2 MAINLINE ISOLATION VALVE-BUTTERFLY VALVE

S.NO.	REQUIREMENTS
1.	Valve type-Butterfly valve (concentric type)
2.	60 inch, 150#, Manual operation, Ends-Flanged face with 125 AARH RF as per ASME B16.47-A
3.	Design code: BS EN 593/ API 609 Category-B
4.	As a minimum Concentric type
5.	Full open/ Full Close operation shall not be less than 15 minutes
6.	Body-ASTM A216 WCB with internal FRE (Fiber Reinforced Epoxy) lining Trims & Internals-Bronze Shaft/ Stem-No casting Other non-metallic parts shall be suitable for the intended service
7.	Valve testing shall be as per BS EN 12266-1/ API 598
8.	Hydrostatic test pressure: Body-450 psi(g), Seat-325 psi(g); Pneumatic seat test pressure: 80 psi(g)

5.3 AIR VALVE

S.NO.	REQUIREMENTS
1.	Inlet size 8 inch, combination type tamper proof air valves i.e. Air inlet & release type.
2.	Design code: IS-14845:2000
3.	PN 1.6
4.	Body-Gray cast iron Trims & Internals-Bronze Other non-metallic parts shall be suitable for the intended service
5.	Flange end
6.	Flange end standard-Applicable IS standard
7.	The air valve shall be installed on a 2.5 m stand pipe above the natural ground

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	level
8.	The air release port design shall be as per AWWA. The same shall not get clogged during the normal operation
9.	The air inlet port design shall be as per AWWA. The air inlet port shall be maximum possible size
10.	Body & seat pressure tests as per the design code

5.4 GATE VALVE FOR AIR VALVE ISOLATION

S.NO.	REQUIREMENTS
1.	8 inch, Gate valve, 150#, Manual operation, Ends-Flanged face with 125 AARH RF as per B16.5
2.	Design code: API 600/ ISO 10434
3.	Body-ASTM A216 WCB with internal FRE lining Trims & Internals-Bronze Shaft/ Stem-No casting Other non-metallic parts shall be suitable for the intended service
4.	Valve testing shall be as per BS EN 12266-1/ API 598
5.	Hydrostatic test pressure: Body-450 psi(g), Seat-325 psi(g); Pneumatic seat test pressure: 80 psi(g)
6.	Full open/ Full Close operation shall not be less than 15 minutes

5.5 SCOUR/ DRAIN VALVE

S.NO.	REQUIREMENTS
1.	32 inch, Gate valve, 150#, Manual operation, Ends-Flanged face with 125 AARH RF as per B16.47 series-A
2.	Design code: API 600/ ISO 10434
3.	Body-ASTM A216 WCB with internal FRE lining Trims & Internals-Bronze Shaft/ Stem-No casting Other non-metallic parts shall be suitable for the intended service
4.	Valve testing shall be as per BS EN 12266-1/ API 598
5.	Hydrostatic test pressure: Body-450 psi(g), Seat-325 psi(g); Pneumatic seat test pressure: 80 psi(g)
6.	Full open/ Full Close operation shall not be less than 15 minutes

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5.6 FLANGES

S.NO.	REQUIREMENTS
1.	Flanges for mainline isolation valve: Size-60 inch Rating-150# End-Lap or WN as required Face-125 AARH RF Design code-ASME B16.47-A Material-ASTM A516 GR.70/ ASTM A105
2.	Flanges for man-way: Size-36 inch Rating-150# End-Lap or WN as required Face-125 AARH RF Design code-ASME B16.47 series-A Material-ASTM A105
3.	Blind flange for man-way: Size-36 inch Rating-150# Face-125 AARH RF Design code- ASME B16.47 series-A Material-ASTM A105
4.	Flanges for scour/ drain valves: Size-32 inch Rating-150# End-Lap or WN as required Face-125 AARH RF Design code- ASME B16.47 series-A Material-ASTM A105
5.	Blind flange for scour/ drain valve assembly: Size-32 inch Rating-150# Face-125 AARH RF Design code- ASME B16.47 series-A Material-ASTM A105

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6.	Flanges for isolation valve of air valves: Size-8 inch Rating-150# End-Lap or WN as required Face-125 AARH RF Design code-ASME B16.5 Material-ASTM A105
7.	Flanges for air valves: Size-8 inch Rating-PN 1.6 End-As per IS standard Face-As per IS standard Design code-IS standard Material-No casting; Fabricated from MS plate

5.7

GASKETS

S.NO.	REQUIREMENTS
1.	Gaskets for mainline isolation valve: Size-60 inch Rating-150# Spiral wound SS316 + GRAFIL+SS316 inner ring+SS316 outer ring ASME B16.20-ASME B16.47-A
2.	Gaskets for man-way: Size-36 inch Rating-150# Spiral wound SS316 + GRAFIL+SS316 inner ring+SS316 outer ring ASME B16.20- ASME B16.47 series-A
3.	Gaskets for scour/ drain valves: Size-32 inch Rating-150# Spiral wound SS316 + GRAFIL+SS316 inner ring+SS316 outer ring ASME B16.20- ASME B16.47 series-A
4.	Gaskets for isolation valve of air valves: Size-8 inch Rating-150#

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	Spiral wound SS316 + GRAFIL+SS316 inner ring+SS316 outer ring ASME B16.20-ASME B16.5
5.	Gaskets for air valves: Size-8 inch Rating-PN 1.6 Material shall be equivalent or superior to NONASBESTOS BS7531 GR.X. Dimensions other details shall be suit to the IS standard of the flanges

5.8 FASTENERS (STUD BOLTS & NUTS)

S.NO.	REQUIREMENTS
1.	Fasteners for the flange joints of mainline isolation valve: Size-60 inch Rating-150# Bolt Stud-ASTM A193 GR.B7 (GALVANIZED); Nuts-ASTM A194 GR.2H (GALVANIZED) ASME B16.21-ASME B16.47-A
2.	Fasteners for the flange joints of man-way: Size-36 inch Rating-150# Bolt Stud-ASTM A193 GR.B7 (GALVANIZED); Nuts-ASTM A194 GR.2H (GALVANIZED) ASME B16.21- ASME B16.47 series-A
3.	Fasteners for the flange joints of scour/ drain valves: Size-32 inch Rating-150# Bolt Stud-ASTM A193 GR.B7 (GALVANIZED); Nuts-ASTM A194 GR.2H (GALVANIZED) ASME B16.21- ASME B16.47 series-A
4.	Fasteners for the flange joints of isolation valve of air valves: Size-8 inch Rating-150# Bolt Stud-ASTM A193 GR.B7 (GALVANIZED); Nuts-ASTM A194 GR.2H (GALVANIZED) ASME B16.21-ASME B16.5
5.	Fasteners for the flange joints of air valves: Size-8 inch

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	Rating-PN 1.6 Bolt Stud-ASTM A193 GR.B7 (GALVANIZED); Nuts-ASTM A194 GR.2H (GALVANIZED) Suit to IS standard flanges
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5.9

PIPES

S.NO.	REQUIREMENTS
1.	Casing pipe-OD 2032 mm, 20 mm, IS 3589, FE 450 GRADE, SAWL/ SAWH
2.	Pipes for man-ways as required; 36 inch, 12 mm Thickness, IS-3589 GR.410, Bevel end, SAW
3.	Pipes for scour/ drain valves installation; 32 inch, 10 mm Thickness, IS-3589 GR.410, Bevel end, SAW
4.	Stand pipe for the air valve installation, 8 inch, STD schedule Thickness, ASTM A106, Gr.B, Bevel end, SEAMLESS

5.10

PAINTING COATING

S.NO.	REQUIREMENTS
1.	MS specials-Internal cement lining & outside cement coating as per IS standard
2.	Above ground piping-Internal cement lining; External coating & painting as per 6-79-0020
3.	Buried piping, buried flanges, etc.-Internal cement lining; External surface shall be applied with 100% solid high build epoxy (minimum 800 micron thick) (Duracoat/ Epigen or equivalent) or PU Coating of thickness DFT 1.5 mm (min.)

5.11

PIPE SPECIALS

S.NO.	REQUIREMENTS
1.	Pipe specials shall be designed as per IS 5822. However, in no case D/ t ratio (i.e. Outside diameter/ thickness ratio) shall exceed 100.
2.	All the manufacturing & testing requirements indicated in IS 784 shall also be complied with.
3.	As a minimum, 25 mm internal cement lining as per IS 1916
4.	As a minimum, 25 mm external cement coating

5.12

WARNING MAT

S.NO.	REQUIREMENTS
1.	Warning mat shall be as per 7-71-0031

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2.	Before manufacturing the details of the warning mat shall be submitted to EIL for review & approval
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6.0 OTHER REQUIREMENTS

The requirements indicated in here are the minimum requirements only & the contractor shall design the pipeline system with best industry practices, engineering practices, value addition, superior quality, & intended purpose.

Signature of Contractor:

Executive Engineer
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GIDC, JHAGADIA

**TECHNICAL CONFIRMATION LIST (PIPELINE ENGG.) FOR
SUPPLY, LAYING, INSTALLATION, TESTING &
COMMISSIONING INCLUDING ALL FITTINGS, CROSSINGS
FOR 1500MM DIA. PCCP PIPELINE FOR WATER SUPPLY
PROJECT AT GIDC JHAGADIA ESTATE
(PIPELINE ENGINEERING)**

PROJECT : SUPPLY, LAYING, INSTALLATION,
TESTING & COMMISSIONING
INCLUDING ALL FITTINGS,
CROSSINGS FOR 1500MM DIA. PCCP
PIPELINE FOR WATER SUPPLY
PROJECT AT GIDC JHAGADIA ESTATE

OWNER : GIDC, JHAGADIA

JOB NO. : B828

TECHNICAL CONFIRMATION LIST

1	29.04.2026	REVISED AND RE ISSUED WITH TENDER	AJ/ RB	RB	NR
0	19.04.2024	ISSUED WITH TENDER	AJ/ RB	RB	NR
Rev. No	Date	Purpose	Prepared by	Checked by	Approved by

Sl. No.	COMPLIANCE STATEMENT / QUERY	BIDDER'S CONFIRMATION/ ANSWER
1.	Bidder confirms that the Bidder's offer is in total compliance to the Bid Package requirements including all the enclosures such as Scope of Work, Engineering Design Basis, Specifications, Standards, Drawings, Vendor list, Vendor Data Requirements, etc. and that there is no variance, deviation to the Bid Package requirements. Bidder undertakes to comply with all provisions of bid package. Any deviations/ deletions/ corrections made elsewhere in the body of the bid document will not be taken cognizance of and all such deviations/ deletions/ corrections shall be deemed to have been withdrawn by the bidder. Bidder to confirm compliance.	

Notes: -

1. The Bidder shall furnish duly filled-in Technical Confirmations in the space provided. In case space provided is not adequate, the reply may be furnished separately under suitably numbered annexure / attachments duly referred against the comment / query.
2. The Technical Confirmation List is required to be categorically confirmed / replied by the bidder and shall be submitted along with the Bid.

Bidder's Signature and Stamp	
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Signature of Contractor:

Executive Engineer
GIDC, Ankleshwar

GIDC, JHAGADIA

**VENDOR LIST FOR SUPPLY, LAYING, INSTALLATION,
TESTING & COMMISSIONING INCLUDING ALL FITTINGS,
CROSSINGS FOR 1500MM DIA. PCCP PIPELINE FOR
WATER SUPPLY PROJECT AT GIDC JHAGADIA ESTATE
(PIPELINE ENGINEERING)**

**PROJECT : SUPPLY, LAYING, INSTALLATION,
TESTING & COMMISSIONING
INCLUDING ALL FITTINGS,
CROSSINGS FOR 1500MM DIA. PCCP
PIPELINE FOR WATER SUPPLY
PROJECT AT GIDC JHAGADIA ESTATE**

OWNER : GIDC, JHAGADIA

JOB NO. : B828

1	29.04.2026	REVISED & RE-ISSUED WITH TENDER	AJ/ RB	RB	NR
0	19.04.2024	ISSUED WITH TENDER	AJ/ RB	RB	NR
Rev. No	Date	Purpose	Prepared by	Checked by	Approved by

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1.0 PCCP LINEPIPE

1	Indian Hume Pipe Co. Ltd.
2	Concrete Udyog Limited.

The above list is for reference only. Even if the contractor proposes to supply the PCCP linepipes from the above vendors or other new vendors, the vendor's past track record (Work order/ Purchase order, Inspection Release note, completion certificate, etc.) not older than 10 years for PCCP linepipe (as per IS 784 or equivalent) of same or higher in terms of inside diameter, & work-pressure; and minimum of 1000 m length shall be submitted to M/s GIDC & EIL for review & approval of the vendor. The order shall be placed only after the approval of the vendor by M/s GIDC & EIL. M/s GIDC & EIL's decision regarding qualification of the PCCP linepipe vendor shall be final & binding on the Contractor. No cost &/ or time implication shall be applicable.

2.0 PIPE SPECIALS

1	Indian Hume Pipe Co. Ltd.
2	Concrete Udyog Limited.

The above list is for reference only. Even if the contractor proposes to supply the pipe specials from the above vendors or other new vendors, the vendor's past track record (Work order/ Purchase order, Inspection Release note, completion certificate, etc.) not older than 10 years for pipe specials (as per IS 784 or equivalent) of same or higher in terms of inside diameter, & work-pressure shall be submitted to M/s GIDC & EIL for review & approval of the vendor. The order shall be placed only after the approval of the vendor by M/s GIDC & EIL. M/s GIDC & EIL's decision regarding qualification of the pipe specials vendor shall be final & binding on the Contractor. No cost &/ or time implication shall be applicable.

3.0 BUTTERFLY VALVE

1	FOURESS ENGINEERING (INDIA) PRIVATE LIMITED [BENGALURU]-F030
2	HAWA ENGINEERS LTD [AHMEDABAD] -H108
3	INTERVALVE POONAWALLA LIMITED [PUNE]-I125
4	L & T VALVES LTD [Kancheepuram]-L001
5	SWIMS TECHNOLOGIES PRIVATE LIMITED [hubli]-W092

4.0 COMBINATION TYPE TAMPER PROOF AIR VALVE

1	LEADER VALVES LIMITED
2	KIRLOSKAR BROTHERS LIMITED
3	BERMAD WATER CONTROL SOLUTIONS
4	GM ENGINEERING
5	VAG-VALVES INDIA PVT. LTD.
6	AQUESTIA A.R.I VALVES
7	VAL-MATIC

The above list is reference only. Even if the contractor proposes to supply the air valves from the above vendors or other new vendors, the vendor's past track record (Work order/ Purchase order, Inspection Release note, completion

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certificate, etc.) not older than 10 years for similar air valve supply shall be submitted to M/s GIDC & EIL for review & approval of the vendor. The order shall be placed only after the approval of the vendor by M/s GIDC & EIL. M/s GIDC & EIL's decision regarding qualification of the air valves vendor shall be final & binding on the Contractor. No cost &/ or time implication shall be applicable.

5.0 8 INCH GATE VALVE

1	Velan Valves India Pvt Ltd [COIMBATORE]-3593
2	DEMBLA VALVES LIMITED [Thane]-3616
3	NILON VALVES PRIVATE LIMITED [AHMEDABAD]-3623
4	FLOTEK INDUSTRIES [Ahmedabad]-3640
5	NUTECH CONTROLS [AHMEDABAD]-3705
6	M/S. VALVINOX S.R.L. INDIA PVT. LTD. [KHOPOLI]-3721
7	VITON ENGINEERS PRIVATE LIMITED [THANE]-3764
8	HI TECH BUTTERFLY VALVES INDIA PVT LTD [PITHAMPUR]-3817
9	INTERVALVE POONAWALLA LIMITED [PUNE]-3887
10	LEADER VALVES LTD [JALANDHAR]-3933
11	INTEGRAL PROCESS CONTROLS INDIA PVT. LTD. [PUNE]-3982
12	DL VALVE PRIVATE LIMITED [RAJKOT]-4003
13	NITON VALVE INDUSTRIES PRIVATE LTD . [Aurangabad]-4009
14	ZED VALVES CO. PVT. LTD [AHMEDABAD]-4031
15	LIBRA ENGINEERING WORKS [AHMEDABAD]-4065
16	PANCHVATI VALVES & FLANGES PVT LTD [NASHIK]-4106
17	SAP INDUSTRIES LTD [AHMEDABAD]-4119
18	AEGIS VALVES INDUSTRIES PRIVATE LIMITED [Ahmedabad]-4132
19	AV VALVES LIMITED [AGRA]-A018
20	AMPO VALVES INDIA PVT LTD [COIMBATORE]-A389
21	BHARAT HEAVY ELECTRICALS LIMITED-B015
22	EXPERT VALVE AND EQUIPMENT PRIVATE LIMITED [Belgaum]-E211
23	FLUIDLINE VALVES CO.PVT LTD [AHMEDABAD]-F065
24	FORWARD ALLOYS & CASTINGS-F138
25	GM ENGINEERING PVT. LTD. [Rajkot]-G186
26	HAWA ENGINEERS LTD [AHMEDABAD]- H108
27	HAWA VALVES (INDIA) PVT LTD [Navi Mumbai]-H175
28	KSB LIMITED [COIMBATORE]-K088
29	L & T VALVES LIMITED [Kacnheepuram]-L001
30	MH VALVES PVT LTD. [AHMEDABAD]-M227
31	MICON ENGINEERS (HUBLI) PVT LTD [Dharwad]-M295
32	NITON VALVE INDUSTRIES PRIVATE LTD . [MUMBAI]-N016
33	NSSL PVT. LTD. (NECO SCHUBERT & SALZER) [NAGPUR]-N061
34	OSWAL INDUSTRIES LTD [KALOL]-O035
35	PANCHVATI VALVES & FLANGES PVT LTD [NASHIK]-P199
36	SAKHI ENGINEERS PVT. LTD. [NAVI MUMBAI]-S070
37	SHALIMAR VALVES PVT LTD [NAVI MUMBAI]-S315
38	SWIMS TECHNOLOGIES PRIVATE LIMITED [hubli]-W092

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6.0 32 INCH GATE VALVE

1	Velan Valves India Pvt Ltd [COIMBATORE]-3593
2	DEMBLA VALVES LIMITED [Thane]-3616
3	NILON VALVES PRIVATE LIMITED [AHMEDABAD]-3623
4	LEADER VALVES LTD [JALANDHAR]-3933
5	NITON VALVE INDUSTRIES PRIVATE LTD . [Aurangabad]-4009
6	ZED VALVES CO. PVT. LTD [AHMEDABAD]-4031
7	PANCHVATI VALVES & FLANGES PVT LTD [NASHIK]-4106
8	AMPO VALVES INDIA PVT LTD [COIMBATORE]-A389
9	FLUIDLINE VALVES CO.PVT LTD [AHMEDABAD]-F065
10	HAWA ENGINEERS LTD [AHMEDABAD]-H108
11	KSB LIMITED [COIMBATORE]-K088
12	L & T VALVES LIMITED [Kacnheepuram]-L001
13	NITON VALVE INDUSTRIES PRIVATE LTD . [MUMBAI]-N016
14	NSSL PVT. LTD. (NECO SCHUBERT & SALZER) [NAGPUR]-N061
15	OSWAL INDUSTRIES LTD [KALOL]-O035
16	PANCHVATI VALVES & FLANGES PVT LTD [NASHIK]-P199
17	SWIMS TECHNOLOGIES PRIVATE LIMITED [hubli]-W092

7.0 8 INCH FLANGE

1	BRITEX ENGINEERING WORKS [Navi Mumbai]-3617
2	JAI AUTO PVT LTD. [Ludhiana]-3628
3	BFN FORGINGS PRIVATE LIMITED [Boisar]-3800
4	BALKRISHNA STEEL FORGE PVT LTD [Rajkot]-3914
5	ANANDMAYEE FORGINGS PVT LTD [DISTT. GHAZIABAD]-A066
6	ABASI ENGINEERING WORKS [CHENNAI]-A074
7	CHW FORGE PVT LTD (FR. CHAUDHRY HAMMER) [Ghaziabad / Greater Noida]-C044
8	CD ENGINEERING CO. [Ghaziabad]-C142
9	KISAAN ENGINEERING WORKS PRIVATE LIMITED [Ghaziabad]-C159
10	ECHJAY INDUSTRIES PVT LTD. (RAJKOT) [RAJKOT]-E016
11	FIVEBROS FORGINGS PVT.LTD. [ANKLESHWAR]-F180
12	GOODLUCK INDIA LIMITED-G182
13	HILTON METAL FORGING LIMITED-H172
14	METAVAL ENGINEERING PRIVATE LIMITED [FARIDABAD]-J067
15	KISAAN STEELS PRIVATE LIMITED [Ghaziabad]-K180
16	KISAAN DIETECH PVT LTD [Ghaziabad]-K189
17	LAL METAL FORGE PRIVATE LIMITED [GHAZIABAD]-L089
18	METAL FORGINGS PVT LTD-M011
19	M.S. FITTINGS MFG. CO PVT LTD [KOLKATA]-M057
20	WILHELM MAASS INDIA PVT LTD [PUNE]-M308
21	PRADEEP METAL LIMITED [NAVI MUMBAI]-P215
22	PARAMOUNT SPECIALITY FORGINGS LIMITED [Navi Mumbai]-P242

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23	PARAMOUNT SPECIALITY FORGINGS LIMITED [Khalapur,]-P242A
24	P.K.TUBES & FITTINGS PVT.LTD. [Bhiwadi]-P315
25	R.N.GUPTA & CO. LTD [Ludhiana]-R186
26	R D FORGE [GHAZIABAD]-T245
27	BF INDUSTRIAL TECHNOLOGY & SOLUTIONS LIMITED [BARODA]-S394
28	TRIVENI REFRACTORIES PVT LTD [GHAZIABAD]-T245
29	UTSAH ENGINEERING PRIVATE LIMITED [Pilkhuwa,hapur]-U116

8.0 32 INCH FLANGE & 36 INCH FLANGE

1	ABASI ENGINEERING WORKS [CHENNAI]-A074
2	CHW FORGE PVT LTD (FR. CHAUDHRY HAMMER) [Ghaziabad / Greater Noida]-C044
3	CD ENGINEERING CO. [Ghaziabad]-C142
4	KISAAN ENGINEERING WORKS PRIVATE LIMITED [Ghaziabad]-C159
5	ECHJAY INDUSTRIES PVT LTD. (RAJKOT) [RAJKOT]-E016
6	GOODLUCK INDIA LIMITED-G182
7	METAVAL ENGINEERING PRIVATE LIMITED [FARIDABAD]-J067
8	KISAAN STEELS PRIVATE LIMITED [Ghaziabad]-K180
9	KISAAN DIETECH PVT LTD [Ghaziabad]-K189
10	LAL METAL FORGE PRIVATE LIMITED [GHAZIABAD]-L089
11	METAL FORGINGS PVT LTD-M011
12	PARAMOUNT SPECIALITY FORGINGS LIMITED [Khalapur,]-P242A
13	P.K.TUBES & FITTINGS PVT.LTD. [Bhiwadi]-P315
14	R D FORGE [GHAZIABAD]-R205
15	BF INDUSTRIAL TECHNOLOGY & SOLUTIONS LIMITED [BARODA]-S394
16	TRIVENI REFRACTORIES PVT LTD [GHAZIABAD]-T245
17	UTSAH ENGINEERING PRIVATE LIMITED [Pilkhuwa,hapur]-U116

9.0 60 INCH FLANGE

1	ABASI ENGINEERING WORKS [CHENNAI]-A074
2	CHW FORGE PVT LTD (FR. CHAUDHRY HAMMER) [Ghaziabad / Greater Noida]-C044
3	CD ENGINEERING CO. [Ghaziabad]-C142
4	KISAAN ENGINEERING WORKS PRIVATE LIMITED [Ghaziabad]-C159
5	ECHJAY INDUSTRIES PVT LTD. (RAJKOT) [RAJKOT]-E016
6	GOODLUCK INDIA LIMITED-G182
7	METAL FORGINGS PVT LTD-M011
8	P.K.TUBES & FITTINGS PVT.LTD. [Bhiwadi]-P315
9	UTSAH ENGINEERING PRIVATE LIMITED [Pilkhuwa,hapur]-U116

10.0 8 INCH GASKET

1	UNI KLINGER LTD [Pune]-3735
2	ASIAN SEALING PRODUCTS PRIVATE LIMITED [Chennai]-3759

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**VENDOR LIST FOR SUPPLY, LAYING,
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3	PILOT GASKETS AND ENGINEERS [thane]-3853
4	BJ&P ENGINEERS PRIVATE LIMITED [CHENNAI]-4023
5	BOMBAY CHEMICAL EQUIPMENTS [Mumbai]-B144
6	CHAMPION JOINTINGS PVT LTD. [VAPI]-C055
7	DAVE ENGINEERS PVT.LTD [Vadodara]-D161
8	GOODRICH GASKET PVT LTD [CHENNAI]-G132
9	HEM ENGINEERING CORPORATION [THANE]-H176
10	IGP ENGINEERS PVT. LIMITED [CHENNAI]-I001
11	JAMES WALKER INMARCO INDUSTREIS PVT. LTD [DADRA]-J210
12	MADRAS INDUSTRIAL PRODUCTS [CHENNAI]-M012
13	NEOSEAL ENGINEERING PRIVATE LIMITED [GANDHINAGAR]-N175
14	STARFLEX SEALING INDIA PVT LTD [Goa]-S471
15	TEEKAY FLOWFLEX PVT. LTD. [DIST RAIGAD]-T210
16	TEADIT PACKING AND GASKETS PVT LTD [Vadodara]-T244

11.0 32 INCH GASKET & 36 INCH GASKET

1	UNI KLINGER LTD [Pune]-3735
2	ASIAN SEALING PRODUCTS PRIVATE LIMITED [Chennai]-3759
3	BOMBAY CHEMICAL EQUIPMENTS [Mumbai]-B144
4	DAVE ENGINEERS PVT.LTD [Vadodara]-D161
5	GOODRICH GASKET PVT LTD [CHENNAI]-G132
6	HEM ENGINEERING CORPORATION [THANE]-H176
7	IGP ENGINEERS PVT. LIMITED [CHENNAI]-I001
8	JAMES WALKER INMARCO INDUSTREIS PVT. LTD [DADRA]-J210
9	MADRAS INDUSTRIAL PRODUCTS [CHENNAI]-M012
10	NEOSEAL ENGINEERING PRIVATE LIMITED [GANDHINAGAR]-N175
11	STARFLEX SEALING INDIA PVT LTD [Goa]-S471
12	TEEKAY FLOWFLEX PVT. LTD. [DIST RAIGAD]-T210
13	TEADIT PACKING AND GASKETS PVT LTD [Vadodara]-T244

12.0 60 INCH GASKET

1	UNI KLINGER LTD [Pune]-3735
2	ASIAN SEALING PRODUCTS PRIVATE LIMITED [Chennai]-3759
3	GOODRICH GASKET PVT LTD [CHENNAI]-G132
4	IGP ENGINEERS PVT. LIMITED [CHENNAI]-I001
5	JAMES WALKER INMARCO INDUSTREIS PVT. LTD [DADRA]-J210
6	NEOSEAL ENGINEERING PRIVATE LIMITED [GANDHINAGAR]-N175
7	TEEKAY FLOWFLEX PVT. LTD. [DIST RAIGAD]-T210
8	TEADIT PACKING AND GASKETS PVT LTD [Vadodara]-T244

13.0 76 INCH CASING PIPE

1	RATNAMANI METALS AND TUBES LTD [INDIA]-3696
2	LALIT PIPES & PIPES PRIVATE LIMITED [THANE]-L061

14.0 36 INCH PIPE & 32 INCH PIPE

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1	JCO GAS PIPE LIMITED [CHHINDWARA]-3611
2	RATNAMANI METALS AND TUBES LTD [KALOL]-3695
3	RATNAMANI METALS AND TUBES LTD [INDIA]-3696
4	SURYA ROSHNI LTD [ANJAR]-3841
5	MEGHA ENGINEERING & INFRASTRUCTURES LTD [HYDERABAD]-3989
6	DEEP SEALS INDIA LIMITED [Samakhlyali]-4039
7	SURINDRA ENGINEERING COMPANY PRIVATE LIMITED [MUMBAI]-4142
8	ARCELORMITTAL NIPPON STEEL INDIA LTD [Surat]-E139
9	JINDAL SAW LTD (KOSI WORKS) [KOSI KALAN]-J110A
10	LALIT PIPES & PIPES PRIVATE LIMITED [THANE]-L061
11	MUKAT TANKS & VESSELS PVT LTD-M188
12	MAN INDUSTRIES (INDIA) LTD [Anjar]-M217A
13	WELSPUN CORP LIMITED (DAHEJ) [Dahej]-W056
14	WELSPUN CORP LIMITED (ANJAR) [Anjar]-W056A

15.0 8 INCH PIPE

1	RATNAMANI METALS AND TUBES LTD [KALOL]-3695
2	RATNAMANI METALS AND TUBES LTD [INDIA]-3696
3	SURYA ROSHNI LTD [ANJAR]-3841
4	STEEL AUTHORITY OF INDIA LTD [Rourkela]-3983
5	SHRI BAJRANG POWER AND ISPAT LIMITED [RAIPUR]-4103
6	ASIAN MILLS PVT LTD [Gujarat]-A332
7	GAURANG PRODUCTS PVT LTD (AST GROUP) [Ghaziabad]-G178
8	JINDAL PIPES LTD [GHAZIABAD]-J015
9	JINDAL INDUSTRIES PVT. LTD. [HISAR]-J111
10	JINDAL (INDIA) LIMITED [Howrah]-J115
11	MAHARASHTRA SEAMLESS LTD.-M187
12	SURYA ROSHNI LTD [BAHADURGARH]-S281
13	WELSPUN CORP LIMITED (ANJAR) [Anjar]-W056A

16.0 FASTENERS FOR 8 INCH FLANGE JOINTS

1	PROCYON TECHNOLOGY [KADI]-3592
2	SAVETA ENGINEERING CO. PVT. LTD. [Palus]-3653
3	HEM INDUSTRIES [silvassa]-3676
4	J J INDUSTRIES [VAPI]-3797
5	ASHWIN FASTENERS PVT LTD [RAKANPUR]-3851
6	TECHBOLT INDUSTRIES PRIVATE LIMITED [Vile Bhagad]-3948
7	FOREX FASTNERS PVT LTD [LUDHIANA]-3971
8	UNIVERSAL PRECISION SCREWS [ROHTAK]-4169
9	AEPCOM FASTENERS PRIVATE LIMITED [Anand]-A058
10	DEEPAK FASTENERS LIMITED(DORAHA UNIT) [Ludhiana]-D125A
11	FASTENERS & ALLIED PRODUCTS PVT LTD. [HUBLI]-F017

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12	INDUSTRIAL ENGINEERING CORP. [VASAI]-I139
13	MULTI FASTENERS PVT LTD [WAGODIA]-M105
14	MEGA ENGINEERING PVT. LTD. [KOLHAPUR]-M273
15	NITIN FASTNERS PVT LTD [VADODARA]-N110
16	PRECISION AUTO ENGINEERS [LUDHIANA]-P200
17	PRESIDENT ENGINEERING WORKS-P258
18	PIONEER NUTS & BOLTS PVT LTD [LUDHIANA]-P282
19	SOUVENIR INTERNATIONAL [Ludhiana]-S137
20	SYNDICATE ENGINEERING INDUSTRIES [Navi Mumbai]-S336
21	UDEHRA FASTNERS LTD [LUDHIANA]-U109
22	UDEHRA MECHANICAL WORKS [LUDHIANA]-U177

17.0 FASTENERS FOR 36 INCH & 32 INCH FLANGE JOINTS

1	PROCYON TECHNOLOGY [KADI]-3592
2	SAVETA ENGINEERING CO. PVT. LTD. [Palus]-3653
3	HEM INDUSTRIES [silvassa]-3676
4	J J INDUSTRIES [VAPI]-3797
5	FOREX FASTNERS PVT LTD [LUDHIANA]-3971
6	UNIVERSAL PRECISION SCREWS [ROHTAK]-4169
7	AEPCOM FASTENERS PRIVATE LIMITED [Anand]-A058
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12	MEGA ENGINEERING PVT. LTD. [KOLHAPUR]-M273
13	NITIN FASTNERS PVT LTD [VADODARA]-N110
14	PRECISION AUTO ENGINEERS [LUDHIANA]-P200
15	PRESIDENT ENGINEERING WORKS-P258
16	PIONEER NUTS & BOLTS PVT LTD [LUDHIANA]-P282
17	SOUVENIR INTERNATIONAL [Ludhiana]-S137
18	SYNDICATE ENGINEERING INDUSTRIES [Navi Mumbai]-S336
19	UDEHRA FASTNERS LTD [LUDHIANA]-U109
20	UDEHRA MECHANICAL WORKS [LUDHIANA]-U177

18.0 FASTENERS FOR 60 INCH FLANGE JOINTS

1	PROCYON TECHNOLOGY [KADI]-3592
2	SAVETA ENGINEERING CO. PVT. LTD. [Palus]-3653
3	HEM INDUSTRIES [silvassa]-3676
4	J J INDUSTRIES [VAPI]-3797
5	FOREX FASTNERS PVT LTD [LUDHIANA]-3971
6	AEPCOM FASTENERS PRIVATE LIMITED [Anand]-A058
7	DEEPAK FASTENERS LIMITED(DORAHA UNIT) [Ludhiana]-D125A
8	FASTENERS & ALLIED PRODUCTS PVT LTD. [HUBLI]-F017

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12	PRECISION AUTO ENGINEERS [LUDHIANA]-P200
13	PRESIDENT ENGINEERING WORKS-P258
14	PIONEER NUTS & BOLTS PVT LTD [LUDHIANA]-P282
15	SOUVENIR INTERNATIONAL [Ludhiana]-S137
16	SYNDICATE ENGINEERING INDUSTRIES [Navi Mumbai]-S336
17	UDEHRA FASTNERS LTD [LUDHIANA]-U109
18	UDEHRA MECHANICAL WORKS [LUDHIANA]-U177

19.0 VENDOR FOR ITEMS FOR WHICH VENDOR LIST IS NOT FURNISHED

The contractor shall propose vendor(s) for items for which vendor list is not furnished. The vendor's past track record (Work order/ Purchase order, Inspection Release note, completion certificate, etc.) not older than 10 years for similar item shall be submitted to M/s GIDC & EIL for review & approval of the vendor. The order shall be placed only after the approval of the vendor by M/s GIDC & EIL. M/s GIDC & EIL's decision regarding qualification of the vendor shall be final & binding on the Contractor. No cost &/ or time implication shall be applicable.

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VENDOR DATA REQUIREMENTS FOR EPC WORKS FOR PCCP PIPELINE & ASSOCIATED FACILITIES

A	19-APR-2024	ISSUED WITH TENDER	AJ/RB	RB	NR
Rev. No.	Date	Purpose	Prepared by	Checked by	Approved by

VENDOR DATA REQUIREMENTS

The following drawings/documents marked "✓" shall be furnished by the bidder.

EIL PIPELINE ENGG.

S. N O.	DESCRIPTION	WITH BID	POST ORDER			REMARKS
			FOR REVIEW	FOR RECORD	WITH DATA BOOK (FINAL)	
1.	Materials requisitions-PCCP linepipe, pipe specials, air valves, mainline isolation valve, gate valves, scour/ drain valve, flanges, gaskets, fasteners, etc.		✓		✓	
2.	Purchase requisitions-PCCP linepipe, pipe specials, air valves, mainline isolation valve, gate valves, scour/ drain valve, flanges, gaskets, fasteners, etc.		✓		✓	
3.	Engineered alignment sheets		✓		✓	
4.	Crossing drawings-river, road/ highway, railway, canal, etc.		✓		✓	
5.	Vendor drawings-PCCP pipeline end details, air valves, mainline isolation valve, gate valves, scour/ drain valve, etc.		✓		✓	
6.	QAPs & ITPs-PCCP linepipe, pipe specials, air valves, mainline isolation valve, gate valves, scour/ drain valve, flanges, gaskets, fasteners, etc.		✓		✓	
7.	PCCP linepipe calculation duly approved by a government technical educational institute such as IIT, NIT, etc.		✓		✓	
8.	GAD of mainline isolation valve assembly including valve chamber		✓		✓	
9.	GAD of combination type tamper proof air valve		✓		✓	
10.	GAD of scour/ drain valve assembly including valve chamber		✓		✓	
11.	MTOs for pipe specials		✓		✓	
12.	any other drawings & documents		✓		✓	
13.	any other calculations, analysis, reports, etc.		✓		✓	
14.	Thrust block (for PCCP pipeline) calculation, locations, design & drawings, etc.		✓		✓	

Notes :

- Pipeline
- "TICK" denotes applicability.
- Post order, drawing / document review shall commence only after approval of Document Control Index (DCI).
- All post order documents shall be submitted / approved through EIL eDMS portal.
- Final documentation shall be submitted in hard copy (Six prints) and soft (two CDs/DVDs) in addition to submission through EIL eDMS.

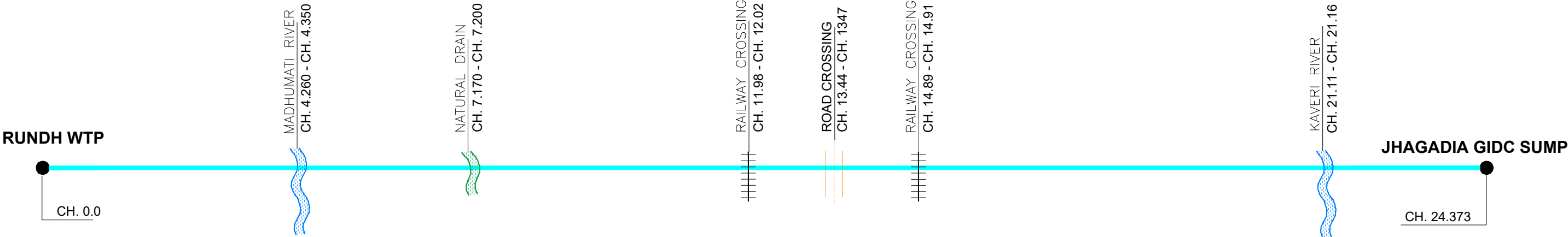
**VENDOR DATA REQUIREMENTS
FOR
EPC WORKS FOR PCCP PIPELINE &
ASSOCIATED FACILITIES**

-
6. Refer - 6-78-0001: Specification for quality management system from Bidders.
 7. Refer - 6-78-0002: Specification for documentation requirements from Contractors.
 8. Refer - 6-78-0003: Specification for documentation requirement from Suppliers.
 9. All drawings & documents shall be submitted in A4 or A3 paper sizes. Documents in higher paper size shall be submitted in exceptional circumstances or as indicated in the MR/Tender.
 10. Post order- The schedule of drawing / data submission shall be mutually agreed between EIL & the bidder / contractor / supplier during finalization of Document Control Index (DCI).
 11. "@" indicates submission of documents to Inspection Agency.
 12. Bill of Material shall form part of the respective drawing.
 13. Also refer other department's VDR :-

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1500MM PCCP PIPELINE FROM RUNDH TO JHAGADIA

ID OF PIPELINE : 1500 mm
SERVICE : WATER
PROPOSED PIPELINE MATERIAL : PCCP



LEGEND:-

- PROPOSED 1500MM PIPELINE
- CANAL
- ROAD CROSSING
- RAILWAY CROSSING
- RIVER CROSSING

NOTES:

- As per the Site Survey Data received from client, following has been proposed:
 - Combination Type/Intake Release/Kinetic Air valve to be installed at every 500m with a maximum distance of 600m between consecutive valves. Also every peak of the pipeline alignment shall have an air valve.
 - Isolation valve with valve chamber to be installed at every 5 km. In no case the distance between the two mainline isolation valve shall exceed 6 km.
 - Drain/Scour valve & valve chamber to be installed at every valley of the pipeline alignment.

DETAILS OF PIPELINE

PIPE MATERIAL	PCCP as per IS 784: 2001
LINE SIZE (ID)	60" (1500 mm)
WORKING PRESSURE (kg/cm ² (g))	10 kg/cm ² (g)
APPROX. LENGTH (km)	24.373 km



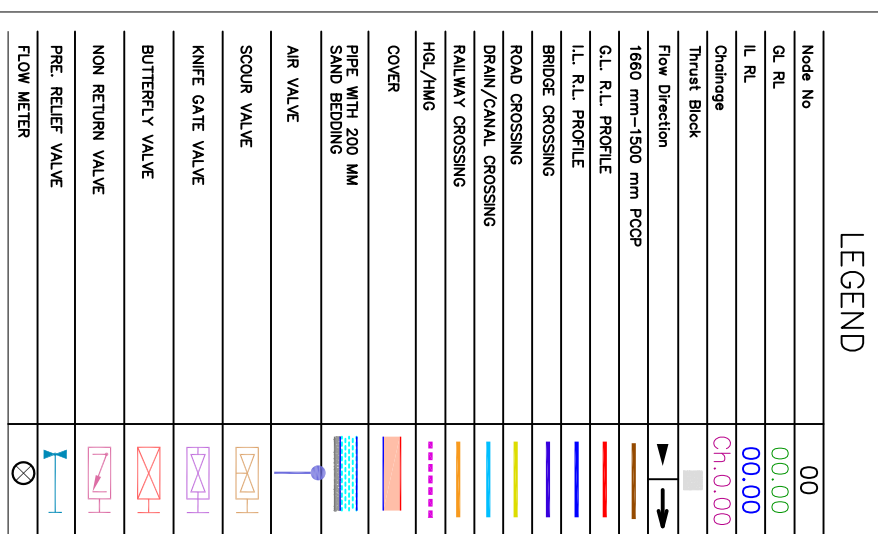
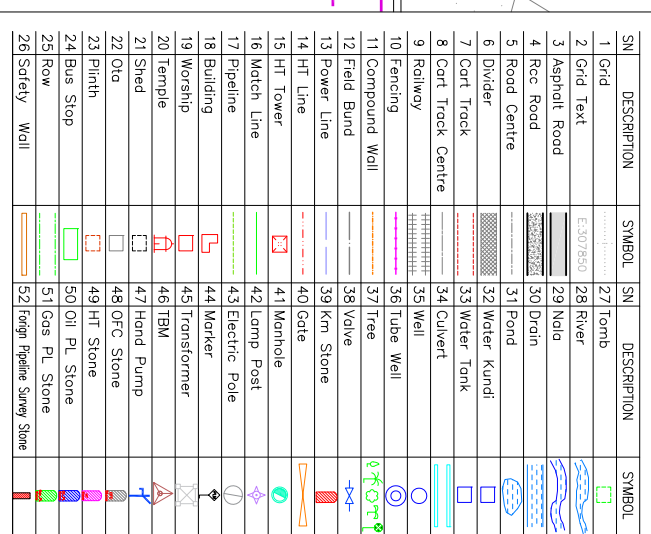
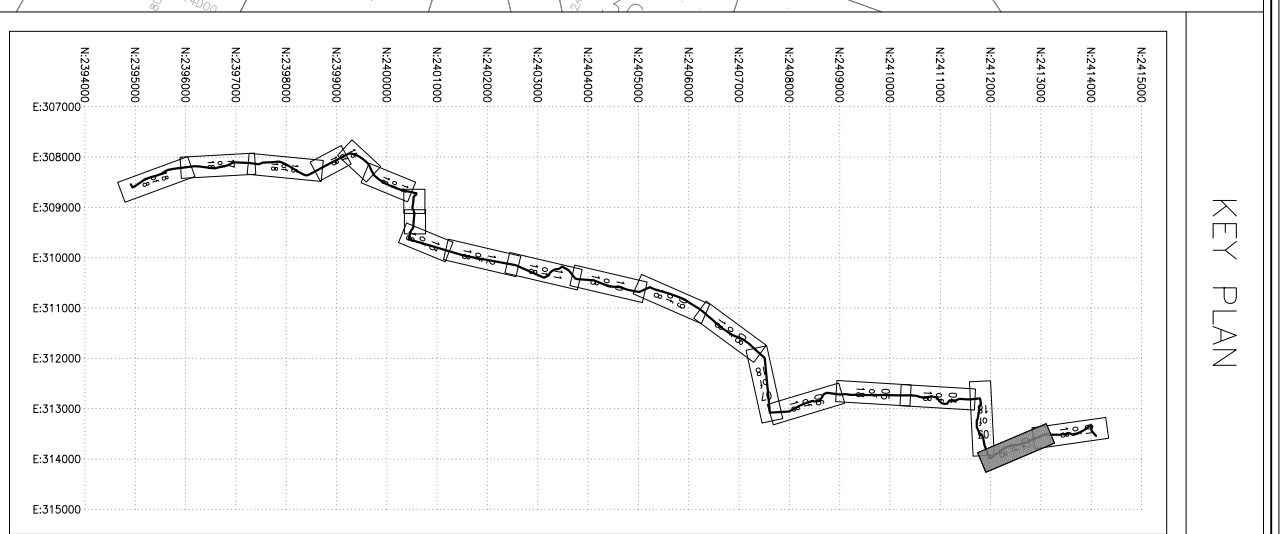
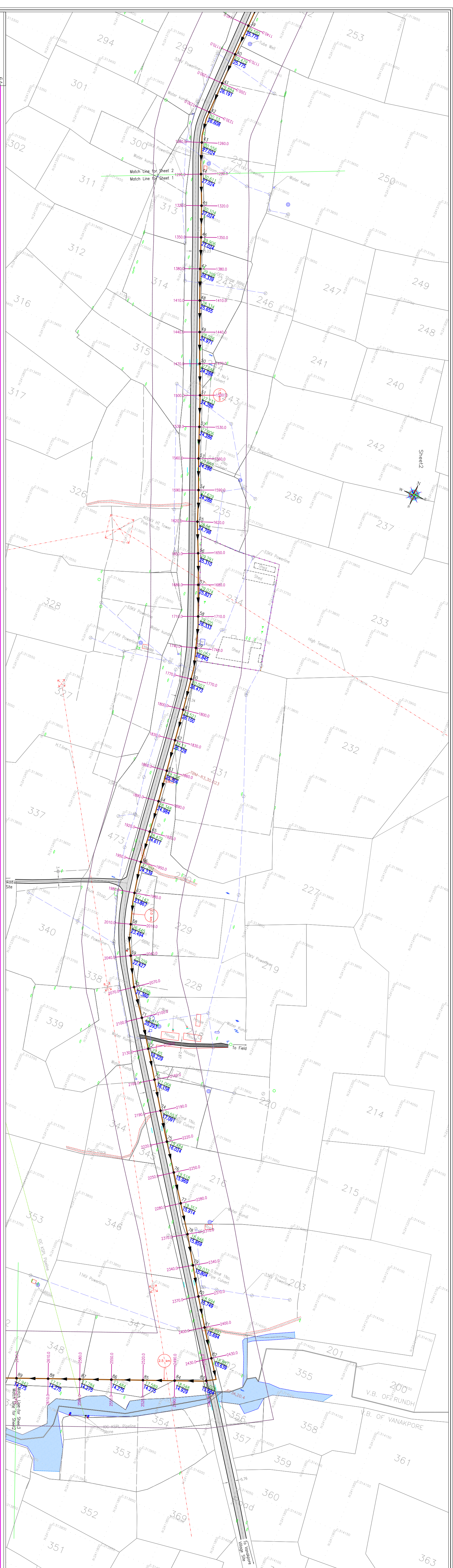
ENGINEERS INDIA LIMITED
NEW DELHI

PROJECT: ENGINEERING, PROCUREMENT & CONSTRUCTION WORKS
FOR PCCP PIPELINE AND ASSOCIATED WORKS
CLIENT : NAA GIDC, JHAGADIA
JOB NO: B828

A	12.26.2023	ISSUED FOR INFORMATION				
REV.	DATE	REVISION	BY	CHK	APPROVED	

SCHEMATIC ARRANGEMENT OF
PIPELINE

DRAWING NO.	REV.
B828-000-83-41-30001	A
SHEET 1 OF 1	

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