



AGENDA MEMORANDUM

Action Item for the City Council Meeting of December 14, 2021

DATE: December 14, 2021

TO: Peter Zaroni, City Manager

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Professional Services Contract Amendment
Mary Rhodes Pipeline Phase 1 System Improvements

CAPTION:

Motion authorizing Amendment No. 1 to a professional services contract with HDR, Inc., Corpus Christi, TX, to provide design, bid, and construction phase services for improvements to the booster pump stations located at Bloomington, Texas and Woodsboro, Texas associated with the Mary Rhodes Pipeline raw water delivery system in an amount of \$831,000.00 for a total contract value not to exceed \$878,560.00, with FY 2022 funding available from the Water Capital Fund.

SUMMARY:

This motion authorizes approval of Amendment No. 1 to a professional services contract for design, bid, and construction phase services for improvements to the booster pump stations located at Bloomington, Texas and Woodsboro, Texas associated with the Mary Rhodes Pipeline (MRP) raw water delivery system.

BACKGROUND AND FINDINGS:

In the 1990s the City of Corpus Christi was experiencing water shortages. Former Mayor Mary Rhodes led an initiative to secure water rights from the Colorado River to provide for an additional water source to residents, businesses, and industries. MRP consists of Phases 1 and 2. Phase 1 was constructed in 1998 and includes a 101-mile-long pipeline with three pump stations that transfer water from Lake Texana to the O.N. Stevens Water Treatment Plant. Phase 2 was constructed in 2016 and includes a 41-mile-long pipeline that has two pump stations and a sedimentation basin. MRP Phase 2 starts at the Colorado River near Bay City and connects to MRP Phase 1 at Lake Texana.

There are three pump stations along the MRP Phase 1 portion. The Intake Pump Station at Lake Texana, Booster Station No.1 near Bloomington, and Booster Station No. 2 near Woodsboro. The Lavaca-Navidad River Authority (LNRA) owns, operates, and maintains the Intake Pump Station at Lake Texana, which provides water to MRP Phase 1 and to the Point Comfort area. The two booster pump stations are owned, operated, and maintained by the City of Corpus Christi.

HDR performed a condition assessment in July 2018 and submitted the report to the City in March 2019. The condition assessment identified the items listed below for further evaluation and recommended improvements to the equipment to improve the condition and capacity of the system. This amendment provides the design, bid, and construction-phase services for the identified items.

Bloomington Booster Pump Station Improvements:

- Add one additional pump with a new variable frequency drive (VFD).
- Replace the existing VFD with a new VFD, including a spare Power Cell for the new VFD configuration, and circuit boards.
- Add backup generator power sufficient to operate up to four (4) pumps, controls, and HVAC and electrical loads for a period of 72 hours.
- Evaluate alternatives for upgrading the pump control valve actuators and replace the valve actuators with the final alternative selected by the City.
- Evaluate the capacity of the existing HVAC system to cool the electrical room with the revised heat loads from the new equipment and modify or replace as necessary.
- Repair the differential settlement that has occurred adjacent to the ground storage tank.
- Replace the existing flow meter with a magnetic flow meter and relocate the meter vault with sufficient straight pipe runs to meet the meter manufacturer's requirements.
- Install dewatering sump pumps in vaults and route discharge piping to a location that does not result in local ponding.

Woodsboro Booster Pump Station Improvements:

- Add one additional pump with a new VFD.
- Replace the existing VFD with a new VFD, including a spare Power Cell if needed for the new VFD configuration, and circuit boards.
- Add backup generator power sufficient to operate up to four (4) pumps, controls, and HVAC electrical loads at the pump station for a period of 72 hours
- Evaluate alternatives for upgrading the pump control valve actuators and replace the valve actuators with the final alternative selected by the City.
- Evaluate the capacity of the existing HVAC system to cool the electrical room with the revised heat loads from the new equipment and modify or replace as necessary.
- Replace the existing flow meter with a magnetic flow meter and relocate the meter vault to a location where it will be more accurate. For an accurate installation location that provides sufficient straight pipe runs to meet the meter manufacturer's requirements, the meter vault siting may require acquisition of additional easement by the City outside of the current pump station site.
- Install dewatering sump pumps in vaults and route discharge piping to a location that does not result in local ponding.

PROJECT TIMELINE:

2022	2022-2023				2023-2024
January - September	O	N	D	J	February - February
Design	Bid				Construction

Projected Schedule reflects City Council award in December 2021 with design completion in September 2022. Construction is anticipated to begin in February 2023 with a one-year duration.

COMPETITIVE SOLICITATION PROCESS:

This project was initially planned to be implemented in FY 2015-2016 and was procured in 2015 but was delayed due to other high priority projects.

HDR Engineering, Inc. was selected in February 2015 under RFQ 2014-08 to perform evaluation of the Mary Rhodes Pipeline, Phase 1 Segment 1 Unit Installation, which was one of three that were announced under the Water CIP Projects category of the RFQ. Six firms submitted under the Water CIP Projects category, and HDR Engineering, Inc. was one of six qualified firms selected in the Water CIP Projects category.

The selection committee with representatives from the Utilities Department and Engineering Services ranked HDR Engineering, Inc. based on five factors: 1) experience of the firm, 2) experience of the key personnel with specific experience in water and wastewater development, 3) project approach and management plan, 4) capacity to meet the project requirements and timelines, and 5) past performance.

HDR Engineering, Inc. has 30 years of experience as a Civil Engineering firm. HDR Engineering, Inc. has successfully designed several specialized projects. Some of the recent projects that HDR has designed are Alameda Street, Packery Channel Dredging & Beach Nourishment, Packery Channel Harvey Repairs, Packery Channel Structural Damage Restoration, and Comprehensive Feasibility Study for Seawall.

ALTERNATIVES:

Any alternative to awarding this contract to HDR, Inc., will delay the construction of the project and compromise the operation and reliability of the pump stations delivering raw water to the O.N. Stevens Water Treatment Plant that serves the City of Corpus Christi. The proposed improvements are needed to maintain pump stations at Bloomington and Woodsboro associated with the MRP raw water delivery system.

FINANCIAL IMPACT:

The fiscal impact for FY 2022 is an amount of \$831,000.00 with funding available from the Water Capital Fund.

FUNDING DETAIL:

The CIP shows that the project was planned for FY 2021. The project is ready to be implemented, and the expenditures shown in the CIP need to be revised to reflect the design of this project. The total expenditures to date on this project are approximately \$104,917.

Fund: **Water 2015 MRP2 (Fund 4095)**
Mission Elem: Water Distribution (041)
Project: Mary Rhodes Pipeline Phase 1 System Improvements (E13037)
Account: Design/Outside Consultants (550950)
Activity: E13037-01-4095-EXP
Amount \$ 831,000.00

RECOMMENDATION:

Staff recommends award of the professional services contract to HDR, Inc., in the amount of \$831,000 with design completion by September 2022. Construction is planned to start in February 2023 with the anticipated project completion in February 2024.

LIST OF SUPPORTING DOCUMENTS:

Location and Vicinity Maps
Professional Services Agreement
CIP Page