

هيئة الأشغال العامة PUBLIC WORKS AUTHORITY شؤون البنية التحتية INFRASTRUCTURE AFFAIRS (DRAINAGE NETWORKS PROJECTS DEPARTMENT)

PREQUALIFICATION DOCUMENT FOR NISTRUCTION OF DILINE TSE DUMBIN

CONSTRUCTION OF D LINE TSE PUMPING STATION & TRANSMISSION MAIN – CP762

PROJECT ID: IA 2018 C 011 G

PART 2 - SCOPE OF WORKS

Public Works Authority PO Box 22188 Doha State of Qatar

March 2018

APPENDIX A: SCOPE OF WORKS		58
1.	Project Outline	58
2.	Time for Completion	59
3.	General Scope of Works	
3.1	General Requirements	59
3.2	The works include, but are not limited to the following:	59
3.3	Environmental and other Utility Authorities Issues	67
3.4	Inspection of Site	67
3.5	Traffic Diversions	68
3.6	Protection of Underground Services	68
3.7	Reinstatement and Restoration	68
3.8	Interface with Other Projects & Coordination with Other Contractors	69
4.	Programme Overview	71

Note: The above documents are not final. The Authority reserves the right to make any changes to the documents that do not change the document philosophy, without incurring any liability to Applicants. The final documents will form the Tender Documents.

APPENDIX A: SCOPE OF WORKS

1. Project Outline

DS105 / C762 project has a 120,000 m3/day TSE pumping station and roughly 68km of proposed TSE transmission mains, starting at the existing Doha South Sewage Treatment Works (DSSTW) and to be laid along the MME allocated corridor, along the Utility Main Corridor, the Salwa International Highway, up to Al Rakhiya Farms, and further up to New TSE storage lagoon. There are TSE extension lines to connect the TSE networks in Expressway projects P008 and P023. The project location is shown in Figure 1.

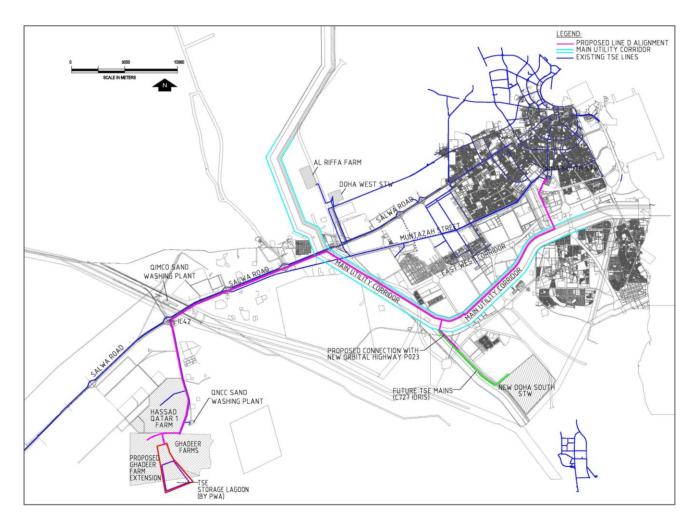


Exhibit 1: The Project Location

2. Time for Completion

The Contract duration comprises of

- One Thousand and Ninety Five (1095) Days for Completion of the whole of the Works (including mobilisation), and
- Four Hundred (400) Days for Maintenance Period.

3. General Scope of Works

3.1 General Requirements

The Contractor shall provide guarantees and insurances as prescribed within the Conditions of Contract. The Contractor shall provide the Engineer's site facilities and services, tests, surveys, investigations, traffic requirements, dewatering, over pumping, sign boards, barricades, etc. The Contractor shall also provide the Contractor's site facilities and services, temporary works, ascertain the location of underground utilities/services, works related to the provision, protection and/or relocation of utilities, compliance with QCS 2014 requirements, preparation and implementation of Health and Safety Plans, Quality Assurance Plans, Sustainability Plans, Environmental Plans/Construction Environmental Management Plans (CEMP), Traffic Management Plans, Stakeholder Management Plans, etc.

3.2 The works include, but are not limited to the following:

- D Line Pumping Station
 - Electric driven D Line pumping station located within Doha South Treatment Works with a capacity of 120,000m³/day over 20 hours, to the Al Rakhiya Storage Seasonal Lagoon. This shall be complete with substructures and superstructures housing the Pump station, and its ancillaries to include but not limited to Kahramaa switchgear, power transformers, Medium voltage VFD with integrated transformer and appurtenances. The superstructure and buildings shall be complete with fully functioning utilities and facilities to include HVAC, plumbing, drainage, earthing, lightning protection, fire alarm / firefighting and lighting systems. The scope of works include but not limited to supply and installation of all services, equipment, components, accessories and fittings required for the operation of the facility to the extent specified and detailed on the Drawings and applicable Specifications including 400 days maintenance or as stipulated in the contract and all extended warranties after provisional handover.
 - The Contractor shall be responsible for ensuring that all details relating to the construction, installation, testing and commissioning are fully compliant with the latest Kahramaa regulations, specifications, standards and requirements. The construction shall not commence until Kahramaa approval are obtained. All material specifications shall meet Kahramaa, QCS-2014 and PWA requirements (as applicable) unless otherwise directed in writing by the concerned authority.
 - The scope of supply and installation of the 11kV switchgears and the distribution transformers shall be as directed by KME according to the approved power supply scheme.

- Provision of 11 kV Switchgear to receive 11 kV power supply from Karahmaa Provision of 11 kV indoor switchgears and two Distribution Transformers (11/0.433 kV) and Liaise with Kahramaa Electrical for the provision of 11 kV power supply as per the approved scheme drawings from KM to the site. The Contractor shall hire Karahmaa approved Electrical Contractor to execute all the 11kV works within the facility up to the tie in with Kahramaa networks at the pump station boundary as shown in the approved scheme drawings from Kahramaa.
- Provisions for Medium voltage VFD's with integrated transformers (11/3.3kV) provided with vacuum circuit breaker along each unit as shown on the drawings with all the associated works.
- Provision of 3.3KV Motors suitably rated for driving the proposed pumps. The final motor rating to be verified as per the approved material submittals of the pumps and the motors.
- o Provisions for the low voltage equipment along with the cabling and all the associated works including but not limited to the items below.
 - LV Main Distribution Board
 - Sub-Main Distribution Boards.
 - Power Factor Correction Capacitor Bank.
 - Distribution Boards.
 - UPS + Back-up Batteries.
 - Lighting and small power for the utility buildings rooms.
 - Power cables MV and LV. Including the relevant raceways and all the associated works.
 - Street lighting and area lighting within the Project site as shown in the drawings. Sreet lighting has to be done by PWA-approved Contractor.
 - complete earthing and bonding system to approval of the Engineer and the concerned local authority.
 - Complete Lightning protection system to approval of the Engineer and the concerned local authority.
 - The Contractor shall carry out and provide an overcurrent protective device. Co-ordination study as part of his material submission,
- The Contractor shall be responsible on all the coordination and shall secure the acceptance from the relevant departments of Kahramaa for the procurement, the installation, the testing and the commissioning and energisation of the electrical equipment.
- The Contractor shall follow the latest approved vendor list from PWA / Kahramaa as applicable and shall obtain the necessary approvals from the supervision consultant and the concerned authorities on the proposed material.
- The Contractor shall prepare the shop drawings as per the approved material submittals. The exact size, dimensions and the coordination with the structures

and all the relevant details of the approved material shall be reflected on the shop drawings for the approval of the engineer. For shop drawings requirements please refer to QCS-2014 Section 21 part 1, point 1.1.5 Shop Drawings

- For contract drawings additional requirements, please refer to QCS-2014 Section 21 part 1, point 1.1.4 Contract Drawings.
- The Contractor shall coordinate all the site works with PWA O&M as per the latest site conditions within the facility.
- TSE Holding (Storage) Tanks of 1 hour storage including all appurtenances and auxiliaries which include but not limited to inlet and outlet piping, vents, valves, penstocks, motorized actuators and drain pump system;
- TSE supply lines to the Holding tanks from the FE9 chamber and a tie-in supply line from the TSE1 pump station feed line from the FE9 chamber. These include but not limited to necessary permanent equipment such as chambers, valves and penstocks.
- Tie in connection to FE9 chamber with 1200mm diameter DI pipe including all ancillaries
- Surge vessels complete with concrete foundation/anchor blocks, piping and valves. This shall be complete with the associated compressor and ancillaries housed in a shed. A surge analysis validation based on the as-builts shall also be undertaken by the Contractor.
- Provisional work item of Fire Water Pump station within DSSTW facility to be implemented only upon written approval from Engineer.
- Provisional work item for FM200 Fire suppression system for KME Switchgear room to be implemented only upon written approval from Engineer.
- Pipe network and associated chambers within Doha South Sewage Treatment Works to allow the proposed Pumping Station to discharge to selectively to either:
 - A, B or D lines
 - M100 to discharge via D Line
 - D Line connection to the backup diesel pump station.
- Potable water system for the pumping station toilets and wash down piping of the pumping station including tie-in to the existing potable water tank and installation of a skid mounted booster pump set.
- Foul sewer system for the pumping station toilets including tie-in to the nearest sewer manhole.
- Construction, testing and commissioning of new access roads within the proposed pumping station area including tie-ins to existing access roads.

- Testing and commissioning of storm water drainage within the proposed pumping station area.
- Relocation works to cover relocation of existing structures and utilities within the footprint of the proposed pumping station, storage tanks. This also includes balling and relocation of trees in accordance with the proposed soft scaping plan.
- Landscaping and soft scaping complete with irrigation system.
- Removal and replacement of existing utilities such as irrigation piping and area/street lighting.
- A fully functional SCADA, Leak Detection and instrumentation system serving the D Line Pump Station and the TSE Transmission Main including but not limited to:
 - Dual Redundant PLC at D-Line Pump Station.
 - Common controls panel as part of MCC to provide necessary controls and interlocks in case of PLC system failure.
 - Fibre Optic Cables, Laying and termination From Line-D end RTU to Pump station and for remote SCADA clients at M100 and Admin building.
 - Master RTU at D-Line Pump Station with GSM and PSTN interface to connect to Line-D chamber RTUs and enable monitoring and control of Line-D as well as Pump Station from PWA central SCADA.
 - Leak Detection System at D-Line Pump Station
 - Redundant SCADA at D-Line Pump Station for Line-D and Pump Station monitoring and control along with necessary licensed software for reporting, data storage, interface and configuration.
 - Remote SCADA Clients at Administration Control Room and M100 Control room including the required furniture as defined in the drawings.

D Line TSE Transmission Main

- DI Pipe Installation, testing & commissioning, including hauling, staging and earthworks. Provide self-restraining joints at pipe deflections at required anchored lengths in lieu of concrete thrust blocks.
 - Section 1: Approximately 60 km of a single DN1200mm transmission main from the existing Doha South STW all the way to Al Ghadeer Farm tap-off point
 - Section 2: Approximately 2.6 km of a single DN1200mm transmission main from the Al Ghadeer Farm tap-off point to the Seasonal Storage Lagoon discharge structure.
 - Section 3: Approximately 1.6 km of a single DN1200mm transmission main branching from the abovementioned Section 2 to the future Al Ghadeer Farm extension.

 Approximately 3.5 km of a single DN1200mm transmission main including interconnections between Line D to New Orbital Highway, Expressway Project P023, Contract 3, Wukair Road;

Tie-ins/ Interconnections

- Interconnection with Project C2013/108 consisting of a twin to single pipeline tie-in chamber immediately outside the boundary wall of DSSTW and an interconnection point with the new pumping facility inside the compound.
- Interconnections to Lines A and B near Abu Nakhla. The lines A and B are currently in use and are of strategic importance to the transmission of TSE away from Doha South Waste Water Treatment Works. Currently it is assumed that the D line will be complete before the installation of the A or B connection, allowing either A or B line to continue operating. However the connection between the A, B, and D lines should be discussed fully with PWA Operations and Maintenance Department before commencement of this section of the works to ensure the operations requirements are completely satisfied.
- Interconnection with Line C near IC42.
- Interconnection with the New Doha South STW (Future IDRIS) approximately 3.5km.
- Interconnection with New Doha South STW TSE distribution system;
- Interconnection with Expressway Project P008 and effectively tie-ins with Project P015 Al Wakra By-pass;
- Cross-connection with East-West Corridor (P011) 800mm TSE transmission main to allow flexibility with the planned TSE Wakra loop;
- Interconnection between Line D to New Orbital Highway, Expressway Project P023, Contract 3, Wukair Road;
- Tie-in chambers, branch valve chambers, air valve chambers, anti-surge air valve chambers, washout chambers, flow control, pressure sustaining valve chambers instrumentation chambers complete with pipe fittings, valves and chamber accessories.
- Supply 2 nos. portable mobile actuators for operating remotely located manually operated butterfly valves inside TSE valve chambers of D line.
- Road crossings, micro-tunnelling and associated works.
- Rail crossing structures such as pipe sleeves, concrete encasements and leakage relief shafts.
- Utility crossings including high security areas such as those traversed by QP pipelines.
- o Discharge structure at TSE seasonal storage lagoon.

- O Provisional item for related works in pipelaying across the existing Al Rakhiya lagoon and in waterlogged areas. The existing lagoon at Al Rakhiya is a temporary TSE disposal facility which will be abandoned and reclaimed by PWA eventually. In case that the lagoon is still present at the time of the D line construction in the said area, the following provisional work items will be in effect to include but not limited to:
 - Providing embankment or fill (compacted to QCS requirements) across the existing temporary lagoon onto which the D line main will be laid. The embankment shall be stable and complete with rock armouring. The embankment shall be wide enough to allow for construction and maintenance vehicular access.
 - Pipe bedding with geotextile wrapping in addition to the typical pipeline trench details identified in the drawings.
 - Culvert crossings (at least two nos.), at the deepest location of the lagoon, to enable transfer of water between the sections of the lagoon that the embankment will cut-off. This includes enabling work items such as cofferdams and dewatering.
- D Line Transmission Main Electrical Works for Automated Valve Chambers & Flow meter chambers.
- Supply and installation of all services, equipment, components, accessories and fittings required for the operation of the equipment/devices to the extent specified and detailed on the drawings and applicable specifications including 400 days maintenance or as stipulated in the contract and all extended warranties after provisional handover.
 - The Contractor shall be responsible for ensuring that all details related to the construction, installation, testing and commissioning of the electrical equipment are fully compliant with the latest Kahramaa regulations, specifications, standards and requirements. The construction shall not commence until the relevant approvals from Kahramaa, PWA and the concerned authorities are duly obtained. All material shall comply with Kahramaa regulations and specifications, QCS-2014 and PWA requirements (as applicable), unless otherwise directed in writing by the concerned authority.
 - For the power supply connections, the contractor scope may include- but not limited to- the below.
 - a. Applying for the electrical service connections from Kahramaa, as per Kahramaa official procedures, and carrying out all the required followup and coordination with Kahramaa till the electrical service connection becomes available on site.
 - b. Paying all the fees/costs that are requested by Kahramaa for providing the electrical service connections.
 - c. Executing the electrical works for the power supply connection (if any) as directed by Kahramaa, which may include the following:
 - Construction of indoor/outdoor distribution substation (if any), including the civil works, architectural works, and MEP works,

in addition to supply, installation, test and commissioning of the substation equipment as per the relevant Kahramaa scheme drawings.

- Supply, Installation, testing and commissioning of the package substation (if any) including the construction of the concrete plinth as per the Kahramaa scheme drawings.
- LV (0.415kV) / MV (11kV) cables laying as per Kahramaa approved scheme drawings. The LV/MV cables shall be laid completely up to the approved tie-in points with Kahramaa network as per Kahramaa approved scheme drawings, which may be falling outside the limit-of-work of the TSE transmission line.
- Supply and installation of Kahramaa electrical standard electrical service cabinet including the associated works/components. The contractor shall coordinate with Kahramaa for the kWh metering units and the MCCB's which shall be installed in the electrical service cabinet.
- All the electrical works shall be carried-out by Kahramaa approved contractor, and per Kahramaa requirements and procedures.
- For the locations, where Kahramaa power supply is neither possible nor feasible to be provided, an alternative power source (solar system) shall be provided. The contractor shall be responsible for supplying, installing, testing and commissioning of a complete proper solar system including the solar panels, batteries, wiring and all relevant components, and the associated civil works. The solar system shall be fully guaranteed to be suitable for proper and reliable operation under the harsh climatic conditions of the State of Qatar, and subject to the approval from PWA.
- The contractor shall obtain and consider the latest existing and proposed utilities for the areas in the vicinity of his electrical works activities, in order to avoid any clashing or damages to the existing utilities. The contractor shall take all the necessary measures to protect the existing utilities as required.
- Supply and Installation of the low voltage equipment along with the cabling and all the associated works including-but not limited to- the items below,
 - LV Feeder pillars
 - Distribution Boards.
 - UPS + Back-up Batteries.
 - LV power cables including the relevant raceways and all the associated works and accessories as required.
 - complete earthing and bonding system to approval of the Engineer and the concerned local authority.

- The Contractor shall carry out and provide an overcurrent protective device. Co-ordination study as part of his material submission,
- The Contractor shall be responsible on all the coordination and shall secure the acceptance from the relevant departments of Kahramaa for the procurement, the installation, the testing and the commissioning and energisation of the electrical equipment.
- The Contractor shall follow the latest approved vendor list from PWA / Kahramaa as applicable and shall obtain the necessary approvals from the supervision consultant and the concerned authorities for the proposed material before procurement.
- The Contractor shall prepare the shop drawings as per the approved material submittals. The exact size, dimensions of the equipment, as well as the coordination with the structures and all the relevant details of the approved material shall be reflected on the shop drawings for the approval of the engineer. For shop drawings requirements please refer to QCS-2014 Section 21 part 1, point 1.1.5 Shop Drawings.
- For contract drawings additional requirements, please refer to QCS-2014 Section 21 part 1, point 1.1.4 Contract Drawings.
- Laying and termination of dual 24-core single mode fibre optic cables, media converters and FOTB along the pipeline to connect RTUs at various chambers to Master RTU and SCADA at D-Line pump station control room and connection to SCADA clients at M100 and Admin Building (via TSE1 and LRPS MCC building respectively) for remote monitoring and control.
- RTUs at Line D valve, leak detection, and flowmeter chambers with fibre optic and GSM interface housed in outdoor double insulated GRP weatherproof panel.
- Necessary instrumentation at chambers. Laying of signal cables, termination and configuration to chamber RTUs and existing pump control systems.
- Utility service including instrumentation/telemetry works and associated electrical works.

SCADA and Instrumentation

 Laying and termination of dual 24-core single mode fibre optic cables, media converters and FOTB along the pipeline to connect RTUs at various chambers (for connection to Master RTU and SCADA at D-Line pump station control room and connection to SCADA clients at M100 and Admin Building via TSE1 and LRPS MCC building respectively) for remote monitoring and control.

- RTUs at Line D valve, leak detection, and flowmeter chambers with fibre optic and GSM interface housed in outdoor double insulated GRP weatherproof panel, provided with panel air conditioner.
- Necessary instrumentation at chambers including leak detection. Laying of signal cables, termination and configuration to chamber RTUs and existing pump control systems as applicable.
- Utility service including instrumentation/telemetry works and associated electrical works.
- Leak Detection System
 - Flow and pressure sensors based Leak detection system along the pipeline with dedicated software customized for the pipeline operating conditions, including interface with other systems to detect leakage, indicate and relay signals to pumping station control rooms to initiate emergency shutdown procedures.
 - Leak Detection system shall include redundant servers, operator and engineering workstations to be installed at Line-D Pump station control room.

3.3 Environmental and other Utility Authorities Issues

The Contractor is required to obtain the necessary permit(s) from the Ministry of Municipality and Environment (MME) and has to ensure compliance with all MME requirements. The Contractor shall make himself fully informed of the Ministry of Municipality and Environment and other utility authorities' requirements which may be needed to complete the construction work. The Contractor shall coordinate with all the relevant utilities agencies/authorities to obtain the required No Objection Certificates (NoCs), approvals and Road Opening permits, dewatering permit prior to the commencement of the Works.

A Project specific CEMP will be prepared by an Independent Environmental Consultant hired by the Contractor during the construction phase of the Project. The contractor shall give presentations to local authorities, wherever applicable. The contractor shall be strictly bound to fully implement the CEMP during the mobilization / entire construction phase / demobilization / restoration of temporary construction facilities. Engineer's Representative will undertake the environmental audits / inspections periodically and contractor shall be obliged to close out all concerns / queries raised during the environmental audits / inspections. Contractor shall carry all the monitoring requirements (e.g. noise, air), if any mentioned in CEMP.

3.4 Inspection of Site

The Contractor shall make himself fully informed and familiar with the surroundings by way of site visits, site inspections, collecting information or any other means deemed necessary and take into consideration the local situation with regard to availability of construction materials/suppliers, volatility and escalation of prices, difficulties associated with bringing and accommodating staff/labourers and obtaining lands for Site Establishment.

3.5 Traffic Diversions

The Contractor shall be responsible for maintaining traffic flows within the proposed site area to existing properties and businesses, including those currently under construction. All traffic diversions shall be designed in accordance with QCS 2014 and Work Zone Traffic Management Guide (WZTMG) current edition published by Public Works Authority 'Ashghal' and all subsequent revision(s) and amendment(s), if any. Traffic Safety Measures for Road Works and Temporary Situations shall be submitted and subject to the approval of Ashghal and the Ministry of Interior (MOI) Traffic Police.

The Contractor shall provide all necessary signage and lighting to an appropriate standard at key locations such as junctions, decision points and changes in alignment. Suitable barriers shall be provided adjacent to any excavations.

The Contractor shall carry out publicity tasks in coordination with PWA and appoint a Public Relations Officer to keep the local residents informed of the progress of the construction period, road closures, diversions, parking arrangements and handling public complaints.

3.6 Protection of Underground Services

The Contractor shall be required to carry out adequate number of utility holes/pit to identify the exact location and level of all existing underground services, ascertain in advance of construction, the route, level, appropriate execution sequence of all proposed underground networks along their entire lengths, resolving all clashes at site, taking the traffic diversions into consideration, prepare and submit detailed/well-coordinated shop drawings, combined and for each utility separate, for the approval of the Engineer and concerned Departments and authorities. Each existing utility shall remain fully operational until such time the proposed scheme is in place, commissioned and ready for jointing at connection points, in coordination and in accordance with the requirements of the Owner of the Utility.

The Contractor is to be aware that in the area about Salwa Road there are two adjacent pressurised TSE Transmission lines to the proposed D Line. The lines A and B were constructed circa 1980 and there are no known as built drawings. These transmission lines are known as A and B and are critical to the sewerage system of Doha.

The Contractor shall protect the existing TSE transmission Lines A and B during the duration of the works. Vehicular crossing the pipelines A and B will only be allowed at specifically designed and pre-approved areas. To that end, the Contractor shall supply signage to direct traffic to the appropriate crossings. Barriers shall be provided to prevent accidental loading or traversing of the existing pipelines. If the Contractor requires additional crossings of the A and B pipelines, the Contractor shall secure approval from the Engineer, by submitting a detailed method statement and detailed design drawings, for the protection of the existing pipeline, considering all possible loads that it may subjected to arising from the proposed crossing.

3.7 Reinstatement and Restoration

The Contractor's scope of works includes the reinstatement, restoration and replacement of private properties affected by the Works which will be under a Provisional Sum item as instructed by the Engineer.

In addition, the Contractor shall reinstate and restore disturbed or damaged existing public utility services as a result of the construction of the Works in coordination and in accordance with the requirements of the PWA Assets Management Affair, Roads Operations and Maintenance Department – Amendment to The Code of Practice and Specifications for Road Openings In the Highway.

3.8 Interface with Other Projects & Coordination with Other Contractors

The Contractor shall coordinate his works with other projects being undertaken by other contractors working within and/or in the vicinity of the project site. The Contractor shall be fully informed of the utility works including those under PWA, QGEWC (E), QGEWC (WATER), Street Lighting, Traffic Signal, ITS, Ooredoo, QP, Q-Rail, QAF, Doha South STW, Hassad Barwa Farm, QNCC, Wadi Jallal, Al Rakhiya Farm, Landscape, Irrigation, Foul Sewerage, Surface Water, Groundwater works, TSE works, etc. within and/or in the vicinity of the project site. All the relevant expressway packages shall also be coordinated for the interface/crossing details. Similarly, coordination with IDRIS shall be undertaken for confirmation of the interconnection provisions/scope of works.

The Contractor shall coordinate his work with all neighbouring sites as deemed necessary, as instructed by Engineer and/or as required by the Authorities. This includes appropriate and timely dissemination of information to the parties directly or indirectly affected by the Works. The Contractor shall be responsible for all liaison and coordination with other contractors and/or Authorities undertaking construction works within or in the vicinity of the project site, to establish any interfaces and to mutually agree on acceptable programmes of work to mitigate the possibility of delay, disruption or damage to the Works.

Following is the list of the major stakeholders directly affected by the Works and with which the Contractor is required to interface with.

- Doha South Sewage Treatment Works (DSSTW): The Contractor to coordinate the Line D interconnection works.
- PWA: The Contractor to coordinate with different expressway packages for the pipe crossings. These expressway packages include East West Corridor (P011) and New Orbital Highway (P023).
 - Similarly, coordination with PWA shall be required for other road crossings such as that on F-Ring Road. PWA shall also be consulted for the interconnection of Line D with the existing lines A, B and C.
- Hassad Barwa Farms: The Contractor to coordinate the Line D TSE supply line works.
- Qatar National Cement Company (QNCC): The Contractor to coordinate the Line D TSE supply line works.
- Al Rakhiya Farms: The Contractor to coordinate the Line D TSE supply line works.
- Qatar Petroleum (QP): The Contractor to coordinate with QP on the pipe crossings.
- Qatar Rail: The Contractor to coordinate with Q Rail on the proposed box culvert crossings.
- Kahramaa: The Contractor to coordinate with Kahramaa for the Line D crossings with existing water and electrical lines. Similarly, the contractor shall coordinate

- with Kahramaa in regards to the electrical connections for the power supply of the proposed actuated valves in different locations.
- MMUP: The Contractor to coordinate with MMUP on laydown areas, site access and corridor related issues.
- Qatar Armed Forces (QAF): The Contractor to coordinate with QAF specifically for the stretch of Line D along the air base near Abu Nakhla lagoon.
- Ooredoo and Vodafone: The Contractor to coordinate pipe line crossings with telecommunication lines.
- Private Developers: The Contractor shall coordinate with private developers where it affects the Works.

4. Programme Overview

The Authority's high level target procurement programme is as follows:

Advertise Prequalification March 2018

Return of completed Prequalification Document April 2018

Invitation to tender sent out to short listed companies July 2018

Tender return and commencement of evaluation August 2018

Tender evaluation and agreement of successful contractors November 2018

Contractors appointed December 2018

Contract commencement date January 2019

However, it is stressed that this target procurement programme is tentative and is subject to change, including change to the dates and the stages involved in the process.