

COMPLETION OF BALANCE WORK AND REFURBISHMENT (REHABILITATION) FOR SEWERAGE NETWORK SYSTEM AT IBRA PHASE II

SCOPE OF WORK

Project Description and Scope of Work

1.1. Brief Description of the Project

The Project aims to complete construction of the balance works of Sewerage Network System at Seih Al-Afia, area and rehabilitation of the existing network required for operation of sewerage system at Seih Al-Afia in Wilayat Ibra. All Networks considered in this scope shall be up to the existing Sewage Pumping Station.

The scope contains Supply of all required materials, installation, construction, pipe protection, wadi protection, testing, commissioning, obtaining of all required NOCs and Permits, reinstatement to original condition and submission of As-Built drawings and GIS as per OWWSC (Haya Water) Standard details, Specifications, requirements.

1.2. Details Scope of Work

The Contractor Scope of Works consists of the following: -

- 1- Supply of all Materials required.
- 2- Construction and Installation of all Civil Works required.
- 3- Topographical survey of existing and new networks and TPs.
- 4- Construction of Benchmarks in accordance to OWWSC (Haya Water) specifications and requirements.
- 5- Investigation of all existing networks, outstanding works and submission of report for Engineer's approval.
- 6- Rehabilitation, Rectification and Completion of networks to allow receiving the flows from plots.
- 7- Preparation of House connection design sheets.
- 8- Preparation of shop drawings.
- 9- Flushing of existing networks.
- 10- Construction of final wet connections which shall start from downstream to ensure the all downstream is functioning and can receive the flows.
- 11- All in accordance to specifications and requirements.
- 12- Any other works to operate the networks subject to Engineer satisfaction and approvals.
- 13- The Type of this Contract is re-measurable, and the Contractor will be paid for

actual executed works. The quantities provided in the Bill of Quantities are indicative for pricing purpose.

14- Compliance to HSE.

15- Gravity sewers of diameter ranging between 150 mm and 300 mm uP.V.C

16- Special Pipe laying - Trenchless methods For Sewer (NON-DISTRUCTIVE METHOD)

17- Construction Pre-cast Concrete Manholes

18- Construction of House connections lines including the property inspection chambers and the necessary connection pipes to the nearest Manholes of approximately (1300 Nos) including:

□ Construction of remaining Inspection Chambers (90 cmx 90 cm) including all necessary Work (approximately 32 Nos).

□ Construction of remaining Inspection Chambers (60 cmx 60 cm) including all necessary Work (approximately 210 Nos).

□ Demolishing of existing Septic/holding Tanks of varying capacity/size including temporary diversion, emptying, cleaning, disinfection, backfilling with imported material and compacting ground to suit the surrounding levels, reinstatement to original condition and disposing the demolished materials in case the new proposed system clash with existing Septic/holding Tanks.

19- Road reinstatement approximately 5000 SQM: The Contractor shall remove the existing asphalt layer and asphaltting all shall be in accordance to Omani Highway Design Manual, Standards & Specifications as per Engineer instruction. All subject to Municipality acceptance.

20- Providing As-Built Drawings and GIS for new and existing works (All in accordance with (ASSET INF REQ)

21- The Contractor shall comply with OWWSC (Haya Water) BD requirements as stated in (2.1 Haya Procedures and requirements).

Rehabilitation Works Required for existing Network at Seih-Alafia Area and to execute the wet connection of the existing network at Seih-Alafia area. Rehabilitation works shall be carried out as indicated below.

The Contractor shall ensure that the existing Network is in good condition and can divert the flow. For those parts which are not in acceptable condition and cannot divert the flow, the Contractor shall submit investigation report and shall recommend the rehabilitation required for Engineer's approval. However, the below quantities are indicative and subject to be increase/decrease based on the accepted report.

ITEM REF.	ITEM DESCRIPTION	Unit	Quantity
1	Exposing of chambers and Manholes in natural ground/dirt road to surrounding surface level and all works required including disposal debris to acceptable location not limited to all required materials and civil works all subject to engineer acceptance.	Nr.	24
1.1	Rising/Lowering (Adjusting) of chambers and Manholes up to 20 cm to surrounding surface level and all works required including disposal debris to acceptable location not limited to all required materials and civil works all subject to engineer acceptance.	Nr.	46
1.2	Rising/Lowering (Adjusting) of chambers and Manholes (20-40) cm to surrounding surface level and all works required including disposal debris to acceptable location not limited to all required materials and civil works all subject to engineer acceptance.	Nr.	6
2	The reinstatement to original condition in interlock tiles, all work required including removal of interlock tiles and concrete and reinstate the area after completing the works. Per Manholes/Chambers	Nr.	22
3	Replacing of Concrete Cover Slab for Manhole 1200 mm Dia. including fabricating the precast concrete slab, shifting to the site and fixing to the correct place as per the drawings.	Nr.	5
4	Replacing of Concrete Cover Slab for Chamber 900x900 mm including fabricating the precast concrete slab, shifting to the site and fixing to the correct place as per the drawings.	Nr.	5
5	Installation of Cover Slab for Manhole 1200 mm Dia including DI frame and cover 600 mm clear opening in accordance EN 124.	Nr.	91
6	Installation of Cover Slab for Chamber 900x900 mm including DI frame and cover 600 mm clear opening in accordance EN 124.	Nr.	100
7	Removing of debris from Manholes 1200 mm and disposal of surplus material to an approved dumping area.	Nr.	107
8	Removing of all debris from inside Manholes 900x900 mm and disposal of surplus material to an approved dumping area.	Nr.	89
9	Epoxy Coating for internal concrete surfaces of Manholes 1200 mm Dia..	Nr.	121

10	Epoxy Coating for internal concrete surfaces of Chamber 900x900 mm	Nr.	103
11	Grouting and Fixing of Manholes/Chambers existing inlets and outlets	Nr.	25
12	Flushing and cleaning of pipes 200 mm Dia	M	2505
13	Flushing and cleaning of pipes 300 mm Dia	M	1000
14	Flushing and cleaning of pipes 160 mm Dia	M	860
15	Air and/or Water Testing for random selected sections between Manholes and chambers for existing line.	M	1000
16	Completing / replacing or adding new sections of lines 200 mm	M	250
17	Completing / replacing or adding new sections of lines 160 mm	M	250
18	Leakage Testing of Manholes/Chambers.	Nr	164
19	For Manholes/Chambers failed to pass leakage test the Contractor shall provide solution to ensure Watertight subject to Engineer Approval and Instruction.	Nr	144
20	CCTV survey of selected sections in the existing network as per direction of the Engineer (Optional).	M	3000
21	Mirror Test for Existing Network to ensure functionality of the sewer line.	M	3000

19- Connections to New Houses at Seih Al-Afia Areas (about 59 houses) including sewer lines, House connection chambers and demolition of existing septic tanks.

