CONSTRUCTION OF WATER DISTRIBUTION NETWORKS FOR IBRI, YANQUL AND DANK WILAYATS IN AD DHAHIRAH GOVERNORATE
(Design & Build)
Package 2
T/2460837/2023
BRIEF SCOPE OF WORK

1. GENERAL

The Oman Water and Wastewater Services Company (OWWSC) is planning to equip with new water distribution networks the rapidly developing areas of Adh Dhahirah Governorate that is seeing a significant population growth. The areas to be supplied are distributed across three (3) Wilayats of Ad Dhahirah Governorate.

The main scope of this project is the extension and reinforcement of the existing transmission lines, expansion of the strategic storage in order to satisfy the present and future water demand in these areas up to 2045 and construction of new distribution network or extension of the existing where it exists, to all the built-up plots included in the area scope of work.

The Contractor shall be responsible for:

- The Final Design of all water transmission and distribution networks, civil, electrical, mechanical works, instrumentation and SCADA. Design and construction of an Administration Building in Ibri as per Specifications Part 8.
- Procurement of materials and equipment, construction and testing, engineering, manufacture, inspection and testing at the maker's works and at site, packing for export shipment, insurance, delivery to site, unloading, complete erection, site testing, start up, commissioning, performance testing; putting into operation, and maintenance support during the defects liability period, which expires Two years after the completion of the whole of the Works.

2. SITE WORKS

The Contractor shall familiarize and satisfy himself with the sites' conditions and take fully into account any necessary earth filling with imported approved filling, excavations, leveling, and compaction up to the required levels as shown on the drawings and directed by the Engineer. All work of this nature and the materials required to comply with the specification shall be deemed to be included within the Contract Price.

The Contractor shall judge for himself the nature of the ground and shall be fully responsible for ascertaining all necessary information concerning permanent water table, periods of rainfall, flooding of the site and all matters affecting the excavations and foundation work.

The Contractor shall carry out before commencement of work a site survey, the site leveling and preparation including cut, fill, compaction, grading and leveling. All levels shall be related to an agreed datum. The site survey plan shall be prepared showing the survey results, the levels of the new works. Copies of this plan shall be sent to the Engineer for approval. Based on this record, the Engineer shall decide the most suitable finished site and floor levels.

The Contractor shall clear all areas of the site where required. This work shall consist of the complete removal and disposal of all rubbish, trees, stumps, bushes and other growing vegetation which are not to be kept, or the remains thereof, found within the Site limits. All debris is to be removed to an approved location.

The Contractor shall check the compaction of the ground as well as suitability of existing soil in various region of his work in various areas. If proper compaction is not available, the Contractor will be responsible, under his scope for necessary compaction, including replacement of unsuitable materials.

All required works shall be performed in accordance with the Earthworks and Dewatering Section of General Technical Civil Specification.

3. OVERVIEW

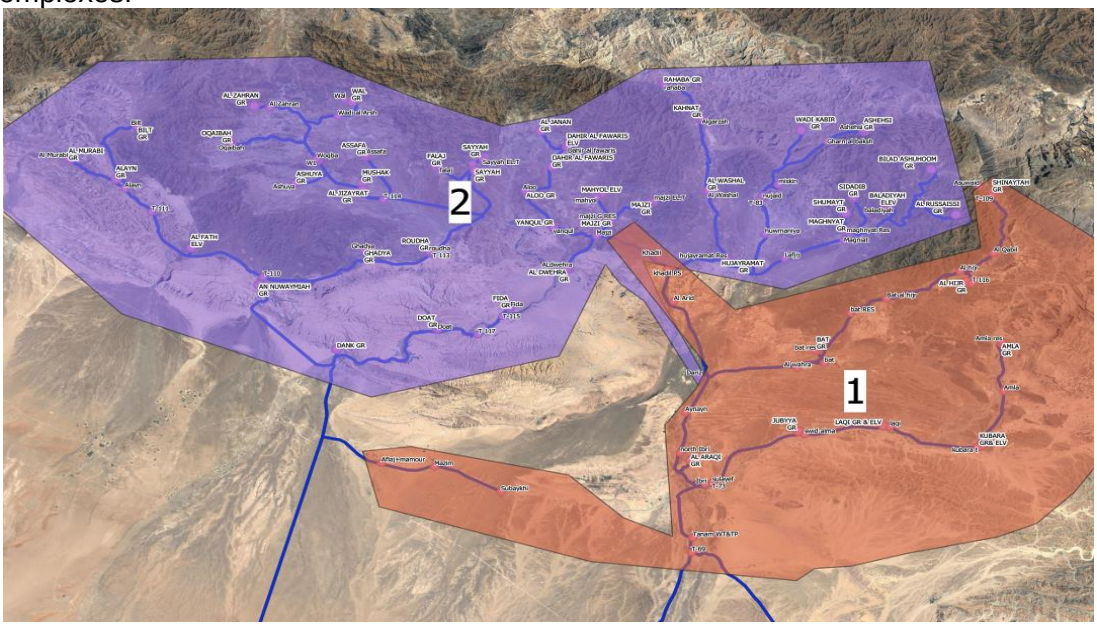
The existing Al Massarat Water Supply System supplies potable water to the major population centers of the Wilayats of Ibri, Yanqul and Dank in Ad Dhahirah Governorate. The source of water are the wellfields in Al Massarat aquifer South-West of Ibri and Dank and the newly constructed transmission line from Sohar desalination plant.
The scope of this work is the construction of:

- reinforcement of the existing transmission system (new pipelines and new pump stations) where the design calculation show that the existing is insufficient
- new transmission system (new pipelines and new pump stations) where it is totally missing
- new strategic storage ground reservoirs to achieve 48 hours strategic storage for all the population foreseen the area scope of work
- new service and elevated reservoirs to feed the distribution network
- wherever not existing yet, distribution network to supply all the existing houses

Initial study was for Ad Dhahirah Governorate and in tendering stage the client has decided to divide the project into two separate packages instead of one in order to improve project efficiency and ensure the successful completion of each individual component. Other reason can be:

- reduce the complexity of the overall project
- allocate resources to complete on time and within budget.
- have greater control over the project timeline and progress
- minimizing the risk of delays or unforeseen issues.

The tender will float in two packages, which the package 1 is water supply complexes of part of Ibri Wilayat, and main transmission lines and pump stations, package 2 consist of remain part of Ibri, Yanqul and Dank water supply complexes.



All the construction works shall be complete with ventilation, firefighting provisions, surge protection devices, electrical installations, connection to the power supply including the construction of electrical substations in case they are required, instrumentation, automation and SCADA for the remote control of the network.

The area scope of work has been divided in sub-areas. The table below reports the sub-areas name and the villages included in each of them. However, the name of minor settlements might be missing from this table, therefore for the actual extent of the scope of work the Contractor shall refer to the Tender Drawings.

Table 1- Areas included in the Scope of Work (Package 2)

Wilayat	Complex Reference	Distribution system	Area Name	Existing Distribution Network
Ibri	A10	Dariz	Dariz	Yes
			Assed	Yes
			Al Tawiyayn	Yes
			Al Arid	Yes
	A11	Hujayrimat	AL Hayyal- Hujayrimat	Partially
	A12	Al Washal	Al Washal	No
	A13	Kahnat	Kahnat (Ghubret Al Munaisuf, Al Shkhoot, Khalat, AlMadrakah, Algarzah)	No
	A14	Rahaba	Rahaba (, Hail Al Tareek, soukam, Dhahrat AlTawi, Sahaidah, Islat, Alhawager, Qusi)	No
	A 16	Asheshi	Al Heal (Qarn Al Kabsh, Asheshi, Deqrah, Al Hayal, Al Ayini, Al Meddelli)	No
	A15	Wadi Kabir	Miskin	Yes
			Huwmaniya	Yes
			Wadi Kabir	No
			Nujaid	Yes
	A19	Khadil	Khadil, Alaredh & Al Hassi (Al Muthayab)	Yes
	A21	Majzi	Al Mahyol	No
			Majzi	No
	A24	Dahir al-Fawaris	Dahir al-Fawaris	No
Dank	A20	Al Dwehra	Al Dwehra	Partially
	B1	Dank	Dank	Yes
			Madinah Al Gadeedah	Yes
			Hay Al Barka	Yes
			Al Wahasha	Yes
			Abu Karabah	Yes
			Al Aqaba	Yes
			Al Alaya	Yes
			Al Jifair	Yes
			Baidha Khad	Yes
			Hay Al-Barakah, Al-Madinah Al-Jadidah	No
	B3	Dhot	Dhot	No
			Al Mihayniyah, Al Taf	No
	B4	Fida	AlKhilly, Kraibah, Iiayat Fida, Khaws, Ghadeer Altawyah	No
			Shabat Al-Asam, Saih Al-Amd	No
	B5	Al Ain	An Nuwamiyah	No
			Al Fath, Al Hunayniyat	No
			Al Ain, Al Furfarah, Al Fujayjah, Al Huyul	No
			Bilt, Qumaira	No
			Al Muraybi, Wadi Asumur, Al Ghubrah, Al Gahmiyah	No
			Al-Ajam, Al-Maseelah	No
Yanqul	A22	Yanqul	Yanqul	Yes
			Al Sawader	Yes
			Karsh	Yes
			Al Buwayrdah	Yes
			Hayl Al Manadrh	Yes
			Al Ouqdah & Industrial Area	No
	A23	Al Aloo	Al Aloo	Partially
			(Wadi) Al Raki	Partially
	B6	Ghadya	Al Gefer, Qarn Al Ruawibah, Ghadya, Murri	No
	B7	Al Roudha	Al Roudha	No
	B8	Sayyah	Falaj as-Sudayrrin	No
			Sayyah	No
	B9	Al Jizayrat	Assafa	No
			Ashuya	No
			Al Jizayrat ,Al Shwaghis, al Mushak, Al Muraibi	No
	B10	Al Woqba	Al Woqba	No
			Wadi Al oqaibah	No
			Wadi Al Arsh, Wal , Ruwaiha	No
			Al-Hareem	No

The Client's Consultant has carried out an Outline Design that defines:

- approximate routes of the pipelines
- location of the services compounds
- minimum pipe size and class
- minimum storage volume requirements
- approximate pump's duty points

The Contractor shall review the Outline Design and might propose alternative solutions to the minimum requirements defined by it. Every alternative solution shall be accompanied by a Value Engineering study including CAPEX and OPEX analysis.

Some of the items shown in the drawings, such as air valves, washouts and isolation valves are merely rough indications, locations and numbers shall be verified by the Contractor in the detailed design stage. The number of pumps mentioned for the pump stations shall be reviewed by the Contractor and final decision shall be made in the detailed design.

The construction methodology is the Contractor responsibility, it shall comply with OWWSC standards, and it is subject to the Client approval.