



CITY OF HOUSTON
Houston Public Works

DESIGN-BUILD SERVICES

Northeast Water Purification Plant Expansion

May 6, 2020



Drone Site Map: May 1, 2020





Construction Progress – EWP 4 Raw Water Corridor

- **Storm Drainage work**
- **Temporary Road Construction in West Corridor**
- **Cathodic Protection Installation**

Lime stabilizing Corridor Road



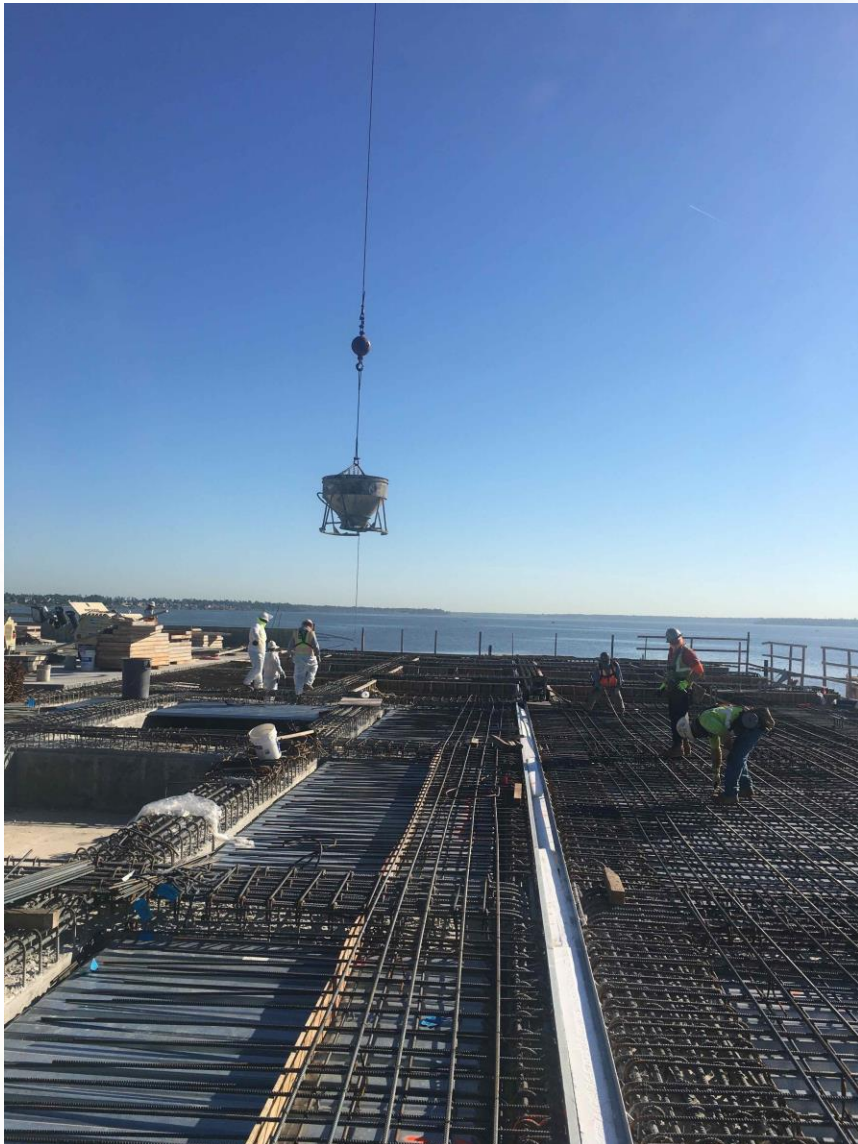


Construction Progress – Influent Pump Station (IPS)

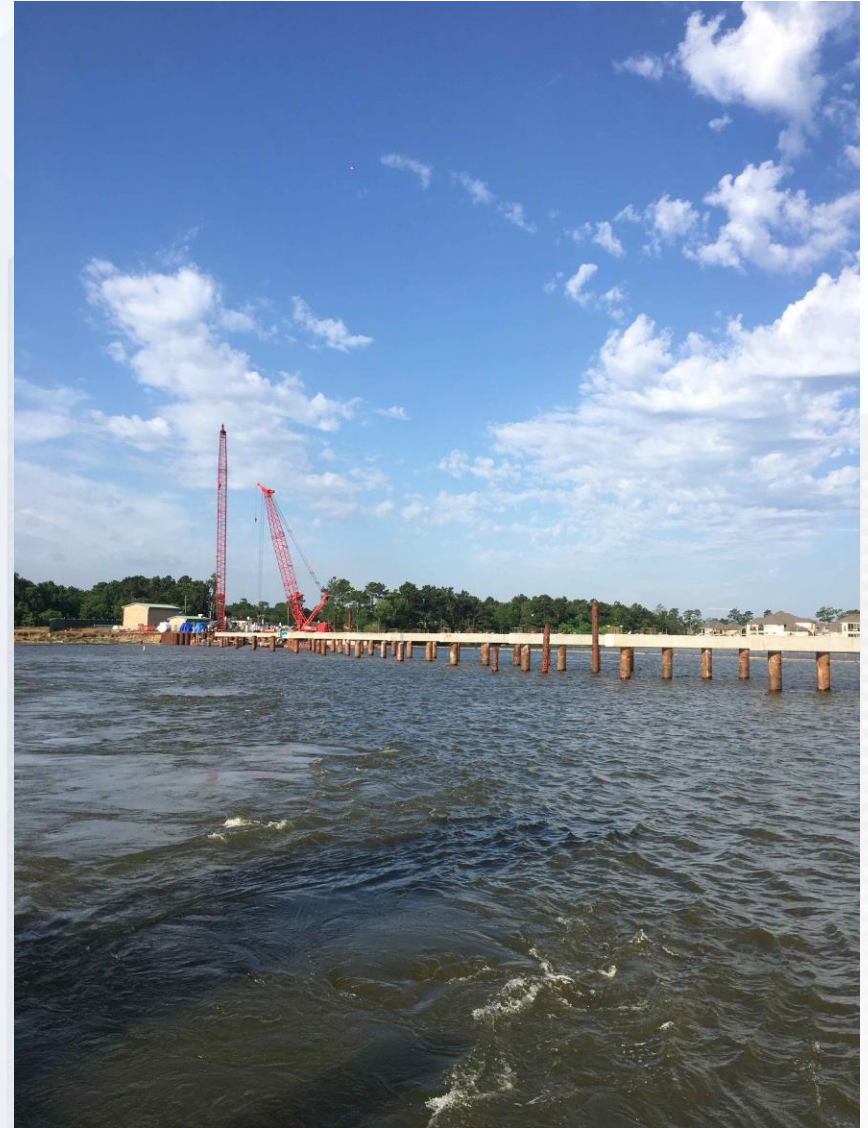
- Platform concrete deck sections (SE Quadrant)
- Precast Bridge Beams Placement



Platform concrete deck sections (SE Quadrant)

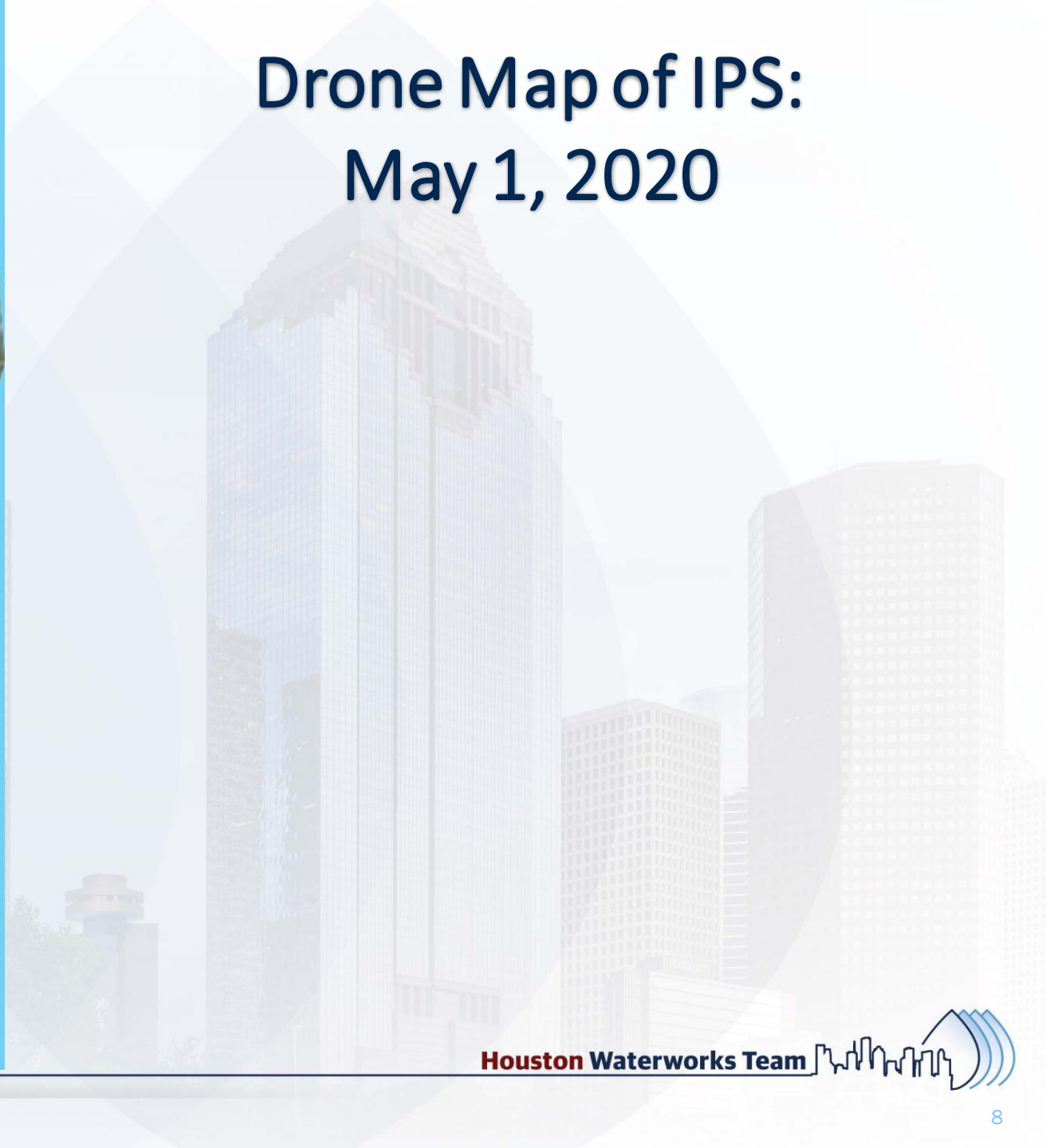


Precast Bridge Beams Placement





Drone Map of IPS: May 1, 2020





Construction Progress – Site Electrical

- **MDB111A & B Eastward Duct Bank Installation**
- **Existing Plant Duct Bank Installation Near Substation**



MDB111A & B Eastward Duct Bank Installation



MDB111A & B Eastward Duct Bank Installation



Existing Plant Duct Bank Installation



Existing Plant Duct Bank Installation

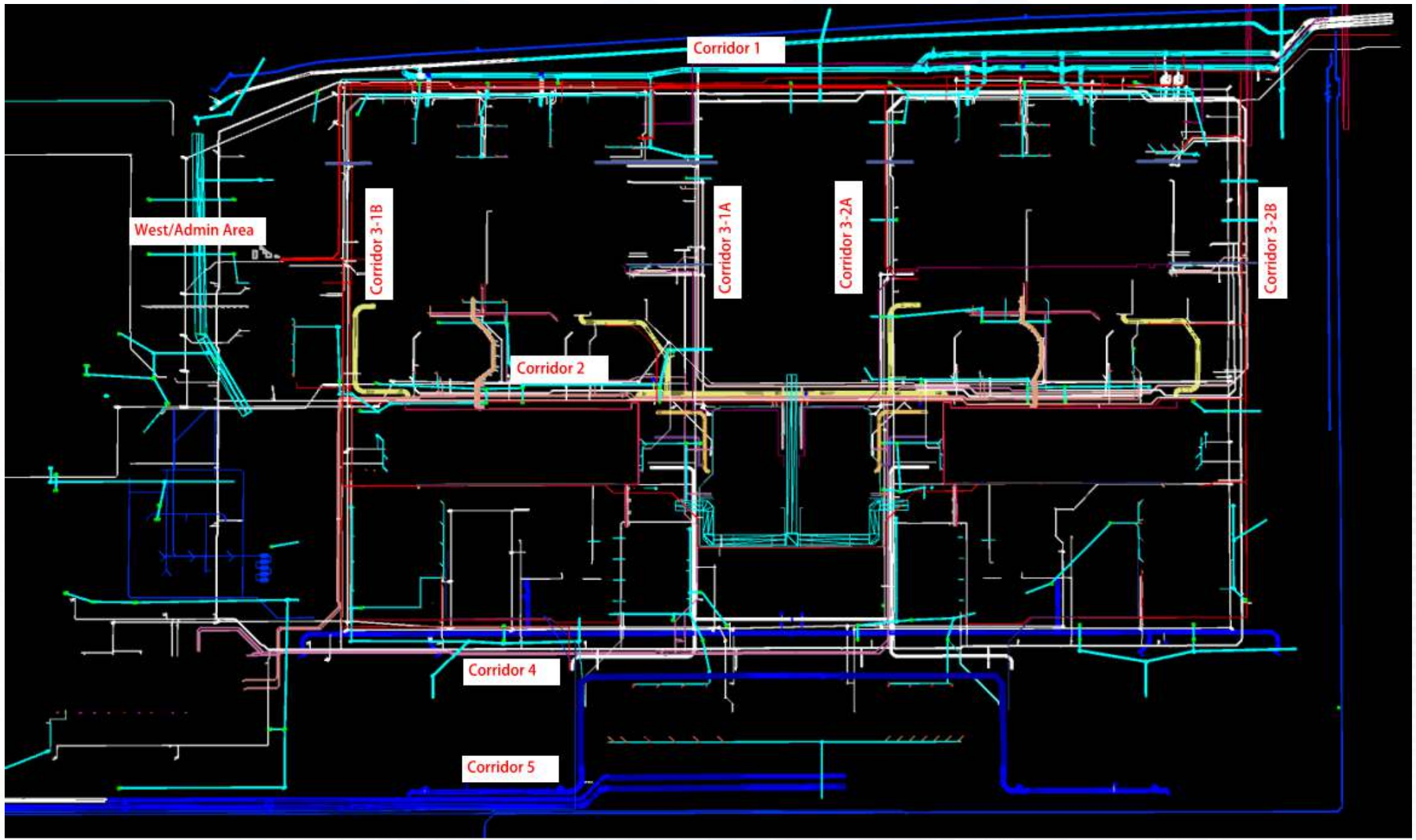




Construction Progress – Yard Piping

- **Installing and welding 108” RW steel pipe in Corridor 1, and started installing the second North run of 108” RW piping**
- **Installing 12” PW ductile iron pipe in Corridor 3-1A**
- **Installing 24” PDR ductile iron pipe in Corridor 3**
- **Installing and welding 84” & 96” FW steel pipe in Corridor 4**
- **Installing 2-16” CEN ductile iron pipe in Corridor 4**
- **Installing 6” PDR piping in Corridor 4 between 111 & HSPS 1**
- **Installing and welding 120” FW steel pipe in Corridor 5 and by HSPS**
- **Installing 2-20” TSL ductile iron pipe in Corridor 4 to Dewatering Bldg**
- **Receiving and inspecting HWT procured valves at warehouse**





Installing 108" RW steel pipe, and set wye in Corridor 1



Installing second North run of 108" RW steel pipe



Installing 12" PW piping and valves in Corridor 3-1A



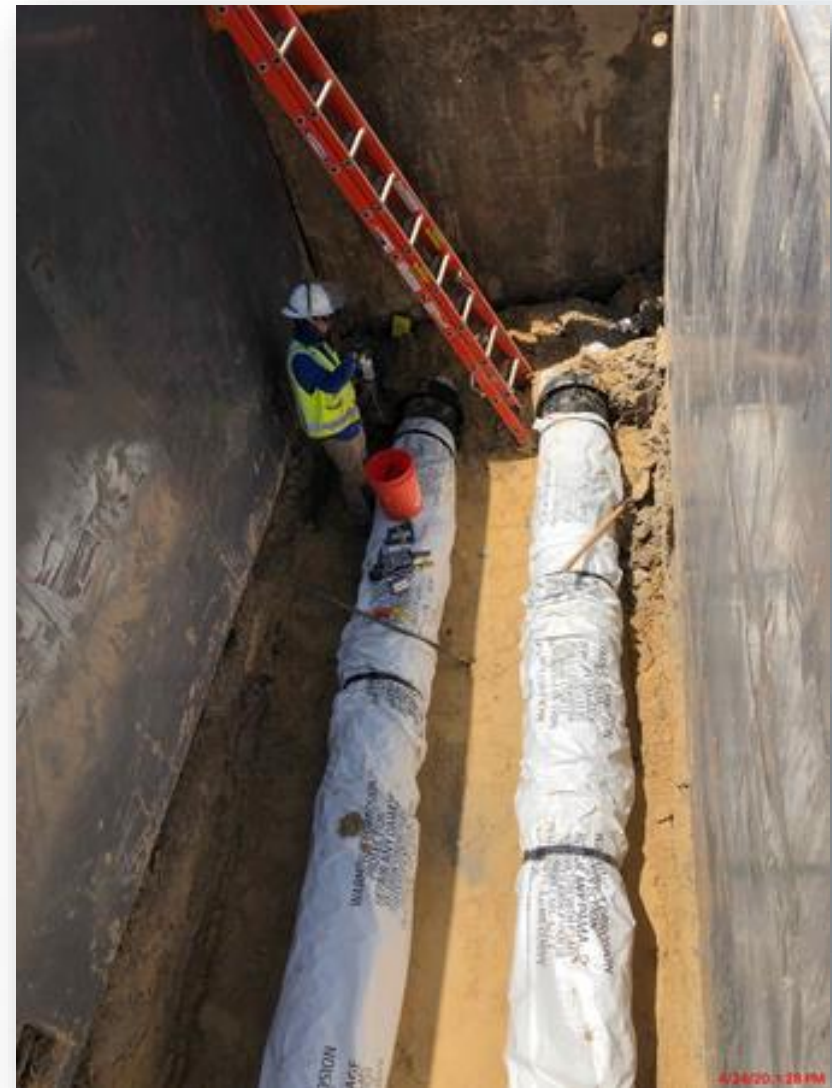
Installing 24" PDR piping from MH603 in Corridor 3-1A



Installed 84" BFV on FW Line off GST-2 in Corridor 4



Installing 2-16" CEN pipe lines in Corridor 4



Installing 6" PDR piping in Corridor 4 between 111 & HSPS 1



Installing 120" FW steel pipe, harness, and tees north of HSPS 1



Installing 120" FW steel pipe in Corridor 5



Installing 2-20" TSL pipe lines in Corridor 4 to Dewatering Bldg



Receiving and inspecting HWT procured valves at warehouse





Construction Progress – Site Civil

Temporary Parking and Staging (JSG):

- Hydroseeded disturbed areas by temporary parking & staging lots.

Pipe Relocates in proposed 120" FW pipe zone (JSG):

- Potholed to locate 4" SSFM and 6" Temp Const Water lines
- Laying 4" SSFM to be relocated

Asphalt Paving (3C Paving Construction)

- Leveled, prepped, and paved Trailer City 2 driveways
- Leveled, prepped, and paved Trailer City 1 walkways



Hydroseeded disturbed areas by temp parking and staging



Laying 4" SSFM to be relocated



Leveled, prepped, and asphalt paved Trailer City 2 Driveways



Asphalt paved Trailer City 2 Driveways



Prepped and paved Trailer City 1 Walkways





Construction Progress – Central Plant

281-FILTER MODULE 1 :

- Forming/Reinforcing/Pouring Walls.
- Pouring Final Filter Slab (Filter 1)
- Forming/Reinforcing Filter 1.
- Pouring Lower Manifold Deck 5/6.
- Reinforcing/Forming Lower Manifold Deck $\frac{3}{4}$.
- Leaktesting Filter 12-

291-TRANSFER PUMP STATION 1:

- Wall C4 & C6 Concrete Pour 2nd Lift
- Continued Pump Can Area Backfill
- Continued Installing Double Containment Plumbing Pipes under Analyzer Room
- Tie rebar and form up walls B4, A6, and columns 2nd lift
- Tie Rebar 4th lift of Pump Cans Encasement

311-POST CHEMICAL FACILITY 1 SH/CS :

- Installation of Mud Slab formwork for Tank and sump area.
- Installation of Vapor Barrier.

312- POST CHEMICAL FACILITY 2

- 312 Facility excavation.

282 -FILTER MODULE 2:

- Reinforcing/Pouring OZW Inlet Box(West) Walls.
- Reinforcing/Pouring OZW Inlet Box(East) Slab.
- Underslab Steel Piping Welding.
- Erecting Second Tower Crane.

292-TRANSFER PUMP STATION 2:

- Pump Can Area Excavation



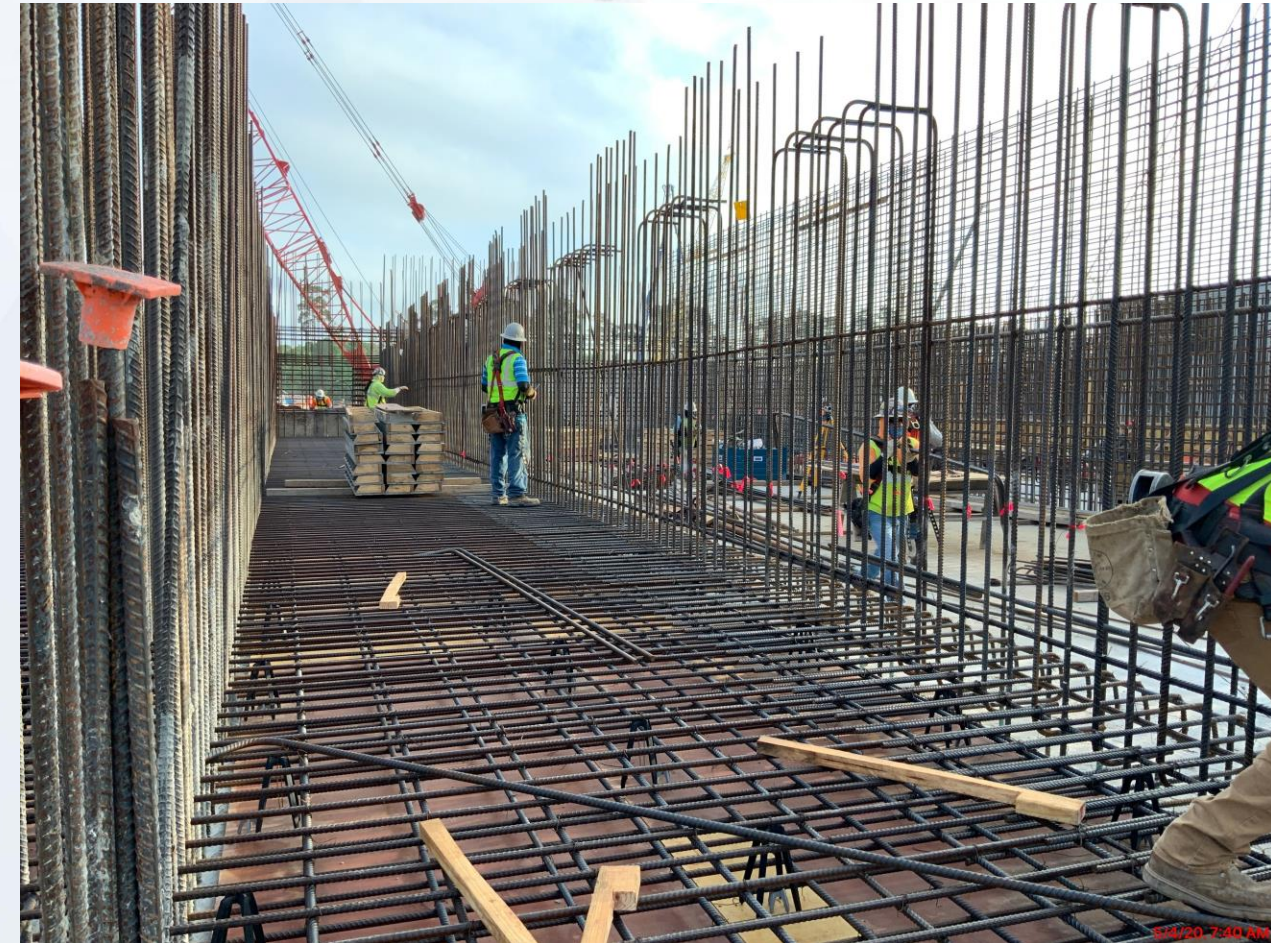
281-FILTER MODULE-Reinforcing/Forming/Pouring Walls



281-FILTER MODULE- Final Filter Slab Pour (Filter 1)



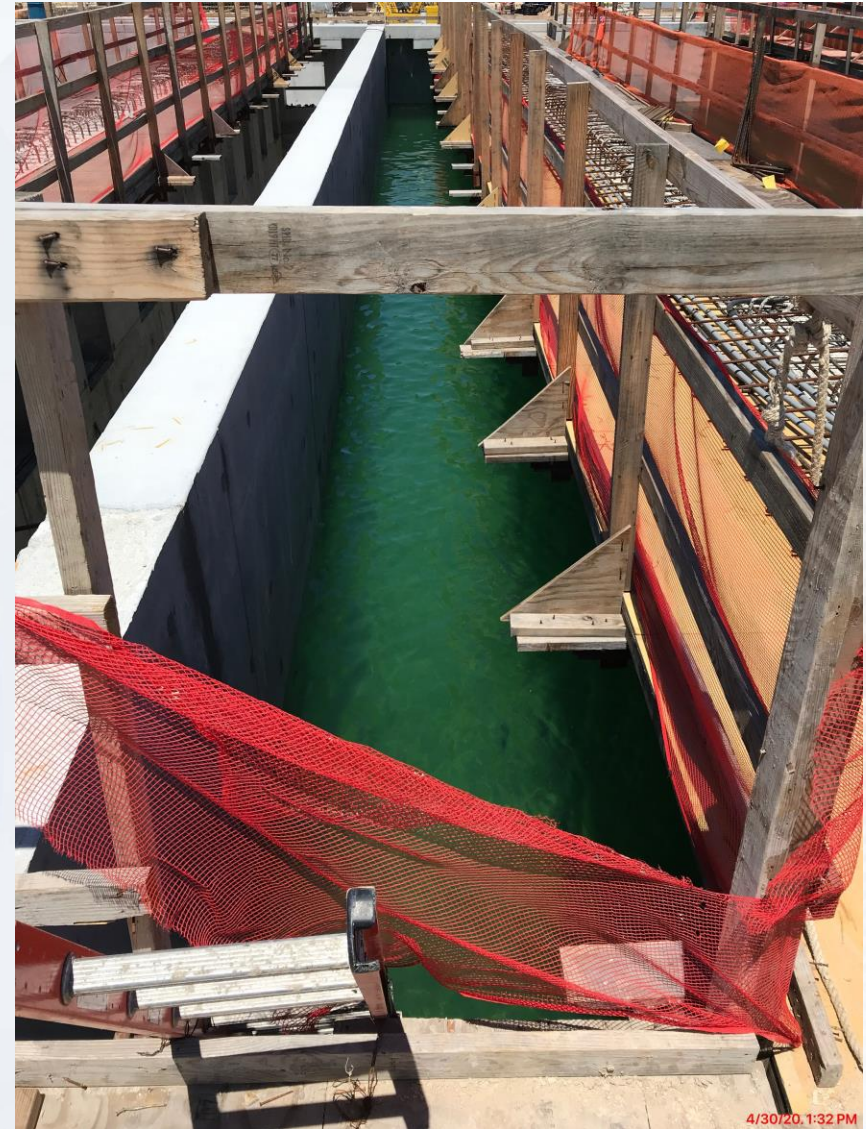
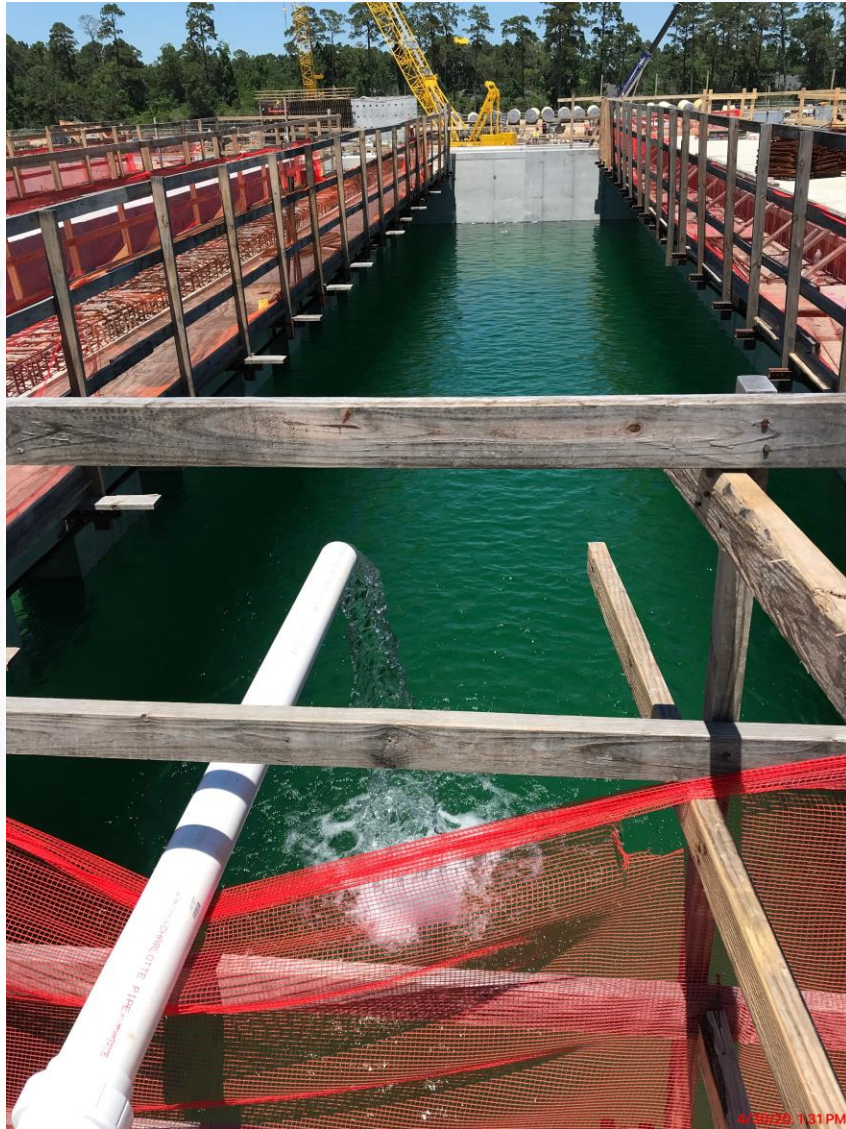
281-FILTER MODULE- Lower Manifold Decks 3/4 Forming/Reinforcement



281-FILTER MODULE- Pouring Lower Manifold Decks 5/6



281-FILTER MODULE- Leak-testing Filter 12



281-FILTER MODULE- West Vs East Side



291– Walls C4 & C6 2nd Lift Concrete Pour



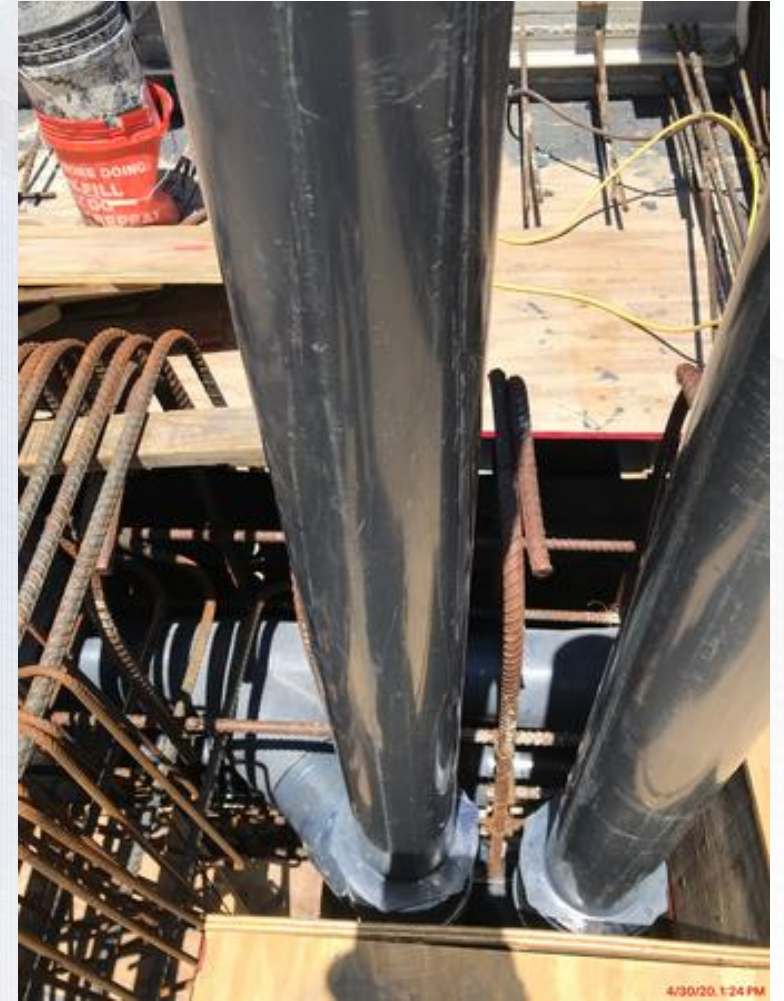
291– Tie Rebar and form up walls B4 & A6 & Columns 2nd lift



291– Continue Pump Can Area Backfill and Tie rebar at Pump Cans encasements 4th lift



291- Install Double Containment Piping under Analyzer Room - Continued



311-PostChemical: Installation of Mud Slab formwork for Tank and sump area.



311-PostChemical: Installation of Vapor Barrier –Tank farm



311-PostChemical: Installation of Vapor Barrier –Tank farm



Central Plant – 1st Phase



282- Reinforcing/Pouring OZW Inlet Box(West) Walls



282-FILTER MODULE 2- Reinforcing/Pouring OZW Inlet Box (East) Slab



282-FILTER MODULE 2- Welding Under-slab Large/Medium Bore Piping



282-FILTER MODULE 2- Erecting Second Tower Crane



6/5/20 9:08 AM

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292 – Pump Can Area Excavation



CENTRAL PLANT – 2nd PHASE





Construction Progress – LREQ Basins Facilities 601/602

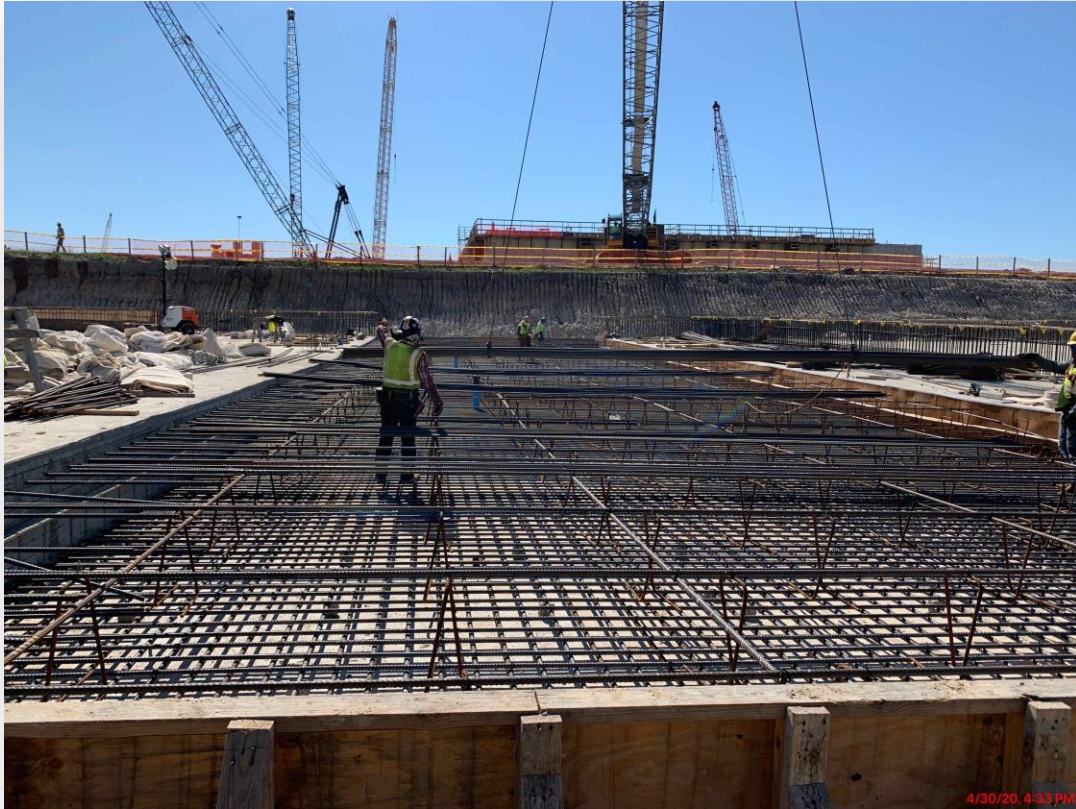
- **Concrete Pour for Main Base Slab #6**
- **Rebar Installation for Main Base Slab #9**
- **Rebar Installation and Pour for Main Base Slab #10**
- **Install Formwork for 601 Pump Station Walls**



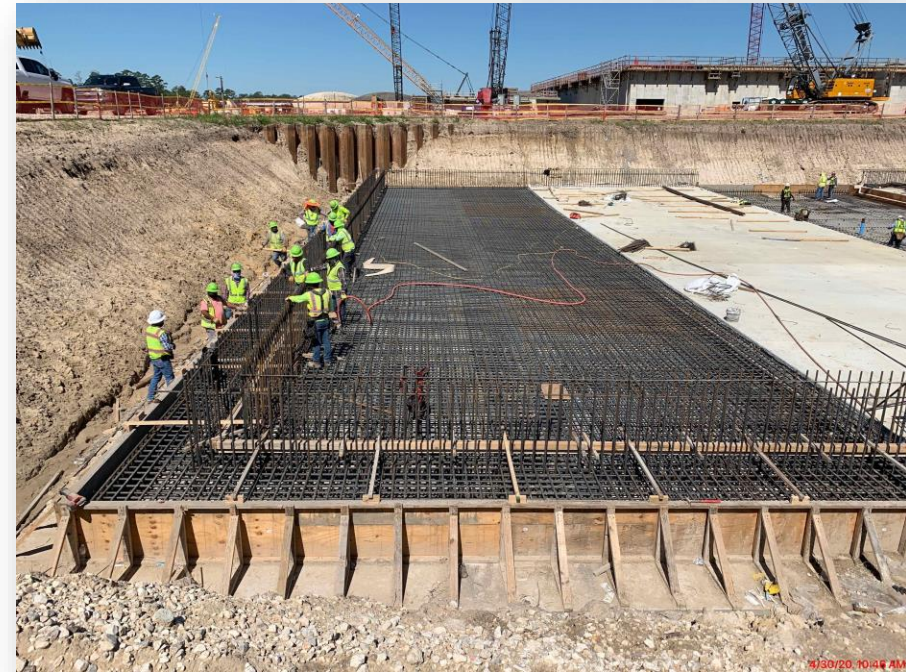
Concrete Pour for Main Base Slab #6



Rebar Installation for Main Base Slab #9



Rebar Installation and Pour for Main Base Slab #10



Install Formwork for 601 Pump Station Walls





Construction Progress – North Plant

221-Rapid Mix Train 1 :

- Forming/Reinforcing/Pouring Walls

222-Rapid Mix Train 2:

- Erect Wall Rebar and Formwork

241-FlocSed Train 1

- 24" PDR installation

242-FlocSed Train 2

- Ported Wall PW-1 FRP
- Distribution Channel Wall FRP
- Slab-on-Grade FRP
- 96" CW encasement

252-Ozone Contractor Train 2:

- Preliminary Leak Testing of Inlet and Outlet Box
- Damp Proofing and Backfilling Inlet Box

502-Gravity Thickener Complex 2

- Basin #4 Mud Mat Prep and start Rebar Placement
- Service Bldg Walls FRP
- Thickened Sludge Sump Walls Basin #3 FRP

611-Liquid Residuals Clarifier Facility 1:

- Valve Vault of OF sump backfill
- Slab-on-Grade FRP



Facility 221 WL-2 F/R/P



Facility 242 Ported Wall F/R/P



Facility 242 Ported Wall F/R/P



4/30/20, 1:02 PM

Facility 242 96" CW Pipe Encasement



Facility 242 SL-33 F/R/P



5/2/20 8:12 AM

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Facility 502 Basin #3 TSL Sump and Service Bldg Walls F/R/P



4/29/20, 10:54 AM

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Facility 502 Service Bldg Walls F/R/P



Facility 502 Basin #4 Mud Matt and Rebar Placement



5/26/20 2:17 PM

Facility 611 SL-11 F/R/P and Meter Vault and OF Sump Backfill





Construction Progress – South Plant

- **Backfilling the 102" pipe at GST 361**
- **Excavating for the installation of 102" pipe at GST 361**
- **Mass concrete pour at Facility 520**
- **Scaffolding set up for masonry installation Facility 111**
- **Pump can locking slab installation at HSPS 401**



Backfilling the 102" pipe at GST 361



Excavating for the installation of 102" pipe at GST 361



Mass concrete pour at Facility 520



Scaffolding set up for masonry installation Facility 111



Pump can locking slab installation at HSPS 401





Construction Progress – Administration Building

- Re-Formed the Elevator Pit
- Placed Foundation Base in the BW/AB
- Encased PDR Pipe
- Formed/Reinforced Grade Beams and Footings in the MB



Re-Forming of the Elevator Pit



Placement of Foundation Base in the AB/BW



Placement of Pipe Encasement for the PDR



Forming/Reinforcing of Grade Beams & Footings in the MB



Forming/Reinforcing of Grade Beams & Footings in the MB



