



**CITY OF HOUSTON**  
Houston Public Works

# DESIGN-BUILD SERVICES

# Northeast Water Purification Plant Expansion

**December 16, 2020**



**Houston Waterworks Team**







**Site Drone Map  
December 11, 2020**







# Construction Progress – Intake Pump Station (IPS)

- Continue erecting structural steel members
- Installing pump curb formwork and curing concrete
- Installation of Building 152 footing
- Building 142 precast panels arrive on site
- Installing the 108" 45 degree turn pipe





# Continue erecting structural steel members





# Installing pump curb formwork and curing concrete





# Installation of Building 152 footing





# Building 142 precast panels arrive on site





# Installing 108" RW 45° Bends







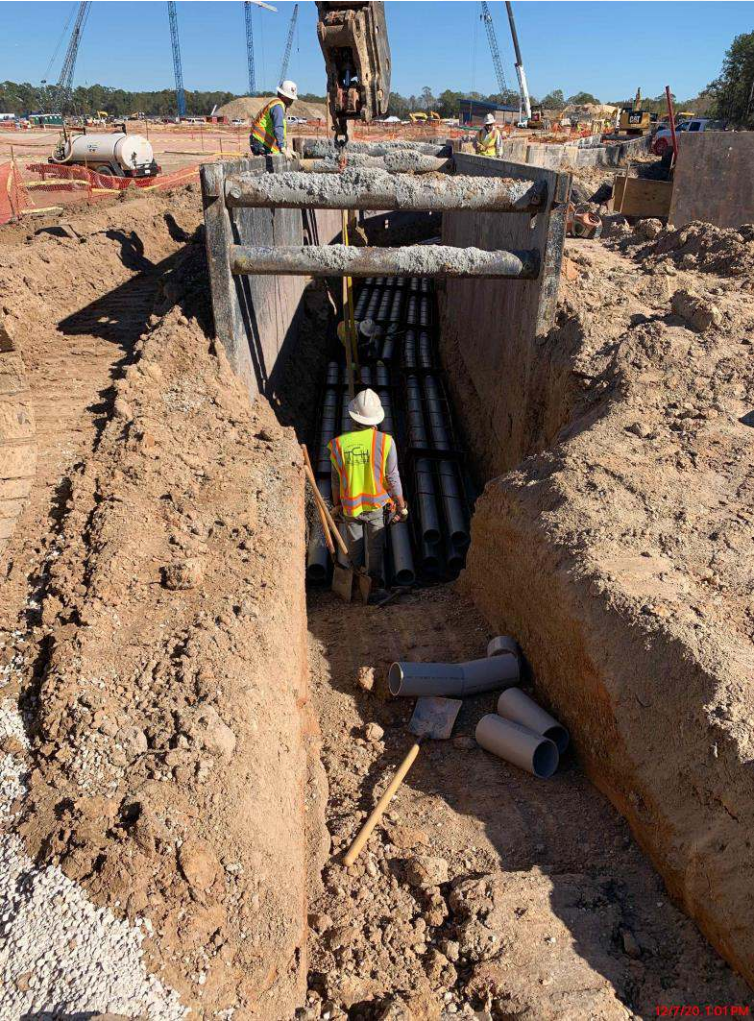
# Construction Progress – Site Electrical

- Duct bank Installation 111A/520 to MMH111A-6/MMH520-2
- Arrival of MVT Transformers (271, 272, 273, 274, 520)





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





# Arrival of MVT Transformers (271, 272, 273, 274, 520)





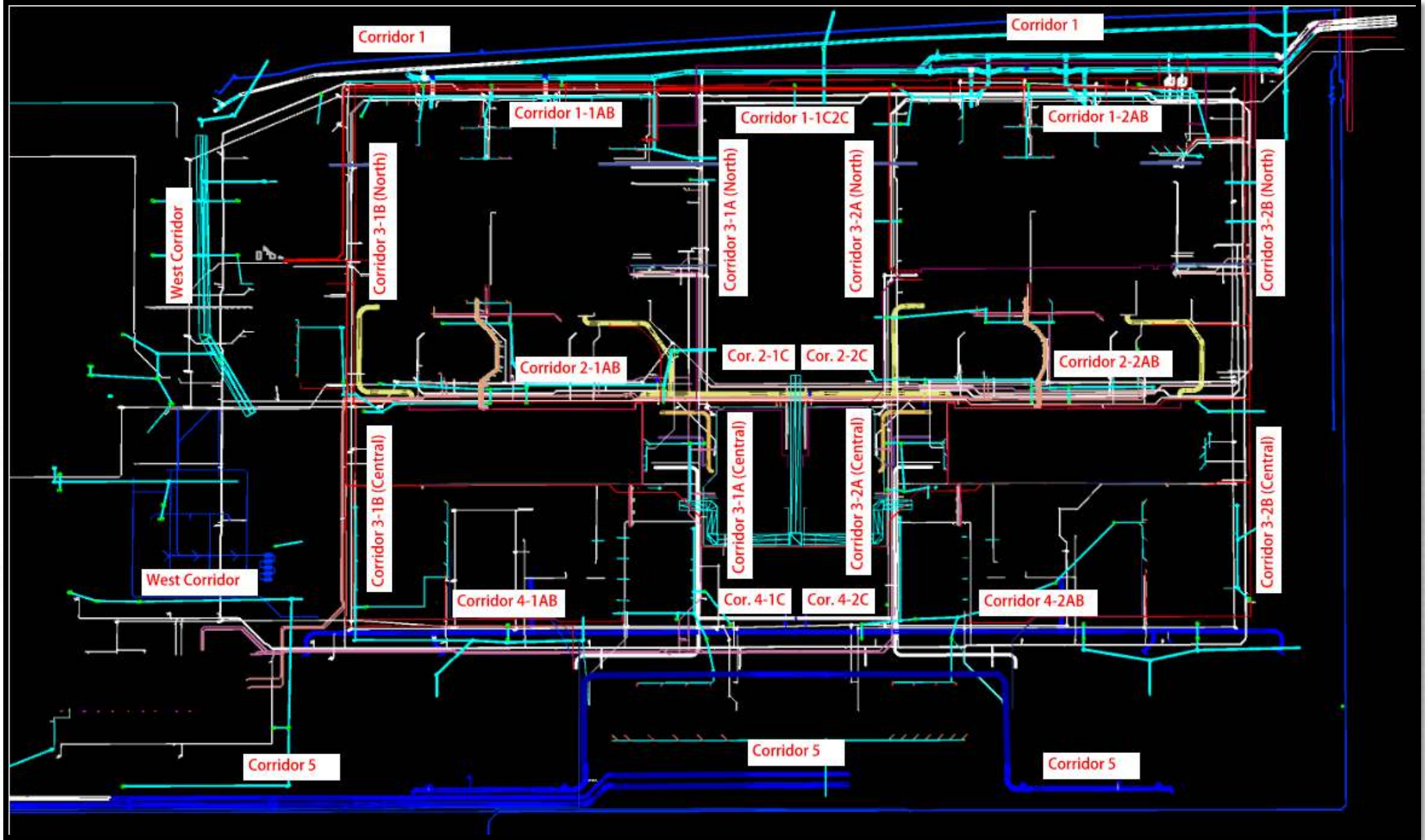


# Construction Progress – Yard Piping

- **Installing 24” DEC piping in Corridor 2-1AB**
- **Installing 2-10” TSL pipelines in Corridor 2-1AB**
- **Installing 6” PW lines in Corridor 2-1AB and 3-1A Central**
- **Installing 10” SSG and 10” PDR piping and manholes in Corridor 3-1B Central**
- **Laying 96” FW steel pipe in Corridor 4 – Phase 2**
- **Laying 108” FW steel pipe in Corridor 5 - Phase 2**
- **Formed and poured 102” FW valve support in Corridor 5 – Phase 2**
- **Laying 108” FW steel pipe in Corridor 5**
- **Restoring craft parking lot after pipe install in Corridor 5**
- **Laying 84” & 120” FW distribution lines in Corridor 5**









# Aerial view of Corridor 2-1AB





# Installing 24" DEC piping in Corridor 2-1AB





# Installing 2-10" TSL lines in Corridor 2-1AB





# Installing 6" PW lines in Corridor 2-1AB and 3-1A Central





# Installing 10" SSG, 10" PDR, and manholes in Corridor 3-1B Central





# Aerial view of Corridor 5





# Laying 108" FW steel pipe in Corridor 5





# Restoring craft parking lot after pipe install in Corridor 5





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





# Aerial view of Corridor 4 – Phase 2





# Laying 96" FW steel pipe in Corridor 4 – Phase 2





# Aerial view of Corridor 5 - Phase 2





# Laying 108" FW steel pipe in Corridor 5 - Phase 2





# Formed and placed 102" FW valve supports in Corridor 5 - Phase 2







# Construction Progress – Central Plant

## **281-FILTER MODULE 1 :**

- **West Side Masonry.**
- **Setting Filter Troughs.**
- **Setting Gallery BWA/BWS Pipe supports.**

## **291-TRANSFER PUMP STATION 1:**

- **Watertightness Testing & Crack Repair Injection**
- **VTP 291PMP10101 Installation**

## **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**

- **FRP –Post Chem Building SOG**
- **RFP – Containment Area SOG**
- **RFP –Ductbank from 312 to 601**

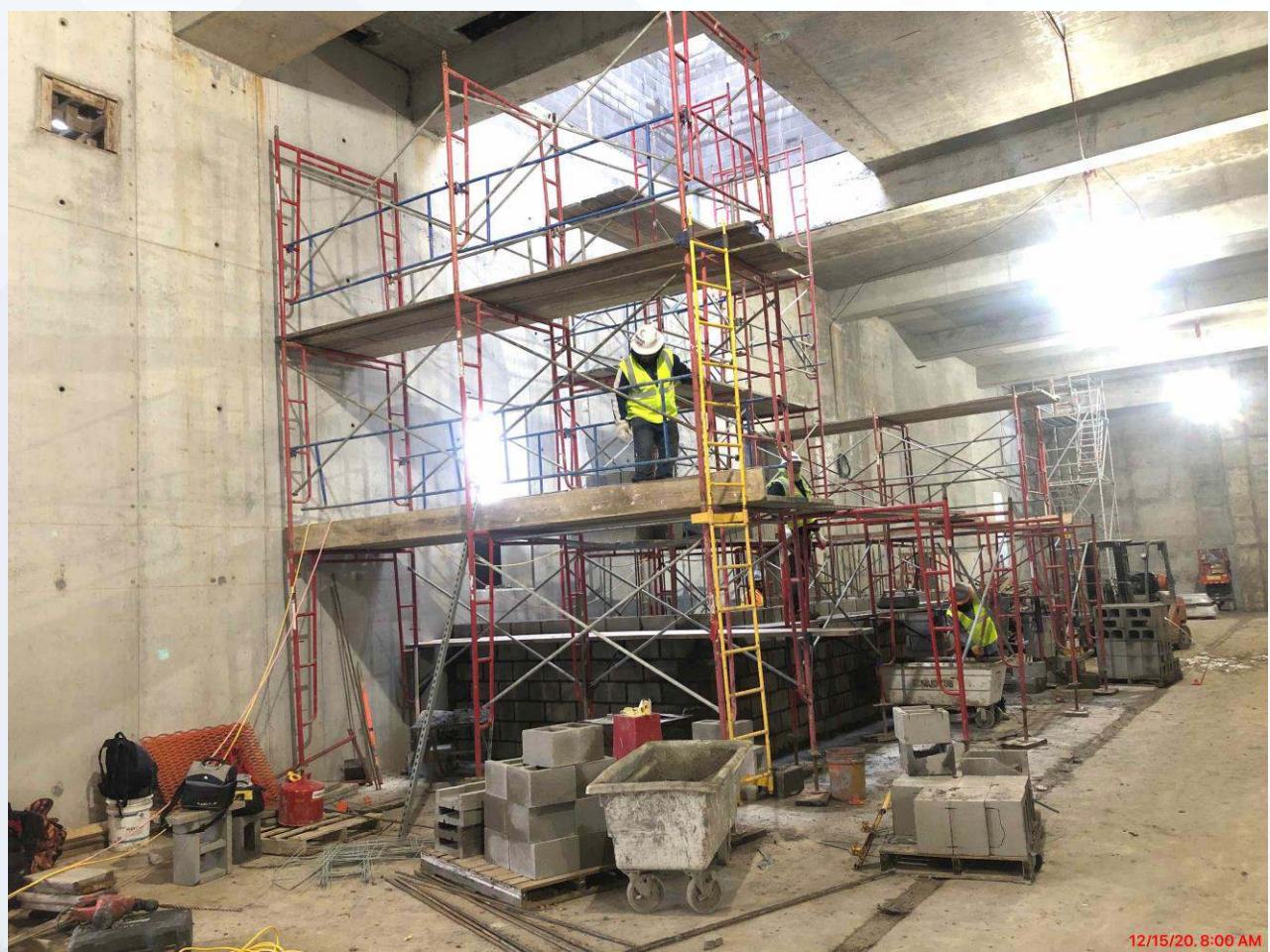
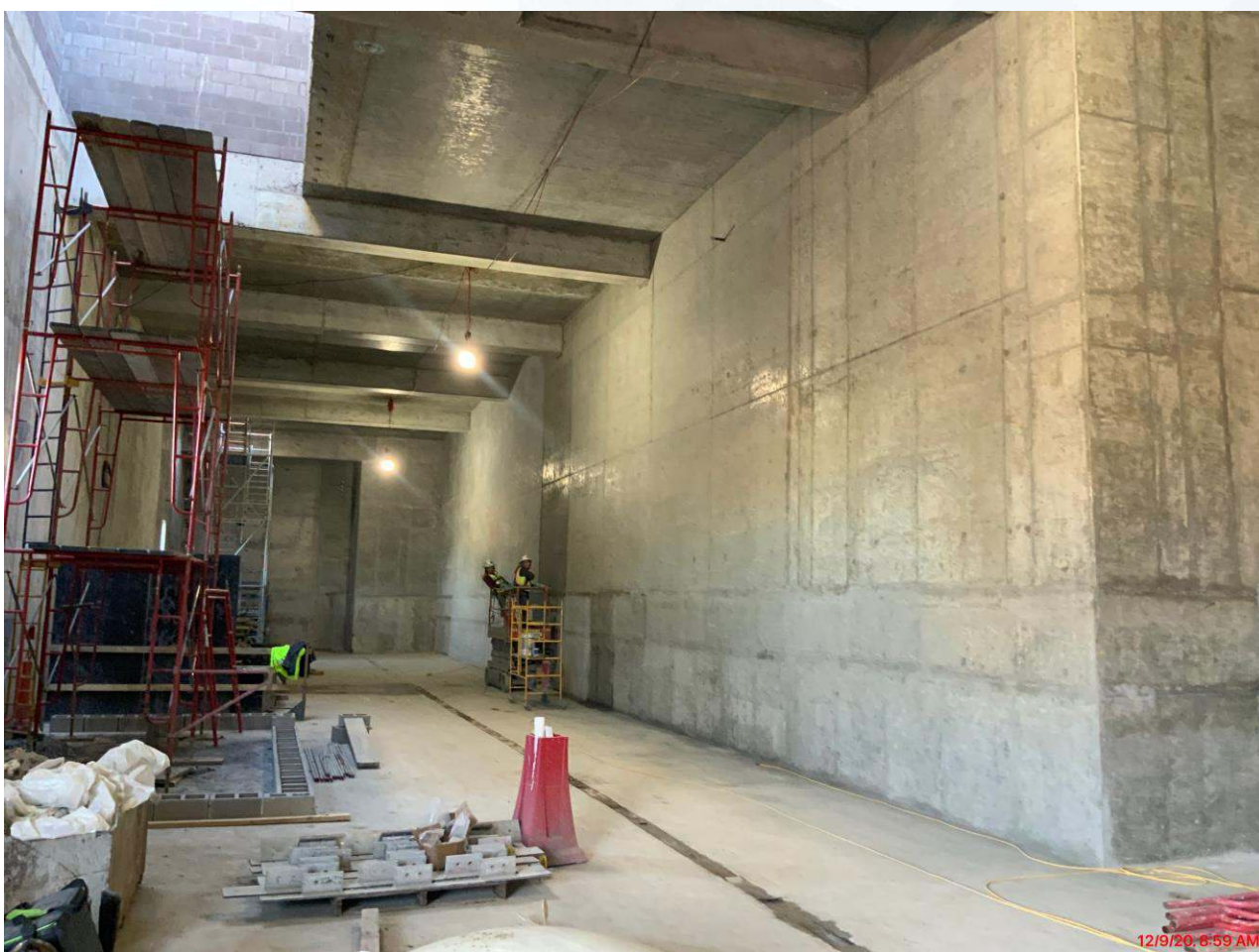
## **282 -FILTER MODULE 2:**

- **Reinforcing/Forming Walls**
- **Pouring Walls**
- **Backfilling For Filter Slab 13 Work**





# 281-FILTER MODULE-West Side Masonry





# 281-FILTER MODULE- Setting Filter Troughs (Filter 12)





# 281-FILTER MODULE – Setting BWA/BWS Pipe supports in Gallery





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





# 291-TPS – Install VTP 291PMP10101





# 311 – Post Chem Building -FRP





# 311 – Post Chem Building -FRP





# 311 - Fabrication of SST CS Tanks





# 311 – Aerial view – 12/01/2020





# 312 - Post Chem Building SOG-FRP





# 312 - Containment Area SOG –FRP



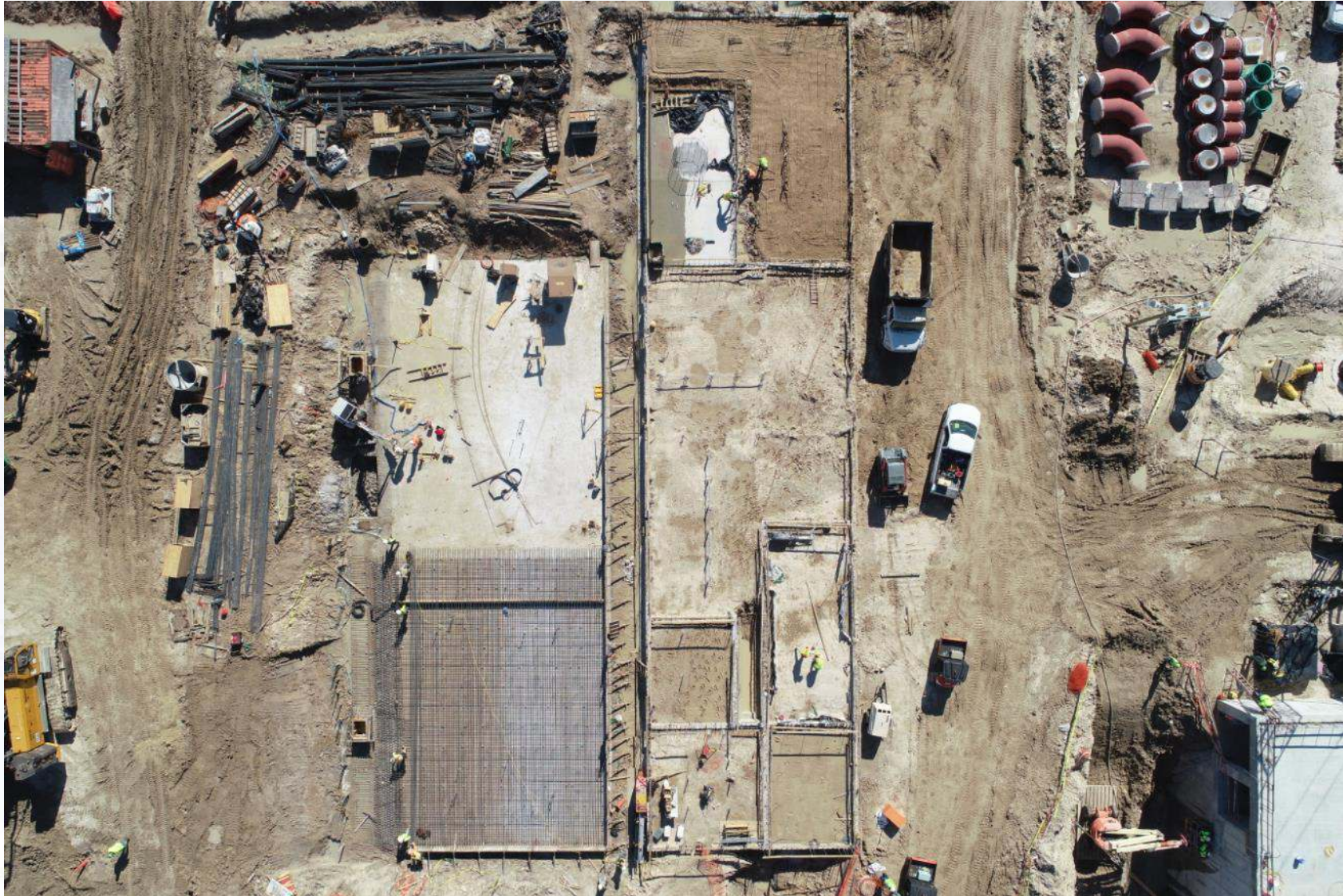


# 312 – ductbank from 312 to 601



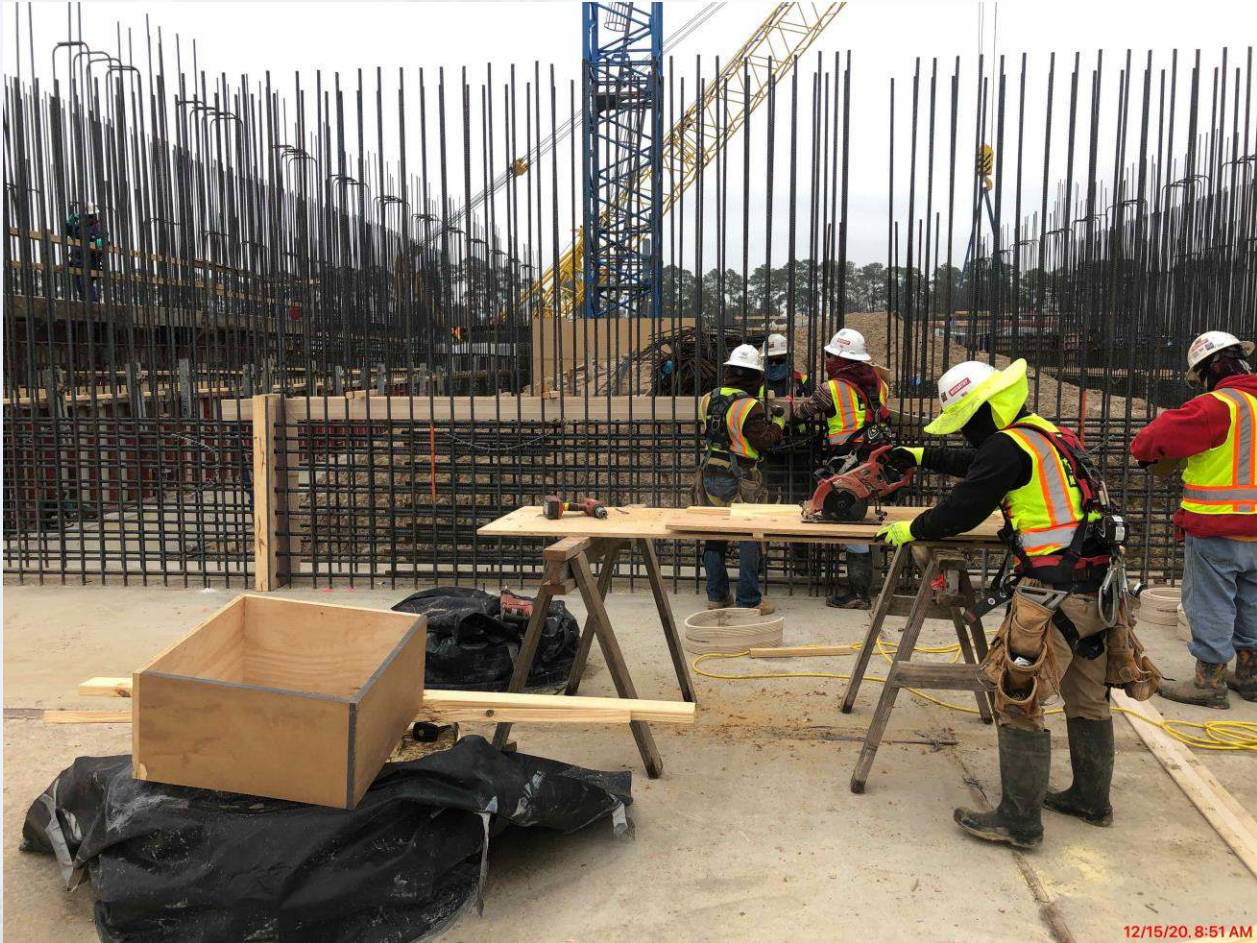


# 312 - Overall view 12/01/2020





# 282-FILTER MODULE 2- Reinforcing/Forming Walls





# 282-FILTER MODULE 2- Pouring Walls





# 282-FILTER MODULE 2- Backfilling for Filter 13 Slab Work





# 292-TPS – FRP Main Slab Sections B1, B3, and C3





# 292-TPS - FRP Pump Cans Lower Encasement







# Construction Progress – LREQ Basins Facilities 601/602

- **601 – Interior walls finish of basin**
- **601 – Installation of underground duct bank North of 312**
- **602 – Continue excavation**
- **602 – Install geofabric, underdrain system and rock placement**





# 601 – Finishing interior walls of basin





# 601 – Installation of underground duct bank North of 312





# 602 – Continue excavation





# 602 – Install geofabric, underdrain system and rock placement







# Construction Progress – North Plant

## 211-Pretreatment Chemical Facility 1:

- Area-B Wall-5 Stripping Formwork and PC Tank Pads F/R/P

## 222-Rapid Mix Train 2:

- Elevated Slab/Beam

## 241-Flocculation & Sedimentation Train 1:

- Cross Collector Leak Test

## 242-Flocculation & Sedimentation Train 2:

- CWC Wall-5 Rebar

## 251-Ozone Contractor Train 1:

- Outlet Box Mudmat

## 252-Ozone Contractor Train 2:

- Baffle Wall-3 Pour

## 502-Gravity Thickener Complex 2:

- USDS Elevated Slab F/R/P

## 503-Gravity Thickener Complex 3:

- TSSB Sump Pour

## 611-Liquid Residuals Clarifier Facility 1:

- WDW Wall-6 Formwork

## 801-Basin Drain Pump Station 1:

- Walls Formwork





# Facility-211 Area-B Wall-5 Stripping Formwork and PC Tank Pads F/R/P





# Facility-222 Elevated Slab-Beam



12/4/20, 11:38 AM



# Facility-241 Cross Collector Leak Test



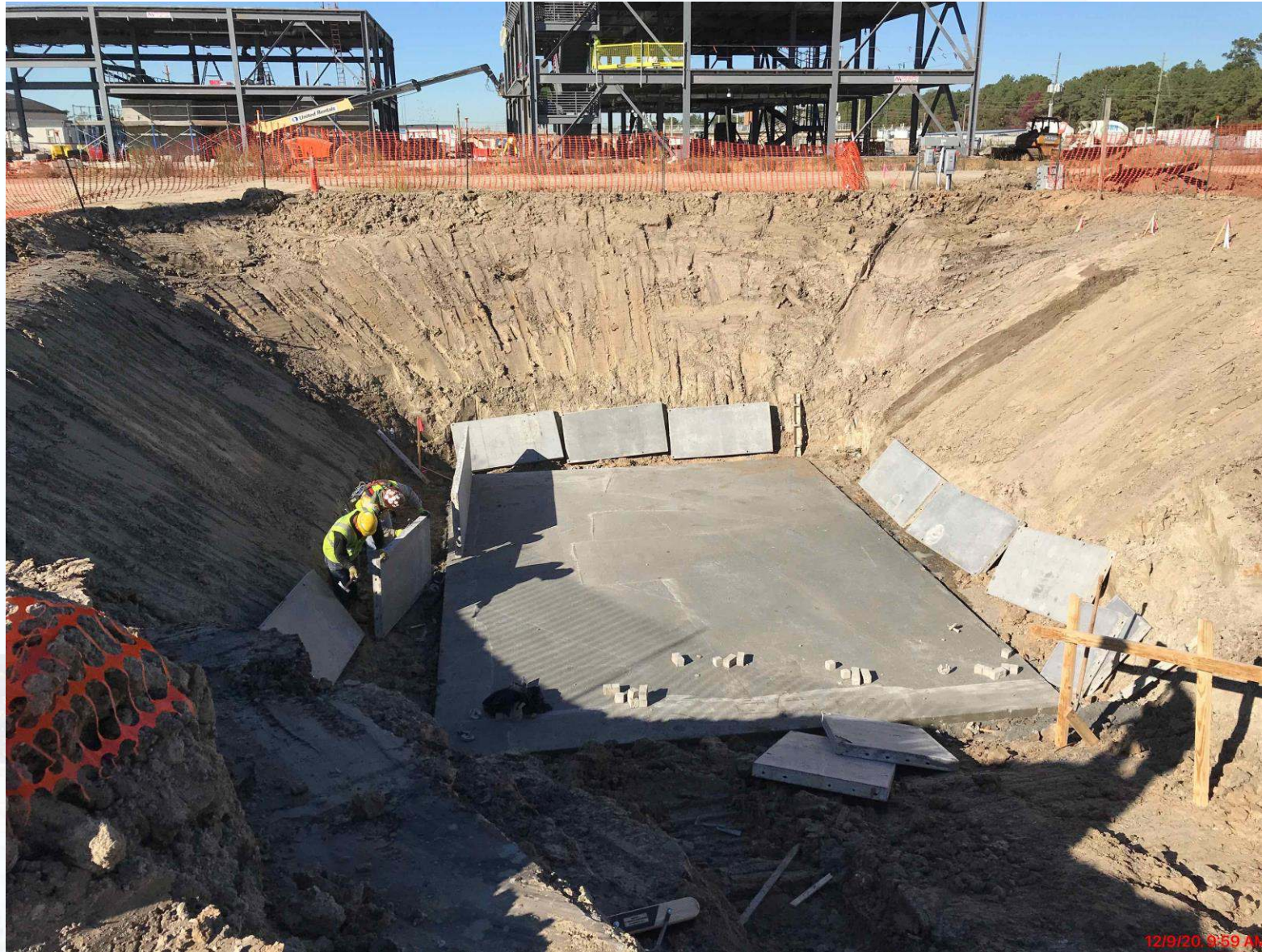


# Facility-242 CWC Wall-5 Rebar





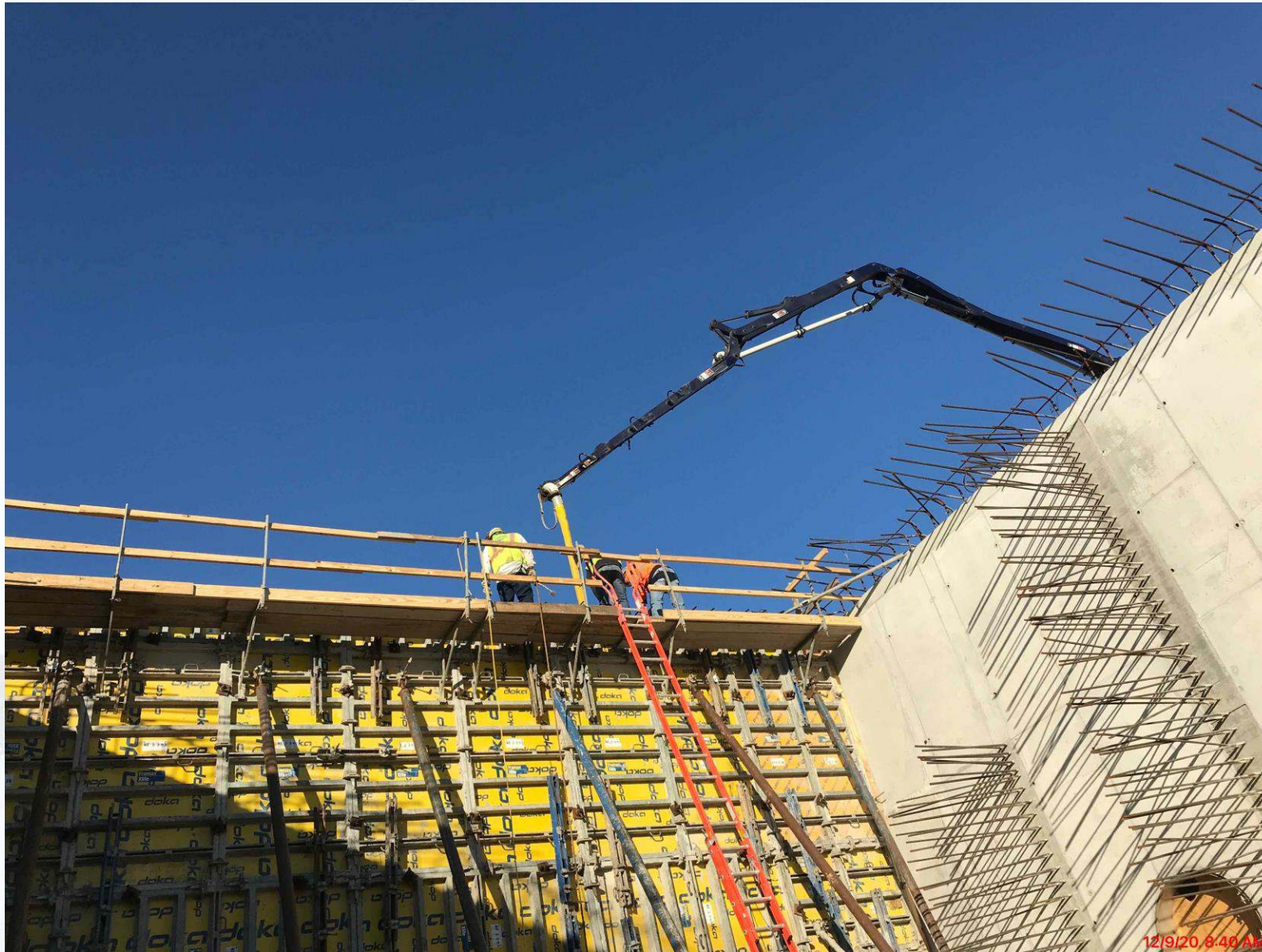
# Facility-251 Outlet Box Mudmat



12/19/20 9:59 AM



# Facility-252 Baffle Wall-3 Pour



12/9/20, 8:46 AM



# Facility-502 USDS Elevated Slab F/R/P



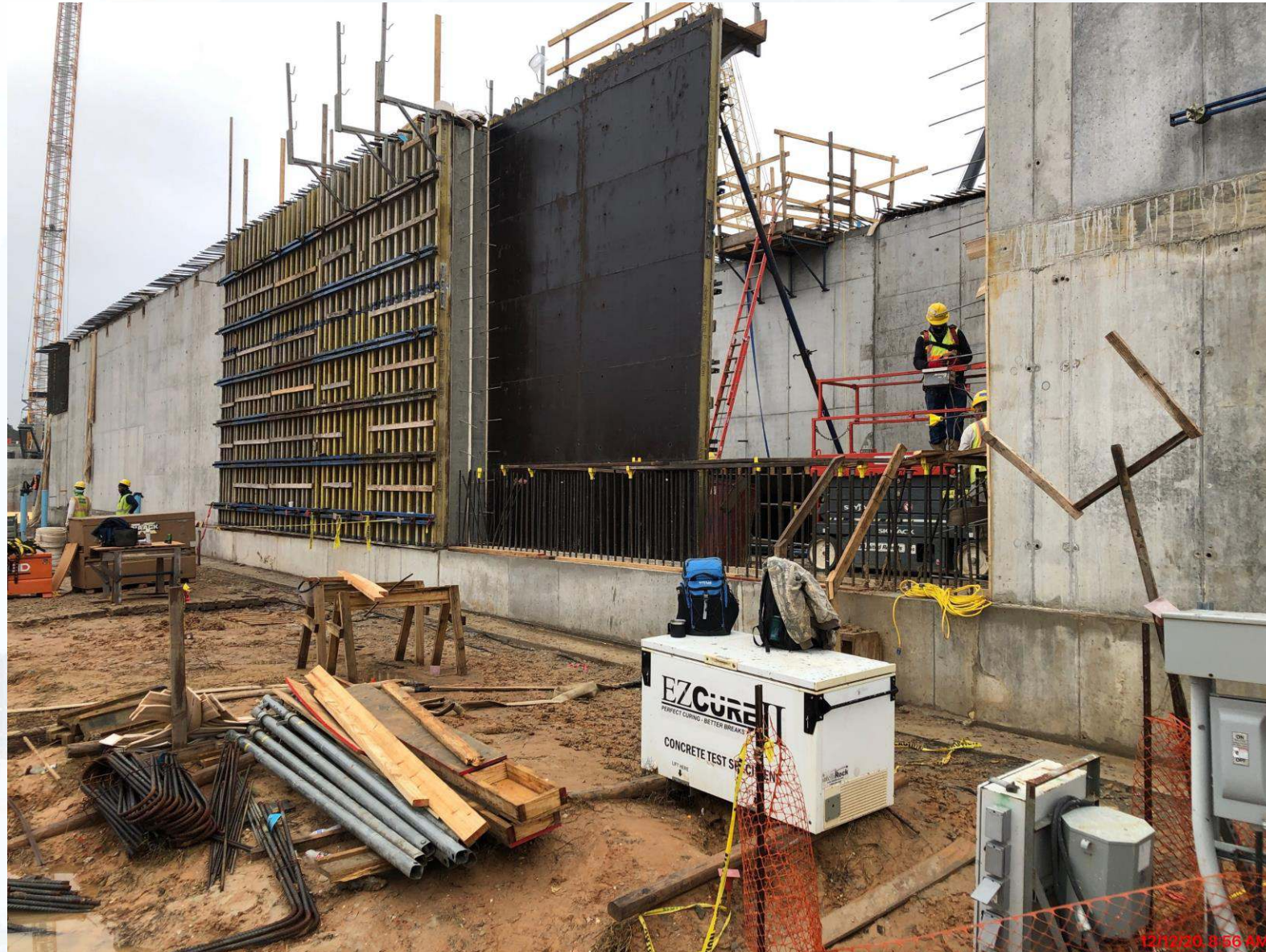


# Facility-503 TSSB Sump Pour



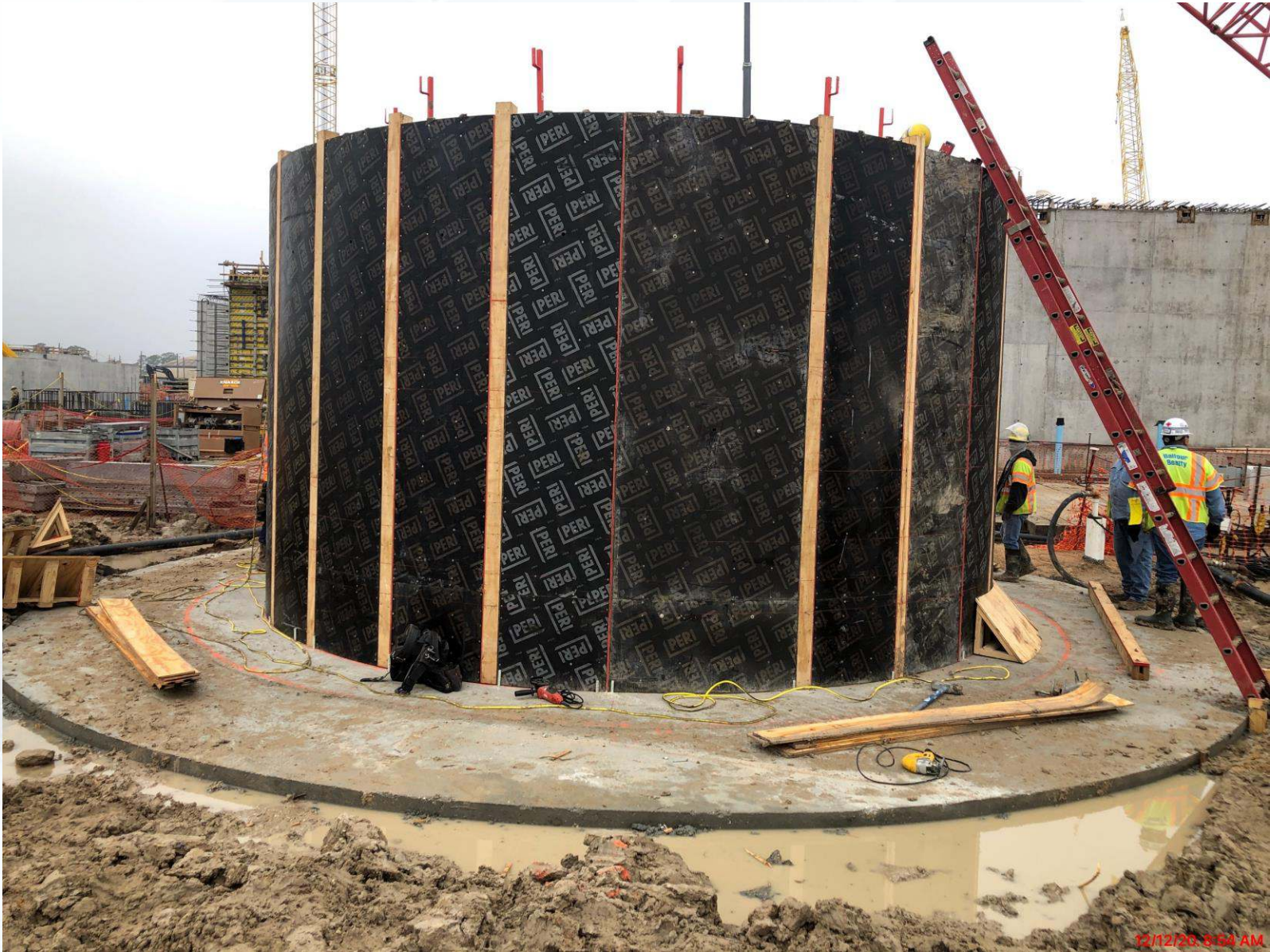


# Facility-611 WDW Wall-6 Formwork





# Facility-801 Walls Formwork



12/12/20 8:54 AM





# Construction Progress – South Plant

- Casting beds & crane pads installation awaits yard pipe tier-1 work completion at GST 361 - GST 362.
- Mobilizing Preload's crew for GST 361 - GST 362.
- Installing leveling course at GST 362.
- Forming footings for GST 361 - GST 362.
- Continued backfilling the 78-inch inlet pipe encasement and pump cans at HSPS 401.
- Hydrostatic testing pipe #7 at HSPS 401.
- Installing steel closure pieces at MSB 111 roof and backfilling at MSB 111.
- Installing interior electrical equipment, conduit & wiring at MSB 111.
- Locking slab installation at HSPS 402.
- Installation of 1st floor plumbing overhead rough-in and conduit racks at the Dewatering Building 520.
- Installation of precast wall panels at the Dewatering Building 520.
- Installation of concrete walls and columns at Sludge Equalization Tank 510.





# GST 361 & 362 AERIAL VIEW

December 11, 2020



GST 361

GST 362



# Mobilizing Preload's crew for GST 361 and GST 362



12/12/20 8:49:24 AM CST 66



# GST 361 and GST 362



Installing leveling course at GST 362



Forming footings for GST 361 - GST 362





**HSPS 401**

**MSB 111**

**HSPS 402**

**HSPS 401, MSB 111, HSPS 402 AERIAL VIEW**  
December 11, 2020





**Continued backfilling the 78-inch inlet pipe encasement and pump cans at HSPS 401**

12/12/20 8:53:38 AM C

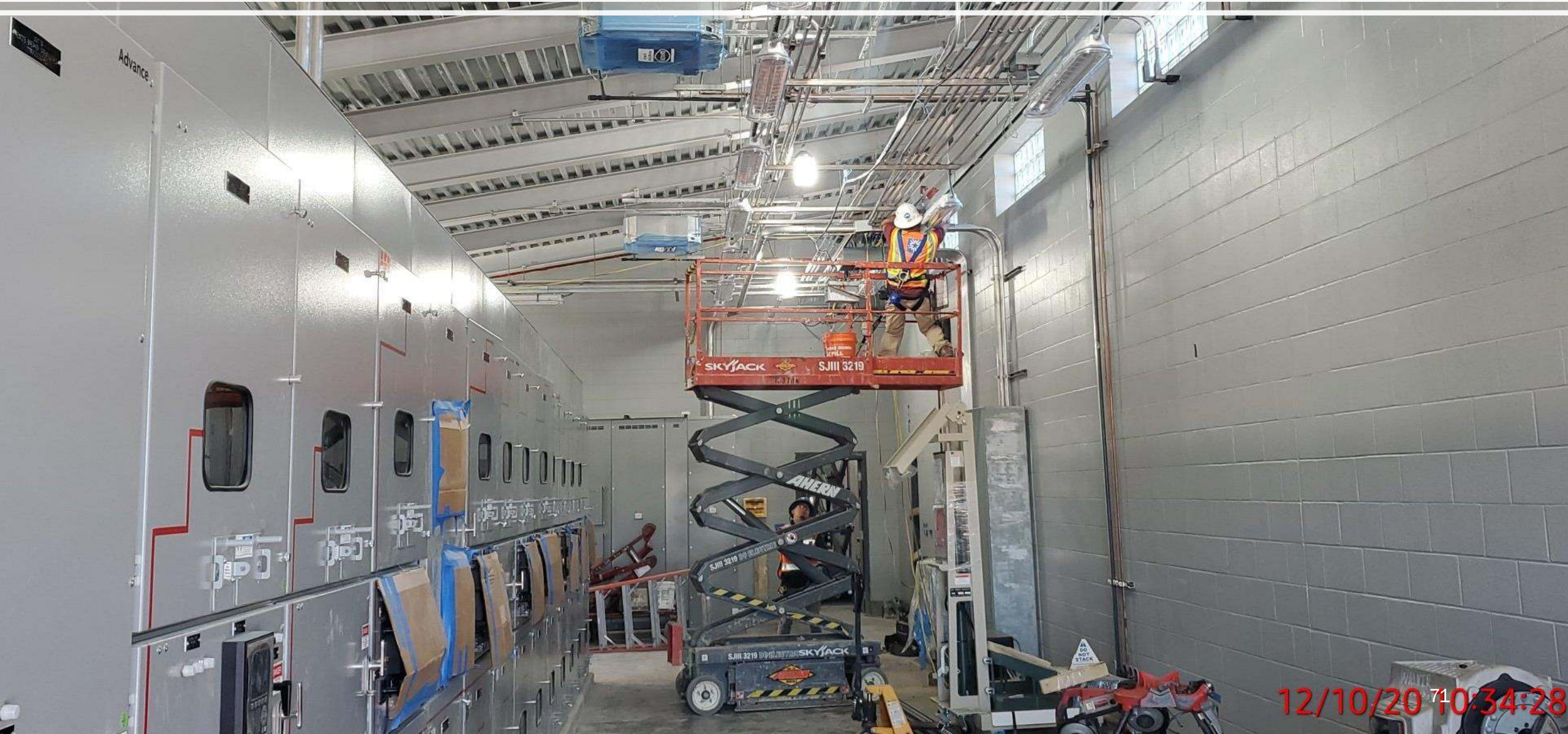


# Installing steel closure pieces at MSB 111 roof and backfilling at MSB 111



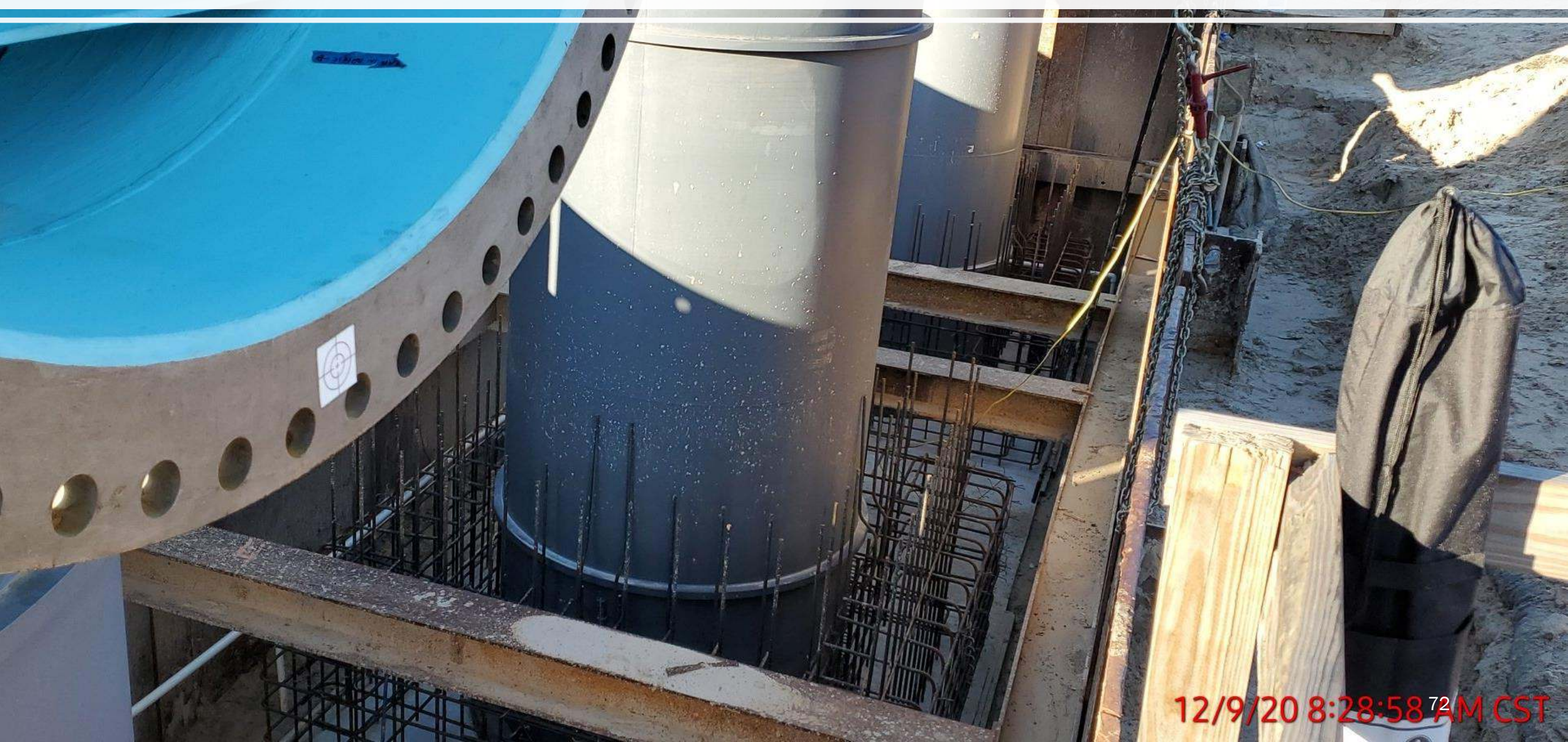


# Installing interior electrical equipment, conduit & wiring at MSB 111





# Locking slab installation at HSPS 402



12/9/20 8:28:58 AM CST



**DEWATERING BUILDING 520 &  
THICKENED SLUDGE EQUALIZATION TANK 510 AERIAL VIEW**  
December 11, 2020



520

510



# Dewatering Building 520





# Installation of precast wall panels at the Dewatering Building 520



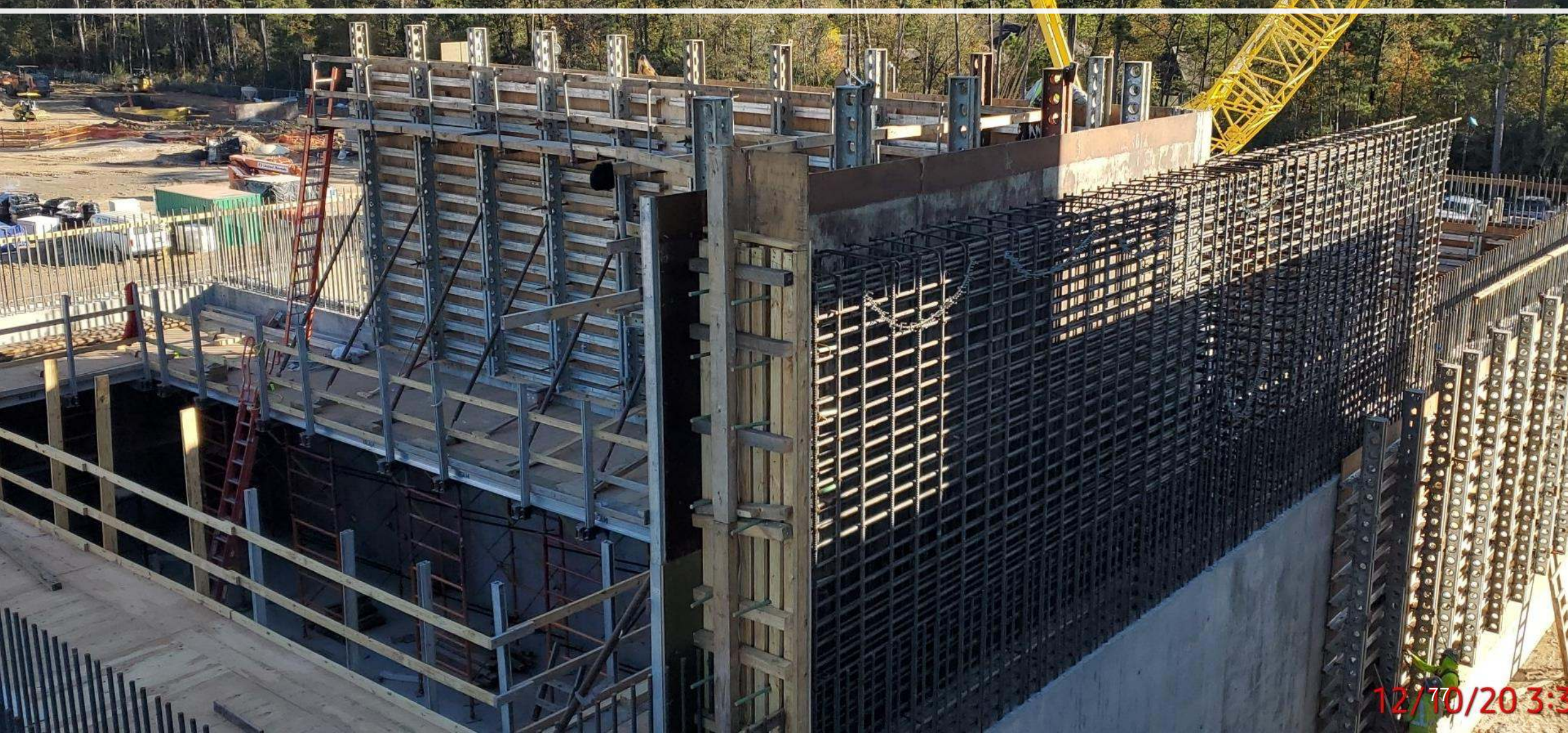


# Installation of 1st floor plumbing overhead rough-in and conduit racks at the Dewatering Building 520





# Installation of concrete walls and columns at Sludge Equalization Tank 510



12/10/20 3:33





# Construction Progress – Administration Building

- Continued Installation of CMU Wall at MB
- Placed LV 2 SOMD at AB
- Placed LV 3 SOMD at AB
- Placed LV 4 Roof SOMD at AB
- Placed Stair 2 Landing and Treads at AB



# Continued Installing CMU Wall





# Placement of LV 2 SOMD at AB



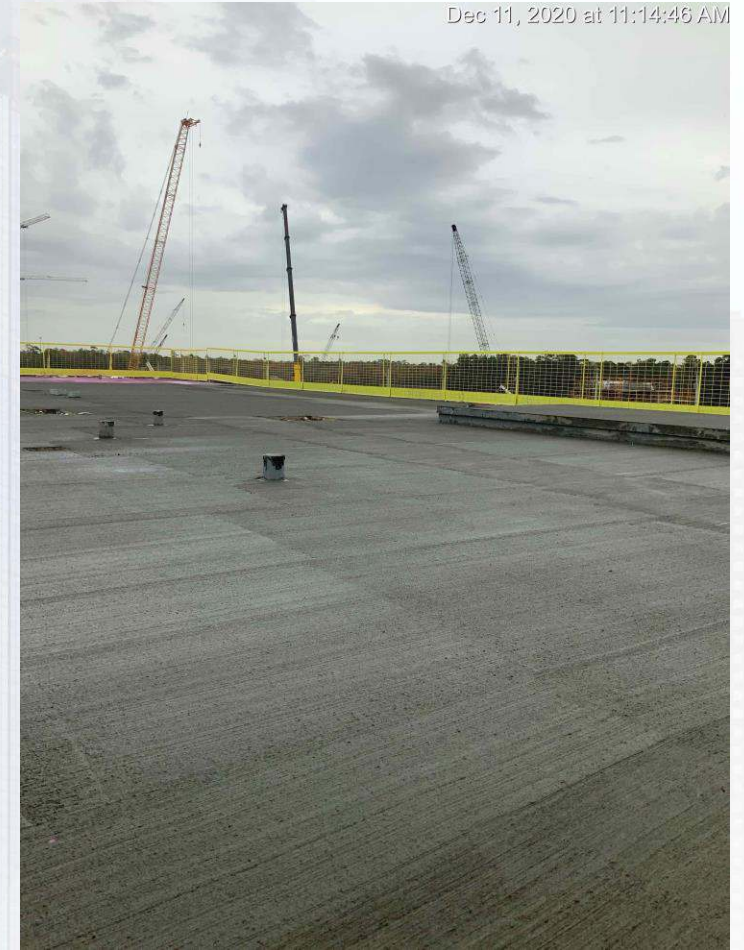
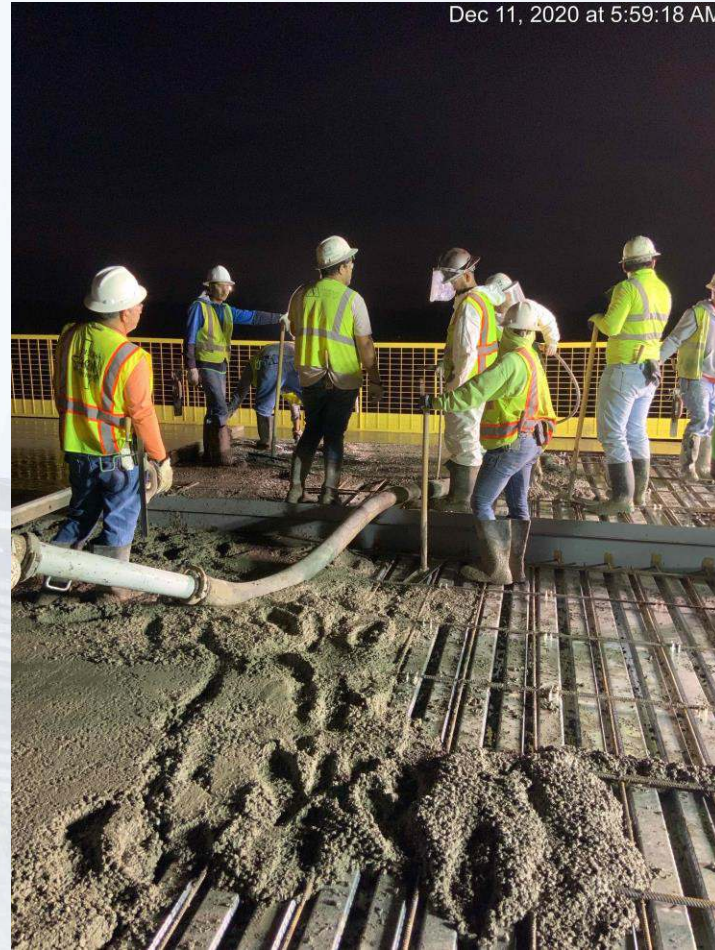
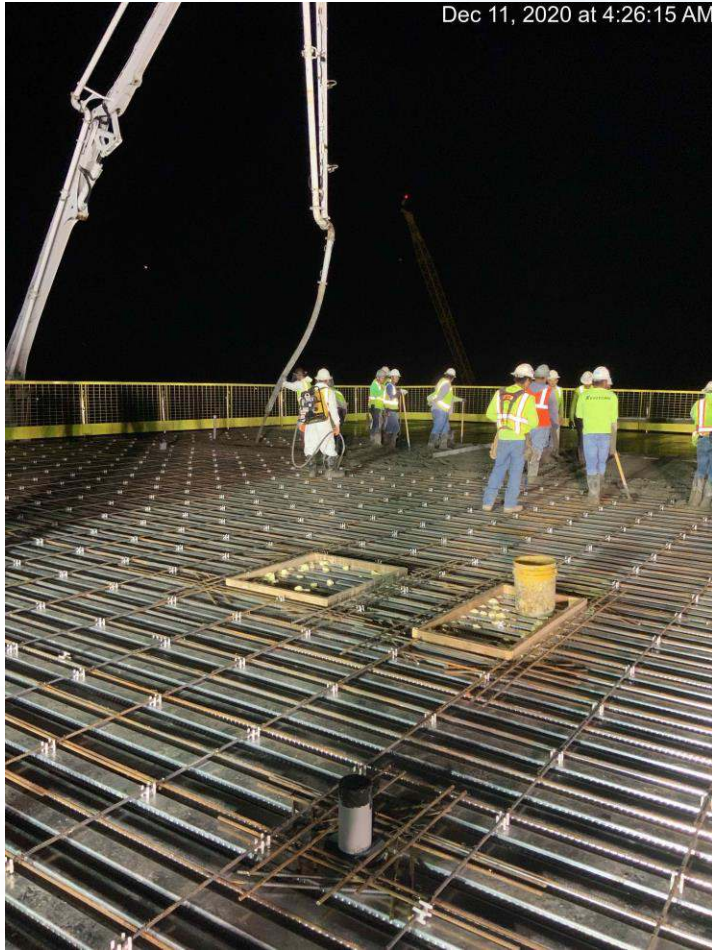


# Placement of LV 3 SOMD at AB



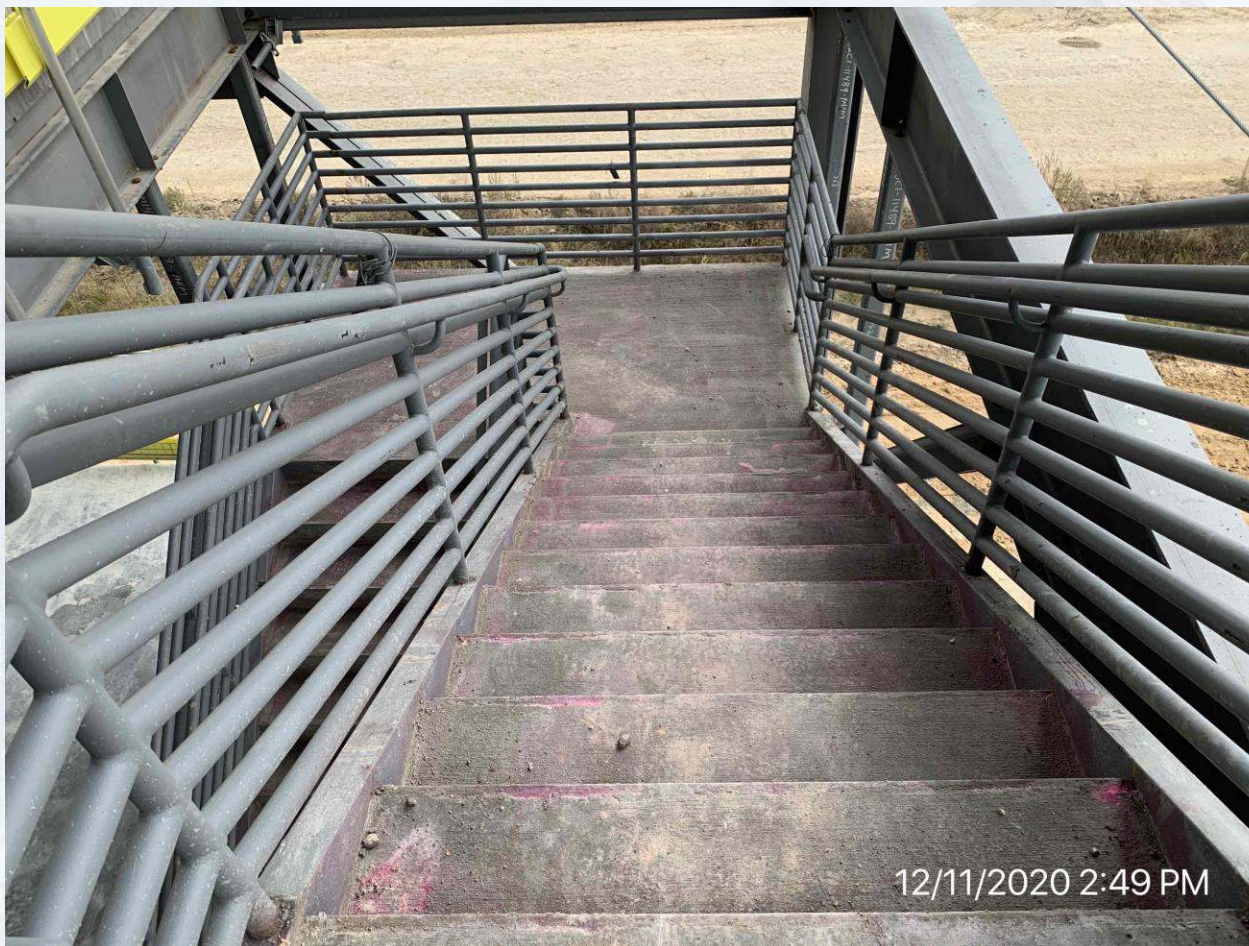


# Placement of LV 4 Roof SOMD at AB





# Placed Stair 2 Landing and Treads at AB



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