



**CITY OF HOUSTON**  
Houston Public Works

# DESIGN-BUILD SERVICES

# Northeast Water Purification Plant Expansion

**June 16, 2021**

**Houston Waterworks Team**







# Site Drone Map June 8, 2021



# Construction Progress – Intake Pump Station (IPS)

- Vertical Turbine Pump Installation in the IPS pump room
- Continue electrical work inside the electrical room at 142
- Translucent panels and Louvers installation at the IPS
- Overhead Door Installation at 142
- Metal roof deck installation at the Electrical Building 152





# Vertical Turbine Pump Installation in the IPS pump room





# Installation of electrical equipment in the electrical room at 142



# Translucent panels and Louvers installation at the IPS



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# Overhead Door Installation at 142



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# Metal roof deck installation at the Electrical Building 152







# Construction Progress – Site Electrical

- 291 Transformer Pads
- Bus Duct Installed in Facility 111
- ABB Training
- 111 Energization

# 291 Transformer Pads





# Bus Duct Installed in Facility 111





# ABB Training





# 111 Energization



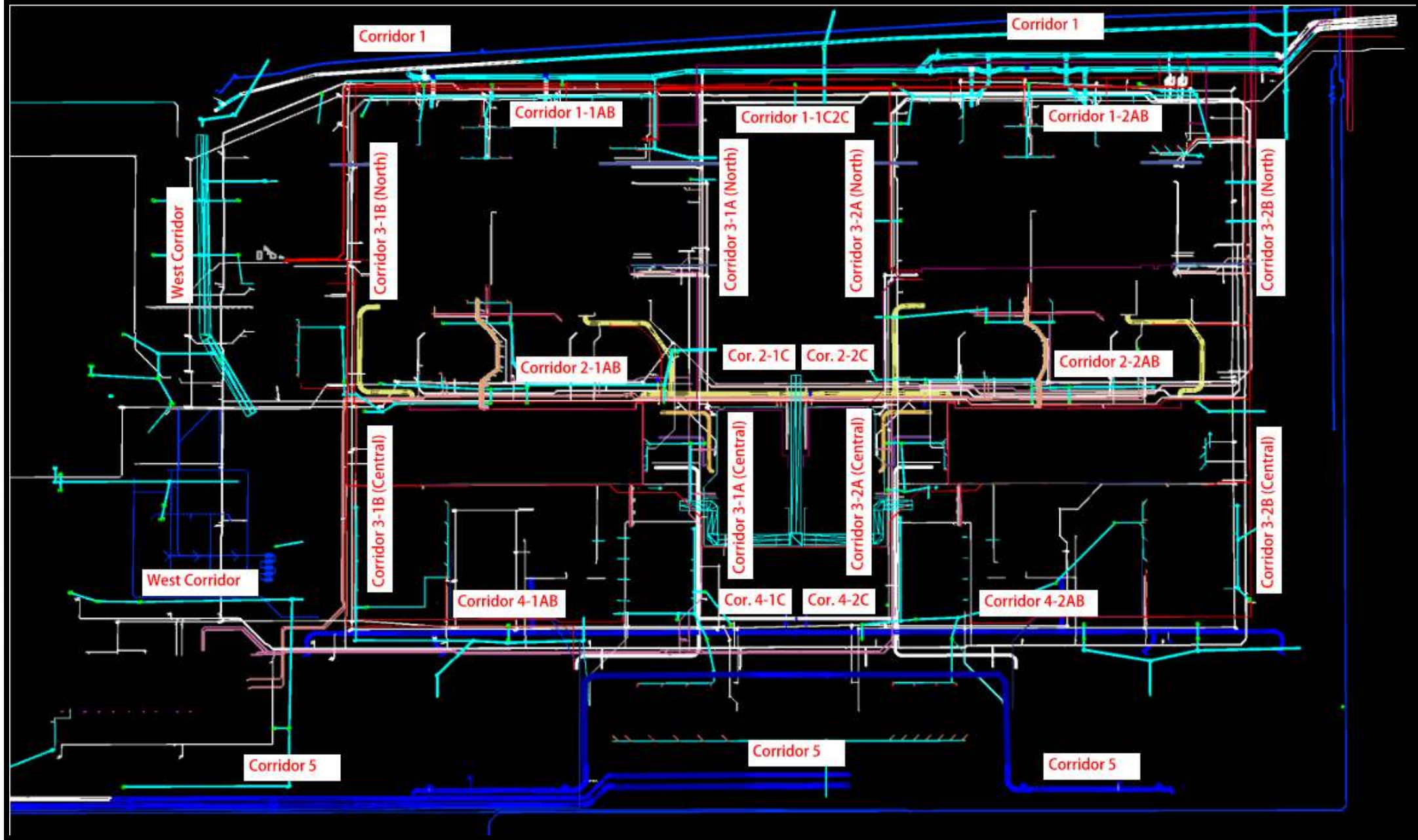


# Construction Progress – Yard Piping

- Completed tie-ins of the 72” BWW pipe at Facilities 281 and 601 in C3-1A
- Installing 12” Storm Pipe from Fac 281 Roof Drains in Corridor 3-1A
- Installing 2-14” TSL pipes in Corridor 2-1AB
- Installing 6” PW pipe to Fac 281 in Corridor 3-1B Central
- Installing 6” SSF pipe and manhole at Fac 281 in Corridor 3-1B Central
- Installing 3-3/4” Sample (SA) Lines in C3-1B North
- Installing the 4” Natural Gas (NG) Line in C3-1B North
- Installing 6” SSG pipe at Fac 080 in West Corridor
- Setting the 84” FW distribution line in Corridor 5 crossing Road 1
- Installing the 120” FW header piping in Corridor 5 – Phase 2









# Completed tie-ins of the 72" BWW pipe at Facilities 281 and 601 in C3-1A





# Installing 12" Storm Pipe from Fac 281 Roof Drains in Corridor 3-1A





# Installing 2-14" TSL pipes in Corridor 2-1AB





# Installing 6" PW pipe to Fac 281 in Corridor 3-1B Central





# Installing 6" SSF pipe and MH120 at Fac 281 in Corridor 3-1B Central



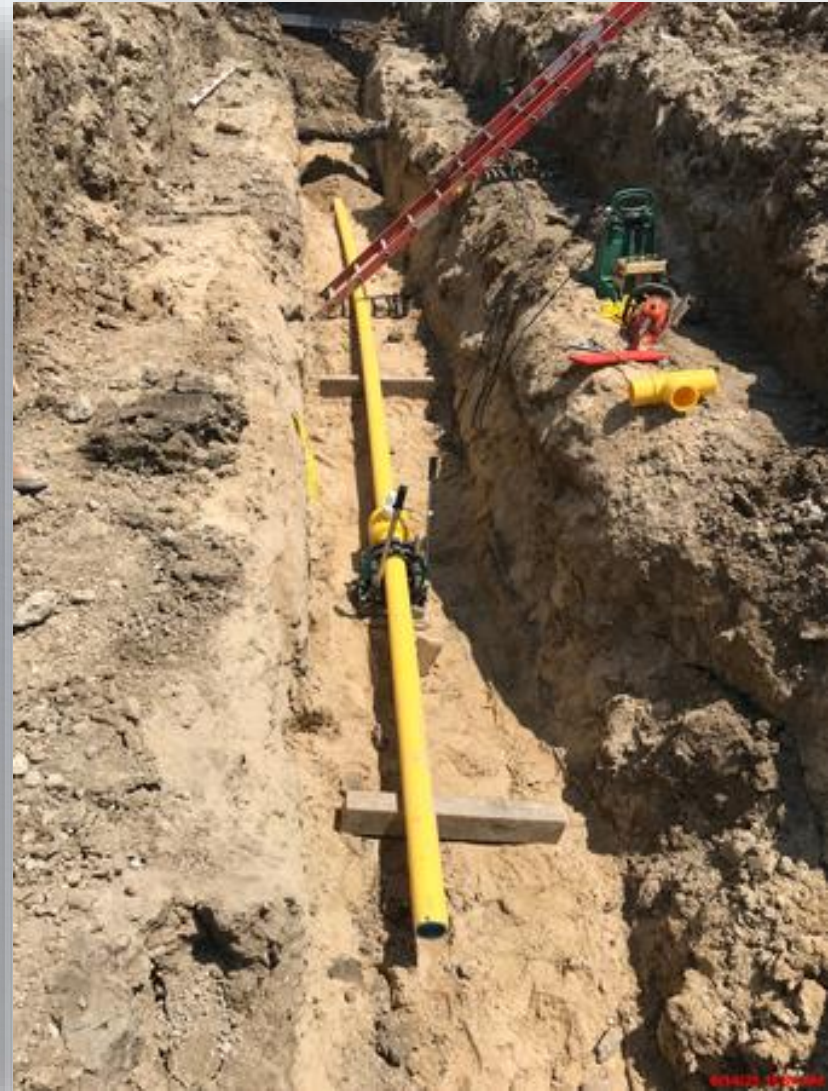


# Installing 3-3/4" Sample (SA) Lines in C3-1B North





# Installing the 4" Natural Gas (NG) Line in C3-1B North





# Installing 6" SSG pipe at Fac 080 in West Corridor





# Installing the 84" FW distribution line in Corridor 5 crossing Road 1





# Installing the 120" FW header piping in Corridor 5 – Phase 2







# Construction Progress – Central Plant

## 281-FILTER MODULE 1 :

- Installing UD Blocks-Filter 11
- MEP work in Gallery
- Installing Cable Tray & Supports
- Installing Hand-Rails on Manifold Walkways

## 291-TRANSFER PUMP STATION 1:

- Install Electrical Room Cable Trays - Ongoing
- Install Roofing TPO - Ongoing
- Install T-Supports on Top Deck – Ongoing
- Installed Stud Wall In Electrical Room
- Delivered & Placed Rooftop HVAC Units

## 292-TRANSFER PUMP STATION 2:

- Pour West Wet Well Columns (3) and Interior 84" Block-outs (3)

## 311-POST CHEMICAL FACILITY 1 SH/CS :

- CMU Clean and Quality repairs.
- Installing Deck and Ledger System.
- Started installation of Top Roof deck system.

## 312 – POST CHEMICAL FACILITY 2 FA/LAS/PEC/SB

- CMU Placement for Chem Bldgs.
- Backfill East area of containment.

## 314 – POST CHEMICAL FACILITY 4 SH/CS :

- F/R/P Building Footings and Stem Walls.
- F/R/P Sump SOG and Walls
- Backfill interior Chem Building

## 282 -FILTER MODULE 2:

- Reinforcing /Forming Tall Walls.
- Pouring Tall Walls. **Houston Waterworks Team**



# CENTRAL PLANT- 1st PHASE OVERALL

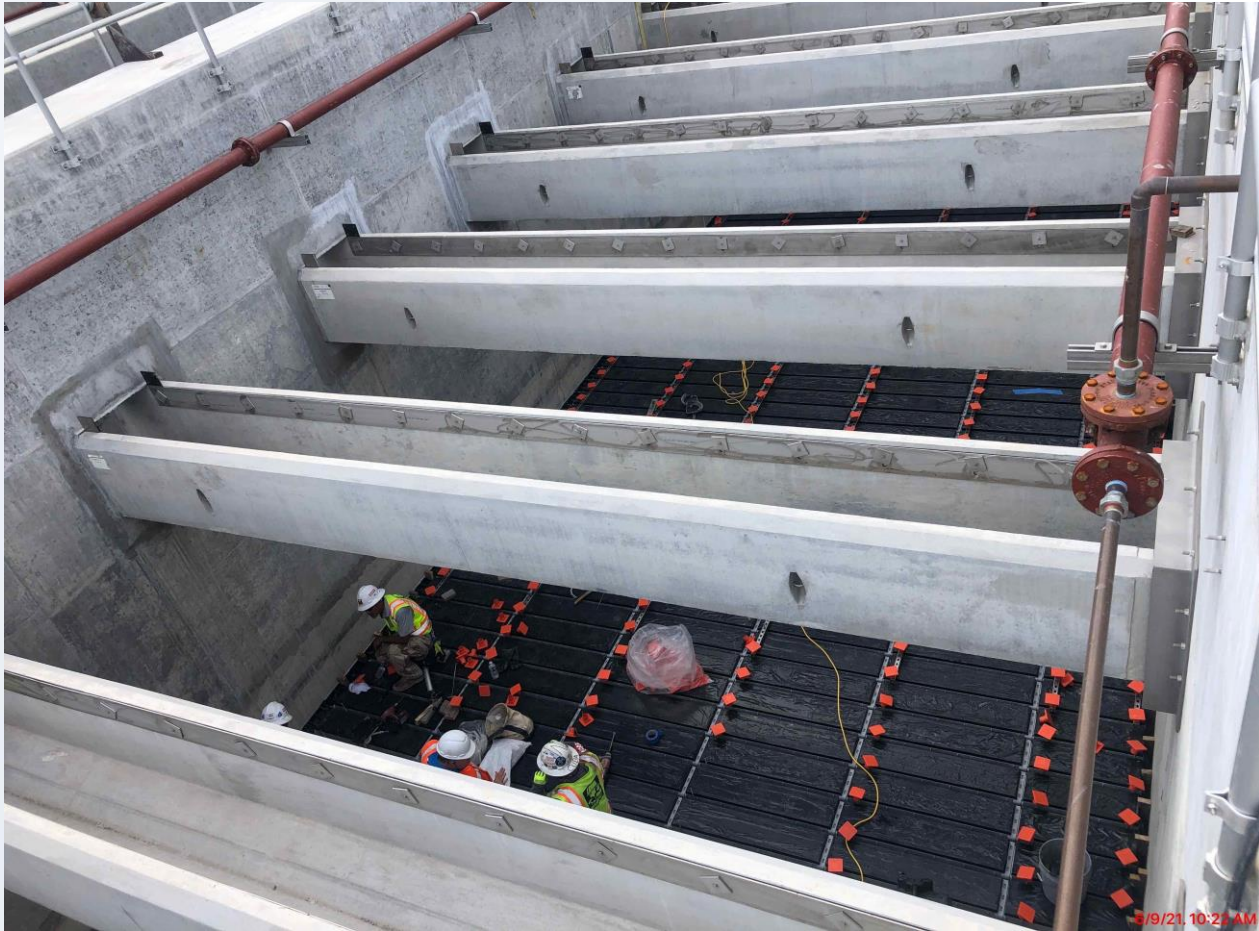
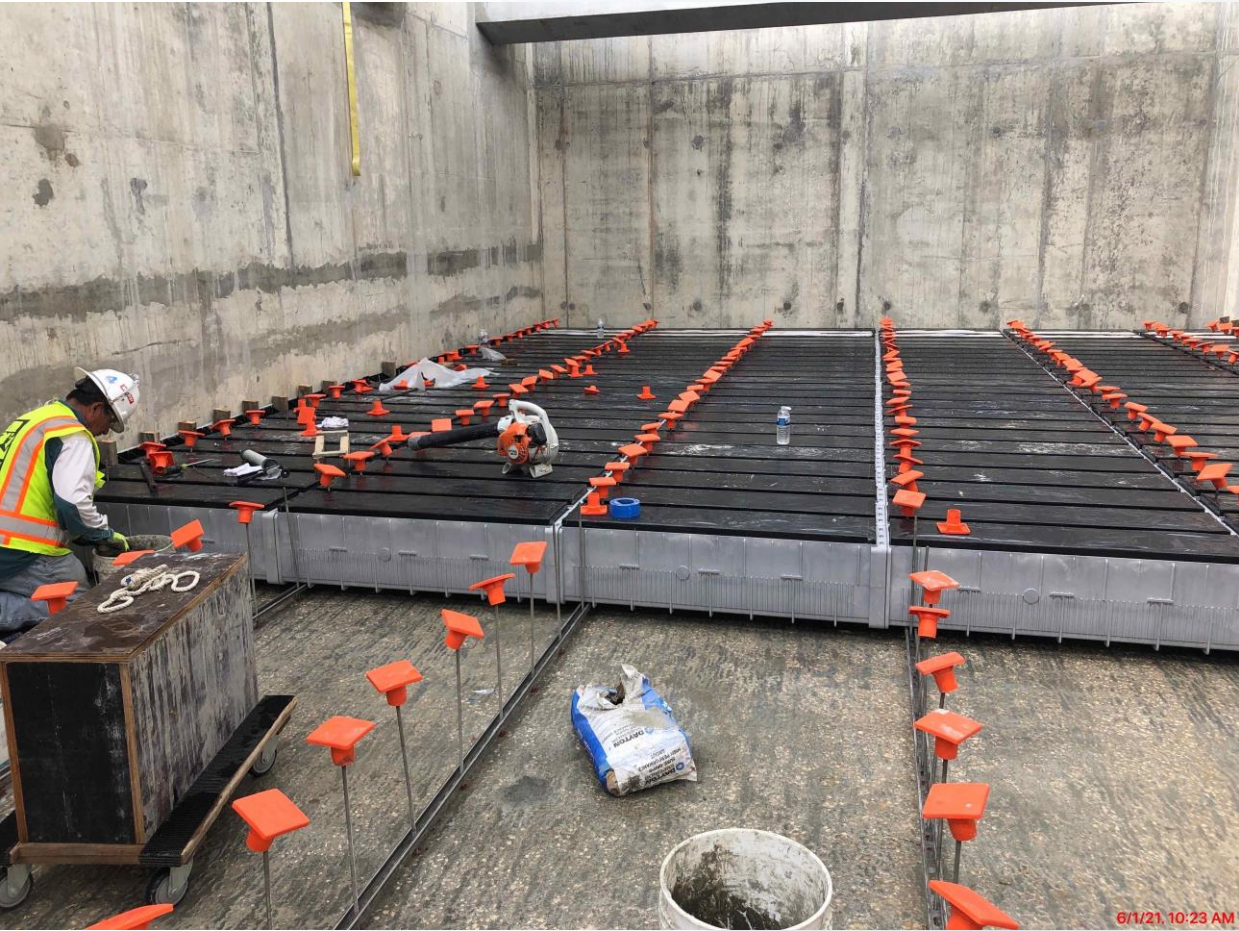


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# 281-FILTER MODULE- Installing UD Blocks- Filter 11



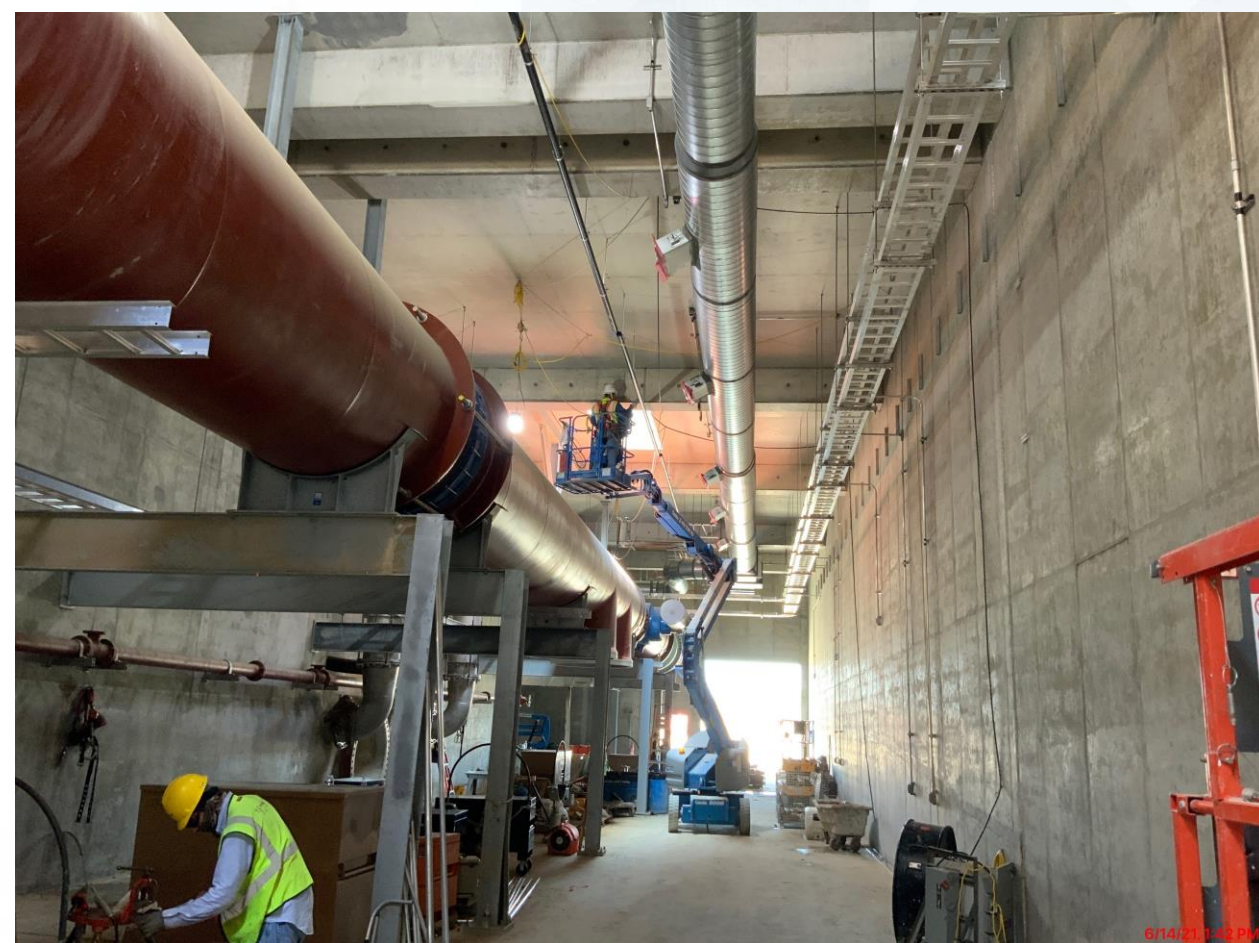


# 281-FILTER MODULE – Installing 36" FE Valves/Venturis





# 281-FILTER MODULE- MEP work in Gallery





# 281-FILTER MODULE- Installing Hand-Rails





# 291-TPS – Aerial View (06/02/2021)



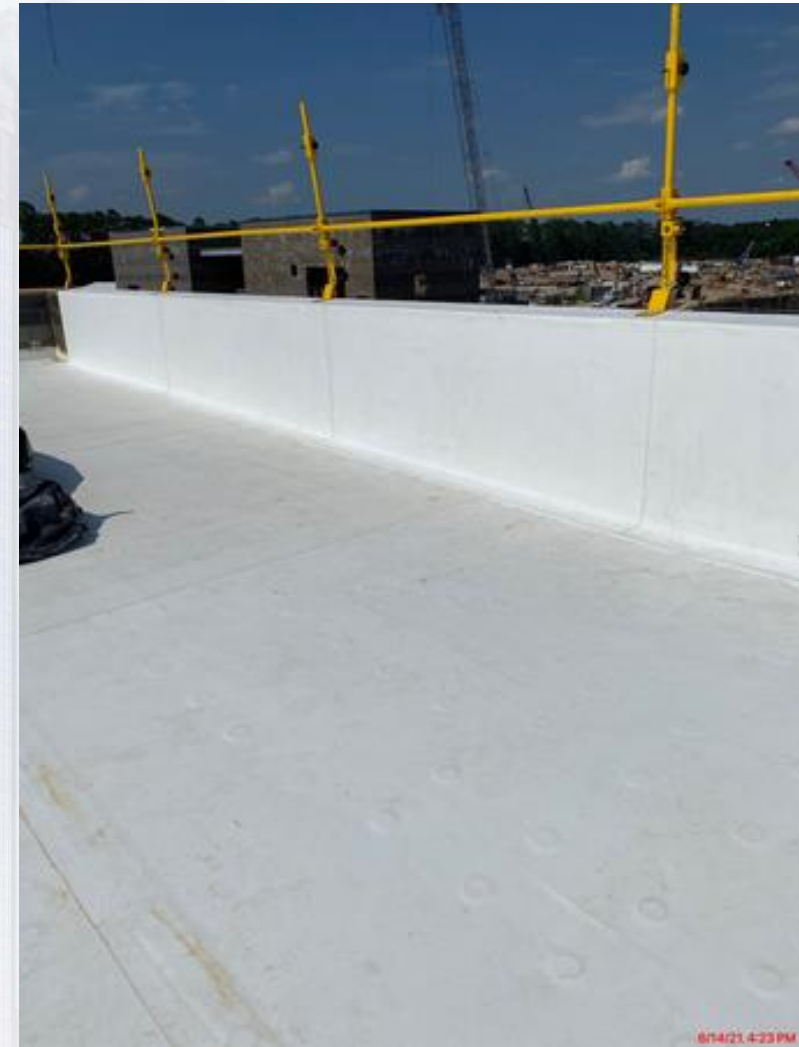


# 291-TPS – Install Electrical Room Cable Trays - Ongoing





# 291-TPS – Install Roofing TPO - Ongoing





# 291-TPS – Installing T-Supports on Top Deck





# 291-TPS – Installing Stud Wall in Electrical Room





# 291-TPS – Deliver and Place Rooftop HVAC Units





# 311 – Aerial view –06/02/2021





# 311 – Application of underside Deck coating.





# 311 – Installation of Glass blocks





# 311 – Starting TPO Roof system





# 311 – Leak test Containment Area



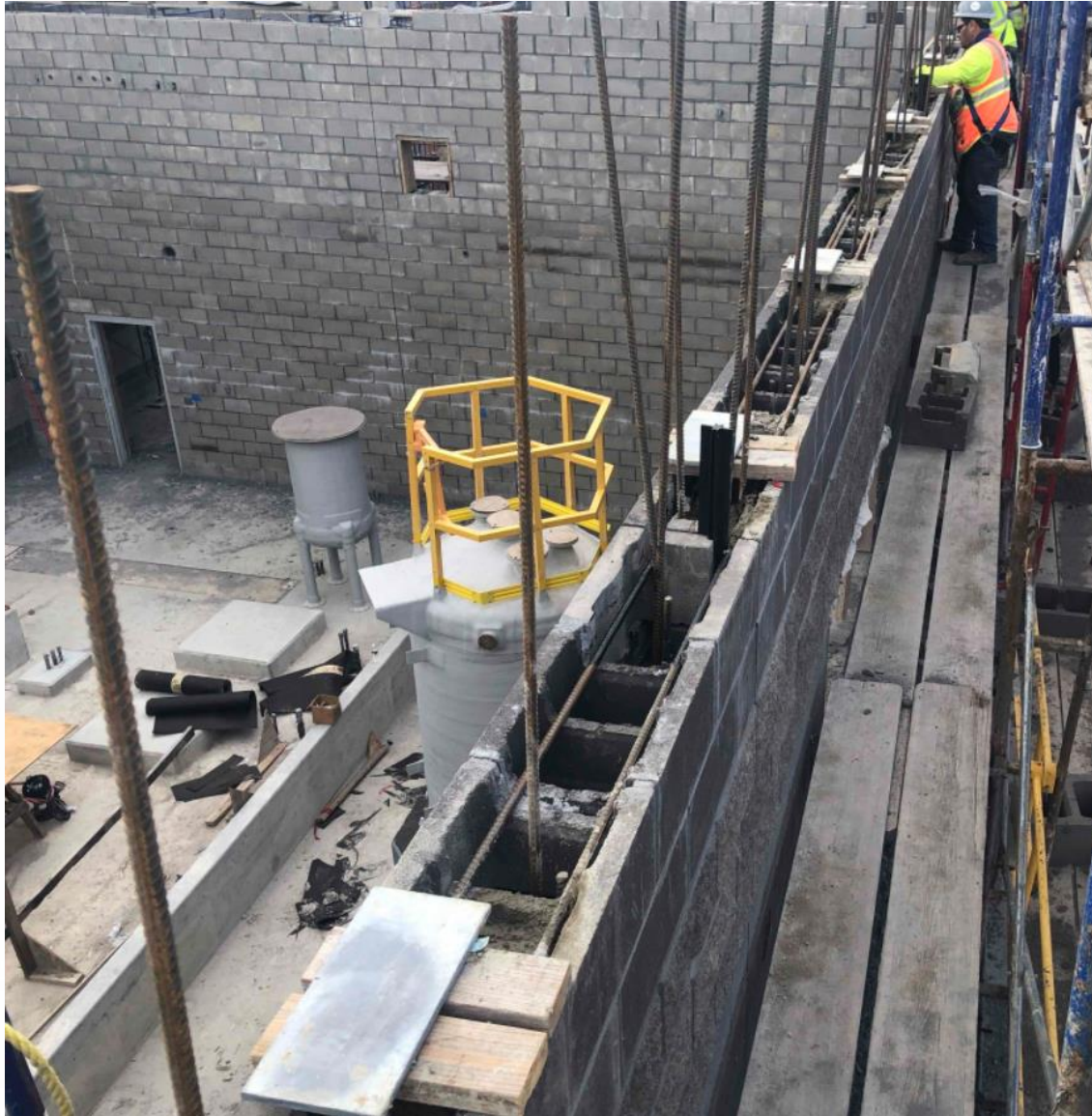


# 312 - Overall view 06/02/21



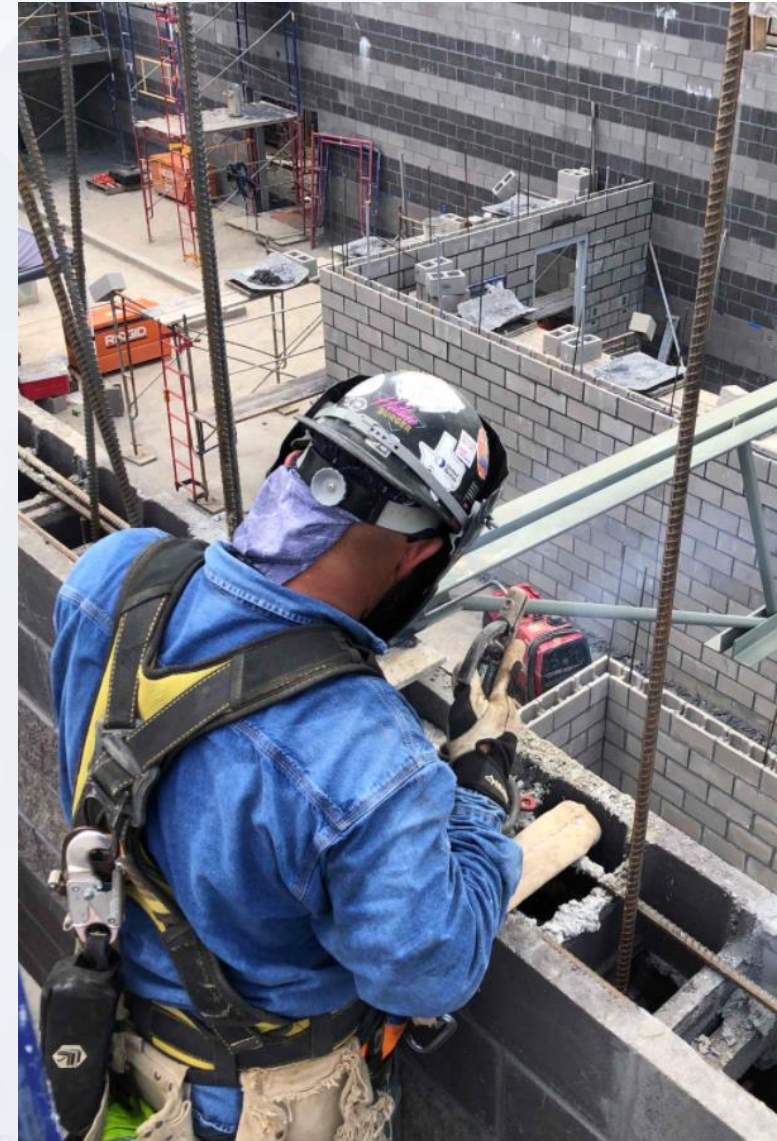


# 312 –Building – CMU Installation





# 312 – D/L/B STM Lines at Truck Fill Station





# 312 – STM Lines installation





# CENTRAL PLANT- 2nd Phase Overall





# 314 –F/R/P SOG at Chem Building





# 314 – F/R/P Building Footings and stem walls.





# 314 – F/R/P Containment SOG





# 282-FILTER MODULE 2- Reinforcing/Forming Tall Walls





# 282-FILTER MODULE 2- Pouring Tall Walls



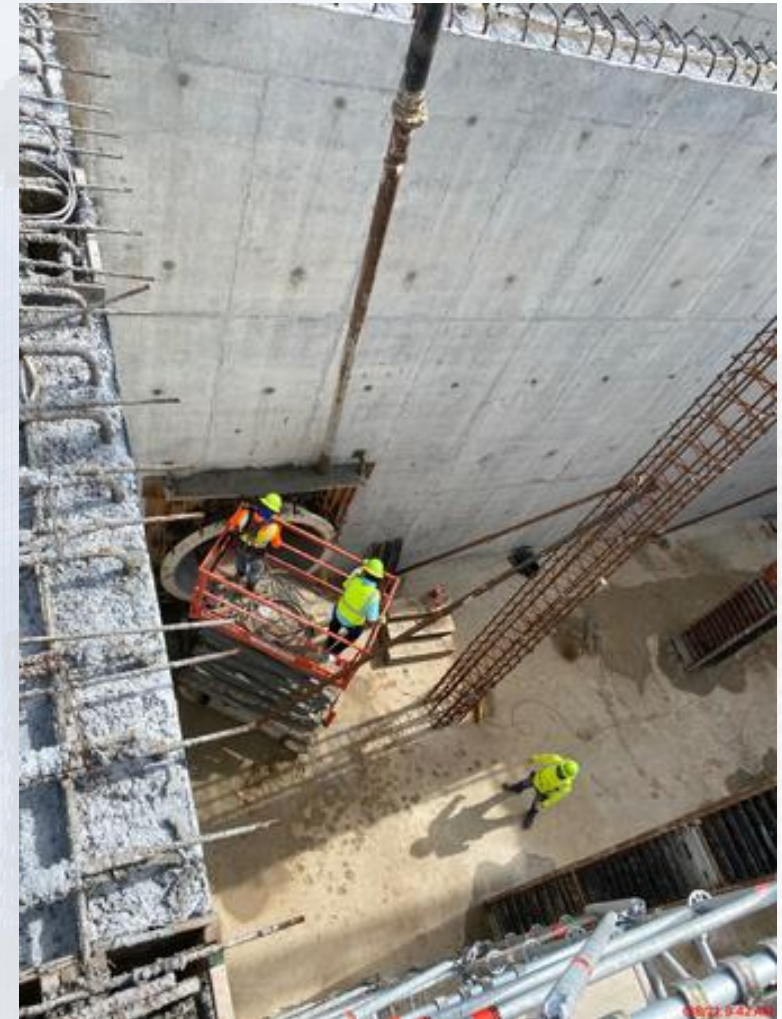


# 292-TPS – Aerial View (06-02-2021)





## 292-TPS – Pour West Wet Well Columns (3) & Interior 84" Block-outs (3)







# Construction Progress – LREQ Basins Facilities 601/602

- **601 – Continue welding of 72" BWW T**
- **601 – Backfill north of basin 1**
- **601 – Prep / install guard rail on north wall**
- **602 – Continue rebar installation for center walls**



# 601 – Welding of 72" BWW T





# 601 – Backfill north of basin 1





# 601 – Prep / Install guard rail on north wall





# 602 – Continue rebar installation for center walls







# Construction Progress – North Plant

## 201-Chlorine Dioxide Facility 1:

- Area-B Backfilled for Mudslab

## 212-Pretreatment Chemical Facility 2:

- Lime Slurry Tanks Welding

## 213-Pretreatment Chemical Facility 3:

- Area-B CMU Walls

## 241-Flocculation & Sedimentation Train 1:

- Slab 36 Curing
- Slab 37 F/R/P
- Walls F/R/P

## 242-Flocculation & Sedimentation Train 2:

- Sedimentation Basin 4 – Filling for Leak Test
- Mixers Arrival

## 252-Ozone Contactor 2:

- Roof-ESL-1&2 Poured

## 261-Ozone Generation Facility 1:

- CMU Walls Base Course

## 272-Pretreatment Service Building 2:

- Masonry Work

## 502-Gravity Thickener Complex 2:

- Gravity Thickener Mechanism Installation

## 611-Liquid Residuals Clarifier Facility 1:

- Handrail Installation





# 201-Chlorine Dioxide Facility 1: Area-B Backfilled for Mudslab





# 212-Pretreatment Chemical Facility 2: Lime Slurry Tanks Welding



6/14/21, 4:09 PM  
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# 213-Pretreatment Chemical Facility 3: Area-B CMU Walls



6/14/21 3:06 PM

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# 241-Flocculation & Sedimentation Train 1: SL-36 Curing, SL-37 F/R/P, and Ported/Exterior Walls F/R/P





# 242-Flocculation & Sedimentation Train 2: Basin 4 Filling for Leak Testing; Mixers Arrival



6/14/21 3:49 PM



6/14/21 3:36 PM



# 252-Ozone Contactor 1: Roof-ESL-1&2 Poured





# 261-Ozone Generation Facility 1: CMU Walls Base Course





# 272-Pretreatment Service Building 2: CMU Work





# 502-Gravity Thickener Complex 2: Gravity Thickener Mechanism

## Install



6/14/21, 3:38 PM





# 611-Liquid Residuals Clarifier Facility 1: Handrail Installation







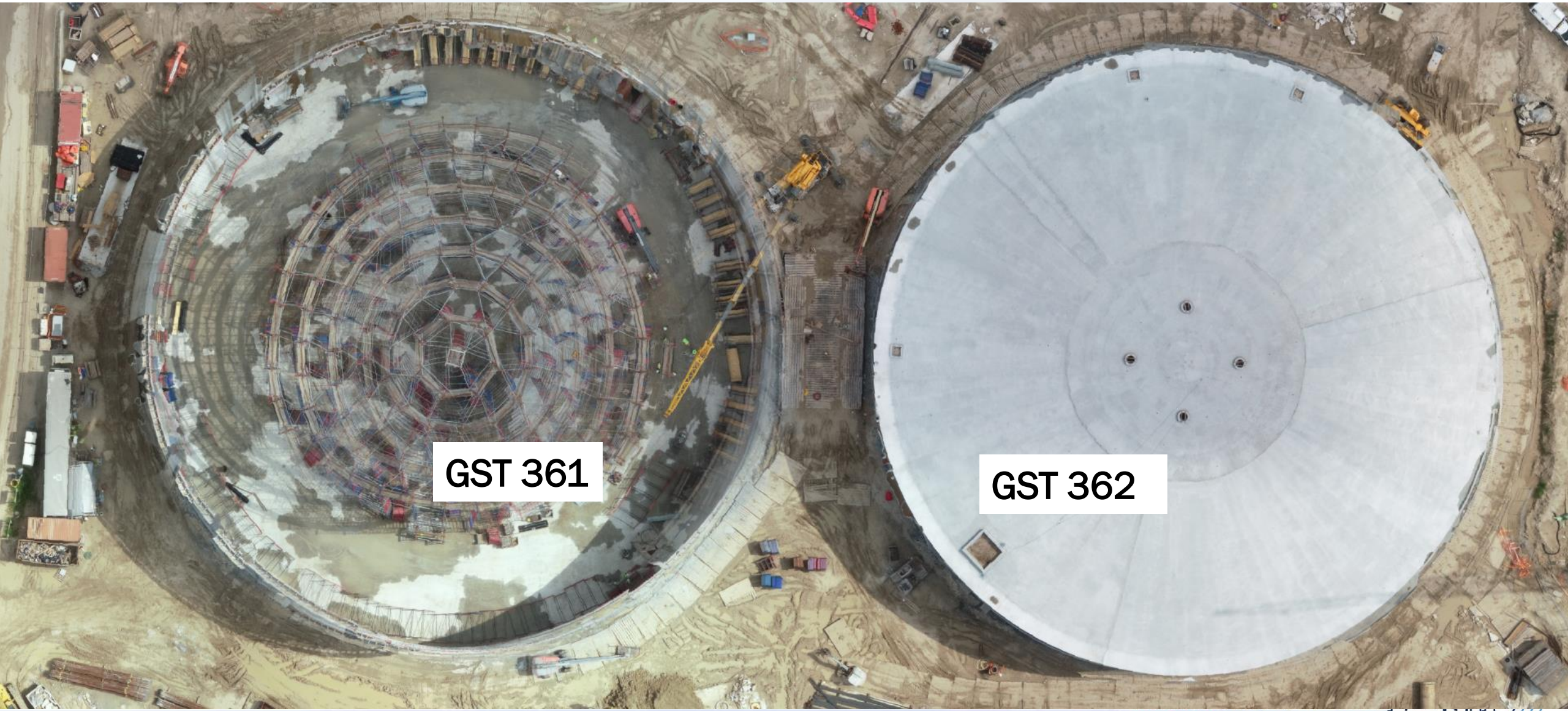
# Construction Progress – South Plant

- **361 - Continue shoring erection.**
- **361 – Shotcrete.**
- **401 – Delivery of all 6 vertical turbine pumps.**
- **401 – Clean and patch pump can interiors.**
- **401 – Continued steel erection.**
- **401 – Below slab plumbing and encasements (electrical room).**
- **401 – Continued electrical room foundation concrete.**
- **402 – Continued installation of 78” buried pipe.**
- **520 – Continued TPO roofing upper level.**
- **520 - Cleaning CMU at the electrical, mechanical, and other rooms.**
- **520 - Continued installation of joint sealants for precast wall panels.**
- **520 - Continued fire piping and plumbing.**
- **520 – Continued process pipe installation.**
- **520 – Continued electrical conduit installation.**
- **520 - Continued mechanical coatings.**
- **510 – Continued water tightness testing of basins & slide gates.**





# GST 361 & 362 AERIAL VIEW

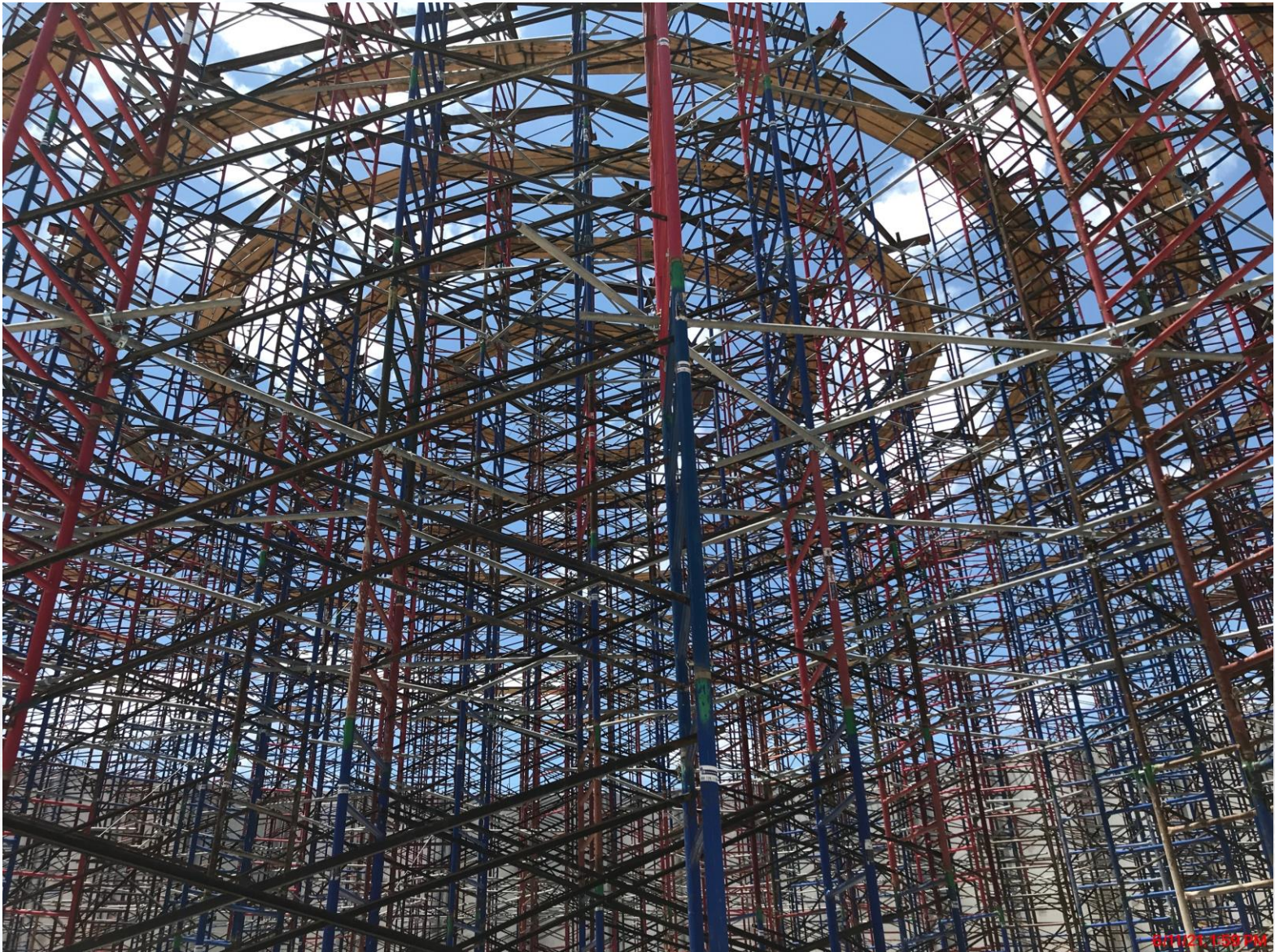


**GST 361**

**GST 362**



# GROUND STORAGE TANK 361



361 – Continued shoring erection



# GROUND STORAGE TANK 361



361 – Shotcrete



# HSPS 401, MSB 111, HSPS 402 AERIAL VIEW



**HSPS 401**

**MSB 111**

**HSPS 402**



# HIGH SERVICE PUMP STATION 401



401 – Delivery and installation of all 6 vertical turbine pumps



# HIGH SERVICE PUMP STATION 401



401 – Continued steel erection



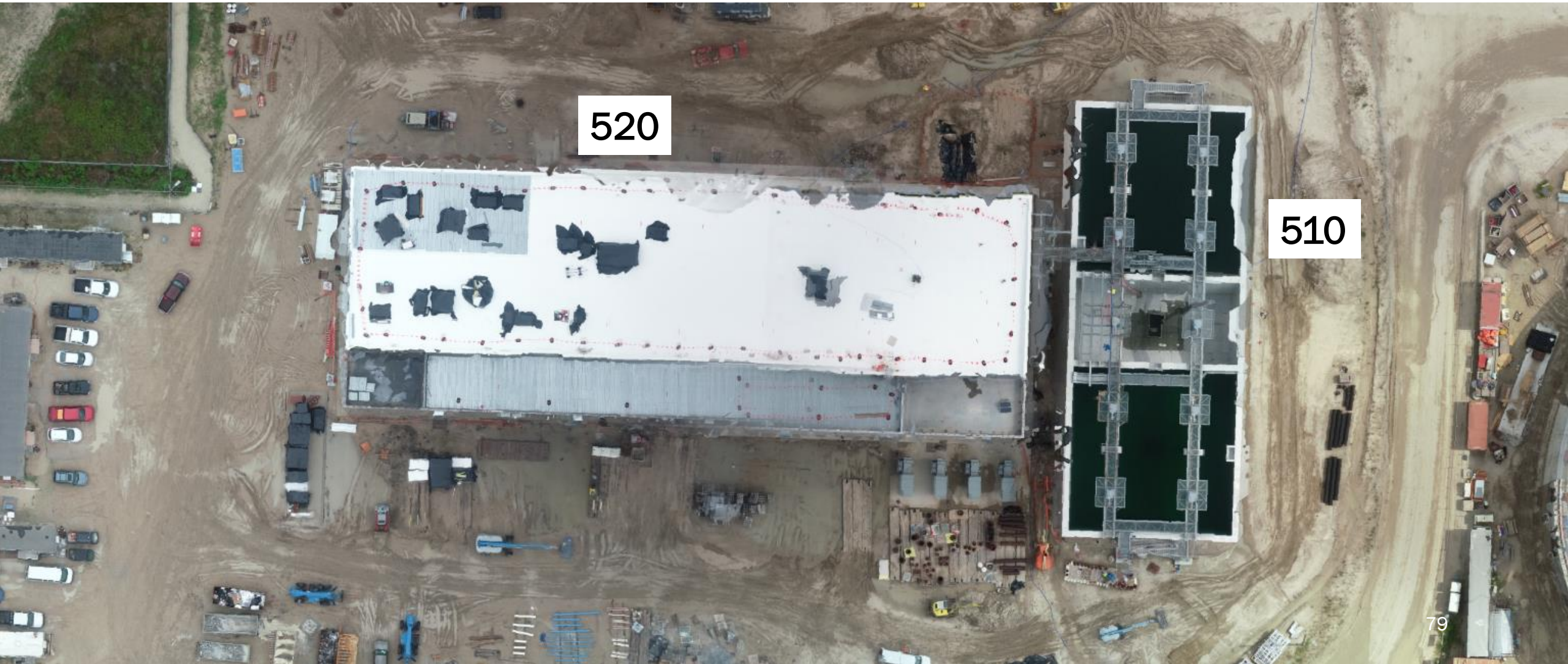
# HIGH SERVICE PUMP STATION 402



402 – Continued installation of 78" buried pipe



# DEWATERING BUILDING 520 & THICKENED SLUDGE EQUALIZATION TANK 510 AERIAL VIEW



520

510



# DEWATERING BUILDING 520



520 – Continued process pipe installation



# Sludge Equalization Tank 510



510 – Continued water tightness testing of basins & slide gates





# Construction Progress – Administration & Maintenance Building

- Installed Curtain Wall framing
- Lime stabilization of North Parking Lot
- Installed Glazing
- Float and Finished Gypsum walls



# Installation of Curtain Wall Framing





# Lime Stabilization of North Parking Lot





# Installation of Glazing





# Float and Finish Gypsum Walls





