

4 August 2020
 To: Mayor and City Council members
 Completion of third ground storage tank of finished water at FM 521 and Shadow Creek Parkway nearing successful completion. Clay



FM 521 Ground Storage Tank Expansion

Scope: The proposed project includes the installation of a third ground storage tank, related piping, upgrade of existing pumps, and controls to provide additional storage and increased firm capacity at the FM 521 Water Pressurization Facility. The Project includes a 2,000' run of conduit and fiber to connect the plant to the fiber network located on Shadow Creek Parkway and provide continuity with the conduit run from Broadway along the FM 521 Waterline.

Justification: The City is in the process of extending both the FM 521 Waterline, and the McHard Road Waterline. The FM 521 Waterline is intended to transfer water from the City's planned Surface Water Treatment Plant.

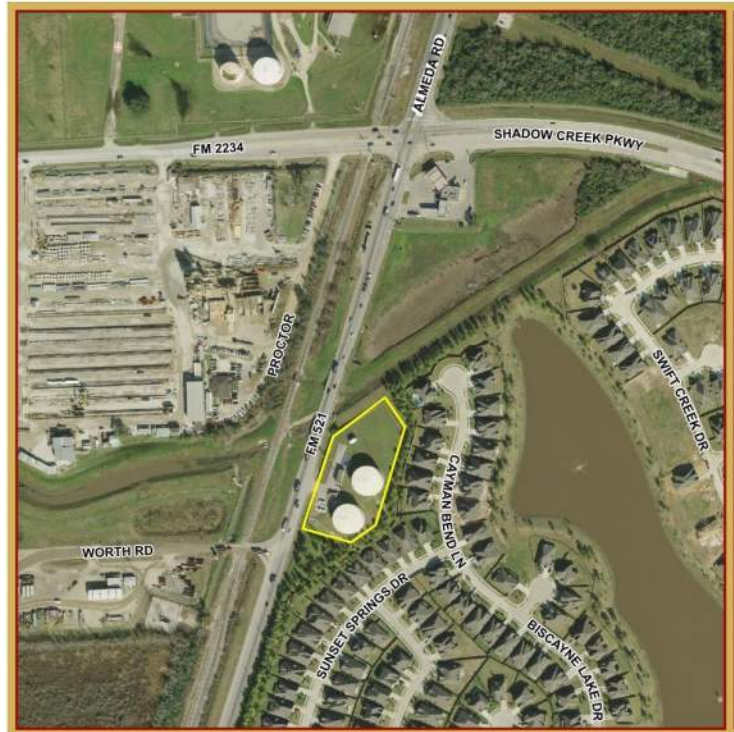
Project Manager: Jameson Appel

Construction Manager: Ronnie Hart

Designer: Costello, Inc.

Contractor: DN Tanks

Budget Info:



Funding Sources	Series	To Date	Future	Total Budget
General Revenue - Cash				-
Certificates of Obligation				-
Certificates of Obligation				-
W/S Revenue Bonds	2017C	152,525		152,525
W/S Revenue Bonds	2019B	2,759,975		2,759,975
Impact Fee – Debt				-
Impact Fee – Cash		2,759,975		2,759,975
Other Funding Sources (Fund Balance)		152,525		152,525
Total Funding Sources		5,825,000	-	5,825,000

Expenditures	To Date	Future	Total
PER			-
Land			-
Design	572,827		572,827
Construction	5,000,430		5,000,430
Construction Materials Testing	28,218		28,218
FF&E			-
Total Expenditures	5,601,475	-	5,601,475

Project Balance/Contingency	223,525
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Schedule:

Phase 1	Base Line	Current
Design Start	September-17	January-18
Bid Start	October-18	September-18
Construction Start	January-19	January-19
Proposed Construction Completion	January-20	June-20

Rain Days: 22

Phase 2	Base Line	Current
Design Start	March-19	March-19
Proposed Bid Start	July-19	October-19
Proposed Construction Start	January-20	January-20
Proposed Construction Completion	October-20	December-20

Rain Days: 0

Phase I: The initial phase of construction which is confined to the pre-cast concrete tank work was given final completion July 2020. Several work items were added to that contract:

- The installation of a receiving inlet for water from the Surface Water Plant was added to the tank construction work. This required a lengthy design coordinate effort with the transmission line designers prior to installation.
- Replacement of the plant entrance and parking areas
- Several yard piping design changes had to be made due to the lack of any as built plans for the facility. These items required re-design during construction adding time to the construction phase.

Phase II: The design for pumping and controls which was separated due to the specialty of the electrical/instrumentation (E&I) and plant control work not belonging with the tank and piping construction.

Phase I Highlights:

- Repair/replace asphalt driveway.
- Install 16" inlet riser pipe for the new tank.
- Sterilize the interior of the tank and fill tank with water.
- Leak test was performed successfully on new GST.
- Bacteria Test taken by COP Water Department confirmed negative results (passed).
- Interior tank Mixers are up and running in all three tanks.
- Substantial Completion was obtained on June 23, 2020, within schedule.
- **Deductive balancing change order for Phase I totaled \$159,222.08 in savings to the project.**
- Retainage has been released to the Contractor
- All close-out documents including: As-Builts, O&M manuals, Final Consent of Surety, Final Lien release, etc. delivered to City.

Upcoming Phase I Work Items:

- Start up of the New Tank once controls software is updated and installed.

Phase II Highlights:

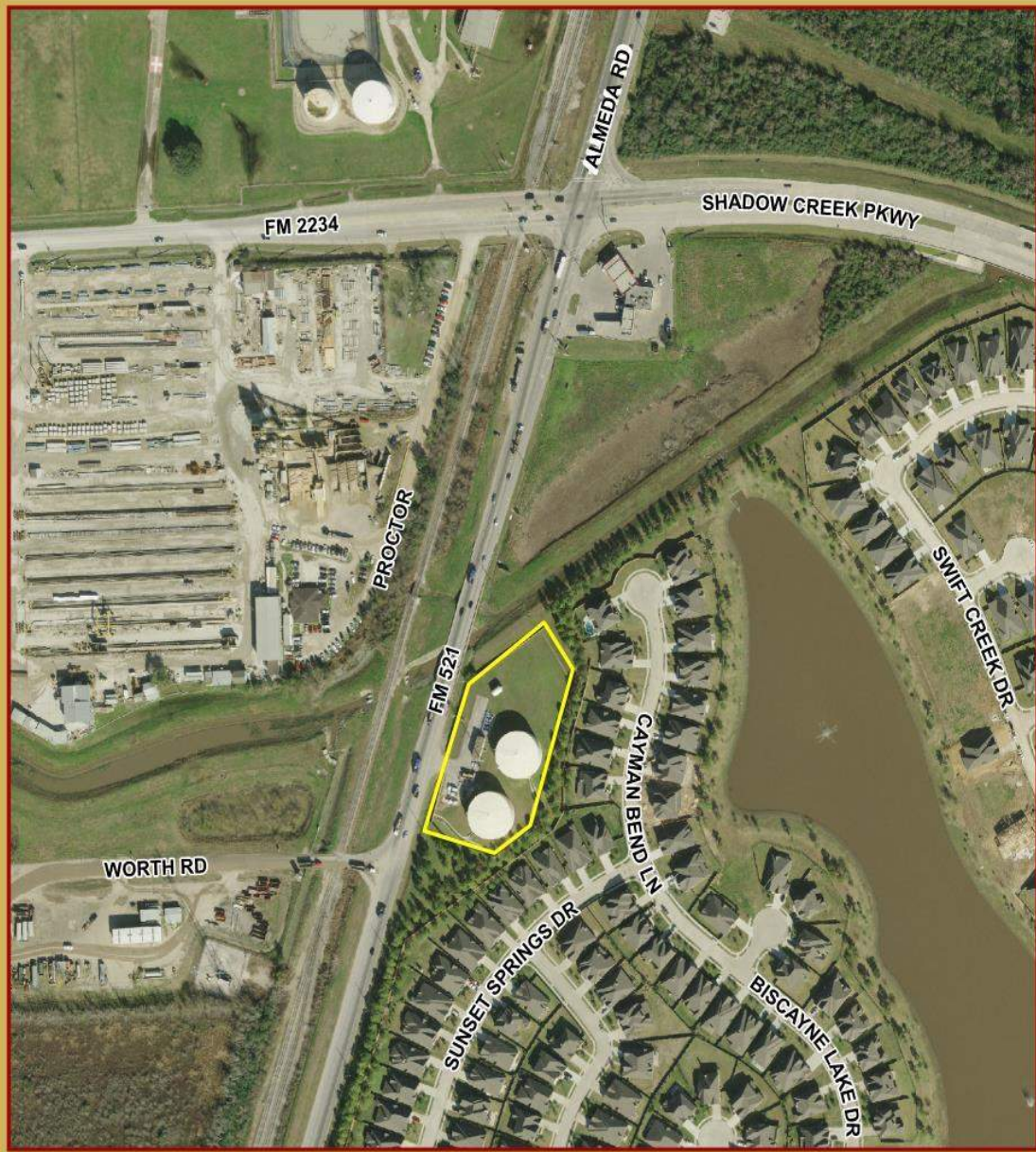
- Installed all conduits for instrumentation on each of the three tanks.
- Pulling wire through conduits for terminations at both ends
- Connect power for control panel and mixers in all three tanks.
- Mounting control panel inside maintenance building.
- Exercised the valves.
- Contractor will demobilize from the site until remaining equipment (pumps and generators) arrive. Pumps and Generator units are now becoming long lead time and delayed delivery items due to COVID issues with manufacturers. Staff is adapting by modifying specifications to utilize standard equipment sizes which in many cases are available on the shelf.

Upcoming Phase II Work Items:

- Generator has been ordered, tentative for January 2021.
- Demo existing generator and generator pad.
- Build new Generator pad and install generator.
- New Booster Pumps have been ordered, tentative install is for December.
- Motor Control Center replacement will require a 2-week plant shutdown, coordination with the Water Production department is underway.
- Fiberoptic conduit run to the water plant.

Previous Memos: 10/26/2017, 6/28/2018, 11/08/2018, 2/07/2019, 4/18/19, 6/28/2019, 8/1/2019, 10/3/2019, 11/21/19, 4/30/2020

Project Location Map:



CITY OF PEARLAND

FM 521
Water Plant

 Property Line



This product is for informational purposes and may not have been prepared for or be suitable for legal, engineering, or surveying purposes. It does not represent an on-the-ground survey and represents only the approximate relative location of property boundaries.

1 inch = 300 feet

JUNE 2018
GIS DEPARTMENT



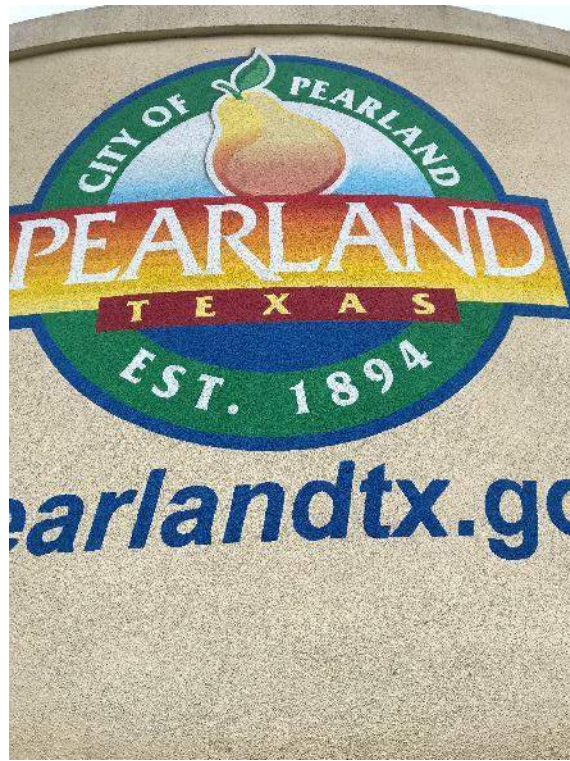
Construction Photos:



Embeds on the tank to install new 16" riser pipe.



Installing 16" riser pipe for water from Surface Water Plant



Painted COP logo



New control panel for the tank



Parking lott cement base placed before asphalt



Base for the parking lott



Installing Asphalt



Placing asphalt and compacting it in using a roller



Placing asphalt lifts



Parking lot asphalt



Completed Asphalt



Gate track asphalt transition



Completed asphalt



Front entrance/ Gate