



CITY OF HOUSTON
Houston Public Works

DESIGN-BUILD SERVICES

Northeast Water Purification Plant Expansion

April 7, 2021





Site Drone Map April 7, 2021

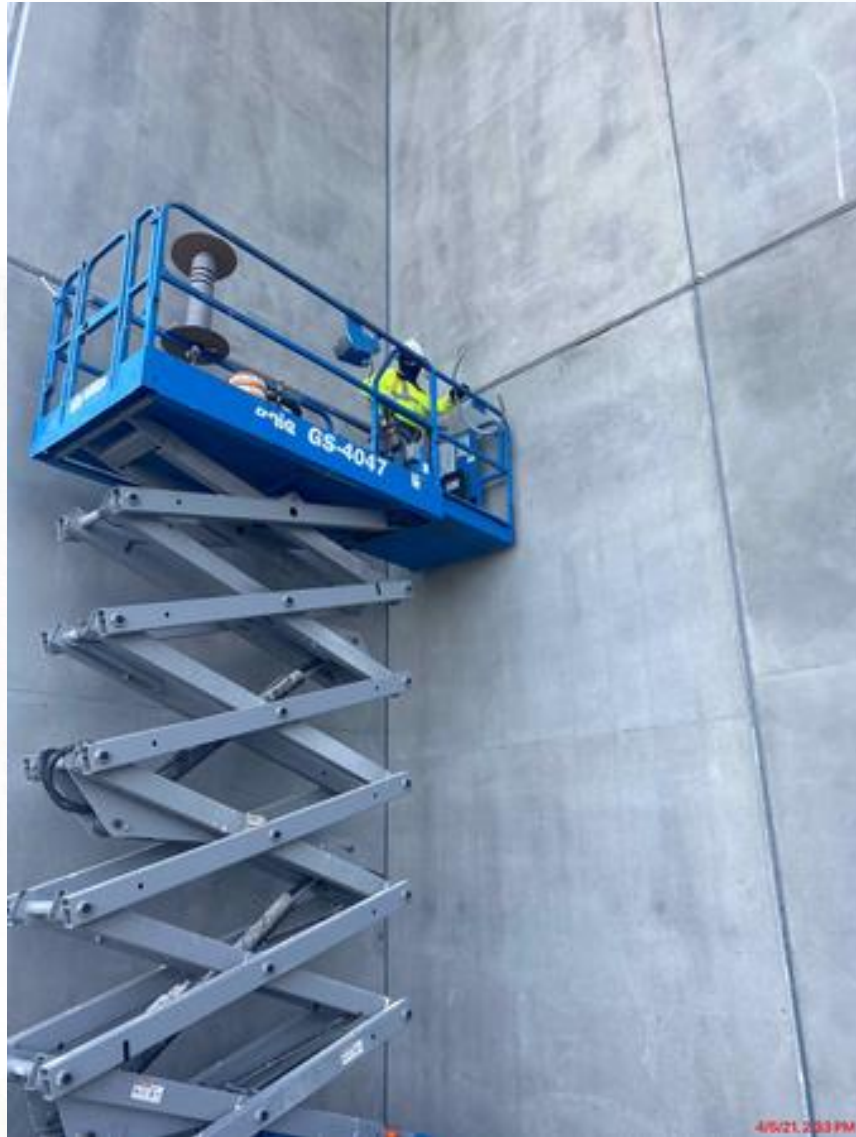


Construction Progress – Intake Pump Station (IPS)

- Building 142 electrical room dry-in and HVAC duct installation
- Installation of equipment pad inside the electrical room
- Roof installation at the IPS
- CMU block installation at the electrical building 152
- Ductbank installation and encasement West of building 152



Installing backing rod for the precast wall panel at the IPS



Installation of equipment pad inside the electrical room



Roof installation at the IPS



CMU block installation at the electrical building 152



Ductbank installation and encasement West of building 152





Construction Progress – Site Electrical

- PFCC Pad Deliveries at Facility 111
- Fiber Duct Bank 291 Installation
- Fiber Duct Bank 261 Excavation



PFCC Pad Deliveries at Facility 111



Fiber Duct Bank 291 Installation



Fiber Duct Bank 261 Excavation

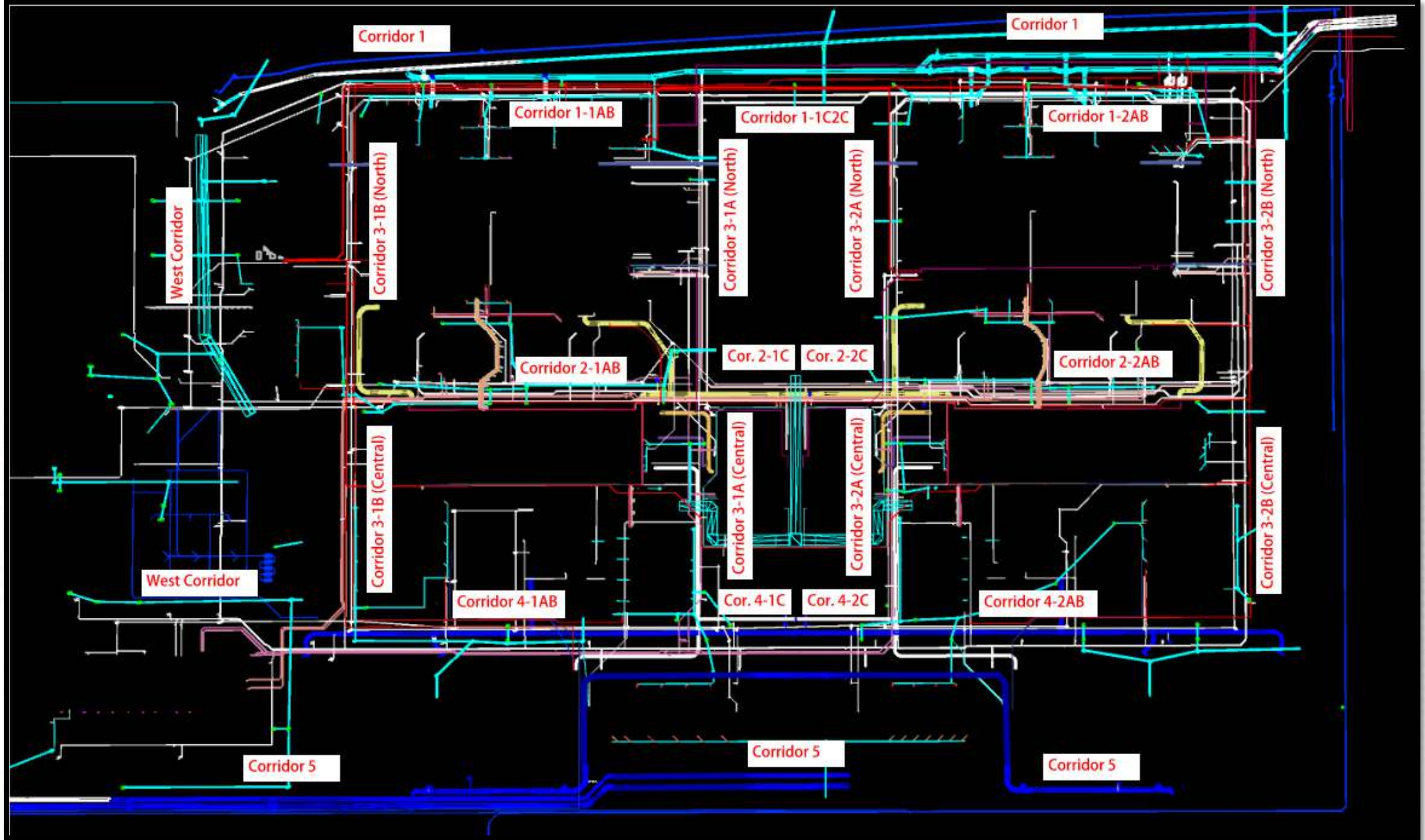




Construction Progress – Yard Piping

- **Installing 24” RCP Storm and manholes in Corridor 3-1B**
- **Installing 2-2” SPD lines in Corridor 3-1B North**
- **Installing 6” & 24” PW lines in West/Admin Area**
- **Installing 1.5” SSF line in West/Admin Area**
- **Installing 12” PW lines crossing in Corridors 3-1A & 2-1C**
- **Complete installing and backfilling the 96” OZW line in Corridor 3-1B North**
- **Installing dismantling joints and manway riser on the 120” & 84” FW lines in Corridor 5**
- **Laying the 84” & 120” FW distribution lines in Corridor 5**
- **Setting the 120” BFV on FW header piping in Corridor 5 – Phase 2**





Installing 24" Storm RCP and manholes in Corridor 3-1B



Installing 2-2" SPD lines in Corridor 3-1B North



Installing 6" & 24" PW line in West/Admin Area



Installing 1.5" SSF line in West/Admin Area



Installing 12" PW lines crossing in Corridors 3-1A & 2-1C



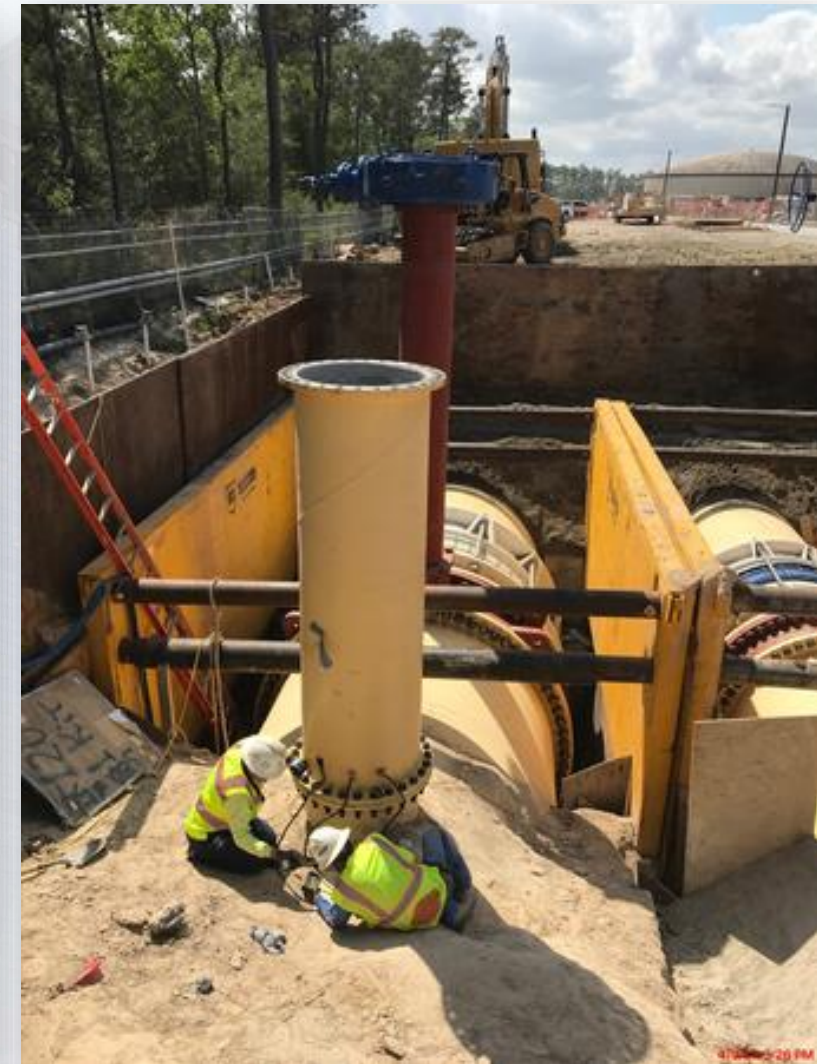
Complete installing and backfilling the 96" OZW line in Corridor 3-1B North



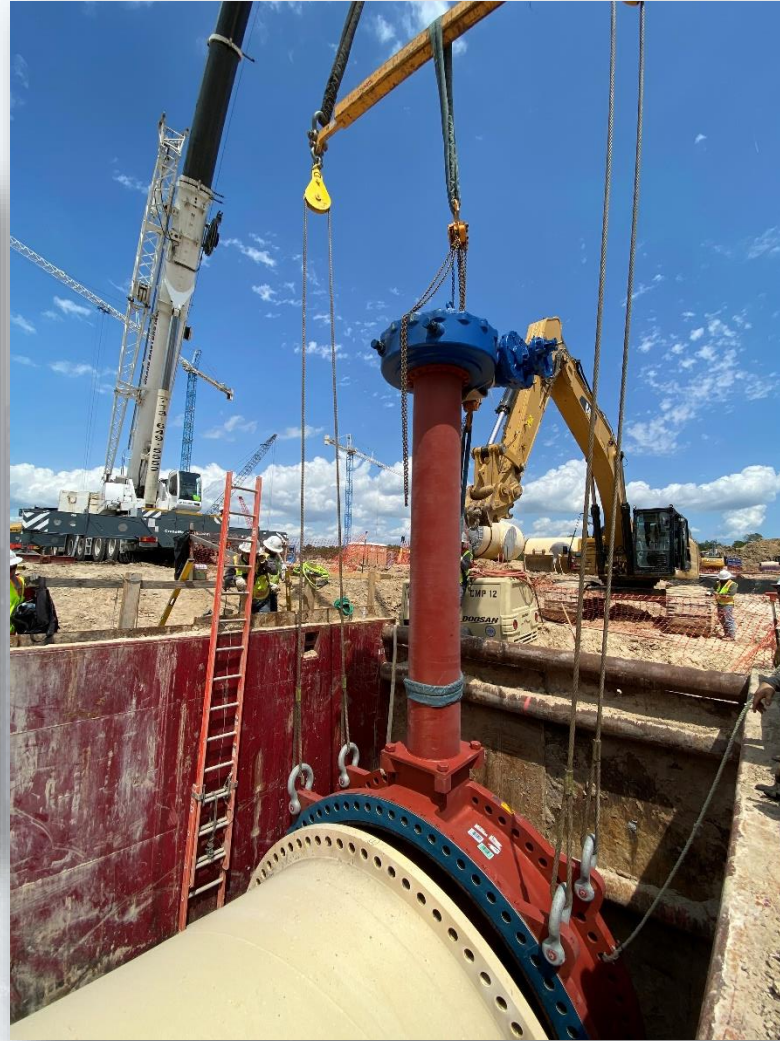
Laying the 84" & 120" FW distribution lines in Corridor 5



Installing dismantling joints and manway riser on the 120" & 84" FW lines in Corridor 5



Setting the 120" BFV on FW header piping in Corridor 5 – Phase 2





Construction Progress – Central Plant

281-FILTER MODULE 1 :

- Finished West Side Masonry
- Install Structural Steel (West Side)
- Installing Gallery Piping
- Installing Hand Rails

291-TRANSFER PUMP STATION 1:

- Install Roofing Joists
- Install UG 6" PPW Line North of TPS Structure
- Pour Discharge Pump Slab
- Deliver 42" BFVs and Slant Disc Valves to Site
- Install Contact Basins 3' x 6' Access Hatches

292-TRANSFER PUMP STATION 2:

- Wall Section B1 Concrete Pour
- Main Wall Sections Reinforcement
- Main Wall Sections Strip Forms

311-POST CHEMICAL FACILITY 1 SH/CS :

- Surface Preparation and Coating Installation for SH Tanks.
- CMU Placement for Chemical Bldgs.
- Backfill Fill Stations.
- Concrete Pour Tank Fill Stations.

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

- FA Steel Tank Installation.
- LAS and SB FRP Tank Installation.
- Concrete Pour Containment Walls.
- Concrete Pour Equipment Pads.

314 – POST CHEMICAL FACILITY 4 SH/CS :

- Continue Mass Excavations
- Installation of Underground Conduits.

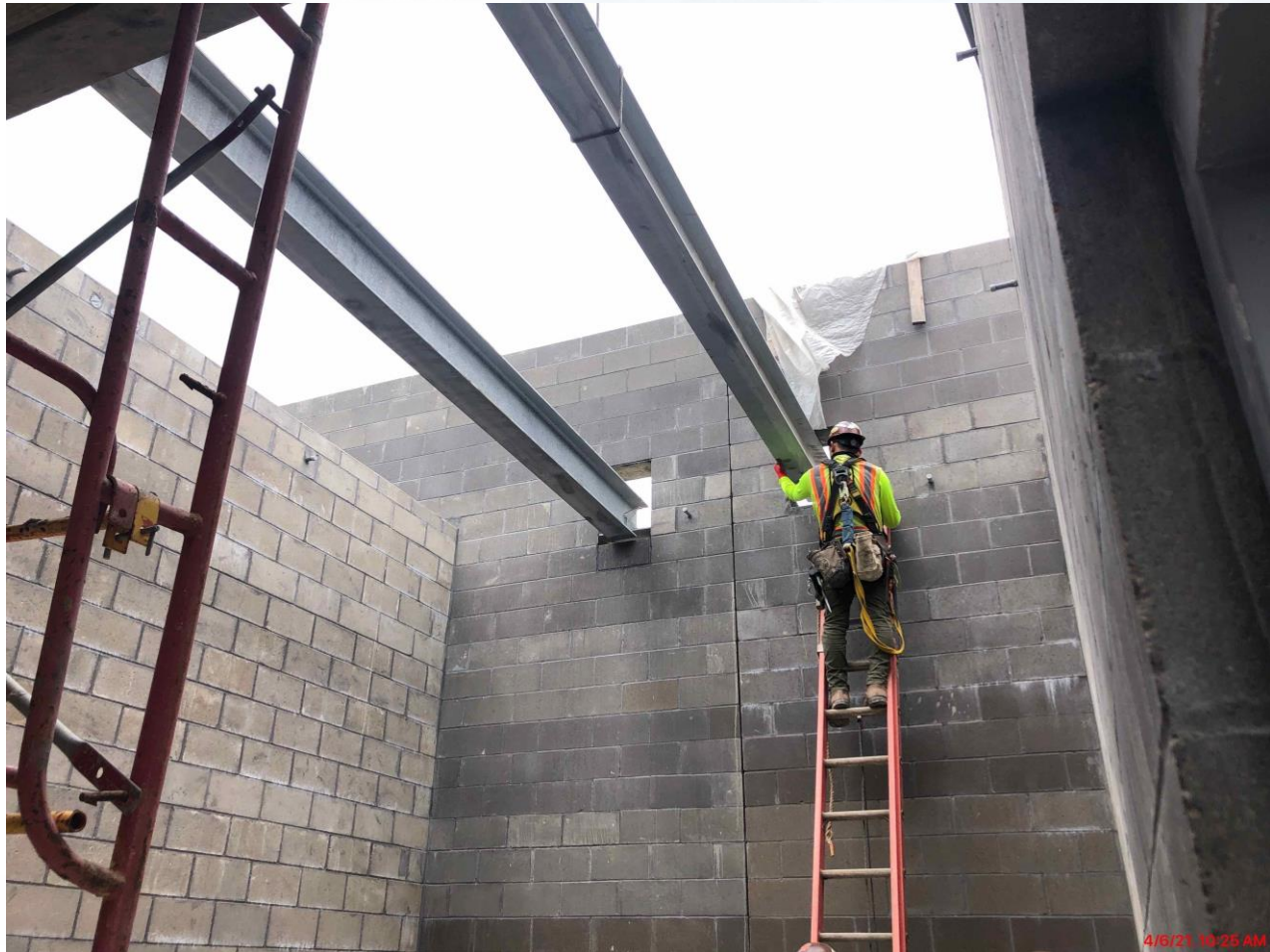
282 -FILTER MODULE 2:

- Reinforcing /Pouring Exterior Tall Walls.
- Forming/Reinforcing Manifold Decks
- Pouring Manifold Decks & Filter Slabs

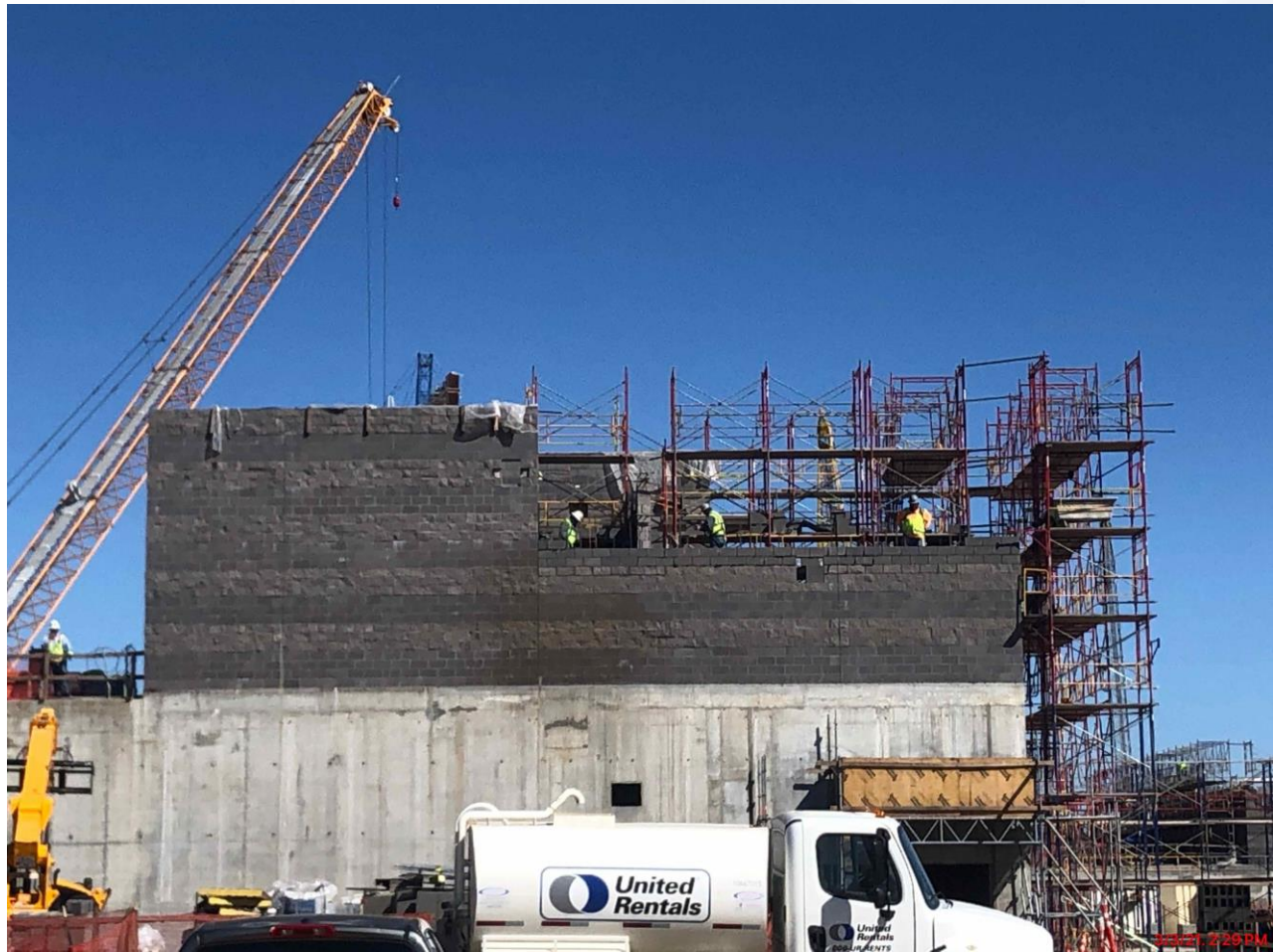
CENTRAL PLANT- 1st PHASE OVERALL



281-FILTER MODULE- Structural Steel (West Side)



281-FILTER MODULE- Finished West Side Masonry Structure



281-FILTER MODULE – Installing Gallery Piping (BWA, V, PPW)



281-FILTER MODULE – Installing Hand-Rails on Walkways



291-TPS – Aerial View (03/02/2021)



291-TPS – Install Roofing Joists



291-TPS – Install UG 6" PPW Line North of TPS Structure



291-TPS – Discharge Slab Concrete Pour



291-TPS – Deliver 42" BFVs and Slant Disc Valves to Site



291-TPS – Install Contact Basin 3' x 6' Access Hatches



311 – Aerial view –03/23/2021



311 – SH Tank – Installation of Insulation.



311 – CMU Placement for Chemical Bldgs.



312 - Overall view 03/23/21



312 -Containment Area: FA Steel Tanks Installation



312 –Building – CMU Installation



314 – Installation of Underground Conduits



Houston Waterworks Team



CENTRAL PLANT – 2nd PHASE OVERALL



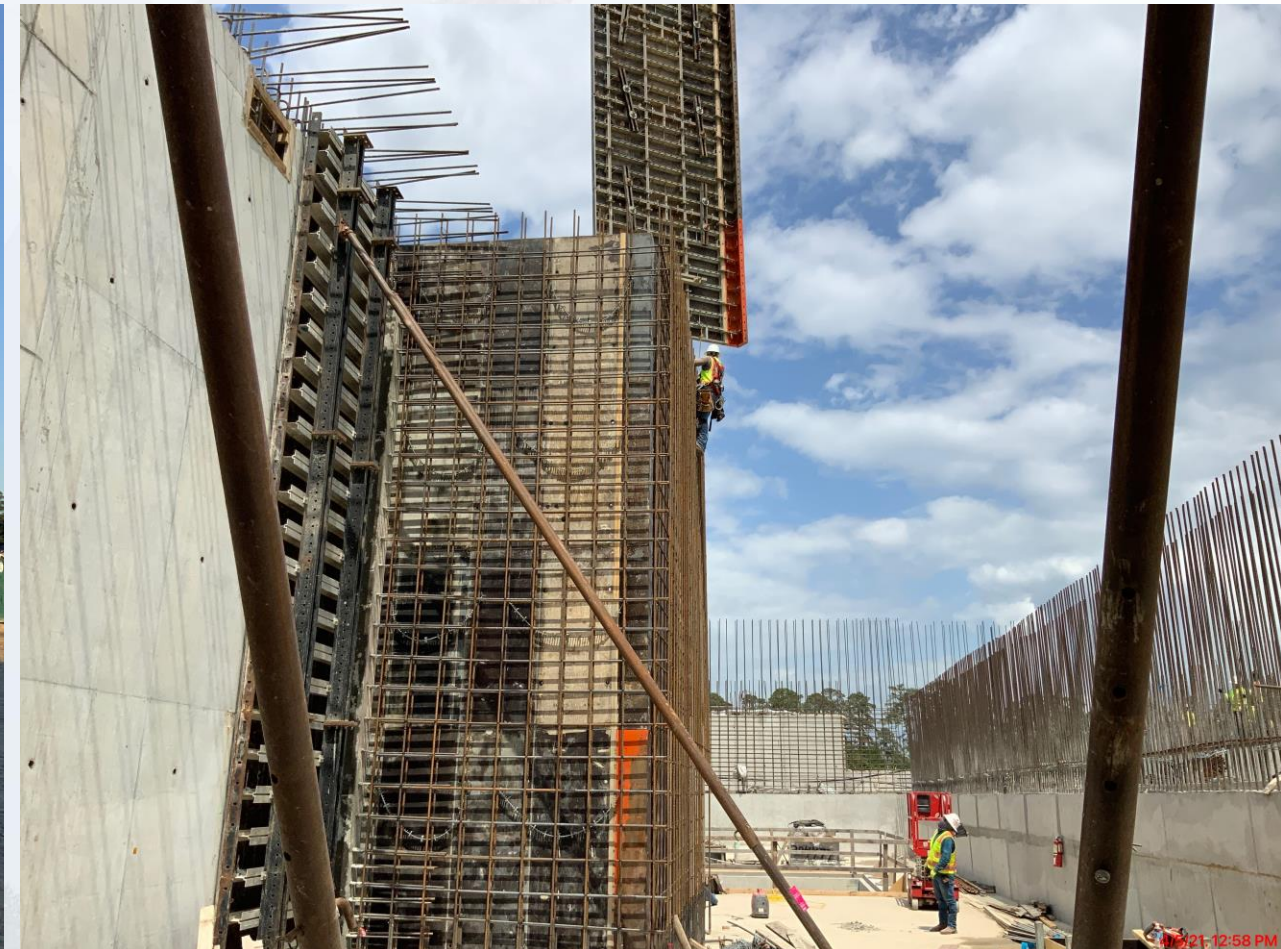
282-FILTER MODULE 2- Forming/Reinforcing Exterior Tall Walls



282-FILTER MODULE 2- Pouring Filter Slabs & Manifold Decks



282-FILTER MODULE 2- Reinforcing/Pouring Exterior Tall Walls



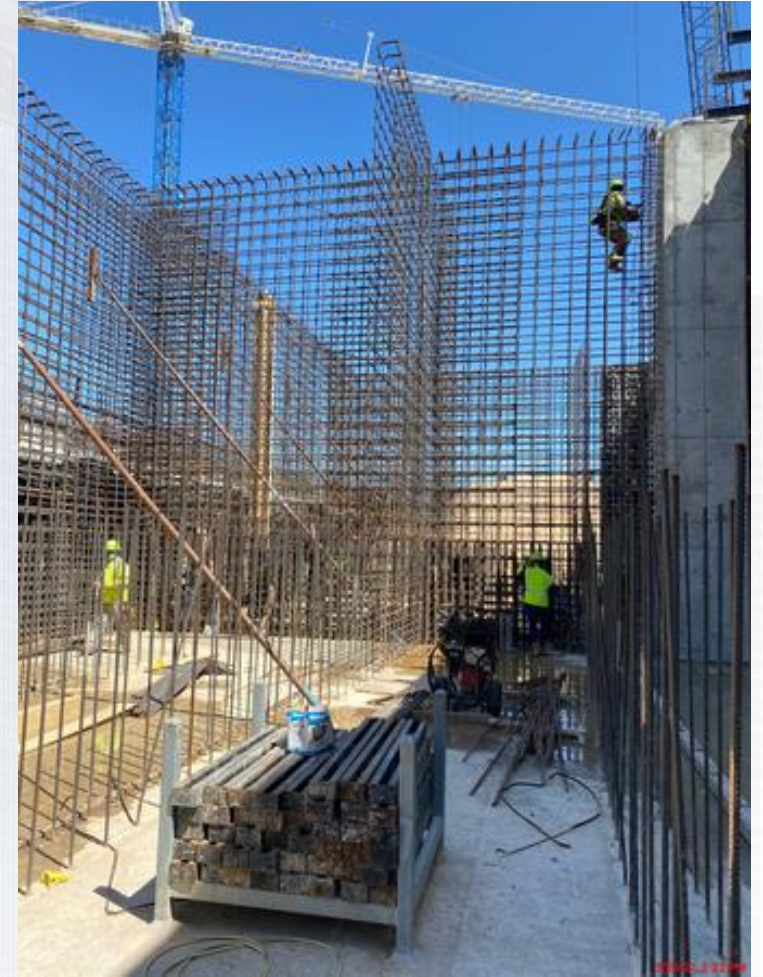
292-TPS – Aerial View (03-02-2021)



292-TPS – Pour Wall Section B1



292-TPS – Main Wall Sections Reinforcement



292-TPS – Main Walls Strip Forms





Construction Progress – LREQ Basins Facilities 601/602

- **601 – Install 72" Butterfly Valves West of Basin**
- **601 – Install 16" CEN and 24" DEC Pipe Wall Pieces**
- **601 – Installation of Ductbank from Facility 312**
- **602 – Formwork and Rebar Installation Slab Section 7**
- **602 – Concrete Placement Slab Section 7**



601 – Install 72" Butterfly Valves West of Basin



601 – Install 16" CEN and 24" DEC Pipe Wall Pieces



601 – Installation of Ductbank from Facility 312



602 – Formwork and Rebar Installation Slab Section 7



602 – Concrete Placement Slab Section 7





Construction Progress – North Plant

201-Chlorine Dioxide Facility 1:

- Area-B ClO₂ Tanks Area SOG-1 F/R/P

211-Pretreatment Chemical Facility 1:

- Primary Coagulant Tanks Welding

221-Rapid Mix Train 1:

- Walls 3 and 4 F/R/P

224-Rapid Mix Train 4:

- Setting 78" Spacer Pipe

242-Flocculation & Sedimentation Train 2:

- W-EW-3 F/R/P
- SL-5 Curing
- SL-16 F/R/P

261-Ozone Generation Facility 1:

- SOG-2 F/R/P

271-Pretreatment Service Bldg 1

- Ductbank Install and Encasement

272-Pretreatment Service Bldg 2

- Prepping for Mudmat

503-Gravity Thickener Complex 3:

- TSSB Elevated Slab F/R/P

504-Gravity Thickener Complex 4:

- USDS & Flow Meter Vault F/R/P

611-Liquid Residuals Clarifier Facility 1:

- EL-S-1 F/R/P

801-Basin Drain Pump Station 1

- Caisson Third Lift Sinking

802-Basin Drain Pump Station 2

- Caisson Third Lift F/R/P



201-Chlorine Dioxide Facility 1: Area-B ClO₂ Tanks Area SOG-1 F/R/P



211-Pretreatment Chemical Facility 1: Primary Coagulant Tanks Welding



221-Rapid Mix Train 1: WL-3 and WL-4 F/R/P



224-Rapid Mix Train 4: 78" Spacer Setting



242-FlocSed Train 2: W-EW-3 F/R/P, SL-5 Curing, SL-16 F/R/P



261-Ozone Generation Facility 1: SOG-2 F/R/P



271-Pretreatment Service Bldg 1: Ductbank Install/Encasement



272-Pretreatment Service Bldg 2: Mudmat Prep



503-Gravity Thickener Complex 3: TSSB Elevated Slab F/R/P



504-Gravity Thickener Complex 4: USDS & Flow Meter Vault F/R/P



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611-Liquid Residuals Clarifier Facility 1: EL-S-1 F/R/P



801-Basin Drain Pump Station 1: Caisson Third Lift Sinking



802-Basin Drain Pump Station 2: Caisson Third Lift F/R/P



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Construction Progress – South Plant

- Curing concrete membrane slab and delivery of shoring material at GST 361.
- Continued exterior shotcrete at GST 362.
- Continued shoring erection at GST 362.
- Commenced forming footers for the electrical room at Fac 401.
- Continued installing under slab electrical & plumbing utilities at Fac 401.
- Backfilling around 48" and 102" header at Fac 401.
- Site work to prepare for supports for 78" at Fac 402.
- Pump and other process mechanical equipment continues to arrive.
- Continued installation of fire piping on the 3rd floor at Fac 520.
- Continued installation of HVAC at 1st, 2nd & 3rd floor at Fac 520.
- Continued installing CMU at the 3rd floor at Fac 520.
- Commenced cold metal framing at Fac 520.
- Continued installation of interior process piping at Fac 520.
- Commenced installation of structural steel stairs and bridge at Fac 510.
- Continue installation of raceway at Fac 510.
- Commenced ductile iron process piping at facility 510 & 520.



GST 361 & 362 AERIAL VIEW

March 29, 2021



GST 361

GST 362



GROUND STORAGE TANK 361



Pouring concrete slab of GST 361

GROUND STORAGE TANK 361



Curing concrete membrane slab & delivery of shoring material

GROUND STORAGE TANK 362



Continued exterior shotcrete at GST 362



Continued shoring erection at GST 362

HSPS 401, MSB 111, HSPS 402 AERIAL VIEW

March 29, 2021



HSPS 401

MSB 111

HSPS 402

HIGH SERVICE PUMP STATION 401



Commenced forming footers for the electrical room at Fac 401



Continued installing under slab electrical & plumbing utilities at Fac 401

HIGH SERVICE PUMP STATION 402



Site work to prepare for supports for 78" at Fac 402

MAIN SWITCHGEAR BUILDING 111



Installation of closure plates

DEWATERING BUILDING 520 & THICKENED SLUDGE EQUALIZATION TANK 510 AERIAL VIEW

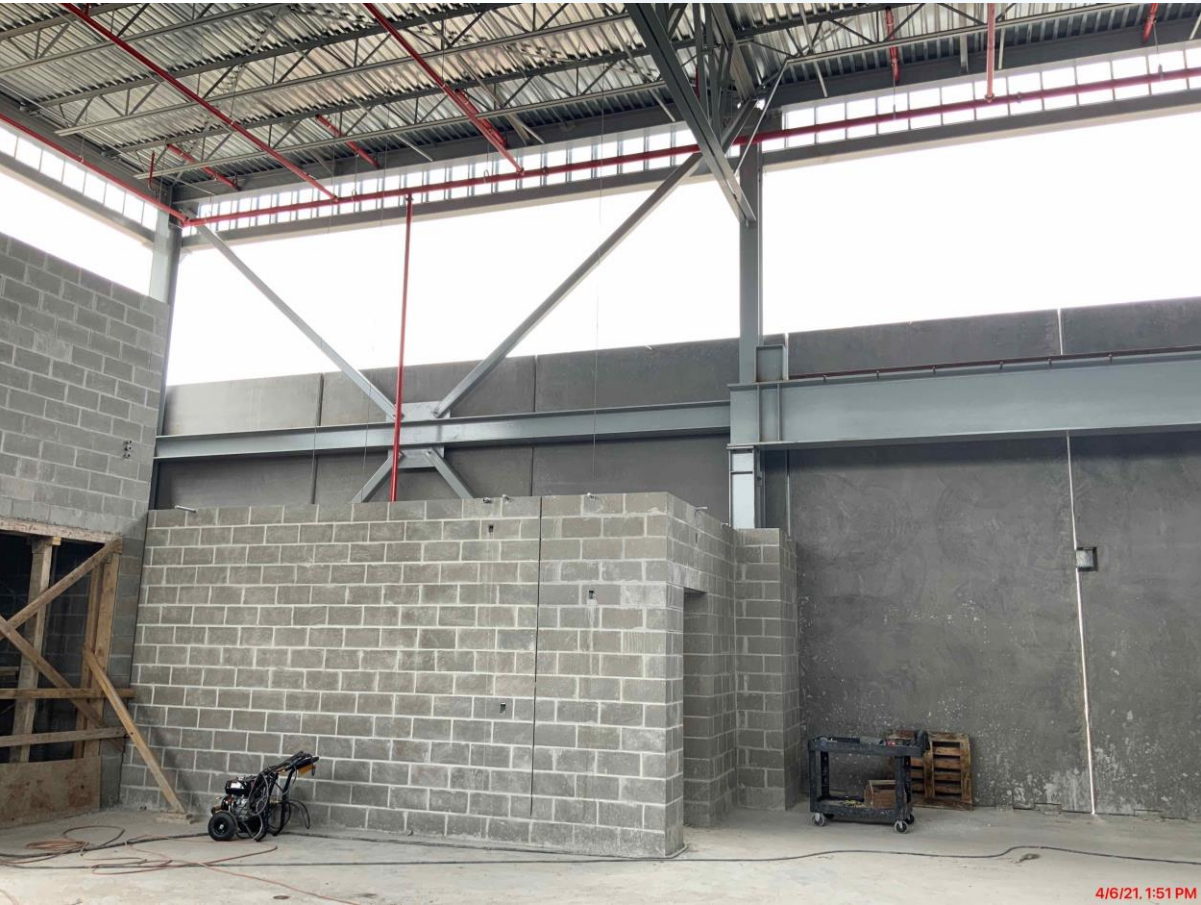
March 29, 2021



520

510

DEWATERING BUILDING 520



Continued installation of fire piping on the 3rd floor at Fac 520



Continued installation of HVAC at the 1st, 2nd & 3rd floor at Fac 520

DEWATERING BUILDING 520



Continued installing CMU at the 3rd floor at Fac 520



Commenced cold metal framing at Fac 520

Sludge Equalization Tank 510



Commenced installation of structural steel stairs and bridge at Fac 510



Construction Progress – Administration Building

- Installed HVAC Equipment
- Installed Roof Rigid Installation and TPO for AB Roof
- Installed Overhead Electrical Conduit
- Placed Concrete for BW SOMD

Installation of AB HVAC Equipment



Installation of Roof Rigid Installation and TPO



Installation of OH Conduit



Placement of BW SOMD



