



BAWA EAST SURFACE WATER PLANT

Scope: Construct a new 6 MGD Surface Water Treatment Plant with capacity to meet storage and redundancy needs to provide required drinking water supply for BAWA.

Justification: The facility will meet currently expected projected growth and drinking water needs for Baytown and surrounding area customers.



Project Manager: Andrea Brinkley

Designer: Jones & Carter/AECOM

Contractor: Plant: Pepper Lawson Waterworks; Offsite Water Transmission: Angel Brothers

Budget Info:

	<i>Budget</i>	<i>Encumbered</i>	<i>Change Orders</i>	<i>Balance</i>
<i>Prelim. Eng.</i>				\$0.00
<i>Land</i>				\$0.00
<i>Engineering</i>	\$4,941,905.00	\$4,403,159.11	\$486,535.00	\$52,210.89
<i>Construction</i>	\$48,400,000	\$46,826,961.11	-58,900.00	\$1,631,938.89
<i>FF&E</i>	\$518,000.00	\$455,165.42		\$62,834.58
<i>Contingency</i>	\$1,582,000.00			\$1,582,000.00
Total	\$55,441,905.00	\$51,685,285.64	\$427,635.00	\$3,328,984.36

Schedule Info:

	<i>Base Line</i>	<i>Current</i>
<i>Design Start</i>	November-13	November-13
<i>Bid Start</i>	February-16	February-16
<i>Construction Start</i>	August-16	August-16
<i>Construction Completion</i>	May-21	October-20

Highlights:

NTP issued on May 16, 2018 with an ending date of May 15, 2021. Construction is trending slightly ahead of schedule at 95% completion. CO#11 \$188,216 is was approved at the BAWA August 2020 meeting. **Additional changes are forthcoming to finalize costs associated with the design team.**

Offsite work: Roadway, Water, Sanitary, Drainage.

- Roadway: TGS agreement for road in place, roadway is 100% complete.
- Water Supply Agreement/Connection: continuing coordination with CCID#1 related to increasing supply when the plant comes online. This agreement for Water Supply to CCID #1 and #2 is in review.
- Site Sanitary: Coordination with CCID #1 for a sanitary septic system, on TGS property. Environmental work is complete. This is the most cost effective option.
- Drainage: CCID#1 will accommodate the general solution for the storm drainage outfall for the plant site and drainage for the road by agreement; **Ongoing discussion pending now, in advance of release of water due to plant commissioning.** Roadway access as public road is in discussion.

Offsite 20" in. water transmission line: The project is 100% complete and in service to provide water to the plant during commissioning. Once commissioning and TCEQ approval is complete, flows will be reversed and will feed the distribution system.

Low Lift Pump station/ Forebay: Units are 100% complete.

Rapid Mixer and Pulsed Bed Clarifier: Contractor completed the installation of chemical pipes on rapid mix wall. Issue with ferric feed was repaired. Meeting held to discuss weir installation after stop logs between pulsed bed clarifier basin and disinfection basin & TCEQ compliance for flow.

Disinfection basin: All change work to add disinfection zone sample taps complete. Contractor attempted placing mortar on basin wall cracks; but cracking and leakage persist will need epoxy sealing on certain cracks and further evaluation.

Backwash Filter/ Equalization Basin: Issues with filter solenoid, instrumentation programming, weir programming ongoing.

Electrical Building: Transformer upgrade per CO #9 underway.

Operations Building: 98% completion. Furniture installation complete. Appliance installation is underway; issues with 1st floor chemical feed connections. Welders continued to work on building exterior bulk tank steps with railings, one of four are completed. Contractor repaired broken ferric line but still has cleanup work to do in

chemical trench. Sub-contractor completed updates and corrections to SCADA programming. Will continue to monitor and correct SCADA.

Transfer Pump Station: Unit is 96 % complete. Electrical transformer is upsizing work per CO #10 underway.

High Service Pump Station: Unit is 100% complete.

Sludge Pump Station/Lagoons: Need to disconnect chemical and storm lines from sanitary and connect to sludge line – included in CO #11.

Plant Generator: Generator has been load tested. Transfer switch is operational. Issue regarding power surge and failure to transfer being reviewed, parts repaired, will be re-load tested.

Concrete Paving: All paving is complete. City staff painted required fire lane.

Work Plan for Commissioning: weekly meetings with project team on workflow, submittals, sequence of work.

- **Phase 1: August 3- 20; Delayed due to construction of disinfection sample points per CO #10; BAWA operators began testing water every 4 hours.**
- **Phase 2: September 4 – 21 Delayed to start Ph 2 due to Hurricane Laura and equipment failures and wier programming;**
- **Phase 3: (pending) September 22 – October 6; subject to change for equipment failures.**

EOR completed walk through for primary electrical building medium voltage, generators, operations of electrical building, high service and low lift electrical, SCADA and control systems, process observation, architectural, as well as mechanical and plumbing. List of issues for repair forwarded to contractor and BAWA on 9/4/20.

External Coordination:

- Coordination with Coastal Water Authority: CWA constructed stop log as discussed to ensure canal water supply is deep enough for pumps during Plant startup & Commissioning.
- Coordination with Public Affairs: ongoing coordination on timeline and logistics for Ribbon Cutting (Late October 2020)
- Coordination with TCEQ: CT Study submitted to TCEQ, initial information received July 29. Pending review and formal approval.

Upcoming work:

Continue Commissioning. Maintain weekly Project team meetings. Work out issues prior to full scale testing as part of Ph 2. Carollo team continues to provide benefit.

Evaluate impact on full scale testing and timing of submission of water sample to TCEQ.

Submit all requirements and documentation to TCEQ; per Step 1, 2. Completed corrosion control study; EOR requested to submit protocols to TCEQ.

Current Project completion projection: The original construction schedule projected a completion May of 2021. This latest update is October 2020.

