



## AGENDA MEMORANDUM

Action Item for the City Council Meeting of June 11, 2024

---

**DATE:** June 11, 2024

**TO:** Peter Zanoni, City Manager

**FROM:** Jeff H. Edmonds, P.E., Director of Engineering Services  
[jeffrey@cctexas.com](mailto:jeffrey@cctexas.com)  
(361) 826-3851

Nick Winkelmann, P.E., Interim Director of Water Systems and Support Services  
[nickw@cctexas.com](mailto:nickw@cctexas.com)  
(361) 826-1796

Josh Chronley, CTCD, Assistant Director of Finance & Procurement  
[joschc2@cctexas.com](mailto:joschc2@cctexas.com)  
(361) 826-3169

<b>Construction Contract Award</b> <b>Wesley Seale Dam Instrumentation Rehabilitation</b>
--

**CAPTION:**

Motion awarding a construction contract to Associated Construction Partners, Ltd., Boerne, Texas, for the Wesley Seale Dam Instrumentation Rehabilitation project to upgrade and modernize the dam monitoring instrumentation system in an amount of \$3,280,300.00, with funding available from the Water CIP Fund.

**SUMMARY:**

This motion approves a construction contract for the Wesley Seale Dam Instrumentation Rehabilitation project. The project includes the rehabilitation and modernization of the dam monitoring instrumentation system which is critical to dam safety and operations.

**BACKGROUND AND FINDINGS:**

The Wesley Seale Dam is located on the Nueces River, four miles west of Mathis, Texas, at the intersection of Live Oak, San Patricio, and Jim Wells counties which is about 32 miles northwest of the City of Corpus Christi. The dam is owned and operated by the City of Corpus Christi and impounds Lake Corpus Christi, which is used for municipal water supply and recreational purposes. At full capacity, the lake stores approximately 256,338 acre-feet of water with a surface area of 19,251 acres at a lake level 94 feet above sea level. The dam was commissioned on April 26, 1958, with earthen embankment sections, two concrete spillways and 60 crest gates with dam safety monitoring instrumentation. The crest gates are used when excessive water needs to be released during flood events.

This project fully rehabilitates and modernizes the dam safety system which protects the structures and monitors any movement of the concrete spillways and embankment sections with respect to variable lake level and water releases. The system consists of extensometers, piezometers, relief wells and other instrumentation which was last upgraded more than 20 years ago. These are critical items supporting the monitoring of a critical structures.

Extensometers measure the movement of the dam at the buttresses which transfer the load from the lake to the ground. At each spillway movement is measured by either extensometers at the downstream base or tiltmeters at the downstream top.

The project also includes the cleaning and evaluation of the existing piezometers, relief wells, horizontal drains, etc. and upgrading the security video system. Piezometers identify failure modes such as sliding or overturning by monitoring uplift pressures in the various underlying soil layers beneath the dam. Relief wells must function properly as they are meant to relieve pressures in lower layers by releasing the pressure downstream in a controlled manner.

Several processes will also be automated including precision surveying. A new survey system will include a permanent total station to laser survey the upstream face and other specific locations of the dam with high precision. The survey information will be recorded and captured as part of the instrumentation system. The system will provide an alert to operators if movement outside of normal parameters is recorded.

Specifically, this project consists of the following tasks:

- Installation of instrument panel power supply for data collection, and communications equipment.
- Installation of new fiber optic cable (FOC) conduits and FOC communication cables and patch panels.
- Installation of new stationary total station survey system, related wiring and components, and protective enclosure structure
- Installation of new vibrating wire extensometers.
- Installation of new vibrating wire piezometers.
- Installation of new wire leads from the instrumentation to their panels.
- Integrate monitoring instrumentation data into the CCW SCADA system.
- Installation of new vibrating wire tiltmeters and related conduits and wiring.
- Cleaning and video surveying relief wells and discharge lines.
- Cleaning and treating specific identified piezometers.
- Cleaning and video surveying horizontal drains.
- Providing a new inclinometer probe.
- Install new FOC and cabinets to support upgraded Homeland Security video camera monitoring.
- Replace the twenty-two (22) year-old FOC the dam-wide Homeland Security Camera system.
- Installation of new monitoring instruments on each spillway called tilt-meters to monitor the downstream portion of the spillway.

**PROJECT TIMELINE:**

2020-2024	2024				2024-2025
October - January	M	A	M	J	July - July
Design	Bid/Award				Construction

Projected Schedule reflects City Council award in June 2024 with anticipated construction completion by July 2025.

**COMPETITIVE SOLICITATION PROCESS:**

The Contracts and Procurement Department issued a Request for Bid on March 6, 2024 and the City received two bids. City analyzed the bids in accordance with the contract documents and determined that Associated Construction Partners, Ltd., is the lowest responsive and responsible bidder.

A summary of the bids is provided below:

BID SUMMARY	
CONTRACTOR	BASE BID
Associated Construction Partners, Ltd.	\$3,280,300.00
Hydro2Geotech LLC	\$3,897,600.00
<i>Engineer's Opinion of Probable Construction Cost</i>	<i>\$1,898,490.00</i>

The Engineer's Opinion of Probable Construction Cost is lower than the bids received due to the complexity of the project and the requirement for a diversity of specialized subcontractors working under one general contractor. Pricing increases were also found to be greater for the electronic monitoring equipment such as the tiltmeters, the total surveying station, and SCADA than was anticipated by the design engineer.

Associated Construction Partners, Ltd., has significant experience working on City projects and has successfully completed Laguna Madre WWTP Rehabilitation, Holly and Rand Morgan Elevated Storage Tanks Implementation, and Everhart Staples Lift Station.

**ALTERNATIVES:**

City Council could choose not to award the construction contract to the low bidder, Associated Construction Partners, Ltd. This would delay needed improvements and deter the effectiveness and compliance of dam safety operations at the Wesley Seale Dam.

**FISCAL IMPACT:**

The fiscal impact for FY 2024 is an amount of \$3,280,300.00 with funding available from the Water Capital Fund. The shortfall in funding will be transferred from the reserve.

**FUNDING DETAIL:**

Fund: **WTRCP RR 032950 2023 (Fund 4487)**  
Department: Water (45)  
Organization: Grants & Capital Projects Funds (89)  
Project: Wesley Seale Dam Instrumentation Rehabilitation (Project No. 20258)  
Account: Construction (550910)  
Activity: 20258-A-4487-EXP  
Amount: \$3,280,300.00

**RECOMMENDATION:**

Staff recommends awarding a construction contract to Associated Construction Partners, Ltd., for the Wesley Seale Dam Instrumentation Rehabilitation project in the amount of \$3,280,300.00. The construction duration is planned for 12 months from issuance of Notice to Proceed to begin construction in July 2024.

**LIST OF SUPPORTING DOCUMENTS:**

Bid Tabs  
Location and Vicinity Maps  
CIP Page  
PowerPoint Presentation