



CITY OF HOUSTON
Houston Public Works

DESIGN-BUILD SERVICES

Northeast Water Purification Plant Expansion

December 2, 2020



Houston Waterworks Team



Site Drone Map
November 20, 2020





Construction Progress – Intake Pump Station (IPS)

- Continue erecting structural steel members
- Installing guide rails and utility rack on the bridge
- Continue backfilling the underground piping



Continue erecting structural steel members



Installing guide rails and utility rack on the bridge



Continue backfilling the underground piping





Construction Progress – Site Electrical

- Duct bank Installation 111A/520 to MMH111A-6/MMH520-2
- Fiber Duct Bank 291 Installation
- Duct Bank Encasement North of Facility 111



Duct bank Installation 111A/520 to MMH111A-6/MMH520-2



Fiber Duct Bank 291 Installation



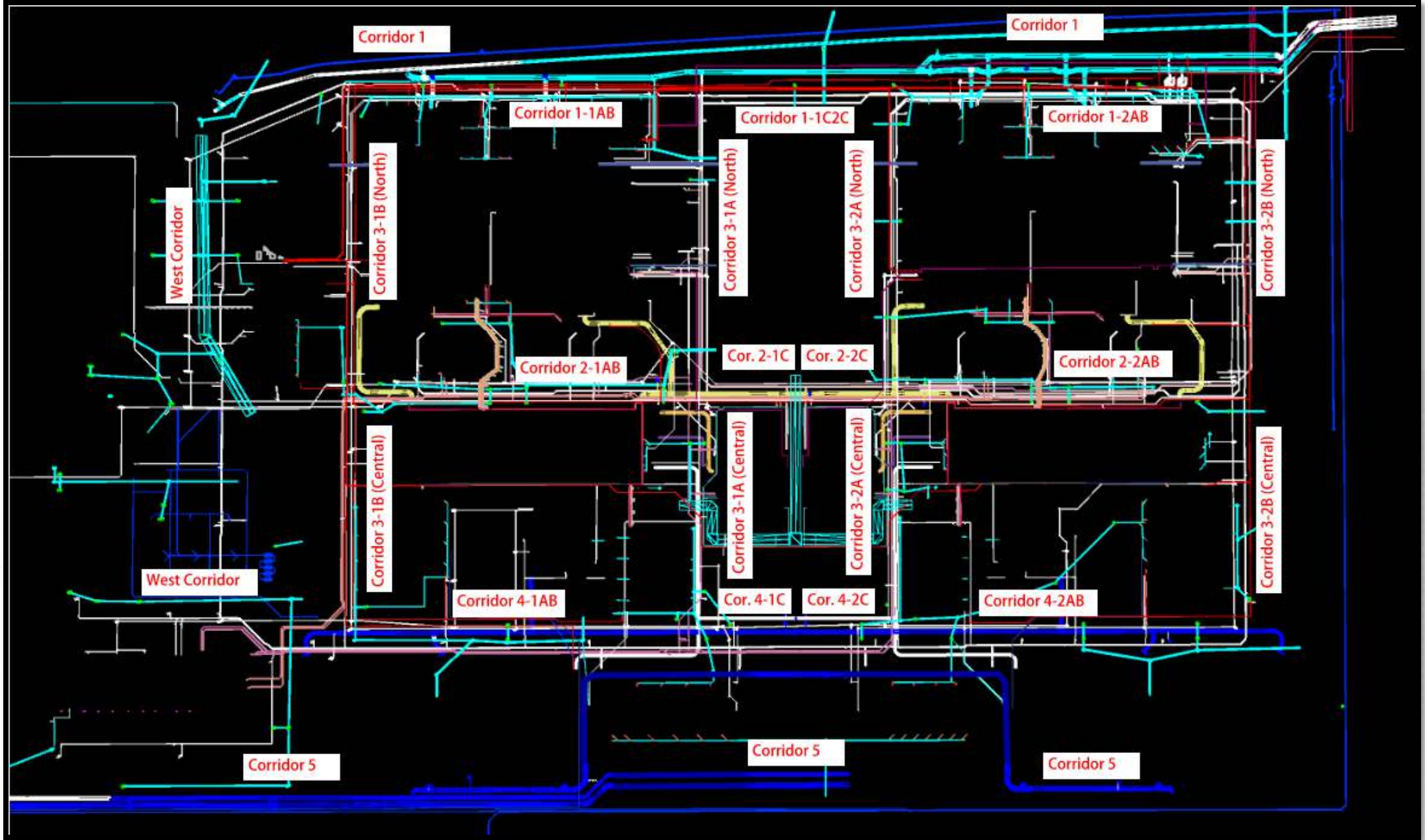
Duct Bank Installation North of Facility 111





Construction Progress – Yard Piping

- **Setting 42” Stm. RCP & catch basin G10 in Corridor 3-1A North**
- **Installing 96” OZW steel pipe in Corridor 2-1AB**
- **Installing 2-16” TSL pipelines in Corridor 2-1AB**
- **Installing 10” SSG in Corridor 3-1B Central**
- **Laying 96” FW steel pipe in Corridor 4**
- **Installing 108” FW steel pipe and corrosion protection in Corridor 4**
- **Poured 102” FW valve support in Corridor 5**
- **Laying 84” & 120” FW distribution lines in Corridor 5**



Setting 42" Stm. RCP & catch basin G10 in Corridor 3-1A North



Installing 96" OZW steel pipe in Corridor 2-1AB



Installing 2-16" to 14" TSL pipelines in Corridor 2-1AB



Installing 10" SSG in Corridor 3-1B Central



Laying 96" FW steel pipe in Corridor 4



Installing 108" FW steel pipe and corrosion protection in Corridor 4



Poured 102" FW valve support in Corridor 5



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





Construction Progress – Central Plant

281-FILTER MODULE 1 :

- Pouring Last Filter Wall.
- West Side Masonry.
- Reinforcing/Forming/Pouring Walkways.
- Drilling anchors & Setting Gallery Pipe supports.

291-TRANSFER PUMP STATION 1:

- Watertightness Testing & Crack Repair Injection
- Install UG 6" PDR Piping and FRP Encasement
- Install Concrete Ring Footer around 42" Pipes

292-TRANSFER PUMP STATION 2:

- FRP Main Slab Sections C1, A3, and B6
- Main Slab Sections B1 and C3 Reinforcement
- Place Grout Under Pump Cans

311-POST CHEMICAL FACILITY 1 SH/CS :

- FRP –Reinforce rebar installation at Pump Building
- Fabrication of SST CS Tanks.

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

- Backfilling Building stem walls
- Stem Walls and SOG RFP – Building Area
- RFP –Concrete pour Containment Sump Areas
- RFP –Containment area SOG

282 -FILTER MODULE 2:

- Final Base Slab Pour
- Reinforcing/Forming/Pouring Walls.



281-FILTER MODULE-Pouring Last Filter Wall



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281-FILTER MODULE – West Side Masonry



281-FILTER MODULE- Reinforcing/Forming/Pouring Walkways



281-FILTER MODULE – Laying out /Setting Pipe supports in Gallery



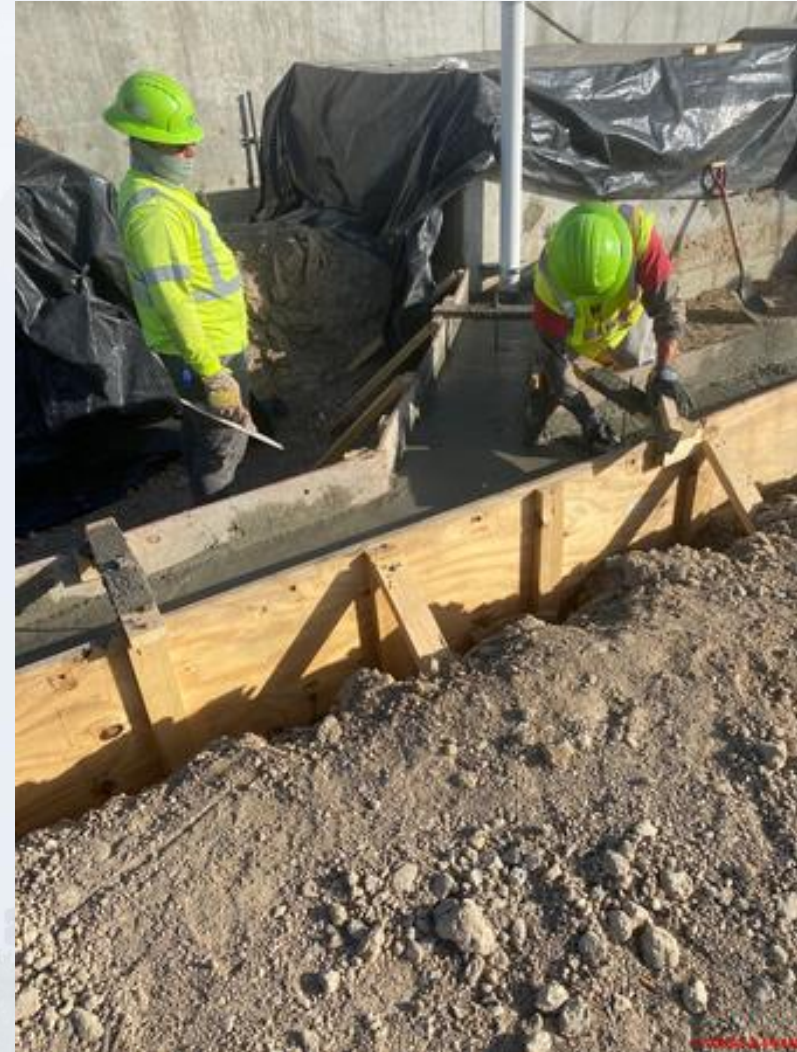
291-TPS – Top View 11/2/2020



291-TPS – Watertightness Testing Phase 2 & Crack Repair Injection



291-TPS – Install UG 6" PDR piping and FRP Encasement



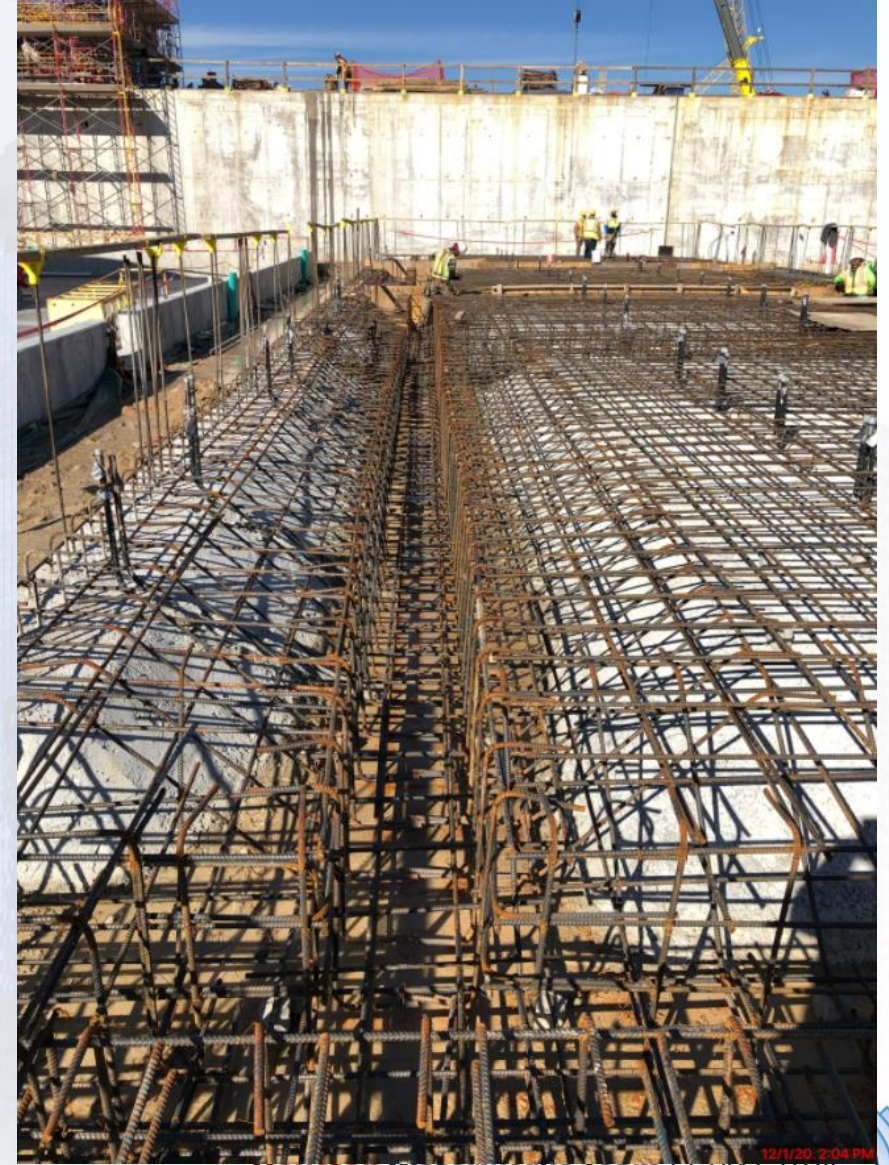
291-TPS – Install Concrete Ring Footer around 42" Risers



311-Post Treatment Chemical Facility 1 - Overall view 12/01/2020



311 – FRP Building pump room



311 - Fabrication of SST CS Tanks



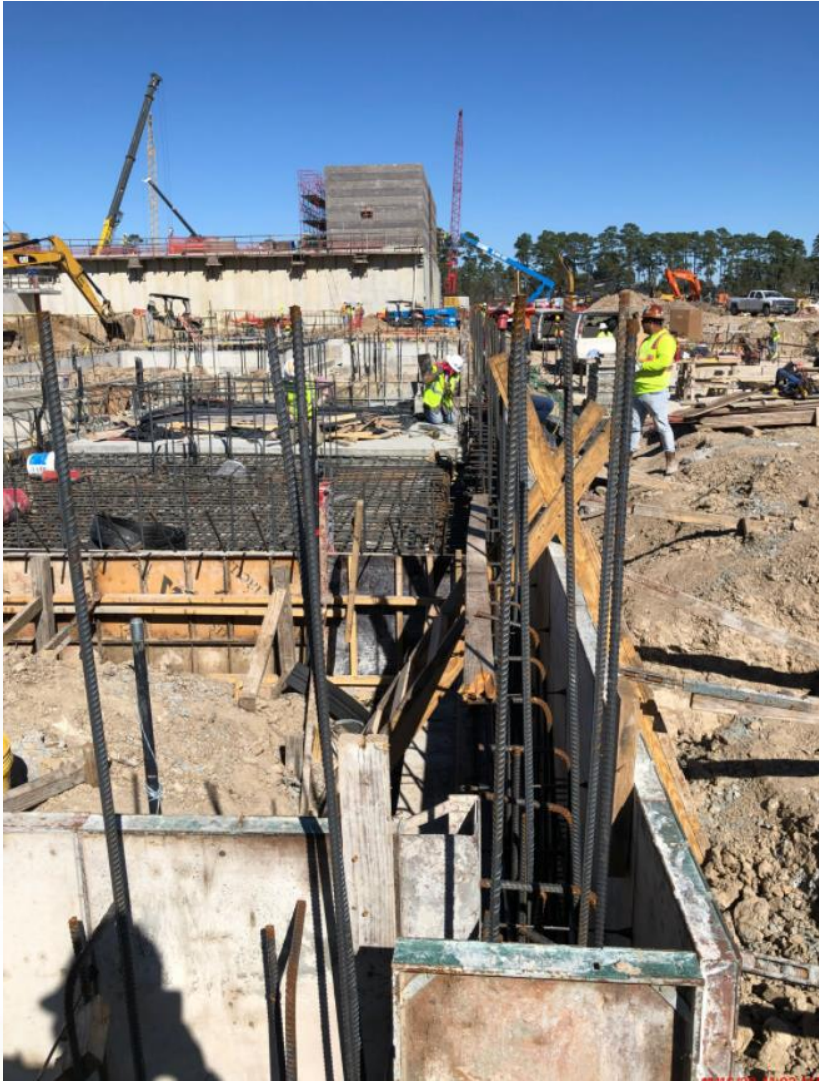
311 - Fabrication of SST CS Tanks



312 - Stem Wall backfilling



312-FRP Polymer SOG



312 - Containment Sump Area –RFP



312 - Containment Area SOG –RFP



312 - Overall view



CENTRAL PLANT – 2nd Phase - Overall



282-FILTER MODULE 2- Pouring Final Base Slab



282-FILTER MODULE 2- Reinforcing/Forming/Pouring Walls



292-TPS – FRP Main Slab Sections C1, A3, and B6





292-TPS – Main Slab Section B1 and C3 Reinforcement



292-TPS – Place Grout under Pump Cans



Construction Progress – LREQ Basins Facilities 601/602

- **601 – Interior walls finish of basin**
- **601 – Installation of handrails**
- **602 – Continue excavation**



601 – Finishing interior walls of basin



601 - Installation of handrails



602 – Continue excavation



Construction Progress – North Plant

211-Pretreatment Chemical Facility 1:

- Slab-1 Concrete

214-Pretreatment Chemical Facility 4:

- Installation of Primary Coagulant Steel Tanks

241-FlocSed Train 1:

- Leak Testing
- 12" USL Encasement
- Overflow Box Placement

242-FlocSed Train 2:

- Structural Concrete Work

243-FlocSed Train 3:

- E/W Corridor

252-Ozone Contractor Train 2:

- Baffle Wall-1A F/R/P

502-Gravity Thickener Complex 2:

- GT #4 Water Tightness Test

504-Gravity Thickener Complex 4:

- GT #7 Wall-2&3 Rebar Installation

611-LiquidResidualsClarifierFacility 1

- PS-EW-1 F/R/P
- WDW-3 F/R/P



Facility 211 – Slab-1 Concrete



Facility 214 – Installation of Primary Coagulant Steel Tanks



Facility 241 – Cross Collector Leak Test, 12" USL Encasement, Overflow Box Concrete Placement



Facility 242 – FBDC-WL-5 & Elevated Deck F/R/P



Facility 242 – CWC-W-2 & CWC-W-6 F/R/P



Facility 243 – E/W Corridor 24" PDR F/R/P



Facility 252 – Baffle Wall-1A F/R/P



Facility 502 –Gravity Thickener #4 Water Tightness Test



504 – Gravity Thickener #7 Wall-2&3 Rebar Installation



Facility 611 – WDW-1 F/R/P, WEW-7 F/R/P, PS-EW-1 Curing





Construction Progress – South Plant

- Casting beds & crane pads installation awaits yard pipe tier-1 work completion at GST 361 - GST 362.
- Install steel closure pieces at MSB 111 roof.
- Installing interior electrical equipment, conduit & wiring at MSB 111.
- Re-install Victaulic W257 flex connectors due to assembly errors at HSPS 401.
- Continued backfilling the 78-inch inlet pipe encasement at HSPS 401.
- Rebar installation at HSPS 402 locking slabs.
- Installation of grout and leveling pump cans at HSPS 402.
- Installation of electrical & plumbing rough-in at the 1st floor at the Dewatering Building 520.
- Installation of precast wall panels at the Dewatering Building 520.
- Masonry installation at the 1st and 2nd floor at the Dewatering Building 520.
- Installation of concrete walls and columns at Sludge Equalization Tank 510.



GST 361 & 362 AERIAL VIEW



GST 361

GST 362

Grading/prepping for casting beds and crane pads





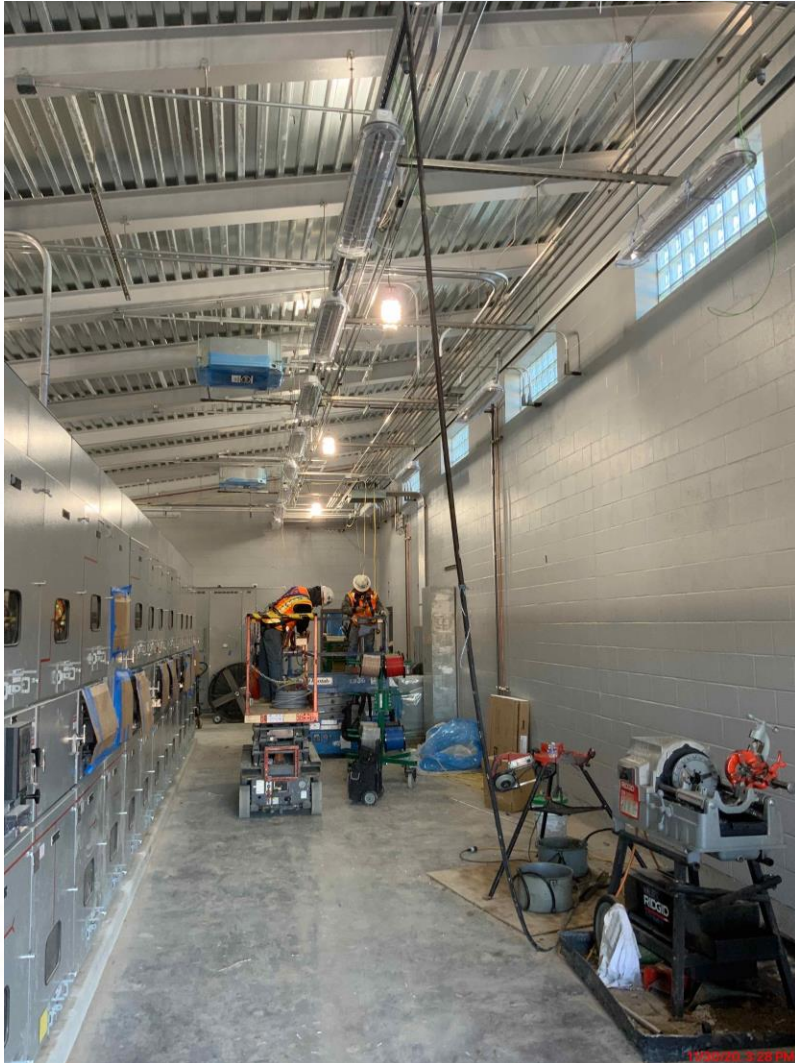
HSPS 401

MSB 111

HSPS 402

HSPS 401, MSB 111, HSPS 402 AERIAL VIEW

Install steel closure pieces at MSB 111 roof and installing interior electrical equipment, conduit & wiring at MSB 111



Re-install Victaulic W257 flex couplings and continued backfilling the 78-inch inlet pipe encasement at HSPS 401



Rebar installation at locking slabs, installation of grout and leveling pump cans at HSPS 402



DEWATERING BUILDING 520 & THICKENED SLUDGE EQUALIZATION TANK 510 AERIAL VIEW



520

510

Dewatering Building 520



Installation of precast wall panels at the Dewatering Building 520



Installation of electrical & plumbing rough-in of the 1st floor at the Dewatering Building 520



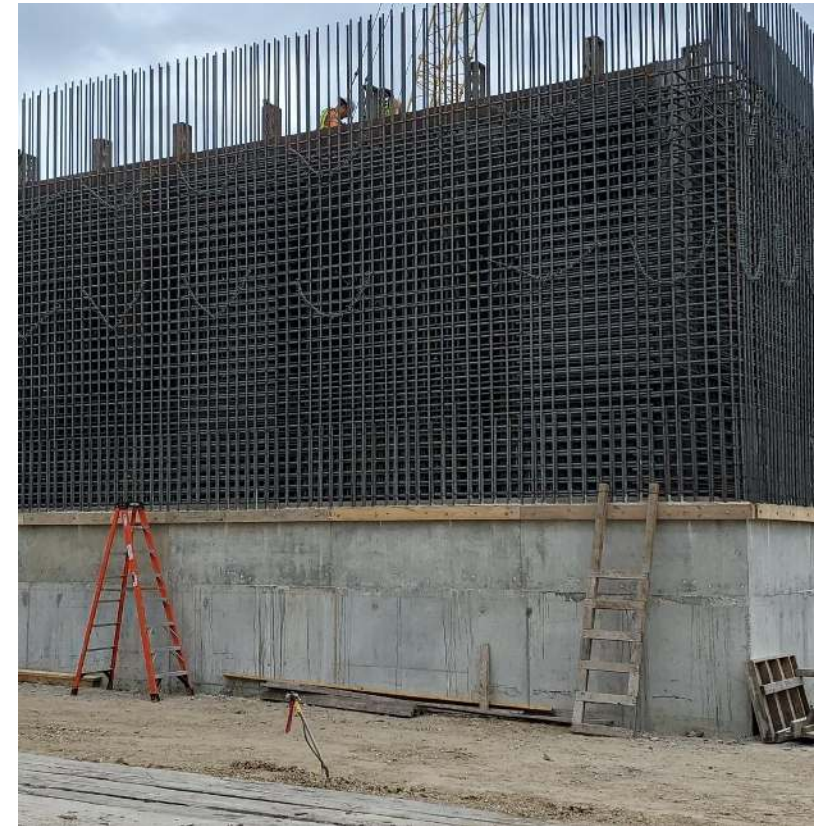
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Masonry installation at the 1st and 2nd floor at Dewatering Building 520





Installation of concrete walls and columns at Sludge Equalization Tank 510



Construction Progress – Administration Building

- Erection of Standing Seam Roof at AB
- Installation of CMU Wall at MB
- Installation of LV 1 Ductwork at AB
- Installation of Elevator Structural Steel
- Reinforcement of LV 2 SOMD at AB



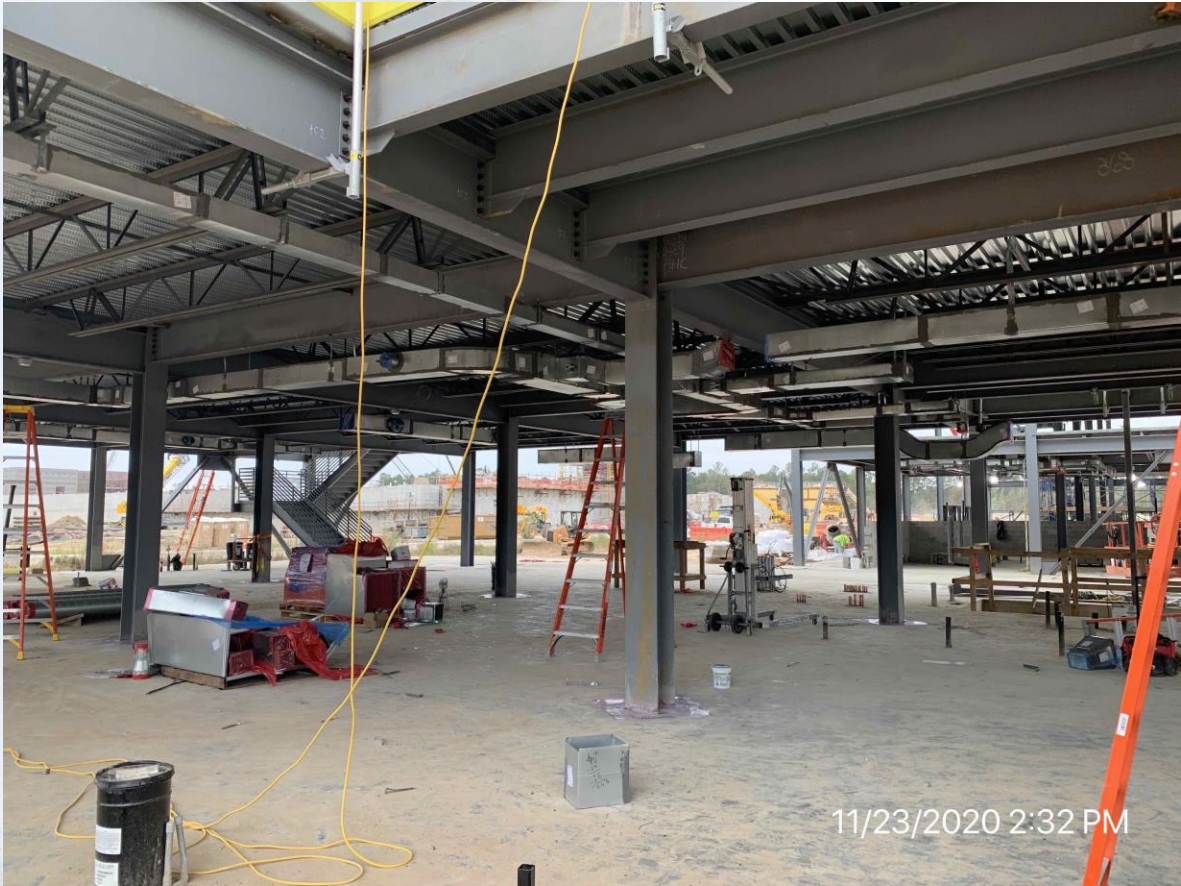
Erected Standing Seam Roof at AB



Continued Installing CMU Wall



Continued Installing Ductwork at AB



Installation of Structural Steel at Elevator



Reinforced LV 2 SOMD at AB



