GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES
LAWRENCEVILLE, GA

Gwinnett Water Resources

SUWANEE CREEK DIVERSION PUMP STATION EXPANSION

ISSUED FOR BID

GWINNETT COUNTY COMMISSION DISTRICT 1
DISTURBED AREA: 1.10 AC

1758 PEACHTREE INDUSTRIAL BLVD.
SUWANEE, GA 30024

811 Know what's below. Call before you dig.

LIST OF APPLICABLE CODES:

- THE GWINNETT COUNTY CONSTRUCTION CODE, 2015 VERSION WITH 2024 AMENDMENTS
- CURRENT ADOPTED OCGA 120-3-3 GEORGIA MINIMUM FIRE SAFETY STANDARDS
- INTERNATIONAL BUILDING CODE, 2018 EDITION WITH 2020 AND 2022, 2024, AND 2025 GEORGIA STATE AMENDMENTS
- INTERNATIONAL FIRE CODE, 2018 EDITION, (AMENDED BY 120-3-3); CONTACT STATE FIRE MARSHAL
- INTERNATIONAL FUEL GAS CODE, 2018 EDITION WITH 2020 AND 2022 GEORGIA STATE AMENDMENTS
- NATIONAL ELECTRICAL CODE, EDITION 2023
- INTERNATIONAL EXISTING BUILDING CODE, 2018 EDITION WITH GEORGIA STATE AMENDMENTS
- NFPA 101 LIFE SAFETY CODE 2018 EDITION (AMENDED BY 120-3-3)

GWINNETT COUNTY BOARD OF COMMISSIONERS

CHAIRWOMAN - NICOLE L. HENDRICKSON
DISTRICT 1 COMMISSIONER - KIRKLAND DION CARDEN
DISTRICT 2 COMMISSIONER - BEN KU
DISTRICT 3 COMMISSIONER - JASPER WATKINS III
DISTRICT 4 COMMISSIONER - MATTHEW HOLTKAMP

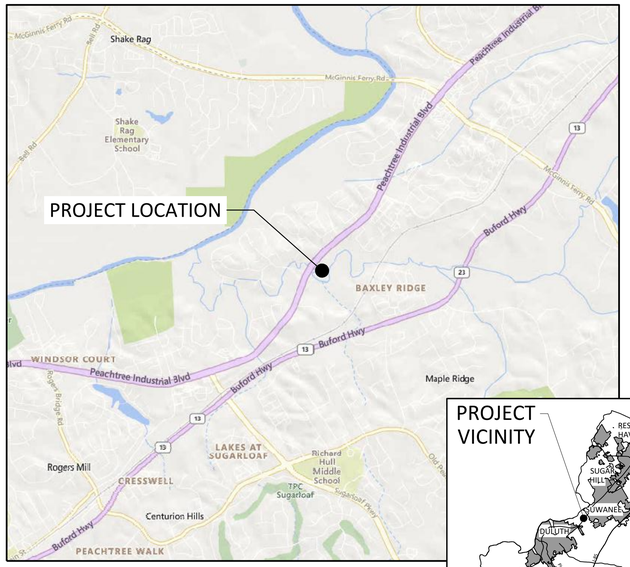
WATER & SEWERAGE AUTHORITY BOARD

CHAIRWOMAN'S APPOINTMENT - CHAIRMAN - BRYAN KERLIN
DISTRICT 1 APPOINTMENT - SECRETARY - CURT THOMPSON
DISTRICT 2 APPOINTMENT - J.C. LAN
DISTRICT 3 APPOINTMENT - HENRY RAWLS
DISTRICT 4 APPOINTMENT - DAVID WITHAM

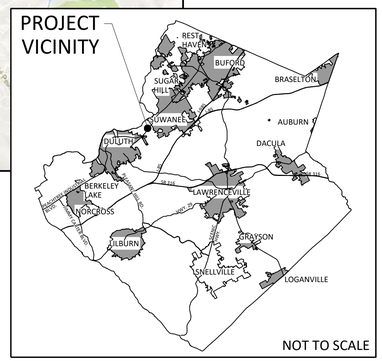
For information regarding this project, contact:

PETER O. COKER
DWR PROJECT MANAGER
684 WINDER HIGHWAY
LAWRENCEVILLE, GA 30045
(678) 376 - 6991
Peter.Coker@gwinnettcounty.com

PROJECT VICINITY MAP



PROJECT LOCATION MAP



GWINNETT COUNTY FIRE MARSHAL INSPECTIONS ARE TO BE SCHEDULED ONLINE AT: GWINNETTZIP.COM

- 50%: INSPECTIONS OF VERTICAL PENETRATIONS.
- 80%: INSPECTIONS OF ANY FIRE RATED PARTITIONS FLOOR OR CEILING, CEILING COVER UP.
- 100%: FINAL INSPECTIONAL, ALL SYSTEMS AND EQUIPMENT ARE INSTALLED AND OPERATIONAL.

ANY INSPECTION REQUESTS MADE BEFORE 2:00PM WILL BE SCHEDULED FOR THE NEXT BUSINESS DAY.

ALL FIRE MARSHALL INSPECTION SHALL BE SCHEDULED BY THE CONTRACTOR.

SEPARATE SUBMITTALS AND REVIEWS BY FIRE PLAN REVIEW FOR:
__ FIRE SPRINKLER
__ FIRE ALARM SYSTEMS
__ FIRE SUPPRESSION SYSTEMS
__ RACK STORAGE (PRODUCT HEIGHT OVER 12 FEET)
__ STORAGE AND/OR USE OF HAZARDOUS MATERIALS

ALL REQUIREMENTS OF THE GWINNETT COUNTY UNIFIED DEVELOPMENT ORDINANCE (UDO) RELATIVE TO THE PREPARATION AND SUBMISSION OF A DEVELOPMENT PLANS HAVING BEEN FULFILLED, AND SAID APPLICATION AND ALL SUPPORTING PLANS AND DATA HAVING BEEN REVIEWED FOR CODE COMPLIANCE BY ALL AFFECTED COUNTY DEPARTMENTS AS REQUIRED UNDER THEIR RESPECTIVE AND APPLICABLE REGULATIONS, APPORVAL OF THIS DEVELOPMENT PLAN IS HEREBY GRANTED AND ALL OTHER DEVELOPMENT PLANS ASSOSICATED WITH THIS PROJECT SHALL BE SUBJECT TO ALL FURTHER PROVISIONS OF SAID UDO.

OCTOBER 2025

24 HOUR EMERGENCY CONTACT:
GWINNETT COUNTY DWR
OFFICE HOURS: (678) 376-6700
AFTER HOURS: (678) 376-7000

NOTIFY THE GWINNETT COUNTY DWR INSPECTOR 24 HOURS PRIOR TO BEGINNING OF EVERY PHASE OF CONSTRUCTION

FREESE AND NICHOLS
2180 Satellite Blvd, Suite 235
Duluth, Georgia 30097
Phone – (404) 334-4310
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2026

GEORGIA REGISTERED No. PE047336 PROFESSIONAL ENGINEER FOREST L. D. HUNT
10/23/2025

GWINNETT COUNTY DWR PROJECT NUMBER: F01469

CASE NUMBER: EPN2025-00756

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ISSUED FOR BID

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 3/31/2027

GEORGIA REGISTERED No. PE047336 PROFESSIONAL ENGINEER FOREST L. D. HUNT

10/23/2025

FREESE NICHOLS
2180 Satellite Boulevard
Suite 235
Duluth, Georgia 30097
Phone - (470)-645-3092
Web - www.freese.com

GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES
SUWANEE CREEK DIVERSION PUMP STATION
GENERAL
LOCATION MAP & INDEX

NO.	ISSUE	BY	DATE
0	ISSUED FOR BID	JCS	10/22/2025

F&N JOB NO. GWR24074
DATE 10/22/25
DESIGNED FLDH
DRAWN SEL
CHECKED JCS
APPROVED FLDH
FILE NAME GN-ALL-INDEX.dwg

VERIFY SCALE Bar Scale is one inch on original drawing. if not one inch on this sheet, adjust scale.
0 1"

SHEET G-1
SEQ. 2 OF 129

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Last Saved: 10/21/2025 9:26 AM Saved By: 08448

Plot Date: 10/21/2025 10:44 AM Plot By: 08407 Filename: N:\WTU\Drawings\GN-ALL-INDEX.dwg

GENERAL NOTES:

1. ALL CONSTRUCTION TO COMPLY WITH GWINNETT COUNTY STANDARDS.
2. ALL CONSTRUCTION SHALL COMPLY WITH THE CONTRACT PLANS, CONTRACT SPECIFICATIONS, PERMIT REQUIREMENTS, ALL APPLICABLE STATE, FEDERAL, AND LOCAL CODES. NO ADDITIONAL PAYMENT WILL BE GIVEN FOR ANY COST INCURRED TO COMPLY WITH REQUIREMENTS SET BY THE AFOREMENTIONED ITEMS.
3. I CERTIFY UNDER PENALTY OF LAW THAT THIS PLAN WAS PREPARED AFTER A SITE VISIT TO THE LOCATIONS DESCRIBED HEREIN BY MYSELF OR MY AUTHORIZED AGENT, UNDER MY DIRECT SUPERVISION.

NAME: FOREST HUNT, P.E. _____

4. THE CONTRACTOR SHALL IMMEDIATELY INFORM THE OWNER OF ANY DISCREPANCIES OR ERRORS DISCOVERED IN THE CONTRACT DOCUMENTS. ANY DEVIATION FROM THE PLANS WITHOUT PRIOR CONSENT OF OWNER MAY BE CAUSE FOR THE WORK TO BE UNACCEPTABLE.
5. A PRE-CONSTRUCTION MEETING MUST BE HELD WITH MEMBERS OF GCDWR, GA POWER, AND THE CONTRACTOR PRIOR TO COMMENCING WORK.
6. THE FOLLOWING PERMITS WILL BE SUBMITTED FOR THIS PROJECT (RE: 01 11 00 SUMMARY OF WORK):
   - LAND DISTURBANCE PERMIT (THROUGH GWINNETT COUNTY PLANNING AND DEVELOPMENT).
   - NPDES GAR 100001.
   - BASIS OF DESIGN REPORT SUBMITTAL TO GEORGIA EPD WASTEWATER DIVISION.
7. ALL CONSTRUCTION ACTIVITIES SHALL BE LIMITED TO WITHIN GCDWR PROPERTY BOUNDARY.
8. LAND DISTURBANCE SHALL BE LIMITED TO THOSE AREAS INDICATED ON THE PLANS FOR ACCESS, STAGING, AND CONSTRUCTION.
9. ALL BUFFERS AND TREE SAVE AREAS ARE TO BE CLEARLY IDENTIFIED WITH TREE PROTECTIVE FENCING PRIOR TO COMMENCEMENT OF ANY LAND DISTURBANCE. NO TREES OR VEGETATION ARE TO BE REMOVED AS A PART OF THIS PROJECT.
10. INSTALLATION OF EROSION CONTROL MEASURES AND PRACTICES SHALL TAKE PLACE PRIOR TO LAND DISTURBING ACTIVITIES. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED AT ALL TIMES AND SHALL BE INSPECTED REGULARLY USING THE EROSION AND SEDIMENT CONTROL CHECKLIST. ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED IF DEEMED NECESSARY BY THE OWNER.
11. DRAINAGE SYSTEMS SHALL BE MAINTAINED, KEPT FREE OF DEBRIS, AND IN OPERATING CONDITION AT ALL TIMES DURING CONSTRUCTION OF THIS PROJECT. THIS MAY INCLUDE, BUT NOT BE LIMITED TO, REPLACEMENT OR RECONSTRUCTION OF EXISTING DRAINAGE STRUCTURES THAT HAVE BEEN DAMAGED OR REMOVED OR RE-GRADED AS REQUIRED BY THE ENGINEER, EXCEPT FOR THOSE DRAINAGE ITEMS SHOWN AT SPECIFIC LOCATIONS IN THE PLANS AND HAVING SPECIFIC PAY ITEMS IN THE DETAILED ESTIMATE. NO SEPARATE PAYMENT WILL BE MADE FOR ANY COSTS INCURRED TO COMPLY WITH THIS REQUIREMENT.
12. MONUMENTS OR LANDMARKS SHALL NOT BE DISTURBED OR REMOVED BY THE CONTRACTOR WITHOUT WRITTEN CONSENT OF THE OWNER. ANY MONUMENT OR LANDMARK REMOVED OR DAMAGED SHALL BE REPLACED BY THE OWNER AT THE EXPENSE OF THE CONTRACTOR.
13. ALL SIGNS, MAILBOXES, FENCING, LANDSCAPING, ETC. SHALL BE PROTECTED DURING CONSTRUCTION. SHOULD IT BE REQUIRED TO REMOVE OR DISTURB SUCH ITEMS, THE CONTRACTOR SHALL SEEK APPROVAL FROM THE OWNER FIRST AND IF APPROVED, THE REMOVAL OR DISTURBANCE OF SUCH ITEMS WILL BE DONE AT NO ADDITIONAL COST TO OWNER. SHOULD THE OWNER DEEM ANY ITEMS AS DAMAGED, THE CONTRACTOR SHALL REPLACE THE ITEM IN LIKE AND KIND AT NO ADDITIONAL EXPENSE TO GWINNETT COUNTY. TRANSPLANTED AND/OR REPLACE ITEMS SHALL BE GUARANTEED BY THE CONTRACTOR FOR ONE YEAR AFTER WORK IS COMPLETED.
14. AT THE END OF EACH WORKDAY, NO TRENCH IS TO BE LEFT OPENED WITHOUT THE APPROVAL OF THE GCDWR INSPECTOR. ALL ACCESS AND OPERABILITY SHALL BE FULLY RESTORED AND SITE MUST BE CLEANED TO THE SATISFACTION OF THE GCDWR INSPECTOR.
15. CONTRACTOR SHALL FURNISH SUITABLE BORROW MATERIAL FOR THE PROJECT THAT SHALL BE APPROVED BY THE GCDWR MATERIAL TESTING FIRM PRIOR TO USE. ALL SPOIL MATERIALS, REFUSE, AND DEBRIS SHALL BE REMOVED FROM THE SITE BY THE CONTRACTOR AND LEGALLY DISPOSED OF AT AN APPROPRIATE OFFSITE LOCATION. BURNING OF REFUSE, DEBRIS, OR SPOIL MATERIAL AT THE PROJECT SITE IS NOT ALLOWED.
16. OWNER'S MATERIAL TESTING FIRM TO PERFORM TESTING OF CONTRACTOR'S WORK WHERE DIRECTED BY THE GCDWR REPRESENTATIVE. CONTRACTOR IS TO ALLOW FULL ACCESS AS NEEDED BY THE MATERIALS TESTING FIRM. ANY FAILED TEST SHALL REQUIRE THE CONTRACTOR TO REDO THE WORK UNTIL THE TEST IS PASSED. ADDITIONAL TESTING DUE TO A FAILED TEST SHALL BE PERFORMED BY CONTRACTOR'S OWN MATERIALS TESTING FIRM AND AT THE EXPENSE OF THE CONTRACTOR.
17. ALL PROJECT SITE AREAS DISTURBED BY CONTRACTOR OPERATIONS SHALL BE STABILIZED WITH PERMANENT GRASSING UNLESS OTHERWISE NOTED. PERMANENT GRASSING SHALL BE SOD UNLESS OTHERWISE SPECIFICALLY NOTED IN THE CONTRACT DOCUMENTS OR APPROVED BY THE OWNER. ANY AREAS OUTSIDE THE PROJECT SITE AREA THAT ARE DISTURBED SHALL BE RESTORED AT THE EXPENSE OF THE CONTRACTOR.
18. THE CONTRACTOR SHALL RESTORE ALL DISTURBED GRAVEL, PAVED, OR CONCRETE ENTRANCES, DRIVEWAYS, AND APRONS TO PRE-CONSTRUCTION CONDITIONS AND IN ACCORDANCE WITH APPLICABLE GDOT AND GCDOT STANDARDS AND REQUIREMENTS. DRIVEWAYS TO BE REPLACED 10 FEET BACK FROM THE CURB OR TO THE CLOSEST EXPANSION JOINT, UNLESS OTHERWISE DIRECTED BY THE OWNER.
19. A PAVING PLAN MUST BE SUBMITTED TO AND APPROVED BY THE ENGINEER BEFORE EXECUTING ASPHALTIC CONCRETE CONSTRUCTION. MILLING IS REQUIRED PRIOR TO ASPHALT RESURFACING, AND IS TO BE DONE IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS. SURFACE OVERLAY IS TO OCCUR IN ONE OPERATION.
20. VEHICULAR AND PEDESTRIAN TRAFFIC ACCESS TO PUBLIC ROADWAYS, DRIVEWAYS, FIRE HYDRANTS, VALVES, ETC. SHALL BE MAINTAINED AT ALL TIMES FOR RESIDENTS, PROPERTY OWNERS, PEDESTRIANS, THE TRAVELING PUBLIC, TRASH PICKUP, MAIL AND PARCEL DELIVERY SERVICES, SCHOOL BUSES, AND EMERGENCY VEHICLES.
21. STREET INTERSECTIONS MAY NOT BE BLOCKED EXCEPT FOR THE ROADWAY AT ANY GIVEN TIME. IF IT BECOMES NECESSARY TO CLOSE A PORTION OF THE ROAD, THE CONTRACTOR SHALL PROVIDE A TRAFFIC ROUTING (DETOUR) PLAN AND SHALL HAVE IT APPROVED BY THE GCDOT PRIOR TO CLOSING THE ROAD.
22. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL NECESSARY FLAGMEN, SIGNAGE, BARRICADES, LIGHTS, AND OTHER TRAFFIC CONTROL DEVICES NECESSARY TO CONTROL THE TRAFFIC AND PROTECT THE PUBLIC. ALL TRAFFIC CONTROL MUST BE IN ACCORDANCE WITH THE LATEST EDITION OF "THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS & HIGHWAYS", GCDOT STANDARDS, AND GDOT STANDARDS. TRAFFIC CONTROL TO BE FURNISHED BY THE CONTRACTOR WITH NO ADDITIONAL COST TO THE OWNER.
23. CONTRACTOR SHALL PROVIDE PARKING WITHIN THE CONSTRUCTION LIMITS DETAILED AND SHALL PARK VEHICLES AND EQUIPMENT SO THAT THERE IS NO DISRUPTION TO TRAFFIC. NO PARKING ON PRIVATE PROPERTY WILL BE PERMITTED.
24. IF THE CONTRACTOR ENCOUNTERS SUBSURFACE CONDITIONS DIFFERENT FROM THOSE SHOWN ON THE PLANS, HE SHALL IMMEDIATELY NOTIFY THE OWNER AND ENGINEER. NO EXISTING UTILITY SHALL BE DISTURBED WITHOUT PROPER AUTHORITY AND THEN ONLY IN SUCH A MANNER AS PRESCRIBED AND APPROVED BY THE OWNER OF THE EXISTING UTILITY.
25. SHOULD IT BECOME NECESSARY TO DISTURB AND EXISTING UTILITY, THE CONTRACTOR IS TO NOTIFY THE OWNER AND THE OWNER OF THE UTILITY. WHEN NECESSARY, CONTRACTOR IS TO CEASE WORK UNTIL SATISFACTORY ARRANGEMENTS HAVE BEEN MADE WITH THE UTILITY OWNER TO PROPERLY CARE FOR AND RELOCATED THE UTILITY. NO CLAIMS FOR DAMAGES SHALL BE ALLOWED THE CONTRACTOR ON ACCOUNT OF ANY DELAY OCCASIONED THEREBY.
26. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EXISTING UTILITIES FROM DAMAGE. ANY DAMAGE TO EXISTING UTILITIES CAUSED BY THE CONTRACTOR SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE. EITHER THE CONTRACTOR OR UTILITY OWNER WILL PERFORM THE REPAIR AT THE DISCRETION OF THE UTILITY OWNER. NO CLAIMS FOR DAMAGES SHALL BE ALLOWED THE CONTRACTOR ON ACCOUNT OF ANY DELAY OCCASIONED THEREBY.
27. THE CONTRACTOR SHALL PROVIDE ALL PIPE FITTINGS AND APPURTENANCES REQUIRED FOR THE COMPLETE INSTALLATION OF ANY PROPOSED PIPELINE, WHETHER OR NOT SUCH ITEMS ARE SHOWN OR CALLED OUT ON THE PLANS. THE CONTRACTOR IS ADVISED THAT FIELD ADJUSTMENTS MAY BE REQUIRED BASED ON ACTUAL SUBSURFACE CONDITIONS AND LOCATIONS OF EXISTING BURIED UTILITIES ENCOUNTERED DURING CONSTRUCTION. THE CONTRACTOR SHALL NOT RECEIVE ANY ADDITIONAL PAYMENT OR TIME EXTENSION FOR ITEMS NOT BEING SHOWN IN PLANS OR FOR FIELD ADJUSTMENTS MADE DUE TO ACTUAL SUBSURFACE CONDITIONS AND UTILITY LOCATIONS.
28. AT COMPLETION OF CONSTRUCTION, ALL VALVE BOXES, METERS, AND APPURTENANCES SHALL BE SET FOR PROPER FINISHED GRADE. PRECAST STRUCTURES, MANHOLE FRAMES AND COVERS ARE TO BE SET FLUSH WITH FINISHED GRADE UNLESS OTHERWISE INDICATED IN THE PLANS OR SPECIFICATIONS.
29. CONTRACTOR IS TO MAKE EVERY EFFORT TO PRESERVE PROPERTY CORNERS, BENCH MARKS, ORIGINAL AND DESIGN SURVEY MONUMENTS, WHICH EXIST ON THE PROJECT. AT THE TIME OF CONTRACT AWARD THE CONTRACTOR SHALL FURNISH PERSONNEL FULLY QUALIFIED AND CAPABLE OF STAKING CORNERS OF STRUCTURES AND CENTERLINES OF PIPELINES SHOWN ON THE PLANS. ANY PROPERTY CORNERS OR R/W MONUMENTS DAMAGED DURING CONSTRUCTION SHALL BE RESTORED BY A REGISTERED LAND SURVEYOR AT THE CONTRACTOR'S EXPENSE.
30. EXISTING UTILITIES SHOWN ON THESE DRAWINGS WERE TAKEN FROM BEST AVAILABLE INFORMATION. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THE HORIZONTAL OR VERTICAL ACCURACY OF SAID UTILITIES OR THE POSSIBILITY THAT UNDERGROUND UTILITIES OTHER THAN THE ONES SHOWN MAY EXIST. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE LOCATION AND SIZE OF ALL UTILITIES PRIOR TO BEGINNING CONSTRUCTION. CONTRACTOR MUST CONTACT THE UTILITIES PROTECTION CENTER AT 811 AT LEAST 72 HOURS PRIOR TO BEGINNING EXCAVATION ON THE PROJECT.
31. THE CONTRACTOR SHALL MAINTAIN ACCESS FOR EMERGENCY VEHICLES AT ALL TIMES DURING CONSTRUCTION.
32. ANY SIGNS REMOVED MUST BE REINSTALLED TO GWINNETT COUNTY STANDARDS.
33. ANY DEVIATIONS FROM THE PLANS MUST BE APPROVED IN WRITING PRIOR TO WORK BEGINNING.
34. PUMP STATION SHALL BE SECURED AT ALL TIMES WITH EITHER PERMANENT OR TEMPORARY FENCING. THE CONTRACTOR IS RESPONSIBLE FOR THE SECURITY AND SAFETY OF THE SITE THROUGHOUT CONSTRUCTION. MAINTAIN ACCESS TO SITE FOR GDCWR AT ALL TIMES.
35. DRAINAGE SYSTEMS SHALL BE MAINTAINED AT ALL TIMES DURING THE CONSTRUCTION OF THIS PROJECT. THE CONTRACTOR WILL NOT BE COMPENSATED FOR DRAINAGE STRUCTURES DAMAGED OR REMOVED AND REPLACED UNLESS SPECIFICALLY SHOWN TO BE PAID.
36. ALL CONSTRUCTION ACTIVITIES SHALL BE LIMITED TO PUBLIC RIGHT-OF-WAYS AND GWINNETT COUNTY EASEMENTS AND PROPERTY. IF ADDITIONAL CONSTRUCTION ACCESS IS REQUIRED BY THE CONTRACTOR, THE CONTRACTOR IS RESPONSIBLE FOR SUCH ACCESS AT THE CONTRACTOR'S EXPENSE WITHOUT ANY GWINNETT COUNTY OR GCDWR LIABILITY.
37. PER THE INTERNATIONAL BUILDING CODE (IEBC) ALL UNALTERED COMPONENTS IN THE EXISTING BUILDING ARE CONSIDERED COMPLIANT AND ACCEPTABLE UNDER CURRENT CODE.

GCP&D NOTES:

1. ALL EXCESS MATERIALS SHALL BE HAULED OFF BY THE CONTRACTOR SO AS TO RESTORE THE SITE TO THE ORIGINAL CONDITION; SPREADING EXCESS MATERIALS IN A FLOODPLAIN OR ELSEWHERE ON SITE IS NOT PERMITTED.

NOTIFICATION REQUIREMENTS/CONTACTS:

1. THE 24-HOUR EMERGENCY CONTACT IS GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES (GCDWR):
   - OFFICE HOURS (678) 376-6700
   - AFTER HOURS (678) 376-7000
2. NOTIFY GCDWR INSPECTIONS OF THE FOLLOWING AT THE INDICATED TIME INTERVAL. INSPECTION POINT OF CONTACT WILL BE PROVIDED AT PRE-CONSTRUCTION MEETING.
   - 24 HOURS BEFORE THE BEGINNING OF EACH PHASE OF CONSTRUCTION.
   - 72 HOURS IN ADVANCE, A REQUEST MUST BE PLACED TO THE INSPECTOR FOR APPROVAL TO REMOVE OR DISTURB SIGNS, MAILBOXES, FENCING, LANDSCAPING, ETC. APPROVAL OF REQUEST IS REQUIRED BEFORE PERFORMING RELATED WORK.
   - 7 DAYS IN ADVANCE, COORDINATE PLANNED SHUT OFF OF SERVICES AND/OR WET CUT-INS WITH THE GCDWR INSPECTOR.
   - 24 HOURS BEFORE A WATER CUT OFF, NOTIFY GCDWR INSPECTOR AND AFFECTED CUSTOMERS PRIOR TO INTERRUPTION OF SERVICE. GCDWR INSPECTOR MUST BE PRESENT AT WET CUT-INS AND ANY OTHER ACTIVITY THAT REQUIRES THE OPERATION OF EXISTING VALVES OR THE SERVICES TO BE SHUT OFF. GCDWR INSPECTOR WILL TEST ALL VALVES PRIOR TO THE SHUT OFF.
3. THE CONTRACTOR SHALL VERIFY LOCATIONS OF EXISTING UTILITIES AND CONTACT THE GEORGIA UTILITY PROTECTION CENTER FOR FIELD MARKING OF UTILITIES 72 HOURS PRIOR TO BEGINNING CONSTRUCTION.
   - UTILITY PROTECTION CENTER #811

   PLEASE CALL 1-(800) 282-7411 OR USE THE EREQUEST OPTION AT GEORGIA811.COM WHEN LOCATING UTILITIES
4. THE CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITIES 24 HOURS PRIOR TO CONSTRUCTION IN AREAS WHERE THE UTILITIES ARE SHOWN OR SUSPECTED TO BE. THE LIST IS BASED ON BEST INFORMATION AVAILABLE, BUT IS NOT GUARANTEED TO BE COMPLETE:
   - GEORGIA POWER COMPANY 1-888-660-5890
5. THE CONTRACTOR SHALL NOTIFY THE FOLLOWING AGENCIES AT LEAST 48 HOURS PRIOR TO CONSTRUCTION WHENEVER ANY STREET IS TO BE PARTIALLY BLOCKED.
   - GWINNETT COUNTY POLICE DEPARTMENT (770) 513-5000
   - GWINNETT COUNTY FIRE DEPARTMENT (678) 518-4800
   - GWINNETT COUNTY BOARD OF EDUCATION (770) 338-4800
6. THE CONTRACTOR SHALL NOTIFY THE FOLLOWING GOVERNMENT AGENCIES AND UTILITIES AT LEAST 48 HOURS BEFORE ENCROACHING ON THEIR RIGHT-OF-WAY
   - GEORGIA DEPARTMENT OF TRANSPORTATION (GDOT) (770) 674-8921
7. CONTRACTOR IS TO NOTIFY AFFECTED CUSTOMERS 24 HOURS IN ADVANCE OF BLOCKING ACCESS TO PROPERTY OR TRAFFIC ROADWAYS. FULL ACCESS TO PROPERTY MUST BE RESTORED BY THE END OF THE WORK DAY.

SEWER NOTES:

1. ALL SEWER CONSTRUCTION SHALL COMPLY WITH THE GCDWR'S LATEST VERSION OF GRAVITY SEWER STANDARDS. ACTUAL FIELD CONDITIONS COULD DICTATE MORE STRINGENT REQUIREMENTS IF DEEMED NECESSARY BY THE GCDWR INSPECTOR.
2. WHEN IT IS NECESSARY TO TAKE ANY PART OF ANY SEWER OUT OF SERVICE, IT REQUIRES OWNER APPROVAL AND COORDINATION. INSTANCES WHERE SERVICES WILL BE OUT FOR AN EXTENDED PERIOD OF TIME, BYPASS PUMPING WILL BE REQUIRED AND WILL BE IMPLEMENTED.
3. THE BYPASS PUMPING SYSTEM SHALL BE SIZED FOR 100 PERCENT OF PEAK FLOWS AND SHALL BE ROUTED AROUND THE OUT-OF-SERVICE SECTION. SEWAGE SHALL BE ENCLOSED IN PIPES AND/OR TANKS AT ALL TIMES AND WILL NOT BE ALLOWED TO BE OPEN TO THE ENVIRONMENT. BYPASS PUMPING MUST BE MONITORED BY THE CONTRACTOR AT ALL TIMES, EVEN PAST NORMAL WORK HOURS (24 HOURS PER DAY, SEVEN (7) DAYS PER WEEK). REFER TO SPECIFICATIONS FOR ADDITIONAL BYPASS DETAILS. REFERENCE SPECIFICATION SECTION 33 01 30.74 "BYPASS PUMPING" FOR PUMPING REQUIREMENTS. REFERENCE SHEET C-03 FOR BYPASS PUMPING STAGING, CONNECTIONS, AND SITE PLAN LOGISTICS.
4. NO BYPASS PUMPING WILL BE ALLOWED UNTIL A WRITTEN PLAN HAS BEEN SUBMITTED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER.
5. MANHOLE FRAME AND COVERS LOCATED OUTSIDE OF THE PAVEMENT SHALL BE BOLT-DOWN, WATERTIGHT COVERS.
6. NO TREES OR PERMANENT STRUCTURES ARE ALLOWED TO REMAIN IN SEWER EASEMENTS IN ACCORDANCE WITH GWINNETT COUNTY POLICY.

PROJECT SPECIFIC NOTES:

1. PROPERTY LINES AND BACKGROUND TOPOGRAPHIC FEATURES SHOWN ON THE PLANS ARE BASED ON A FIELD SURVEY PREPARED BY TERRAMARK ON 10/03/2022.
2. THE SOURCE OF TOPOGRAPHIC DATA FOR THIS PROJECT WAS TAKEN FROM GROUND RUN SURVEY PROVIDED BY TERRAMARK.
3. THERE IS NO STORM WATER MANAGEMENT BEING PROVIDED FOR THIS PROJECT.
4. NO HYDROLOGY STUDY WAS CONDUCTED AS PART OF THIS PROJECT.
5. APPROVAL OF THIS PLAT DOES NOT AUTHORIZE ANY LAND DISTURBANCE OR CONSTRUCTION. LAND DISTURBANCE PERMITS AND/OR BUILDING PERMITS MUST BE OBTAINED PRIOR TO ANY LAND DISTURBANCE.
6. THE DESIGN PROFESSIONAL, WHOSE SEAL APPEARS HEREON, CERTIFIES THE FOLLOWING: 1) THE NATIONAL WETLAND INVENTORY MAPS HAVE BEEN CONSULTED; AND 2) THE APPROPRIATE PLAN SHEET [X] DOES / [] DOES NOT INDICATE AREAS OF UNITED STATES ARMY CORPS OF ENGINEERS JURISDICTIONAL WETLANDS AS SHOWN ON THE MAPS' AND, 3) IF WETLANDS ARE INDICATED, THE LAND OWNER OR DEVELOPER HAS BEEN ADVISED THAT LAND DISTURBANCE OF PROTECTED WETLANDS SHALL NOT OCCUR UNLESS THE APPROPRIATE FEDERAL WETLANDS ALTERATION ("SECTION 040") PERMIT HAS BEEN OBTAINED.
7. IF DISTURBED, ALL DISTURBED WETLANDS SHALL BE RESTORED TO PRE-CONSTRUCTION CONDITIONS. THE TOP FOOT OF TOP SOIL IN THE WETLAND AREAS SHALL BE STOCKPILED SEPARATELY FROM OTHER EXCAVATED MATERIAL AND REPLACED BACK IN THE TOP OF THE TRENCH WHEN PIPE INSTALLATION IS COMPLETE. WETLAND AREAS SHALL THEN BE STRAWED AND DRESSED, THEN SEEDED WITH A US ARMY CORPS OF ENGINEERS APPROVED WETLANDS SEED MIX.
8. THE 25-FOOT NATURAL, UNDISTURBED STREAM BUFFER, UNDER ARTICLE V, SECTION 15, OF THE SOIL AND EROSION AND SEDIMENT CONTROL ORDINANCE SHALL REMAIN IN FORCE.
9. A 50 FOOT UNDISTURBED BUFFER AND 75 FOOT IMPERVIOUS SETBACK SHALL BE MAINTAINED ADJACENT TO ALL STREAMS.
10. PORTIONS OF THIS SITE ARE LOCATED IN FLOOD ZONE "AE" AS SHOWN ON FIRM PANEL 13135C0042H DATED 03/04/2013.

WATER NOTES:

1. NEW WATER SERVICE LINES SHALL BE INSTALLED AND EXISTING WATER SERVICE LINES SHALL BE RECONNECTED, RELOCATED, OR REPLACED AT THE SAME TIME AS THE NEW WATER MAIN IS INSTALLED. WORK SHALL BE SEQUENCED IN SUCH A MANNER THAT INTERRUPTED WATER SERVICES SHALL BE RESTORED BEFORE THE WORK DAY IS COMPLETE.
2. PROPOSED WATER MAINS SHALL BE INSTALLED AT A MINIMUM COVER OF 4 FEET UNLESS OTHERWISE SHOWN ON THE PLANS OR APPROVED BY THE ENGINEER.

CONSTRUCTION SEQUENCING AND CONNECTION NOTES:

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ASPECTS OF CONSTRUCTION SEQUENCING AND PHASING.
2. THE SUGGESTED PROJECT SEQUENCE OF CONSTRUCTION IS PROVIDED IN SPECIFICATION SECTION 01 14 00 UNIQUE REQUIREMENTS.

PROJECT DATA:

1.	PROJECT NAME:	SUWANEE CREEK DIVERSION PUMP STATION EXPANSION
2.	PROJECT LOCATION:	DISTRICT 1 PARCEL ID: 7207-087
3.	PROJECT ADDRESS:	1758 PEACHTREE INDUSTRIAL BLVD, SUWANEE, GA 30024
4.	PRESENT AND PROPOSED USE:	M1 - UTILITIES
5.	OWNER/DEVELOPER:	GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES 684 WINDER HWY LAWRENCEVILLE, GA 30045 (678) 376-6991 (PETER COKER) PETER.COKER@GWINNETTCOUNTY.COM
6.	ENGINEER:	FREESE & NICHOLS, INC. 2180 SATELLITE BOULEVARD, SUITE 235 DULUTH, GA 30097 (470) 645-3092
7.	SURVEYOR:	TERRAMARK
8.	ZONING:	M1- UTILITIES

ES&PC CONTACT*:

CONTRACTOR NAME: _____

ES&PC 24 HOUR CONTACT NAME: _____

ES&PC 24 HOUR CONTACT PHONE: _____

DEVELOPMENT NOTES:

1. NOTIFY GWINNETT COUNTY INSPECTOR 24 HOURS BEFORE BEGINNING OF EVERY PHASE OF CONSTRUCTION (678) 518-6000.
2. ALL CONSTRUCTION TO COMPLY WITH GWINNETT COUNTY STANDARDS.
3. NATURAL VEGETATION SHALL REMAIN ON THE PROPERTY UNTIL ISSUANCE OF A DEVELOPMENT PERMIT. NO INTERIM LAND DISTURBANCE PERMITS SHALL BE ISSUED.

ISSUED FOR BID

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2025

GEORGIA REGISTERED No. PE047336 PROFESSIONAL ENGINEER FOREST L. D. HUNT
10/23/2025

FREESE NICHOLS
2180 Satellite Boulevard
Suite 235
Duluth, Georgia 30097
Phone - (470) 645-3092
Web - www.freese.com

GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES
SUWANEE CREEK DIVERSION PUMP STATION

GENERAL
GENERAL NOTES

F&N JOB NO. GWR24074
DATE 10/22/25
DESIGNED FLDH
DRAWN SEL
CHECKED JCS
APPROVED FLDH
FILE NAME GN-ALL-NOTES.dwg

NO.	ISSUE	BY	DATE
0	ISSUED FOR BID	JCS	10/22/2025

VERIFY SCALE Bar Scale is one inch on original drawing. If not one inch on this sheet, adjust scale.
0 1"

SHEET G-2
SEQ. 3 OF 129

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Last Saved: 10/21/2025 9:26 AM Saved By: 08448

Plot Date: 10/21/2025 10:44 AM Plot By: 08407 Filename: N:\WTU\Drawings\GN-ALL-NOTES.dwg

ABBREVIATIONS

ABBRE	ABBREVIATION
ACC	ACCESS
AH	AHEAD
@	AT
APPROX	APPROXIMATE
ARV	AIR RELEASE VALVE
ASPH	ASPHALT
AUTO	AUTOMATIC
AVE	AVENUE
BFV	BUTTERFLY VALVE
BK	BACK
B/L	BASE LINE
BM	BENCHMARK
BLDG	BUILDING
BLK	BLOCK
BRG	BEARING
BOC	BACK OF CURB
BRD	BURIED
CAV	COMBINATION AIR/VACCUUM VALVE
CI	CAST IRON
CIRS	CAST IRON ROD SET
CL	CENTERLINE
CLR	CLEAR
CMP	CORRUGATED METAL PIPE
CN	CALCIUM NITRATE
CONC	CONCRETE
CONST	CONSTRUCTION
CONT	CONTINUOUS
CP	CONTROL POINT
CTR	CENTER
CSMT	CASEMENT
CU	COPPER
CY	CUBIC YARD
DET OR DTL	DETAIL
DI	DUCTILE IRON
DIA	DIAMETER
DOT	DEPARTMENT OF TRANSPORTATION
DR	DRIVE OR DOOR
DWG	DRAWING
DWL	DOWEL
DWY	DRIVE WAY
E	EAST
EB	ELECTRIC BOX
e.g.	FOR EXAMPLE
EA	EACH
ELEC TRANS PAD	ELECTRIC TRANSMITTER PAD
ELEV OR EL	ELEVATION
EMO	ELECTRIC MOTOR OPERATOR
ETC	ET CETERA
EQ	EQUAL
EQUIP	EQUIPMENT
EX OR EXIST	EXISTING
FV	FIELD VERIFY
FF	FINISHED FLOOR
FFE	FINISHED FLOOR ELEVATION
FH OR FIRE HYD	FIRE HYDRANT
FD	FLOOR DRAIN
FL OR FLR	FLOOR
FLG X MJ	FLANGED BY MECHANICAL JOINTS
FLG	FLANGED
FLEX BASE	FLEXIBLE BASE
FL	FLOW LINE
FO OR F/O	FIBER OPTIC
FT	FEET
GA	GAUGE
GALV	GALVANIZED
GCDWR	GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES
GMH	GAS MANHOLE
GM	GAS METER
G SIGN	GAS SIGN
GV'S	GATE VALVES
GV	GATE VALVE
GND	GROUND
GW	GUY WIRE
HDPE	HIGH DENSITY POLYETHYLENE
HDWL	HEADWALL
HMAC	HOT MIX ASPHALTIC CONC.
HORZ	HORIZONTAL
HR	HOUR
HT	HEIGHT
HWY	HIGHWAY
ID	INSIDE DIAMETER
IE	INVERT ELEVATION
IN	INCH
IRF	IRON ROD FOUND
IRS	IRON ROD SET
JTS	JOINTS
JB	JUNCTION BOX
LF	LINEAR FEET
LT	LEFT OR LIGHT

LONG	LONGITUDINAL
LOD	LIMIT OF DISTURBANCE
LP	LIGHT POLE
LVL	LEVEL
M	MOBILE
MH	MANHOLE
MAINT	MAINTENANCE/MAINTAINED
MAX	MAXIMUM
MB	MAIL BOX
MFR	MANUFACTURER
MJ	MECHANICAL JOINT
MIN	MINIMUM
MTG	MOUNTING OR MOUNTED
N	NORTH
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
N.O.I.	NOTICE OF INTENT
N.O.T.	NOTICE OF TERMINATION
OC	ON CENTER
OD	OUTSIDE DIAMETER
OHE	OVERHEAD ELECTRIC LINES
OHT	OVERHEAD TELEPHONE LINES
OPNG	OPENING
OPP	OPPOSITE
PAV	PUMP AIR VALVE
PVMT	PAVEMENT
PB	PULL BOX OR PUSH BUTTON
PED	PEDESTAL
PE LINE	PETROLEUM LINE
PE	PLAIN END
PER	PURSUANT TO
PIT	PRESSURE INDICATING TRANSMITTER
PL OR ℄	PROPERTY LINE OR PLATE
PRV	PRESSURE REDUCING VALVE
PVC	POLYVINYL CHLORIDE PIPE
PP	POWER POLE
PCCP	PRETENSIONED CONC. CYLINDER PIPE
PI	POINT OF INTERSECTION
PROP	PROPOSED
PSI	POUNDS PER SQUARE INCH
PSF	POUNDS PER SQUARE FOOT
RR	RAILROAD
REHAB	REHABILITATE
RE	REFER TO
REINF	REINFORCED
REF	REFERENCE
REM	REMOVE
REQ'D	REQUIRED
REV	REVERSE
RCB	REINFORCED CONC. BOX
RCP	REINFORCED CONC. PIPE
RCCP	REINFORCED CONC. CYLINDER PIPE
RT	RIGHT
ROW OR R/W	RIGHT-OF-WAY
S	SOUTH
SCH	SCHEDULE
SD	STORM DRAIN
SDR	STANDARD DIMENSION RATIO
SECT	SECTION
SF	SQUARE FEET
SH	SPRINKLER HEAD
SHT	SHEET
SIG BOX	TRAFFIC SIGNAL BOX
SM	SPRINKLER MAIN
SPEC	SPECIFICATIONS
SS	SANITARY SEWER OR STAINLESS STEEL
SDMH	STORM DRAIN MANHOLE
SSMH	SANITARY SEWER MANHOLE
STD	STANDARD
STA	STATION
ST	STREET
STRUCT	STRUCTURAL
SL	STREET LIGHT
SQ	SQUARE
SQ FT	SQUARE FOOT
SURF	SURFACE
SVC	SERVICE
TBM	TEMPORARY BENCH MARK
TC	TOP OF CURB
TC BOX	TRAFFIC CONTROL BOX
TC LT	TRAFFIC CONTROL LIGHT
TEL	TELEPHONE
TEMP	TEMPETURE
TN	TOP OF NUT
TOP	TOP OF PIPE
TS BOX	TRAFFIC SIGNAL BOX
TS&V	TAPPING SLEEVE AND VALVE
T SIGN	TRAFFIC SIGN
TYP	TYPICAL
UG	UNDERGROUND GAS
UGT	UNDERGROUND TELEPHONE

FO MARKER	U/G FIBER OPTIC TELEPHONE MARKER
UGTV	U/G CABLE TV LINES
VAC	VACUUM
VCP	VITRIFIED CLAY PIPE
VERT	VERTICAL
VOL	VOLUME
VPI	VERTICAL POINT OF INTERSECTION
W	WEST OR WIDTH
W/	WITH
W/O	WITHOUT
WL	WATER LINE
WMH	WATER MANHOLE
WT	WEIGHT
WV	WATER VALVE
WV'S	WATER VALVES

SYMBOLS

DETAIL NUMBER

DETAIL REFERENCE

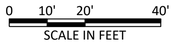
SHEET ON WHICH DETAIL IS REFERENCED

NOTE BY SYMBOL

REVISION NUMBER

NORTH ARROW

SCALE BAR



GAS MARKER

BENCHMARK

SURVEY CONTROL POINT

LIGHT STANDARD

POWER POLE

GUY WIRE AND ACHOR

TELEPHONE PEDESTAL

CLEAN OUT

SPRINKLER VALVE

SIGN

TREE

IRON ROD

IRON ROD (FOUND)

BREAK LINE

RAILROAD

BRUSH OR TREES

WATER METER (WM)

MAIL BOX

CONCRETE AREA

ASPHALT PAVEMENT REPAIR

EXISTING ASPHALT

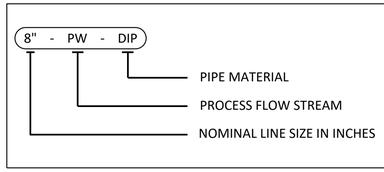
PROPOSED DEMOLITION

PROPOSED CONCRETE AREA

LEGEND

EXISTING		PROPOSED/FUTURE	
FM — FM	FORCE MAIN	FM — FM	
D	DRAIN LINE	D	
W — W	WATER LINE	W — W	
SS	SEWER LINE	SS	
SS SS	SEWER LINE 24" OR LARGER	SS SS	
G — G	UNDERGROUND GAS LINE	G — G	
UT — UT	UNDERGROUND TELEPHONE LINE	UT — UT	
UE — UE	UNDERGROUND ELECTRIC LINE	UE — UE	
F/O	UNDERGROUND FIBER OPTIC LINE	F/O	
OE — OE	OVERHEAD ELECTRIC	OE — OE	
UCTV	UNDERGROUND CABLE TV	UCTV	
	GATE VALVE	GV	
	MISC. VALVE & TYPE		
	REDUCER		
	FIRE HYDRANT		
	COMBINATION AIR RELEASE/VACUUM VALVE	AV	
	BLOW OFF VALVE	BO	
G W	WATER METER OR GAS METER	W G	
	VAULT		
S	SEWER ACCESS MANHOLE		
	STORM DRAIN MANHOLE		
	WATER SERVICE & SIZE		
	PLUG		
PL — PL	PROPERTY LINE AND/OR R.O.W.		
	PERMANENT EASEMENT		
	TEMPORARY EASEMENT		
	CITY LIMIT AND/OR COUNTY LINE		
FLOOD — FLOOD	100 YR FLOOD PLAIN BOUNDARY		
I.P.	IRON PIN/PIPE & SIZE	I.P.	
	ROAD CENTERLINE ℄		
X — X — X	FENCE	X — X — X	
	ROAD GRAIL		
LOD — LOD	LIMIT OF DISTURBANCE	LOD — LOD	
	CONCRETE CURB & GUTTER		
	EDGE of ASPHALT		
	CONCRETE CULVERT (SIZE R.C.C.P.)		
10'	CONCRETE INLET (SIZE NOTED)	10'	
	EROSION SILT FENCING		
25' SB — 25' SB	STREAM BUFFERS		
50' SB — 50' SB			
75' SB — 75' SB			

EXPLANATION OF PIPE DESIGNATION



PROCESS FLOW STREAM - INDEX

PROCESS CODE	PRODUCT - SERVICE
CD	CHEMICAL DRAIN
CN	CALCIUM NITRATE
DRP	DRAIN
NPW	NON-POTABLE WATER
SUP	SUMP PUMP DISCHARGE
POW	POTABLE WATER
RWW	RAW WASTE WATER
FOA	FOUL AIR

PIPE MATERIAL INDEX

DESCRIPTION	CODE
CAST IRON PIPE	CI
DUCTILE IRON PIPE	DIP
POLY VINYL CHLORIDE PIPE	PVC
STAINLESS STEEL PIPE	SST
REINFORCED CONCRETE PIPE (C76)	RCP
COPPER PIPE	CU
FIBER REINFORCED PLASTIC PIPE	FRP

GENERAL NOTES:

THIS IS A STANDARD LEGEND THEREFORE, NOT ALL OF THIS INFORMATION MAY BE USED ON THIS PROJECT.

ISSUED FOR BID

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2025

GEORGIA REGISTERED No. PE047336 PROFESSIONAL ENGINEER FOREST L. D. HUNT
10/23/2025

FREESE NICHOLS
2180 Satellite Boulevard
Suite 235
Duluth, Georgia 30097
Phone - (470)-645-3092
Web - www.freese.com

GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES
SUWANEE CREEK DIVERSION PUMP STATION

GENERAL

LEGEND AND ABBREVIATIONS

NO.	ISSUE	BY	DATE
0	ISSUED FOR BID	JCS	10/22/2025

VERIFY SCALE Bar Scale is one inch on original drawing. If not one inch on this sheet, adjust scale.

F&N JOB NO. GWR24074
DATE 10/22/25
DESIGNED FLDH
DRAWN SEL
CHECKED JCS
APPROVED FLDH
FILE NAME GN-ALL-NOTES.dwg

SHEET G-3
SEQ. 4 OF 129

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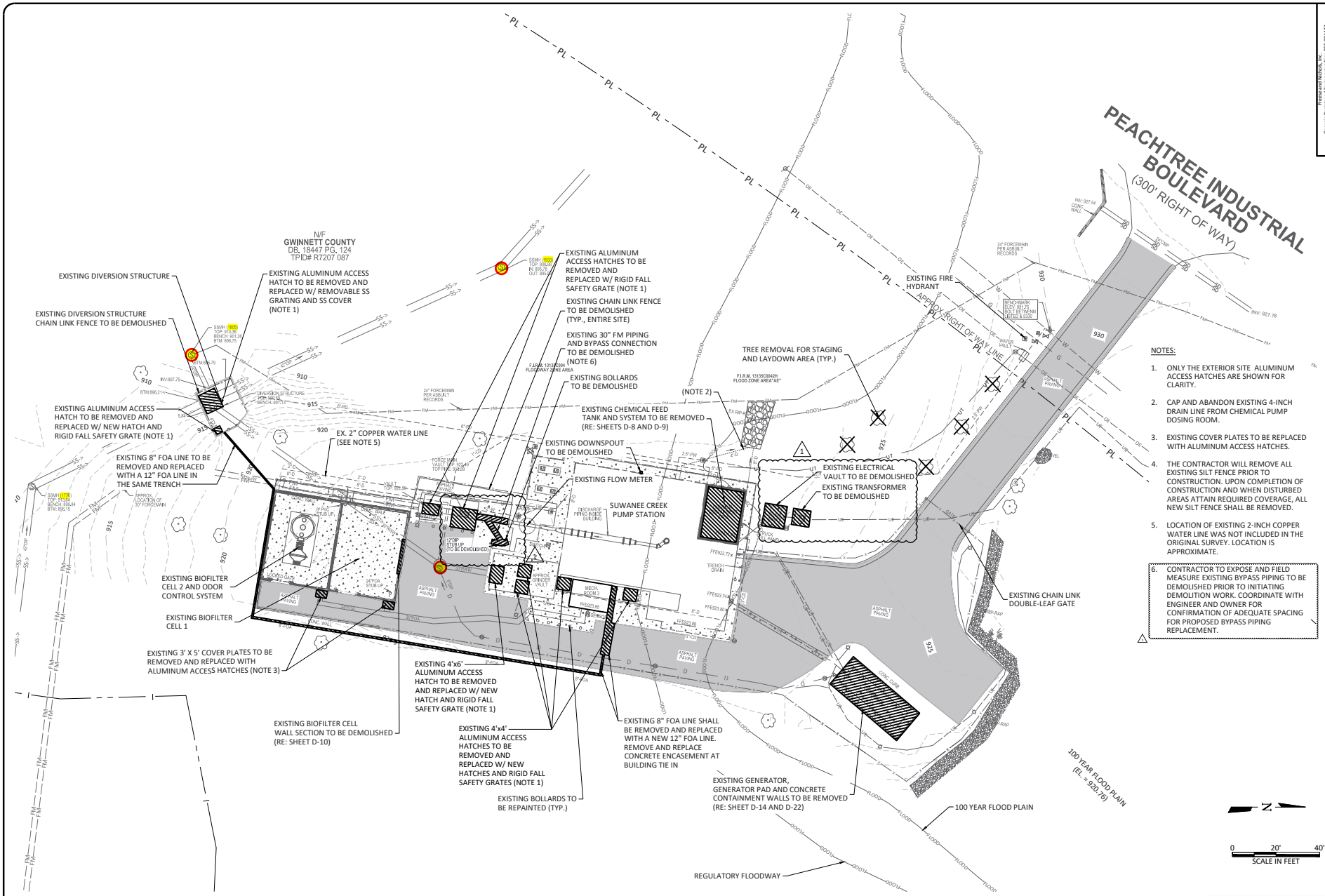

NOTES:

1. ONLY THE EXTERIOR SITE ALUMINUM ACCESS HATCHES ARE SHOWN FOR CLARITY.
2. CAP AND ABANDON EXISTING 4-INCH DRAIN LINE FROM CHEMICAL PUMP DOSING ROOM.
3. EXISTING COVER PLATES TO BE REPLACED WITH ALUMINUM ACCESS HATCHES.
4. THE CONTRACTOR WILL REMOVE ALL EXISTING SILT FENCE PRIOR TO CONSTRUCTION. UPON COMPLETION OF CONSTRUCTION AND WHEN DISTURBED AREAS ATTAIN REQUIRED COVERAGE, ALL NEW SILT FENCE SHALL BE REMOVED.
5. LOCATION OF EXISTING 2-INCH COPPER WATER LINE WAS NOT INCLUDED IN THE ORIGINAL SURVEY. LOCATION IS APPROXIMATE.
6. CONTRACTOR TO EXPOSE AND FIELD MEASURE EXISTING BYPASS PIPING TO BE DEMOLISHED PRIOR TO INITIATING DEMOLITION WORK. COORDINATE WITH ENGINEER AND OWNER FOR CONFIRMATION OF ADEQUATE SPACING FOR PROPOSED BYPASS PIPING REPLACEMENT.

ISSUED FOR BIDD

Freese and Nichols, Inc.
Georgia Registered Engineering Firm #F-00433

GEORGIA REGISTERED No. PE051805 PROFESSIONAL ENGINEER JOSHUA CADE STARLING
12/10/2025

FREESE NICHOLS
2180 Satellite Boulevard
Suite 235
Duluth, Georgia 30097
Phone: 470-645-2502
Web: www.freese.com

GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES
SUWANEE CREEK DIVERSION PUMP STATION
CIVIL
EXISTING SITE PLAN & DEMOLITION PLAN

NO.	ISSUE	BY	DATE
0	ISSUED FOR BID	JCS	12/10/2025
1	ADDENDUM NO. 3	JCS	10/22/2025

VERIFY SCALE Bar Scale is one inch on original drawing. If not one inch on this sheet, adjust scale: 0 1

P&W JOB NO.	GWR24074
DATE	10/22/25
DESIGNED	FLDH
DRAWN	SEL
CHECKED	JCS
APPROVED	FLDH
FILE NAME	CV-ALL-EX-SITE.dwg

SHEET C-1
SEQ. 5 OF 129

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NOTES:

1. NO PERMANENT SURVEY CONTROL MONUMENTS WERE IDENTIFIED WITHIN THE PROJECT SITE LIMITS. HORIZONTAL AND VERTICAL CONTROL WAS ESTABLISHED BY REFERENCING EXISTING BENCHMARK CONTROL POINTS LOCATED WITHIN THE ROW ALONG PEACHTREE INDUSTRIAL BOULEVARD. THESE CONTROL POINTS WERE UTILIZED TO ESTABLISH TEMPORARY "FLY POINTS", MARKED BY ASPHALT NAILS, ON-SITE FOR THE PURPOSES OF TOPOGRAPHIC AND BOUNDARY SURVEYING. REFER TO SHEET G1 FOR THESE BENCHMARK LOCATIONS.

SURVEY FLY POINTS

ELEV.	SYMB NO.	NORTHING	EASTING
924.57	1	2315010.5139	1466990.9505
923.39	2	2315022.3772	1466907.3884
922.55	3	2315006.3689	1466813.2579
923.73	4	2315000.5303	1466882.1733
923.65	5	2314926.9261	1466858.5060
919.82	6	2314933.8748	1466700.8126
909.39	7	2314892.8192	1466677.3448

BENCHMARK POINTS

ELEV.	MARKER	NORTHING	EASTING
931.79	1/2" CAPPED REBAR	2314837.0650	1467140.0800
935.89	1/2" CAPPED REBAR	2314932.6020	1467379.0930
936.8	PK NAIL IN ASPHALT	2314793.9370	1467291.9590

PEACHTREE INDUSTRIAL BOULEVARD (300' RIGHT OF WAY)

STREAM CENTER

N/F GWINNETT COUNTY DB: 18447 PG. 124 TPID# R7207 087

APPROX. RIGHT OF WAY LINE

100 YEAR FLOOD PLAIN

REGULATORY FLOODWAY

F.I.R.M. 13135C0042H FLOODWAY ZONE AREA

F.I.R.M. 13135C0042H FLOOD ZONE AREA"AE"

SCALE IN FEET 0 20' 40'

ISSUED FOR BID

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2025

GEORGIA REGISTERED No. PE051805 PROFESSIONAL ENGINEER JOSHUA CADE STARLING
10/22/2025

FREESE NICHOLS
2180 Satellite Boulevard
Suite 235
Duluth, Georgia 30097
Phone - (470)-645-3092
Web - www.freese.com

GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES
SUWANEE CREEK DIVERSION PUMP STATION

CIVIL

STAKING AND CONTROL POINTS

NO.	ISSUE	BY	DATE
0	ISSUED FOR BID	JCS	10/22/2025

VERIFY SCALE Bar Scale is one inch on original drawing. If not one inch on this sheet, adjust scale. 0 1"

F&N JOB NO.	GWR24074
DATE	10/22/25
DESIGNED	CAO
DRAWN	SEL
CHECKED	JCS
APPROVED	JCS
FILE NAME	CV-ALL-PL-PNTS.dwg

SHEET C-2

SEQ. 6 OF 129

ACAD Rel: 24.2s (LMS Tech)
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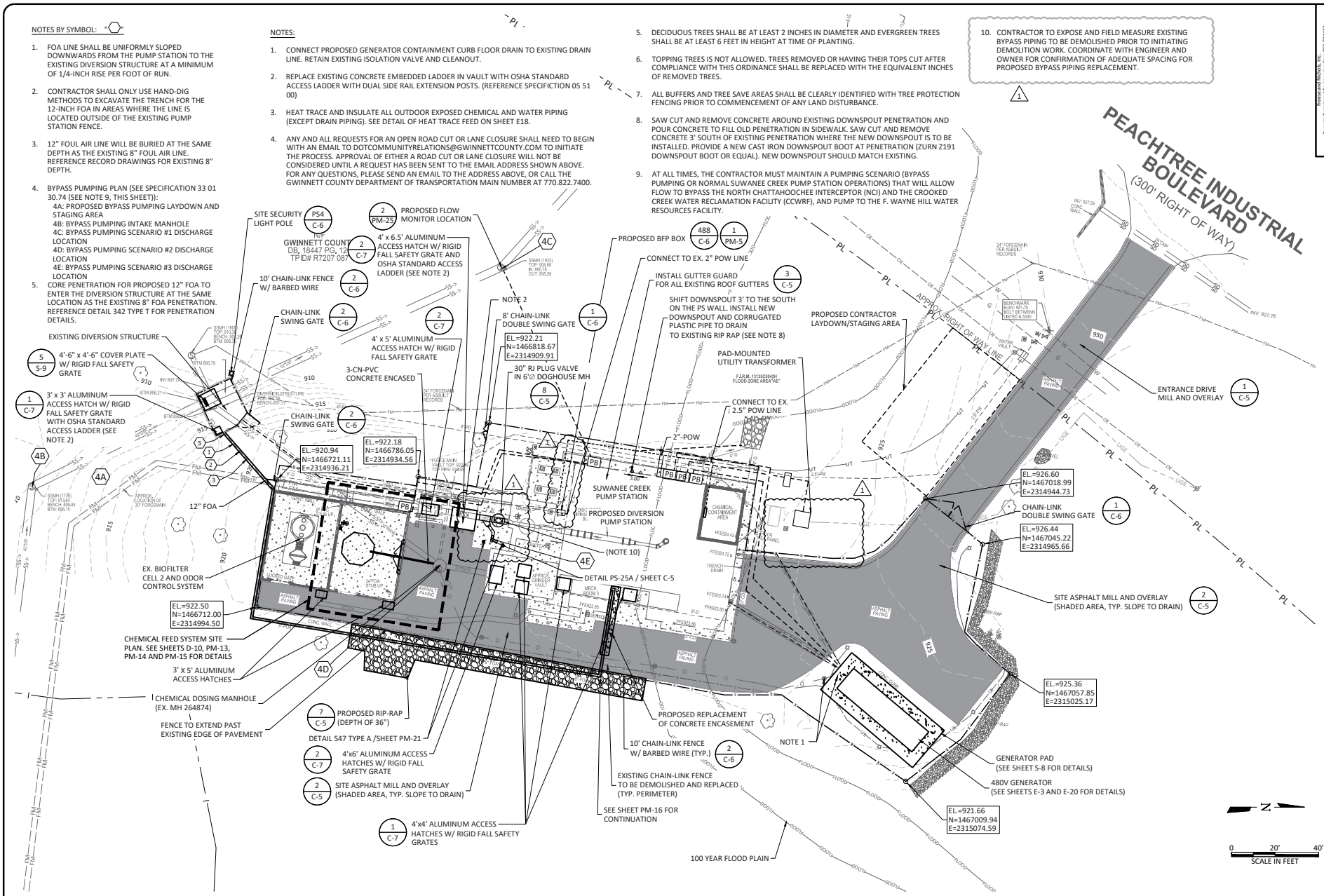
Last Saved: 10/21/2025 9:33 AM Saved By: 08448

Plot Date: 10/21/2025 11:00 AM Plot By: 08407 Filename: N:\WTU\Drawings\CV-ALL-PL-PNTS.dwg



Fricks and Noble, Inc.
Georgia Registered Professional Engineering Firm #P# 004133

GEORGIA REGISTERED No. PE051805 PROFESSIONAL ENGINEER JOSHUA CADE STARLING
12/10/2025

FRICKS and NOBLE
2180 Satellite Boulevard
Suite 235
Duluth, Georgia 30097
Phone: 404.445.2502
Web: www.fricks.com

GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES
SUWANEE CREEK DIVERSION PUMP STATION
CIVIL
PROPOSED SITE PLAN

NO.	ISSUE	BY	DATE
0	ADDENDUM NO. 3	JCS	12/10/2025
0	ISSUED FOR BID	JCS	10/22/2025

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F&N JOB NO.	GWR24074
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DRAWN	SEL
CHECKED	JCS
APPROVED	FLDH
FILE NAME	CV-ALL-PL-SITE.dwg

SHEET C-3
SEQ. 7 OF 129

ACAD Rel: 24.2s (LMS Tech)
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Last Saved: 12/9/2025 6:10 PM Saved By: 08407

Plot Date: 12/9/2025 6:11 PM Plot By: 08407 Filename: N:\WTU\Drawings\CV-ALL-PL-SITE.dwg

NOTES:

1. REPAVE ASPHALT TO MATCH EXISTING TOPOGRAPHY AND SLOPE TO DRAIN. REMOVE ANY INTERMEDIATE LOW POINTS IN PAVEMENT. REPLACE PAVEMENT IN-KIND.

PEACHTREE INDUSTRIAL BOULEVARD
(300' RIGHT OF WAY)

LINE OF WRESTED VEGITATION

STREAM CENTER

N/F GWINNETT COUN
DB. 18447 PG. 12
TPID# R7207 087

25-FT UNDISTURBED STATE WATERS BUFFER

50-FT GWINNETT COUNTY UNDISTURBED STREAM BUFFER

75-FT GWINNETT COUNTY IMPERVIOUS SETBACK

REGULATORY FLOODWAY

100 YEAR FLOOD PLAIN (EL. = 920.76)

F.I.R.M. 13135C0042H FLOODWAY ZONE AREA

F.I.R.M. 13135C0042H FLOOD ZONE AREA"AE"

EXISTING RIP-RAP

EXISTING FIRE HYDRANT

APPROX. RIGHT OF WAY LINE

CONCRETE WASHOUT
N037.814393
W093.451362

BENCHMARK
ELEV. 931.75
BOLT BETWENN
LISTED & 5330

24" FORCEMAIN PER ASBUILT RECORDS

INV: 927.54 CONC WALL

INV: 927.78

SSMH (1805)
TOP: 910.36
BENCH: 901.26
BTM: 898.75

SSMH (1933)
TOP: 906.88
IN: 895.78
OUT: 895.59

DIVERSION STRUCTURE
TOP: 560.83
BENCH: 901.13

SSMH (1804)
TOP: 913.64
BENCH: 899.84
BTM: 896.15

FORCE MAIN VAULT TOP: 922.49
TOP PIPE: 913.89

VAULT TOP: 922.59

CHEMICAL CONTAINMENT AREA
FFE924.43

DISCHARGE PIPING INSIDE BUILDING

APPROX GRINDER VAULT

MECH. ROOM 3

TRENCH DRAIN

APRROX. EL. 923.18

SPLASH BLOCK

1' WIDE TRENCH TO BE CONCRETE FILLED TO GRADE

PROPOSED RIP-RAP W/ FILTER FABRIC (7 / C-5)

NOTE 1

SITE ASPHALT MILL AND OVERLAY (SHADED AREA, TYP. SLOPE TO DRAIN) (2 / C-5)

PROPOSED GENERATOR ANG GENERATOR PAD

PROPOSED 542"L X 144"W X 188"H GENERATOR

100 YEAR FLOOD PLAIN (EL. = 920.76)

REGULATORY FLOODWAY

LINE OF WRESTED VEGITATION

STREAM CENTER

922.50

922.52

922.51

N

0 20' 40'
SCALE IN FEET

ISSUED FOR BID

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 3/31/2025

GEORGIA REGISTERED No. PE051805 PROFESSIONAL ENGINEER JOSHUA CADE STARLING

10/22/2025

FREESE NICHOLS
2180 Satellite Boulevard
Suite 235
Duluth, Georgia 30097
Phone - (470)-645-3092
Web - www.freese.com

GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES
SUWANEE CREEK DIVERSION PUMP STATION

CIVIL

GRADING PLAN

NO.	ISSUE	BY	DATE
0	ISSUED FOR BID	JCS	10/22/2025

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F&N JOB NO.	GWR24074
DATE	10/22/25
DESIGNED	CAO
DRAWN	SEL
CHECKED	JCS
APPROVED	JCS
FILE NAME	CV-ALL-PL-GRAD.dwg

SHEET C-4

SEQ. 8 OF 129

ACAD Rel: 24.2s (LMS Tech)
Filename: N:\WTU\Drawings\CV-ALL-PL-GRAD.dwg
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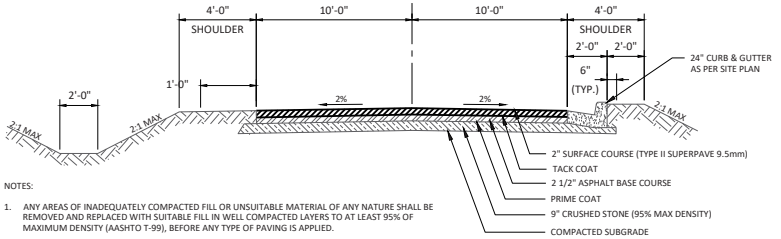
Plot Date: 10/21/2025 11:00 AM Plot By: 08407 Filename: N:\WTU\Drawings\CV-ALL-PL-GRAD.dwg

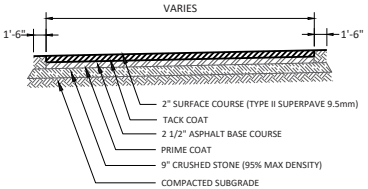


NOTES:

1. ANY AREAS OF INADEQUATELY COMPACTED FILL OR UNSUITABLE MATERIAL OF ANY NATURE SHALL BE REMOVED AND REPLACED WITH SUITABLE FILL IN WELL COMPACTED LAYERS TO AT LEAST 95% OF MAXIMUM DENSITY (AASHTO T-99), BEFORE ANY TYPE OF PAVING IS APPLIED.
2. NO CONTRACTOR SHALL BEGIN TO APPLY PAVING WITHOUT A RELEASE FROM THE DEPARTMENT, AND WILL BE HELD RESPONSIBLE FOR REPLACING ANY PAVING, BASE AND SUBGRADE WHICH MAY FAIL BECAUSE OF INADEQUATE SUBGRADE CONDITIONS, AS WELL AS FOR ORDINARY PAVING DEFICIENCIES.

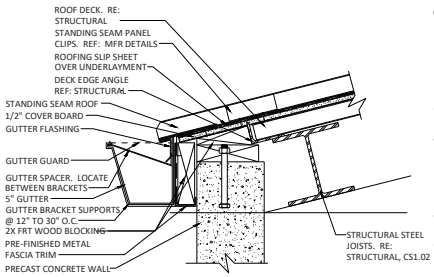
1 C-5 ENTRANCE DRIVE TYPICAL CROSS SECTION (MILL AND OVERLAY ONLY)

NOT TO SCALE



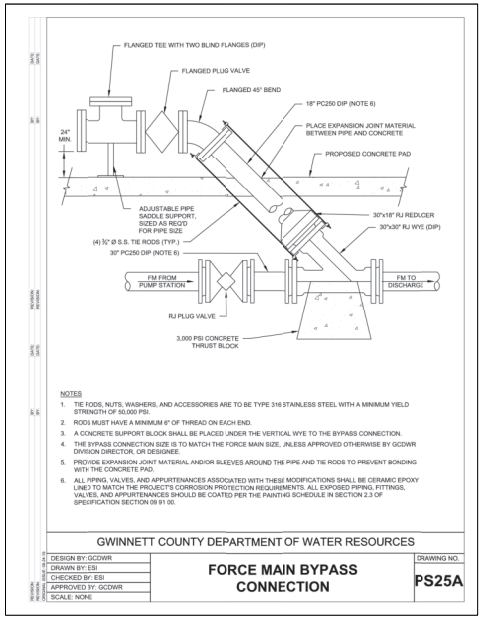
2 C-5 PARKING AREA TYPICAL CROSS SECTION (MILL AND OVERLAY ONLY)

NOT TO SCALE



3 C-5 ROOF GUTTER AND GUTTER GUARD

NOT TO SCALE



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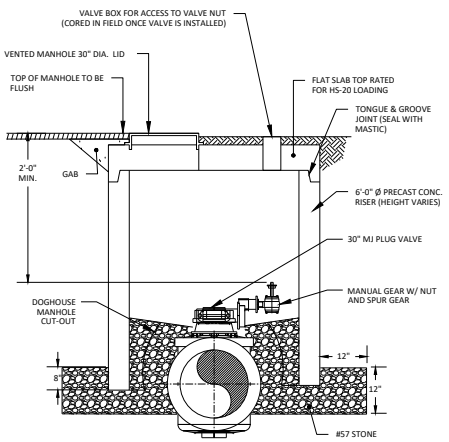
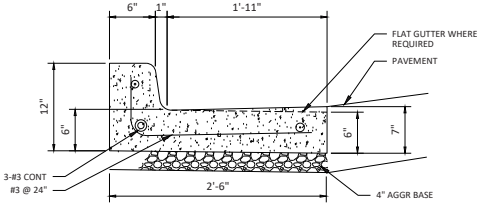


NOTES:

1. MAINTAIN 1'-0" CLEAR BETWEEN PIPE AND MH STRUCTURE
2. MANHOLES LIDS TO BE VENTED W/ 24-1" HOLES
3. ALL GASKETS SHALL BE TORUSEAL, NO SUBSTITUTION.
4. INSTALL BRICK AND MORTAR IN ANNULAR SPACE AROUND PIPE AT DOGHOUSE MANHOLE OPENINGS.
5. PLUG VALVE OPERATOR SHALL BE ACCESSIBLE FROM MANHOLE OPENING.

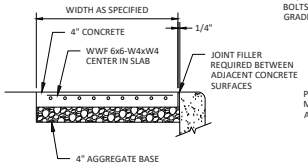
8 C-5 30-INCH MJ PLUG VALVE WITH MANWAY DETAIL

NOT TO SCALE



4 C-5 CURB AND GUTTER

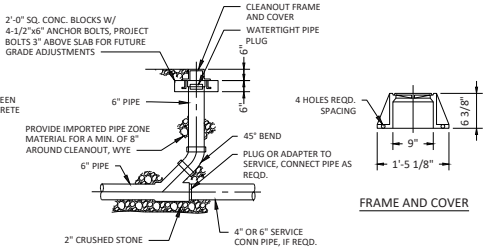
NOT TO SCALE



NOTE:
PROVIDE 1/8"x1/2" DEEP JOINT EVERY 4 FT AND FULL JOINT WIDTH PREFORMED JOINT FILLER EVERY 20 FT.

5 C-5 CONCRETE WALK

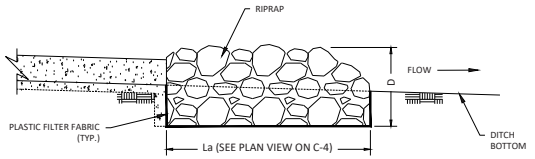
NOT TO SCALE



ELEVATION

6 C-5 CLEANOUT DETAIL

NOT TO SCALE



La = APRON LENGTH
D = INSTALLATION DEPTH
Dp = DEPTH OF PROTECTION
d50 = AVERAGE STONE DIAMETER

RIPRAP TYPE	REQUIRED d50 (FT)	MIN. DEPTH "D" (IN)
3	≤ 0.67	18

7 C-5 RIPRAP DETAIL

NOT TO SCALE

ISSUED FOR BID

Freese and Nichols, Inc.
Georgia Registered Engineering Firm #F-00413
Jessica Cade Starling
12/10/2025
2180 Satellite Boulevard
Suite 235
Duluth, Georgia 30097
Phone: (470) 445-2502
Web: www.freese.com

GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES
SUWANEE CREEK DIVERSION PUMP STATION
CIVIL
DETAILS I

NO.	ISSUE	BY	DATE
0	ADDENDUM NO. 3	JCS	12/10/2025
0	ISSUED FOR BID	JCS	10/22/2025

VERIFY SCALE Bar Scale is one inch on original drawing. If not one inch on this sheet, adjust scale: 1 0

PJN & JOB NO.	GWR24074
DATE	10/22/2025
DESIGNED	FLDH
DRAWN	SEL
CHECKED	FLDH
APPROVED	FLDH
FILE NAME	CV-ALL-DT-DETL01.dwg

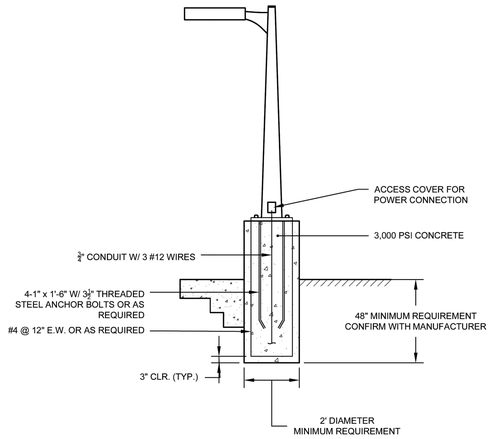
SHEET C-5
SEQ. 9 OF 129

ACAD Rel: 24.2s (LMS Tech)
Reference: N:\WTU\Drawings\CV-ALL-DT-DETL01.dwg
Last Saved: 12/9/2025 2:43 PM Saved By: 08407
Plot Date: 12/9/2025 6:11 PM Plot By: 08407 Filename: N:\WTU\Drawings\CV-ALL-DT-DETL01.dwg

SECURITY LIGHT ON 20' POLE

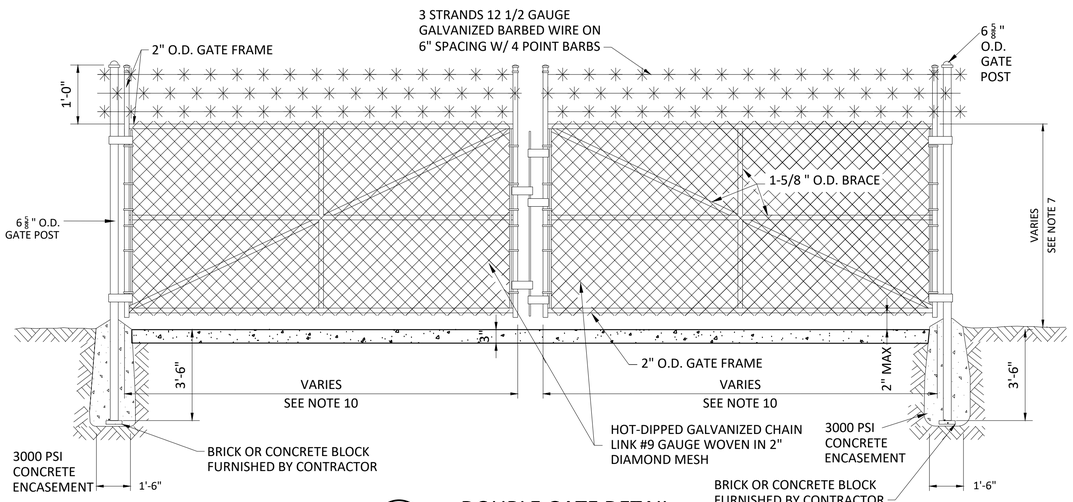
NOTES:

1. LUMINAIRE SHALL BE LITHONIA D-SERIES SIZE 1 DSX1 LED2 LED FIXTURE WITH TYPE IV DISTRIBUTION, OR DESIGNEE APPROVED EQUAL.
2. POLE SHALL BE 20 FOOT ROUND TAPERED ALUMINUM POLE; LITHONIA RTA OR GCDWR DIVISION DIRECTOR, OR DESIGNEE APPROVED EQUAL.
3. LUMINAIRE AND POLE SHALL BE DARK BRONZE.
4. LUMINAIRE SHALL BE 120VAC WITH PHOTOCELL CONTROL PER STANDARDS. AN OUTDOOR WEATHER RATED MANUAL SWITCH SHALL BE PROVIDED TO OVERRIDE THE PHOTOCELL.
5. MOUNT PHOTOCELL IN AN ACCESSIBLE LOCATION WITHOUT THE USE OF A BOOM TRUCK.
6. PROVIDE ALL TYPE 316 STAINLESS STEEL HARDWARE.
7. FOUNDATION SHALL BE PROVIDED PER THE MANUFACTURER'S REQUIREMENTS AND BE RATED FOR A 100 MPH WIND GUST.



GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES
PUMP STATION & FORCE MAIN STANDARD DETAILS

SHEET TITLE	DRN. BY: ESI	REV. NO.	BY	DATE
SITE SECURITY LIGHT	CKD BY: ESI			
	APPD. BY: GCDWR			
	DATE: 9/24/19			
DETAIL NO. PS-4	FILE NO:	SCALE: N.T.S.		

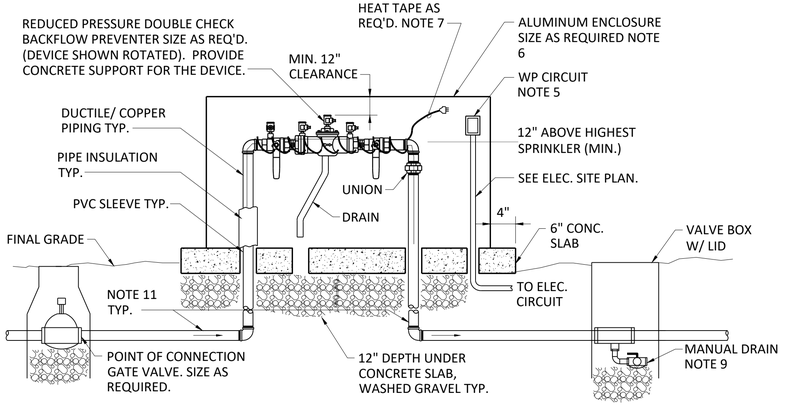


1 / C-6 **DOUBLE GATE DETAIL**

NOT TO SCALE

CHAIN LINK FENCE/GATE NOTES:

1. ALL CHAIN LINK FENCE METAL PARTS SHALL BE SP HOT DIP GALVANIZED AFTER FABRICATION.
2. FENCES SHALL BE FURNISHED COMPLETE WITH ALL NECESSARY FITTINGS AND HARDWARE.
3. POSTS SHALL BE ROLLED OR EXTRUDED SECTIONS OR TUBING OF STEEL OR ALUMINUM CAPABLE OF WITHSTANDING A LATERAL FORCE OF 100 POUNDS APPLIED AT THE TOP. ALL HOLLOW POSTS SHALL BE CAPPED.
4. STANDARD PIPE SIZES INDICATED ARE NOMINAL DIAMETER, SCHEDULE 40, PER AMERICAN STANDARDS ASSOCIATION (ASA) B 36.10.
5. TOP OF CONCRETE FOOTING TO BE SLOPED AWAY FROM FENCE/ GATE POSTS.
6. ALL NUTS, BOLTS, AND WASHERS SHALL BE STAINLESS STEEL AND SHALL BE PAINTED BLACK.
7. HEIGHT (H) OF DOUBLE SWING GATE TO BE 10'-0". HEIGHT (H) OF DOUBLE SWING GATES INSTALLED AT NEW CHEMICAL FEED SYSTEM BIOFILTER CELL 1 TO BE 6'-5".
8. PROVIDE PLUNGE ROD AND CATCHES FOR ALL GATES IN OPEN AND CLOSED POSITION.
9. 1'-0" OF 3 STRAND GALVANIZED BARBED WIRE TO BE USED FOR SITE PERIMETER, DIVERSION STRUCTURE, AND CHEMICAL FEED SYSTEM AREA FENCE.
10. WIDTH OF DOUBLE SWING GATES VARIES DEPENDANT ON INSTALLATION LOCATION. SEE SHEETS C-3 AND PM-13 FOR WIDTH DETAILS.
11. PVC FENCE SLATS REQUIRED. SLATS SHALL BE ARCHITECTURAL BROWN.

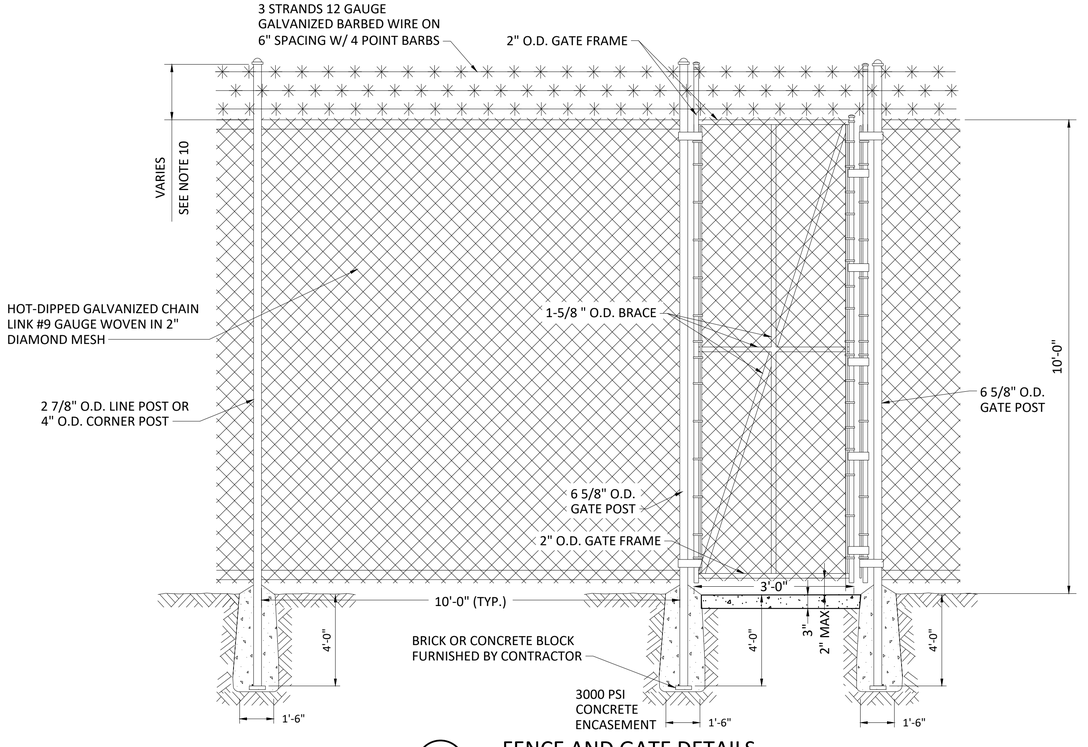


NOTES:

1. INSTALL HEAT TRACING AROUND ALL ABOVE GROUND PIPING AND DEVICES. IN ACCORDANCE WITH MFR'S INSTRUCTIONS.
2. INSTALL PIPE INSULATION ON ALL ABOVE GROUND PIPING.
3. INSTALL BACKFLOW ASSEMBLY IN ACCORDANCE WITH THE LOCAL PLUMBING CODE.
4. INSTALL ELECTRICAL DEVICES ON OPPOSITE SIDE FROM DISCHARGE PORT OF VALVES.
5. NEMA 3R WEATHERPROOF ENCLOSURE FOR ELEC. CONNECTION OF HEAT-TAPE.
6. WEATHER-PROOF ALUMINUM BACKFLOW PREVENTER COVER, BY MANUFACTURER. MIN. 12" CLEARANCE ON ALL SIDES AND FROM TOP OF DEVICE TO ENCLOSURE AND FROM CONCRETE SLAB TO BOTTOM OF DEVICE.
7. HEAT TRACING. LENGTH AS REQUIRED.
8. CONTRACTOR SHALL COORDINATE LOCATION OF DEVICE PRIOR WATER MAIN CONSTRUCTION.
9. INSTALL 1" GLOBE VALVE FOR MANUAL DRAIN. SLOPE VALVE DOWNWARD FOR PROPER DRAINAGE. INSTALL IN A VALVE BOX W/LID. PROVIDE 3 CUBIC FEET OF GRAVEL FOR DRAINAGE.
10. INSTALL TYPE "K" RIGID COPPER/ DUCTILE IRON PIPING TO 5' ON EACH SIDE OF CONCRETE PAD BEFORE CONNECTING TO PVC LINES.
11. INSTALL TYPE "K" RIGID COPPER/ DUCTILE IRON PIPING, USE 90° ELBOWS TURNING UP INTO BACKFLOW DEVICE PAD. DO NOT BEND PIPING. BRAZE ALL METALLIC CONNECTIONS OF THE COPPER/ DUCTILE IRON PIPE.
12. REFER TO SPECIFICATION 33 12 16.13, MISCELLANEOUS VALVES FOR MORE INFORMATION.

488 / C-6 ABOVE GRADE **BACKFLOW PREVENTER DETAIL**

NOT TO SCALE



2 / C-6 **FENCE AND GATE DETAILS**

NOT TO SCALE

ISSUED FOR BID

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2025

GEORGIA REGISTERED No. PE051805 PROFESSIONAL ENGINEER JOSHUA CADE STARLING

10/22/2025

FREESE NICHOLS
2180 Satellite Boulevard
Suite 235
Duluth, Georgia 30097
Phone - (470)-645-3092
Web - www.freese.com

GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES
SUWANEE CREEK DIVERSION PUMP STATION

CIVIL

DETAILS II

NO.	ISSUE	BY	DATE
0	ISSUED FOR BID	JCS	10/22/2025

VERIFY SCALE Bar Scale is one inch on original drawing. If not one inch on this sheet, adjust scale. 0 1

F&N JOB NO.	GWR24074
DATE	10/22/2025
DESIGNED	CAO
DRAWN	SEL
CHECKED	JCS
APPROVED	JCS
FILE NAME	CV-ALL-DT-DET101.dwg

SHEET C-6

SEQ. 10 OF 129

ACAD Rel: 24.2s (LMS Tech)
Filename: N:\WTU\Drawings\CV-ALL-DT-DET101.dwg
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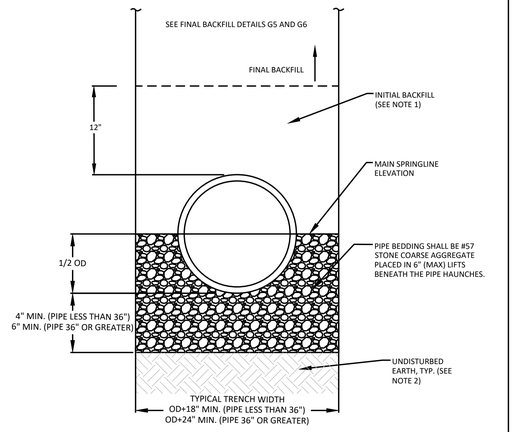
Plot Date: 10/21/2025 11:00 AM Plot By: 08407 Filename: N:\WTU\Drawings\CV-ALL-DT-DETL01.dwg



SECTION

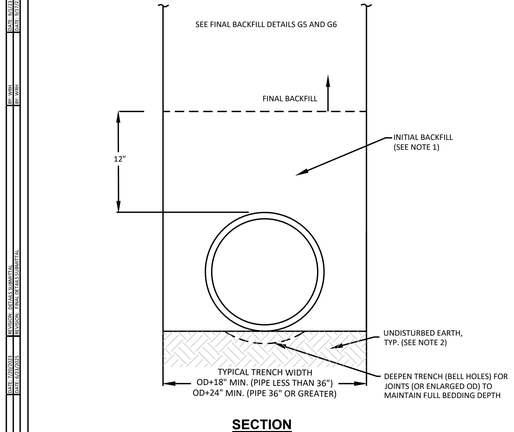
MINIMUM STANDARD FOR PVC GRAVITY SEWER

NOTES:

1. ON THE SIDES OF THE PIPE, PLACE INITIAL BACKFILL IN LIFTS NOT EXCEEDING 6" IN THICKNESS AND COMPACTED VIA MECHANICAL TAMPING METHODS. THEN PLACE REMAINING 12" TOP INITIAL BACKFILL LIFT AND COMPACT TO 90% OF MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D698 STANDARD PROCTOR. INITIAL BACKFILL MATERIAL SHALL BE REUSED OR IMPORTED EARTH FREE OF STONES LARGER THAN 2" DIAMETER (AS MEASURED IN ANY DIRECTION), CLODS, ORGANIC MATTER, RUBBISH, OR OTHER UNSUITABLE MATERIAL.
2. WHEN BOTTOM OF TRENCH IS INADVERTENTLY DISTURBED OR SATURATED, REMOVE DISTURBED OR SATURATED MATERIAL AND REPLACE WITH #57 STONE CONSOLIDATED.

GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES

DESIGN BY: 2025 DWR REVISION	**CLASS 'B' BEDDING AND INITIAL BACKFILL**	DRAWING NO. **G1B**
DRAWN BY: AMK		
CHECKED BY: WRH		
APPROVED BY: DWR		
SCALE: NONE		



SECTION

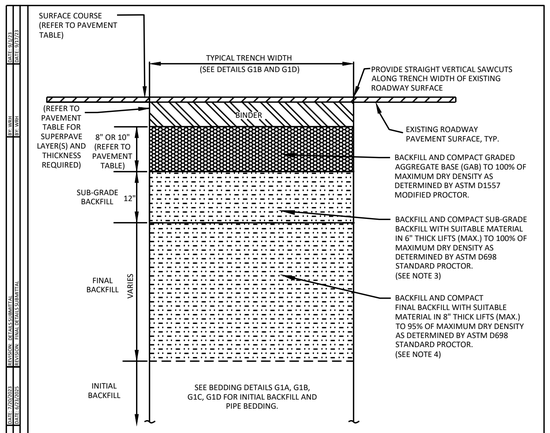
MINIMUM STANDARD FOR DIP WATER MAINS

NOTES:

1. ON THE SIDES OF THE PIPE, PLACE INITIAL BACKFILL IN LIFTS NOT EXCEEDING 6" IN THICKNESS AND COMPACTED VIA MECHANICAL TAMPING METHODS. THEN PLACE REMAINING 12" TOP INITIAL BACKFILL LIFT AND COMPACT TO 90% OF MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D698 STANDARD PROCTOR. INITIAL BACKFILL MATERIAL SHALL BE REUSED OR IMPORTED EARTH FREE OF STONES LARGER THAN 2" DIAMETER (AS MEASURED IN ANY DIRECTION), CLODS, ORGANIC MATTER, RUBBISH, OR OTHER UNSUITABLE MATERIAL.
2. WHEN BOTTOM OF TRENCH IS INADVERTENTLY DISTURBED OR SATURATED, REMOVE DISTURBED OR SATURATED MATERIAL AND REPLACE WITH #57 STONE CONSOLIDATED.

GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES

DESIGN BY: 2025 DWR REVISION	**CLASS 'D' BEDDING AND INITIAL BACKFILL**	DRAWING NO. **G1D**
DRAWN BY: AMK		
CHECKED BY: WRH		
APPROVED BY: DWR		
SCALE: NONE		



SECTION

NOTES:

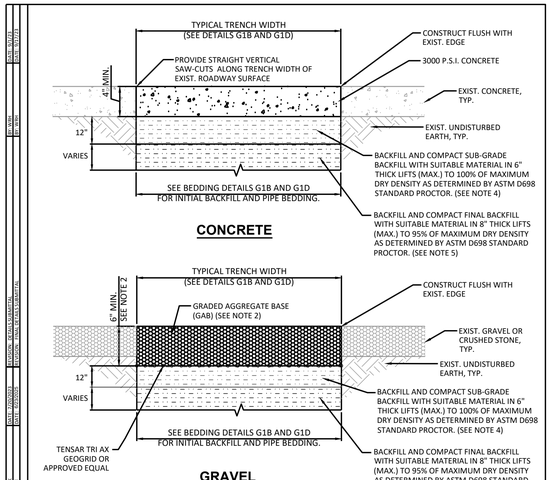
1. ALL MATERIALS AND METHODS OF INSTALLATION SHALL COMPLY WITH THE GDOT "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION," LATEST EDITION.
2. NEW ROADWAY PAVEMENT SHALL MATCH CROSS SLOPE AND GRADE OF EXISTING ROADWAY.
3. SUB-GRADE BACKFILL MATERIAL SHALL BE REUSED OR IMPORTED EARTH FREE OF CLODS, ORGANIC MATTER, RUBBISH, STONES LARGER THAN 2" DIAMETER (AS MEASURED IN ANY DIRECTION), OR OTHER UNSUITABLE MATERIAL.
4. FINAL BACKFILL MATERIAL SHALL BE REUSED OR IMPORTED EARTH FREE OF STONES LARGER THAN 4" DIAMETER (AS MEASURED IN ANY DIRECTION), CLODS, ORGANIC MATTER, RUBBISH, OR OTHER UNSUITABLE MATERIAL.

PAVEMENT TABLE

LOCAL AND COLLECTOR (MAJOR OR MINOR),	
ADT < 8,000	ADT > 8,000
GAB: 8"	GAB: 10"
BINDER (19mm): 2"	BINDER (19mm): 4"
SURFACE (9.5mm): 1.5"	SURFACE (12.5mm): 1.5"
ARTERIAL (MINOR, MAJOR OR PRINCIPAL),	
ADT < 15,000	ADT > 15,000
GAB: 10"	GAB: 10"
BASE (25mm): 3"	BASE (25m): 4"
BINDER (19mm): 2"	BINDER (19mm): 2"
SURFACE (12.5mm): 1.5"	SURFACE (12.5mm): 1.5"

GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES

DESIGN BY: 2025 DWR REVISION	**LONGITUDINAL ROADWAY CUT - FINAL BACKFILL**	DRAWING NO. **G5**
DRAWN BY: AMK		
CHECKED BY: WRH		
APPROVED BY: DWR		
SCALE: NONE		



CONCRETE

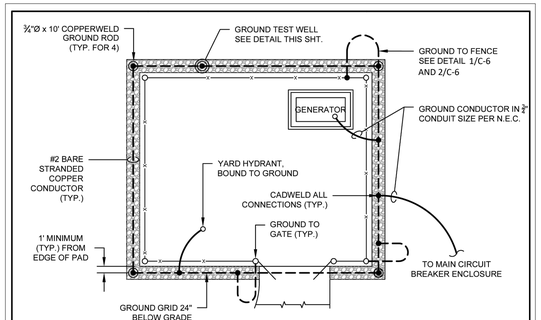
GRAVEL

NOTES:

1. ALL MATERIALS AND METHODS OF INSTALLATION SHALL COMPLY WITH THE GDOT "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" LATEST REVISION.
2. WHERE DEPTH OF EXISTING CONCRETE OR GRAVEL ROADWAY IS GREATER THAN 4" THE NEW DEPTH SHALL MATCH EXISTING ROADWAY OR DRIVEWAY DEPTH. IF GAB IS PRESENT BENEATH AN EXISTING CONCRETE ROAD OR DRIVEWAY, MATCH THE EXISTING GAB DEPTH.
3. NEW ROADWAY PAVEMENT SHALL MATCH CROSS SLOPE AND GRADE OF EXISTING ROADWAY.
4. SUB-GRADE BACKFILL MATERIAL SHALL BE REUSED OR IMPORTED EARTH FREE OF CLODS, ORGANIC MATTER, RUBBISH, STONES LARGER THAN 2" DIAMETER (AS MEASURED IN ANY DIRECTION), OR OTHER UNSUITABLE MATERIAL.
5. FINAL BACKFILL MATERIAL SHALL BE REUSED OR IMPORTED EARTH FREE OF CLODS, ORGANIC MATTER, RUBBISH, STONES LARGER THAN 4" DIAMETER (AS MEASURED IN ANY DIRECTION), CLODS, ORGANIC MATTER, RUBBISH, OR OTHER UNSUITABLE MATERIAL.

GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES

DESIGN BY: 2025 DWR REVISION	**CONCRETE OR GRAVEL PAVEMENT CUT - FINAL BACKFILL**	DRAWING NO. **G6**
DRAWN BY: AMK		
CHECKED BY: WRH		
APPROVED BY: DWR		
SCALE: NONE		

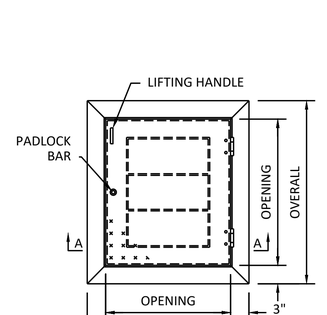


NOTES:
1. SEE ~~DETAIL PS-12~~ C AND PM SHEETS FOR PUMP STATION LAYOUT.
2. SEE STANDARDS FOR ADDITIONAL REQUIREMENTS.
3. BOUND ALL EQUIPMENT TO GROUND

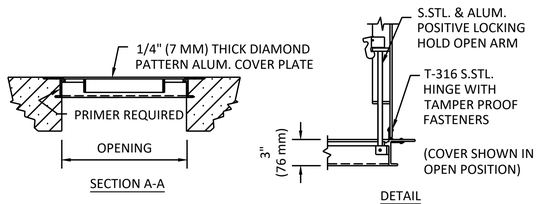
GROUND TEST WELL DETAIL

GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES
PUMP STATION & FORCE MAIN STANDARD DETAILS

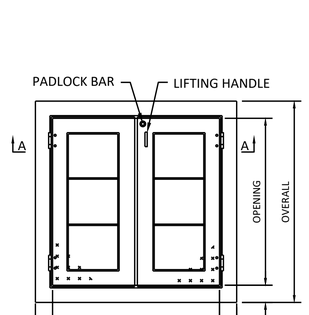
Gwinnett	SHEET TITLE: PUMP STATION GROUNDING DETAIL	DRN. BY: ESI	REV. NO.	BY	DATE
		CKD BY: ESI			
		APPD. BY: GCDWR			
		DATE: 9/24/19			
	DETAIL NO. PS-21	FILE NO.	SCALE: N.T.S.		



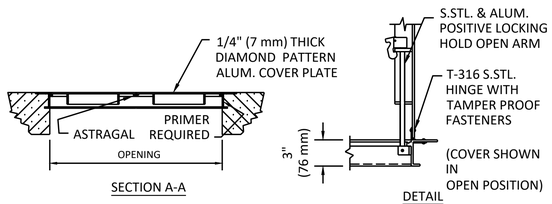
- ADD RIGID FALL PROTECTION (SEE 3/C-7 FOR DETAILS)
- 5 OF 7 ACCESS HATCH REPLACEMENTS TO REQUIRE RIGID FALL PROTECTION



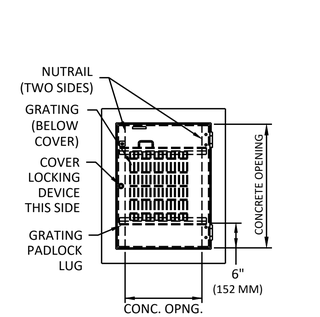
1 C-7 ACCESS HATCH I
NOT TO SCALE

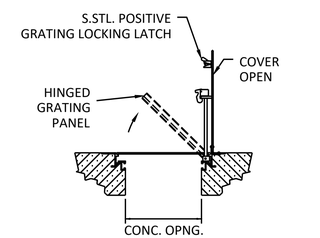


- ADD RIGID FALL PROTECTION (SEE 3/C-7 FOR DETAILS)



2 C-7 ACCESS HATCH II
NOT TO SCALE





3 C-7 RIGID FALL PROTECTION
NOT TO SCALE

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2027

GEORGIA REGISTERED No. PE051805 PROFESSIONAL ENGINEER JOSHUA CADE STARLING
10/22/2025

FREESE NICHOLS
2180 Satellite Boulevard
Suite 235
Duluth, Georgia 30097
Phone - (470)-645-3092
Web - www.freese.com

GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES
SUWANEE CREEK DIVERSION PUMP STATION

CIVIL

DETAILS III

F&N JOB NO.	GWR24074
DATE	10/22/2025
DESIGNED	CAO
DRAWN	SEL
CHECKED	JCS
APPROVED	JCS
FILE NAME	CV-ALL-DT-DETL01.dwg

NO.	ISSUE	BY	DATE
0	ISSUED FOR BID	JCS	10/22/2025

VERIFY SCALE Bar Scale is one inch on original drawing. If not one inch on this sheet, adjust scale.
0 1"

SHEET C-7

SEQ. 11 OF 129

ISSUED FOR BID

ACAD Rel: 24.2s (LMS Tech)
Filename: N:\WTU\Drawings\CV-ALL-DT-DETL01.dwg
Last Saved: 9/10/2025 1:27 PM Saved By: 08852

Plot Date: 10/21/2025 11:00 AM Plot By: 08407 Filename: N:\WTU\Drawings\CV-ALL-DT-DETL01.dwg

GEORGIA UNIFORM CODING SYSTEM
FOR SOIL EROSION AND SEDIMENT CONTROL PRACTICES
GEORGIA SOIL AND WATER CONSERVATION COMMISSION

STRUCTURAL PRACTICES

CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Cd	CHECKDAM			A small temporary barrier or dam constructed across a swale, drainage ditch or area of concentrated flow.
Ch	CHANNEL STABILIZATION			Improving, constructing or stabilizing an open channel, existing stream, or ditch.
Co	CONSTRUCTION EXIT		Co	A crushed stone pad located at the construction site exit to provide a place for removing mud from tires thereby protecting public streets.
Cr	CONSTRUCTION ROAD STABILIZATION		Cr	A traveleay constructed as part of a construction plan including access roads, subdivision roads, parking areas and other on-site vehicle transportation routes.
Dc	STREAM DIVERSION CHANNEL			A temporary channel constructed to convey flow around a construction site while a permanent structure is being constructed.
Di	DIVERSION			An earth channel or dike located above, below, or across a slope to divert runoff. This may be a temporary or permanent structure.
Dn1	TEMPORARY DOWNDRAIN STRUCTURE		Dn1	A flexible conduit of heavy-duty fabric or other material designed to safely conduct surface runoff down a slope. This is temporary and inexpensive.
Dn2	PERMANENT DOWNDRAIN STRUCTURE		Dn2	A paved chute, pipe, sectional conduit or similar material designed to safely conduct surface runoff down a slope.
Fr	FILTER RING			A temporary stone barrier constructed at storm drain inlets and pond outlets.
Ga	GABION			Rock filter baskets which are hand-placed into position forming soil stabilizing structures.
Gr	GRADE STABILIZATION STRUCTURE		Gr	Permanent structures installed to protect channels or waterways where otherwise the slope would be sufficient for the running water to form gullies.
Lv	LEVEL SPREADER			A structure to convert concentrated flow of water into less erosive sheet flow. This should be constructed only on undisturbed soils.
Rd	ROCK FILTER DAM			A permanent or temporary stone filter dam installed across small streams or drainageways.
Re	RETAINING WALL		Re	A wall installed to stabilize cut and fill slopes where maximum permissible slopes are not obtainable. Each situation will require special design.
Rt	RETRO FITTING		Rt	A device or structure placed in front of a permanent stormwater detention pond outlet structure to serve as a temporary sediment filter.
Sd1	SEDIMENT BARRIER			A barrier to prevent sediment from leaving the construction site. It may be sandbags, bales of straw or hay, brush, logs and poles, gravel, or a silt fence.
Sd2	INLET SEDIMENT TRAP			An impounding area created by excavating around a storm drain drop inlet. The excavated area will be filled and stabilized on completion of construction activities.
Sd3	TEMPORARY SEDIMENT BASIN		Sed	A basin created by excavation or a dam across a waterway. The surface water runoff is temporarily stored allowing the bulk of the sediment to drop out.
Sd4	TEMPORARY SEDIMENT TRAP			A small temporary pond that drains a disturbed area so that sediment can settle out. The principle feature distinguishing a temporary sediment trap from a temporary sediment basin is the lack of a pipe or riser.
Sk	FLOATING SURFACE SKIMMER		Sk	A buoyant device that releases/drains water from the surface of sediment ponds, traps, or basins at a controlled rate of flow.
Spb	SEEP BERM		Spb	Linear control device constructed as a diversion perpendicular to the direction of runoff to enhance dissipation and infiltration, while creating multiple sedimentation chambers with the employment of intermediate dikes.

STRUCTURAL PRACTICES

CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Sr	TEMPORARY STREAM CROSSING		Sr	A temporary bridge or culvert-type structure protecting a stream or watercourse from damage by crossing construction equipment.
St	STORMDRAIN OUTLET PROTECTION		St	A paved or short section of riprap channel at the outlet of a storm drain system preventing erosion from the concentrated runoff.
Su	SURFACE ROUGHENING		Su	A rough soil surface with horizontal depressions on a contour or slopes left in a roughened condition after grading.
Tc	TURBIDITY CURTAIN		Tc	A floating or staked barrier installed within the water (it may also be referred to as a floating boom, silt barrier, or silt curtain).
Tp	TOPSOILING		Tp (USUALLY STOCKPILE AND EXTERNAL AREAS)	The practice of stripping off the more fertile soil, storing it, then spreading it over the disturbed area after completion of construction activities.
Tr	TREE PROTECTION		(REMOTE TREE CENTERS)	To protect desirable trees from injury during construction activity.
Wt	VEGETATED WATERWAY OR STORMWATER CONVEYANCE CHANNEL			Paved or vegetative water outlets for diversions, terraces, berms, dikes or similar structures.

VEGETATIVE PRACTICES

CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Bf	BUFFER ZONE		Bf	Strip of undisturbed original vegetation, enhanced or restored existing vegetation or the reestablishment of vegetation surrounding an area of disturbance or bordering streams.
Cs	COASTAL DUNE STABILIZATION (WITH VEGETATION)		Cs	Planting vegetation on dunes that are denuded, artificialy constructed, or re-nourished.
Ds1	DISTURBED AREA STABILIZATION (WITH MULCHING ONLY)		Ds1	Establishing temporary protection for disturbed areas where seedings may not have a suitable growing season to produce an erosion retarding cover.
Ds2	DISTURBED AREA STABILIZATION (WITH TEMP SEEDING)		Ds2	Establishing a temporary vegetative cover with fast growing seedings on disturbed areas.
Ds3	DISTURBED AREA STABILIZATION (WITH PERM SEEDING)		Ds3	Establishing a permanent vegetative cover such as trees, shrubs, vines, grasses, or legumes on disturbed areas.
Ds4	DISTURBED AREA STABILIZATION (SODDING)		Ds4	A permanent vegetative cover using sods on highly erodable or critically eroded lands.
Du	DUST CONTROL ON DISTURBED AREAS		Du	Controlling surface and air movement of dust on construction site, roadways and similar sites.
Fl-Co	FLOCCULANTS AND COAGULANTS		Fl-Co	Substance formulated to assist in the solids/liquid separation of suspended particles in solution.
Sb	STREAMBANK STABILIZATION (USING PERM VEGETATION)		Sb	The use of readily available native plant materials to maintain and enhance streambanks, or to prevent, or restore and repair small streambank erosion problems.
Ss	SLOPE STABILIZATION		Ss	A protective covering used to prevent erosion and establish temporary or permanent vegetation on steep slopes, shore lines, or channels.
Tac	TACKIFIERS AND BINDERS		Tac	Substance used to anchor straw or hay mulch by causing the organic material to bind together.

GaSWCC (Amended - 2013)

EROSION CONTROL PROJECT NARRATIVE

PROJECT GENERALLY CONSISTS OF MISCELLANEOUS PROCESS AND SITE IMPROVEMENTS TO THE EXISTING SUWANEE CREEK PUMP STATION. SITE IMPROVEMENTS INCLUDE INSTALLATION OF NEW CONCRETE PAD AND ELECTRICAL GENERATOR, REPAVEMENT AND RESURFACING OF EXISTING ROADWAY AND ASPHALT, INSTALLATION OF INTERNAL AND EXTERNAL SAFETY HATCHES, AND THE INSTALLATION OF NEW CHAIN-LINK SECURITY FENCING AS INDICATED IN THESE DRAWINGS.

EIGHT (6) TYPES OF EROSION CONTROL MEASURES WILL BE UTILIZED IN THE CONSTRUCTION OF THE PROJECT

1. SILT FENCE - TYPE SENSITIVE (SD1-S) SHALL BE INSTALLED AT APPROPRIATE LOCATIONS TO PREVENT SEDIMENT FROM BEING WASHED OFF OF THE SITE.
2. TEMPORARY AND PERMANENT GRASSING (DS2 & DS3) SHALL BE USED TO RE-ESTABLISH VEGETATION ON THE DISTURBED AREAS AS CONSTRUCTION PROCEEDS.
3. CONSTRUCTION EXITS (CO) WILL BE USED TO PREVENT SEDIMENT FROM LEAVING THE SITE VIA THE TIRES OF TRUCKS AND CONSTRUCTION EQUIPMENT.
4. HAYBALE CHECKDAMS (CD-HB) SHALL BE PLACED IN ROADSIDE DITCHES AND CHANNELS TO PREVENT SEDIMENT FROM BEING WASHED OFF OF THE SITE.
5. DUST CONTROL (DU) WILL BE IMPLEMENTED TO MINIMIZE ANY DUST.
6. MULCH (DS1) WILL BE USED TO TEMPORARILY STABILIZE DISTURBED SOIL UNTIL SEEDING CAN BE PERFORMED.

CERTIFICATION

I CERTIFY UNDER PENALTY OF LAW THAT THIS PLAN WAS PREPARED AFTER A SITE VISIT TO THE LOCATIONS DESCRIBED HEREIN BY MYSELF OR MY AUTHORIZED AGENT, UNDER MY DIRECT SUPERVISION.

I CERTIFY THAT THE PERMITTEE'S EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN PROVIDES FOR AN APPROPRIATE AND COMPREHENSIVE SYSTEM OF BEST MANAGEMENT PRACTICES REQUIRED BY THE GEORGIA WATER QUALITY CONTROL ACT AND THE DOCUMENT "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA" (MANUAL) PUBLISHED BY THE GEORGIA SOIL AND WATER CONSERVATION COMMISSION AS OF JANUARY 1 OF THE YEAR IN WHICH THE LAND-DISTURBING ACTIVITY WAS PERMITTED, PROVIDES FOR THE SAMPLING OF THE RECEIVING WATER(S) OR THE SAMPLING OF THE STORM WATER OUTFALLS AND THAT THE DESIGNED SYSTEM OF BEST MANAGEMENT PRACTICES AND SAMPLING METHODS IS EXPECTED TO MEET THE REQUIREMENTS CONTAINED IN THE GENERAL NPDES PERMIT NO. GAR 1000001.

I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT CERTIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED, BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.

John P. Schneider

LEVEL II CERTIFIED DESIGN PROFESSIONAL # 0000094149
EXP. DATE: 04/27/2027

STORM WATER AND EROSION CONTROL NOTES

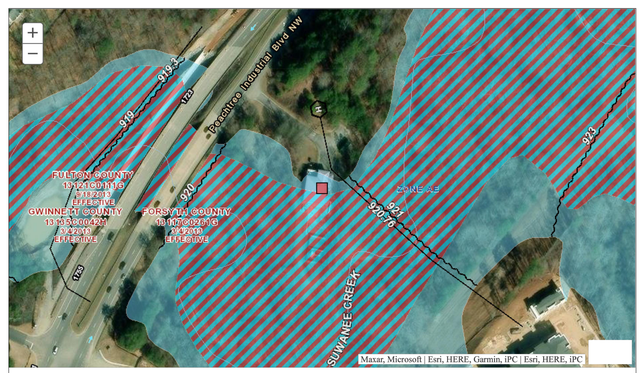
1. FLOODPLAINS ON THIS PROPERTY FROM ALL WATER COURSES WITH A DRAINAGE AREA EXCEEDING 100 ACRES IS SHOWN. THIS PROJECT DOES NOT LIE WITHIN THE 100-YEAR FLOODPLAIN, AS SHOWN IN FEMA FIRM PANEL 13135C00H WITH AN EFFECTIVE DATE OF MARCH 4, 2013.
2. NO STREAM BUFFERS WILL BE ENCROACHED UPON AS A RESULT OF THIS PROJECT.
3. TOTAL WETLAND AREA = 0.00 ACRES.
4. THE SOURCE OF TOPOGRAPHY IS TERRAMARK LAND SURVEYING, INC. RECEIVED BY FREESE AND NICHOLS ON 10/03/2022.
5. THE DESIGN PROFESSIONAL WHO PREPARED THE E&SC PLAN IS TO INSPECT THE INSTALLATION OF THE INITIAL SEDIMENT STORAGE REQUIREMENTS, PERIMETER CONTROL BMPS, AND SEDIMENT BASINS WITHIN 7 DAYS AFTER INSTALLATION.
6. NON-EXEMPT ACTIVITIES SHALL NOT BE CONDUCTED WITHIN THE 25 OR 50-FOOT UNDISTURBED STREAM BUFFERS AS MEASURED FROM THE POINT OF WRESTED VEGETATION OR WITHIN 25-FEET OF THE COASTAL MARSHLAND BUFFER AS MEASURED FROM THE JURISDICTIONAL DETERMINATION LINE WITHOUT FIRST ACQUIRING THE NECESSARY VARIANCES AND PERMITS. ALL STREAM BUFFERS THAT ARE ENCROACHED UPON IN THIS PROJECT ARE EXEMPT PER THE EROSION AND SEDIMENT ACT 12-7-6 (B) 15 (C).
7. EROSION AND SEDIMENT CONTROL DEVICES SHOWN ARE THE MINIMUM REQUIRED. ADDITIONAL DEVICES MAY BE REQUIRED AS NECESSARY.
8. MAINTENANCE OF ALL SOIL EROSION AND SEDIMENTATION CONTROL MEASURES AND PRACTICES, WHETHER TEMPORARY OR PERMANENT, SHALL BE AT ALL TIMES THE RESPONSIBILITY OF THE CONTRACTOR.
9. PERMANENT GRASSING AND/OR LANDSCAPING SHALL BE INSTALLED WITHIN TWO WEEKS AFTER THE COMPLETION OF ANY LAND DISTURBING ACTIVITY, OR IF ACTIVITY IS DISCONTINUED FOR A PERIOD OF TWO WEEKS OR LONGER. IN CERTAIN AREAS THE PLANS CLEARLY NOTE THAT NO LAND DISTURBANCE WILL BE ALLOWED UN-STABILIZED OVERNIGHT. THESE AREAS NEED TO HAVE THE NECESSARY TEMPORARY AND PERMANENT MEASURES IDENTIFIED ON THE PLANS INSTALLED WITHIN 24-HOURS.
10. A TEMPORARY COVER OF HEAVY MULCH OR MULCH WITH TEMPORARY SEEDING SHALL BE PLACED ON ALL AREAS WHERE PERMANENT COVER CAN NOT BE ESTABLISHED IMMEDIATELY DUE TO SEASONAL LIMITATIONS.
11. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING EROSION AND SEDIMENT CONTROL DEVICES IN GOOD WORKING CONDITION AND CLEANING OUT THE DEVICES BEFORE THEY ARE HALF-FULL OF SEDIMENT.
12. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT UNDER NO CIRCUMSTANCES ANY SEDIMENT, TRASH, OR DEBRIS BE ALLOWED ONTO ADJACENT PROPERTIES, PUBLIC LANDS, OR OUTSIDE OF THE CONSTRUCTION LIMITS.
13. CONTRACTOR SHALL BUILD, MAINTAIN, AND USE A CONSTRUCTION EXIT AT ALL SITE ENTRY/EXIT LOCATIONS ADJACENT TO PAVED ROADS.
14. ALL EROSION AND SEDIMENT CONTROL DEVICES TO BE USED ARE DETAILED ON THE EROSION CONTROL PLAN OR EROSION CONTROL DETAILS.
15. ALL EROSION AND SEDIMENT CONTROL DEVICES SHALL MEET THE MINIMUM REQUIREMENTS OF THE SPECIFICATIONS AND ALL LOCAL, STATE, AND FEDERAL LAWS AS APPLICABLE TO THIS PROJECT. ALL DEVICES SHALL BE PROPERLY INSTALLED AND BE OF SUITABLE MATERIALS. ANY DEVICES JUDGED TO BE INADEQUATE IN MATERIAL AND/OR CONSTRUCTION WILL IMMEDIATELY BE REPLACED WITH NEW OR ADDITIONAL DEVICES TO ENSURE PROPER CONTROL.
16. ALL TEMPORARY SILT CONTROL FENCING SHALL BE INSTALLED AND MAINTAINED BY THE CONTRACTOR THROUGHOUT THE LIFE OF THE PROJECT. THE CONTRACTOR SHALL INSPECT FENCE DAILY AND AFTER EVERY RAIN. ACCUMULATED SILT SHALL BE REMOVED AS SOON AS PRACTICAL, BUT NO LATER THAN WHEN FENCE IS HALF FULL. CONTRACTOR SHALL REMOVE THE SILT FENCE WHEN PERMANENT GRASSING HAS BEEN ESTABLISHED.
17. ALL EROSION CONTROL DEVICES, THAT ARE NOT DIRECTLY SPECIFIED AS TO INSTALLATION AND MATERIALS, SHALL MEET THE REQUIREMENTS OF THE GA. DEPT. OF TRANSPORTATION, SPECIFICATIONS FOR THE CONSTRUCTION OF ROADS AND BRIDGES, CURRENT EDITION, AND LATEST SUPPLEMENT IN EFFECT AT THE TIME OF BID OPENING OR THE MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA, 2016 EDITION.
18. CONSTRUCTION EXITS (Co) SHALL BE REQUIRED AT ALL OTHER LOCATIONS USED FOR INGRESS/EGRESS FROM THE CONSTRUCTION AREA. CONSTRUCTION MATERIAL STORAGE AREAS WILL REQUIRE THE INSTALLATION OF A CONSTRUCTION EXIT TO REDUCE OR ELIMINATE THE TRANSPORT OF MUD FROM THE AREA. SILT FENCE SHALL ALSO BE INSTALLED TO PREVENT SEDIMENT FROM LEAVING THE MATERIAL STORAGE AREA. AFTER DEMOBILIZATION, THE MATERIAL STORAGE AREA SHALL BE SEEDED AND MULCHED, AND THE SILT FENCE SHALL REMAIN UNTIL THE AREA IS PERMANENTLY STABILIZED.
19. MAXIMUM SLOPE FOR CUT OR FILL IS 2H:1V EXCEPT EARTHEN DAM EMBANKMENTS SHALL BE 2.5H:1V.
20. ALL FILL SLOPES SHALL HAVE SILT FENCE PLACED AT THE TOE OF THE SLOPE.
21. THE LIMITS OF DISTURBANCE ARE NOT WITHIN, OR DISCHARGE TO, 1 LINEAR MILE OF AN IMPAIRED STREAM SEGMENT THAT IS IMPAIRED FOR BIO F (PER THE GA EPD 303(D) LIST).
22. DUE TO THE SMALL SITE, ALL EROSION AND SEDIMENT POLLUTION CONTROL PLAN PHASES SHALL BE PERFORMED IN TWO PHASES. PHASE I AND PHASE II SHALL CONSIST OF INSTALLATION AND MAINTENANCE OF PERIMETER BMPS (CONSTRUCTION EXIT, CONCRETE WASHOUT, SILT FENCE, TREE PROTECTION FENCING) IN ADDITION TO THE STABILIZATION OF DISTURBED AREA (MULCH, SEEDING, DUST CONTROL) ONCE CONSTRUCTION BEGINS. THERE ARE NO PERMANENT BMPS SPECIFIED AS A PART OF THIS PROJECT SO PHASE III WILL CONSIST OF REMOVAL OF SITE BMPS AND ESTABLISHMENT OF PERMANENT SEEDING.

GSWCC — GEORGIA SOIL AND WATER CONSERVATION COMMISSION

JOHN P. SCHNEIDER
Level II Certified Design Professional
CERTIFICATION NUMBER 0000094149
ISSUED: 04/27/2021 EXPIRES: 04/27/2027

EROSION CONTROL NOTES

1. THE EXISTING AND PROPOSED LAND USE OF THE PROJECT SITE IS A PUMP STATION FACILITY ON MILL CREEK. THE PROJECT SITE IS ENTIRELY OWNED BY GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES.
2. OWNER/DEVELOPER/PP: PETER O. COKER, DWR PROJECT MANAGER
PETER.COKER@GWINNETTCOUNTY.COM, 678-376-6991,
684 WINDER HIGHWAY, LAWRENCEVILLE, GA 30045
3. 24 HOUR CONTACT: GWINNETT COUNTY DWR; OFFICE HOURS: (678) 376-6700
AFTER HOURS: (678) 376-7000
4. THIS PROJECT LIES WITHIN GSWCC REGION II IN GWINNETT COUNTY, GEORGIA. THE PROJECT IS ENTIRELY LOCATED AT 1758 PEACHTREE INDUSTRIAL BLVD., SUWANEE, GEORGIA 30024.
5. TOTAL PROJECT AREA: 1.1± ACRES.
6. TOTAL DISTURBED AREA: 1.1± ACRES
7. EROSION CONTROL PRACTICES SHALL COMPLY WITH THE STANDARDS/SPECIFICATIONS IN THE MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA.
8. EROSION AND SEDIMENT CONTROL DEVICES MUST BE INSTALLED PRIOR TO ANY GRADING ON SITE.
9. DISTURBED AREAS LEFT IDLE FOR MORE THAN FOURTEEN DAYS, AND NOT TO FINAL GRADE, WILL BE ESTABLISHED TO TEMPORARY VEGETATION (DS2). MULCH, TEMPORARY VEGETATION OR PERMANENT VEGETATION SHALL BE COMPLETED ON ALL EXPOSED AREAS WITHIN 14 DAYS AFTER DISTURBANCE. ALL AREAS TO FINAL GRADE WILL BE ESTABLISHED TO PERMANENT VEGETATION IMMEDIATELY UPON COMPLETION.
10. WHEN HAND PLANTING, MULCH (HAY OR STRAW) SHOULD BE UNIFORMLY SPREAD OVER SEEDED AREAS WITHIN 24 HOURS OF SEEDING.
11. EROSION AND SEDIMENT CONTROL DEVICES MUST BE INSTALLED AND INSPECTED PRIOR TO ANY GRADING ON SITE. PLEASE CALL WITH ENOUGH LEAD-TIME FOR AN INSPECTION TO MEET YOUR SCHEDULE.
12. SEDIMENT AND EROSION CONTROL DEVICES MUST BE CHECKED AFTER EACH STORM EVENT. EACH DEVICE IS TO BE MAINTAINED OR REPLACED IF SEDIMENT ACCUMULATION HAS REACHED ONE-HALF THE CAPACITY OF THE DEVICE. ADDITIONAL DEVICES MUST BE INSTALLED IF NEW CHANNELS HAVE DEVELOPED.
13. THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION AND SEDIMENT CONTROL MEASURES AND PRACTICES PRIOR TO, OR CONCURRENT WITH, LAND DISTURBING ACTIVITIES.
14. EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVIDE FOR EFFECTIVE EROSION AND SEDIMENT CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE.
15. MULCH TEMPORARY VEGETATION ON ALL EXPOSED AREAS WITHIN 14 DAYS AFTER DISTURBANCE.
16. CONTRACTOR SHALL MAINTAIN DRIVEWAY ACCESS AND POSTAL SERVICE THROUGHOUT THE DURATION OF THE PROJECT.
17. WHEN PLANTING VEGETATION, MULCH (HAY OR STRAW) SHOULD BE UNIFORMLY SPREAD OVER SEEDED AREA WITHIN 24 HOURS OF SEEDING.
18. IN CONCENTRATED FLOW AREAS, ALL SLOPES STEEPER THAN 2.5:1 AND WITH A HEIGHT OF TEN FEET OR GREATER (DOES NOT APPLY TO RETAINING WALLS), AND CUTS AND FILLS WITHIN STREAM BUFFERS, SHALL BE STABILIZED WITH THE APPROPRIATE EROSION CONTROL MATTING OR BLANKETS. MULCH SHALL BE USED AS A TEMPORARY COVER.
19. THE USE OF POLYMERS IS ACCEPTED AS A BMP AS RECOMMENDED BY THE STATE SOIL & WATER CONSERVATION COMMISSION BMP "GREEN BOOK". POLYMERS USED TO STABILIZE CONSTRUCTION SITES MUST BE USED IN CONJUNCTION WITH MULCHING AND OR HYDRO SEEDING.
20. RECEIVING WATER FOR THIS PROJECT IS SUWANEE CREEK, WHICH IS NOT LISTED ON THE 303(D) LIST.
21. WASTE MATERIALS SHALL NOT BE DISCHARGED TO WATERS OF THE STATE, EXCEPT AS AUTHORIZED BY A SECTION 404 PERMIT.
22. ANY DISTURBED AREA LEFT EXPOSED FOR A PERIOD GREATER THAN 14 DAYS SHALL BE STABILIZED WITH MULCH OR TEMPORARY SEEDING.



FEMA FLOOD HAZARD MAP
NOT TO SCALE

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Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2025

GEORGIA REGISTERED No. PE048582 PROFESSIONAL ENGINEER JOHN PHILLIP SCHNEIDER
10/21/2025

FREESE NICHOLS
2180 Satellite Boulevard
Suite 235
Duluth, Georgia 30097
Phone - (470)-645-3092
Web - www.freese.com

GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES
SUWANEE CREEK DIVERSION PUMP STATION
EROSION AND SEDIMENT CONTROL
NOTES & UNIFORM CODE

NO.	ISSUE	BY	DATE
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R&M JOB NO. GWR24074
DATE 10/22/2025
DESIGNED JPS
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SEQ. 12 OF 129

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INTRODUCTION
THIS EROSION SEDIMENTATION AND POLLUTION CONTROL PLAN (ESPCP) IS FOR THE PROJECT KNOWN AS THE GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES (GCDWR) SUWANEE CREEK DIVERSION PUMP STATION EXPANSION. PROJECT IS LOCATED IN GWINNETT COUNTY, GEORGIA. GCDWR IS IN CHARGE OF ADMINISTRATING THE PROJECT.

THE INTENT OF THIS ESPCP IS TO COMPLY WITH NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) GENERAL PERMIT NUMBER GAR 100001 (PERMIT) BY PROVIDING BEST MANAGEMENT PRACTICES (BMPS) TO MINIMIZE AND MANAGE STORM WATER DISCHARGE FROM THE CONSTRUCTION SITE.

THE PERMIT AUTHORIZES STORM WATER DISCHARGES TO WATERS OF THE STATE FROM STAND-ALONE CONSTRUCTION ACTIVITIES SUBJECT TO LIMITATIONS, MONITORING REQUIREMENTS AND OTHER CONDITIONS SET FORTH IN THE PERMIT. REQUIREMENTS OF THIS ESPCP ARE INCORPORATED BY REFERENCE INTO THE CONSTRUCTION CONTRACT DOCUMENTS FOR THE PROJECT.

IMPLEMENTATION
THE CONTRACTOR FOR CONSTRUCTION OF THE PROJECT IS CONTRACTUALLY OBLIGATED TO CARRY OUT ALL RESPONSIBILITIES OF THE PERMIT OPERATOR AS DEFINED IN THE PERMIT. THE BMPS AND CONTROL ELEMENTS WILL BE IMPLEMENTED TO COMPLY WITH THOSE RECOMMENDED BY THE GEORGIA SOIL AND WATER CONSERVATION COMMISSION FOUND IN THE MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA, LATEST EDITION (MANUAL). THE CONTRACTOR WILL INSTALL, INSPECT, MAINTAIN, AND DOCUMENT THE BMPS AND CONTROL ELEMENTS IN ACCORDANCE WITH THIS DOCUMENT, THE CONTRACT DOCUMENTS AND THE CONSTRUCTION PLANS. GEORGIA LAW STIPULATES THAT ANY INCREASE IN TURBIDITY ABOVE THE STIPULATED AMOUNTS IN THE PERMIT IS A VIOLATION OF THE PERMIT UNLESS THE BMPS HAVE BEEN PROPERLY INSTALLED AND MAINTAINED. VIOLATIONS OF THE PERMIT DESCRIBED IN THE GEORGIA WATER QUALITY CONTROL ACT INCLUDE SIGNIFICANT FINES AND/OR IMPRISONMENT.

CONTROLS
THIS ESPCP CONTAINS THE FOLLOWING BMPS AND CONTROL ELEMENTS:

- EROSION AND SEDIMENT CONTROL BMPS
- CONTROLS FOR OTHER CONSTRUCTION-RELATED POLLUTANTS

TO COMPLY WITH THE PERMIT, BMPS AND CONTROL ELEMENTS DESCRIBED BELOW WILL BE IMPLEMENTED FOR CONSTRUCTION ACTIVITIES ASSOCIATED WITH THE PROJECT.

EROSION AND SEDIMENT CONTROL BMPS:
EROSION AND SEDIMENT CONTROL BMPS WILL BE USED TO REDUCE EROSION AT LAND-DISTURBING ACTIVITIES AND TO LIMIT THE DEPOSITION OF SEDIMENT ONTO ADJACENT LANDS AND/OR WATERSHEDS.

THE CONTRACTOR WILL IMPLEMENT THE EROSION AND SEDIMENT CONTROL BMPS LISTED BELOW AND THE BMPS SPECIFIED IN THE CONTRACT DOCUMENTS AND CONSTRUCTION PLANS. THE SPECIFIED EROSION AND SEDIMENT CONTROL BMPS ARE DESCRIBED IN THE MANUAL. EXAMPLES OF EROSION AND SEDIMENT CONTROL BMPS THAT WILL BE USED FOR THIS PROJECT INCLUDE, BUT ARE NOT LIMITED TO:
- TEMPORARY SEEDING
- PERMANENT SEEDING
- SILT FENCE
- HAYBALE CHECKDAMS
- CONSTRUCTION EXITS
- DUST CONTROL
- MULCH

THE STANDARD CONFIGURATION AND DEFINITIONS OF ADDITIONAL BMPS CAN BE FOUND ON SHEETS ES-1.

THE TYPICAL STORAGE IN SILT FENCE ACCEPTED BY MOST JURISDICTIONS IS 0.2 CY PER LINEAR FOOT OF SILT FENCE. THE TOTAL AMOUNT OF SILT FENCE EXPECTED TO BE INSTALLED AS PART OF THIS PROJECT IS 861 LINEAR FEET, YIELDING A TOTAL SEDIMENT STORAGE CAPACITY OF 172 CY. THE EXPECTED DISTURBED AREA OF THE PROJECT IS 0.95 ACRES, WITH AN EXPECTED SEDIMENT STORAGE CAPACITY REQUIREMENT OF 67 CY PER DISTURBED ACRE THUS YIELDING A MINIMUM SEDIMENT STORAGE REQUIREMENT OF 95 CY. THE AMOUNT OF SEDIMENT STORAGE PROVIDED (172 CY) IS GREATER THAN THE EXPECTED SEDIMENT STORAGE CAPACITY REQUIREMENT (95 CY).

THE CONTRACTOR WILL IMPLEMENT THE FOLLOWING CONTROLS FOR POTENTIAL CONSTRUCTION-RELATED POLLUTANTS:

- BUILDING MATERIALS AND PRODUCTS WILL BE COVERED WITH PLASTIC SHEETING OR TEMPORARY ROOFS TO MINIMIZE EXPOSURE TO PRECIPITATION AND RAINWATER.
- ADEQUATE WASTE CONTAINERS WILL BE PROVIDED AT APPROPRIATE LOCATIONS ON THE PROJECT SITE AWAY FROM STREETS, GUTTERS, WATER COURSES AND STORM DRAINS, AND WILL HAVE PROPER DISPOSAL. WORKERS WILL BE REQUIRED TO UTILIZE WASTE CONTAINERS.
- LIQUID WASTE COLLECTION AREAS SHALL BE LOCATED WITHIN SECONDARY CONTAINMENT STRUCTURES TO MINIMIZE THE RISK OF CONTAMINATED DISCHARGES.
- ALL SANITARY SEWER OR SEPTIC SYSTEM WASTE SHALL BE HANDLED AND DISPOSED OF IN ACCORDANCE WITH THE STATE AND/OR LOCAL REGULATIONS.
- CONSTRUCTION MATERIALS STORED AT THE SITE WILL BE MONITORED AND KEPT IN A LOCATION WHERE CONTACT WITH STORM WATER, WELLS, AND ANY OTHER BODY OF WATER CAN BE PREVENTED.
- STORAGE CONTAINERS FOR OIL, FUEL AND OTHER HAZARDOUS SUBSTANCES WILL BE LOCATED IN DESIGNATED AREAS PROTECTED WITH IMPERVIOUS CONTAINMENT BERMS.
- THE CONTRACTOR WILL NOTIFY GEORGIA EPD (404-656-4863) AND THE NATIONAL RESPONSE CENTER (NRC) (800-424-8802) UPON AWARENESS OF A RELEASE CONTAINING A HAZARDOUS SUBSTANCE OR OIL IN AN AMOUNT EQUAL TO OR GREATER THAN A REPORTING QUANTITY ESTABLISHED UNDER THE GEORGIA OIL OR HAZARDOUS MATERIAL SPILL OR RELEASE ACT (O.C.G.A. 12-14-2, ET SEQ.), 40 CFR 117 AND 40 CFR 302, AS SOON AS THE CONTRACTOR HAS KNOWLEDGE OF THE DISCHARGE.
- DISCHARGE OF CONSTRUCTION MATERIALS INTO ANY BODY OF WATER WILL BE PREVENTED.
- ANY SPILL WILL BE CLEANED UP IMMEDIATELY.
- WHEN WASHING VEHICLES BEFORE THEY LEAVE THE SITE, ANY HAZARDOUS SUBSTANCES THAT HAVE BEEN IN CONTACT WITH THE CONSTRUCTION VEHICLES WILL NOT BE WASHED INTO ANY STREAMS, LAKES, WELLS, ETC.
- PROVIDE A BMP FOR THE CONCRETE WASHDOWN OF TOOLS, CONCRETE MIXER CHUTES, HOPPERS AND THE REAR OF VEHICLES. WASHOUT OF THE DRUM AT THE CONSTRUCTION SITE IS PROHIBITED.

AMENDMENTS/REVISIONS TO THE ES & PC PLAN WHICH HAVE A SIGNIFICANT EFFECT ON BMP'S WITH A HYDRAULIC COMPONENT MUST BE CERTIFIED BY THE DESIGN PROFESSIONAL.

INSPECTIONS
EACH EROSION AND SEDIMENT CONTROL AND STORM WATER MANAGEMENT DEVICE WILL BE INSPECTED IN ACCORDANCE WITH THIS ESPCP, CONTRACT DOCUMENTS AND CONSTRUCTION PLANS. ALL INSPECTIONS REQUIRED BY THIS ESPCP SHALL BE CONDUCTED BY QUALIFIED PERSONNEL, AS DEFINED BY THE PERMIT. FOR THIS PROJECT THE CONTRACTOR IS OBLIGATED, BY AGREEMENT WITH THE OWNER, TO PROVIDE QUALIFIED PERSONNEL FOR ALL INSPECTIONS.

REQUIREMENTS FOR INSPECTION AND MAINTENANCE INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:

1. EACH DAY WHEN ANY TYPE OF CONSTRUCTION ACTIVITY HAS TAKEN PLACE AT A PRIMARY PERMITTEE'S SITE, CERTIFIED PERSONNEL PROVIDED BY THE PRIMARY PERMITTEE SHALL INSPECT: (A) ALL AREAS AT THE PRIMARY PERMITTEE'S SITE WHERE PETROLEUM PRODUCTS ARE STORED, USED, OR HANDLED FOR SPILLS AND LEAKS FROM VEHICLES AND EQUIPMENT; (B) ALL LOCATIONS AT THE PRIMARY PERMITTEE'S SITE WHERE VEHICLES ENTER OR EXIT THE SITE FOR EVIDENCE OF OFF-SITE SEDIMENT TRACKING; AND (C) MEASURE RAINFALL ONCE EACH 24-HOUR PERIOD AT THE SITE. THESE INSPECTIONS MUST BE CONDUCTED UNTIL A NOTICE OF TERMINATION IS SUBMITTED.

2. MEASURE AND RECORD RAINFALL WITHIN DISTURBED AREAS OF THE SITE THAT HAVE NOT MET FINAL STABILIZATION ONCE EVERY 24 HOURS EXCEPT ANY NON-WORKING SATURDAY, NON-WORKING SUNDAY AND NON-WORKING FEDERAL HOLIDAY. THE DATA COLLECTED FOR THE PURPOSE OF COMPLIANCE WITH THIS PERMIT SHALL BE REPRESENTATIVE OF THE MONITORED ACTIVITY. MEASUREMENT OF RAINFALL MAY BE SUSPENDED IF ALL AREAS OF THE SITE HAVE UNDERGONE FINAL STABILIZATION OR ESTABLISHED A CROP OF ANNUAL VEGETATION AND A SEEDING OF TARGET PERENNIALS APPROPRIATE FOR THE REGION.

3. CERTIFIED PERSONNEL (PROVIDED BY THE PRIMARY PERMITTEE) SHALL INSPECT THE FOLLOWING AT LEAST ONCE EVERY FOURTEEN (14) CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A STORM THAT IS 0.5 INCHES RAINFALL OR GREATER (UNLESS SUCH STORM ENDS AFTER 5:00 PM ON ANY FRIDAY OR ON ANY NON-WORKING SATURDAY, NON-WORKING SUNDAY OR ANY NON-WORKING FEDERAL HOLIDAY IN WHICH CASE THE INSPECTION SHALL BE COMPLETED BY THE END OF THE NEXT BUSINESS DAY AND/OR WORKING DAY, WHICHEVER OCCURS FIRST): (A) DISTURBED AREAS OF THE PRIMARY PERMITTEE'S CONSTRUCTION SITE; (B) AREAS USED BY THE PRIMARY PERMITTEE FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION; AND (C) STRUCTURAL CONTROL MEASURES. EROSION AND SEDIMENT CONTROL MEASURES IDENTIFIED IN THE PLAN APPLICABLE TO THE PRIMARY PERMITTEE'S SITE SHALL BE OBSERVED TO ENSURE THAT THEY ARE OPERATING CORRECTLY. WHERE DISCHARGE LOCATIONS OR POINTS ARE ACCESSIBLE, THEY SHALL BE INSPECTED TO ASCERTAIN WHETHER EROSION CONTROL MEASURES ARE EFFECTIVE IN PREVENTING SIGNIFICANT IMPACTS TO RECEIVING WATER(S). FOR AREAS OF A SITE THAT HAVE UNDERGONE FINAL STABILIZATION OR ESTABLISHED A CROP OF ANNUAL VEGETATION AND A SEEDING OF TARGET PERENNIALS APPROPRIATE FOR THE REGION, THE PERMITTEE MUST COMPLY WITH PART IV.D.4.A.(4). THESE INSPECTIONS MUST BE CONDUCTED UNTIL A NOTICE OF TERMINATION IS SUBMITTED.

4. CERTIFIED PERSONNEL (PROVIDED BY THE PRIMARY PERMITTEE) SHALL INSPECT AT LEAST ONCE PER MONTH DURING THE TERM OF THIS PERMIT (I.E., UNTIL A NOTICE OF TERMINATION IS SUBMITTED TO EPD) THE AREAS OF THE SITE THAT HAVE UNDERGONE FINAL STABILIZATION OR ESTABLISHED A CROP OF ANNUAL VEGETATION AND A SEEDING OF TARGET PERENNIALS APPROPRIATE FOR THE REGION. THESE AREAS SHALL BE INSPECTED FOR EVIDENCE OF, OR THE POTENTIAL FOR, POLLUTANTS ENTERING THE DRAINAGE SYSTEM AND THE RECEIVING WATER(S). EROSION AND SEDIMENT CONTROL MEASURES IDENTIFIED IN THE PLAN SHALL BE OBSERVED TO ENSURE THAT THEY ARE OPERATING CORRECTLY. WHERE DISCHARGE LOCATIONS OR POINTS ARE ACCESSIBLE, THEY SHALL BE INSPECTED TO ASCERTAIN WHETHER EROSION CONTROL MEASURES ARE EFFECTIVE IN PREVENTING SIGNIFICANT IMPACTS TO RECEIVING WATER(S).

5. BASED ON THE RESULTS OF EACH INSPECTION, THE SITE DESCRIPTION AND THE POLLUTION PREVENTION AND CONTROL MEASURES IDENTIFIED IN THE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN, THE PLAN SHALL BE REVISED AS APPROPRIATE NOT LATER THAN SEVEN (7) CALENDAR DAYS FOLLOWING EACH INSPECTION. IMPLEMENTATION OF SUCH CHANGES SHALL BE MADE AS SOON AS PRACTICAL BUT IN NO CASE LATER THAN SEVEN (7) CALENDAR DAYS FOLLOWING EACH INSPECTION.

6. A REPORT OF EACH INSPECTION THAT INCLUDES THE NAME(S) OF CERTIFIED PERSONNEL MAKING EACH INSPECTION, THE DATE(S) OF EACH INSPECTION, CONSTRUCTION PHASE (I.E., INITIAL, INTERMEDIATE OR FINAL), MAJOR OBSERVATIONS RELATING TO THE IMPLEMENTATION OF THE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN, AND ACTIONS TAKEN IN ACCORDANCE WITH PART IV.D.4.A.(5). OF THE PERMIT SHALL BE MADE AND RETAINED AT THE SITE OR BE READILY AVAILABLE AT A DESIGNATED ALTERNATE LOCATION UNTIL THE ENTIRE SITE OR THAT PORTION OF A CONSTRUCTION SITE THAT HAS BEEN PHASED HAS UNDERGONE FINAL STABILIZATION AND A NOTICE OF TERMINATION IS SUBMITTED TO EPD. SUCH REPORTS SHALL BE READILY AVAILABLE BY END OF THE SECOND BUSINESS DAY AND/OR WORKING DAY AND SHALL IDENTIFY ALL INCIDENTS OF BEST MANAGEMENT PRACTICES THAT HAVE NOT BEEN PROPERLY INSTALLED AND/OR MAINTAINED AS DESCRIBED IN THE PLAN. WHERE THE REPORT DOES NOT IDENTIFY ANY INCIDENTS, THE INSPECTION REPORT SHALL CONTAIN A STATEMENT THAT THE BEST MANAGEMENT PRACTICES ARE IN COMPLIANCE WITH THE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN. THE REPORT SHALL BE SIGNED IN ACCORDANCE WITH PART V.G.2. OF THIS PERMIT.

MAINTENANCE
THE CONTRACTOR WILL IMPLEMENT ROUTINE MAINTENANCE PROCEDURES, SUCH AS REMOVING SILT AT SILT BARRIERS WHEN THE ACCUMULATION REACHES FIFTY PERCENT OF CAPACITY, TO ENSURE THAT THE BMPS WILL FUNCTION AS INTENDED THROUGHOUT THE DURATION OF THE PROJECT. WITHIN 48 HOURS FOLLOWING EACH INSPECTION, ANY REQUIRED MAINTENANCE MUST BE COMPLETED. MAINTENANCE OF EACH EROSION AND SEDIMENT CONTROL DEVICE WILL BE PERFORMED THROUGHOUT THE CONSTRUCTION PERIOD AND UNTIL FINAL STABILIZATION IS ACHIEVED.

SAMPLING REQUIREMENTS
THE PERMIT REQUIRES THE MONITORING OF NEPHELOMETRIC TURBIDITY IN RECEIVING WATER(S) OR OUTFALLS IN ACCORDANCE WITH THE PERMIT.

RECEIVING WATER SAMPLES AND STORM WATER DISCHARGE SAMPLES WILL BE COLLECTED BY GRAB SAMPLES AND THE ANALYSIS OF THESE SAMPLES MUST BE CONDUCTED IN ACCORDANCE WITH METHODOLOGY AND TEST PROCEDURES SPECIFIED BY THE PERMIT. THE FREQUENCY OF SAMPLING WILL BE AS DESCRIBED IN THE FOLLOWING SECTION. SAMPLING AND ANALYSIS OF THE RECEIVING WATER(S) OR OUTFALLS BEYOND THE MINIMUM FREQUENCY STATED BELOW WILL BE REPORTED TO THE EPD.

1. SAMPLE CONTAINERS WILL BE LABELED BEFORE COLLECTING SAMPLES.
2. SAMPLES WILL BE WELL MIXED BEFORE TRANSFERRING TO A SECONDARY CONTAINER.
3. CLEAN GLASS OR PLASTIC JARS WITH LARGE MOUTHS WILL BE USED TO COLLECT SAMPLES. THE JARS SHOULD BE CLEANED THOROUGHLY TO AVOID CONTAMINATION.
4. MANUAL, AUTOMATIC OR RINSING STAGE SAMPLING MAY BE UTILIZED. SAMPLES REQUIRED BY THE PERMIT SHOULD BE ANALYZED IMMEDIATELY, BUT IN NO CASE LATER THAN 48 HOURS AFTER COLLECTION. HOWEVER, SAMPLES FROM AUTOMATIC SAMPLERS MUST BE COLLECTED NO LATER THAN THE NEXT BUSINESS DAY AFTER THEIR ACCUMULATION, UNLESS FLOW THROUGH AUTOMATED ANALYSIS IS UTILIZED. DILUTION OF SAMPLES IS NOT REQUIRED. SAMPLES MAY BE ANALYZED DIRECTLY WITH A PROPERLY CALIBRATED TURBIDIMETER. SAMPLES ARE NOT REQUIRED TO BE COOLED.
5. SAMPLING AND ANALYSIS OF THE RECEIVING WATER(S) OR OUTFALL BEYOND THE MINIMUM FREQUENCY STATED IN THE PERMIT MUST BE REPORTED TO EPD.

SAMPLING
POINTS THE CONTRACTOR WILL SAMPLE UNNAMED TRIBUTARIES AND CREEKS AT THE LOCATIONS LISTED BELOW. THE PLAN SHEETS WITHIN THESE CONSTRUCTION PLANS SHOW THE LOCATION OF ALL PERENNIAL AND INTERMITTENT STREAMS AND OTHER WATER BODIES INTO WHICH STORM WATER IS DISCHARGED, AND THE SAMPLING LOCATIONS FOR EACH REPRESENTATIVE STORM WATER OUTFALL.

NAME	DESCRIPTION	LATITUDE	LONGITUDE
SAMPLING POINT NO. 1	SUWANEE CREEK	34.033293	-84.105186
SAMPLING POINT NO. 2	SUWANEE CREEK	34.032162	-84.106577

IT SHOULD BE NOTED THAT ALL OF THE ABOVE SAMPLING LOCATIONS MAY NOT BE ACTIVE AT ALL TIMES DURING CONSTRUCTION OF THE PIPELINE. A SAMPLING LOCATION WILL BE ACTIVE FROM THE TIME CONSTRUCTION ACTIVITY STARTS IN THE WATERSHED THAT FEEDS THE SAMPLING LOCATION UNTIL FINAL STABILIZATION IS ACHIEVED IN THAT WATERSHED. THE TIMING OF THE CONSTRUCTION ACTIVITY WITHIN A WATERSHED DEPENDS ON CONSTRUCTION STAGING. HOWEVER, CONSTRUCTION STAGING HAS NOT YET BEEN DETERMINED. THE CONTRACTOR MAY STAGE THE CONSTRUCTION SO THAT 1) CONSTRUCTION BEGINS AT ONE END OF THE PROJECT AND PROGRESSES SYSTEMATICALLY TO THE OTHER END; 2) CONSTRUCTION BEGINS AT BOTH ENDS OF THE PROJECT AND PROGRESSES TO A COMMON MEETING POINT; OR 3) MULTIPLE CREWS BEGIN CONSTRUCTION AT DIFFERENT SECTIONS OF THE PROJECT AND EVENTUALLY LINK UP WITH EACH OTHER.

MANUAL SAMPLING
- SAMPLING WILL BEGIN AT THE DESIGNATED REPRESENTATIVE RECEIVING WATER(S) AT THE DOWNSTREAM LOCATION. THIS SAMPLE WILL BE TAKEN AT THE DISCHARGE FARTHEST DOWNSTREAM AT THE SITE BUT UPSTREAM OF ANY OTHER STORM WATER DISCHARGE NOT ASSOCIATED WITH THE PROJECT. FOR LARGE STREAMS WHERE VARIATIONS IN COLOR ARE VISIBLE, SEVERAL DOWNSTREAM SAMPLES FROM ACROSS THE RECEIVING WATER(S) MAY BE TAKEN AND THE ARITHMETIC AVERAGE OF THE TURBIDITY OF THESE SAMPLES MAY BE USED FOR THE DOWNSTREAM VALUE.
- UPSTREAM SAMPLES WILL BE TAKEN AFTER DOWNSTREAM SAMPLES HAVE BEEN ACQUIRED. THE UPSTREAM SAMPLE WILL BE TAKEN AT THE DISCHARGE FARTHEST UPSTREAM AT THE SITE BUT DOWNSTREAM OF ANY OTHER STORM WATER DISCHARGES NOT ASSOCIATED WITH THE PROJECT. WHERE APPROPRIATE, SEVERAL UPSTREAM SAMPLES FROM ACROSS THE RECEIVING WATER(S) MAY BE TAKEN AND THE ARITHMETIC AVERAGE OF THE TURBIDITY OF THESE SAMPLES MAY BE USED FOR THE UPSTREAM VALUE.
- THE SAMPLES WILL BE TAKEN FROM THE HORIZONTAL AND VERTICAL CENTER OF THE RECEIVING WATER(S) OR THE STORM WATER OUTFALL CHANNEL(S).
- CARE WILL BE TAKEN TO AVOID STIRRING THE BOTTOM SEDIMENTS IN THE RECEIVING WATER(S) OR IN THE OUTFALL STORM WATER CHANNEL.
- THE SAMPLING CONTAINER WILL BE HELD SO THAT THE OPENING FACES UPSTREAM.
- THE SAMPLES WILL BE KEPT FREE OF FLOATING DEBRIS.
- ONCE THE SAMPLE JAR OR BOTTLE IS FULL AND CAPPED, IT WILL BE TRANSPORTED TO THE LOCATION WHERE THE TURBIDITY TESTING WILL BE CONDUCTED. ALL TURBIDITY TESTS WILL BE CONDUCTED IMMEDIATELY, BUT NO LATER THAN 48 HOURS AFTER THE TIME THE SAMPLE WAS OBTAINED.

SAMPLING FREQUENCY
THE CONTRACTOR MUST SAMPLE IN ACCORDANCE WITH THIS ES&PCP AT LEAST ONCE FOR EACH RAINFALL EVENT DESCRIBED BELOW:

a. FOR EACH AREA OF THE SITE THAT DISCHARGES TO A RECEIVING STREAM, THE FIRST RAIN EVENT THAT REACHES OR EXCEEDS 0.5 INCH AND ALLOWS FOR MONITORING DURING NORMAL BUSINESS HOURS* (MONDAY THROUGH FRIDAY, 8:00 AM TO 5:00 PM AND SATURDAY 8:00 AM TO 5:00 PM, EXCLUDING ALL NONWORKING FEDERAL HOLIDAYS, WHEN CONSTRUCTION ACTIVITY IS BEING CONDUCTED BY THE PRIMARY PERMITTEE) THAT OCCURS AFTER ALL CLEARING AND GRUBBING OPERATIONS HAVE BEEN COMPLETED IN THE DRAINAGE AREA OF THE LOCATION SELECTED AS THE REPRESENTATIVE SAMPLING LOCATION;
b. IN ADDITION TO ITEM A) ABOVE, FOR EACH AREA OF THE SITE THAT DISCHARGES TO A RECEIVING STREAM, THE FIRST RAIN EVENT THAT REACHES OR EXCEEDS 0.5 INCH AND ALLOWS FOR MONITORING DURING NORMAL BUSINESS HOURS* THAT OCCURS EITHER 90 DAYS AFTER THE FIRST SAMPLING EVENT OR AFTER ALL MASS GRADING OPERATIONS HAVE BEEN COMPLETED IN THE DRAINAGE AREA OF THE LOCATION SELECTED AS THE REPRESENTATIVE SAMPLING LOCATION, WHICHEVER COMES FIRST;
c. AT THE TIME OF SAMPLING PERFORMED PURSUANT TO ITEMS A) AND B) ABOVE, IF BMPS ARE FOUND TO BE PROPERLY DESIGNED, INSTALLED, AND MAINTAINED, NO FURTHER ACTION IS REQUIRED. IF BMPS IN ANY AREA OF THE SITE THAT DISCHARGES TO A RECEIVING STREAM ARE NOT PROPERLY DESIGNED, INSTALLED, AND MAINTAINED, CORRECTIVE ACTION SHALL BE DEFINED AND IMPLEMENTED WITHIN TWO BUSINESS DAYS, AND TURBIDITY SAMPLES SHALL BE TAKEN FROM DISCHARGES FROM THAT AREA OF THE SITE FOR EACH SUBSEQUENT RAIN EVENT THAT REACHES OR EXCEEDS 0.5 INCH DURING NORMAL BUSINESS HOURS* UNTIL THE SELECTED TURBIDITY STANDARD IS ATTAINED, OR UNTIL POST-STORM EVENT INSPECTIONS DETERMINE THAT BMPS ARE PROPERLY DESIGNED, INSTALLED, AND MAINTAINED.
d. EXISTING CONSTRUCTION ACTIVITIES, I.E., THOSE THAT ARE OCCURRING ON OR BEFORE THE EFFECTIVE DATE OF THIS PERMIT THAT HAVE MET THE SAMPLING REQUIRED BY (A) ABOVE SHALL SAMPLE IN ACCORDANCE WITH (B). THOSE EXISTING CONSTRUCTION ACTIVITIES THAT HAVE MET THE SAMPLING REQUIRED BY (B) ABOVE SHALL NOT BE REQUIRED TO CONDUCT ADDITIONAL SAMPLING OTHER THAN AS REQUIRED BY (C) ABOVE.

*NOTE THAT THE CONTRACTOR MAY CHOOSE TO MEET THE REQUIREMENTS OF A) AND B) ABOVE BY COLLECTING TURBIDITY SAMPLES FROM ANY RAIN EVENT THAT REACHES OR EXCEEDS 0.5 INCH AND ALLOWS FOR MONITORING AT ANY TIME OF THE DAY OR WEEK.

RAINFALL DATA
MEASUREMENT OF RAINFALL DATA WILL BE RECORDED DAILY (ONCE DURING EACH 24-HOUR PERIOD) AT THE DOWNSTREAM MONITORING POINT FOR EACH ACTIVE CONSTRUCTION STAGE IN WHICH STREAM MONITORING IS UTILIZED AND NEAR THE CENTER OF EACH ACTIVE CONSTRUCTION STAGE IN WHICH OUTFALL MONITORING IS UTILIZED. THE CONTRACTOR WILL ESTABLISH A RAIN GAUGE ON EACH ACTIVE CONSTRUCTION STAGE FOR THIS PURPOSE. FURTHERMORE, THE CONTRACTOR WILL COLLECT AND RECORD THE RAINFALL DATA ON THE DAILY RAINFALL MONITORING DATA FORM.

TESTING
THE CONTRACTOR WILL EMPLOY QUALIFIED PERSONNEL WHO SHALL GATHER SAMPLES OF STORM WATER AS OUTLINED IN THE PERMIT PART IV, D.5 AND AS FURTHER DEFINED IN THIS ESPCP. THE CONTRACTOR WILL HAVE THE TURBIDITY OF EACH SAMPLE TESTED BY A QUAILIFIED TESTING LABORATORY.

ALL TURBIDITY TESTS WILL BE CONDUCTED IN ACCORDANCE WITH 40 CFR PART 136 (UNLESS OTHER TEST PROCEDURES HAVE BEEN APPROVED); THE GUIDANCE DOCUMENT TITLED "NPDES STORM WATER SAMPLING GUIDANCE DOCUMENT, EPA 833-B-92-001 AND GUIDANCE DOCUMENTS THAT MAY BE PREPARED BY THE EPD.

NTU LIMIT RATIONAL
THE CONTRACTOR SHALL SAMPLE THE RECEIVING STREAM BOTH UPSTREAM OF THE PROJECT AREA AND DOWNSTREAM OF THE PROJECT AREA. THE TOTAL INCREASE IN TURBIDITY FROM SAMPLE LOCATIONS UPSTREAM AND DOWNSTREAM OF THE CONSTRUCTION SITE SHALL NOT EXCEED 750 NTU.

REPORTING
THE CONTRACTOR SHALL SUBMIT A SUMMARY OF THE MONITORING RESULTS TO THE APPROPRIATE DISTRICT OFFICE OF THE EPD ACCORDING TO THE LIST IN APPENDIX A OF THE PERMIT BY THE FIFTEENTH DAY OF THE MONTH FOLLOWING THE REPORTING PERIOD. REPORTING PERIODS ARE MONTHS DURING WHICH SAMPLES ARE TAKEN IN ACCORDANCE WITH THE PERMIT. SAMPLING RESULTS SHALL BE IN A CLEARLY LEGIBLE FORMAT. UPON WRITTEN NOTIFICATION, THE EPD MAY REQUIRE THE CONTRACTOR TO SUBMIT THE SAMPLING RESULTS ON A MORE FREQUENT BASIS. SAMPLING AND ANALYSIS OF ANY STORM WATER DISCHARGE(S) OR THE RECEIVING WATER(S) BEYOND THE MINIMUM FREQUENCY STATED IN THIS PERMIT MUST BE REPORTED IN A SIMILAR MANNER TO THE EPD. THE SAMPLING REPORTS MUST BE SIGNED IN ACCORDANCE WITH PART V.G OF THE PERMIT. SAMPLING REPORTS MUST BE SUBMITTED TO THE EPD UNTIL SUCH TIME AS A NOTICE OF TERMINATION IS SUBMITTED IN ACCORDANCE WITH PART VI OF THE PERMIT.
IN ADDITION TO OTHER RECORD-KEEPING REQUIREMENTS, THE MONITORING INFORMATION SHALL INCLUDE:

a. THE DATE, EXACT PLACE, AND TIME OF SAMPLING OR MEASUREMENTS;
b. THE NAME(S) OF THE INDIVIDUAL(S) WHO PERFORMED THE SAMPLING AND MEASUREMENTS;
c. THE DATE(S) ANALYSES WERE PERFORMED;
d. THE TIME(S) ANALYSES WERE INITIATED;
e. THE NAME(S) OF THE INDIVIDUAL(S) WHO PERFORMED THE ANALYSES;
f. REFERENCES AND WRITTEN PROCEDURES, WHEN AVAILABLE, FOR THE ANALYTICAL TECHNIQUES OR METHODS USED;
g. THE RESULTS OF SUCH ANALYSES, INCLUDING THE BENCH SHEETS, INSTRUMENT READOUTS, COMPUTER DISKS OR TAPES, ETC., USED TO DETERMINE THESE RESULTS; AND
h. RESULTS THAT EXCEED 1,000 NTU SHALL BE REPORTED AS "EXCEEDS 1,000 NTU."

THE CONTRACTOR MUST RETAIN COPIES OF ALL MONITORING RESULTS AND SHALL PROVIDE THE OWNER WITH COPIES OF ALL MONITORING RESULTS.

RETENTION OF RECORDS
THE PRIMARY PERMITTEE SHALL RETAIN THE FOLLOWING RECORDS AT THE CONSTRUCTION SITE OR THE RECORDS SHALL BE READILY AVAILABLE AT A DESIGNATED ALTERNATE LOCATION FROM COMMENCEMENT OF CONSTRUCTION UNTIL SUCH TIME AS A NOTICE OF TERMINATION IS SUBMITTED IN ACCORDANCE WITH PART VI:

a. A COPY OF ALL NOTICES OF INTENT SUBMITTED TO EPD;
b. A COPY OF THE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN REQUIRED BY THIS PERMIT;
c. THE DESIGN PROFESSIONAL'S REPORT OF THE RESULTS OF THE INSPECTION CONDUCTED IN ACCORDANCE WITH PART IV.A.5. OF THIS PERMIT;
d. A COPY OF ALL MONITORING INFORMATION, RESULTS, AND REPORTS REQUIRED BY THIS PERMIT;
e. A COPY OF ALL INSPECTION REPORTS GENERATED IN ACCORDANCE WITH PART IV.D.4.a. OF THIS PERMIT;
f. A COPY OF ALL VIOLATION SUMMARIES AND VIOLATION SUMMARY REPORTS GENERATED IN ACCORDANCE WITH PART III.D.2. OF THIS PERMIT; AND
g. DAILY RAINFALL INFORMATION COLLECTED IN ACCORDANCE WITH PART IV.D.4.a.(1)(c) OF THIS PERMIT.

COPIES OF ALL NOTICES OF INTENT, NOTICES OF TERMINATION, REPORTS, PLANS, MONITORING REPORTS, MONITORING INFORMATION, INCLUDING ALL CALIBRATION AND MAINTENANCE RECORDS AND ALL ORIGINAL STRIP CHART RECORDINGS FOR CONTINUOUS MONITORING INSTRUMENTATION, EROSION, SEDIMENTATION AND POLLUTION CONTROL PLANS, RECORDS OF ALL DATA USED TO COMPLETE THE NOTICE OF INTENT TO BE COVERED BY THIS PERMIT AND ALL OTHER RECORDS REQUIRED BY THIS PERMIT SHALL BE RETAINED BY THE PERMITTEE WHO EITHER PRODUCED OR USED IT FOR A PERIOD OF AT LEAST THREE YEARS FROM THE DATE THAT THE NOT IS SUBMITTED IN ACCORDANCE WITH PART VI OF THIS PERMIT. THESE RECORDS MUST BE MAINTAINED AT THE PERMITTEE'S PRIMARY PLACE OF BUSINESS OR AT A DESIGNATED ALTERNATIVE LOCATION ONCE THE CONSTRUCTION ACTIVITY HAS CEASED AT THE PERMITTED SITE. THIS PERIOD MAY BE EXTENDED BY REQUEST OF THE EPD AT ANY TIME UPON WRITTEN NOTIFICATION TO THE PERMITTEE.

REPORT SUBMITTAL
ALL WRITTEN CORRESPONDENCE REQUIRED BY THE PERMIT SHALL BE SUBMITTED BY RETURN RECEIPT CERTIFIED MAIL (OR SIMILAR SERVICE) TO THE APPROPRIATE DISTRICT OFFICE OF THE EPD ACCORDING TO THE SCHEDULE IN APPENDIX A OF THE PERMIT.

COPIES OF THE DATA SENT TO GEORGIA EPD, INCLUDING THE RETURN RECEIPTS, WILL BE PROVIDED TO THE OWNER AND THE ENGINEER ON A MONTHLY BASIS.

ISSUED FOR BID

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 1/30/2025

GEORGIA REGISTERED No. PE048682 PROFESSIONAL ENGINEER JOHN PHILLIP SCHNEIDER
10/21/2025

FREESE NICHOLS
2180 Satellite Boulevard
Suite 235
Duluth, Georgia 30097
Phone - (470)-645-3092
Web - www.freese.com

GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES
SUWANEE CREEK DIVERSION PUMP STATION
EROSION AND SEDIMENT CONTROL
E&SC NOTES

NO.	ISSUE	BY	DATE

Ds1 MULCHING

MULCH OR TEMPORARY GRASSING SHALL BE APPLIED TO ALL EXPOSED AREAS WITHIN 14 DAYS OF DISTURBANCE. MULCH CAN BE USED AS A SINGULAR CONTROL DEVICE FOR UP TO SIX MONTHS, BUT IT SHALL BE APPLIED AT THE APPROPRIATE DEPTH, DEPENDING ON THE MATERIAL USED, ANCHORED, AND HAVE CONTINUOUS 90% COVER OR GREATER OF THE SOIL SURFACE. MAINTENANCE SHALL BE REQUIRED TO MAINTAIN APPROPRIATE DEPTH AND 90% COVER. TEMPORARY VEGETATION MAY BE EMPLOYED INSTEAD OF MULCH IF THE AREA WILL REMAIN UNDISTURBED FOR LESS THAN SIX MONTHS. IF AN AREA WILL REMAIN UNDISTURBED FOR GREATER THAN SIX MONTHS, PERMANENT VEGETATION TECHNIQUES SHALL BE EMPLOYED.

SITE PREPARATION

1. GRADE TO PERMIT THE USE OF EQUIPMENT FOR APPLYING AND ANCHORING MULCH.
2. INSTALL NEEDED EROSION CONTROL MEASURES AS REQUIRED SUCH AS DIKES, DIVERSION BERMS, TERRACES, AND SEDIMENT BARRIERS.
3. LOOSEN COMPACT SOIL TO A MINIMUM DEPTH OF 3 INCHES.

APPLYING MULCH

WHEN MULCH IS USED WITHOUT SEEDING, MULCH SHALL BE APPLIED TO PROVIDE FULL COVERAGE OF THE EXPOSED AREA.

1. DRY STRAW OR HAY MULCH AND WOOD CHIPS SHALL BE APPLIED UNIFORMLY BY HAND OR BY MECHANICAL EQUIPMENT.
2. IF THE AREA WILL EVENTUALLY BE COVERED WITH PERENIAL VEGETATION, 20-30 POUNDS OF NITROGEN PER ACRE IN ADDITION TO THE NORMAL AMOUNT SHALL BE APPLIED TO OFFSET THE UPTAKE OF NITROGEN CAUSED BY THE DECOMPOSITION OF THE ORGANIC MULCHES.
3. CUTBACK ASPHALT SHALL BE APPLIED UNIFORMLY. CARE SHOULD BE TAKEN IN AREAS OF PEDESTRIAN TRAFFIC DUE TO PROBLEMS OF TRACKING IN, OR DAMAGE TO SHOES, CLOTHING, ETC.
4. APPLY POLYETHYLENE FILM ON EXPOSED AREAS.

ANCHORING MULCH

1. STRAW OR HAY MULCH CAN BE PRESSED INTO THE SOIL WITH A DISK HARROW WITH THE DISK SET STRAIGHT OR WITH A SPECIAL PACKER DISK. DISKS MAY BE SMOOTH OR SERRATED AND SHOULD BE 20 INCHES OR MORE IN DIAMETER AND 8 TO 12 INCHES APART. THE EDGES OF THE DISK SHOULD BE DULL ENOUGH NOT TO CUT THE MULCH BUT TO PRESS IT INTO THE SOIL LEAVING MUCH OF IT IN AN ERECT POSITION. STRAW OR HAY MULCH SHALL BE ANCHORED IMMEDIATELY AFTER APPLICATION.
2. STRAW OR HAY SPREAD WITH SPECIAL BLOWER-TYPE EQUIPMENT MAY BE ANCHORED WITH EMULSIFIED ASHPALT (GRADE AE-5 OR SS-1). THE ASPHALT EMULSION SHALL BE SPRAYED ONTO THE MULCH AS IT IS EJECTED FROM THE MACHINE. USE 100 GALLONS OF EMULSIFIED ASPHALT AND 100 GALLONS OF WATER PER TON OF MULCH. TACKIFIERS AND BINDERS CAN BE SUBSTITUTED FOR EMULSIFIED ASPHALT. PLASTIC MESH OR NETTING WITH A MESH NO LARGER THAN ONE INCH BY ONE INCH SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS.
3. NETTING OF THE APPROPRIATE SIZE SHALL BE USED TO ANCHOR WOOD WASTE. OPENINGS OF THE NETTING SHALL NOT BE LARGER THAN THE AVERAGE SIZE OF THE WOOD WASTE CHIPS.
4. POLYETHYLENE FILM SHALL BE ANCHOR TRENCHED AT THE TOP AS WELL AS INCREMENTALLY AS NECESSARY.

Ds2 Ds3 TEMPORARY & PERMANENT GRASSING

VEGETATIVE COVERS

	MONTH	TEMPORARY SEED	RATE/ACRE	RATES/1,000 SQ. FT. FERTILIZER	RATES/1,000 SQ. FT. LIME STONE	PERMANENT SEED	RATE/ACRE	RATES/1,000 SQ. FT. FERTILIZER	RATES/1,000 SQ. FT. LIME STONE	MAINTENANCE
1)	JANUARY	RYEGRASS	40 - 50 LB.	12 LB (10-10-10)	45 LB.	UNHULLED BERMUDA COMMON SERALA	8 - 10 LB. 30 - 40 LB. (1)	12 LB (10-10-10) 35 LB (6-12-12)	45 LB. 45 LB.	10 LB (10-10-10) 10 LB (10-10-10)
2)	FEBRUARY	RYEGRASS	40 - 50 LB.	12 LB (10-10-10)	45 LB.	UNHULLED BERMUDA COMMON SERALA FESCUE	8 - 10 LB. 30 - 40 LB. 30 - 50 LB.	12 LB (10-10-10) 35 LB (6-12-12) 35 LB (6-12-12)	45 LB. 45 LB. 45 LB.	10 LB (10-10-10) 10 LB (10-10-10) 10 LB (10-10-10)
3)	MARCH	RYE WEEPING LOVEGRASS	2 - 3 BU. 4 - 6 LB.	12 LB (10-10-10) 12 LB (10-10-10)	45 LB. 45 LB.	UNHULLED BERMUDA COMMON SERALA FESCUE	8 - 10 LB. 30 - 40 LB. 30 - 50 LB.	12 LB (10-10-10) 35 LB (6-12-12) 12 LB (10-10-10)	45 LB. 45 LB. 45 LB.	10 LB (10-10-10) 10 LB (10-10-10) 10 LB (10-10-10)
4)	APRIL	RYE BROWN TOP MILLET SUDAN ANNUAL	2 - 3 BU. 30 - 40 LB. 35 LB.	12 LB (10-10-10) 12 LB (10-10-10) 35 LB (6-12-12)	45 LB. 45 LB.	WEEPING LOVEGRASS HULLED BERMUDA BAHIA	4 - 6 LB. 5 - 6 LB. 40 - 60 LB.	12 LB (10-10-10) 12 LB (10-10-10) 35 LB (6-12-12)	45 LB. 45 LB. 45 LB.	10 LB (10-10-10) 10 LB (10-10-10) 10 LB (10-10-10)
5)	MAY	WEEPING LOVEGRASS SUDAN GRASS BROWN TOP MILLET	4 - 6 LB. 35 LB. 30 - 40 LB.	12 LB (10-10-10) 35 LB (6-12-12) 12 LB (10-10-10)	45 LB. 45 LB. 45 LB.	WEEPING LOVEGRASS HULLED BERMUDA BAHIA	4 - 6 LB. 5 - 6 LB. 40 - 60 LB.	12 LB (10-10-10) 12 LB (10-10-10) 35 LB (6-12-12)	45 LB. 45 LB. 45 LB.	10 LB (10-10-10) 10 LB (10-10-10) 10 LB (10-10-10)
6)	JUNE	WEEPING LOVEGRASS SUDAN GRASS BROWN TOP MILLET	4 - 6 LB. 35 LB. 30 - 40 LB.	12 LB (10-10-10) 35 LB (6-12-12) 12 LB (10-10-10)	45 LB. 45 LB.	WEEPING LOVEGRASS HULLED BERMUDA BAHIA	4 - 6 LB. 5 - 6 LB. 40 - 60 LB.	12 LB (10-10-10) 12 LB (10-10-10) 35 LB (6-12-12)	45 LB. 45 LB. 45 LB.	10 LB (10-10-10) 10 LB (10-10-10) 10 LB (10-10-10)
7)	JULY	WEEPING LOVEGRASS SUDAN GRASS BROWN TOP MILLET	4 - 6 LB. 35 LB. 30 - 40 LB.	12 LB (10-10-10) 35 LB (6-12-12) 12 LB (10-10-10)	45 LB. 45 LB.	WEEPING LOVEGRASS SUDAN GRASS BROWN TOP MILLET	4 - 6 LB. 35 LB. 30 - 40 LB.	12 LB (10-10-10) 35 LB (6-12-12) 12 LB (10-10-10)	45 LB. 45 LB. 45 LB.	10 LB (10-10-10) 10 LB (10-10-10) 10 LB (10-10-10)
8)	AUGUST	RYEGRASS WEEPING LOVEGRASS	40 - 50 LB. 4 - 6 LB.	12 LB (10-10-10) 12 LB (10-10-10)	45 LB. 45 LB.	HULLED BERMUDA BAHIA	5 - 6 LB. 40 - 60 LB.	12 LB (10-10-10) 35 LB (6-12-12)	45 LB. 45 LB.	10 LB (10-10-10) 10 LB (10-10-10)
9)	SEPTEMBER	RYEGRASS TALL FESCUE	40 - 50 LB. 30 - 50 LB.	12 LB (10-10-10) 35 LB (6-12-12)	45 LB. 45 LB.	TALL FESCUE	30 - 50 LB.	35 LB (6-12-12)	45 LB.	10 LB (10-10-10)
10)	OCTOBER	WHEAT	2 - 3 BU.	12 LB (10-10-10)	45 LB.	UNHULLED BERMUDA COMMON SERALA FESCUE	8 - 10 LB. 30 - 40 LB. 30 - 50 LB.	12 LB (10-10-10) 35 LB (10-10-10) 35 LB (6-12-12)	45 LB. 45 LB. 45 LB.	10 LB (10-10-10) 10 LB (10-10-10) 10 LB (10-10-10)
11)	NOVEMBER	WHEAT	2 - 3 BU.	12 LB (10-10-10)	45 LB.	UNHULLED BERMUDA FESCUE	8 - 10 LB. 30 - 50 LB.	12 LB (10-10-10) 35 LB (10-10-10)	45 LB. 45 LB.	10 LB (10-10-10) 10 LB (10-10-10)
12)	DECEMBER	RYE RYEGRASS WHEAT	2 - 3 BU. 40 - 50 LB. 2 - 3 BU.	12 LB (10-10-10) 12 LB (10-10-10) 12 LB (10-10-10)	45 LB. 45 LB. 45 LB.	UNHULLED BERMUDA FESCUE	8 - 10 LB. 30 - 50 LB.	12 LB (10-10-10) 35 LB (6-12-12)	45 LB. 45 LB.	10 LB (10-10-10) 10 LB (10-10-10)

(1) - USE A MINIMUM OF 40 LBS. SCARIFIED SEED. REMAINDER MAY BE UNSCARIFIED, CLEAN HULLED SEED.

THE ABOVE SEEDING CHART LISTS ALL POTENTIAL OPTIONS. CONTRACTOR IS TO SUBMIT THE SCHEDULE AND PROPOSED SEED MIXTURE FOR THIS PROJECT FOR ENGINEER'S APPROVAL PRIOR TO SEEDING.

CONSTRUCTION SCHEDULE

ACTIVITY	MONTH 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
NOTICE TO PROCEED																	
INSTALLATION OF EROSION CONTROL																	
MAINTENANCE OF EROSION CONTROL																	
INSTALLATION OF TREE PROTECTION DEVICES																	
MAINTENANCE OF TREE PROTECTION DEVICES																	
INSTALLATION OF WATER MAIN																	
TEMPORARY AND PERMANENT GRASSING																	
CLEAN-UP																	

CONSTRUCTION ACTIVITIES ARE EXPECTED TO BEGIN IN JULY 2026 AND END IN JUNE 2028.

PERMITTEE CONTACT INFORMATION

CONTRACTOR

PERMITTEE CERTIFICATION STATEMENT

___ I CERTIFY THAT THE RECEIVING WATER(S) OR THE OUTFALL(S) OR A COMBINATION OF RECEIVING WATER(S) AND OUTFALL(S) WILL BE MONITORED IN ACCORDANCE WITH THE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN.

OPERATOR'S PRINTED NAME: _____

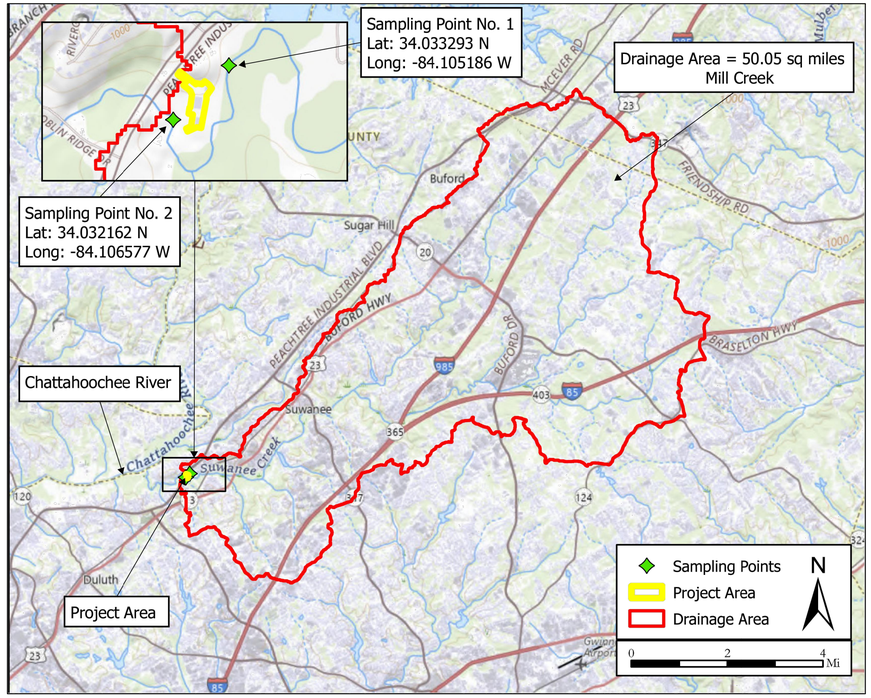
SIGNATURE: _____ DATE: _____

SOIL TYPES ON SITE

Cfs - Chewacla silt loam, 0 to 2 percent slopes, frequently flooded
MiF2 - Madison sandy clay loam, 15 to 45 percent slopes, eroded

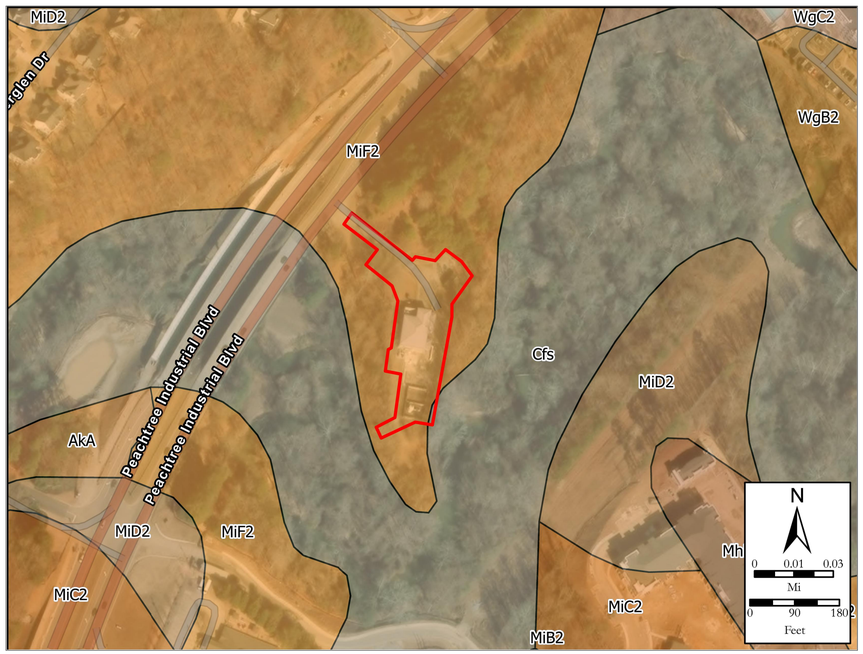
SOIL TYPES SHOWN ON FIGURE

AkA - Altavista fine sandy loam, 0 to 2 percent slopes
MhB2 - Madison gravelly sandy loam, 2 to 6 percent slopes, eroded
MiB2 - Madison sandy clay loam, 2 to 6 percent slopes, eroded
MiC2 - Madison sandy clay loam, 6 to 10 percent slopes, moderately eroded
MiD2 - Madison sandy clay loam, 10 to 15 percent slopes, moderately eroded
WgB2 - Wickham sandy loam, 2 to 6 percent slopes
WgC2 - Wickham sandy loam, 6 to 10 percent slopes



NPDES BOUNDARY

NOT TO SCALE



SOILS MAP

NOT TO SCALE

ISSUED FOR BID

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 3/30/2025

GEORGIA REGISTERED No. PE048682 PROFESSIONAL ENGINEER JOHN PHILLIP SCHNEIDER

10/21/2025

FREESE NICHOLS
2180 Satellite Boulevard
Suite 235
Duluth, Georgia 30097
Phone - (470)-645-3092
Web - www.freese.com

GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES

SUWANEE CREEK DIVERSION PUMP STATION

EROSION AND SEDIMENT CONTROL

NOTES & NPDES DETAILS

NO.	ISSUE	BY	DATE
0	ISSUED FOR BID	JPS	10/22/2025

VERIFY SCALE Bar Scale is one inch on original drawing. if not one inch on this sheet, adjust scale.

0 1"

F&N JOB NO. GWR24074
DATE 10/22/2025
DESIGNED JPS
DRAWN SEL
CHECKED JPS
APPROVED JPS
FILE NAME ESC-ALL-DT-DETL01.dwg

SHEET ES-3
SEQ. 14 OF 129

ACAD Rel: 24.2s (LMS Tech)
Filename: N:\WTU\Drawings\ESC-ALL-DT-DETL01.dwg
Last Saved: 9/8/2025 11:47 AM Saved By: 08448

Plot Date: 10/21/2025 11:13 AM Plot By: 08407 Filename: N:\WTU\Drawings\ESC-ALL-DT-DETL01.dwg

EROSION, SEDIMENTATION & POLLUTION CONTROL PLAN CHECKLIST
STAND ALONE CONSTRUCTION PROJECTS GAR100001

SWCD: Region 2; Gwinnett County SWCD

Project Name: Suwanee Creek Diversion Pump Station Expansion **Address:** 1758 Peachtree Industrial Blvd. Suwanee, GA 30024

Local Issuing Authority: Gwinnett County Department of Water Resources **Date on Plans:** October 2025

Name & Email of person filling out checklist: John Schneider (john.schneider@freese.com)

TO BE SHOWN ON ES&PC PLAN

Plan Page #	Included Y/N		
ES-4	Y	1	The applicable Erosion, Sedimentation and Pollution Control Plan Checklist established by the Commission as of January 1 of the year in which the land-disturbing activity was permitted. The completed Checklist must be submitted with the ES&PC Plan or the Plan will not be reviewed. **Permit IV.D.1. pg 27**
ES-1	Y	2	Level II certification number issued by the Commission, signature and seal of the certified design professional. Signature, seal and Level II number must be on each sheet pertaining to ES&PC Plan or the Plan will not be reviewed. The Level II certification must be issued to the Design Professional, **after completion of a GSWCC approved course**, and whose signature and seal are on the Plan.
ES-1	Y	3	Limits of disturbance shall be **less than** 50 acres at any one time without prior written authorization from the GAEPD District Office. If GAEPD approves the request to disturb 50 acres or more at any one time, the Plan must include the GAEPD approval letter and completed Appendix 1 of this checklist with at least 4 of the chosen BMPs. * A copy of the written approval by GAEPD must be attached to the Plan for the Plan to be reviewed. **Permit IV.D.3. pg 28**
ES-1	Y	4	The name and phone number of the 24-hour contact responsible for erosion, sedimentation and pollution controls.
ES-1	Y	5	Provide the name, address, email address, and phone number of Primary Permittee.
ES-1	Y	6	Note total and disturbed acreages of the project or phase under construction.
ES-5	Y	7	Provide the GPS location of the construction exit for the site. Give the Latitude and Longitude in decimal degrees.
ALL	Y	8	Initial date of the Plan and the dates of any revisions made to the Plan including the entity who requested the revisions.
ES-1	Y	9	Descriptions of the nature of construction activity and existing site conditions.
ES-3	Y	10	Provide vicinity map showing site's relation to surrounding areas. Include designation of specific phase, if necessary.
ES-1	Y	11	Identify the project receiving waters and describe all sensitive adjacent areas including streams, lakes, residential areas, wetlands, marshlands, etc. which may be affected.
ES-1	Y	12	Design professional's certification statement and signature that the site was visited prior to development of the ES&PC Plan as stated on **Part IV page 20** of the permit.
ES-1	Y	13	Design professional's certification statement and signature that the Permittee's ES&PC Plan provides for an appropriate and comprehensive system of BMPs and sampling to meet permit requirements as stated on **Part IV page 20** of the permit. *
ES-1	Y	14	Clearly note the statement that "The design professional who prepared the ES&PC Plan is to inspect **and certify** the installation of the initial sediment storage requirements and perimeter control BMPs within 7 days after installation." *
ES-1	Y	15	Clearly note the statement that "Non-exempt activities shall not be conducted within the 25 or 50-foot undisturbed stream buffers as measured from the point of wrested vegetation or within 25-feet of the coastal marshland buffer as measured from the Jurisdictional Determination Line without first acquiring the necessary variances and permits."
ES-1	Y	16	Provide a description of any buffer encroachments and indicate whether a buffer variance is required.
ES-1	Y	17	Clearly note the statement that "Amendments/revisions to the ES&PC Plan which have a significant effect on BMPs with a hydraulic component must be certified by the design professional." *
ES-1	Y	18	Clearly note the statement that "Waste materials shall not be discharged to waters of the State, except as authorized by a Section 404 permit." *
ES-1	Y	19	Clearly note statement that "The escape of sediment from the site shall be prevented by the installation of erosion and sediment control measures and practices prior to land disturbing activities."
ES-1	Y	20	Clearly note statement that "Erosion control measures will be maintained at all times. If full implementation of the approved Plan does not provide for effective erosion control, additional erosion and sediment control measures shall be implemented to control or treat the sediment source."
ES-1	Y	21	Clearly note the statement "Any disturbed area left exposed for a period greater than 14 days shall be stabilized with mulch or temporary seeding."
N/A	N/A	22	Any construction activity which discharges storm water into a Biota Impaired Stream Segment, or within 1 linear mile upstream of and within the same watershed as any portion of a Biota Impaired Stream Segment, must comply with **Part III.C.** of the permit. Include the completed Appendix 1 of this checklist with at least 4 of the chosen BMPs that will be used for those areas of the site which discharge to the Impaired Stream Segment. *
N/A	N/A	23	If a TMDL Implementation Plan for sediment has been finalized for the Biota Impaired Stream Segment (identified in Item 22 above) at least six months prior to submittal of NOI, the ES&PC Plan must address any site-specific conditions or requirements included in the TMDL Implementation Plan. *
ES-2	Y	24	BMPs for concrete washdown of tools, concrete mixer chutes, hoppers and the rear of the vehicles. Include statement that washout of the drum at the construction site is prohibited. *
ES-2	Y	25	Provide BMPs for the remediation of all petroleum spills and leaks.
ALL	Y	26	Description of the measures that will be installed during the construction process to control pollutants in storm water that will occur after construction operations have been completed. *
ES-2	Y	27	Description of practices to provide cover for building materials and building products on site. *
ES-2	Y	28	Description of the practices that will be used to reduce the pollutants in storm water discharges. *
ES-3	Y	29	Description and chart or timeline of the intended sequence of major activities which disturb soils for the major portions of the site (i.e., initial perimeter and sediment storage BMPs, clearing and grubbing activities, excavation activities, utility activities, grading, infrastructure, temporary and final stabilization).
ES-2	Y	30	Provide complete requirements of Inspections and record keeping by the Primary Permittee. *
ES-2	Y	31	Provide complete requirements of Sampling Frequency and Reporting of sampling results. *
ES-2	Y	32	Provide complete details for Retention of Records as per **Part IV.F.** of the permit. *
ES-2	Y	33	Description of analytical methods to be used to collect and analyze the samples from each location. *
ES-2	Y	34	Appendix B rationale for NTU values at all outfall sampling points where applicable. *
ES-3	Y	35	Delineate all sampling locations on **all phases of** the Plan, and perennial and intermittent streams and other water bodies into which storm water is discharged. *
ALL	Y	36	A description of appropriate controls and measures that will be implemented at the construction site including: (1) initial sediment storage requirements and perimeter control BMPs, (2) intermediate grading and drainage BMPs, and (3) final BMPs. For construction sites where there will be no mass grading and the initial sediment storage requirements and initial perimeter control BMPs, intermediate grading and drainage BMPs, and final BMPs are the same, the Plan may combine all BMPs into a single phase plan. *
ALL	Y	37	Graphic scale and North arrow.
ALL	Y	38	Existing and proposed contour lines with contour lines drawn at an interval in accordance with the following:

Map Scale	Ground Slope	Contour Intervals, ft.
1 inch = 100ft or larger scale	Flat 0 - 2% Rolling 2 - 8% Steep 8% +	0.5 or 1 1 or 2 2, 5 or 10

N/A	N/A	39	Use of Alternative BMPs whose performance has been documented to be equivalent to or superior to conventional BMPs as certified by a Design Professional (unless disapproved by GAEPD or the Georgia Soil and Water Conservation Commission). Refer to the Alternative BMP Guidance Document found at www.gaswcc.georgia.gov.
N/A	N/A	40	Use of Alternative BMP for application to the Equivalent BMP List. Refer to Appendix A-2 of the Manual for Erosion & Sediment Control in Georgia 2016 Edition. *
N/A	N/A	41	Delineation of the applicable 25-foot or 50-foot undisturbed buffers adjacent to State Waters and any additional buffers as required by the Local Issuing Authority. Clearly note and delineate all areas of impact.
ES-1	Y	42	Delineation of all State Waters and wetlands located on or within 200 feet of the project site.
ES-3	Y	43	Delineation and acreage of contributing drainage basins on the project site.
N/A	N/A	44	Provide hydrology study and maps of drainage basins for both the pre- and post-developed conditions. *
N/A	N/A	45	Estimate of the runoff coefficient or peak discharge flow of the site prior to and after construction activities are completed. **For solar farm projects, post-construction impervious area shall be calculated as 70% of total solar panel square footage.**
N/A	N/A	46	Storm-drain pipe and weir velocities with appropriate outlet protection to accommodate discharges without erosion. Identify/Delineate at all storm water discharge points.
ES-3	Y	47	Soil series for the project site and their delineation.
ES-5/ES-6	Y	48	The limits of disturbance for each phase of construction.
N/A	N/A	49	Provide a minimum of 67 cubic yards of sediment storage per acre drained using a temporary sediment basin, retrofitted detention pond, and/or excavated inlet sediment traps for each common drainage location. Sediment storage volume must be in place prior to and during all land disturbance activities until final stabilization of the site has been achieved. A written justification explaining the decision to use equivalent controls when a sediment basin is not attainable must be included in the Plan for each common drainage location in which a sediment basin is not provided. A written justification as to why 67 cubic yards of storage is not attainable must also be given. Worksheets from the Manual must be included for structural BMPs and all calculations used by the design professional to obtain the required sediment storage when using equivalent controls. When discharging from sediment basins and impoundments, Permittees are required to utilize outlet structures that withdraw water from the surface, unless infeasible. If outlet structures that withdraw water from the surface are not feasible, a written justification explaining this decision must be included in the Plan.
ES-5/ES-6	Y	50	Location of Best Management Practices that are consistent with, and no less stringent than, the Manual for Erosion and Sediment Control in Georgia. Use uniform coding symbols from the Manual Chapter 6, with legend.
ES-7	Y	51	Provide detailed drawings for all structural practices. Specifications must, at a minimum, meet the guidelines set forth in the Manual for Erosion and Sediment Control in Georgia.
ES-3	Y	52	Provide vegetative plan, noting all temporary and permanent vegetative practices. Include species, planting dates and seeding, fertilizer, lime and mulching rates. Vegetative plan shall be site specific for appropriate time of year that seeding will take place and for the appropriate geographic region of Georgia.

* **If using this checklist for a project that is less than 1 acre and not part of a common development but within 200 ft of a perennial stream, the * checklist items would be N/A.**

Effective January 1, 2025

ISSUED FOR BID

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2025

GEORGIA REGISTERED No. PE048682 PROFESSIONAL ENGINEER JOHN PHILLIP SCHNEIDER
10/21/2025

FREESE NICHOLS
2180 Satellite Boulevard
Suite 235
Duluth, Georgia 30097
Phone - (470)-645-3092
Web - www.freese.com

GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES
SUWANEE CREEK DIVERSION PUMP STATION
EROSION AND SEDIMENT CONTROL
EROSION CONTROL CHECKLIST

FAN JOB NO.	DATE	BY	NO.	ISSUE	DATE	CHECKED	APPROVED
GWR24074	10/22/2025	JPS	0	ISSUED FOR BID	10/22/2025	JPS	JPS
DESIGNED JPS					FILE NAME ESC-ALL-DT-DETL01.dwg		
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VERIFY SCALE Bar Scale is one inch on original drawing. If not one inch on this sheet, adjust scale. 1 0

SHEET ES-4
SEQ. 15 OF 129

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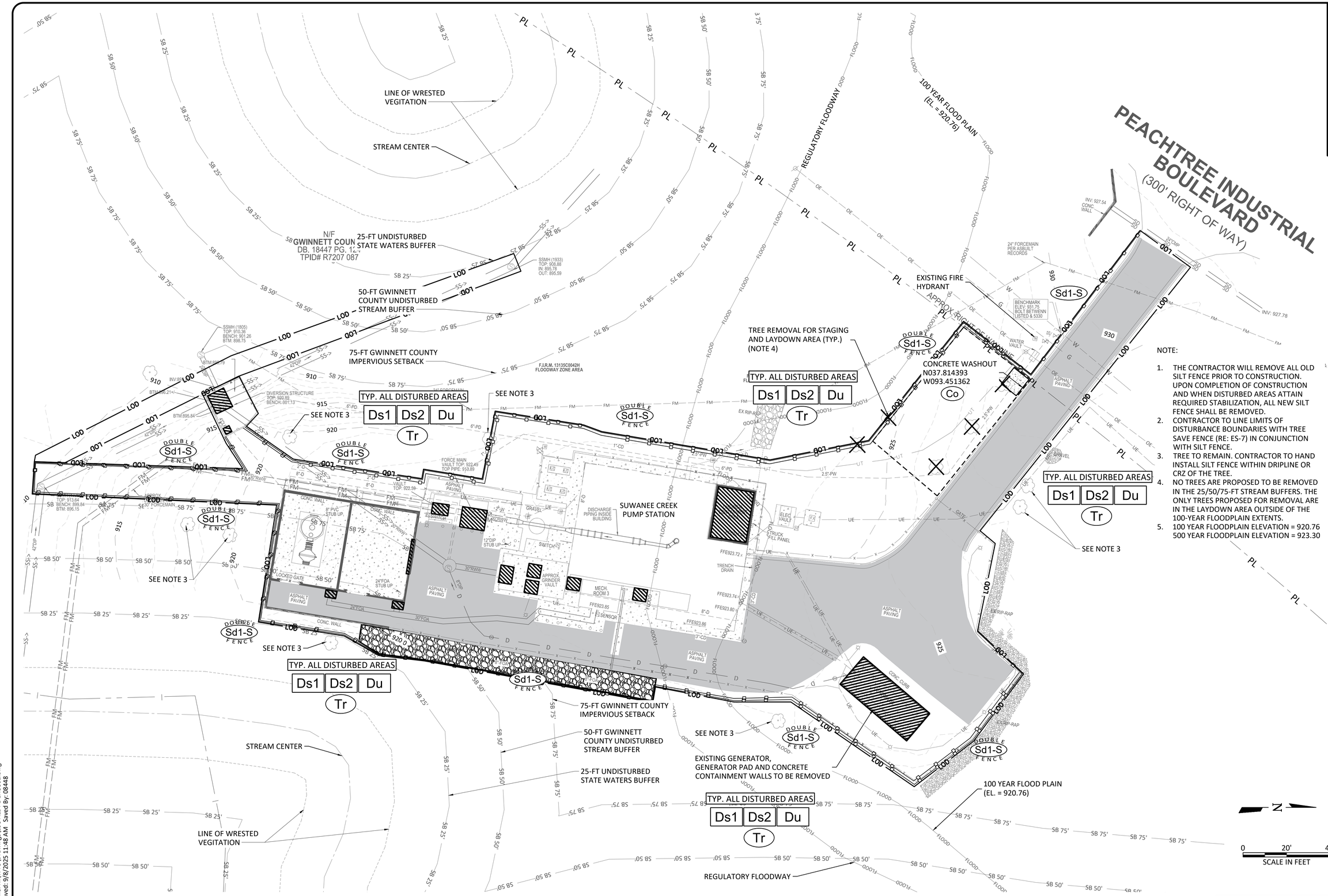

ISSUED FOR BID

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 3/31/2025

GEORGIA REGISTERED No. PE045682 PROFESSIONAL ENGINEER JOHN PHILLIP SCHNEIDER

10/21/2025

FREESE NICHOLS
2180 Satellite Boulevard
Suite 235
Duluth, Georgia 30097
Phone - (470)-645-3092
Web - www.freese.com

GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES
SUWANEE CREEK DIVERSION PUMP STATION
EROSION AND SEDIMENT CONTROL
PHASE I & II

F&N JOB NO.	GWR24074			
DATE	10/22/2025			
DESIGNED	JPS			
DRAWN	SEL			
CHECKED	JPS			
APPROVED	JPS			

NO.	ISSUE	BY	DATE
0	ISSUED FOR BID	JPS	10/22/2025

FILE NAME ESC-ALL-PL-EROS01.dwg

VERIFY SCALE Bar Scale is one inch on original drawing. If not one inch on this sheet, adjust scale.
0 1"

SHEET ES-5
SEQ. 16 OF 129

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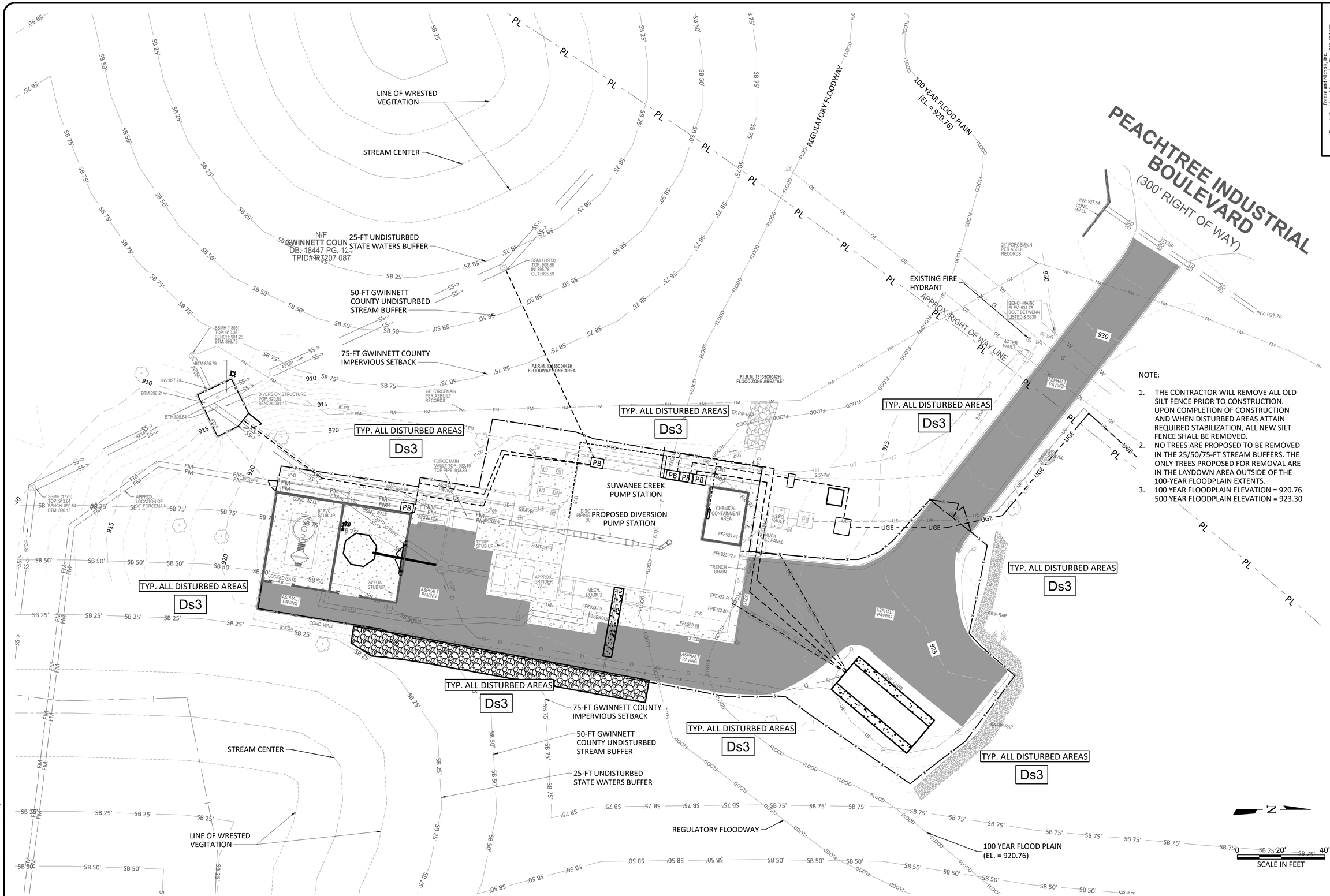

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 3/31/2025

GEORGIA REGISTERED No. PE048682 PROFESSIONAL ENGINEER JOHN PHILLIP SCHNEIDER

10/21/2025

FREESE NICHOLS
2180 Satellite Boulevard
Suite 235
Duluth, Georgia 30097
Phone - (470)-645-3092
Web - www.freese.com

GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES

SUWANEE CREEK DIVERSION PUMP STATION

EROSION AND SEDIMENT CONTROL

PHASE III

NO.	ISSUE	BY	DATE
0	ISSUED FOR BID	JPS	10/22/2025

F&N JOB NO. GWR24074
DATE 10/22/2025
DESIGNED JPS
DRAWN SEL
CHECKED JPS
APPROVED JPS
FILE NAME ES-ALL-PL-EROS02.dwg

VERIFY SCALE Bar Scale is one inch on original drawing. If not one inch on this sheet, adjust scale.
0 1"

SHEET ES-6
SEQ. 17 OF 129

ISSUED FOR BID

ACAD Rel: 24.2s (LMS Tech)
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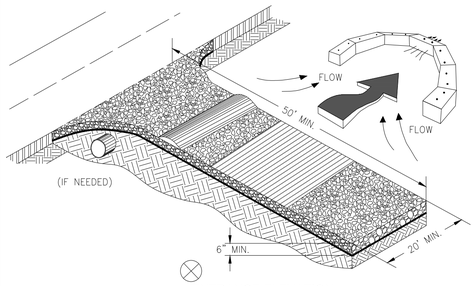
Last Saved: 9/9/2025 8:41 AM Saved By: 08448

Plot Date: 10/21/2025 11:14 AM Plot By: 08407 Filename: N:\WTU\Drawings\ES-ALL-PL-EROS02.dwg

Co CRUSHED STONE CONSTRUCTION EXIT

EXIT DIAGRAM

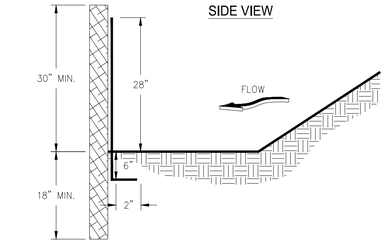


ENTRANCE ELEVATION

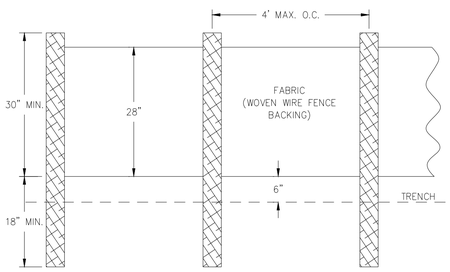
NOTES:
1. AVOID LOCATING ON STEEP SLOPES OR AT CURVES ON PUBLIC ROADS.
2. REMOVE ALL VEGETATION AND OTHER UNSUITABLE MATERIAL FROM THE FOUNDATION AREA, GRADE, AND CROWN FOR POSITIVE DRAINAGE.
3. AGGREGATE SIZE SHALL BE IN ACCORDANCE WITH NATIONAL STONE ASSOCIATION R-2 (1.5"-3.5" STONE).
4. GRAVEL PAD SHALL HAVE A MINIMUM THICKNESS OF 6".
5. PAD WIDTH SHALL BE EQUAL FULL WIDTH AT ALL POINTS OF VEHICULAR EGRESS, BUT NO LESS THAN 20'.
6. A DIVERSION RIDGE SHOULD BE CONSTRUCTED WHEN GRADE TOWARD PAVED AREA IS GREATER THAN 2%.
7. INSTALL PIPE UNDER THE ENTRANCE IF NEEDED TO MAINTAIN DRAINAGE DITCHES.
8. WHEN WASHING IS REQUIRED, IT SHOULD BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN (DIVERT ALL SURFACE RUNOFF AND DRAINAGE FROM THE ENTRANCE TO A SEDIMENT CONTROL DEVICE).
9. WASHRACKS AND/OR TIRE WASHERS MAY BE REQUIRED DEPENDING ON SCALE AND CIRCUMSTANCE. IF NECESSARY, WASHRACK DESIGN MAY CONSIST OF ANY MATERIAL SUITABLE FOR TRUCK TRAFFIC THAT REMOVE MUD AND DIRT.
10. MAINTAIN AREA IN A WAY THAT PREVENTS TRACKING AND/OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAYS. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.

Sd1-S SILT FENCE - TYPE SENSITIVE

SIDE VIEW



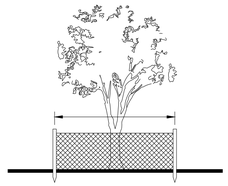
FRONT VIEW

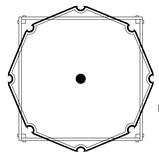


NOTES:
1. USE STEEL OR WOOD POSTS OR AS SPECIFIED BY THE EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN.
2. HEIGHT (28") IS TO BE SHOWN ON THE EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN.

Tr TREE PROTECTION

CHAIN LINK FENCE DETAIL

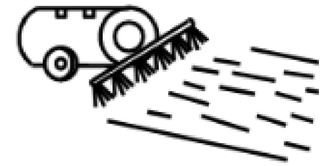




BARRIER CONSTRUCTED TO PROTECT TREE TRUNK, CROWN, AND ROOT SYSTEM FROM INJURY. BARRIERS SHALL BE LOCATED AT THE LIMITS OF THE TREE'S CRITICAL ROOT ZONE (A RADIUS OF ONE AND A HALF FEET PER INCH OF THE TREE'S DIAMETER AT BREAST HEIGHT). BARRIER SHALL BE KEPT IN GOOD CONDITION FOR THE DURATION OF THE PROJECT AND IS TO REMAIN IN PLACE UNTIL THE NOTICE OF TERMINATION.

FOR ADDED PROTECTION

- PROVIDE 4" DEEP ORGANIC MULCH OVER ANY UNPROTECTED ROOT ZONE.
- PROVIDE TEMPORARY IRRIGATION WHERE PRACTICAL AND FEASIBLE.



NOTES

1. THIS BMP IS PUT IN PLACE TO PREVENT SURFACE AND AIR MOVEMENT OF DUST FROM EXPOSED SOIL SURFACES AND TO REDUCE THE PRESENCE OF AIRBORNE SUBSTANCES THAT MAY BE HARMFUL OR INJURIOUS TO HUMAN HEALTH, WELFARE, OR SAFETY, OR TO ANIMALS OR PLANT LIFE.
2. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING THE PUBLIC STREETS ADJACENT TO THE CONSTRUCTION SITE IN A CLEAN AND SAFE CONDITION. ANY DIRT, MUD, GRAVEL OR ANY OTHER MATERIAL TRACKED OR SPILLED ONTO THE PUBLIC STREET SHALL BE REMOVED AND SWEPT PROMPTLY AND IN NO CASE LEFT TO REMAIN AFTER THE END OF THE WORKING DAY.
3. THE CONTRACTOR SHALL USE EITHER A VACUUM SWEEPER OR A STANDARD SWEEPER, AFTERWARD REMOVING ALL MATERIAL FROM THE GUTTER LINE.
4. CONTRACTOR TO USE WATER IRRIGATION FOR DUST CONTROL BY SPRINKLING WITH WATER UNTIL THE SURFACE IS WET AND ABLE TO BE SWEEPED/VACCUUMED. REPEAT AS NEEDED.

Du

"Du" DUST CONTROL

SCALE: N.T.S.

ISSUED FOR BID

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 3/31/2027

GEORGIA
REGISTERED
No. PE045682
PROFESSIONAL
ENGINEER
JOHN PHILLIP SCHNEIDER

10/21/2025

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Suite 235
Duluth, Georgia 30097
Phone - (470)-645-3092
Web - www.freese.com

GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES

SUWANEE CREEK DIVERSION PUMP STATION

EROSION AND SEDIMENT CONTROL

E&SC DETAILS I

F&N JOB NO.	GWR24074
DATE	10/22/2025
DESIGNED	JPS
DRAWN	SEL
CHECKED	JPS
APPROVED	JPS
FILE NAME	ES-ALL-DT-DETL01.dwg

NO.	ISSUE	BY	DATE
0	ISSUED FOR BID	JPS	10/22/2025

VERIFY SCALE Bar Scale is one inch on original drawing. If not one inch on this sheet, adjust scale.

0 1"

SHEET ES-7

SEQ. 18 OF 129

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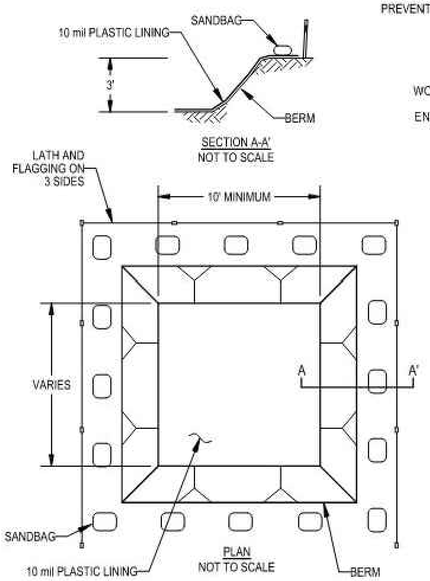
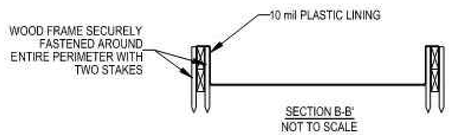
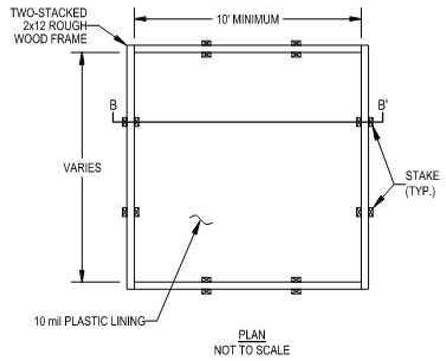
MATERIALS USED TO CONSTRUCT TEMPORARY CONCRETE WASHOUT FACILITIES SHALL BE REMOVED FROM THE SITE OF THE WORK AND DISPOSED OF OR RECYCLED.

HOLES, DEPRESSIONS OR OTHER GROUND DISTURBANCES CAUSED BY THE REMOVAL OF THE TEMPORARY CONCRETE WASHOUT FACILITIES SHALL BE BACKFILLED, REPAIRED, AND STABILIZED TO PREVENT EROSION.

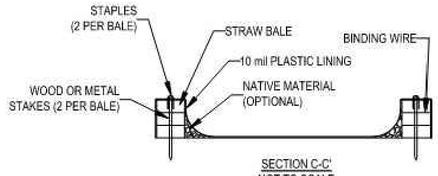


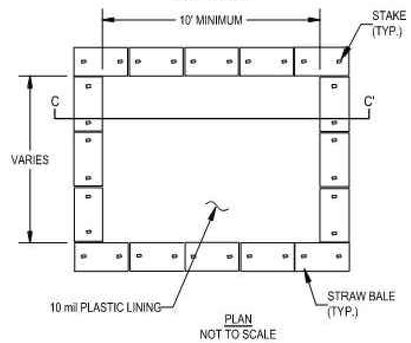
TYPE "BELOW GRADE"





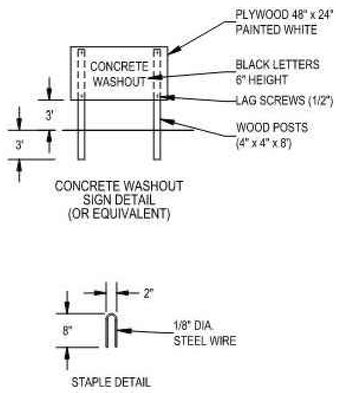
TYPE "ABOVE GRADE" WITH WOOD PLANKS





TYPE "ABOVE GRADE" WITH STRAW BALES

NOTES:
1. ACTUAL LAYOUT DETERMINED IN THE FIELD.
2. THE CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 30' OF THE TEMPORARY CONCRETE WASHOUT FACILITY.



NOTES:
1. ACTUAL LAYOUT DETERMINED IN THE FIELD.
2. THE CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 30' OF THE TEMPORARY CONCRETE WASHOUT FACILITY

1 / ES-8 CONCRETE WASHOUT
N.T.S.

ISSUED FOR BID

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 3/31/2025

GEORGIA REGISTERED No. PE048682 PROFESSIONAL ENGINEER JOHN PHILLIP SCHNEIDER
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GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES
SUWANEE CREEK DIVERSION PUMP STATION
EROSION AND SEDIMENT CONTROL
E&SC DETAILS II

NO.	ISSUE	BY	DATE
0	ISSUED FOR BID	JPS	10/22/2025

VERIFY SCALE Bar Scale is one inch on original drawing. If not one inch on this sheet, adjust scale.
0 1"

F&N JOB NO. GWR24074
DATE 10/22/2025
DESIGNED JPS
DRAWN SEL
CHECKED JPS
APPROVED JPS
FILE NAME ES-ALL-DT-DETL01.dwg

SHEET ES-8
SEQ. 19 OF 129

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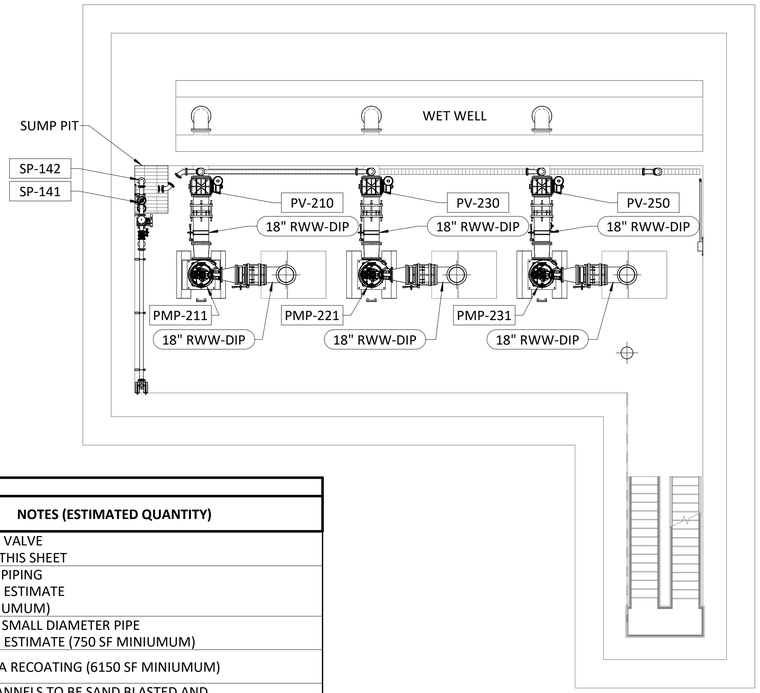
PROPOSED VALVE SCHEDULE

ID	SIZE	TYPE	SERVICE	P&ID NO.	SPEC SECTION	NOTES
PGV-210	18"	PLUG	WASTEWATER	I-6	33 34 16	PLUG VALVE UPSTREAM OF PMP-211
PGV-211	4"	PLUG	WASTEWATER	I-6	34 34 16	PLUG VALVE ON PUMP 211 DRAIN LINE
PGV-220	16"	PLUG	WASTEWATER	I-6	33 34 16	PLUG VALVE DOWNSTREAM OF PMP-212
PGV-221	4"	PLUG	WASTEWATER	I-6	34 34 16	PLUG VALVE ON PUMP 221 DRAIN LINE
PGV-230	18"	PLUG	WASTEWATER	I-6	33 34 16	PLUG VALVE UPSTREAM OF PMP-221
PGV-231	4"	PLUG	WASTEWATER	I-6	34 34 16	PLUG VALVE ON PUMP 231 DRAIN LINE
PGV-240	16"	PLUG	WASTEWATER	I-6	33 34 16	PLUG VALVE DOWNSTREAM OF PMP-222
PGV-250	18"	PLUG	WASTEWATER	I-6	33 34 16	PLUG VALVE UPSTREAM OF PMP-231
PGV-260	16"	PLUG	WASTEWATER	I-6	33 34 16	PLUG VALVE DOWNSTREAM OF PMP-232
PGV-201	12"	PLUG	WASTEWATER	I-6	33 34 16	PLUG VALVE ON DISCHARGE HEADER
PGV-202	12"	PLUG	WASTEWATER	I-6	33 34 16	PLUG VALVE ON DISCHARGE HEADER
PGV-141	4"	PLUG	WASTEWATER	I-6	33 34 16	PLUG VALVE ON SP-141 DISCHARGE HEADER
PGV-142	4"	PLUG	WASTEWATER	I-6	33 34 16	PLUG VALVE ON SP-142 DISCHARGE HEADER
CHV-220	16"	CHECK	WASTEWATER	I-6	33 34 16	CHECK VALVE DOWNSTREAM OF PMP-212
CHV-240	16"	CHECK	WASTEWATER	I-6	33 34 16	CHECK VALVE DOWNSTREAM OF PMP-222
CHV-260	16"	CHECK	WASTEWATER	I-6	33 34 16	CHECK VALVE DOWNSTREAM OF PMP-232
CHV-141	4"	CHECK	WASTEWATER	I-6	33 34 16	CHECK VALVE DOWNSTREAM OF SP-141
CHV-142	4"	CHECK	WASTEWATER	I-6	33 34 16	CHECK VALVE DOWNSTREAM OF SP-142
CAV-141	1"	CAV	WASTEWATER	I-6	33 34 16	COMBINATION AIR VALVE DOWNSTREAM OF SP-141
CAV-142	1"	CAV	WASTEWATER	I-6	33 34 16	COMBINATION AIR VALVE DOWNSTREAM OF SP-142
CAV-220	3"	CAV	WASTEWATER	I-6	33 34 16	COMBINATION AIR VALVE DOWNSTREAM OF PMP-212
CAV-240	3"	CAV	WASTEWATER	I-6	33 34 16	COMBINATION AIR VALVE DOWNSTREAM OF PMP-222
CAV-260	3"	CAV	WASTEWATER	I-6	33 34 16	COMBINATION AIR VALVE DOWNSTREAM OF PMP-232
CAV-270	4"	CAV	WASTEWATER	I-6	33 34 16	COMBINATION AIR VALVE ON DISCHARGE HEADER

NOTE:
1. THE INCLUDED VALVE, EQUIPMENT, AND PAINTING/COATING SCHEDULES ARE NOT EXHAUSTIVE LISTS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY AND QUANTIFY ALL VALVES, EQUIPMENT, SIZE, SPECIFICATION REQUIREMENTS, COATING TYPES, ETC.
2. CORROSIVE ENVIRONMENT FOR PIPING, PROCESS MECHANICAL EQUIPMENT, APPURTENANCES, AND RELATED EQUIPMENT IS DEFINED AS ANY LOCATION THAT HAS OR MAY HAVE H2S GAS, CORROSIVE CHEMICALS, OR OTHER CORROSIVE PROPERTIES PRESENT. THESE AREAS INCLUDE, BUT ARE NOT LIMITED TO THE WETWELL, GRINDER AREA, LOWER PUMP ROOM, UPPER PUMP ROOM, MAIN ENTRANCE ROOM, DIVERSION BOX, CHEMICAL FEED AREAS, AND ODOR CONTROL ROOM.



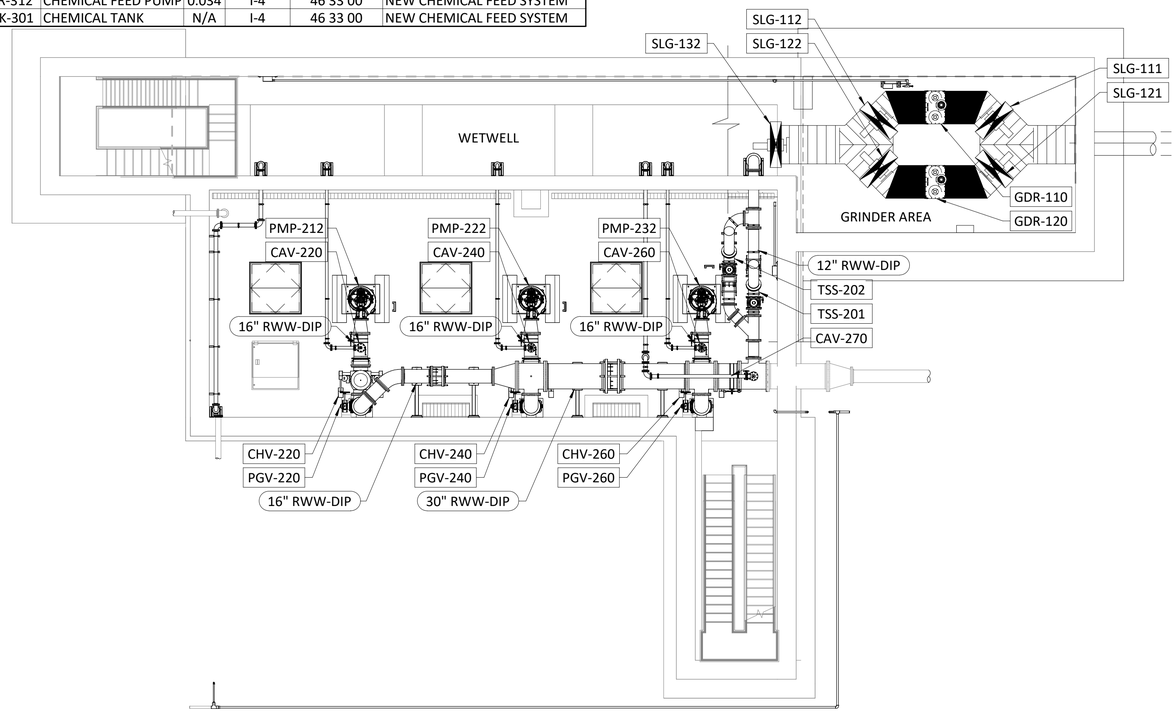
1 LOWER PUMP ROOM
1/8" = 1'-0"

PROPOSED EQUIPMENT SCHEDULE

ID	DESCRIPTION	HP	P&ID NO.	SPEC SECTION	NOTES
GDR-110	CHANNEL GRINDER	10	I-5	46 24 33	REPLACE EXISTING WITH NEW
GDR-120	CHANNEL GRINDER	10	I-5	46 24 33	REPLACE EXISTING WITH NEW
SLG-111	SLIDE GATE	3	I-5	40 05 50	GDR-2110 INFLUENT GATE
SLG-112	SLIDE GATE	3	I-5	40 05 50	GDR-2110 EFFLUENT GATE
SLG-121	SLIDE GATE	3	I-5	40 05 50	GDR-2120 INFLUENT GATE
SLG-122	SLIDE GATE	3	I-5	40 05 50	GDR-2120 EFFLUENT GATE
SLG-132	SLIDE GATE	3	I-5	40 05 50	GRINDER AREA EFFLUENT GATE
SLG-103	SLIDE GATE	3	I-5	40 05 50	DIVERSION BOX INFLUENT GATE
PMP-211	STAGE 1 PUMP	385	I-6	43 21 39	REPLACE EXISTING WITH NEW
PMP-212	STAGE 2 PUMP	385	I-6	43 21 39	REPLACE EXISTING WITH NEW
PMP-221	STAGE 1 PUMP	385	I-6	43 21 39	REPLACE EXISTING WITH NEW
PMP-222	STAGE 2 PUMP	385	I-6	43 21 39	REPLACE EXISTING WITH NEW
PMP-231	STAGE 1 PUMP	385	I-6	43 21 39	REPLACE EXISTING WITH NEW
PMP-232	STAGE 2 PUMP	385	I-6	43 21 39	REPLACE EXISTING WITH NEW
SP-141	SUMP PUMP 1	2.7	I-6	44 42 60	REPLACE EXISTING WITH NEW
SP-142	SUMP PUMP 2	2.7	I-6	44 42 60	REPLACE EXISTING WITH NEW
OCD-1110	COILING DOOR	0.5	N/A	08 33 23	REPLACE EXISTING WITH NEW
CFR-311	CHEMICAL FEED PUMP	0.034	I-4	46 33 00	NEW CHEMICAL FEED SYSTEM
CFR-312	CHEMICAL FEED PUMP	0.034	I-4	46 33 00	NEW CHEMICAL FEED SYSTEM
TNK-301	CHEMICAL TANK	N/A	I-4	46 33 00	NEW CHEMICAL FEED SYSTEM

PROPOSED PAINTING/COATING SCHEDULE

ID	DESCRIPTION	SPEC SECTION	NOTES (ESTIMATED QUANTITY)
1	NEW PROCESS PIPING VALVES	09 91 00	SEE PROPOSED VALVE SCHEDULE ON THIS SHEET
2	NEW PROCESS PIPING (10"-30" DIAMETER)	09 91 00	NEW PROCESS PIPING SURFACE AREA ESTIMATE (1200 SF MINIUMUM)
3	NEW EXPOSED POTABLE, NON-POTABLE, SUMP AND DRAIN PIPING (1"-8" DIAMETER)	09 91 00	NEW EXPOSED SMALL DIAMETER PIPE SURFACE AREA ESTIMATE (750 SF MINIUMUM)
4	WETWELL, GRINDER AREA, DIVERSION STRUCTURE, SUMP PIT, INFLUENT MANHOLE	09 97 23	HIGH RISK AREA RECOATING (6150 SF MINIUMUM)
5	EXPOSED FLOOR DRAIN, CONCRETE CHANNELS, AND NEW FLOOR DRAIN PIPING	03 60 00, 09 91 00, 09 97 23	CONCRETE CHANNELS TO BE SAND BLASTED AND RECOATED; NEW FLOOR DRAIN PIPING TO BE COATED
6	CONTRACTOR TO APPLY A NEW VINYL ESTER GEL COAT WITH UV INHIBITORS TO ALL EXISTING INDOOR FRP DUCT IN THE WETWELL AND GRINDER AREAS	N/A	GEL COAT SHALL BE ASHLAND HETRON-SERIES WITH UV INHIBITORS OR OWNER-APPROVED EQUAL. PIGMENT SHALL BE SELECTED TO MATCH EXISTING



2 UPPER PUMP ROOM
1/8" = 1'-0"

0 4' 8' 16'
1/8"=1'-0"

3 MAIN ENTRANCE ROOM
1/8" = 1'-0"

ISSUED FOR BID

Plot Date: 10/21/2025 10:56:03 AM

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2026

GEORGIA REGISTERED No. PE051805 PROFESSIONAL ENGINEER JOSHUA CADE STARLING
10/22/2025

FREESE NICHOLS
2180 Satellite Boulevard
Suite 235
Duluth, GA 30097
Phone - (470) 645-3092
Web - www.freese.com

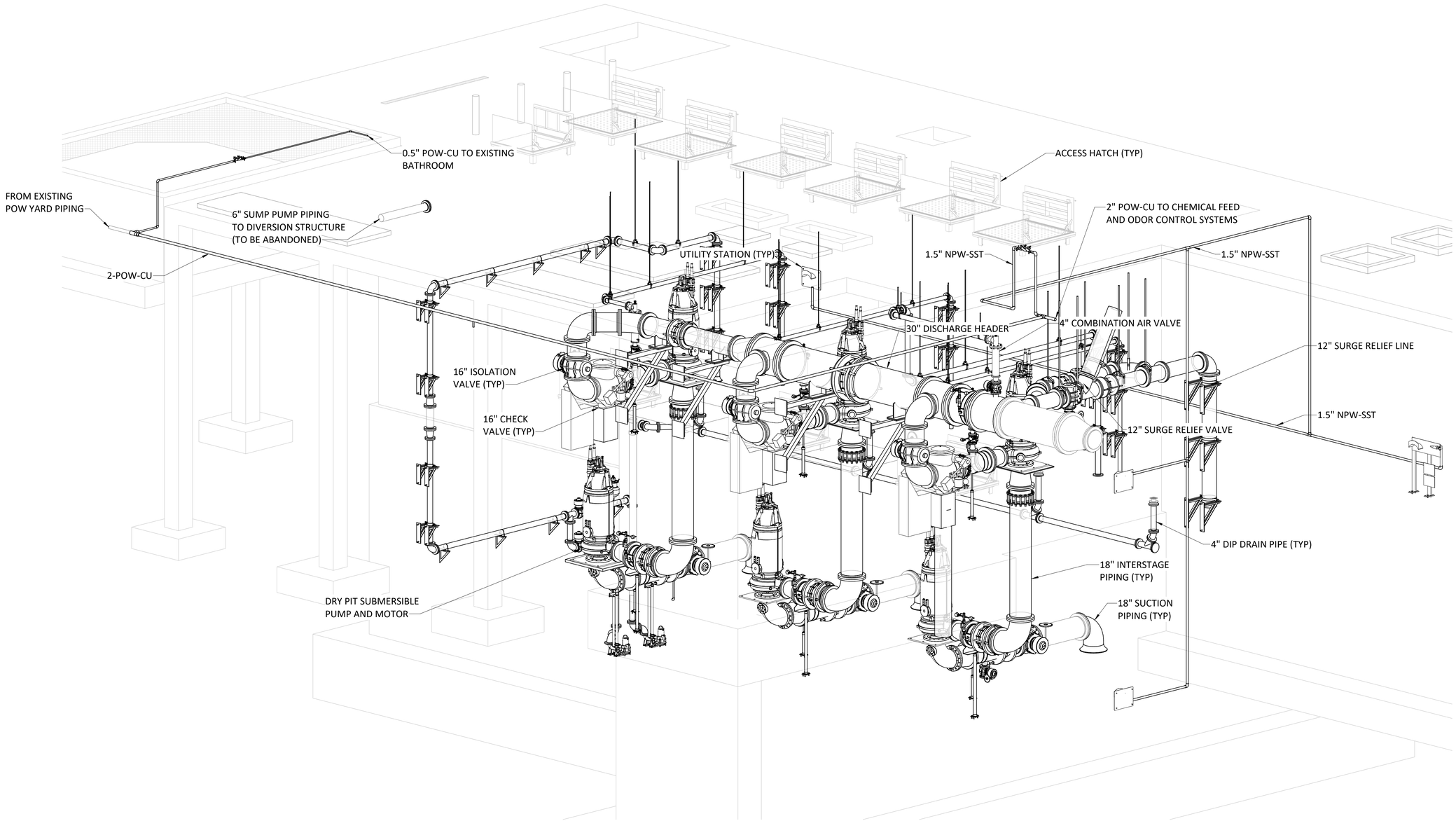
GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES
SUWANEE CREEK DIVERSION PUMP STATION
PROCESS MECHANICAL
PUMP STATION OVERALL PLANS

F&N JOB NO.	GWR24074
DATE	10/22/25
DESIGNED	JCS
DRAWN	SDR
CHECKED	
APPROVED	JCS
FILE NAME	WW-GWR24074-EX-R23.RVT

NO.	ISSUE	DATE	BY
0	ISSUED FOR BID	10/22/2025	JCS

VERIFY SCALE Bar is one inch on original drawing. If not one inch on this sheet, adjust scale. 1 0

SHEET PM-1
SEQ. 20 OF 129



1 PUMP STATION ISOMETRIC

NOTE:

1. ISOMETRIC DRAWING FOR ILLUSTRATION PURPOSES ONLY. REFER TO SUBSEQUENT PLAN SHEETS FOR CONSTRUCTION DETAILS.

0 4' 8'
3/16"=1'-0"

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Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2026

GEORGIA REGISTERED No. PE051805 PROFESSIONAL ENGINEER JOSHUA CADE STARLING

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FREESE NICHOLS
2180 Satellite Boulevard
Suite 235
Duluth, GA 30097
Phone - (470) 645-3092
Web - www.freese.com

GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES
SUWANEE CREEK DIVERSION PUMP STATION

PROCESS MECHANICAL

PUMP STATION ISOMETRIC

F&N JOB NO.	GWR24074
DATE	10/22/25
DESIGNED	JCS
DRAWN	SDR
CHECKED	
APPROVED	JCS
FILE NAME	WW-GWR24074-EX-R23.RVT

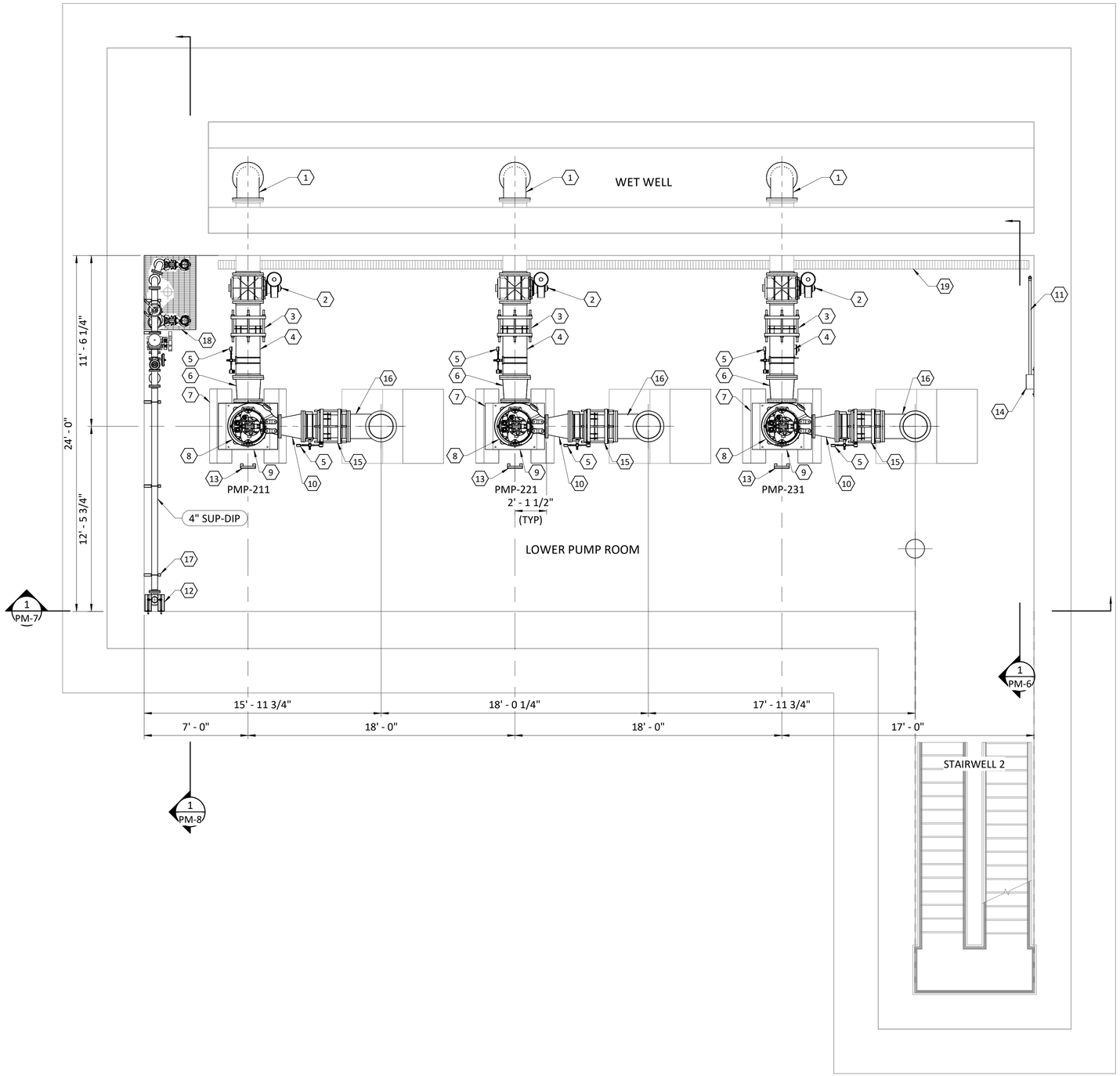
NO.	ISSUE	DATE	BY
0	ISSUED FOR BID	10/22/2025	JCS

VERIFY SCALE Bar is one inch on original drawing. If not one inch on this sheet, adjust scale. 0 1

SHEET PM-2

SEQ. 21 OF 129

Plot Date: 10/21/2025 10:56:15 AM



1 LOWER PUMP ROOM PLAN
1/4" = 1'-0"

GENERAL NOTES:

1. ALL PIPE, VALVES, AND APPURTENANCES SHALL BE RATED FOR 250 PSI OPERATING PRESSURE. FLANGES SHALL BE RATED THE SAME PRESSURE AND SHALL MATCH THAT OF THE APPURTENANCE. BOLT PATTERN (FLANGE CLASS) SHALL BE COORDINATED BY THE CONTRACTOR TO ENSURE PROPER CONNECTION.
2. PIPE INSIDE PUMP ROOM SHALL BE COATED PER SPECIFICATION 09 91 00 - PAINTING AND LINED PER RESPECTIVE PIPE SPECIFICATION.
3. CONTRACTOR SHALL VERIFY FINAL DIMENSIONS BASED ON THE ACTUAL EQUIPMENT TO BE INSTALLED. CONTRACTOR TO HOLD PUMP CENTERLINE DIMENSION AS SHOWN ON PM-7 AND ADJUST PUMP CONCRETE PAD AND SUPPORT PAD AS NECESSARY.
4. CONTRACTOR SHALL KEEP AREA BELOW ACCESS HATCH CLEAR FOR EQUIPMENT STAGING FOR INSTALLATION, AND REMOVAL.
5. COORDINATE FINAL LOCATION OF ALL INSTRUMENT TAPS AND CLEARLY INDICATE ON THE PIPE SHOP DRAWINGS.
6. THIS SHEET DOES NOT SHOW ALL EXISTING PIPING, APPURTENANCES, AND UTILITY STATIONS THAT ARE REMAINING IN PLACE.
7. EXPOSED FLOOR DRAIN CONCRETE CHANNELS TO BE SAND BLASTED AND RECOATED PER SPECIFICATION 03 60 00 AND 09 91 00 AND 09 97 23. EXISTING FLOOR DRAIN PIPING TO BE DEMOLISHED AND REPLACED WITH DUCTILE IRON PIPING AT THE SIZES INDICATED, AND COATED PER SPECIFICATION SECTION 09 91 00.
8. SMALL DIAMETER PIPING (2-INCH AND LESS) FOR POTABLE AND NON-POTABLE WATER SERVICE TO BE COPPER PIPE IN NON-CORROSIVE AREAS (INCLUDING YARD PIPING) AND STAINLESS STEEL PIPE IN CORROSIVE ENVIRONMENTS (AS DEFINED IN NOTE 2, PM-1).
9. CONTRACTOR TO APPLY A NEW VINYL ESTER GEL COAT WITH UV INHIBITORS TO ALL EXISTING INDOOR FRP DUCT IN THE WETWELL AND GRINDER AREAS. GEL COAT SHALL BE ASHLAND HETRON-SERIES WITH UV INHIBITORS OR OWNER-APPROVED EQUAL. PIGMENT SHALL BE SELECTED TO MATCH EXISTING.
10. PLUG VALVES TO BE INSTALLED WITH SHAFT HORIZONTAL AND PLUG ROTATING TO TOP OF PIPE WHEN OPEN.
11. ALL PIPE BENDS ARE SHORT RADIUS UNLESS OTHERWISE NOTED.

NOTES BY SYMBOL: "⟨#⟩"

1 18" DIP PUMP INTAKE
2 18" PLUG VALVE FLG
3 18" DISMANTLING JOINT
4 18" DIP SUCTION PIPE
5 PRESSURE GAUGE AND TRANSMITTER (RE: DETAIL 4/PM-22)
6 18"X16" ECCENTRIC REDUCER DIP FLG
7 CONCRETE EQUIPMENT PAD, SEE STRUCTURAL
8 DRY PIT SUBMERSIBLE PUMP AND MOTOR
9 PUMP BASE PLATE
10 18"X12" CONCENTRIC REDUCER DIP FLG
11 1.5" NPW-SST
12 PIPE SUPPORT (TYP) (RE: DETAIL 341, TYPE V) WITH RISER CLAMP
13 ELECTRICAL PANEL, SEE ELECTRICAL
14 UTILITY STATION (RE: DETAIL 362, TYPE C)
15 18" DISMANTLING JOINT
16 18" 90 DEGREE LONG RADIUS BEND DIP FLG
17 PIPE SUPPORT (TYP) (RE: DETAIL 340, TYPE S)
18 EXISTING SUMP PIT. REPLACE GRATING
19 EXISTING TRENCH DRAIN GRATING (TO BE REPLACED)

0 2' 4' 8'
1/4"=1'-0"

ISSUED FOR BID

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2026

GEORGIA REGISTERED No. PE051805 PROFESSIONAL ENGINEER JOSHUA CADE STARLING
10/22/2025

FREESE NICHOLS
2180 Satellite Boulevard
Suite 235
Duluth, GA 30097
Phone - (470) 645-3092
Web - www.freese.com

GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES
SUWANEE CREEK DIVERSION PUMP STATION
PROCESS MECHANICAL
LOWER PUMP ROOM PLAN

F&N JOB NO.	GWR24074
DATE	10/22/25
DESIGNED	JCS
DRAWN	SDR
CHECKED	
APPROVED	JCS

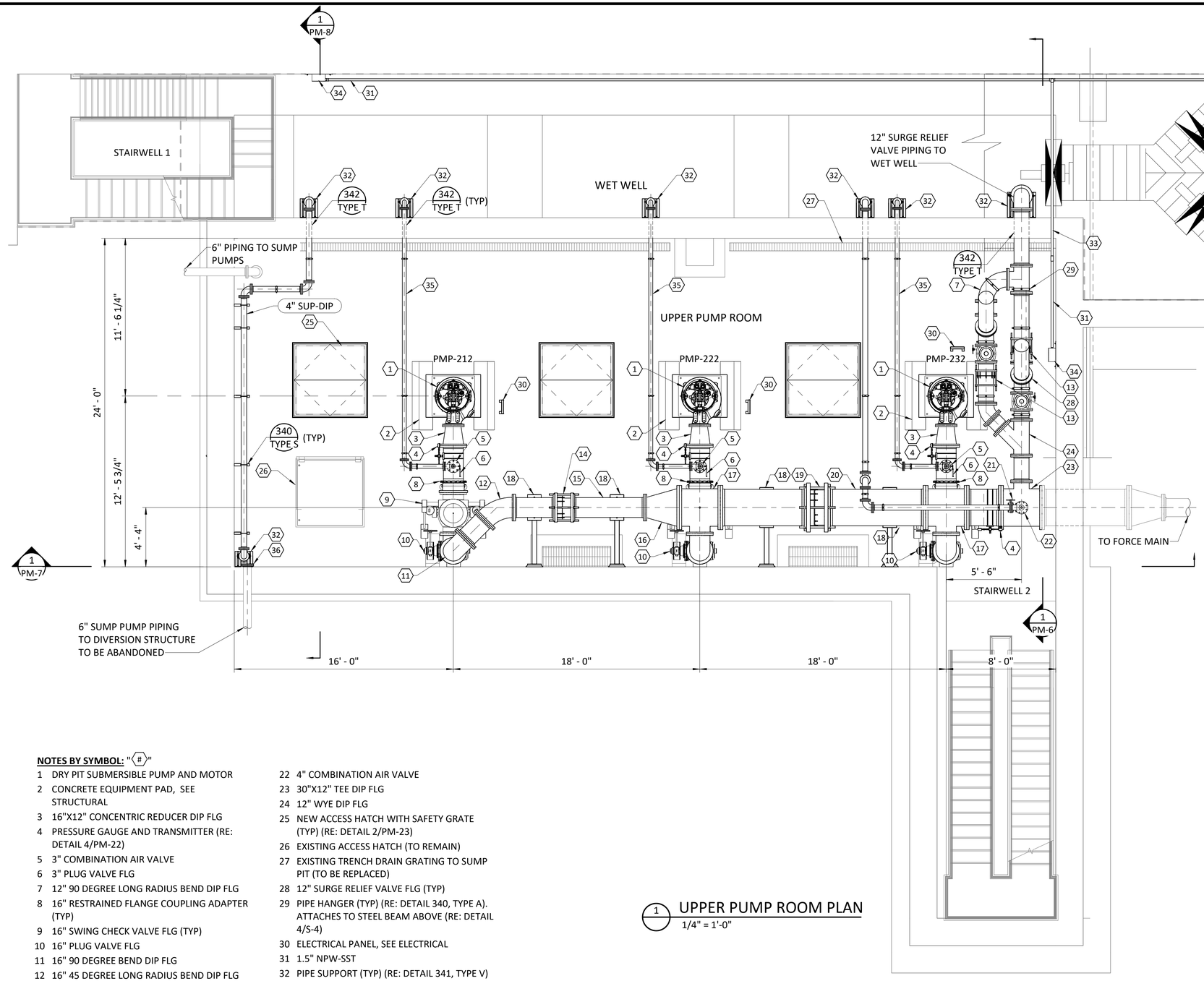
NO.	ISSUE	BY	DATE
0	ISSUED FOR BID	JCS	10/22/2025

FILE NAME WW-GWR24074-EX-R23.RVT

VERIFY SCALE Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.
0 1"

SHEET PM-3
SEQ. 22 OF 129

Plot Date: 10/21/2025 10:56:21 AM



NOTES BY SYMBOL: "⟨#⟩"

1 DRY PIT SUBMERSIBLE PUMP AND MOTOR
2 CONCRETE EQUIPMENT PAD, SEE STRUCTURAL
3 16"X12" CONCENTRIC REDUCER DIP FLG
4 PRESSURE GAUGE AND TRANSMITTER (RE: DETAIL 4/PM-22)
5 3" COMBINATION AIR VALVE
6 3" PLUG VALVE FLG
7 12" 90 DEGREE LONG RADIUS BEND DIP FLG
8 16" RESTRAINED FLANGE COUPLING ADAPTER (TYP)
9 16" SWING CHECK VALVE FLG (TYP)
10 16" PLUG VALVE FLG
11 16" 90 DEGREE BEND DIP FLG
12 16" 45 DEGREE LONG RADIUS BEND DIP FLG
13 12" DISMANTLING JOINT
14 16" DISMANTLING JOINT
15 16" DIP DISCHARGE HEADER
16 30"X16" CONCENTRIC REDUCER DIP FLG
17 30"X16" TEE DIP FLG
18 PIPE SUPPORT (RE: DETAIL 1/PM-22)
19 30" DISMANTLING JOINT
20 30" DI DISCHARGE HEADER
21 4" PLUG VALVE FLG
22 4" COMBINATION AIR VALVE
23 30"X12" TEE DIP FLG
24 12" WYE DIP FLG
25 NEW ACCESS HATCH WITH SAFETY GRATE (TYP) (RE: DETAIL 2/PM-23)
26 EXISTING ACCESS HATCH (TO REMAIN)
27 EXISTING TRENCH DRAIN GRATING TO SUMP PIT (TO BE REPLACED)
28 12" SURGE RELIEF VALVE FLG (TYP)
29 PIPE HANGER (TYP) (RE: DETAIL 340, TYPE A). ATTACHES TO STEEL BEAM ABOVE (RE: DETAIL 4/S-4)
30 ELECTRICAL PANEL, SEE ELECTRICAL
31 1.5" NPW-SST
32 PIPE SUPPORT (TYP) (RE: DETAIL 341, TYPE V) WITH RISER CLAMP
33 PIPE PENETRATION (RE: DETAIL 342 TYPE C)
34 UTILITY STATION (RE: DETAIL 362 TYPE C)
35 3" DRP-SST (CAV DRAIN LINE)
36 6" DIP BLIND FLANGE

1 UPPER PUMP ROOM PLAN
1/4" = 1'-0"

GENERAL NOTES:

1. ALL PIPE, VALVES, AND APPURTENANCES SHALL BE RATED FOR 250 PSI OPERATING PRESSURE. FLANGES SHALL BE RATED THE SAME PRESSURE AND SHALL MATCH THAT OF THE APPURTENANCE. BOLT PATTERN (FLANGE CLASS) SHALL BE COORDINATED BY THE CONTRACTOR TO ENSURE PROPER CONNECTION.
2. PIPE INSIDE PUMP ROOM SHALL BE COATED PER SPECIFICATION 09 91 00 - PAINTING AND LINED PER THE RESPECTIVE PIPE SPECIFICATION.
3. CONTRACTOR SHALL VERIFY FINAL DIMENSIONS BASED ON THE ACTUAL EQUIPMENT TO BE INSTALLED. CONTRACTOR TO HOLD PUMP CENTERLINE DIMENSION AS SHOWN ON PM-7 AND ADJUST PUMP CONCRETE PAD AND SUPPORT PAD AS NECESSARY.
4. CONTRACTOR SHALL KEEP AREA BELOW ACCESS HATCH CLEAR FOR EQUIPMENT STAGING FOR INSTALLATION, AND REMOVAL.
5. COORDINATE FINAL LOCATION OF ALL INSTRUMENT TAPS AND CLEARLY INDICATE ON THE PIPE SHOP DRAWINGS.
6. THIS SHEET DOES NOT SHOW ALL EXISTING PIPING, APPURTENANCES, AND UTILITY STATIONS THAT ARE REMAINING IN PLACE.
7. EXPOSED FLOOR DRAIN CONCRETE CHANNELS TO BE SAND BLASTED AND RECOATED PER SPECIFICATION 03 60 00 AND 09 91 00 AND 09 97 23. EXISTING FLOOR DRAIN PIPING TO BE DEMOLISHED AND REPLACED WITH DUCTILE IRON PIPING AT THE SIZES INDICATED, AND COATED PER SPECIFICATION SECTION 09 91 00.
8. SMALL DIAMETER PIPING (2-INCH AND LESS) FOR POTABLE AND NON-POTABLE WATER SERVICE TO BE COPPER PIPE IN NON-CORROSIVE AREAS (INCLUDING YARD PIPING) AND STAINLESS STEEL PIPE IN CORROSIVE ENVIRONMENTS (AS DEFINED IN NOTE 2, PM-1).
9. CONTRACTOR TO APPLY A NEW VINYL ESTER GEL COAT WITH UV INHIBITORS TO ALL EXISTING INDOOR FRP DUCT IN THE WETWELL AND GRINDER AREAS. GEL COAT SHALL BE ASHLAND HETRON-SERIES WITH UV INHIBITORS OR OWNER-APPROVED EQUAL. PIGMENT SHALL BE SELECTED TO MATCH EXISTING.
10. ALL PIPE BENDS ARE SHORT RADIUS UNLESS OTHERWISE NOTED.

0 2' 4' 8'
1/4"=1'-0"

ISSUED FOR BID

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2026

GEORGIA REGISTERED No. PE051805 PROFESSIONAL ENGINEER JOSHUA CADE STARLING
10/22/2025

FREESE NICHOLS
2180 Satellite Boulevard
Suite 235
Duluth, GA 30097
Phone - (470) 645-3092
Web - www.freese.com

GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES
SUWANEE CREEK DIVERSION PUMP STATION
PROCESS MECHANICAL
UPPER PUMP ROOM PLAN

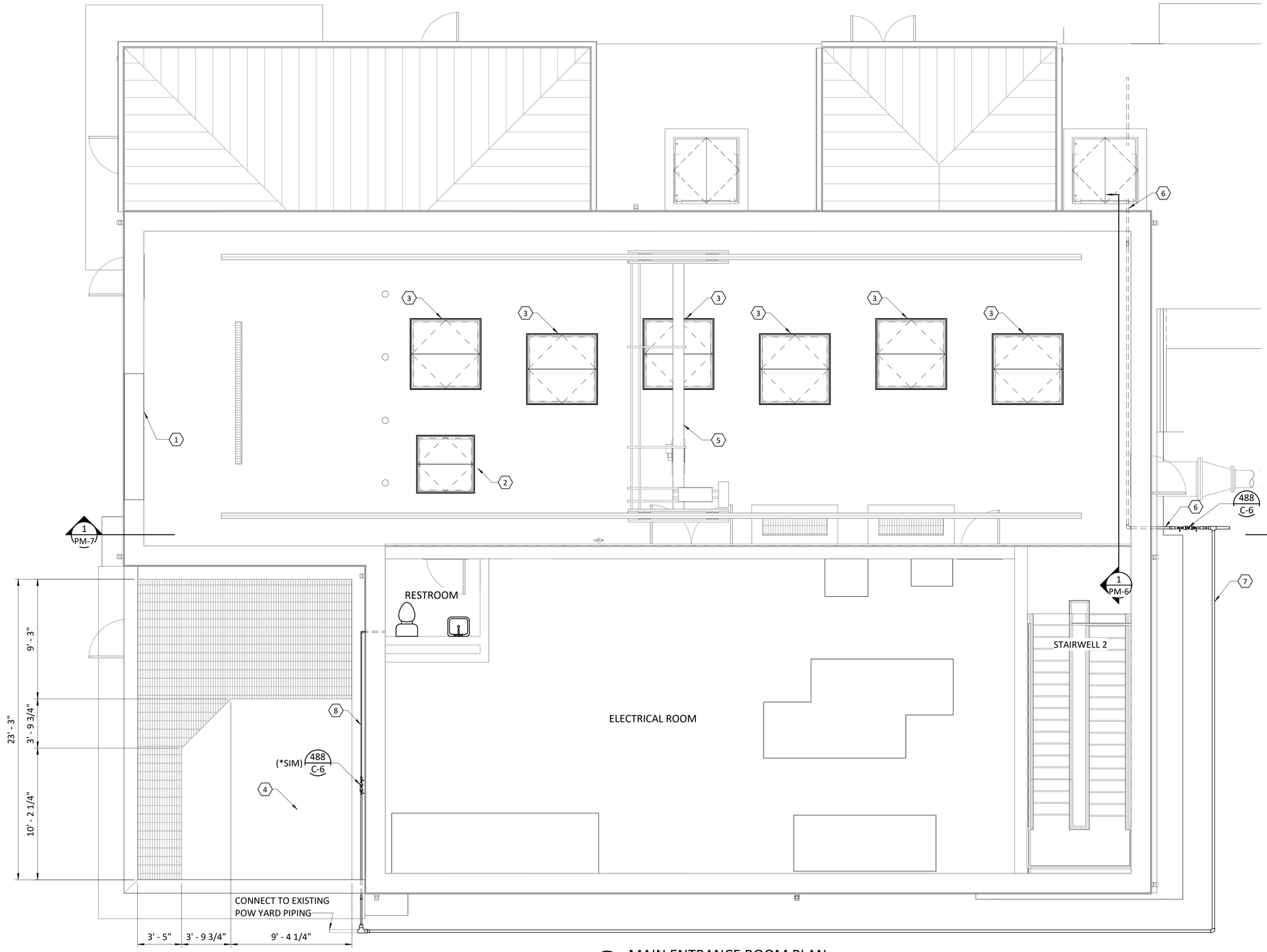
F&N JOB NO.	GWR24074
DATE	10/22/25
DESIGNED	JCS
DRAWN	SDR
CHECKED	
APPROVED	JCS
FILE NAME	WW-GWR24074-EX-R23.RVT

NO.	ISSUE	DATE	BY
0	ISSUED FOR BID	10/22/2025	JCS

VERIFY SCALE Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.
0 1"

SHEET PM-4
SEQ. 23 OF 129

Plot Date: 10/21/2025 10:56:32 AM



1 MAIN ENTRANCE ROOM PLAN
1/4" = 1'-0"

0 2' 4' 8'
1/4"=1'-0"

GENERAL NOTES:

1. AREA BELOW FRP GRATING IN EXISTING CHEMICAL FEED SYSTEM AREA TO BE GROUTED.
2. BRIDGE CRANE SUPPORTS TO BE MODIFIED TO ACCOMMODATE RATED 5-TON CAPACITY. REFER TO STRUCTURAL DRAWINGS FOR DETAILS.

NOTES BY SYMBOL: "(#)"

1 EXISTING OVERHEAD COILING DOOR (TO BE REPLACED)
2 EXISTING ACCESS HATCH (TO BE REPLACED WITH NEW HATCH WITH RIGID FALL PROTECTION) (RE: DETAIL 2/C-7)
3 ACCESS HATCH (RE: DETAIL 2/PM-23)
4 REFER TO DEMOLITION SHEETS FOR EXTENTS OF DEMOLITION OF EXISTING CHEMICAL FEED SYSTEM.
5 EXISTING BRIDGE CRANE (TO REMAIN, SUPPORT TO BE MODIFIED TO PS DESIGN STANDARD) (RE: SHEET S-5 FOR DETAILS)
6 1.5" NPW-SST
7 2" NPW-CU
8 0.5" POW-CU

ISSUED FOR BID

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2026

GEORGIA REGISTERED No. PE051805 PROFESSIONAL ENGINEER JOSHUA CADE STARLING
10/22/2025

FREESE AND NICHOLS
2180 Satellite Boulevard
Suite 235
Duluth, GA 30097
Phone - (470) 645-3092
Web - www.freese.com

GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES
SUWANEE CREEK DIVERSION PUMP STATION
PROCESS MECHANICAL
MAIN ENTRANCE ROOM PLAN

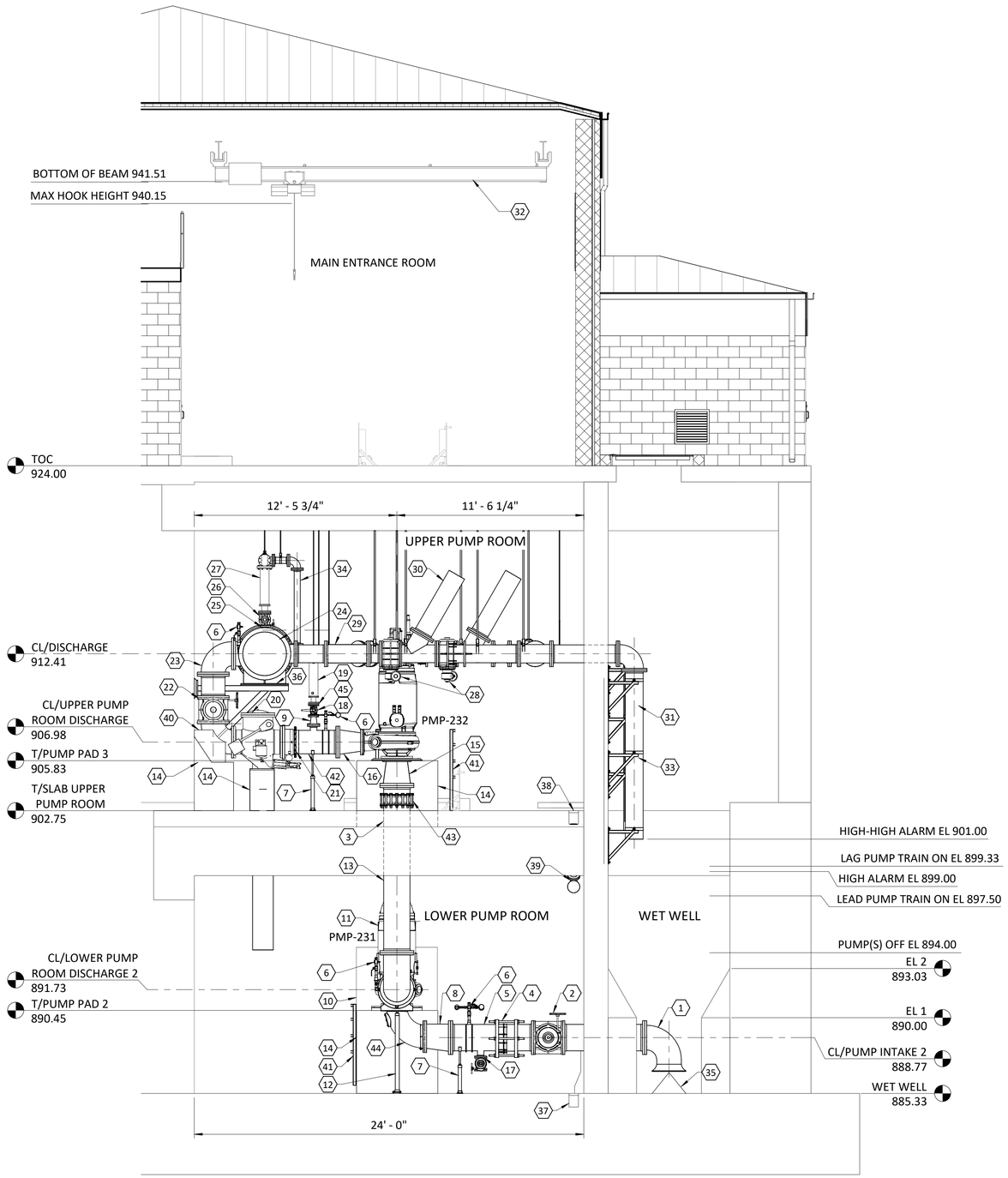
F&N JOB NO.	GWR24074
DATE	10/22/25
DESIGNED	JCS
DRAWN	SDR
CHECKED	
APPROVED	JCS
FILE NAME	WW-GWR24074-EX-R23.RVT

NO.	ISSUE	BY	DATE
0	ISSUED FOR BID	JCS	10/22/2025

Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.
VERIFY SCALE 0 1

SHEET PM-5
SEQ. 24 OF 129

Plot Date: 10/21/2025 10:56:34 AM



1 PUMP STATION SECTION I
PM-3 1/4" = 1'-0"

GENERAL NOTES:

1. CONTRACTOR TO VERIFY DIMENSIONS OF CONCRETE SUPPORTS WITH EQUIPMENT MANUFACTURER FINAL DIMENSIONS.
2. CONTRACTOR SHALL VERIFY FINAL DIMENSIONS WITH EQUIPMENT MANUFACTURERS. CONTRACTOR TO HOLD PUMP CENTERLINE DIMENSIONS AS SHOWN ON THIS SHEET AND ADJUST SUPPORTS, AND PIPING AS NEEDED.
3. ALL NOTES BY SYMBOL ASSOCIATED WITH THE ANNOTATED PUMP ASSEMBLY ARE TYPICAL FOR ALL THREE PUMP ASSEMBLIES.
4. EXPOSED FLOOR DRAIN CONCRETE CHANNELS TO BE SAND BLASTED AND RECOATED PER SPECIFICATIONS 09 91 00 AND 09 97 23. EXISTING FLOOR DRAIN PIPING TO BE DEMOLISHED AND REPLACED WITH DUCTILE IRON PIPING AT THE SIZES INDICATED, AND COATED PER SPECIFICATION SECTION 09 91 00.
5. ALL SMALL DIAMETER PIPING, EXCEPT THE ONES SHOWN IN DEMOLITION SHEETS TO BE REPLACED WITH STAINLESS STEEL PIPES.
6. CONTRACTOR TO APPLY A NEW VINYL ESTER GEL COAT WITH UV INHIBITORS TO ALL EXISTING INDOOR FRP DUCT IN THE WETWELL AND GRINDER AREAS. GEL COAT SHALL BE ASHLAND HETRON-SERIES WITH UV INHIBITORS OR OWNER APPROVED EQUAL. PIGMENT SHALL BE SELECTED TO MATCH EXISTING.
7. REFER TO SHEET E-7 FOR BUILDING CLASSIFICATION.
8. ALL PIPE BENDS ARE SHORT RADIUS UNLESS OTHERWISE NOTED.

NOTES BY SYMBOL: "⟨#⟩"

1 18" DI PUMP INTAKE
2 18" PLUG VALVE FLG
3 REFERENCE DETAIL 6 SHEET S2 (TYP OF 3)
4 18" DISMANTLING JOINT
5 18" DIP SUCTION PIPING
6 PRESSURE GAUGE AND TRANSMITTER (RE: DETAIL 4/PM-22)
7 ADJUSTABLE PIPE SUPPORTS (RE: DETAIL PS25C1)
8 18"X16" ECCENTRIC REDUCER DIP FLG
9 4"x3" FLGxFLG CONCENTRIC REDUCER
10 CONCRETE THRUST BLOCK. FRONT SIDE NOT SHOWN FOR CLARITY. SEE STRUCTURAL
11 DRY PIT SUBMERSIBLE PUMP AND MOTOR
12 ADJUSTABLE PIPE SUPPORT (RE: DETAIL 1/PM-20)
13 18" DIP INTERSTAGE DISCHARGE PIPING
14 CONCRETE EQUIPMENT PAD, SEE STRUCTURAL
15 18"X14" CONCENTRIC REDUCER DIP FLG (CONTRACTOR PROVIDED)
16 16"X12" CONCENTRIC REDUCER DIP FLG
17 4" FLANGED WELDED ON OUTLET, 4" PLUG VALVE WITH HAND LEVER, 4" BLIND FLANGE
18 3" PLUG VALVE FLG WITH HAND LEVER
19 3" COMBINATION AIR VALVE
20 16" SWING CHECK VALVE FLG
21 16" RESTRAINED FLANGE COUPLING ADAPTER (TYP)
22 16" PLUG VALVE FLG
23 16" 90 DEGREE BEND DIP FLG
24 30" DIP DISCHARGE HEADER
25 4" FLANGED WELDED ON RADIAL OUTLET
26 4" PLUG VALVE FLG
27 4" COMBINATION AIR VALVE
28 12" PLUG VALVE FLG
29 12" WYE DIP FLG
30 12" SURGE RELIEF VALVE FLG (TYP)
31 12" SURGE RELIEF VALVE PIPING TO WETWELL
32 EXISTING 5-TON BRIDGE CRANE (RE: STRUCTURAL SHEETS FOR SUPPORT IMPROVEMENTS)
33 PIPE SUPPORT (TYP) (RE: DETAIL 341, TYPE V) WITH RISER CLAMP
34 4" SST (CAV DRAIN LINE)
35 VORTEX SUPPRESSION FINS (REFERENCE DETAILS ON PM-24)
36 PIPE SUPPORT (RE: DETAIL 1/PM-22)
37 EXISTING TRENCH DRAIN GRATING TO SUMP PIT (TO BE REPLACED), SEE STRUCTURAL
38 EXISTING TRENCH DRAIN GRATING (TO BE REPLACED), SEE STRUCTURAL
39 EXISTING 4" DRP-PVC TO BE REMOVED AND PLACED WITH 4" DRP-DIP
40 DISCHARGE PIPE SUPPORT WITH RESTRAINT (RE: STRUCTURAL DETAILS)
41 ELECTRICAL PANEL, SEE ELECTRICAL
42 16" FLGxPE CUSTOM FITTING WITH 4" FLANGED WELDED ON OUTLET
43 18" RUBBER EXPANSION JOINT, WITH RESTRAIN RODS (PRELOADED) (TYP OF 3)
44 16"x14" REDUCING ELBOW FLGxFLG (MANUFACTURER PROVIDED)
45 DIELECTRIC INSULATION FLANGE KIT (TYP) (RE: DETAIL 3/PM-22)

0 2' 4' 8'
1/4"=1'-0"

ISSUED FOR BID

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Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2026

GEORGIA REGISTERED No. PE051805 PROFESSIONAL ENGINEER JOSHUA CADE STARLING
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GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES
SUWANEE CREEK DIVERSION PUMP STATION
PROCESS MECHANICAL
PUMP STATION SECTION I

F&N JOB NO.	GWR24074
DATE	10/22/25
DESIGNED	JCS
DRAWN	SDR
CHECKED	JCS
APPROVED	

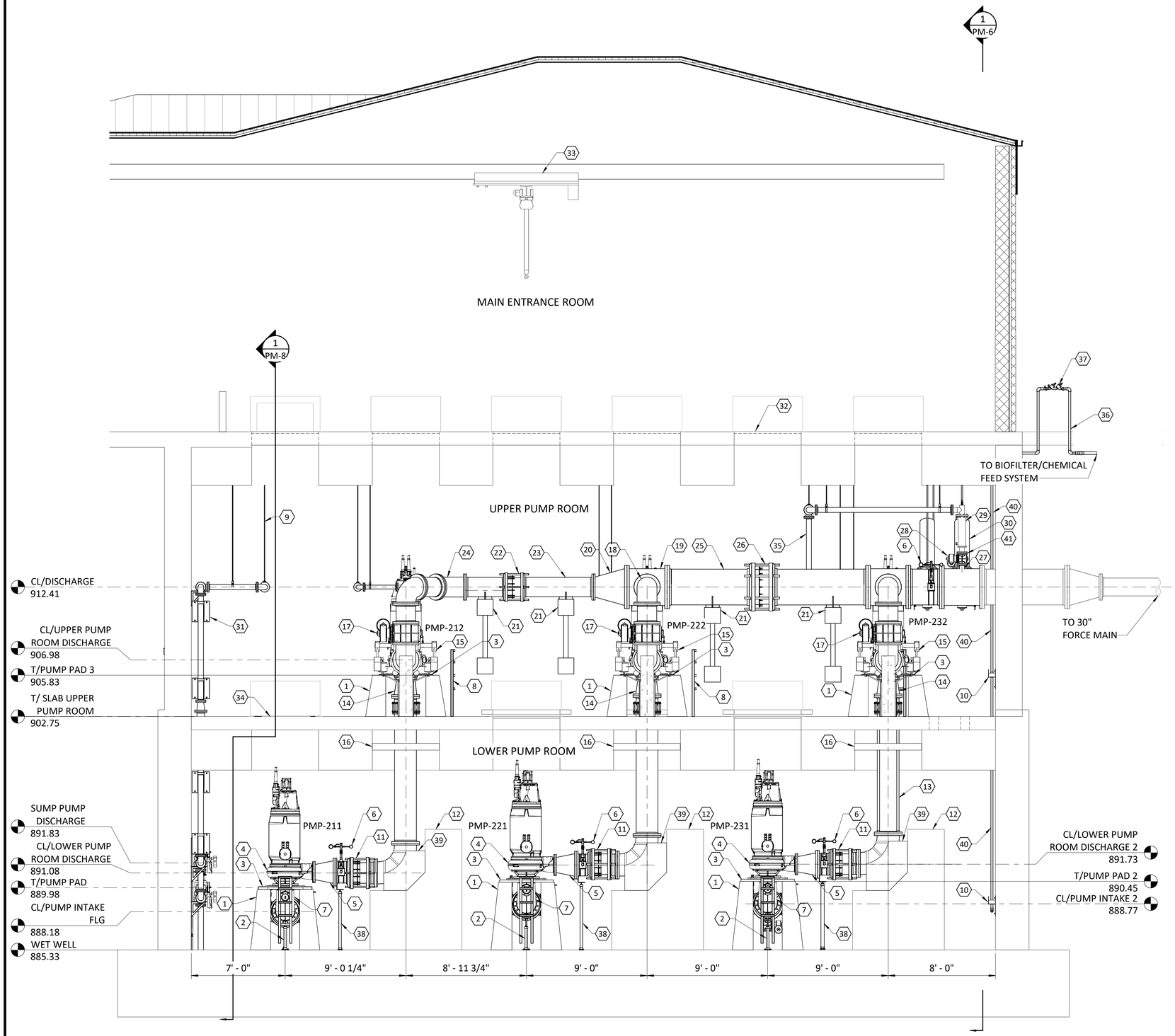
NO.	ISSUE	BY	DATE
0	ISSUED FOR BID	JCS	10/22/2025

Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.
VERIFY SCALE 0 1"

FILE NAME WW-GWR24074-EX-R23.RVT

SHEET PM-6
SEQ. 25 OF 129

Plot Date: 10/21/2025 10:56:42 AM



1 PM-3 PUMP STATION SECTION II
1/4" = 1'-0"

GENERAL NOTES:

1. CONTRACTOR TO VERIFY DIMENSIONS OF CONCRETE SUPPORTS WITH EQUIPMENT MANUFACTURER FINAL DIMENSIONS.
2. CONTRACTOR SHALL VERIFY FINAL DIMENSIONS WITH EQUIPMENT MANUFACTURERS. CONTRACTOR TO HOLD PUMP CENTERLINE DIMENSIONS AS SHOWN ON THIS SHEET AND ADJUST SUPPORTS, AND PIPING AS NEEDED.
3. ALL NOTES BY SYMBOL ASSOCIATED WITH THE ANNOTATED PUMP ASSEMBLY ARE TYPICAL FOR ALL THREE PUMP ASSEMBLIES.
4. EXPOSED FLOOR DRAIN PIPING TO BE REPLACED WITH NEW DI PIPING.
5. ALL SMALL DIAMETER PIPING, EXCEPT THE ONES SHOWN IN DEMOLITION SHEETS TO BE REPLACED.

NOTES BY SYMBOL: "(#)"

1 CONCRETE EQUIPMENT PAD. SEE STRUCTURAL
2 ADJUSTABLE PIPE SUPPORTS (RE: DETAIL PS25C1)
3 PUMP BASE PLATE (CONTRACTOR TO VERIFY EXACT DIMENSIONS)
4 DRY PIT SUBMERSIBLE PUMP AND MOTOR
5 12"X18" DI CONCENTRIC REDUCER FLG
6 PRESSURE GAUGE AND TRANSMITTER (RE: DETAIL 4/PM-22)
7 16"x14" REDUCING ELBOW FLGxFLG (TO BE PROVIDED BY PUMP MANUFACTURER)
8 ELECTRICAL PANEL, SEE ELECTRICAL
9 PIPE HANGER (TYP) (RE: DETAIL 340, TYPE A)
10 UTILITY STATION (RE: DETAIL 362 TYPE C)
11 18" DISMANTLING JOINT
12 CONCRETE THRUST BLOCK, SEE STRUCTURAL
13 18" DI INTERSTAGE DISCHARGE PIPING
14 18"X14" CONCENTRIC REDUCER DI FLG
15 16" SWING CHECK VALVE FLG
16 RE: DETAIL 6/S-2 AND DETAIL 2/S-3
17 16" PLUG VALVE FLG
18 16" 90 DEGREE BEND DI FLG
19 30"X16" TEE DI FLG
20 16"X30" CONCENTRIC REDUCER DI FLG
21 PIPE SUPPORT (RE: DETAIL 1/PM-22)
22 16" DISMANTLING JOINT (TYP)
23 16" DI DISCHARGE HEADER
24 16" 45 DEGREE BEND DI FLG
25 30" DI DISCHARGE HEADER
26 30" RESTRAINED DISMANTLING JOINT
27 4" FLANGED WELDED ON RADIAL OUTLET
28 4" PLUG VALVE FLG
29 4" COMBINATION AIR VALVE
30 12" SURGE RELIEF VALVE FLG
31 PIPE SUPPORT (TYP) (RE: DETAIL 341, TYPE V) WITH RISER CLAMP
32 ACCESS HATCH (TYP), SEE STRUCTURAL
33 EXISTING BRIDGE CRANE
34 EXISTING HATCH (TO REMAIN)
35 4" SST (CAV DRAIN LINE)
36 1.5" POW-CU
37 BACKFLOW PREVENTER (RE: DETAIL 488/C-6)
38 FLANGED PIPE SUPPORT (RE: DETAIL 1/PM-20)
39 DISCHARGE PIPE SUPPORT WITH RESTRAINT (RE: STRUCTURAL DETAILS)
40 1.5" NPW-SST
41 DIELECTRIC INSULATION FLANGE KIT (TYP) (RE: DETAIL 3/PM-22)

0 2' 4' 8'
1/4"=1'-0"

ISSUED FOR BID

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2026

GEORGIA REGISTERED No. PE051805 PROFESSIONAL ENGINEER JOSHUA CADE STARLING
10/22/2025

FREESE AND NICHOLS
2180 Satellite Boulevard
Suite 235
Duluth, GA 30097
Phone - (470) 645-3092
Web - www.freese.com

GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES
SUWANEE CREEK DIVERSION PUMP STATION
PROCESS MECHANICAL
PUMP STATION SECTION II

F&N JOB NO.	GWR24074
DATE	10/22/25
DESIGNED	JCS
DRAWN	SDR
CHECKED	
APPROVED	JCS

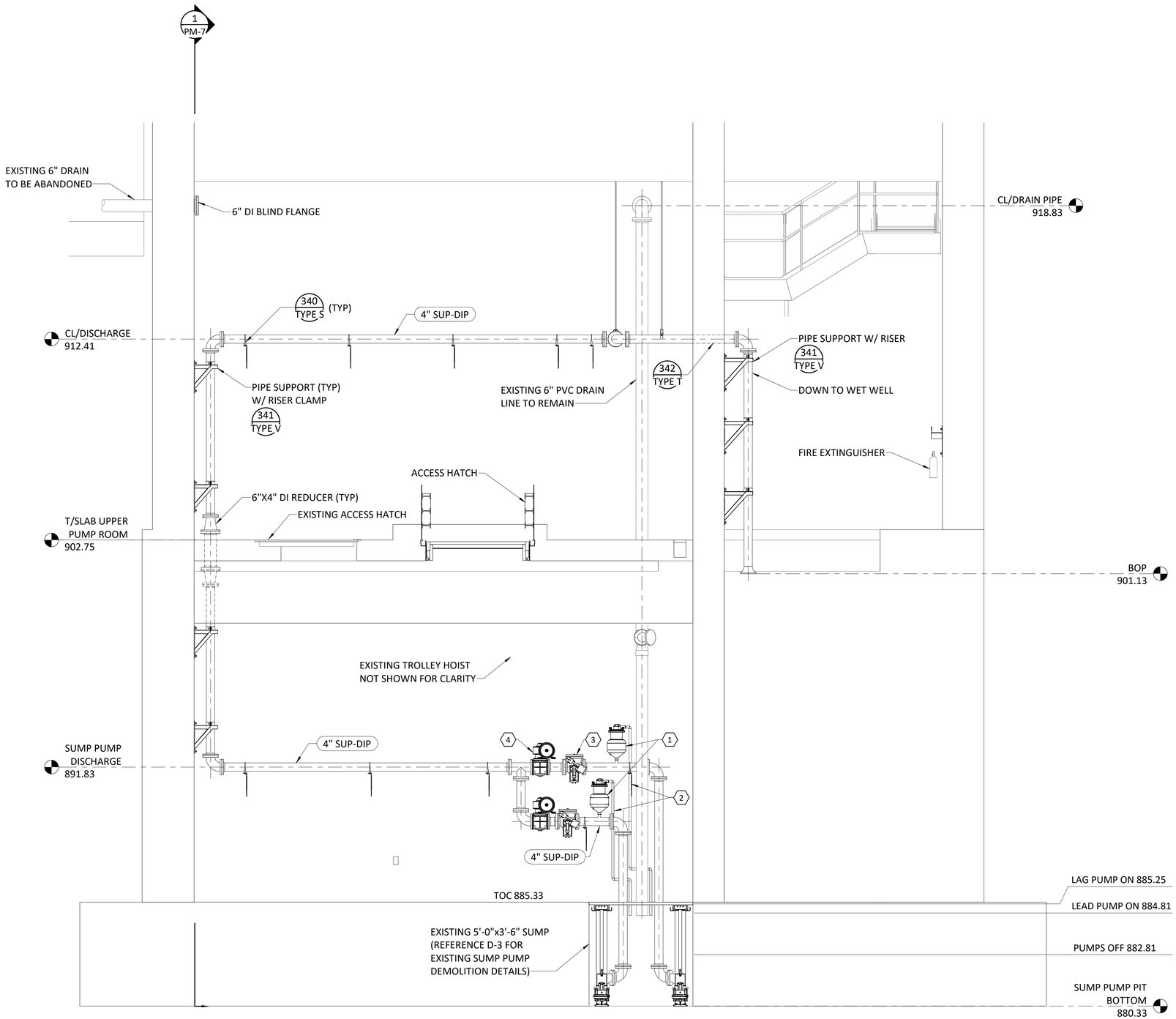
NO.	ISSUE	BY	DATE
0	ISSUED FOR BID	JCS	10/22/2025

FILE NAME WW-GWR24074-EX-R23.RVT

VERIFY SCALE Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.
0 1"

SHEET PM-7
SEQ. 26 OF 129

Plot Date: 10/21/2025 10:56:53 AM



1 PM-3 SUMP PUMP SECTION
3/8" = 1'-0"

NOTES BY SYMBOL: "⟨#⟩"

1 1" COMBINATION AIR VALVE
2 1" DRP-SST (CAV DRAIN LINE)
3 4" CHECK VALVE (TYP)
4 4" PLUG VALVE FLG WITH CHAINWHEEL OPERATOR (TYP)

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2026

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10/22/2025

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Suite 235
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GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES
SUWANEE CREEK DIVERSION PUMP STATION
PROCESS MECHANICAL
SUMP PUMP SECTION

F&N JOB NO.	GWR24074
DATE	10/22/25
DESIGNED	JCS
DRAWN	SDR
CHECKED	-
APPROVED	JCS
FILE NAME	WW-GWR24074-EX-R23.RVT

NO.	ISSUE	DATE	BY
0	ISSUED FOR BID	10/22/2025	JCS

VERIFY SCALE Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.
0 1

SHEET PM-8
SEQ. 27 OF 129

ISSUED FOR BID

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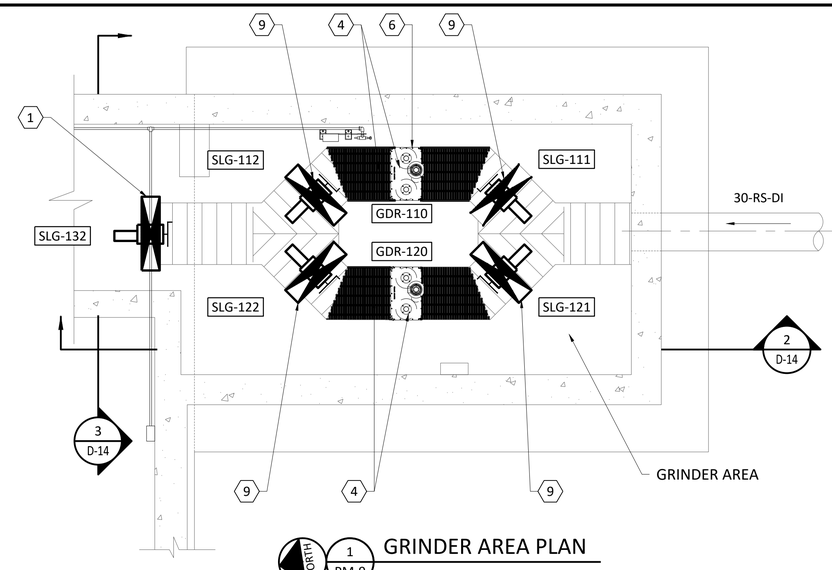
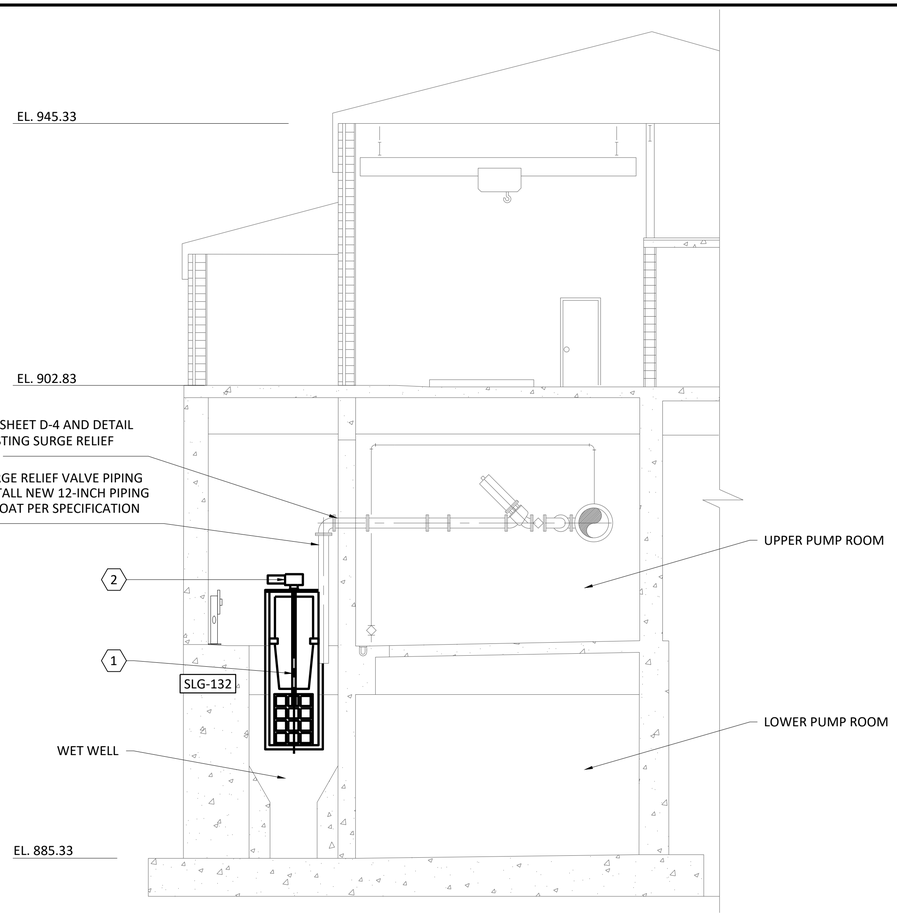
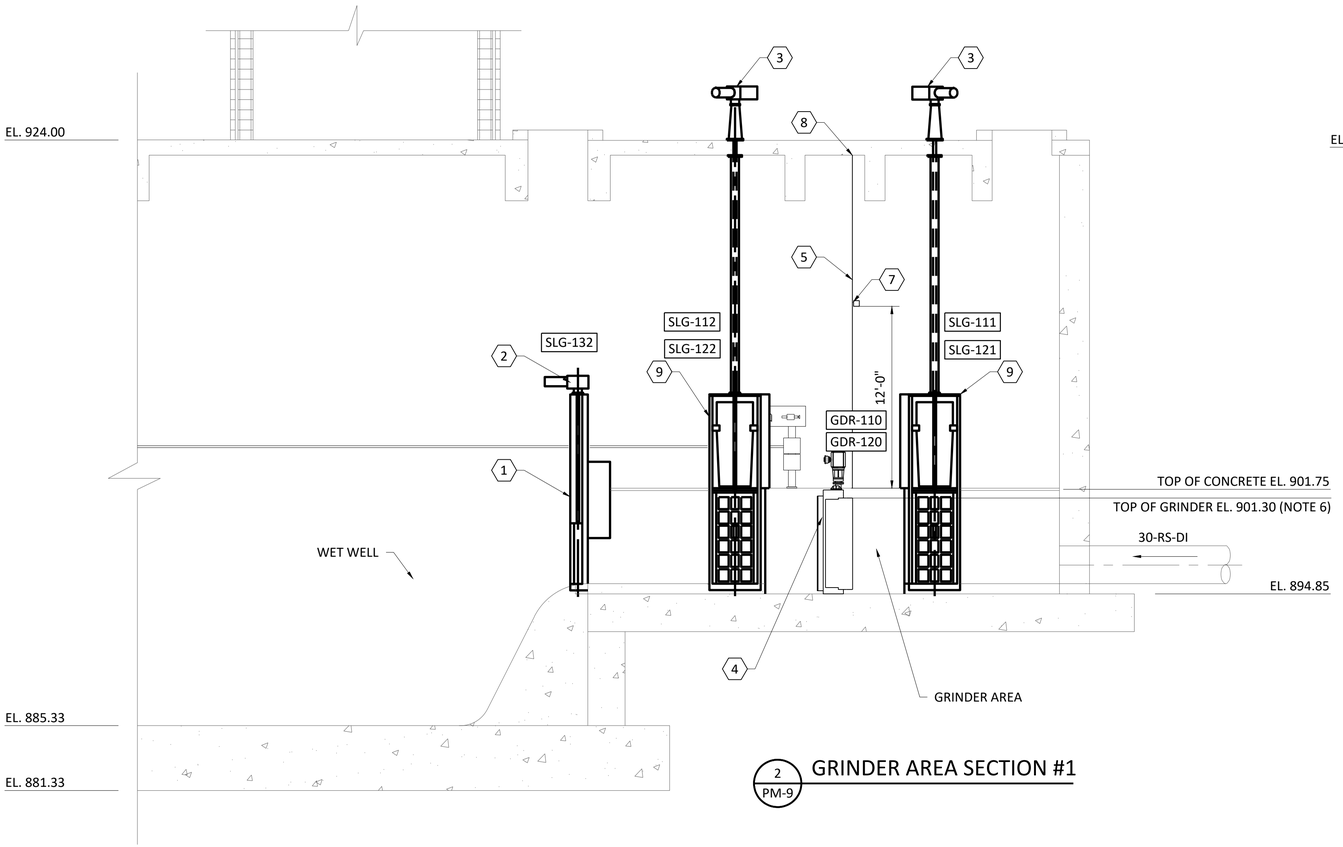


NORTH 1 PM-9 GRINDER AREA PLAN



3 PM-9 GRINDER AREA SECTION #2



2 PM-9 GRINDER AREA SECTION #1

GENERAL NOTES:

1. EXISTING SLIDE GATES AND ACTUATORS TO BE REPLACED. SEE DEMOLITION SHEETS FOR DETAILS.
2. GRINDERS TO BE REPLACED, SEE SPECIFICATION 46 24 33 FOR DETAILS.
3. SEE STRUCTURAL SHEETS FOR CHANNEL COATING IMPROVEMENTS.
4. EXISTING GRATING IN GRINDER AREA TO BE REPLACED WITH NEW FLUSH MOUNTED 316SS GRATING.
5. ACTUATORS FOR SLIDE GATE SLG-132 NOT EXTENDED ABOVE WET WELL DUE TO CONFLICT WITH EXISTING STRUCTURAL BEAM.
6. GRINDER SHOULD EXTEND TO THE FULL DEPTH OF THE CHANNEL. IF THE AWARDED MANUFACTURER GRINDER HEIGHT IS LOWER THAN THE DIVERSION BOX OVERFLOW ELEVATION (901.13'), PROVIDE A STAINLESS STEEL 316 BAR SCREEN TO THE GRINDER FRAME. FIELD VERIFY ALL DIMENSIONS BEFORE SHOP DRAWING SUBMITTAL AND FINAL INSTALLATION.

NOTES BY SYMBOL: " (X) "

1. SLIDE GATE (RE:DETAIL 1/PM-23).
2. SLIDE GATE ACTUATOR.
3. SLIDE GATE ACTUATOR, INSTALLED ABOVE WET WELL AT GRADE.
4. GRINDERS (DETAIL 1/PM-10) AND FLUSH MOUNTED 316SS GRATING.
5. GRINDER GUIDE RAILS TO TERMINATE AT HATCH OPENING.
6. FOR THE LENGTH OF THE NEW GRINDER, CONTRACTOR TO WIDEN THE EXISTING CHANNEL TO A MINIMUM OF 44" (COORDINATE WITH AWARDED MANUFACTURER FOR FINAL DIMENSIONS). REPAIR CONCRETE PER STRUCTURAL DETAILS.
7. MID-HEIGHT RAIL SUPPORT (RE: DETAIL 1/S-3).
8. GUIDE RAIL, GUIDE RAIL ANCHORS, AND GUIDE RAIL SUPPORT DESIGN IS TO BE PROVIDED BY THE AWARDED MANUFACTURER AND COORDINATED WITH THE CONTRACTOR. CONTRACTOR IS TO COORDINATE THE FINAL GUIDE RAIL AND GRINDER LOCATION PRIOR TO INSTALLATION. CONTRACTOR TO VERIFY HATCH CLEAR OPENING DIMENSIONS AND FINAL GRINDER DIMENSIONS AND VERIFY WITH THE OWNER AND ENGINEER THAT THERE ARE NO CONFLICTS PRIOR TO INSTALLATION.
9. OPEN CHANNEL SLIDE GATE, EMBED MOUNT (TYP) (RE: DETAIL 1/PM-25).

0 5' 10'
SCALE IN FEET

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Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 5/30/2026

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FREESE NICHOLS
2180 Satellite Boulevard
Suite 235
Duluth, Georgia 30097
Phone - (470)-645-3092
Web - www.freese.com

GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES
SUWANEE CREEK DIVERSION PUMP STATION
PROCESS MECHANICAL
GRINDER AREA - PLAN & SECTIONS

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0	ISSUED FOR BID	JCS	10/22/2025

F&N JOB NO. GWR24074
DATE 10/22/2025
DESIGNED JCS
DRAWN SEL
CHECKED JCS
APPROVED JCS
FILE NAME MP-GRD-PE-MODL.dwg

VERIFY SCALE Bar Scale is one inch on original drawing. If not one inch on this sheet, adjust scale. 0 1"

SHEET PM-9
SEQ. 28 OF 129

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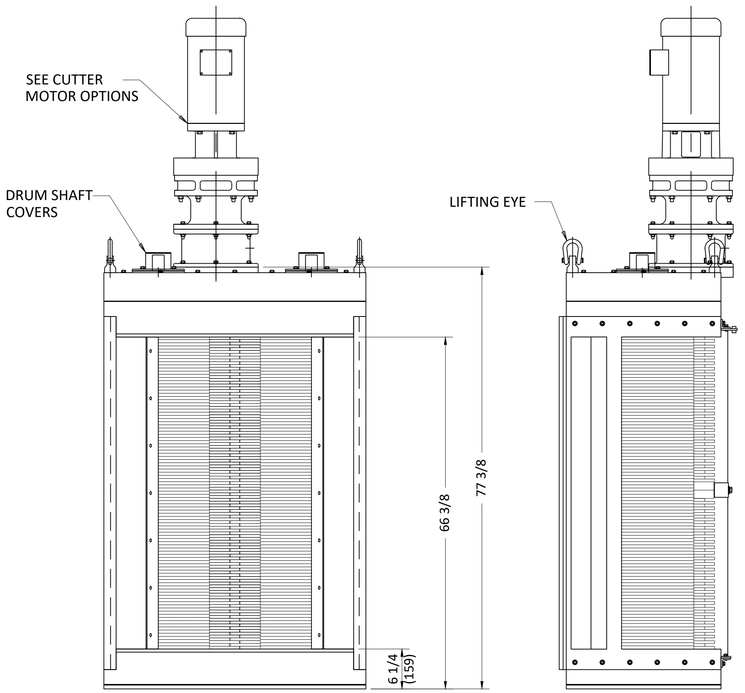
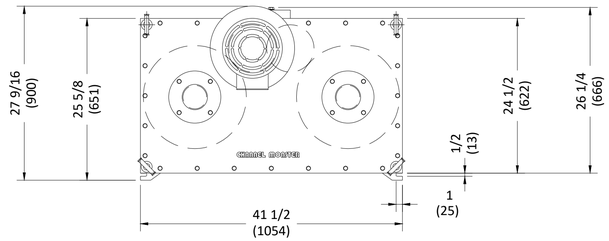


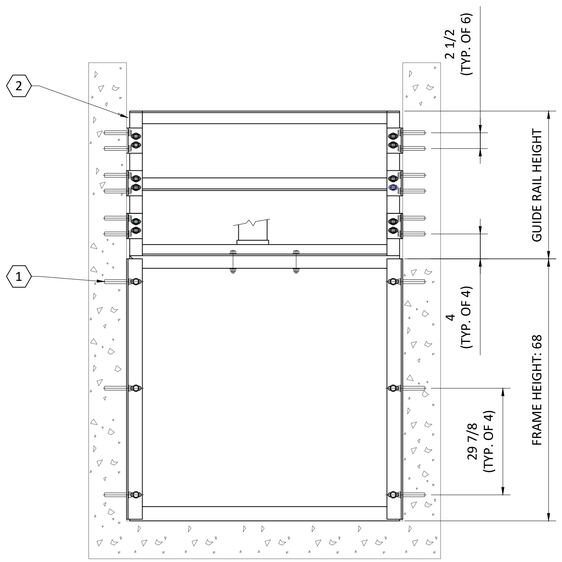
1A GRINDER PLAN DETAIL
1"=1'-0"



1B GRINDER PLAN DETAIL
1"=1'-0"

GENERAL NOTES:

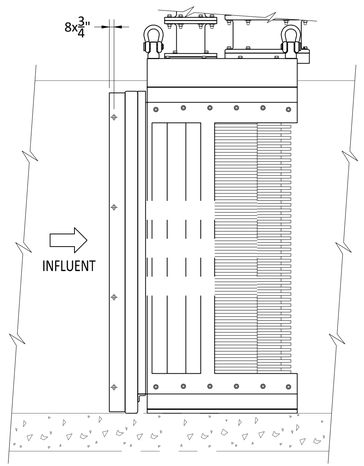
1. FRAME DESIGN, LIFTING EYES, ANCHOR BOLT DESIGN, EMBEDMENT, AND SPACING TO BE PROVIDED BY THE AWARDED MANUFACTURER.



1C GRINDER FRAME/GUIDE RAIL DETAIL
1"=1'-0"

NOTES BY SYMBOL: "(X)"

1. ANCHOR BOLTS 1/2" X 3 3/4" MIN. AWARDED MFR TO PROVIDE FINAL ANCHOR BOLT SIZING, SPACING, AND DESIGN.
2. CONTRACTOR SHALL GROUT OR SEAL GAPS BETWEEN FRAME AND CHANNEL TO PREVENT ANY LARGE PARTICLES FROM PASSING.



1D GRINDER SIDE DETAIL
1"=1'-0"

0 5' 10'
SCALE IN FEET

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Expires 6/30/2026

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FREESE NICHOLS
2180 Satellite Boulevard
Suite 235
Duluth, Georgia 30097
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SUWANEE CREEK DIVERSION PUMP STATION
PROCESS MECHANICAL
GRINDER DETAILS

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F&N JOB NO. GWR24074
DATE 10/22/2025
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CHECKED JCS
APPROVED JCS
FILE NAME MP-GRD-PE-DETL.dwg

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0 1"

SHEET PM-10
SEQ. 29 OF 129

ACAD Rel: 25.0s (LMS Tech)
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Plot Date: 10/21/2025 11:05 AM Plot By: 08763 Filename: N:\WTU\Drawings\PM Sheets\MP-GRD-PE-DETL.dwg

EXISTING CONDITIONS:

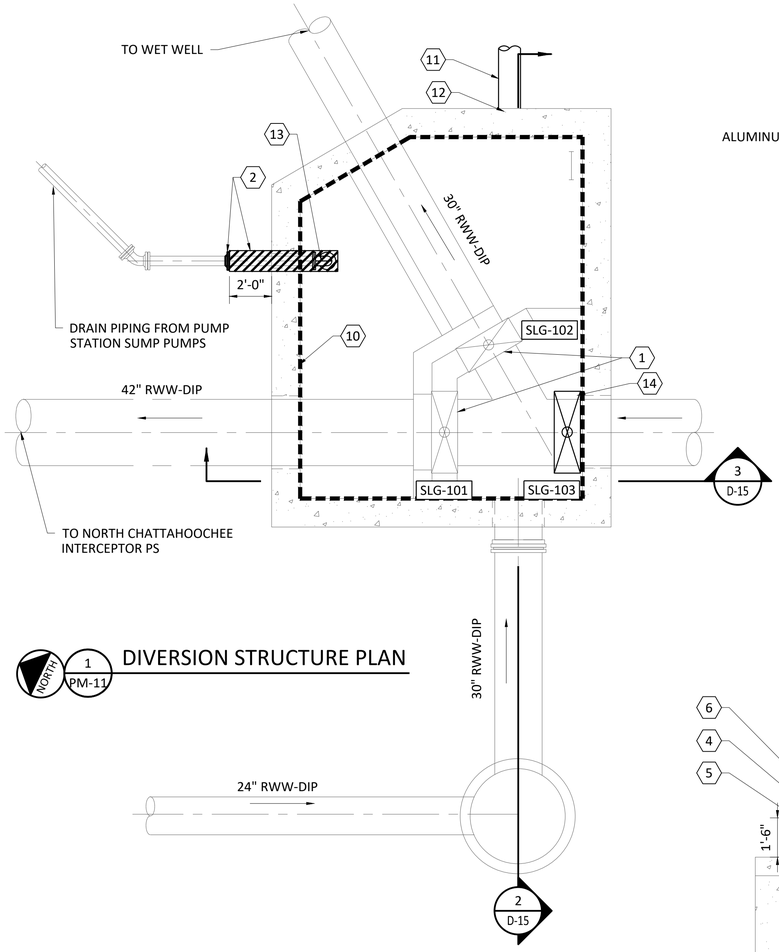
1. INTERIOR SURFACE OF EXISTING WALLS ARE PARTIALLY DEGRADED DUE TO ACID ATTACK, AND THE EXISTING, FAILED PROTECTIVE COATING IS PARTIALLY COVERING THE WALL INTERIOR SURFACES.
2. UNDERSIDE OF EXISTING TOP SLAB IS PARTIALLY DEGRADED DUE TO ACID ATTACK, AND THE EXISTING, FAILED PROTECTIVE COATING IS PARTIALLY COVERING THE SLAB UNDERSIDE.
3. GROUTED INVERT CONDITIONS ARE UNKNOWN, BUT SOME SURFACES ARE PARTIALLY DEGRADED.
4. ALL GATE SUPPORTS AND SOME PIPING ARE HEAVILY DEGRADED.
5. FLOW CONTROL WALLS ARE PARTIALLY DAMAGED.
6. FIELD VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS PRIOR TO BEGINNING CONSTRUCTION.

REPAIR AND COATING PLAN:

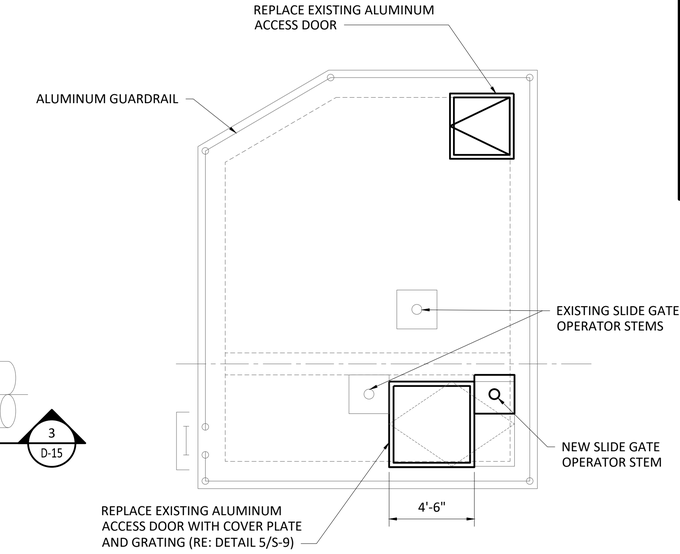
1. WITHIN THE LIMITS SHOWN, COAT INTERIOR SURFACES OF WALLS, SURFACE OF BOTTOM SLAB, AND UNDERSIDE OF TOP SLAB. APPLY PRIMER AND COATING AS REQUIRED BY SPECIFICATION 09 97 23, COORDINATE WITH COATINGS MANUFACTURER TO PROVIDE SAFE WALKING SURFACES IN FOOT TRAFFIC AREAS.
2. SURFACES TO BE COATED SHALL BE PREPARED PRIOR TO COATING. SURFACE PREPARATION SHALL BE IN ACCORDANCE WITH MANUFACTURER RECOMMENDATIONS, SPECIFICATION 09 97 23, AND AS INDICATED ON S-9.
3. ALL SURFACES SHALL BE:
   A. WASHED, EXISTING COATINGS REMOVED, HYDRO-BLASTED, AND SOUNDED. REFER TO S-9.
   B. ALL SPALLED, UNSOUND, AND/OR SOFT AREAS OF CONCRETE SHALL BE REMOVED AND PATCHED, CRACKS PREPARED AND SEALED, HOLES FILLED (REFER TO S-9), CONCRETE DRIED TO THE EXTENT REQUIRED FOR COATINGS, AND THEN RESURFACER APPLIED TO PROVIDE A SURFACE PROFILE SUITABLE FOR COATING PER MANUFACTURER RECOMMENDATIONS.
      - RESURFACER APPLICATION THICKNESS SHALL BE AS REQUIRED BY EXISTING WALL CONDITIONS AND MANUFACTURER'S RECOMMENDATIONS. 1/4-INCH APPLICATION THICKNESS TO PROVIDE THE SURFACE PROFILE REQUIRED. COORDINATE WITH EXISTING CONDITIONS.
   C. PERFORM ALL REPAIRS TO STRUCTURE AND ALLOW ADEQUATE CURING TIME PRIOR TO PRIMING FOR COATING.
4. NEW SLIDE GATE ANCHORS SHOULD ACHIEVE THE REQUIRED EMBEDMENT IN SOUND, EXISTING CONCRETE SUBSTRATE. EMBEDMENT WITH REPAIR MATERIALS SHOULD NOT COUNT TOWARDS THE MANUFACTURERS REQUIRED EMBEDMENT. REFERENCE SHEET PM-12 FOR SLIDE GATE DETAILS.
5. REPLACE EXISTING LADDER IN DIVERSION STRUCTURE WITH OSHA STANDARD ACCESS LADDER WITH DUAL SIDE RAIL EXTENSION POSTS. (REFERENCE SPECIFICATION 05 51 00)

NOTES BY SYMBOL: "⟨X⟩"

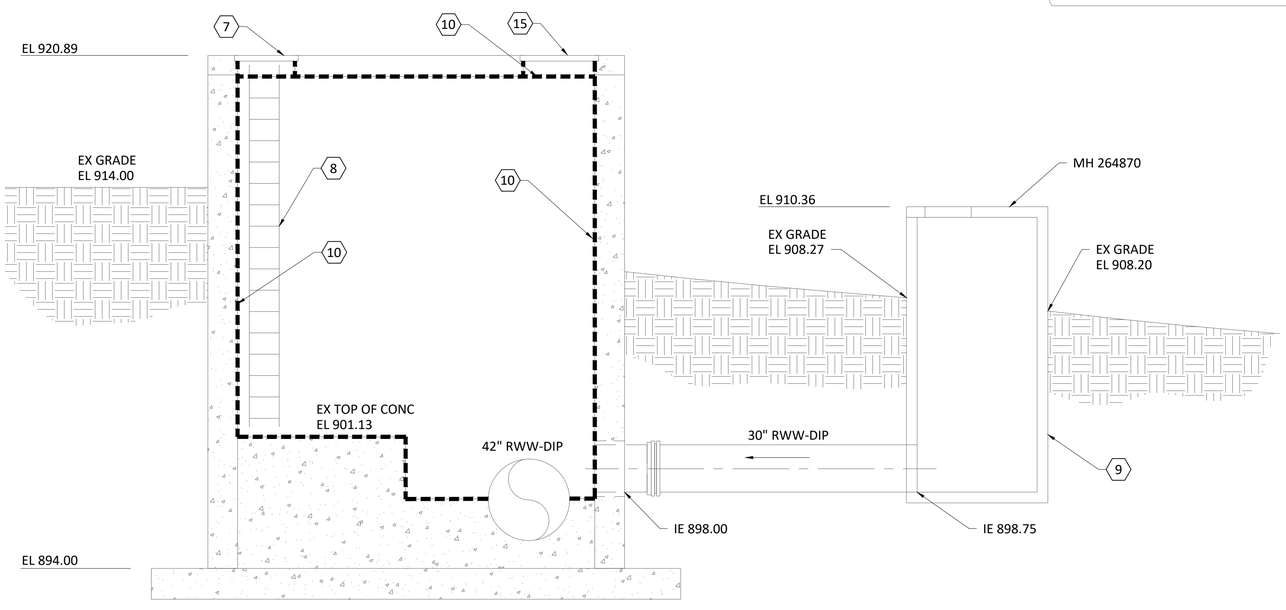
1. SLIDE GATES
2. 6-INCH SUMP PUMP DRAIN PIPE (TO BE ABANDONED) - INSTALL 6-INCH RESTRAINED MJ PLUG.
3. SLIDE GATE ACTUATORS
4. 12" FRP FRESH AIR INTAKE GOOSENECK
5. 316 L SST BUGSCREEN W/ 316 SS HARDWARE
6. 12" FRP DAMPER
7. ALUMINUM HATCH TO BE REPLACED (RE: DETAIL 2/S-4 AND DETAIL 1/C-7)
8. SAFETY LADDER TO BE REMOVED AND REPLACED, NOTE 5.
9. 6'Ø MANHOLE
10. DIVERSION STRUCTURE INTERIOR TO BE REPAIRED AND COATED.
11. 12"-FOA-PVC
12. WALL PENETRATION. CONTRACTOR TO REMOVE EXISTING 8-INCH PENETRATION AND UPSIZE TO A 12-INCH PENETRATION (RE: DETAIL 342 TYPE T). REPAIR COATINGS PER THIS SHEET AND STRUCTURAL DRAWINGS. REFERENCE C-03 FOR 12"-FOA-PVC ROUTING.
13. CONTRACTOR TO REMOVE THE EXISTING 6-INCH SUMP PUMP DRAIN PIPING AND 90-DEGREE BEND. INSTALL SWELLING SEALANT WATER STOP IN THE EXISTING PIPE PENETRATION. FILL WITH SIKACRETE 211 SCC OR APPROVED EQUAL.
14. INSTALL THE SURFACE MOUNTED SLIDE GATE ON THE EXISTING 42-INCH PIPE AND DEMOLISH THE EXISTING 42" CHANNEL AS REQUIRED FOR SLIDE GATE INSTALLATION (RE: REPAIR AND COATING PLAN, NOTE 4 (THIS SHEET))
15. ALUMINUM HATCH TO BE REPLACED WITH COVER PLATE AND GRATING (REFERENCE DETAILS 6/S-8 AND 5/S-9)



1 NORTH PM-11 DIVERSION STRUCTURE PLAN



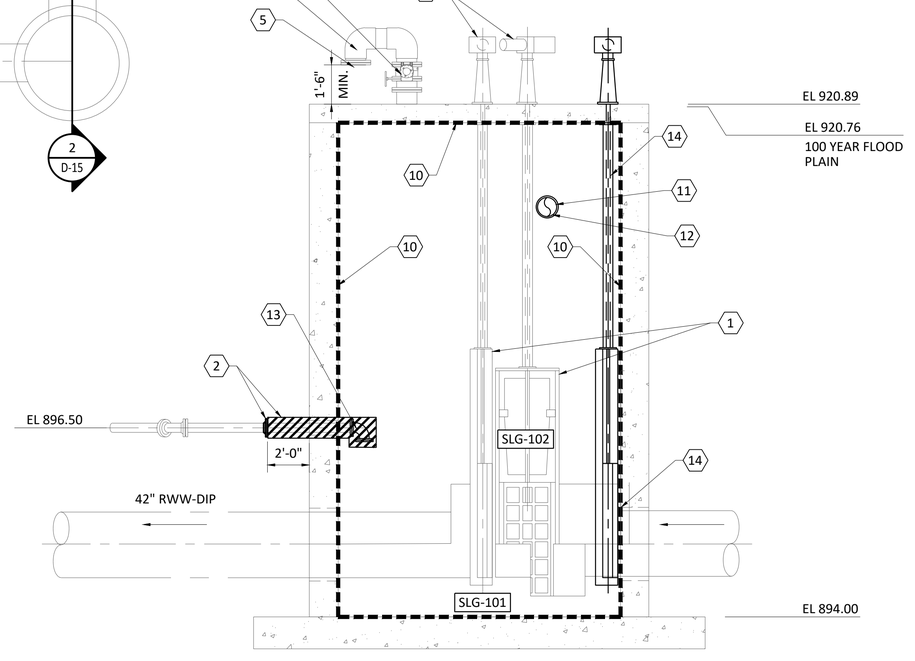
4 NORTH PM-11 DIVERSION STRUCTURE TOP PLAN



2 PM-11 DIVERSION STRUCTURE SECTION

GENERAL NOTES:

1. SLIDE GATES AND ACTUATORS TO REMAIN IN PLACE.



3 PM-11 DIVERSION STRUCTURE SECTION

0 1' 2' 4' 8'
1/4"=1'-0"

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FREESE NICHOLS
2180 Satellite Boulevard
Suite 235
Duluth, Georgia 30097
Phone - (470)-645-3092
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GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES
SUWANEE CREEK DIVERSION PUMP STATION
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DIVERSION STRUCTURE - PLAN & SECTIONS

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F&N JOB NO. GWR24074
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APPROVED JCS
FILE NAME MP-DIV-PE-MODL.dwg

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SHEET PM-11
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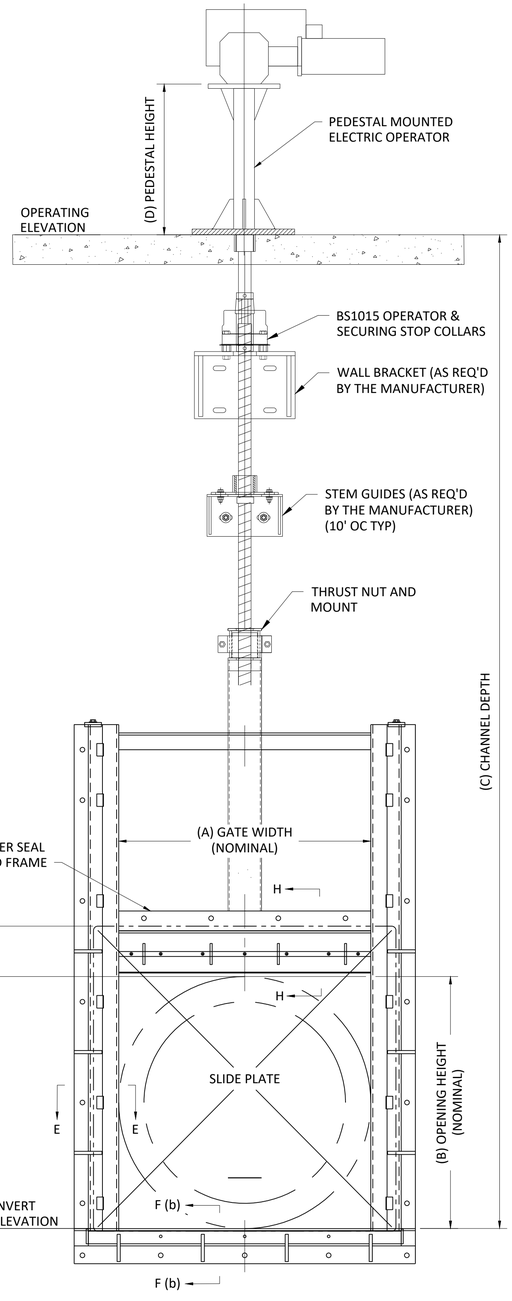
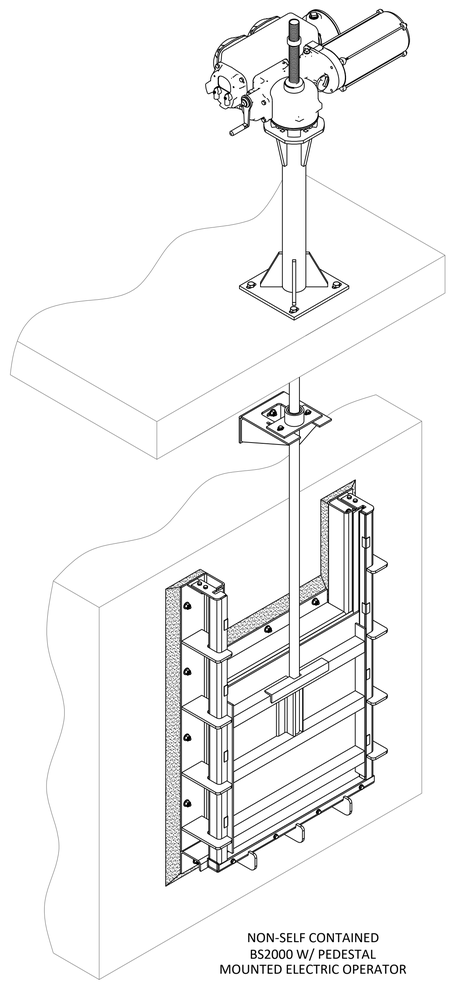


NON-SELF CONTAINED (NSC)
W/WALL MOUNT PEDESTAL, ELECTRIC OPERATOR
(CAN ALSO USE F-F (a) INVERT)

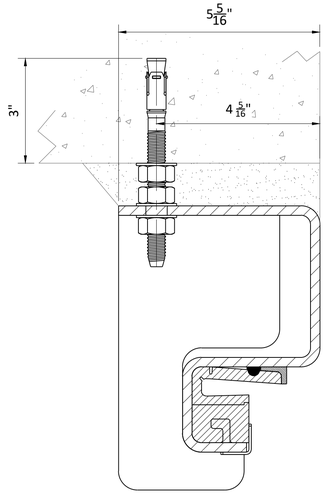


NON-SELF CONTAINED
BS2000 W/ PEDESTAL
MOUNTED ELECTRIC OPERATOR

1A
-

768X
PIPE END-OF-WALL MOUNT

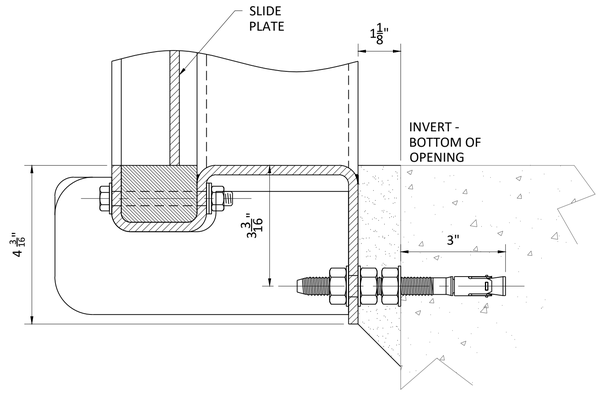
NOT TO SCALE



1B
-

SECTION E-E
WALL MOUNTED GUIDE FRAME

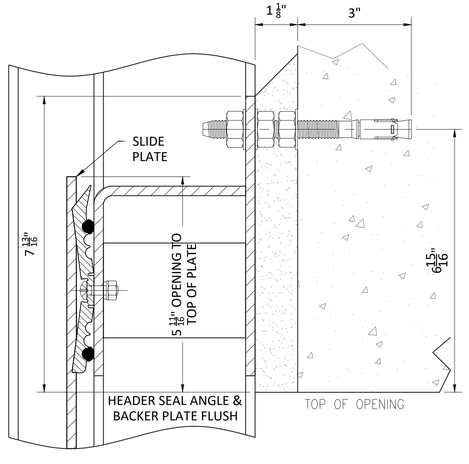
NOT TO SCALE



1C
-

SECTION F-F (B)
WALL MOUNTED INVERT

NOT TO SCALE



FOR PORT AND PIPE OPENINGS

1D
-

SECTION H-H
SLIDE GATE UPPER SEAL AND FRAME

NOT TO SCALE

0 5' 10'
SCALE IN FEET

ISSUED FOR BID

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2026

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GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES
SUWANEE CREEK DIVERSION PUMP STATION

CIVIL

DIVERSION STRUCTURE DETAILS

NO.	ISSUE	BY	DATE
0	ISSUED FOR BID	JCS	10/22/2025

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VERIFY SCALE 0 1"

F&N JOB NO.	GWR24074
DATE	10/22/2025
DESIGNED	JCS
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APPROVED	JCS
FILE NAME	MP-PS-DT-DETL03.dwg

SHEET PM-12
SEQ. 31 OF 129

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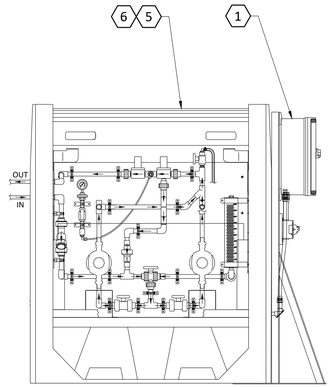
GENERAL NOTES

1. ALL EQUIPMENT SHOWN IN THIS SHEET IS BASED ON THE MANUFACTURER LISTED IN THE PROJECT MANUAL. IF MODIFICATIONS ARE NEEDED TO THIS LAYOUT TO ACCOMMODATE ALTERNATIVE EQUIPMENT PROPOSED BY THE CONTRACTOR, THE CONTRACTOR WILL BE RESPONSIBLE FOR MODIFYING THE DESIGN/LAYOUT AT NO ADDITIONAL COST TO THE OWNER.
2. ALL PVC PIPE AND FITTINGS SHALL BE SCHEDULE 80 PVC.
3. CONTAINMENT CURBING IS NOT SHOWN ON THIS SHEET.
4. DOOR ON FEED EQUIPMENT EXTENDS PAST PAD DIMENSIONS. MAINTAIN 36" OF CLEARANCE FOR CONTROL PANEL ACCESS.
5. STUB-UP FOR ELECTRICAL CONDUIT AND DISCHARGE PIPING TO BE DETERMINED PER SITE PLACEMENT.
6. ALL PIPING AND ELECTRICAL TO CONFORM TO BID REQUIREMENTS.
7. MAINTAIN AN 18" CLEARANCE BETWEEN TANK PERIMETER AND EDGE OF PAD.

NOTES BY SYMBOL " (X) "

1. VDLT CONTROL PANEL.
2. MECHANICAL FLOAT LEVEL INDICATOR
3. 2"Ø FILL PIPING ASSEMBLY.
4. 1/2"Ø SUCTION PIPING ASSEMBLY.
5. CALIBRATION MODULE ASSEMBLY.
6. CHEMICAL FEED PUMPS.
7. SS PIPE/UTILITY TANK STAND.
8. 6,650 GAL DW TANK, 10'-2" DIA, 14'-3" HGT.
9. OVERFILL SITE TUBE ASSEMBLY.
10. LEAK DETECTION SYSTEM ASSEMBLY.
11. PRESSURE LEVEL SYSTEM ASSEMBLY.



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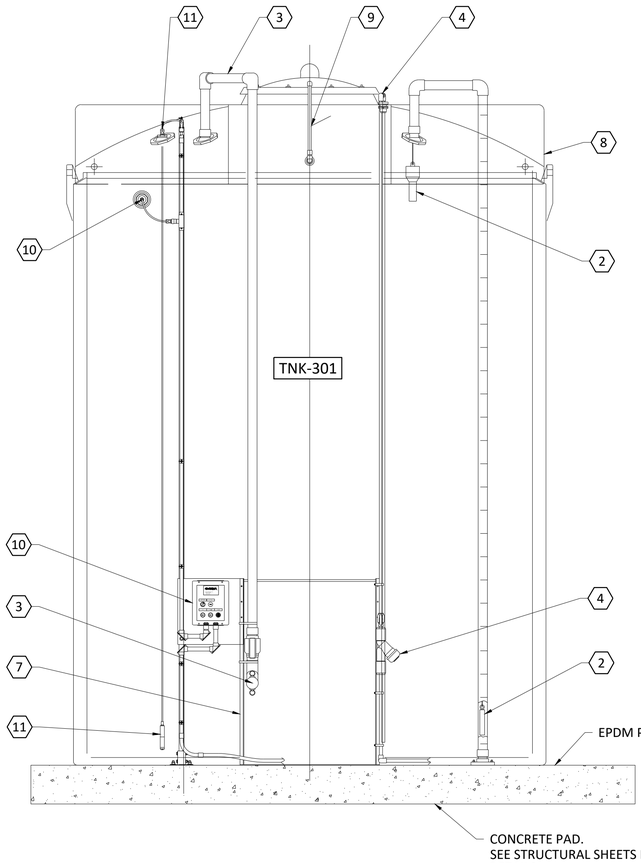
NOT TO SCALE



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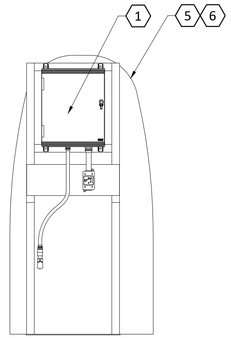

2-B SKID SIDE ELEVATION VIEW
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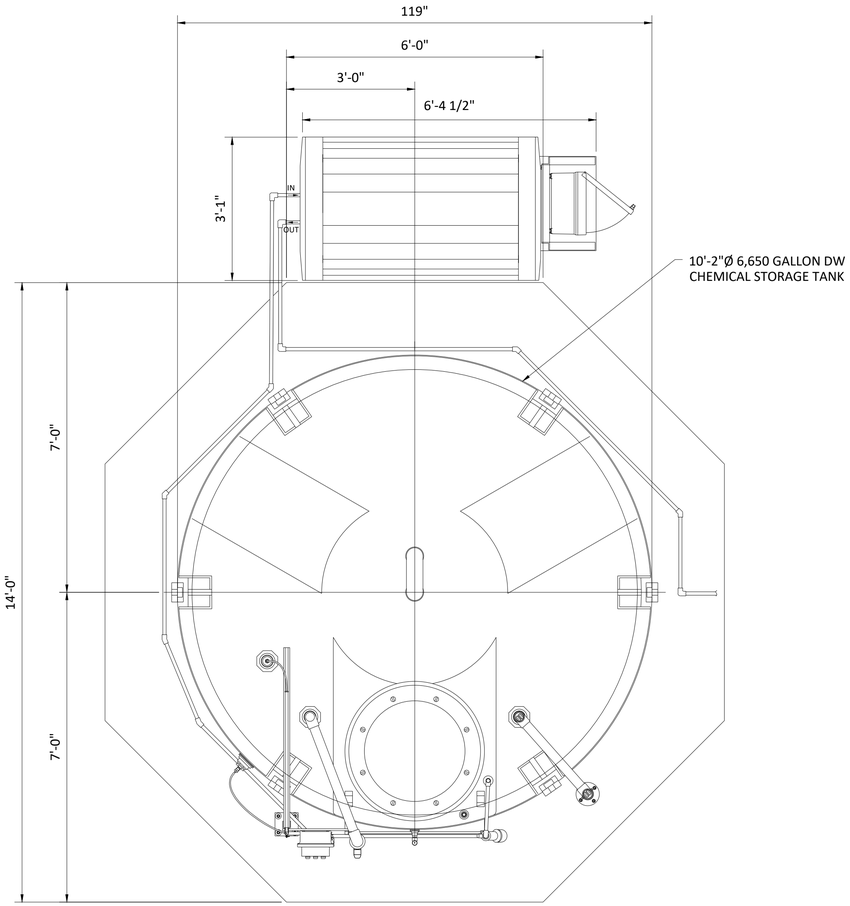

1 PLAN VIEW
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Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
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GEORGIA REGISTERED No. PE045447 PROFESSIONAL ENGINEER STEPHEN DOUGLAS CHICKERSON COOPER
10/22/25

FREESE NICHOLS
2180 Satellite Boulevard
Suite 235
Duluth, Georgia 30097
Phone - (470) 645-3092
Web - www.freese.com

GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES
SUWANEE CREEK DIVERSION PUMP STATION
PROCESS MECHANICAL
CHEMICAL FEED SYSTEM PLAN & ELEVATION VIEW

F&N JOB NO. GWR24074
DATE 10/22/2025
DESIGNED SDC
DRAWN SEL
CHECKED SDC
APPROVED SDC
FILE NAME MP-CFB-PE-SITE.dwg

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GENERAL NOTES

1. ALL EQUIPMENT SHOWN IN THIS SHEET IS BASED ON THE MANUFACTURER LISTED IN THE PROJECT MANUAL. IF MODIFICATIONS ARE NEEDED TO THIS LAYOUT TO ACCOMMODATE ALTERNATIVE EQUIPMENT PROPOSED BY THE CONTRACTOR, THE CONTRACTOR WILL BE RESPONSIBLE FOR MODIFYING THE DESIGN/LAYOUT AT NO ADDITIONAL COST TO THE OWNER.
2. CONTRACTOR SHALL CONFIRM THE MANHOLE TOP CONFIGURATION (FLAT TOP OR CONE) PRIOR TO INSTALLATION. THE 4" PVC CONDUIT SHALL BE INSTALLED AT AN ELEVATION THAT DOES NOT CONFLICT WITH THE MANHOLE TOP STRUCTURE. COORDINATE FINAL CONDUIT ELEVATION IN THE FIELD AND ADJUST AS NECESSARY TO AVOID INTERFERENCE. THE TOP OF THE 4" PVC CONDUIT SHOULD BE INSTALLED A MIN 6" BELOW PAVEMENT SURFACE.
3. SAW CUT TRENCH FOR 4" PVC CONDUIT.
4. SAW CUTTING TO BEGIN APROXIMATELY 6" BEHIND THE FEED LINE PENETRATION.
5. TERMINATE 4" PVC CHEMICAL CONDUIT 6" ABOVE TOP OF EX. 30" RS PIPE.
6. SLOPE DRAIN PIPE AT 1% TO THE MANHOLE.

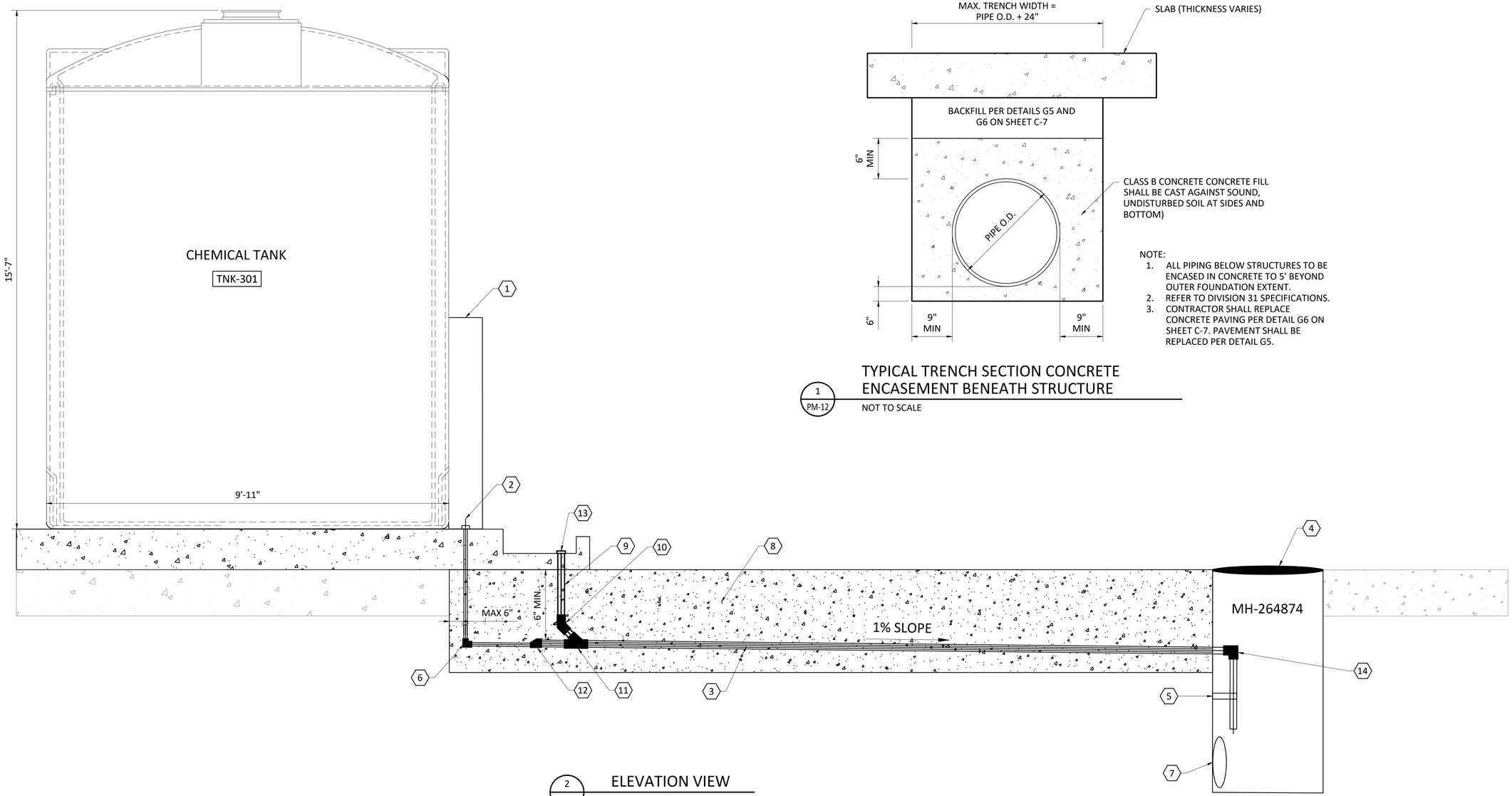
NOTES BY SYMBOL: " (X) "

1. CHEMICAL FEED SYSTEM CONTROL PANEL
2. 1/2" BRAIDED CLEAR FLEXIBLE PVC DISCHARGE TUBING
3. 4" SCHEDULE 80 PVC CONDUIT
4. EXISTING PRECAST CONCRETE MH
5. PIPE SUPPORT (RE: DETAIL 340 TYPE R)
6. 2" SCHEDULE 80 PVC LONG-RADIUS 90° BEND (TYP.)
7. EXISTING 30" RWW
8. CONCRETE ENCASEMENT (SEE DETAIL, THIS SHEET)
9. 4" SCHEDULE 80 PVC FLOOR DRAIN
10. 4" SCHEDULE 80 PVC 45° BEND
11. 4" X 4" SCHEDULE 80 PVC WYE
12. 4" X 2" SCHEDULE 80 PVC ECCENTRIC REDUCER
13. FLOOR DRAIN (RE: DETAIL 345/TYPE A)
14. 4" SCHEDULE 80 PVC LONG RADIUS 90° BEND

NOTE:
1. ALL PIPING BELOW STRUCTURES TO BE ENCASED IN CONCRETE TO 5' BEYOND OUTER FOUNDATION EXTENT.
2. REFER TO DIVISION 31 SPECIFICATIONS.
3. CONTRACTOR SHALL REPLACE CONCRETE PAVING PER DETAIL G6 ON SHEET C-7. PAVEMENT SHALL BE REPLACED PER DETAIL G5.

1 / PM-12 — TYPICAL TRENCH SECTION CONCRETE ENCASEMENT BENEATH STRUCTURE

NOT TO SCALE



2 / PM-12 — ELEVATION VIEW

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Georgia Registered Engineering Firm PEF-004433
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10/22/25

FREESE NICHOLS
2180 Satellite Boulevard
Suite 235
Duluth, Georgia 30097
Phone - (470) 645-3092
Web - www.freese.com

GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES
SUWANEE CREEK DIVERSION PUMP STATION

PROCESS MECHANICAL
CHEMICAL FEED PIPING
ELEVATION VIEW

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FILE NAME	MP-CFB-PE-SITE.dwg

SHEET PM-14

SEQ. 33 OF 129

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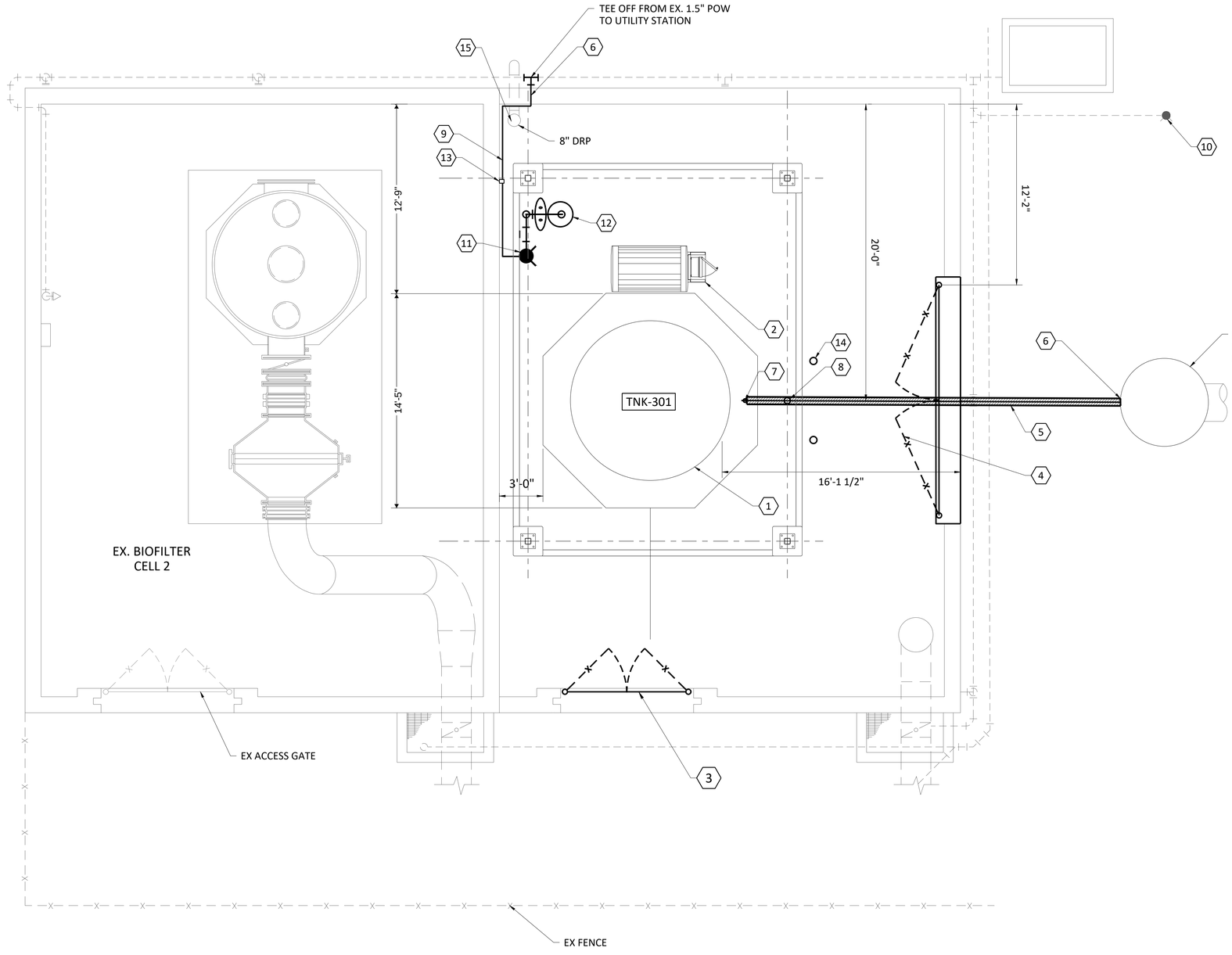
2. IF PROPOSED CHEMICAL FEED LINE IS FOUND TO BE IN CONFLICT WITH EXISTING DRAINAGE AND POTABLE WATER LINES DURING CONSTRUCTION, IT WILL BE RELOCATED AS NEEDED TO ELIMINATE THE CONFLICT AT NO ADDITIONAL COST TO OWNER.
3. POTABLE WATER LINE GOING TO EMERGENCY EYEWASH AND SHOWER SHALL BE HEAT TRACED AND INSULATED. REFER TO SPEC SECTION 22 45 00.

NOTES BY SYMBOL: "(X)"

1. EQUIPMENT PAD, CHEMICAL TANK, AND CANOPY (RE: PM-13 AND S-10)
2. CALCIUM NITRATE FEED SYSTEM (RE: PM-13)
3. 9'-0" WIDE DOUBLE GATE ASSEMBLY (RE: DETAIL 1, C-6)
4. 15'-6" WIDE DOUBLE GATE ASSEMBLY (RE: DETAIL 1, C-6)
5. CHEMICAL CONDUIT TRENCH (RE: PM-14 & D-10)
6. PIPE PENETRATION (RE: DETAIL 342, TYPE T)
7. 2" CHEMICAL FEED CONDUIT
8. 4" FLOOR DRAIN
9. 1.5" POW-CU
10. EX. YARD HYDRANT
11. UTILITY STATION (RE: DETAIL 362, TYPE C)
12. EMERGENCY WASH STATION (RE: DETAIL 4, PM-24)
13. PIPE SUPPORT (RE: DETAIL 340, TYPE Q)
14. BOLLARDS (RE: DETAIL 547, TYPE A)
15. PIPE WILL BE CUT FLUSH TO GRADE, WITH DRAIN INSTALLED (RE: DETAIL 345, TYPE A)



NORTH 1 - CHEMICAL FEED SYSTEM SITE PLAN

1/4" = 1'-0"

0 1' 2' 4' 8'

1/4"=1'-0"

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Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2026

GEORGIA REGISTERED No. PE045447 PROFESSIONAL ENGINEER DICKERSON COOMBS

10/22/25

FREESE NICHOLS
2180 Satellite Boulevard
Suite 235
Duluth, Georgia 30097
Phone - (470)-645-3092
Web - www.freese.com

GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES
SUWANEE CREEK DIVERSION PUMP STATION
PROCESS MECHANICAL
CHEMICAL FEED SYSTEM SITE PLAN

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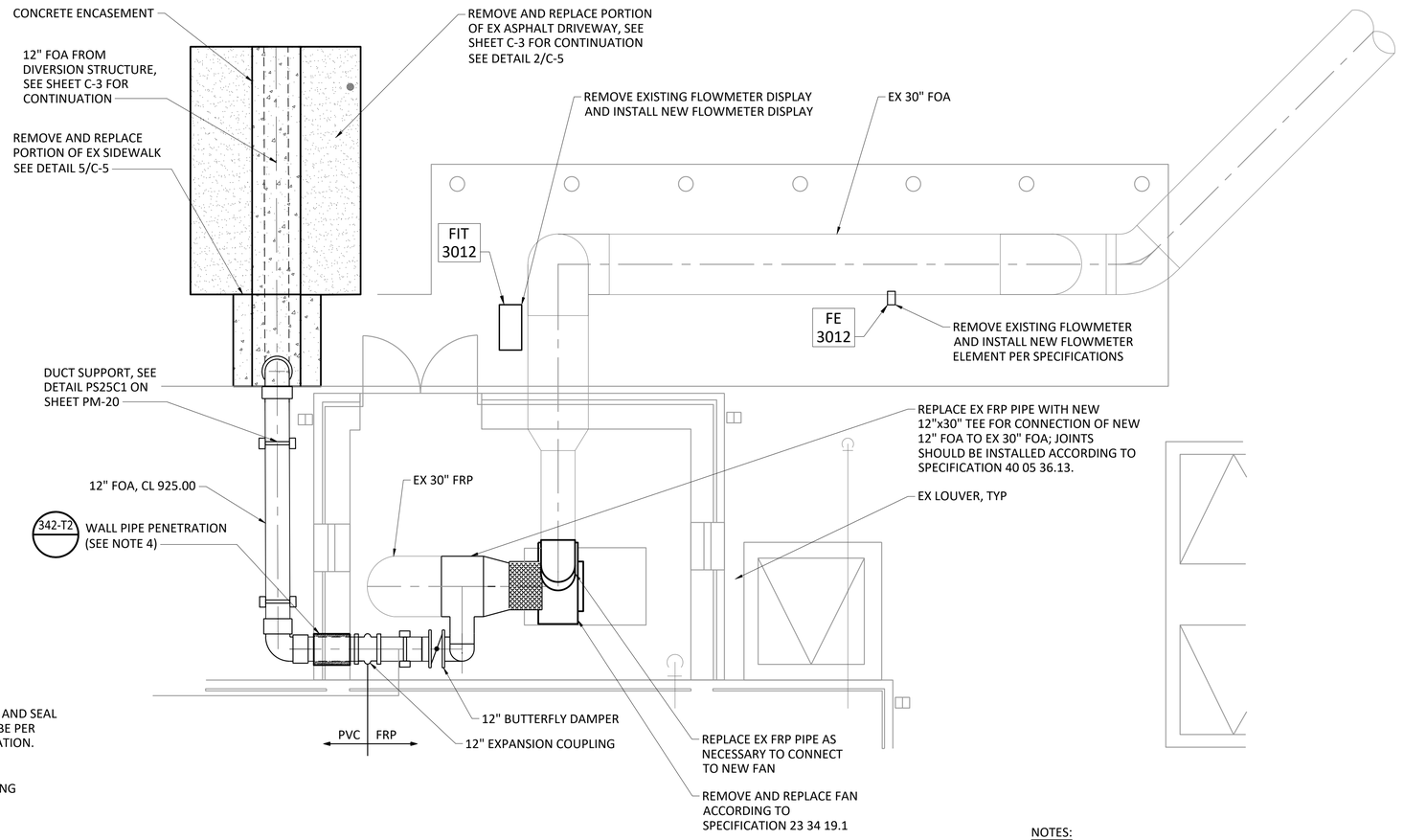

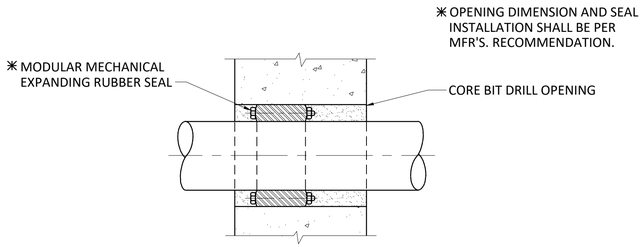

342 TYPE T2 — FOR EXISTING WALLS
PIPE PENETRATION DETAIL
NOT TO SCALE

NORTH 1 - ODOR CONTROL-MOTOR ROOM
1" = 3'-0"

NOTES:

1. FOA LINE SHALL BE UNIFORMLY SLOPED DOWNWARDS FROM THE PUMP STATION TO THE EXISTING DIVERSION STRUCTURE AT A MINIMUM OF 1/4" RISE PER 1 FOOT OF RUN.
2. CONTRACTOR SHALL APPLY A NEW PARAFFINATED GEL COAT WITH UV INHIBITORS TO ALL EXISTING ABOVE GRADE OUTDOOR FRP DUCT TO REMAIN. PARAFFINATED GEL COAT SHALL BE LILLY 5777-SERIES WITH UV INHIBITORS OR OWNER-APPROVED EQUAL. PIGMENTATION SHALL BE SELECTED TO MATCH EXISTING.
3. TO KEEP THE PROPOSED 12" FOA PVC PIPE REMOVABLE FROM THE WALL PENETRATION, TYPE T2 PENETRATION FOR THIS WALL SHALL NOT HAVE GAP FILLED WITH NON-SHRINK GROUT.

ISSUED FOR BID

Freese and Nichols, Inc.
Texas Registered Engineering Firm F-2144

GEORGIA REGISTERED No. PE045447 PROFESSIONAL ENGINEER STEVEN DICKERSON COOPER
10/22/25

FREESE NICHOLS
2180 Satellite Boulevard
Suite 235
Duluth, Georgia 30097
Phone - (470)-645-3092
Web - www.freese.com

GWINETT COUNTY DEPARTMENT OF WATER RESOURCES
SUWANEE CREEK DIVERSION PUMP STATION
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ODOR CONTOL CONNECTION

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APPROVED	SDC
FILE NAME	WW-PST-EX.dwg

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SHEET PM-16
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ACAD Rel: 25.0s (LMS Tech)
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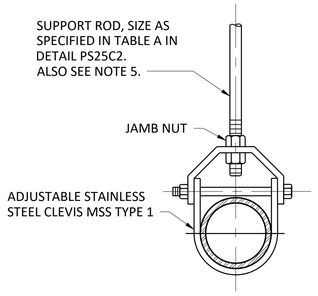
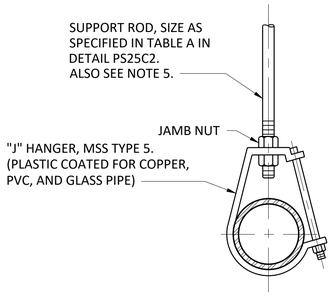
PIPE SUPPORT/HANGER NOTES

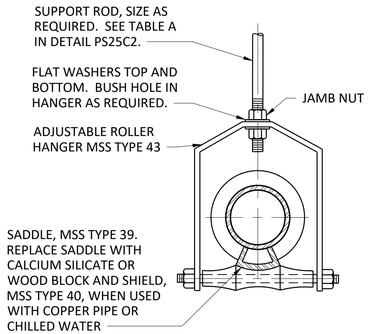
1. CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL NECESSARY SUPPORTS FOR A COMPLETE SYSTEM. WHERE NO REFERENCE TO PIPE SUPPORT SYSTEMS IS GIVEN ON THE DRAWINGS, THE CONTRACTOR SHALL USE AN APPROPRIATE SYSTEM AS RECOMMENDED BY THE PIPE MANUFACTURER. PIPE AND CONDUIT SUPPORT SYSTEMS SHALL BE UNISTRUT, EATON (B-LINE), POWER STRUT, SUPER STRUT OR APPROVED EQUAL, AND SHALL BE DESIGNED BY THE CONTRACTOR TO MEET THE LOAD AND SPAN REQUIREMENTS. SYSTEMS SHALL CONFORM TO PIPE AND SUPPORT MANUFACTURER'S RECOMMENDATIONS.
2. UNLESS OTHERWISE SPECIFIED, HANGERS AND SUPPORTS IN NON-CORROSIVE AREAS SHALL BE HOT DIP GALVANIZED AFTER FABRICATION. UNLESS OTHERWISE SPECIFIED, HANGERS AND SUPPORTS IN CORROSIVE AREAS SHALL BE SS316. NUT, BOLTS, WASHERS AND ALL EMBEDDED ITEMS SHALL BE TYPE 316 STAINLESS STEEL.
3. UNLESS OTHERWISE SPECIFIED, EXPANSION ANCHORS SHALL NOT BE USED.
4. MSS REFERS TO THE MANUFACTURERS STANDARDIZATION SOCIETY OF THE VALVE AND FITTINGS INDUSTRY, STANDARD PRACTICE SP58 AND SP69.
5. HANGER BRACKETS AND SUPPORT COMPONENTS MAY BE INTERCHANGED.
6. CONCRETE INSERTS IN AREAS BELOW WATER SURFACE OR NORMALLY SUBJECT TO SUBMERGING SHALL BE EMBEDDED ANCHOR BOLTS OR EQUAL.
7. PROVIDE PLASTIC OR RUBBER CHANNEL END CAPS AT EXPOSED ENDS OF CHANNELS 7'-0" ABOVE FLOOR AND BELOW.
8. ALL PIPING SUPPORTED BY HANGERS AND/OR STRUCTURAL ATTACHMENTS SAHLL BE BRACED AGAINST HORIZONTAL, VERTICAL, AXIAL, AND LONGITUDINAL SWAY. BRACINGS SHALL BE CALCULATED TO RESIST ZONE 1 SEISMIC LOADINGS AS SPECIFIED BY SMACNA AND AS INDICATED IN THE SPECIFICATIONS.
9. FITTINGS SHALL NOT BE LESS THAN MSS CL. B.
10. NOT ALL PIPE HANGERS/STRUCTURAL SUPPORTS MAY BE USED IN THESE PLANS.



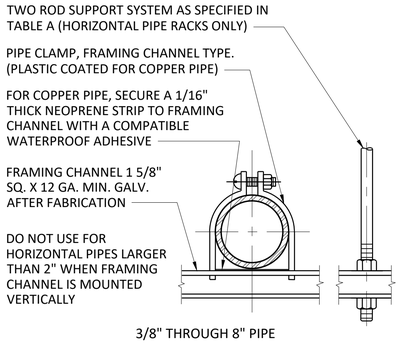
340 TYPE A — 1/2" THROUGH 12" PIPE — PIPE HANGER DETAIL — NOT TO SCALE



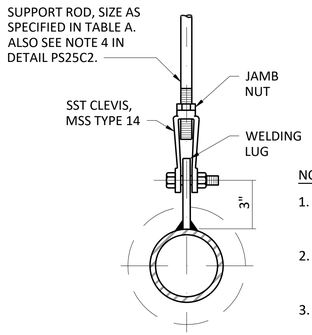
340 TYPE B — 1/2" THROUGH 8" PIPE — PIPE HANGER DETAIL — NOT TO SCALE



340 TYPE C — 3/8" THROUGH 8" PIPE — PIPE HANGER DETAIL — NOT TO SCALE



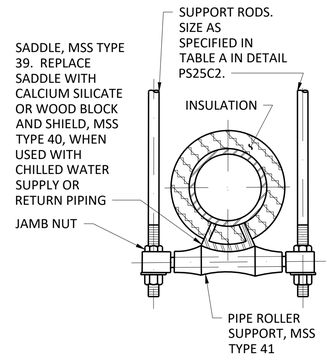
340 TYPE D — 3/8" THROUGH 8" PIPE — PIPE HANGER DETAIL — NOT TO SCALE



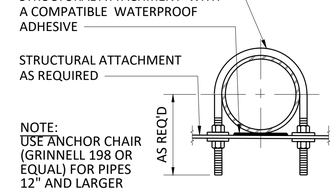
NOTES:

1. LUG SHALL BE WELDED TO PIPE BEFORE LINING IS APPLIED TO PIPE.
2. JACKET OF INSULATED PIPE SHALL BE CAULKED AT WELDING LUG.
3. THIS HANGER SHALL NOT BE USED WITH CHILLED WATER SUPPLY OR RETURN PIPING.

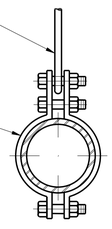
340 TYPE M — 2 1/2" THROUGH 12" PIPE — PIPE HANGER DETAIL — NOT TO SCALE



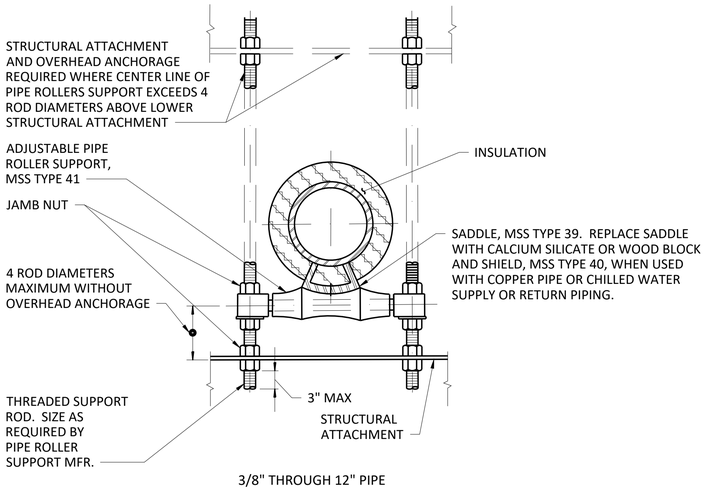
340 TYPE O — 10" THROUGH 12" PIPE — PIPE HANGER DETAIL — NOT TO SCALE



340 TYPE E — 1/2" THROUGH 24" PIPE — PIPE HANGER DETAIL — NOT TO SCALE



340 TYPE L — 3/4" THROUGH 30" PIPE — PIPE HANGER DETAIL — NOT TO SCALE



340 TYPE N — 3/8" THROUGH 12" PIPE — PIPE HANGER DETAIL — NOT TO SCALE

TABLE A - PIPE SPAN AND SUPPORT ROD SIZE

NOMINAL PIPE SIZE (INCHES)	SUPPORT ROD SIZE AND MAXIMUM LOAD PER ROD (SEE NOTES 1-5)				MAXIMUM PIPE SPAN (FEET)			
	ONE ROD SUPPORT SYSTEM		TWO ROD SUPPORT SYSTEM		STEEL	COPPER	PLASTIC (SEE NOTE 3)	DUCTILE IRON (SEE NOTE 5)
	ROD SIZE (INCHES)	MAX LOAD (POUNDS)	ROD SIZE (INCHES)	MAX LOAD (POUNDS)				
3/8 TO 3/4	3/8	610	3/8	610	5	5	CONTINUOUS	N/A
1	3/8	610	3/8	610	5	5	5	N/A
1 1/4	3/8	610	3/8	610	5	5	5	N/A
1 1/2	3/8	610	3/8	610	5	5	5	N/A
2	3/8	610	3/8	610	10	5	5	12' FOR PRESSURE PIPE 10' FOR SOIL PIPE
2 1/2	1/2	1130	3/8	610	10	10	5	
3	1/2	1130	3/8	610	10	20	5	
4	5/8	1810	3/8	610	10	20	5	
6	3/4	2710	1/2	1130	15	20	5	
8	7/8	3770	5/8	1810	15	20	5	
10	1	4960	3/4	2710	20	N/A	5	
12	1 1/4	8000	7/8	3770	20	N/A	10	
14	1 1/4	8000	1	4960	20	N/A	N/A	
16	1 1/4	8000	1	4960	25	N/A	N/A	
18	1 1/4	8000	1	4960	25	N/A	N/A	
20	1 1/2	11630	1 1/4	8000	25	N/A	N/A	
24	1 1/2	11630	1 1/2	11630	30	N/A	N/A	
30	1 1/2	11630	1 1/2	11630	30	N/A	N/A	

NOTES:

1. DESIGN WEIGHT SHALL BE THE WEIGHT OF THE PIPE FULL OF WATER. IF FLUID CONVEYED IS NOT WATER, DESIGN WEIGHT SHALL BE DETERMINED BY SPECIFIC GRAVITY OF FLUID AND PIPE WEIGHT. HANGER SYSTEMS SHALL BE DESIGNED FOR A FACTOR OF SAFETY OF 5 OR GREATER.
2. ROD SIZES SHOWN ARE FOR THE SUPPORT OF A SINGLE PIPE. WHEN SUPPORTING MORE THAN ONE PIPE, ROD SHALL BE SIZED USING THE DESIGNED WEIGHTS (SEE NOTE 1) TO DETERMINE THE TOTAL DESIGN LOAD. THE TOTAL DESIGN LOAD SHALL NOT EXCEED THE MAXIMUM LOADS SHOWN IN TABLE A.
3. SPAN SHOWN IS FOR SCHEDULE 80 PVC PIPE AT 100°F. SPANS FOR OTHER PLASTICS, OTHER PVC PIPE SCHEDULES AND PIPES AT HIGHER TEMPERATURES SHALL BE SHORTENED IN ACCORDANCE WITH THE PIPE MANUFACTURER'S RECOMMENDATIONS. "CONTINUOUS" MEANS PIPE SHALL BE IN UNISTRUT POWER-STRUT OR SIMILAR CHANNEL.
4. FOR PIPES SUBJECT TO LONGITUDINAL MOVEMENT, OR HAVING SERVICE TEMPERATURES IN RANGES OF 33°F TO 59°F OR 120°F TO 450°F, SEE TYPICAL SUPPORT ROD FOR PIPES SUBJECT TO HORIZONTAL MOVEMENT, THIS DRAWING.
5. PROVIDE A MINIMUM OF ONE PIPE HANGER PER PIPE LENGTH, WITHIN 4" OF THE BELL.

GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES

DESIGN BY: 2025 DWR REVISION	**PIPE SUPPORT - TABLE A (4" THROUGH 30" PIPE)**
DRAWN BY: AMK	
CHECKED BY: JCS	
APPROVED BY: DWR	
SCALE: NONE	

DRAWING NO. **PS25C2**

REVISION / DESIGN / DRAWN / CHECKED / APPROVED / ORIGINAL ISSUE

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Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2026

GEORGIA REGISTERED No. PE051805 PROFESSIONAL ENGINEER JOSHUA CADE STARLING
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FREESE NICHOLS
2180 Satellite Boulevard
Suite 235
Duluth, Georgia 30097
Phone - (470)-645-3092
Web - www.freese.com

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DETAILS I

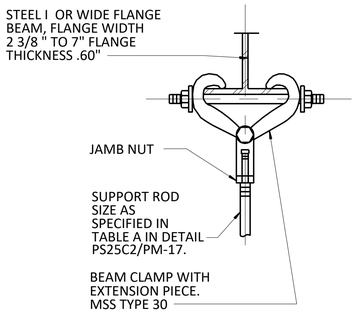
F&N JOB NO. GWR24074
DATE 10/22/2025
DESIGNED JCS
DRAWN SEL
CHECKED JCS
APPROVED JCS
FILE NAME MP-ALL-DT-DETL01.dwg

SHEET PM-17
SEQ. 36 OF 129

ISSUED FOR BID

ACAD Rel: 25.0s (LMS Tech)
Filename: N:\WTU\Drawings\PM Sheets\MP-ALL-DT-DETL01.dwg
Last Saved: 9/16/2025 5:09 PM Saved By: 08763

Plot Date: 10/21/2025 3:31 AM Plot By: 08763 Filename: N:\WTU\Drawings\PM Sheets\MP-ALL-DT-DETL01.dwg

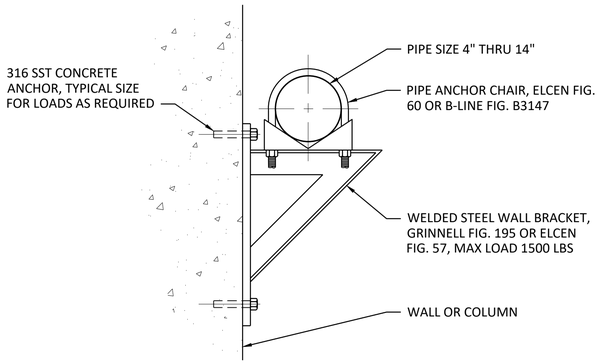


CAPACITY: 3/8 " THROUGH 6" PIPE
MAXIMUM ALLOWABLE LOAD:

ROD SIZE	WOOD LOAD	CONC./STEEL LOAD
3/8 "	390 LBS	610 LBS
1/2 "	640 LBS	1130 LBS
5/8 "	760 LBS	1810 LBS
3/4 "	830 LBS	2710 LBS
7/8 "	830 LBS	3770 LBS

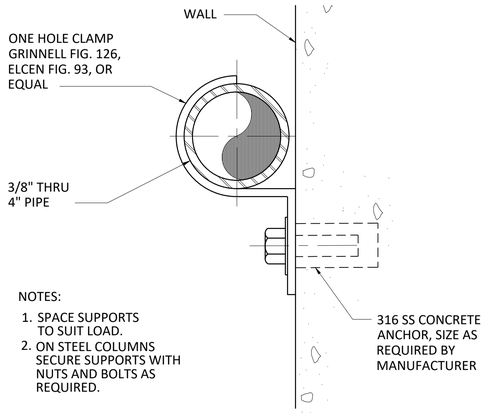
SPACING SHALL BE AS REQUIRED,
BUT SHALL NOT EXCEED THOSE SPANS
SHOWN IN TABLE A IN DETAIL PS25C2/PM-17.

341 TYPE C — STRUCTURAL ATTACHMENT DETAIL
NOT TO SCALE



4" THROUGH 14"

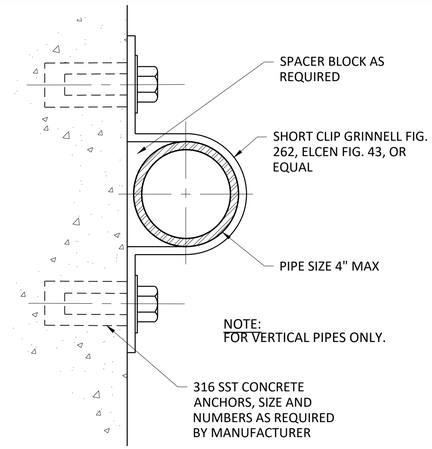
340 TYPE S — PIPE SUPPORT DETAIL
NOT TO SCALE



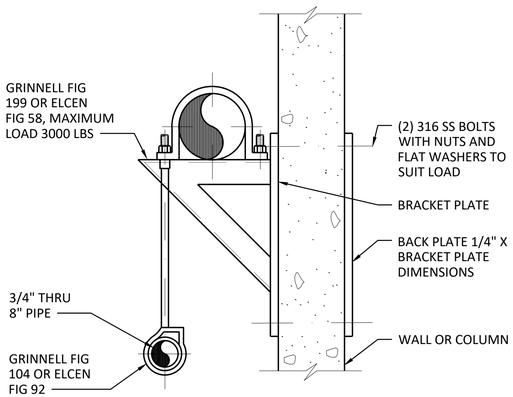
NOTES:
1. SPACE SUPPORTS TO SUIT LOAD.
2. ON STEEL COLUMNS SECURE SUPPORTS WITH NUTS AND BOLTS AS REQUIRED.

3/8" THROUGH 4" PIPE

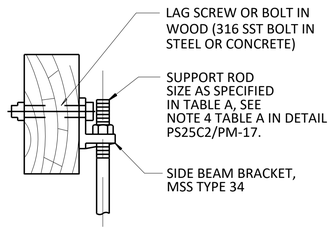
340 TYPE Q — PIPE SUPPORT DETAIL
NOT TO SCALE



340 TYPE R — PIPE SUPPORT DETAIL
NOT TO SCALE



340 TYPE T — PIPE SUPPORT DETAIL
NOT TO SCALE



CAPACITY: WOOD 3/8 " THROUGH 4" PIPE
(THROUGH 6" PIPE USING PIPE HANGER TYPE 5 OR 8)

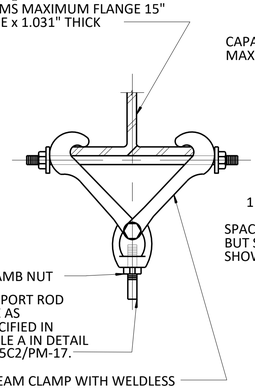
STEEL OR CONCRETE 3/8 " THROUGH 12" PIPE.

MAXIMUM ALLOWABLE LOAD:

ROD SIZE	LOAD WOOD	LOAD CONCRETE/STEEL
3/8 "	390 LBS	610 LBS
1/2 "	640 LBS	1130 LBS
5/8 "	760 LBS	1810 LBS
3/4 "	830 LBS	2710 LBS
7/8 "	830 LBS	3770 LBS

SPACING SHALL BE AS REQUIRED, BUT SHALL NOT EXCEED SPANS SHOWN IN TABLE A IN DETAIL PS25C2/PM-17.

341 TYPE B — STRUCTURAL ATTACHMENT DETAIL
NOT TO SCALE

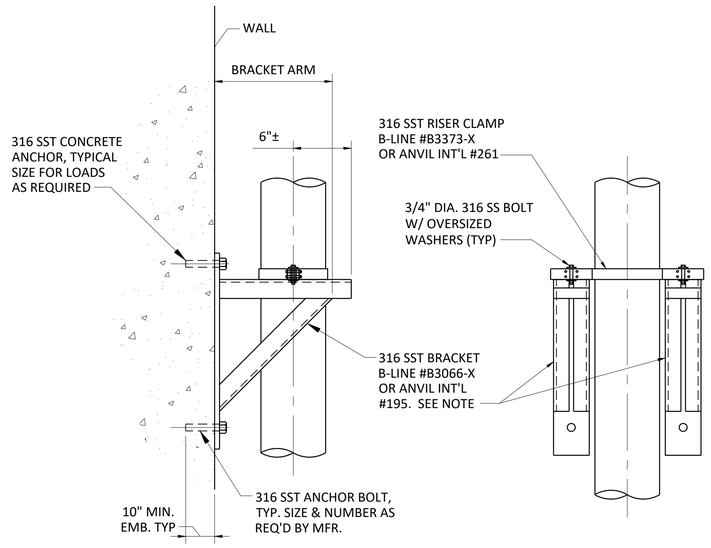


CAPACITY: 3/8" THROUGH 12" PIPE
MAXIMUM ALLOWABLE LOAD:

ROD SIZE	LOAD
3/8 "	610 LBS
1/2 "	1130 LBS
5/8 "	1810 LBS
3/4 "	2710 LBS
7/8 "	3770 LBS
1"	4960 LBS
1 1/4 "	8000 LBS

SPACING SHALL BE AS REQUIRED,
BUT SHALL NOT EXCEED THOSE SPANS
SHOWN IN TABLE A IN DETAIL PS25C2/PM-17.

341 TYPE D — STRUCTURAL ATTACHMENT DETAIL
NOT TO SCALE



NOTE:
FOR PIPES REQUIRING BRACKET ARM DISTANCES GREATER THAN 24", USE B-LINE #B3067-X OR ANVIL INT'L #199.

VERTICAL PIPE SUPPORT

341 TYPE V — STRUCTURAL ATTACHMENT DETAIL
NOT TO SCALE

ISSUED FOR BID

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2026

GEORGIA REGISTERED No. PE051805 PROFESSIONAL ENGINEER JOSHUA CADE STARLING
10/22/2025

FREESE NICHOLS
2180 Satellite Boulevard
Suite 235
Duluth, Georgia 30097
Phone - (470)-645-3092
Web - www.freese.com

GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES
SUWANEE CREEK DIVERSION PUMP STATION
PROCESS MECHANICAL
DETAILS II

NO.	ISSUE	BY	DATE
0	ISSUED FOR BID	JCS	10/22/2025

F&N JOB NO. GWR24074
DATE 10/22/2025
DESIGNED JCS
DRAWN SEL
CHECKED JCS
APPROVED JCS
FILE NAME MP-ALL-DT-DETL01.dwg

VERIFY SCALE Bar Scale is one inch on original drawing. If not one inch on this sheet, adjust scale.
0 1"

SHEET PM-18
SEQ. 37 OF 129

ACAD Rel: 25.0s (LMS Tech)
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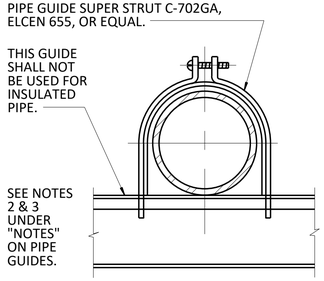
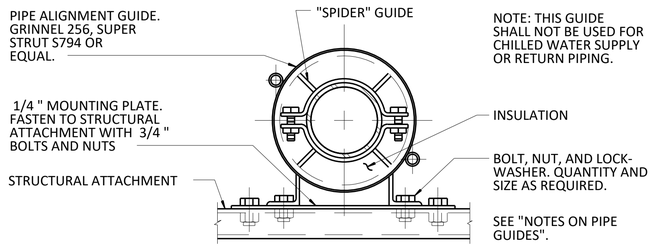
Plot Date: 10/21/2025 3:29 AM Plot By: 08763 Filename: N:\WTU\Drawings\PM Sheets\MP-ALL-DT-DETL01.dwg

NOTES ON PIPE GUIDES:

1. SECTIONS OF HOT AND CHILLED PIPING BETWEEN ANCHORS SHALL BE PROVIDED WITH PIPE GUIDES.
2. THE FIRST AND SECOND PIPE GUIDES FROM EXPANSION JOINTS SHALL BE LOCATED AT A MAXIMUM OF FOUR AND EIGHTEEN PIPE DIAMETERS RESPECTIVELY FROM THE FREE END OF THE EXPANSION JOINT. INTERMEDIATE PIPE GUIDES SHALL BE LOCATED AS RECOMMENDED BY THE EXPANSION JOINT MANUFACTURER. TYPE G1 OR G2 PIPE GUIDES SHALL BE THE FIRST GUIDE FROM ANY EXPANSION JOINT.
3. FOR "L","Z" AND "U" CONFIGURATION OF PIPING BETWEEN ANCHORS, PIPE GUIDES SHALL BE PROVIDED.
4. FOR LONG RUNS OF PIPE REQUIRING PIPE GUIDES (GREATER THAN 4 GUIDES), EVERY THIRD, PIPE GUIDE SHALL BE A TYPE G1 OR G2 AS APPLICABLE.

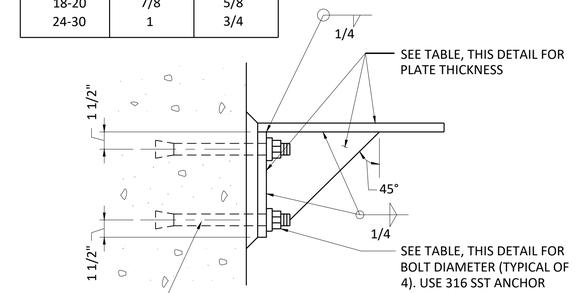


341 TYPE G1 — 1/2" THROUGH 6" PIPE
PIPE GUIDE DETAIL
NOT TO SCALE

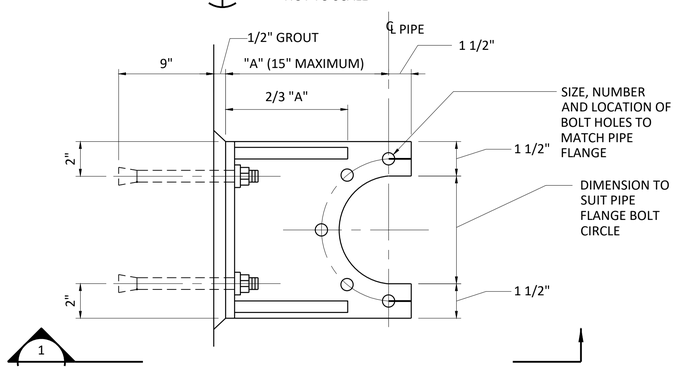


341 TYPE G2 — 3/4" THROUGH 12" PIPE
PIPE GUIDE DETAIL
NOT TO SCALE

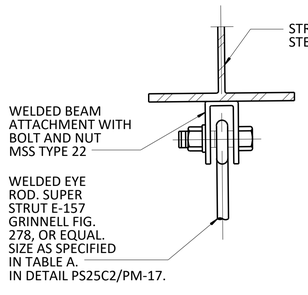
BOLT AND PLATE TABLE		
PIPE SIZE (INCHES)	BOLT SIZE (INCHES)	PLATE THICKNESS (INCHES)
2-2 1/2	3/8	1/4
3-6	1/2	3/8
8-12	5/8	3/8
14-16	3/4	1/2
18-20	7/8	5/8
24-30	1	3/4



1 - L — ELEVATION
NOT TO SCALE



341 TYPE T — STRUCTURAL ATTACHMENT DETAIL
NOT TO SCALE

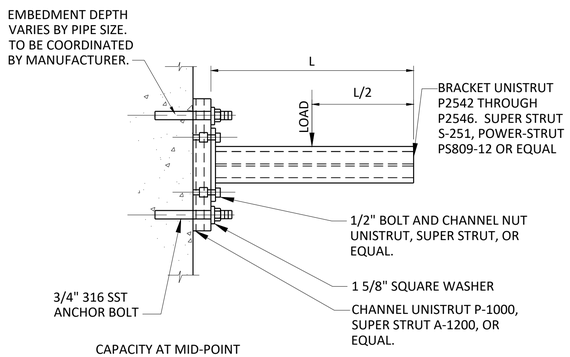


CAPACITY: 3/8 " THROUGH 12" PIPE MAXIMUM ALLOWABLE LOAD.

ROD SIZE	LOAD
3/8 "	610 LBS
1/2 "	1130 LBS
5/8 "	1810 LBS
3/4 "	2710 LBS
7/8 "	3770 LBS

SPACING SHALL BE AS REQUIRED. BUT SHALL NOT EXCEED THOSE SPANS SHOWN IN TABLE A IN DETAIL PS25C2/PM-17.

341 TYPE H — STRUCTURAL ATTACHMENT DETAIL
NOT TO SCALE



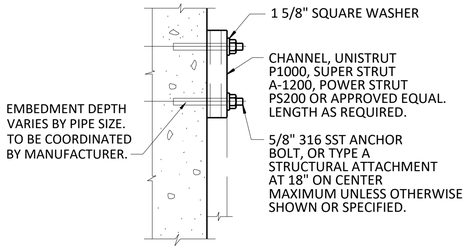
CAPACITY AT MID-POINT

L	LOAD
12"	1000 LBS
18"	650 LBS
24"	500 LBS
30"	400 LBS
36"	350 LBS

BRACKET MAY BE USED WITH VARIOUS HANGER, ROLLER, GUIDE AND CLAMP ASSEMBLIES.

SPACING SHALL BE AS REQUIRED, BUT SHALL NOT EXCEED THOSE SPANS SHOWN IN TABLE A IN DETAIL PS25C2/PM-17.

341 TYPE K — STRUCTURAL ATTACHMENT DETAIL
NOT TO SCALE

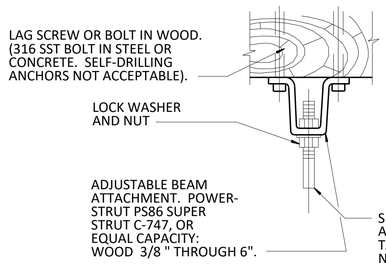


BRACKET MAY BE WALL OR CEILING MOUNTED, AND MAY BE USED WITH VARIOUS HANGER, GUIDE, RACK, OR ANCHOR AND SWAY BRACE ASSEMBLIES.

MAXIMUM LOAD CAPACITY SHALL BE AS RECOMMENDED BY THE CHANNEL MANUFACTURER WITH A FACTOR OF SAFETY OF 4 OR GREATER.

SPACING SHALL BE AS REQUIRED, BUT SHALL NOT EXCEED THOSE SPANS SHOWN IN TABLE A IN DETAIL PS25C2/PM-17.

341 TYPE M — STRUCTURAL ATTACHMENT DETAIL
NOT TO SCALE



PIPE (THROUGH 10" PIPE USING PIPE HANGER TYPE 5 OR 8) STEEL OR CONCRETE, 3/8 " THROUGH 12" PIPE.

MAXIMUM ALLOWABLE LOAD:

ROD SIZE	LOAD WOOD	LOAD CONCRETE/STEEL
3/8 "	425 LBS	610 LBS
1/2 "	715 LBS	1130 LBS
5/8 "	810 LBS	1810 LBS
3/4 "	1500 LBS	2710 LBS
7/8 "	1650 LBS	3770 LBS

341 TYPE J — STRUCTURAL ATTACHMENT DETAIL
NOT TO SCALE

ISSUED FOR BID

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2026

GEORGIA REGISTERED No. PE051805 PROFESSIONAL ENGINEER JOSHUA CADE STARLING
10/22/2025

FREESE NICHOLS
2180 Satellite Boulevard
Suite 235
Duluth, Georgia 30097
Phone - (470)-645-3092
Web - www.freese.com

GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES
SUWANEE CREEK DIVERSION PUMP STATION
PROCESS MECHANICAL
DETAILS III

NO.	ISSUE	BY	DATE
0	ISSUED FOR BID	JCS	10/22/2025

F&N JOB NO. GWR24074
DATE 10/22/2025
DESIGNED JCS
DRAWN SEL
CHECKED JCS
APPROVED JCS
FILE NAME MP-ALL-DT-DETL01.dwg

VERIFY SCALE Bar Scale is one inch on original drawing. If not one inch on this sheet, adjust scale.
0 1"

SHEET PM-19
SEQ. 38 OF 129

ACAD Rel: 25.0s (LMS Tech)
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Last Saved: 10/21/2025 3:31 AM Saved By: 08763

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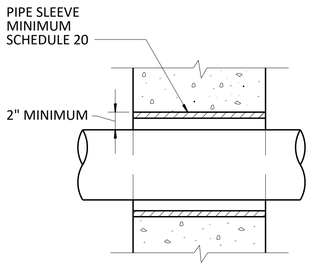
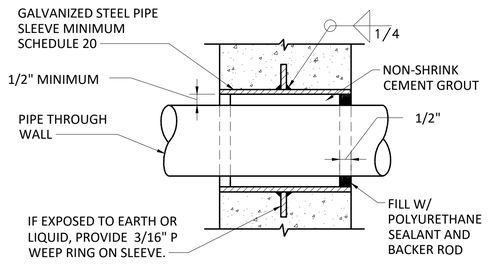
PIPE PENETRATION NOTES

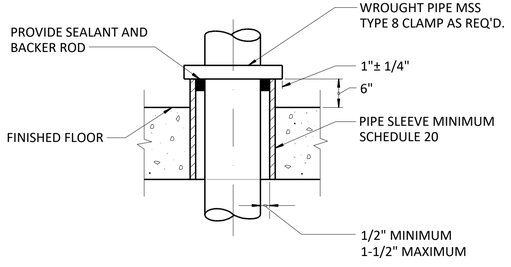
1. ALL STEEL SLEEVES SHALL BE STAINLESS STEEL, UNLESS OTHERWISE NOTED.
2. SEAL FLANGES SHALL BE DRILLED TO 150 POUND STANDARD. EACH JOINT SHALL HAVE GASKETS.
3. FLEXIBLE JOINTS SHALL BE PROVIDED FOR UNDERGROUND PIPING.
4. INSULATION SHALL NOT EXTEND THROUGH SLEEVES, UNLESS OTHERWISE NOTED.
5. WHERE DUCTILE IRON PIPE IS EMBEDDED IN CONCRETE AT AN EXPANSION JOINT USE TYPE J.
6. WEEP RINGS SHALL HAVE A MINIMUM DIAMETER EQUAL TO THE PIPE DIAMETER PLUS 6-INCHES.
7. TANK SIDE OF WALL SHALL MEAN SIDE OF WALL NORMALLY EXPOSED TO LIQUID, EARTH, OR OUTSIDE ATMOSPHERE.
8. SEAL WITH MASTIC SEALANT WHERE WALL IS EXPOSED TO LIQUID, EARTH, OR EXPLOSION HAZARD AREA.
9. NOT ALL PIPE PENETRATIONS MAY BE USED IN THESE PLANS.
10. OD = OUTSIDE DIAMETER.



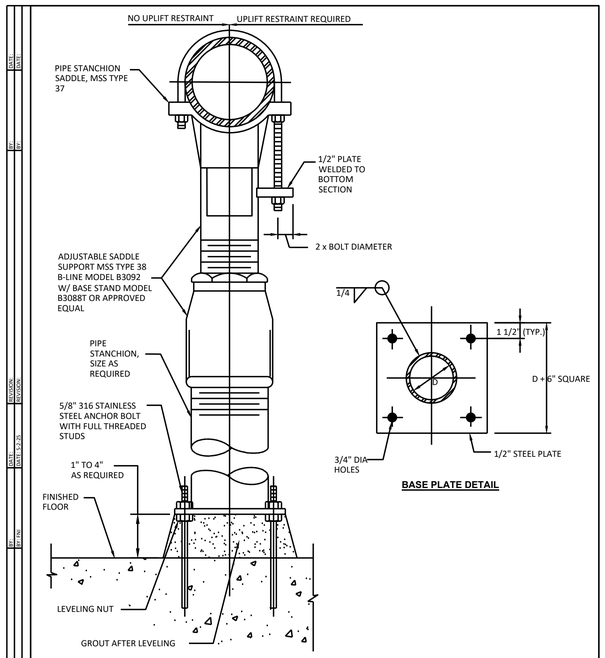
342 TYPE B — FOR WALLS
PIPE PENETRATION DETAIL
NOT TO SCALE



342 TYPE E — FOR WALLS
PIPE PENETRATION DETAIL
NOT TO SCALE



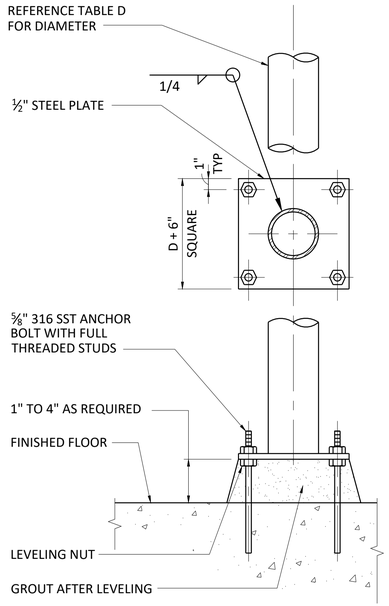
342 TYPE C — FOR FLOORS AND CEILINGS
PIPE PENETRATION DETAIL
NOT TO SCALE



NOTES:
1. SPACING SHALL BE AS REQUIRED, BUT SHALL NOT EXCEED THOSE SPANS SHOWN IN TABLE A ON DETAIL PS25C2. FOR DIP, SIZES OVER 12" SPECIFY SUPPORT FOR DI.

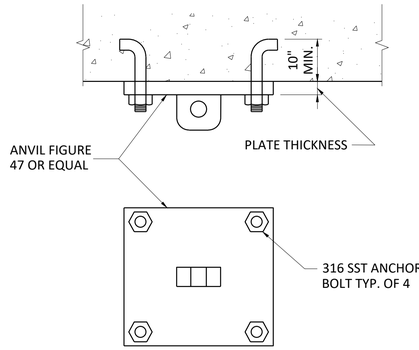
GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES

DESIGN BY: 2025 DWR REVISION	**PIPE SUPPORT (4" THROUGH 30" PIPE)**	DRAWING NO. **PS25C1**
DRAWN BY: AMK		
CHECKED BY: JCS		
APPROVED BY: DWR		
SCALE: NONE		



SPACING SHALL BE AS REQUIRED, BUT SHALL NOT EXCEED THOSE SPANS SHOWN IN TABLE A IN DETAIL PS25C2/PM-17.

341 TYPE N — ### STRUCTURAL ATTACHMENT DETAIL
NOT TO SCALE

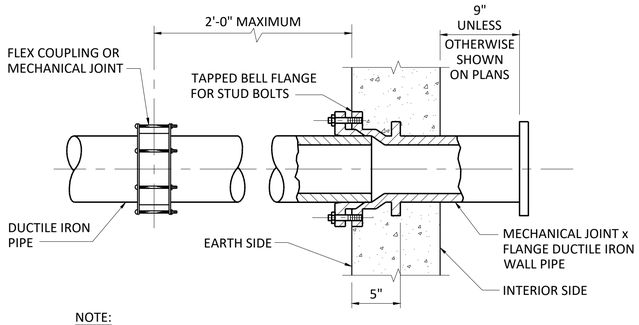


MAXIMUM ALLOWABLE LOAD			
PLATE THICKNESS	ROD SIZE	BOLT SIZE	LOAD
¾"	1"	¾"	4960 LBS
1"	1¼"	⅞"	8000 LBS
1"	1½"	1"	11630 LBS

ATTACH ROD TO STRUCTURAL ATTACHMENT WITH FORGED STEEL CLEVIS, ANVIL FIG 299 OR EQUAL.

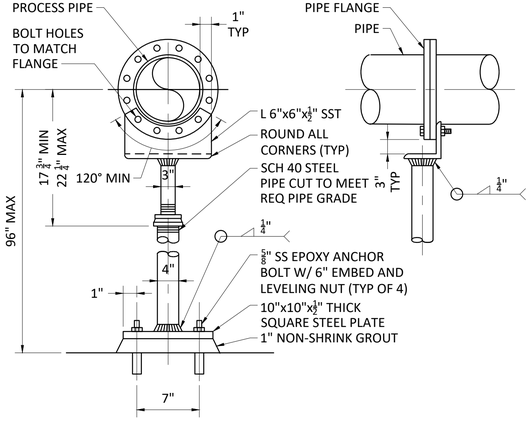
341 TYPE S — ### STRUCTURAL ATTACHMENT DETAIL
NOT TO SCALE

TABLE D-PIPE STANCHION DIAMETER	
PIPE, ELBOW, OR TEE SIZE (INCHES)	NOMINAL PIPE STANCHION DIA. (INCHES)
2 - 3 1/2	1 1/2
4 - 12	3
14 - 16	4
18 - 36	6



NOTE:
COAT WALL PIPE WITH SPECIFIED PAINT SYSTEM PRIOR TO CONCRETE PLACEMENT.

342 TYPE K — FOR WALLS
PIPE PENETRATION DETAIL
NOT TO SCALE



NOTES:
1. HOT DIP GALVANIZE ENTIRE PIPE SUPPORT AFTER FABRICATION (EXCEPT FOR STAINLESS STEEL FASTENING HARDWARE).
2. SEE PLANS AND SECTIONS FOR PIPE GRADE REQUIREMENT.
3. PIPE SUPPORT SUITABLE FOR PIPE SIZES 3" THROUGH 24" DIA.

1 - — ### ADJUSTABLE PIPE SUPPORT - FLANGE
NOT TO SCALE

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 12/31/2025

GEORGIA REGISTERED No. PE051805 PROFESSIONAL ENGINEER JOSHUA CADE STARLING
10/22/2025

FREESE NICHOLS
2180 Satellite Boulevard
Suite 235
Duluth, Georgia 30097
Phone - (470)-645-3092
Web - www.freese.com

GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES
SUWANEE CREEK DIVERSION PUMP STATION
PROCESS MECHANICAL
DETAILS IV

F&N JOB NO.	GWR24074
DATE	10/22/2025
DESIGNED	JCS
DRAWN	SEL
CHECKED	JCS
APPROVED	JCS
FILE NAME	MP-ALL-DT-DETL01.dwg

NO.	ISSUE	BY	DATE
0	ISSUED FOR BID	JCS	10/22/2025

VERIFY SCALE Bar Scale is one inch on original drawing. If not one inch on this sheet, adjust scale.
0 1

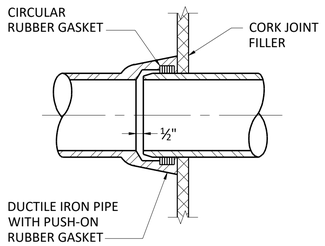
SHEET PM-20
SEQ. 39 OF 129

ISSUED FOR BID

ACAD Rel: 25.0s (LMS Tech)
Filename: N:\WTU\Drawings\PM Sheets\MP-ALL-DT-DETL01.dwg
Last Saved: 9/16/2025 5:09 PM Saved By: 08448
Plot Date: 10/21/2025 3:26 AM Plot By: 08763 Filename: N:\WTU\Drawings\PM Sheets\MP-ALL-DT-DETL01.dwg

PIPE PENETRATION NOTES

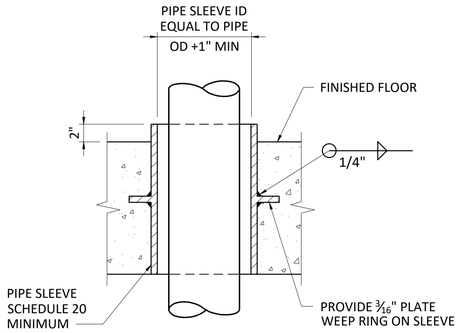
1. ALL STEEL SLEEVES SHALL BE STAINLESS STEEL, UNLESS OTHERWISE NOTED.
2. SEAL FLANGES SHALL BE DRILLED TO 150 POUND STANDARD. EACH JOINT SHALL HAVE GASKETS.
3. FLEXIBLE JOINTS SHALL BE PROVIDED FOR UNDERGROUND PIPING.
4. INSULATION SHALL NOT EXTEND THROUGH SLEEVES, UNLESS OTHERWISE NOTED.
5. WHERE DUCTILE IRON PIPE IS EMBEDDED IN CONCRETE AT AN EXPANSION JOINT USE TYPE J.
6. WEEP RINGS SHALL HAVE A MINIMUM DIAMETER EQUAL TO THE PIPE DIAMETER PLUS 6-INCHES.
7. TANK SIDE OF WALL SHALL MEAN SIDE OF WALL NORMALLY EXPOSED TO LIQUID, EARTH, OR OUTSIDE ATMOSPHERE.
8. SEAL WITH MASTIC SEALANT WHERE WALL IS EXPOSED TO LIQUID, EARTH, OR EXPLOSION HAZARD AREA.
9. NOT ALL PIPE PENETRATIONS MAY BE USED IN THESE PLANS.
10. OD = OUTSIDE DIAMETER.



FLEXIBLE JOINT ON DRAINAGE LINES AT STRUCTURAL JOINTS

342 TYPE J — PIPE PENETRATION DETAIL

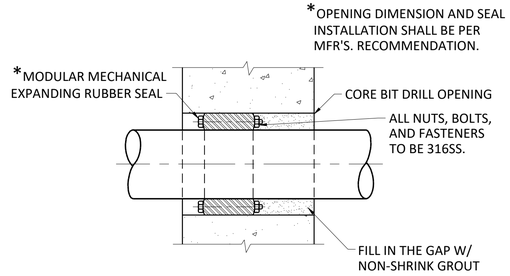
NOT TO SCALE



FOR FLOORS

342 TYPE S — PIPE PENETRATION DETAIL

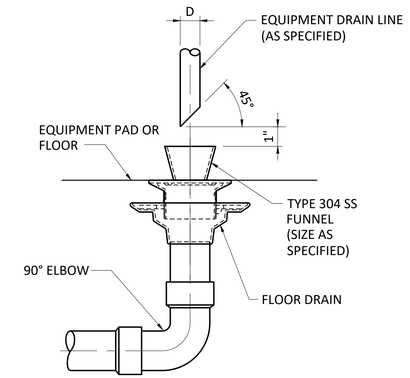
NOT TO SCALE



FOR EXISTING WALLS

342 TYPE T — PIPE PENETRATION DETAIL

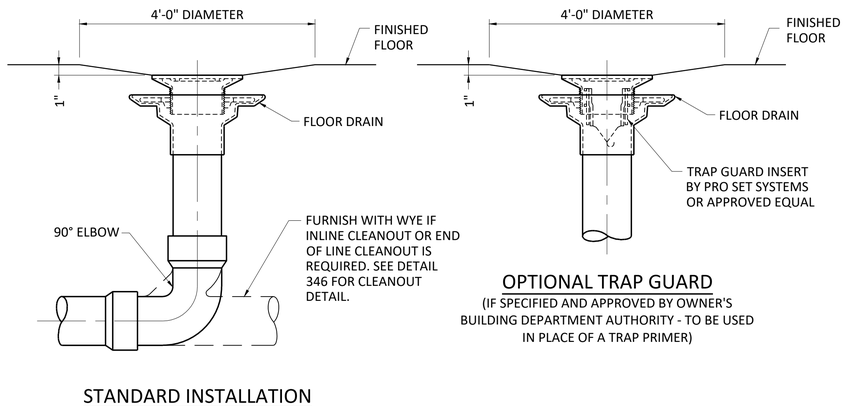
NOT TO SCALE



(2" TO 6" DIAMETER DRAINS)

344 TYPE A — EQUIPMENT DRAIN DETAIL

NOT TO SCALE



STANDARD INSTALLATION

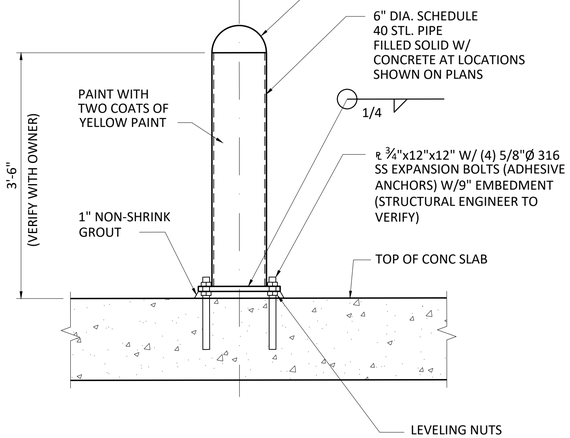
OPTIONAL TRAP GUARD

(IF SPECIFIED AND APPROVED BY OWNER'S BUILDING DEPARTMENT AUTHORITY - TO BE USED IN PLACE OF A TRAP PRIMER)

(2" TO 6" DIAMETER DRAINS)

345 TYPE A — FLOOR DRAIN DETAIL

NOT TO SCALE



TYPICAL CONCRETE SURFACE MOUNTED BOLLARD DETAIL

547 TYPE A

NOT TO SCALE

ISSUED FOR BID

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2026

GEORGIA REGISTERED No. PE051805 PROFESSIONAL ENGINEER JOSHUA CADE STARLING

10/22/2025

FREESE NICHOLS
2180 Satellite Boulevard
Suite 235
Duluth, Georgia 30097
Phone - (470)-645-3092
Web - www.freese.com

GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES

SUWANEE CREEK DIVERSION PUMP STATION

PROCESS MECHANICAL

DETAILS V

NO.	ISSUE	BY	DATE
0	ISSUED FOR BID	JCS	10/22/2025

F&N JOB NO. GWR240174
DATE 10/22/2025
DESIGNED JCS
DRAWN SEL
CHECKED JCS
APPROVED JCS
FILE NAME MP-ALL-DT-DETL01.dwg

VERIFY SCALE Bar Scale is one inch on original drawing. If not one inch on this sheet, adjust scale.

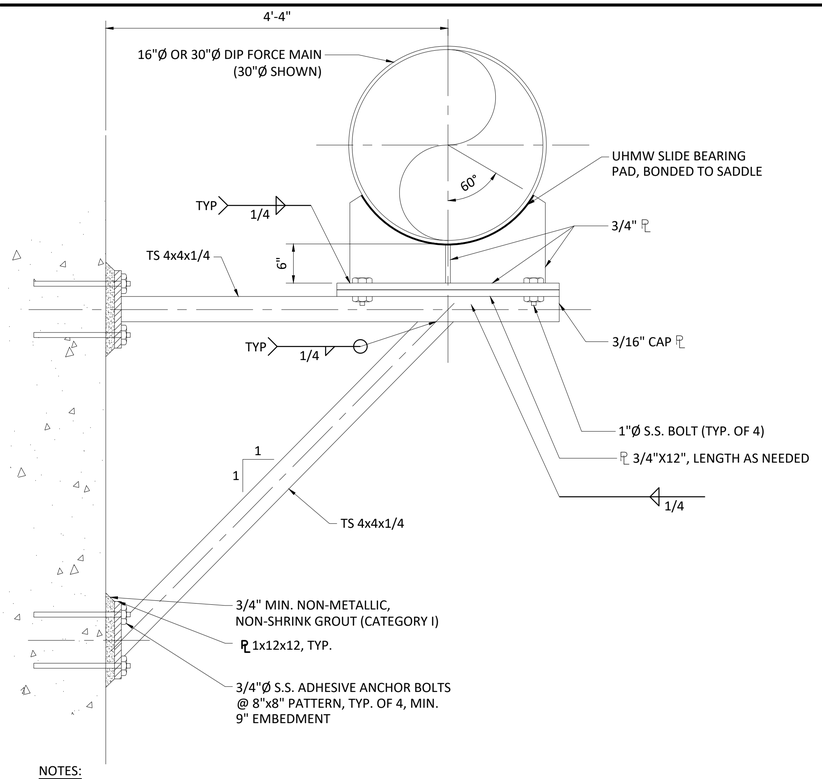
0 1"

SHEET PM-21

SEQ. 40 OF 129

ACAD Rel: 25.0s (LMS Tech)
Filename: N:\WTU\Drawings\PM Sheets\MP-ALL-DT-DETL01.dwg
Last Saved: 9/16/2025 5:09 PM Saved By: 08448

Plot Date: 10/21/2025 3:25 AM Plot By: 08763 Filename: N:\WTU\Drawings\PM Sheets\MP-ALL-DT-DETL01.dwg

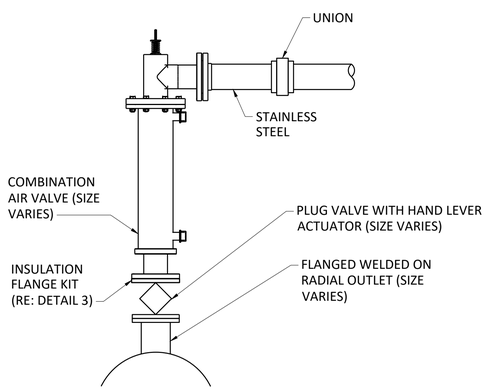


NOTES:

1. ALL WELDED COMPONENTS ON THIS DETAIL WILL BE 316L SS.
2. CONTRACTOR TO DEMOLISH THE EXISTING PIPE SUPPORTS AND REPLACE WITH THE DETAIL ON THIS SHEET. CUT EXISTING ANCHORS FLUSH WITH THE EXISTING CONCRETE. COORDINATE NEW ANCHOR LOCATION TO AVOID CONFLICTS WITH EXISTING.
3. FOR AREAS OF DAMAGED CONCRETE , REFERENCE DETAIL 3/SHEET S-8.

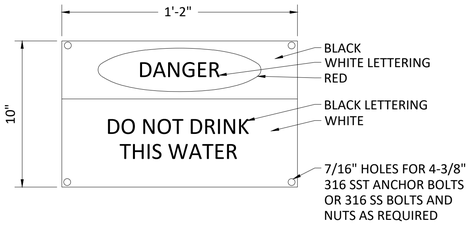
1 - FORCE MAIN WALL SUPPORT

NOT TO SCALE



2 - CAV (COMBINATION AIR VALVE)

NOT TO SCALE

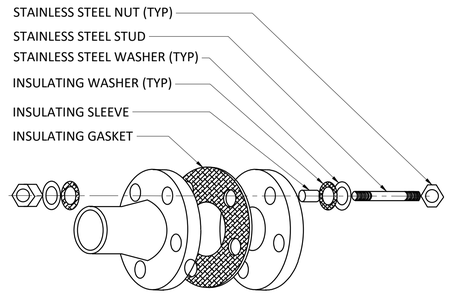


NOTES:

1. WARNING SIGN SHALL BE 0.060 INCH FIBERGLASS WITH EMBEDDED FADERPROOF LEGENDS.
2. LETTER HEIGHTS ARE APPROXIMATE.
3. CONTRACTOR SHALL USE 6 HOLES FOR INSTALLING SIGN ON WALLS AND A MINIMUM OF 4 HOLES FOR INSTALLING SIGN ON HANDRAILS.

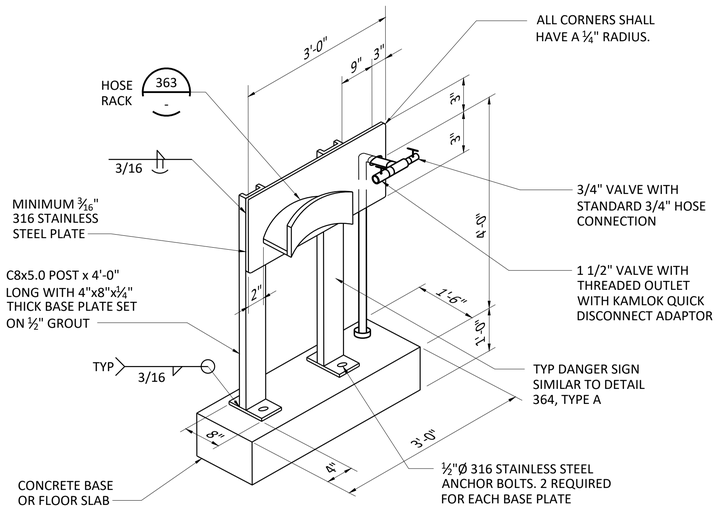
364 TYPE A - TYPICAL DANGER SIGN

NOT TO SCALE



3 - DIELECTRIC INSULATION FLANGE KIT

NOT TO SCALE

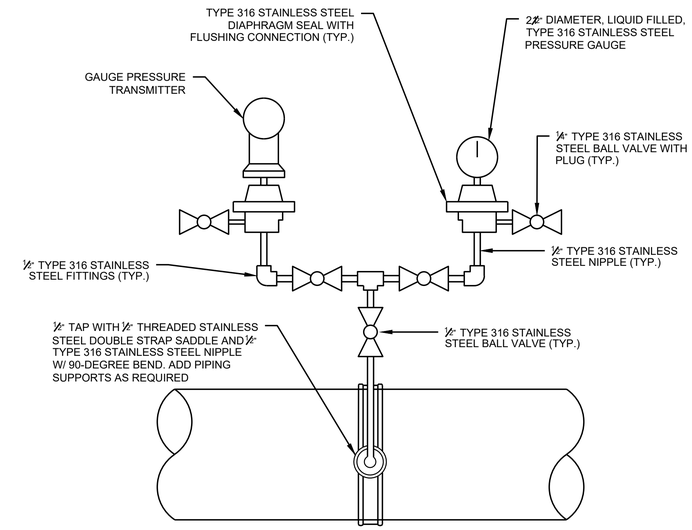


NOTES:

1. ANCHOR BOLTS SHALL BE HOOKED UNDER REINFORCING STEEL OR INTO BASE SLAB.
2. FOR 362 TYPE C UTILITY STATION, PROVIDE 50-FOOT HOSE. (ENGINEER TO VERIFY WITH OWNER ON THE LENGTH OF HOSE).
3. COMPLETE ASSEMBLY TO BE 316 STAINLESS STEEL.

362 TYPE C - POST-MOUNTED UTILITY STATION DETAIL

NOT TO SCALE

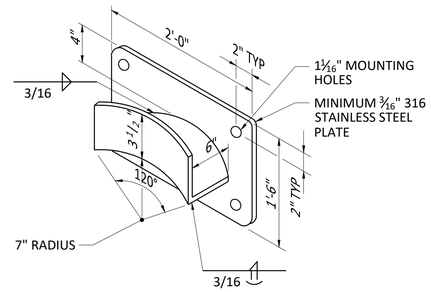


NOTES:

1. PRESSURE TRANSDUCER AND TRANSMITTER, PRESSURE GAUGE, AND DIAPHRAGM SEAL SHALL BE PROVIDED BY A MANUFACTURER IDENTIFIED IN THE LIST OF ACCEPTABLE MANUFACTURERS.

4 - PRESSURE TRANSDUCER AND GAUGE ASSEMBLY

NOT TO SCALE



NOTE:

1. ALL CORNERS SHALL HAVE A ¾" RADIUS.
2. PROVIDE FASTENERS TO FASTEN HOSE RACK TO CHAIN LINK FENCE.

363 - HOSE RACK

NOT TO SCALE

ISSUED FOR BID

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2026

GEORGIA REGISTERED No. PE051805 PROFESSIONAL ENGINEER JOSHUA CADE STARLING
10/22/2025

FREESE NICHOLS
2180 Satellite Boulevard
Suite 235
Duluth, Georgia 30097
Phone - (470)-645-3092
Web - www.freese.com

GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES
SUWANEE CREEK DIVERSION PUMP STATION
PROCESS MECHANICAL
DETAILS VI

NO.	ISSUE	BY	DATE
0	ISSUED FOR BID	JCS	10/22/2025

VERIFY SCALE Bar Scale is one inch on original drawing. If not one inch on this sheet, adjust scale.
0 1"

R&M JOB NO.	GWR24074		
DATE	10/22/2025	DESIGNED	JCS
DRAWN	SEL	CHECKED	JCS
APPROVED	JCS	FILE NAME	MP-ALL-DT-DETL01.dwg

SHEET PM-22

SEQ. 41 OF 129

ACAD Rel: 25.0s (LMS Tech)
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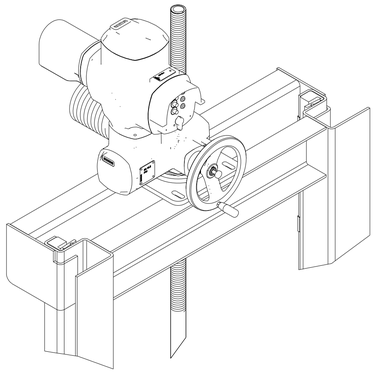
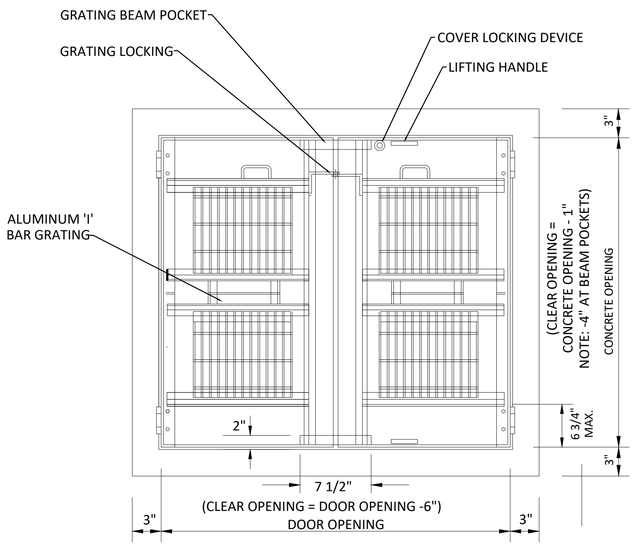
Plot Date: 10/21/2025 10:51 AM Plot By: 08763 Filename: N:\WTU\Drawings\PM Sheets\MP-ALL-DT-DETL01.dwg

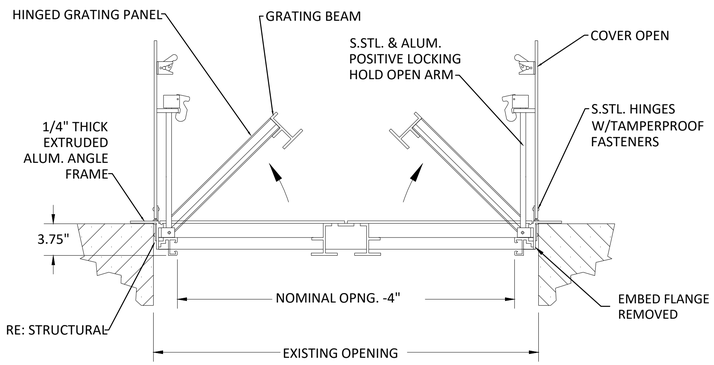
GATE DIMENSIONS		
TAG	DIMENSION	DESCRIPTION
A	REFERENCE SPECIFICATION 40 05 50	OPENING CLEAR WIDTH
B		GATE PLATE HEIGHT/MAX. HEAD
C		DISTANCE FROM FLOOR LEVEL TO CHANNEL/OPENING INVERT
D		DISTANCE FROM FLOOR LEVEL TO TOP OF BENCH/PEDESTAL (STANDARD IS 30")



1A - BENCH MOUNTED ELECTRIC OPERATOR

NOT TO SCALE





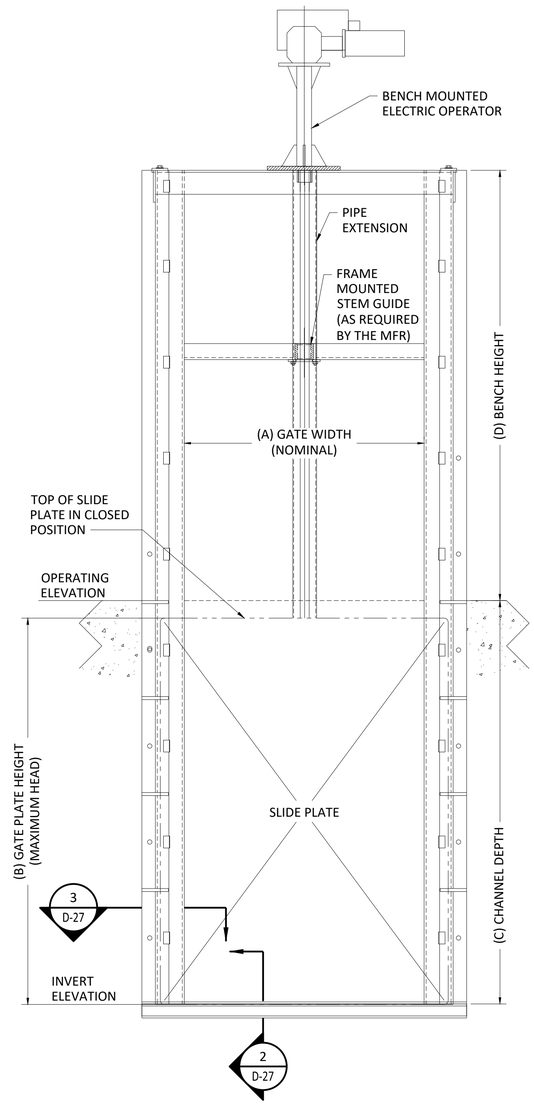
SECTION

NOT TO SCALE

NOTE: CONTRACTOR TO VERIFY EXISTING OPENING OF 60" X 60"

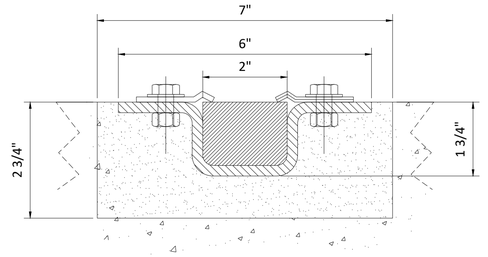
2 - DROP-IN STYLE HATCH WITH SAFETY GRATE

NOT TO SCALE



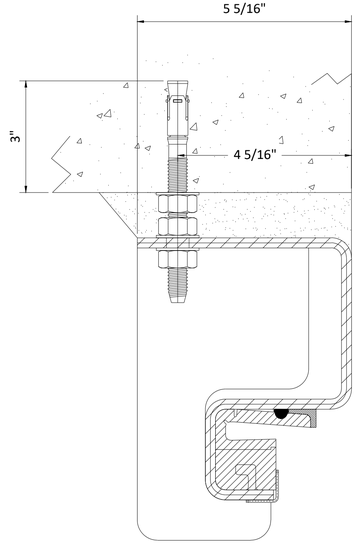
1B - OPEN CHANNEL END-OF-WALL MOUNT SLIDE GATE W/ EMBEDDED FRAME INVERT

NOT TO SCALE



1C - EMBEDDED INVERT FOR BASE OF GUIDE FRAME

NOT TO SCALE



1D - WALL MOUNTED GUIDE FRAME

NOT TO SCALE

ISSUED FOR BID

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2026

GEORGIA REGISTERED No. PE051805 PROFESSIONAL ENGINEER JOSHUA CADE STARLING

10/22/2025

FREESE NICHOLS
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Web - www.freese.com

GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES

SUWANEE CREEK DIVERSION PUMP STATION

PROCESS MECHANICAL

DETAILS VII

NO.	ISSUE	BY	DATE
0	ISSUED FOR BID	JCS	10/22/2025

F&N JOB NO. GWR24074
DATE 10/22/2025
DESIGNED JCS
DRAWN SEL
CHECKED JCS
APPROVED JCS
FILE NAME MP-ALL-DT-DETL01.dwg

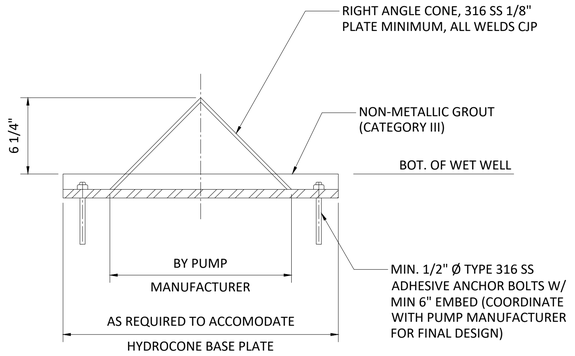
VERIFY SCALE Bar Scale is one inch on original drawing. If not one inch on this sheet, adjust scale. 0 1"

SHEET PM-23

SEQ. 42 OF 129

ACAD Rel: 25.0s (LMS Tech)
Filename: N:\WTU\Drawings\PM Sheets\MP-ALL-DT-DETL01.dwg
Last Saved: 10/21/2025 3:31 AM Saved By: 08763

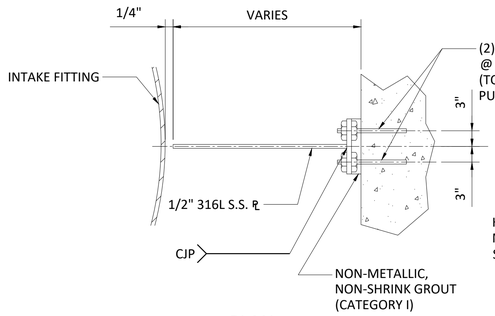
Plot Date: 10/21/2025 10:53 AM Plot By: 08763 Filename: N:\WTU\Drawings\PM Sheets\MP-ALL-DT-DETL01.dwg



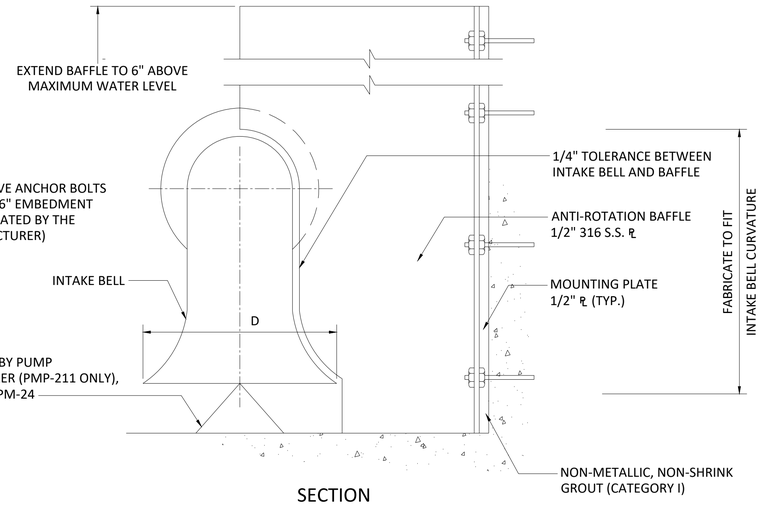
1 / - HYDRO-CONE (PMP-211 ONLY)

NOT TO SCALE

NOTES:
1. DIMENSIONS SHALL BE ADJUSTED AND COORDINATED BY THE CONTRACTOR FOR THE INTAKE BELL DIAMETER "D".
2. FIN AND ANCHOR BOLT MATERIAL SHOWN IN THIS DETAIL SHALL BE 316 SS. ALL WELDED COMPONENTS ON THIS SHEET SHALL BE 316L SS.
3. CONTRACTOR TO DEMOLISH THE EXISTING VORTEX SUPPRESSION EQUIPMENT AND REPLACE WITH THE DETAILS OUTLINED ON THIS SHEET. CUT EXISTING ANCHORS FLUSH WITH THE EXISTING CONCRETE. COORDINATE NEW ANCHOR LOCATION TO AVOID CONFLICTS WITH THE EXISTING.
4. FOR AREAS OF DAMAGED CONCRETE, REFERENCE DETAIL 3/SHEET S-8.



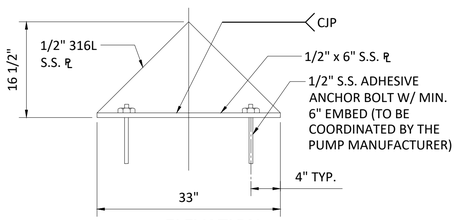
PLAN



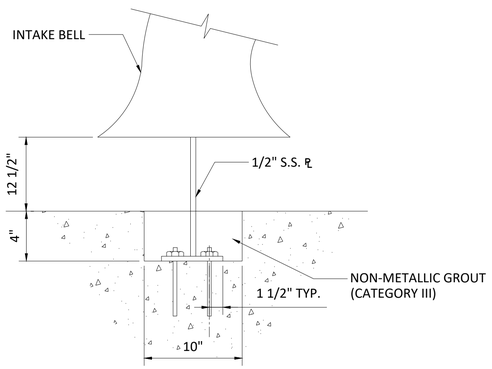
SECTION

2 / - ANTI-ROTATION BAFFLE (PMP-211 ONLY)

NOT TO SCALE



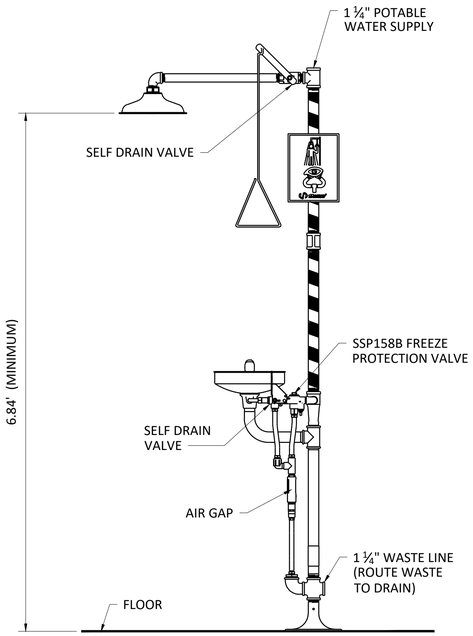
ELEVATION



SECTION

3 / - PUMP INTAKE FIN (PMP-221 AND PMP-231 ONLY)

NOT TO SCALE



4 / - EYEWASH DETAIL

3/4" = 1'-0"

0 6" 1' 2'

3/4"=1'-0

ISSUED FOR BID

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 5/30/2026

GEORGIA REGISTERED No. PE051805 PROFESSIONAL ENGINEER JOSHUA CADE STARLING
10/22/2025

FREESE NICHOLS
2180 Satellite Boulevard
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Phone - (470)-645-3092
Web - www.freese.com

GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES
SUWANEE CREEK DIVERSION PUMP STATION
PROCESS MECHANICAL
DETAILS VIII

NO.	ISSUE	BY	DATE
0	ISSUED FOR BID	JCS	10/22/2025

F&N JOB NO. GWR24074
DATE 10/22/2025
DESIGNED JCS
DRAWN SEL
CHECKED JCS
APPROVED JCS
FILE NAME MP-ALL-DT-DETL01.dwg

Bar Scale is one inch on original drawing. If not one inch on this sheet, adjust scale.
VERIFY SCALE 0 1"

SHEET PM-24
SEQ. 43 OF 129

ACAD Rel: 25.0s (LMS Tech)
Filename: N:\WTU\Drawings\PM Sheets\MP-ALL-DT-DETL01.dwg
Last Saved: 10/21/2025 3:31 AM Saved By: 08763

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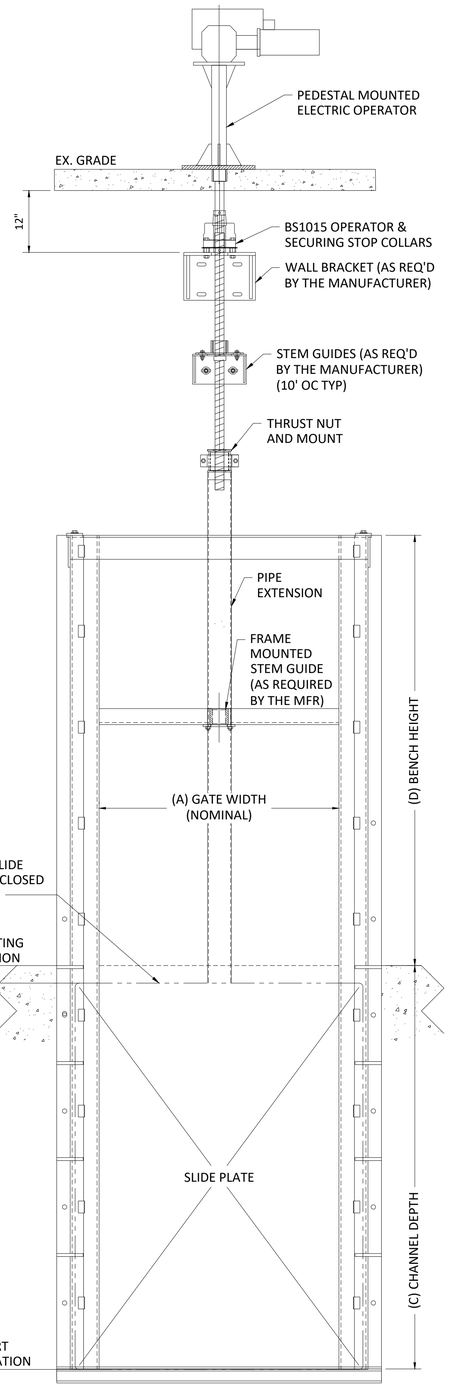
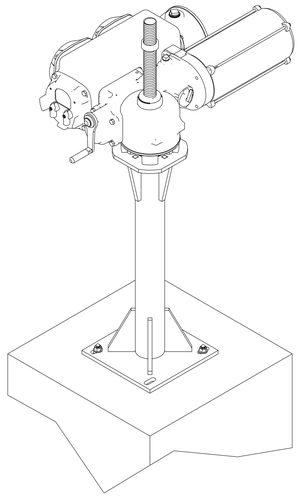


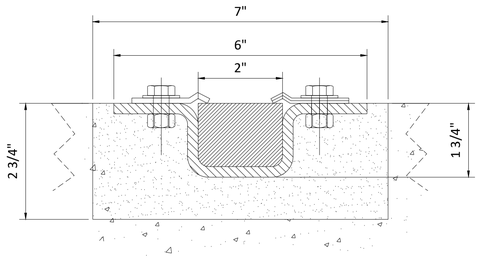
1A — OPEN CHANNEL MOUNT SLIDE GATE W/ EMBEDDED FRAME INVERT

NOT TO SCALE



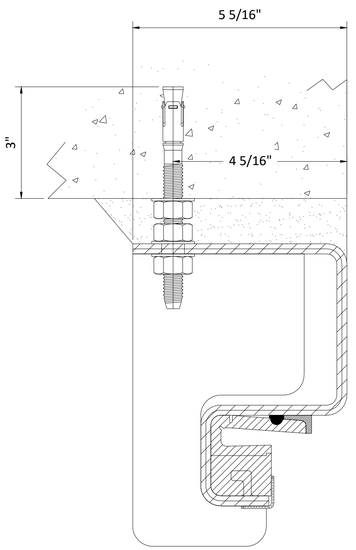
1B — PEDESTAL MOUNTED ELECTRIC OPERATOR

NOT TO SCALE



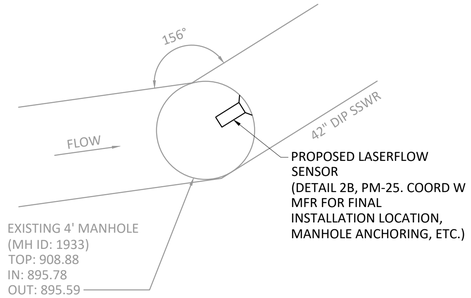
1C — EMBEDDED INVERT FOR BASE OF GUIDE FRAME

NOT TO SCALE



1D — WALL MOUNTED GUIDE FRAME

NOT TO SCALE

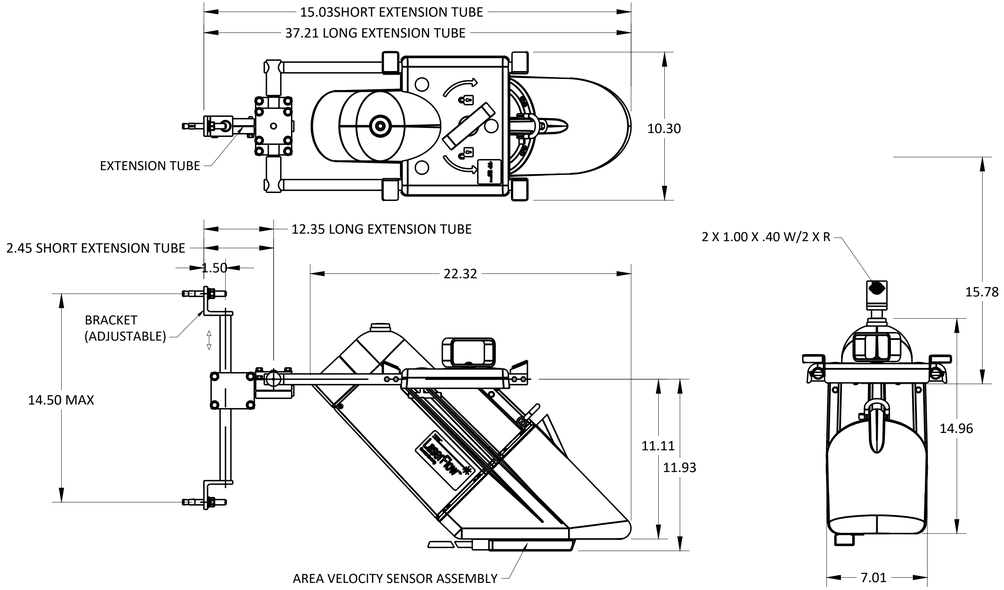


NOTES:
1. LASERFLOW SENSOR IS TO BE INSTALLED AFTER ALL BYPASS PUMPING OPERATIONS RELATED TO MH ID 1933 HAVE BEEN COMPLETED.

2A — PROPOSED LASERFLOW INSTALLATION

NOT TO SCALE

LaserFlow SENSOR SPECIFICATIONS	
WEIGHT	
MOUNT	11.5 LBS [5.2 KG]
LaserFlow SENSOR 10M	19.2 LBS [8.7 KG]
LaserFlow SNSR + AREA VELOCITY	20 LBS [9 KG]
ENCLOSURE MATERIAL	
HOUSING LaserFlow	CONDUCTIVE CARBON FILLED ABS
HOUSING ULTRASONIC	ANNODIZED ALUMINUM 6061
ULTRASONIC SENSOR	Kynar 340 RESIN PVDF GRADE
MOUNTING HARDWARE	STAINLESS STEEL
ALL OTHER EXTERIOR METAL PARTS	STAINLESS STEEL
ELECTRICAL	
POWER SUPPLY	TIENet BUS POWERED 8-26 VDC
ELECTRICAL CONNECTIONS	
TIENet DEVICE	SREW TERMINAL CONNECTION OR TIENet PLUG
LASER CLASS	CLASS 3R



NOTES:
1. ALL DIMENSIONS SHOWN FOR DETAIL 2B ARE SHOWN IN INCHES.

2B — LASERFLOW SENSOR DETAIL

NOT TO SCALE

ISSUED FOR BID

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2026

GEORGIA REGISTERED No. PE051805 PROFESSIONAL ENGINEER JOSHUA CADE STARLING
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GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES
SUWANEE CREEK DIVERSION PUMP STATION

PROCESS MECHANICAL

DETAILS IX

NO.	ISSUE	BY	DATE
0	ISSUED FOR BID	JCS	10/22/2025

VERIFY SCALE Bar Scale is one inch on original drawing. If not one inch on this sheet, adjust scale.

0 1"

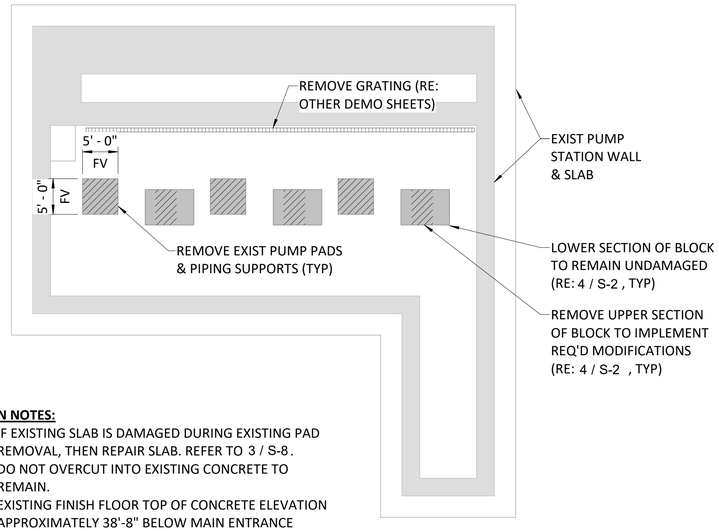
F&N JOB NO.	GWR24074
DATE	10/22/2025
DESIGNED	JCS
DRAWN	SEL
CHECKED	JCS
APPROVED	JCS
FILE NAME	MP-ALL-DT-DETL01.dwg

SHEET PM-25

SEQ. 44 OF 129

ACAD Rel: 25.0s (LMS Tech)
Filename: N:\WTU\Drawings\PM Sheets\MP-ALL-DT-DETL01.dwg
Last Saved: 9/16/2025 5:09 PM Saved By: 08448

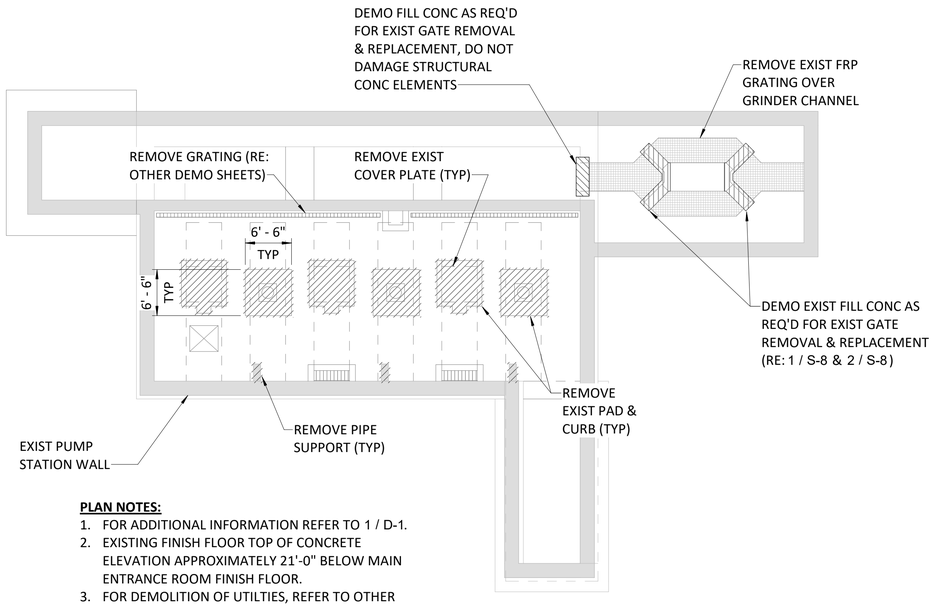
Plot Date: 10/21/2025 3:18 AM Plot By: 08763 Filename: N:\WTU\Drawings\PM Sheets\MP-ALL-DT-DETL01.dwg



PLAN NOTES:

1. IF EXISTING SLAB IS DAMAGED DURING EXISTING PAD REMOVAL, THEN REPAIR SLAB. REFER TO 3 / S-8.
2. DO NOT OVERCUT INTO EXISTING CONCRETE TO REMAIN.
3. EXISTING FINISH FLOOR TOP OF CONCRETE ELEVATION APPROXIMATELY 38'-8" BELOW MAIN ENTRANCE ROOM FINISH FLOOR.
4. FOR DEMOLITION OF UTILTIES, REFER TO OTHER DEMOLITION SHEETS.

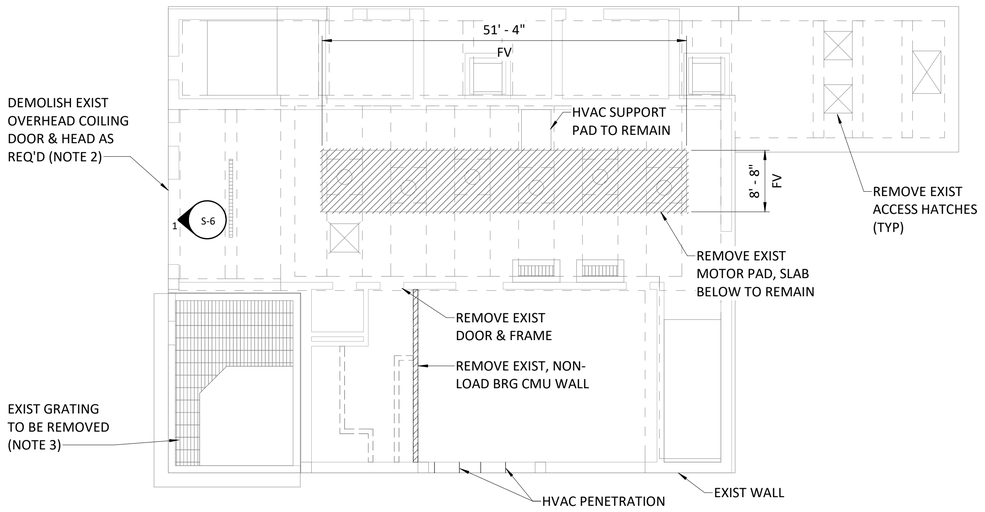
1 LOWER PUMP ROOM DEMOLITION PLAN
3/32" = 1'-0"



PLAN NOTES:

1. FOR ADDITIONAL INFORMATION REFER TO 1 / D-1.
2. EXISTING FINISH FLOOR TOP OF CONCRETE ELEVATION APPROXIMATELY 21'-0" BELOW MAIN ENTRANCE ROOM FINISH FLOOR.
3. FOR DEMOLITION OF UTILTIES, REFER TO OTHER DEMOLITION SHEETS.

2 UPPER PUMP ROOM DEMOLITION PLAN
3/32" = 1'-0"



PLAN NOTES:

1. FOR ADDITIONAL INFORMATION REFER TO 1 / D-1.
2. TEMPORARILY SUPPORT EXISTING VENEER AND STRUCTURAL CMU AS REQUIRED FOR DEMOLITION AND NEW HEAD AND DOOR.
3. REMOVE GRATING AND SUPPORTS. FOR DEMOLITION OF UTILITIES, REFER TO OTHER DEMOLITION SHEETS.
4. FINISH FLOOR IS APPROXIMATELY MATCHES EXTERIOR FINISH GRADE ELEVATION. RELATIVE TO LOWER AND UPPER PUMP ROOM FLOORS ELEVATIONS GIVEN, FINISH FLOOR ELEVATION IS 0'-0".

3 MAIN ENTRANCE ROOM DEMOLITION PLAN
3/32" = 1'-0"

0 1' 2' 4'
1/2"=1'-0"

0 4' 8' 16'
1/8"=1'-0"

0 4' 8' 16'
3/32"=1'-0"

NORTH

ISSUED FOR BID

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2024

GEORGIA REGISTERED No. SE000469 STRUCTURAL ENGINEERS PETER A. BARKWOOD 10/21/2025

FREESE NICHOLS
2180 Satellite Boulevard
Suite 235
Duluth, GA 30097
Phone - (470) 645-3092
Web - www.freese.com

GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES
SUWANEE CREEK DIVERSION PUMP STATION

STRUCTURAL
DEMOLITION
STRUCTURAL DEMOLITION OVERVIEW

F&N JOB NO.	GWR24074			
DATE	10/22/2025			
DESIGNED	PAB			
DRAWN	JLM			
REVISED				
CHECKED	RCW			
		10/22/2025	PAB	BY
		DATE		

FILE NAME ST-GWR24074-EX-R23.RVT

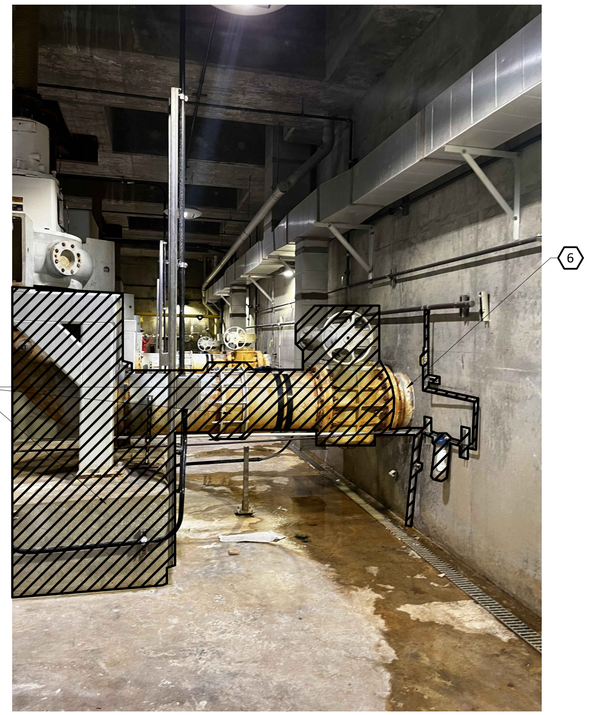
NO.	ISSUE
0	ISSUED FOR BID

VERIFY SCALE 0 1
Bar is one inch on original drawing. If not one inch on this sheet adjust scale.

SHEET D-1
SEQ. 45 OF 129

Plot Date: 10/21/2025 9:28:22 AM

1 - EXISTING REDUCER AND DISCHARGE PIPE DEMOLITION
NOT TO SCALE



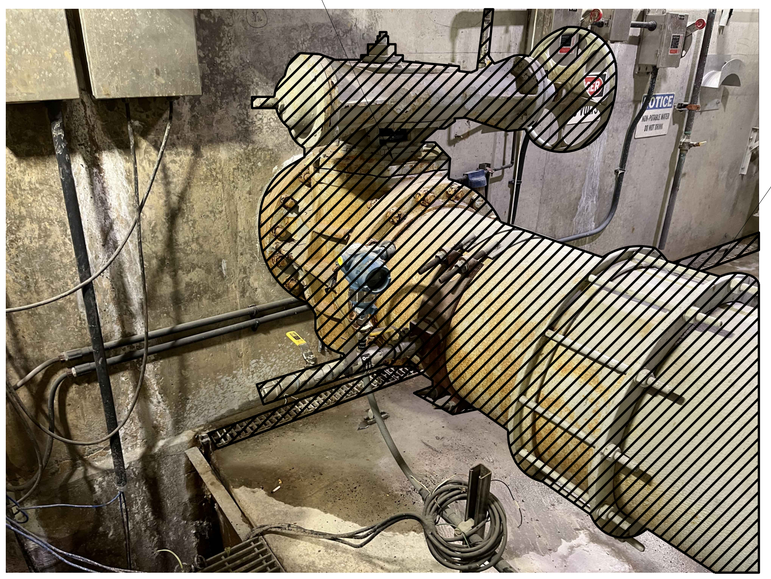
2 - STAGE 1 SUCTION PLUG VALVE AND PIPING DEMOLITION (TYP)
NOT TO SCALE

GENERAL NOTES:

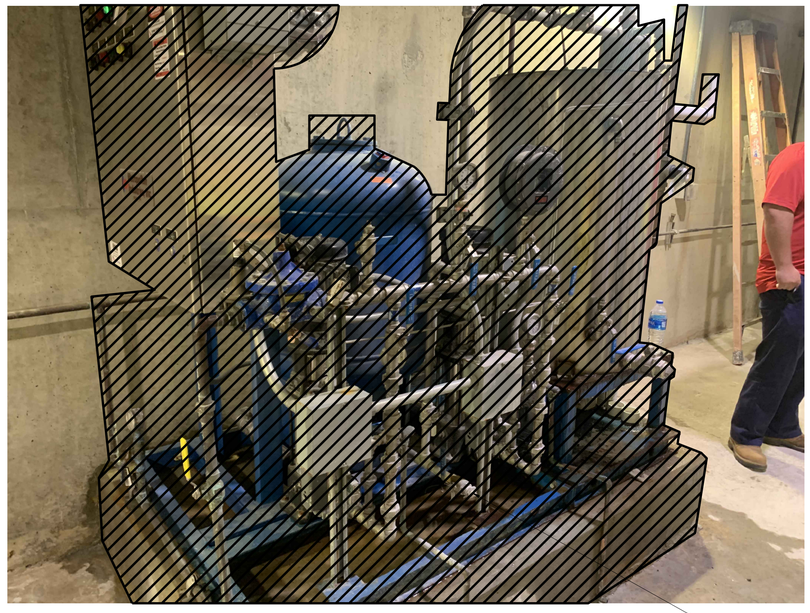
1. OWNER WILL RETAIN THE RIGHT TO SALVAGE ANY MATERIALS AND COMPONENTS. ANY MATERIAL REMOVED AND IDENTIFIED FOR DISPOSAL SHALL BE REMOVED FROM THE JOB SITE AT NO ADDITIONAL COST TO THE OWNER.
2. ALL NON-SALVAGED EQUIPMENT SHALL BE PROPERLY DISPOSED OFF OF OWNER'S SITE AND DISPOSED OF IN ACCORDANCE WITH FEDERAL STATE AND LOCAL LAWS, REGULATIONS AND OTHER ORDINANCES AT NO ADDITIONAL COST TO OWNER.
3. BEFORE BEGINNING CONSTRUCTION, NOTIFY ENGINEER OF ANY DISCREPANCIES OR CONFLICTS FOUND IN DRAWINGS AND/OR FIELD DIMENSIONS.
4. THE CONTRACTOR MUST PROTECT ALL EXISTING EQUIPMENT NOT SET FOR DEMOLITION THROUGHOUT CONSTRUCTION DURATION.
5. CONTRACTOR SHALL PROVIDE A RESTRAINED PLUG OR CAP ON ALL CUT LINES THAT WILL BE ABANDONED IN PLACE.
6. THE FULL COMPONENTS OF THE EXISTING SEAL WATER SYSTEM ARE NOT SHOWN IN THE DEMOLITION PLANS. CONTRACTOR TO VERIFY ALL ASSOCIATED PIPING, EQUIPMENT, AND PARTS FOR DEMOLITION.
7. ONCE SCPS IS ON BYPASS, THE CONTRACTOR IS TO DEWATER THE WET WELL BEFORE DEMOLISHING EXISTING PUMPS, PIPES, ETC.

NOTES BY SYMBOL: "(X)"

1. EXISTING PUMPS, PUMP SUPPORT PAD, APPURTENANCES, AND REDUCERS TO BE REMOVED.
2. EXISTING 18-INCH SUCTION PIPING, PLUG VALVE, SEAL WATER PIPING AND PAD TO BE REMOVED.
3. EXISTING PLUG VALVES TO BE REMOVED.
4. EXISTING SEAL WATER SYSTEM AND APPURTENANCES TO BE REMOVED.
5. EXISTING TRENCH DRAIN GRATING TO BE REMOVED AND REPLACED.
6. EXISTING 18-INCH WALL PIPE PENETRATION IS TO REMAIN INTACT.



3 - SUCTION PIPING PLUG VALVE DEMOLITION
NOT TO SCALE



4 - SEAL WATER DEMOLITION (TYP)
NOT TO SCALE

ISSUED FOR BID

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2026

GEORGIA REGISTERED No. PE051805 PROFESSIONAL ENGINEER JOSHUA CADE STARLING
10/22/2025

FREESE NICHOLS
2180 Satellite Boulevard
Suite 235
Duluth, Georgia 30097
Phone - (470)-645-3092
Web - www.freese.com

GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES
SUWANEE CREEK DIVERSION PUMP STATION
PROCESS MECHANICAL
LOWER PUMP ROOM DEMOLITION PLAN I

NO.	ISSUE	BY	DATE
0	ISSUED FOR BID	JCS	10/22/2025

F&N JOB NO. GWR24074
DATE 10/22/2025
DESIGNED CAD
DRAWN SEL
CHECKED JCS
APPROVED JCS
FILE NAME MP-ALL-DT-DEMO.dwg

VERIFY SCALE Bar Scale is one inch on original drawing. If not one inch on this sheet, adjust scale.
0 1"

SHEET D-2
SEQ. 46 OF 129

ACAD Rel: 25.0s (LMS Tech)
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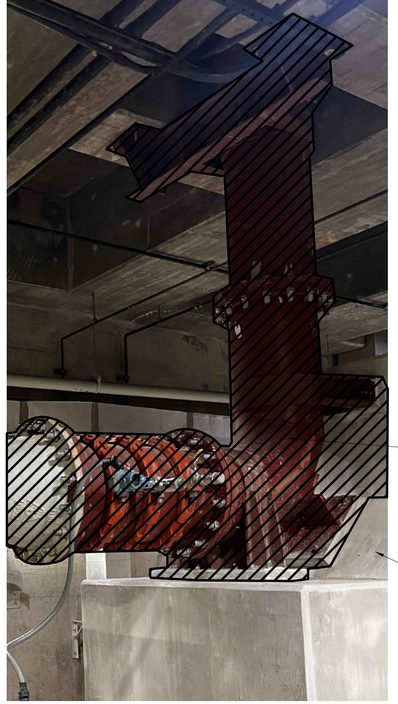
Plot Date: 10/21/2025 3:36 AM Plot By: 08763 Filename: N:\WTU\Drawings\PM Sheets\MP-ALL-DT-DEMO.dwg

GENERAL NOTES:

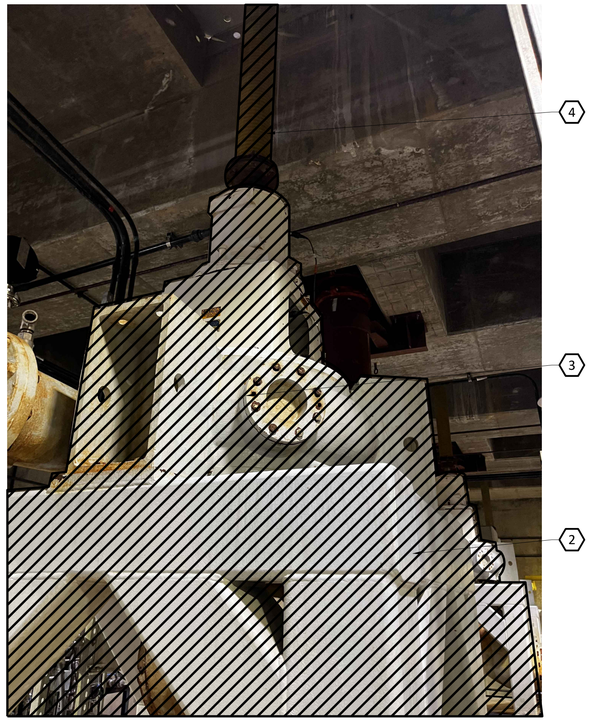
1. OWNER WILL RETAIN THE RIGHT TO SALVAGE ANY MATERIALS AND COMPONENTS. ANY MATERIAL REMOVED AND IDENTIFIED FOR DISPOSAL SHALL BE REMOVED FROM THE JOB SITE AT NO ADDITIONAL COST TO THE OWNER.
2. ALL NON-SALVAGED EQUIPMENT SHALL BE PROPERLY DISPOSED OFF OF OWNER'S SITE AND DISPOSED OF IN ACCORDANCE WITH FEDERAL STATE AND LOCAL LAWS, REGULATIONS AND OTHER ORDINANCES AT NO ADDITIONAL COST TO OWNER.
3. BEFORE BEGINNING CONSTRUCTION, NOTIFY ENGINEER OF ANY DISCREPANCIES OR CONFLICTS FOUND IN DRAWINGS AND/OR FIELD DIMENSIONS.
4. THE CONTRACTOR MUST PROTECT ALL EXISTING EQUIPMENT NOT SET FOR DEMOLITION THROUGHOUT CONSTRUCTION DURATION.
5. CONTRACTOR SHALL PROVIDE A PLUG OR CAP ON ALL CUT LINES THAT WILL BE ABANDONED IN PLACE.
6. THE FULL COMPONENTS OF THE EXISTING SEAL WATER SYSTEM ARE NOT SHOWN IN THE DEMOLITION PLANS. CONTRACTOR TO VERIFY ALL ASSOCIATED PIPING, EQUIPMENT, AND PARTS FOR DEMOLITION.

NOTES BY SYMBOL: "⟨X⟩"

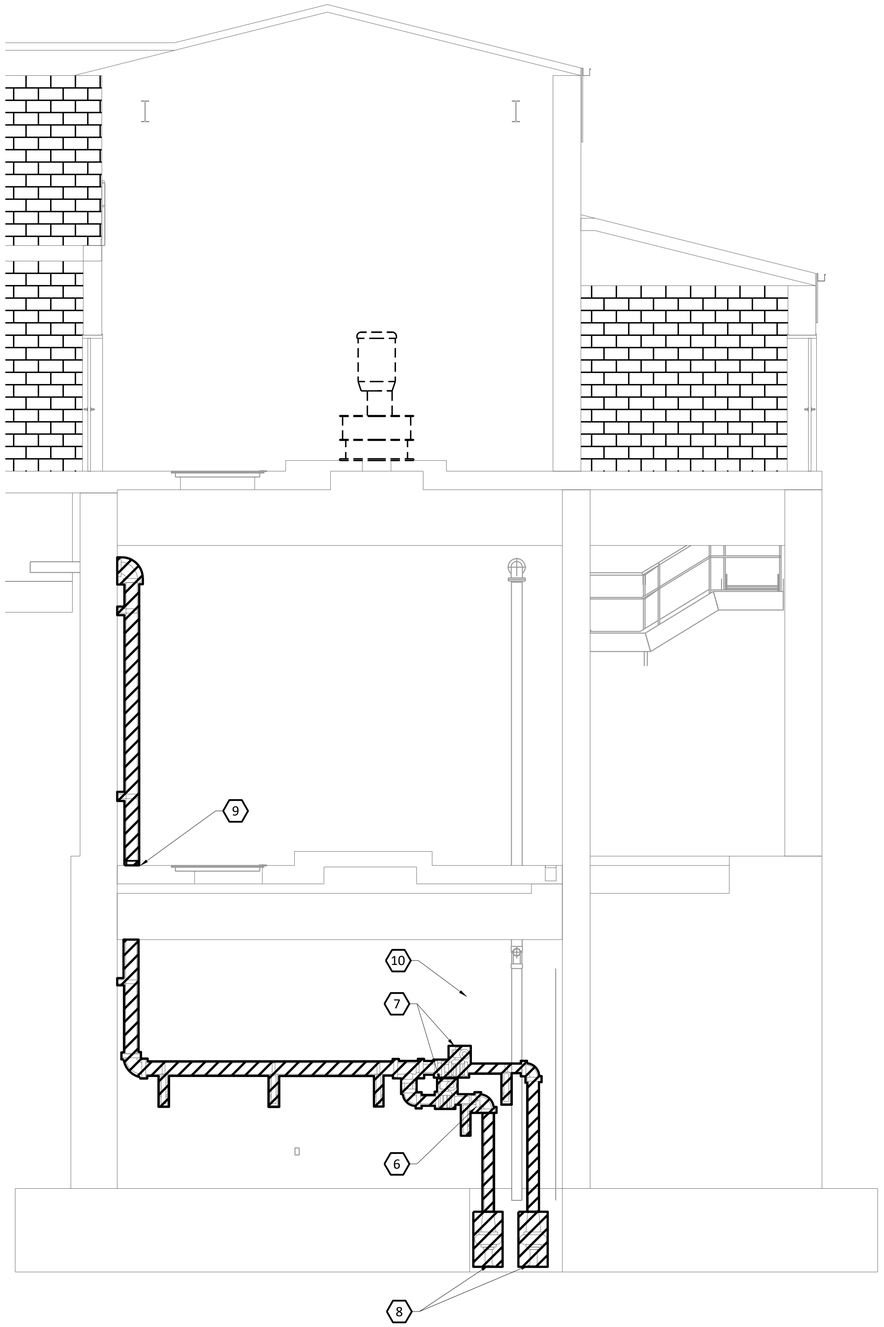
1. 18" INTERMEDIATE PIPING TO BE DEMOLISHED.
2. EXISTING STEEL PUMP SUPPORT PAD TO BE REMOVED.
3. EXISTING PUMPS AND APPURTENANCES TO BE REMOVED.
4. EXISTING MOTOR VERTICAL SHAFTS TO BE REMOVED.
5. THE EXISTING CONCRETE THRUST BLOCKS ARE TO REMAIN IN PLACE AS MUCH AS POSSIBLE. COORDINATE WITH STRUCTURAL SHEETS FOR MODIFICATIONS REQUIRED.
6. EXISTING 4" CHECK VALVE TO BE REMOVED.
7. EXISTING 4" PLUG VALVE TO BE REMOVED.
8. EXISTING SUMP PUMPS AND CONNECTIONS TO BE REMOVED.
9. EXISTING WALL PENETRATION TO REMAIN.
10. EXISTING TROLLY HOIST SYSTEM TO REMAIN (NOT SHOWN FOR CLARITY).



1 - DISCHARGE PIPING MODIFICATION
NOT TO SCALE



2 - EXISTING PUMP DEMOLITION (TYP)
NOT TO SCALE



3 - SUMP PUMP DEMOLITION SECTION VIEW
NOT TO SCALE

ISSUED FOR BID

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2026

GEORGIA REGISTERED No. PE051805 PROFESSIONAL ENGINEER JOSHUA CADE STARLING
10/22/2025

FREESE NICHOLS
2180 Satellite Boulevard
Suite 235
Duluth, Georgia 30097
Phone - (470)-645-3092
Web - www.freese.com

GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES
SUWANEE CREEK DIVERSION PUMP STATION
PROCESS MECHANICAL
LOWER PUMP ROOM DEMOLITION PLAN II

NO.	ISSUE	BY	DATE
0	ISSUED FOR BID	JCS	10/22/2025

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F&N JOB NO. GWR24074
DATE 10/22/2025
DESIGNED CAO
DRAWN SEL
CHECKED JCS
APPROVED JCS
FILE NAME MP-ALL-DT-DEMO.dwg

SHEET D-3
SEQ. 47 OF 129

ACAD Rel: 25.0s (LMS Tech)
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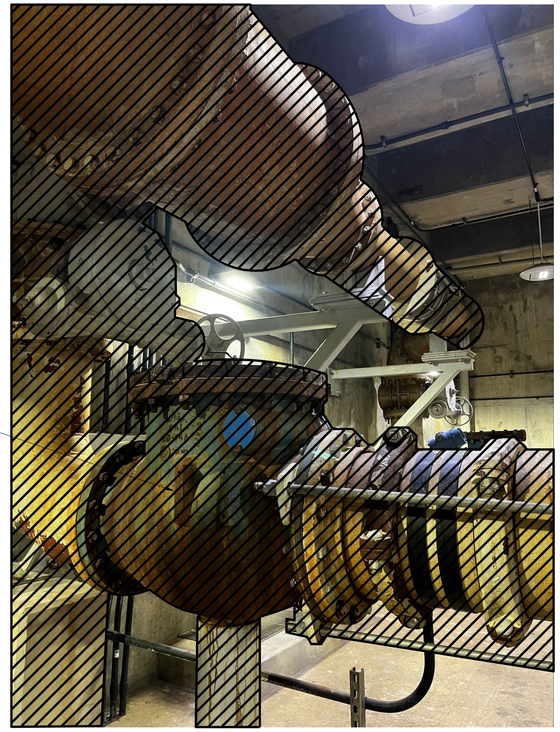
Last Saved: 9/16/2025 5:10 PM Saved By: 08448

Plot Date: 10/21/2025 3:37 AM Plot By: 08763 Filename: N:\WTU\Drawings\PM Sheets\MP-ALL-DT-DEMO.dwg

1 - DISCHARGE PIPING DEMOLITION
NOT TO SCALE



2 - EXISTING CHECK VALVE AND DISCHARGE PIPE DEMOLITION (TYP)
NOT TO SCALE

GENERAL NOTES:

1. OWNER WILL RETAIN THE RIGHT TO SALVAGE ANY MATERIALS AND COMPONENTS. ANY MATERIAL REMOVED AND IDENTIFIED FOR DISPOSAL SHALL BE REMOVED FROM THE JOB SITE AT NO ADDITIONAL COST TO THE OWNER.
2. ALL NON-SALVAGED EQUIPMENT SHALL BE PROPERLY DISPOSED OFF OF OWNER'S SITE AND DISPOSED OF IN ACCORDANCE WITH FEDERAL STATE AND LOCAL LAWS, REGULATIONS AND OTHER ORDINANCES AT NO ADDITIONAL COST TO OWNER.
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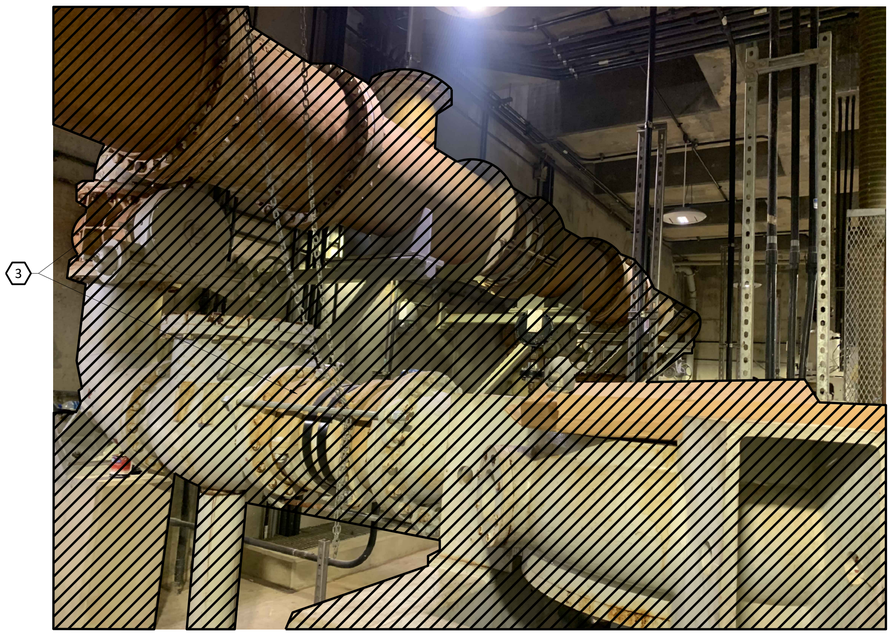
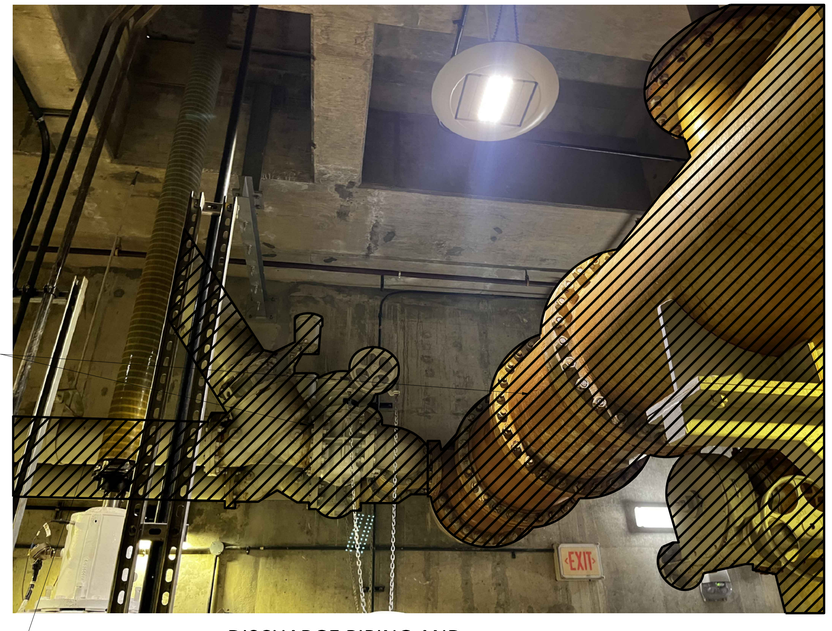
4. THE CONTRACTOR MUST PROTECT ALL EXISTING EQUIPMENT NOT SET FOR DEMOLITION THROUGHOUT CONSTRUCTION DURATION.
5. CONTRACTOR SHALL PROVIDE A RESTRAINED PLUG OR CAP ON ALL CUT LINES THAT WILL BE ABANDONED IN PLACE.
6. THE FULL COMPONENTS OF THE EXISTING SEAL WATER SYSTEM ARE NOT SHOWN IN THE DEMOLITION PLANS. CONTRACTOR TO VERIFY ALL ASSOCIATED PIPING, EQUIPMENT, AND PARTS FOR DEMOLITION.

NOTES BY SYMBOL: "(X)"

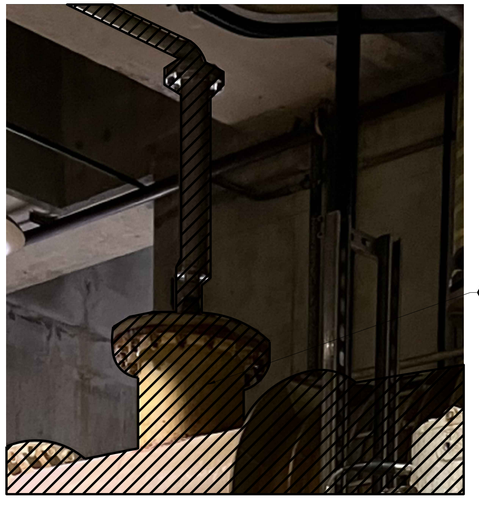
1. EXISTING DISCHARGE PIPING AND APPURTENANCES TO BE REMOVED.
2. EXISTING CHECK VALVE AND DISCHARGE BRANCH PIPING TO BE REMOVED.
3. EXISTING DISCHARGE HEADER AND APPURTENANCES TO BE REMOVED.
4. EXISTING SURGE RELIEF VALVE AND PIPING TO BE REMOVED.
5. EXISTING AIR RELEASE VALVE TO BE REMOVED.
6. EXISTING 10" SURGE RELIEF VALVE PIPING TO BE REMOVED IN THE UPPER PUMP ROOM, INCLUDING THROUGH THE WALL, AND ALL PIPING IN THE WETWELL. UPSIZED PENETRATION TO BE PROVIDED FOR 12-INCH SURGE VALVE PIPING.



3 - DISCHARGE PIPING DEMOLITION
NOT TO SCALE



4 - DISCHARGE PIPING AND SURGE RELIEF VALVES/PIPING DEMOLITION
NOT TO SCALE



5 - AIR RELEASE VALVE DEMOLITION
NOT TO SCALE

ISSUED FOR BID

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 5/30/2026

GEORGIA REGISTERED No. PE051805 PROFESSIONAL ENGINEER JOSHUA CADE STARLING
10/22/2025

FREESE NICHOLS
2180 Satellite Boulevard
Suite 235
Duluth, Georgia 30097
Phone - (470)-645-3092
Web - www.freese.com

GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES
SUWANEE CREEK DIVERSION PUMP STATION
PROCESS MECHANICAL
UPPER PUMP ROOM DEMOLITION PLAN

NO.	ISSUE	BY	DATE
0	ISSUED FOR BID	JCS	10/22/2025

F&N JOB NO. GWR24074
DATE 10/22/2025
DESIGNED CAO
DRAWN SEL
CHECKED JCS
APPROVED JCS
FILE NAME MP-ALL-DT-DEMO.dwg

VERIFY SCALE Bar Scale is one inch on original drawing. If not one inch on this sheet, adjust scale.
0 1"

SHEET D-4
SEQ. 48 OF 129

ACAD Rel: 25.0s (LMS Tech)
Filename: N:\WTU\Drawings\PM Sheets\MP-ALL-DT-DEMO.dwg
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Plot Date: 10/21/2025 3:38 AM Plot By: 08763 Filename: N:\WTU\Drawings\PM Sheets\MP-ALL-DT-DEMO.dwg

1

1 — MOTOR DEMOLITION
NOT TO SCALE

GENERAL NOTES:

1. OWNER WILL RETAIN THE RIGHT TO SALVAGE ANY MATERIALS AND COMPONENTS. ANY MATERIAL REMOVED AND IDENTIFIED FOR DISPOSAL SHALL BE REMOVED FROM THE JOB SITE AT NO ADDITIONAL COST TO THE OWNER.
2. ALL NON-SALVAGED EQUIPMENT SHALL BE PROPERLY DISPOSED OFF OF OWNER'S SITE AND DISPOSED OF IN ACCORDANCE WITH FEDERAL STATE AND LOCAL LAWS, REGULATIONS AND OTHER ORDINANCES AT NO ADDITIONAL COST TO OWNER.
3. BEFORE BEGINNING CONSTRUCTION, NOTIFY ENGINEER OF ANY DISCREPANCIES OR CONFLICTS FOUND IN DRAWINGS AND/OR FIELD DIMENSIONS.
4. THE CONTRACTOR MUST PROTECT ALL EXISTING EQUIPMENT NOT SET FOR DEMOLITION THROUGHOUT CONSTRUCTION DURATION.
5. CONTRACTOR SHALL PROVIDE A PLUG OR CAP ON ALL CUT LINES THAT WILL BE ABANDONED IN PLACE.
6. THE FULL COMPONENTS OF THE EXISTING SEAL WATER SYSTEM ARE NOT SHOWN IN THE DEMOLITION PLANS. CONTRACTOR TO VERIFY ALL ASSOCIATED PIPING, EQUIPMENT, AND PARTS FOR DEMOLITION.

NOTES BY SYMBOL: "⟨X⟩"

1. EXISTING MOTORS, MOTOR PAD, AND APPURTENANCES TO BE REMOVED.

ISSUED FOR BID

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2026

GEORGIA REGISTERED No. PE051805 PROFESSIONAL ENGINEER JOSHUA CADE STARLING
10/22/2025

FREESE NICHOLS
2180 Satellite Boulevard
Suite 235
Duluth, Georgia 30097
Phone - (470)-645-3092
Web - www.freese.com

GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES
SUWANEE CREEK DIVERSION PUMP STATION
PROCESS MECHANICAL
MAIN ENTRANCE ROOM DEMOLITION PLAN

NO.	ISSUE	BY	DATE
0	ISSUED FOR BID	JCS	10/22/2025

F&N JOB NO. GWR24074
DATE 10/22/2025
DESIGNED CAO
DRAWN SEL
CHECKED JCS
APPROVED JCS
FILE NAME MP-ALL-DT-DEMO.dwg

VERIFY SCALE Bar Scale is one inch on original drawing. If not one inch on this sheet, adjust scale.
0 1

SHEET D-5
SEQ. 49 OF 129

ACAD Rel: 25.0s (LMS Tech)
Filename: N:\WTU\Drawings\PM Sheets\MP-ALL-DT-DEMO.dwg
Last Saved: 9/16/2025 5:10 PM Saved By: 08448
Plot Date: 10/21/2025 3:40 AM Plot By: 08763 Filename: N:\WTU\Drawings\PM Sheets\MP-ALL-DT-DEMO.dwg

1 - EXISTING SLIDE GATE DEMOLITION I
NOT TO SCALE

1 - EXISTING SLIDE GATE DEMOLITION II
NOT TO SCALE

GENERAL NOTES:

1. OWNER WILL RETAIN THE RIGHT TO SALVAGE ANY MATERIALS AND COMPONENTS. ANY MATERIAL REMOVED AND IDENTIFIED FOR DISPOSAL SHALL BE REMOVED FROM THE JOB SITE AT NO ADDITIONAL COST TO THE OWNER.
2. ALL NON-SALVAGED EQUIPMENT SHALL BE PROPERLY DISPOSED OFF OF OWNER'S SITE AND DISPOSED OF IN ACCORDANCE WITH FEDERAL STATE AND LOCAL LAWS, REGULATIONS AND OTHER ORDINANCES AT NO ADDITIONAL COST TO OWNER.
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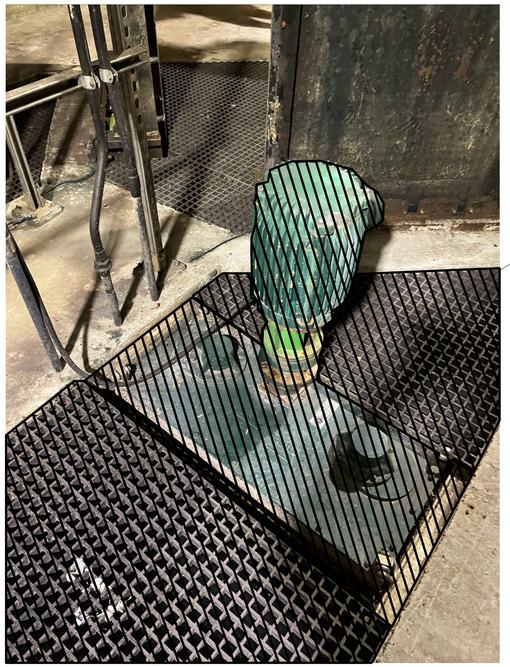
4. THE CONTRACTOR MUST PROTECT ALL EXISTING EQUIPMENT NOT SET FOR DEMOLITION THROUGHOUT CONSTRUCTION DURATION.
5. CONTRACTOR SHALL PROVIDE A PLUG OR CAP ON ALL CUT LINES THAT WILL BE ABANDONED IN PLACE.

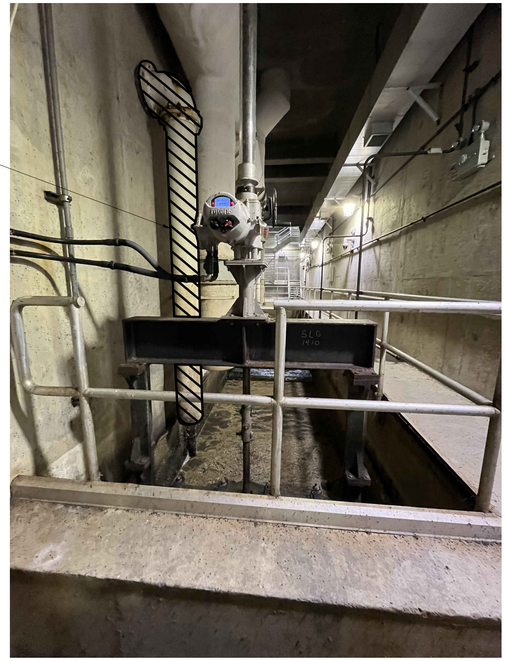
NOTES BY SYMBOL: "(X)"

1. EXISTING SLIDE GATES TO BE REMOVED.
2. EXISTING NON-POTABLE LINES IN THE GRINDER AND WET WELL AREA TO BE REMOVED AND REPLACED WITH STAINLESS STEEL PIPE.
3. EXISTING GRATING TO BE REMOVED.
4. EXISTING SURGE RELIEF PIPING TO BE REMOVED.



3 - GRINDER DEMOLITION
NOT TO SCALE

4 - NON-POTABLE PIPE DEMOLITION
NOT TO SCALE



5 - SURGE RELIEF VALVE PIPING DEMOLITION
NOT TO SCALE

ISSUED FOR BID

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 5/30/2026

GEORGIA REGISTERED No. PE051805 PROFESSIONAL ENGINEER JOSHUA CADE STARLING
10/22/2025

FREESE NICHOLS
2180 Satellite Boulevard
Suite 235
Duluth, Georgia 30097
Phone - (470)-645-3092
Web - www.freese.com

GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES
SUWANEE CREEK DIVERSION PUMP STATION
PROCESS MECHANICAL
GRINDER AREA DEMOLITION PLAN I

NO.	ISSUE	BY	DATE
0	ISSUED FOR BID	JCS	10/22/2025

F&N JOB NO. GWR24074
DATE 10/22/2025
DESIGNED CAO
DRAWN SEL
CHECKED JCS
APPROVED JCS
FILE NAME MP-ALL-DT-DEMO.dwg

VERIFY SCALE Bar Scale is one inch on original drawing. If not one inch on this sheet, adjust scale.
0 1"

SHEET D-6
SEQ. 50 OF 129

ACAD Rel: 25.0s (LMS Tech)
Filename: N:\WTU\Drawings\PM Sheets\MP-ALL-DT-DEMO.dwg
Last Saved: 10/21/2025 3:43 AM Saved By: 08763

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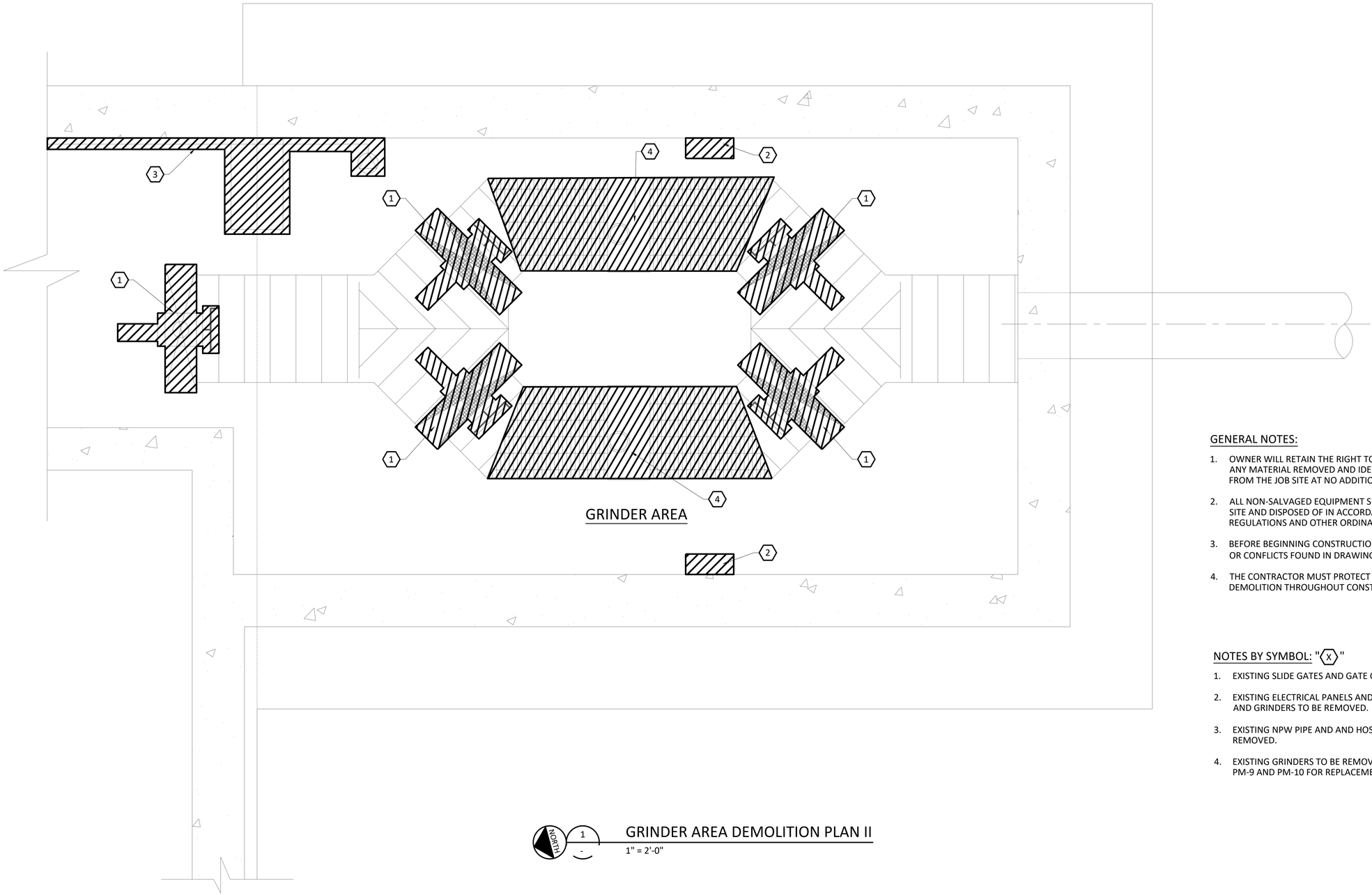

GRINDER AREA

GRINDER AREA DEMOLITION PLAN II

NORTH 1 - 1" = 2'-0"

GENERAL NOTES:

1. OWNER WILL RETAIN THE RIGHT TO SALVAGE ANY MATERIALS AND COMPONENTS. ANY MATERIAL REMOVED AND IDENTIFIED FOR DISPOSAL SHALL BE REMOVED FROM THE JOB SITE AT NO ADDITIONAL COST TO THE OWNER.
2. ALL NON-SALVAGED EQUIPMENT SHALL BE PROPERLY DISPOSED OFF OF OWNER'S SITE AND DISPOSED OF IN ACCORDANCE WITH FEDERAL STATE AND LOCAL LAWS, REGULATIONS AND OTHER ORDINANCES AT NO ADDITIONAL COST TO OWNER.
3. BEFORE BEGINNING CONSTRUCTION, NOTIFY ENGINEER OF ANY DISCREPANCIES OR CONFLICTS FOUND IN DRAWINGS AND/OR FIELD DIMENSIONS.
4. THE CONTRACTOR MUST PROTECT ALL EXISTING EQUIPMENT NOT SET FOR DEMOLITION THROUGHOUT CONSTRUCTION DURATION.

NOTES BY SYMBOL: "(X)"

1. EXISTING SLIDE GATES AND GATE OPERATORS TO BE REMOVED.
2. EXISTING ELECTRICAL PANELS AND CONDUIT ASSOCIATED WITH THE GATES AND GRINDERS TO BE REMOVED.
3. EXISTING NPW PIPE AND AND HOSE REEL/UTILITY STATION TO BE REMOVED.
4. EXISTING GRINDERS TO BE REMOVED AND REPLACED. REFERENCE SHEETS PM-9 AND PM-10 FOR REPLACEMENT DETAILS.

0 2' 4'
SCALE IN FEET

ISSUED FOR BID

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2026

GEORGIA REGISTERED No. PE051805 PROFESSIONAL ENGINEER JOSHUA CADE STARLING
10/22/2025

FREESE NICHOLS
2180 Satellite Boulevard
Suite 235
Duluth, Georgia 30097
Phone - (470)-645-3092
Web - www.freese.com

GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES
SUWANEE CREEK DIVERSION PUMP STATION
PROCESS MECHANICAL
GRINDER AREA DEMOLITION PLAN II

F&N JOB NO.	GWR24074
DATE	10/22/2025
DESIGNED	JCS
DRAWN	SEL
CHECKED	JCS
APPROVED	JCS
FILE NAME	MP-ALL-DT-DEMO.dwg

NO.	ISSUE	BY	DATE
0	ISSUED FOR BID	JCS	10/22/2025

VERIFY SCALE Bar Scale is one inch on original drawing. If not one inch on this sheet, adjust scale. 0 1"

SHEET D-7
SEQ. 51 OF 129

ACAD Rel: 25.0s (LMS Tech)
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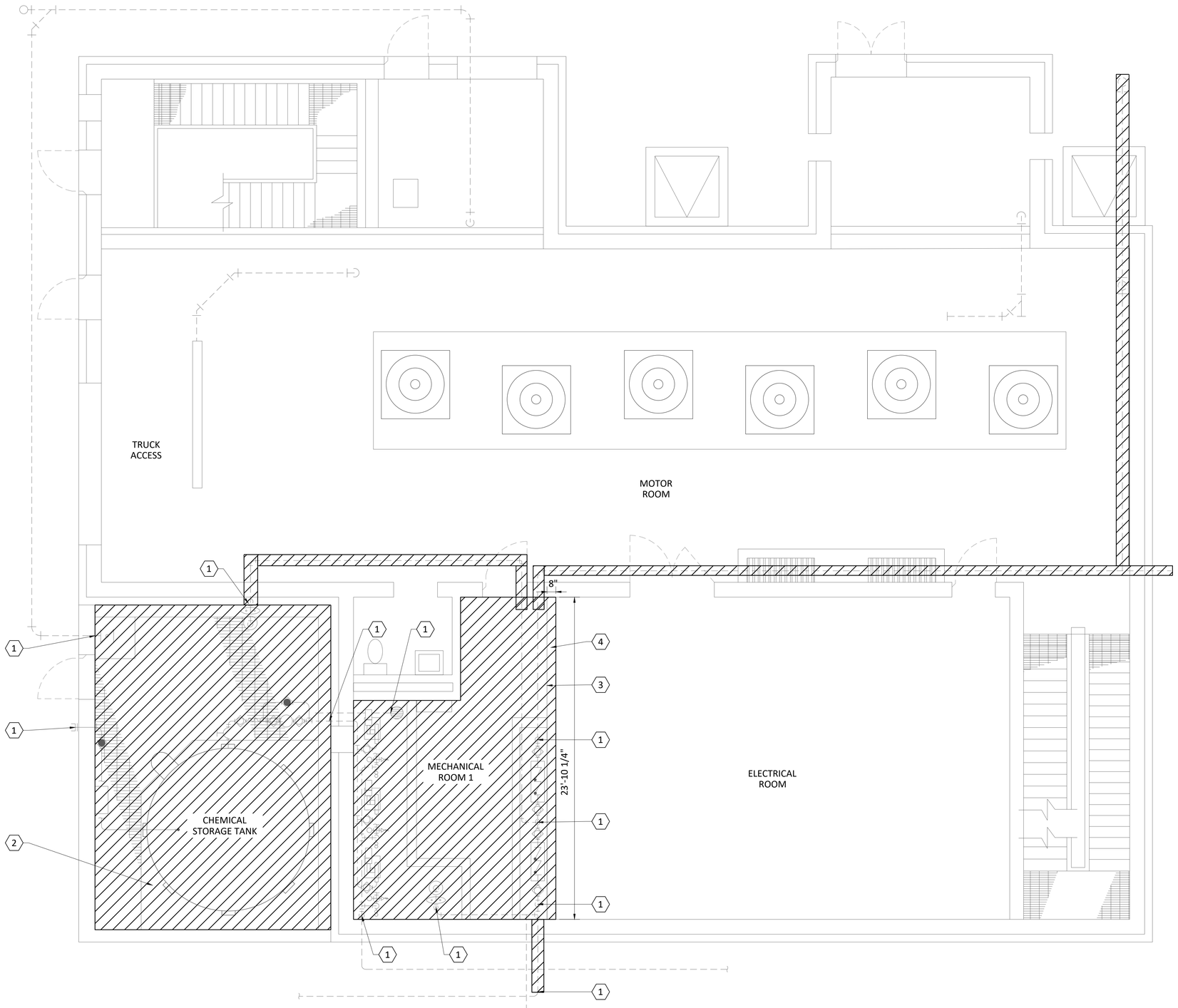


NORTH

1 CHEMICAL FEED SYSTEM DEMOLITION PLAN I
1/4" = '1-0"

GENERAL NOTES:

1. OWNER WILL COORDINATE WITH CONTRACTOR TO IDENTIFY WHAT MATERIALS AND EQUIPMENT WILL BE SALVAGED. ANY MATERIAL REMOVED AND IDENTIFIED FOR DISPOSAL SHALL BE REMOVED FROM THE JOB SITE AT NO ADDITIONAL COST TO THE OWNER.
2. ALL NON-SALVAGED EQUIPMENT SHALL BE PROPERLY DISPOSED OFF OF OWNER'S SITE AT NO ADDITIONAL COST TO OWNER.
3. BEFORE BEGINNING CONSTRUCTION, NOTIFY ENGINEER OF ANY DISCREPANCIES OR CONFLICTS FOUND IN DRAWINGS AND/OR FIELD DIMENSIONS.
4. THE CONTRACTOR MUST PROTECT ALL EXISTING EQUIPMENT NOT SET FOR DEMOLITION THROUGHOUT CONSTRUCTION DURATION.
5. REMOVE ALL EQUIPMENT ASSOCIATED WITH THE EXISTING CHEMICAL FEED SYSTEM INCLUDING: STORAGE TANK, CHEMICAL FEED PUMPS, CHEMICAL FEED PIPING, WATER SUPPLY PIPING, AND ASSOCIATED APPURTENANCES.
6. REFERENCE DRAWING D-19 FOR ADDITIONAL INFORMATION ON THE DEMOLITION OF THE EXISTING CHEMICAL FEED SYSTEM.
7. ALL ANCHOR BOLTS THAT REMAIN FROM DEMOLITION OF EXISTING EQUIPMENT SHALL BE CUT AND GROUND DOWN TO 1/2" BELOW THE EXISTING SURFACE.
8. WHERE DEMOLITION OF EXISTING CONCRETE WILL LEAVE EMBEDDED EXISTING REBAR EXPOSED, AN ADDITIONAL 1 1/2" CONCRETE AND REINFORCEMENT BEYOND LIMITS OF THE DEMOLITION SHALL BE REMOVED. THE 1 1/2" AREAS BEING REMOVED SHALL THEN BE PLACED BACK WITH CONCRETE STRUCTURAL REPAIR MATERIAL AS SPECIFIED TO PROVIDE CORROSION PROTECTION FOR THE EXPOSED EXISTING REBAR, UNLESS NOTED OTHERWISE ON PLAN.
9. REPAIR MORTAR SHALL BE SIKATOP 123 PLUS. PREPARE, INSTALL IN MULTIPLE LIFTS, FINISH, AND CURE AS RECOMMENDED BY MANUFACTURER.

NOTES BY SYMBOL: " " (X)

1. PROVIDE A RESTRAINED PLUG OR CAP ON ALL CUT LINES THAT WILL BE ABANDONED IN PLACE.
2. BACKFILL 7 FOOT DEEP CHEMICAL TANK STORAGE PIT WITH 57 STONE AND CAPPED WITH CONCRETE. REFER TO STRUCTURAL DRAWINGS.
3. DEMOLISH EXISTING 11.5 FOOT TALL CMU WALL SEPARATING MECHANICAL ROOM NO. 1 AND ELECTRICAL ROOM.
4. GRIND DOWN BASE OF REMOVED WALL TO BE FLUSH WITH EXISTING SLAB.

0 1' 2' 4' 8'
1/4"=1'-0"

ISSUED FOR BID

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2026

GEORGIA REGISTERED No. PE045447 PROFESSIONAL ENGINEER MICHAEL DICKERSON COOPER
10-22-25

FREESE NICHOLS
2180 Satellite Boulevard
Suite 235
Duluth, Georgia 30097
Phone - (470)-645-3092
Web - www.freese.com

GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES
SUWANEE CREEK DIVERSION PUMP STATION
PROCESS MECHANICAL
CHEMICAL FEED SYSTEM DEMOLITION PLAN I

NO.	ISSUE	BY	DATE
0	ISSUED FOR BID	SDC	10/22/2025

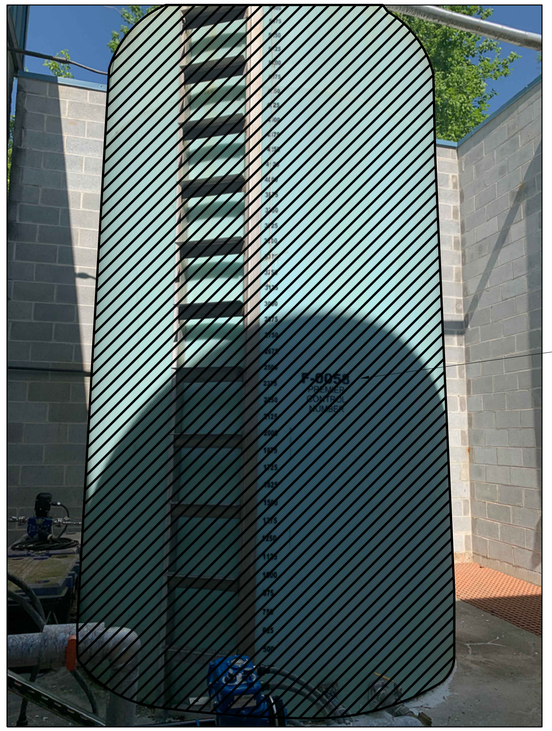
Bar Scale is one inch on original drawing. If not one inch on this sheet, adjust scale.
VERIFY SCALE 0 1"

F&N JOB NO.	GWR24074
DATE	10/22/2025
DESIGNED	SDC
DRAWN	SEL
CHECKED	SDC
APPROVED	SDC
FILE NAME	MP-CFB-PL-DEMO.dwg

SHEET D-8
SEQ. 52 OF 129

ACAD Rel: 25.0s (LMS Tech)
Filename: N:\WTU\Drawings\PM Sheets\MP-CFB-PL-DEMO.dwg
Last Saved: 9/16/2025 5:10 PM Saved By: 08448

Plot Date: 10/21/2025 4:00 AM Plot By: 08763 Filename: N:\WTU\Drawings\PM Sheets\MP-CFB-PL-DEMO.dwg



1 CHEMICAL TANK DEMOLITION
NOT TO SCALE

2 CHEMICAL FEED SYSTEM PIPING AND VALVE DEMOLITION
NOT TO SCALE

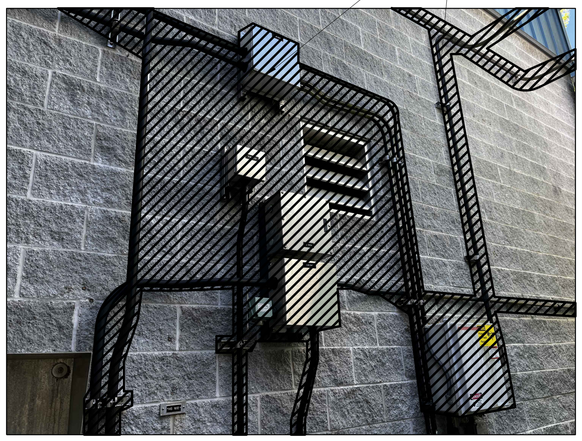
GENERAL NOTES:

1. OWNER WILL RETAIN THE RIGHT TO SALVAGE ANY MATERIALS AND COMPONENTS. ANY MATERIAL REMOVED AND IDENTIFIED FOR DISPOSAL SHALL BE REMOVED FROM THE JOB SITE AT NO ADDITIONAL COST TO THE OWNER.
2. ALL NON-SALVAGED EQUIPMENT SHALL BE PROPERLY DISPOSED OFF OF OWNER'S SITE AND DISPOSED OF IN ACCORDANCE WITH FEDERAL STATE AND LOCAL LAWS, REGULATIONS AND OTHER ORDINANCES AT NO ADDITIONAL COST TO OWNER.
3. BEFORE BEGINNING CONSTRUCTION, NOTIFY ENGINEER OF ANY DISCREPANCIES OR CONFLICTS FOUND IN DRAWINGS AND/OR FIELD DIMENSIONS.
4. THE CONTRACTOR MUST PROTECT ALL EXISTING EQUIPMENT NOT SET FOR DEMOLITION THROUGHOUT CONSTRUCTION DURATION.
5. CONTRACTOR SHALL PROVIDE A PLUG OR CAP ON ALL CUT LINES THAT WILL BE ABANDONED IN PLACE.
6. ALL ANCHOR BOLTS THAT REMAIN FROM DEMOLITION OF EXISTING EQUIPMENT SHALL BE CUT AND GROUND DOWN TO 1/2" BELOW THE EXISTING SURFACE.

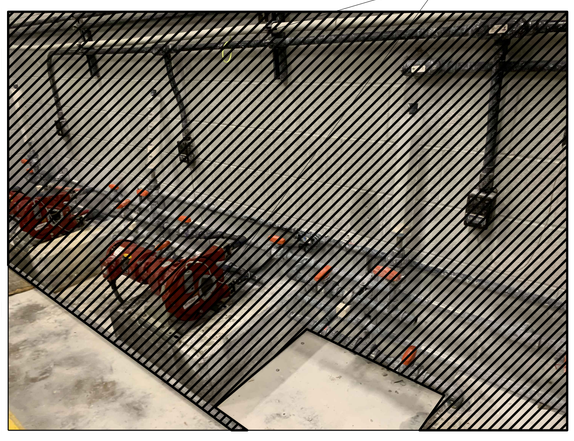
NOTES BY SYMBOL: "(X)"

1. EXISTING 12,000 GALLON, 12' DIAMETER CHEMICAL FEED TANK AND ACCESSORIES TO BE REMOVED.
2. EXISTING ELECTRICAL PANELS AND CONDUIT TO BE REMOVED.
3. EXISTING PIPING AND APPURTENANCES ASSOCIATED WITH THE CHEMICAL FEED SYSTEM TO BE REMOVED.
4. EMERGENCY WASH STATION AND PW PIPING TO BE REMOVED.
5. CHEMICAL FEED PUMPS AND ASSOCIATED PIPING AND APPURTENANCES TO BE REMOVED.
6. NON-POTABLE WATER SYSTEM TO BE REMOVED AND RELOCATED AWAY FROM THE MECHANICAL ROOM.

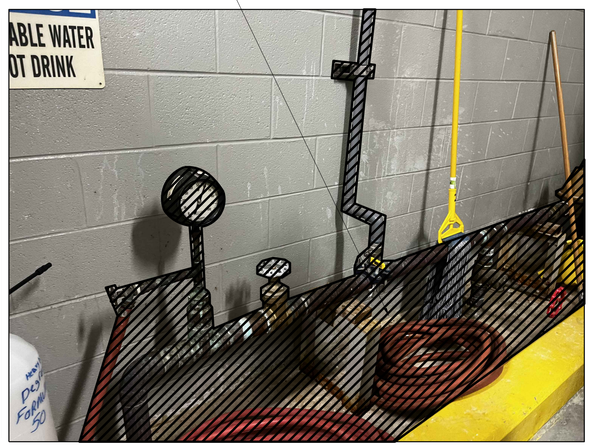
3 EYE WASH DEMOLITION
NOT TO SCALE



4 ELECTRICAL DEMOLITION
NOT TO SCALE



5 METERING PUMPS DEMOLITION
NOT TO SCALE



6 CHEMICAL ROOM NON-POTABLE WATER SYSTEM RELOCATION
NOT TO SCALE

ISSUED FOR BID

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2026

GEORGIA REGISTERED No. PE045447 PROFESSIONAL ENGINEER DICKERSON COOPER
10-22-25

FREESE NICHOLS
2180 Satellite Boulevard
Suite 235
Duluth, Georgia 30097
Phone - (470)-645-3092
Web - www.freese.com

GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES
SUWANEE CREEK DIVERSION PUMP STATION
PROCESS MECHANICAL
CHEMICAL FEED SYSTEM DEMOLITION PLAN II

NO.	ISSUE	BY	DATE
0	ISSUED FOR BID	SDC	10/22/2025

F&N JOB NO. GWR24074
DATE 10/22/2025
DESIGNED SDC
DRAWN SEL
CHECKED SDC
APPROVED SDC
FILE NAME MP-CFB-PL-DEMO.dwg

VERIFY SCALE Bar Scale is one inch on original drawing. If not one inch on this sheet, adjust scale.
0 1"

SHEET D-9
SEQ. 53 OF 129

ACAD Rel: 25.0s (LMS Tech)
Filename: N:\WTU\Drawings\PM Sheets\MP-CFB-PL-DEMO.dwg
Last Saved: 9/16/2025 5:10 PM Saved By: 08448

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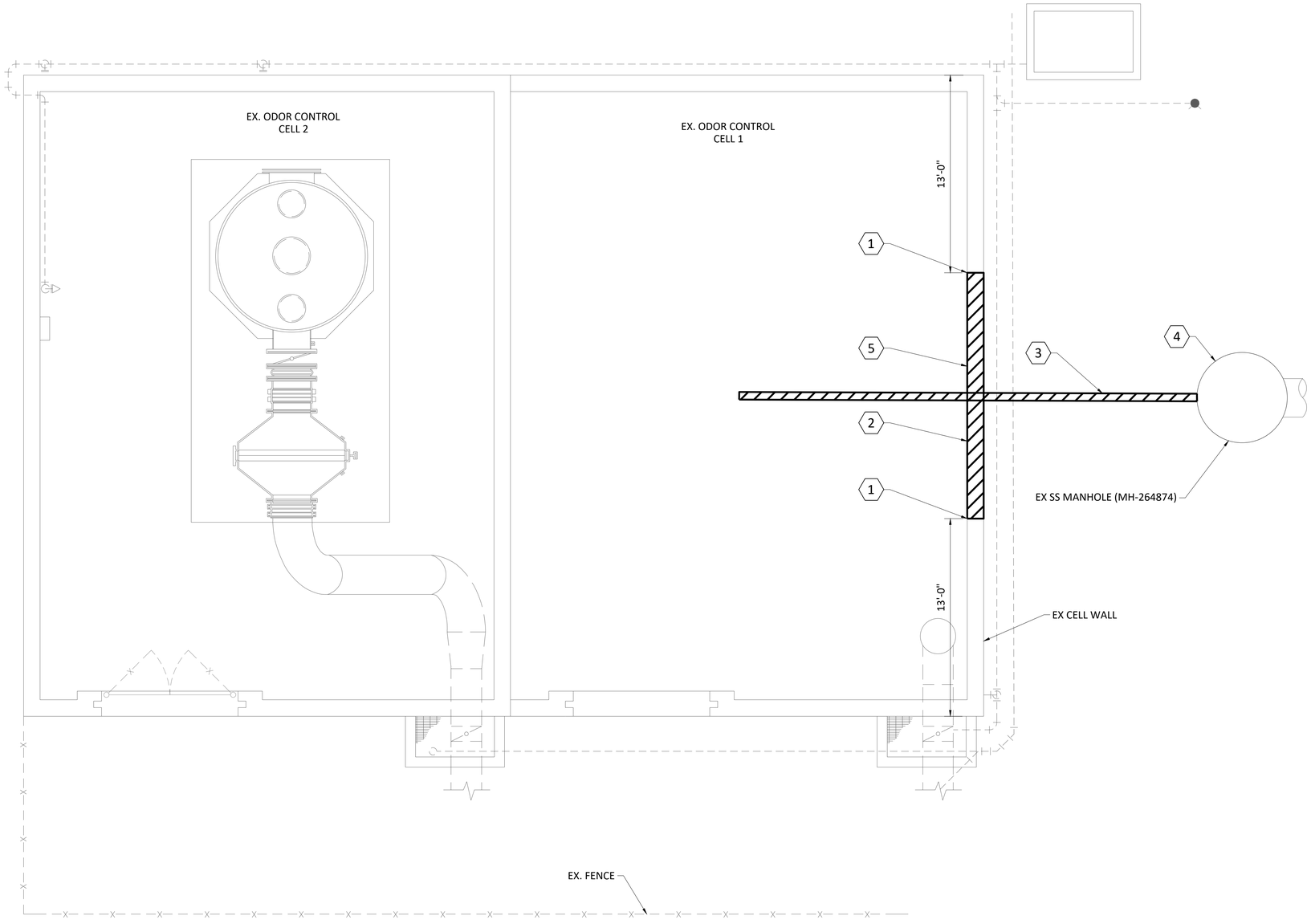

FILTER CELL DEMOLITION

1/4" = '-0"

GENERAL NOTES:

1. OWNER WILL RETAIN THE RIGHT TO SALVAGE ANY MATERIALS AND COMPONENTS. ANY MATERIAL REMOVED AND IDENTIFIED FOR DISPOSAL SHALL BE REMOVED FROM THE JOB SITE AT NO ADDITIONAL COST TO THE OWNER.
2. ALL NON-SALVAGED EQUIPMENT SHALL BE PROPERLY DISPOSED OFF OF OWNER'S SITE AT NO ADDITIONAL COST TO OWNER.
3. BEFORE BEGINNING CONSTRUCTION, NOTIFY ENGINEER OF ANY DISCREPANCIES OR CONFLICTS FOUND IN DRAWINGS AND/OR FIELD DIMENSIONS.
4. THE CONTRACTOR MUST PROTECT ALL EXISTING EQUIPMENT NOT SET FOR DEMOLITION THROUGHOUT CONSTRUCTION DURATION.
5. WHERE DEMOLITION OF EXISTING CONCRETE WILL LEAVE EMBEDDED EXISTING REBAR EXPOSED, AN ADDITIONAL 1 1/2" CONCRETE AND REINFORCEMENT BEYOND LIMITS OF THE DEMOLITION SHALL BE REMOVED. THE 1 1/2" AREAS BEING REMOVED SHALL THEN BE PLACED BACK WITH CONCRETE STRUCTURAL REPAIR MATERIAL AS SPECIFIED TO PROVIDE CORROSION PROTECTION FOR THE EXPOSED EXISTING REBAR,
   UNLESS NOTED OTHERWISE ON PLAN.
6. REPAIR MORTAR SHALL BE PREPARED, INSTALLED IN MULTIPLE LIFTS, FINISHED, AND CURED AS RECOMMENDED BY MANUFACTURER.

NOTES BY SYMBOL: "(X)"

1. SAW CUT EXISTING CONCRETE WALL.
2. GRIND DOWN BASE OF REMOVED WALL TO BE FLUSH WITH EXISTING SLAB.
3. SAW CUT 12" WIDE BY 30'-6" LONG TRENCH.
4. REMOVE EXISTING MANHOLE STEPS IN MH-264874
5. DEMOLISH 16 FOOT WIDE, 6.5 FOOT TALL, 1 FOOT THICK SPAN OF EXISTING CELL WALL.

0 1' 2' 4' 8'
1/4"=1'-0"

ISSUED FOR BID

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2026

GEORGIA REGISTERED No. PE045447 PROFESSIONAL ENGINEER STEVEN DEANE DICKERSON COOPER
10-22-25

FREESE NICHOLS
2180 Satellite Boulevard
Suite 235
Duluth, Georgia 30097
Phone - (470)-645-3092
Web - www.freese.com

GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES
SUWANEE CREEK DIVERSION PUMP STATION
PROCESS MECHANICAL
FILTER CELL DEMOLITION

NO.	ISSUE	BY	DATE
0	ISSUED FOR BID	SDC	10/22/2025

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F&N JOB NO.	GWR24074		
DATE	10/22/2025		
DESIGNED	SDC	CHECKED	SDC
DRAWN	SEL	APPROVED	SDC
FILE NAME	MP-CFB-PL-DEMO.dwg		

SHEET D-10
SEQ. 54 OF 129

ACAD Rel: 25.0s (LMS Tech)
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Plot Date: 10/21/2025 4:03 AM Plot By: 08763 Filename: N:\WTU\Drawings\PM Sheets\MP-CFB-PL-DEMO.dwg

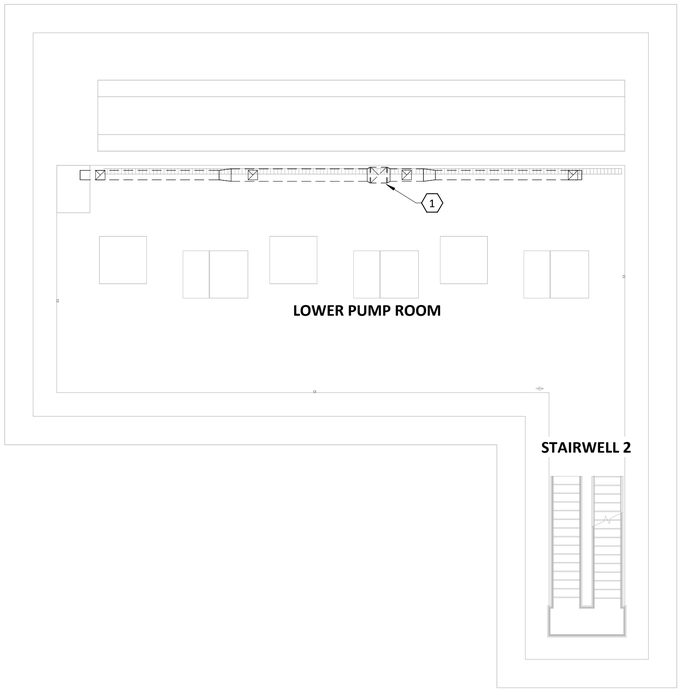
GENERAL NOTES

1. REFER TO H-1 FOR LEGEND, GENERAL NOTES AND ABBREVIATIONS.
2. DEMOLISH HVAC EQUIPMENT AND SYSTEMS IN THEIR ENTIRETY, UNLESS NOTED OTHERWISE.
3. FIELD VERIFY FOR EXACT LOCATIONS.
4. EQUIPMENT SHALL ONLY BE REMOVED ONCE IT IS NO LONGER NEEDED FOR OPERATION OF THE PUMP STATION. SHUTDOWNS SHALL BE COORDINATED WITH AND APPROVED BY THE OWNER PRIOR.
5. THE CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING UTILITIES AND FINISHES NOT BEING REPLACED OR REMOVED.

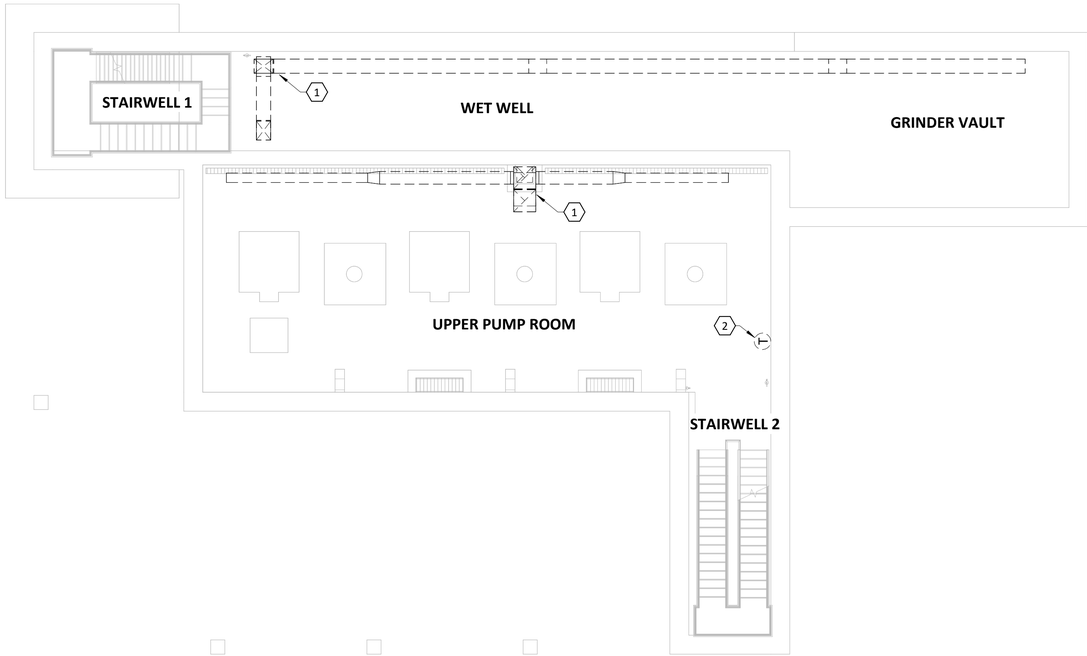
NOTES BY SYMBOL "⬡"

1 DEMOLISH EXHAUST DUCTWORK ALONG WITH DUCT BRANCHES AND GRILLES. PROTECT DUCT SUPPORTS FOR REUSE. REPAIR RESULTING FLOOR PENETRATION FOR RE-USE.

2 DEMOLISH THERMOSTAT AND WIRING. PROTECT CONDUIT FOR REUSE.



1 LOWER PUMP ROOM DEMOLITION PLAN
1/8" = 1'-0"



2 H-6 UPPER PUMP ROOM DEMOLITION PLAN
1/8" = 1'-0"

0 4' 8' 16'
1/8"=1'-0"

ISSUED FOR BID

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2026

GEORGIA REGISTERED No. PE051583 PROFESSIONAL ENGINEER
10/21/2025

FREESE NICHOLS
2180 Satellite Boulevard
Suite 235
Duluth, GA 30097
Phone - (470) 645-3092
Web - www.freese.com

GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES
SUWANEE CREEK DIVERSION PUMP STATION

BUILDING MECHANICAL
PUMP STATION
DEMOLITION PLAN I

F&N JOB NO.	GWR24074
DATE	10/22/2025
DESIGNED	DCA
DRAWN	DCA
REVISED	-
CHECKED	WAY

NO.	ISSUE	DATE	BY
0	ISSUED FOR BID	10/22/2025	JAK

FILE NAME HV-GWR24074-EX-R23.rvt

VERIFY SCALE
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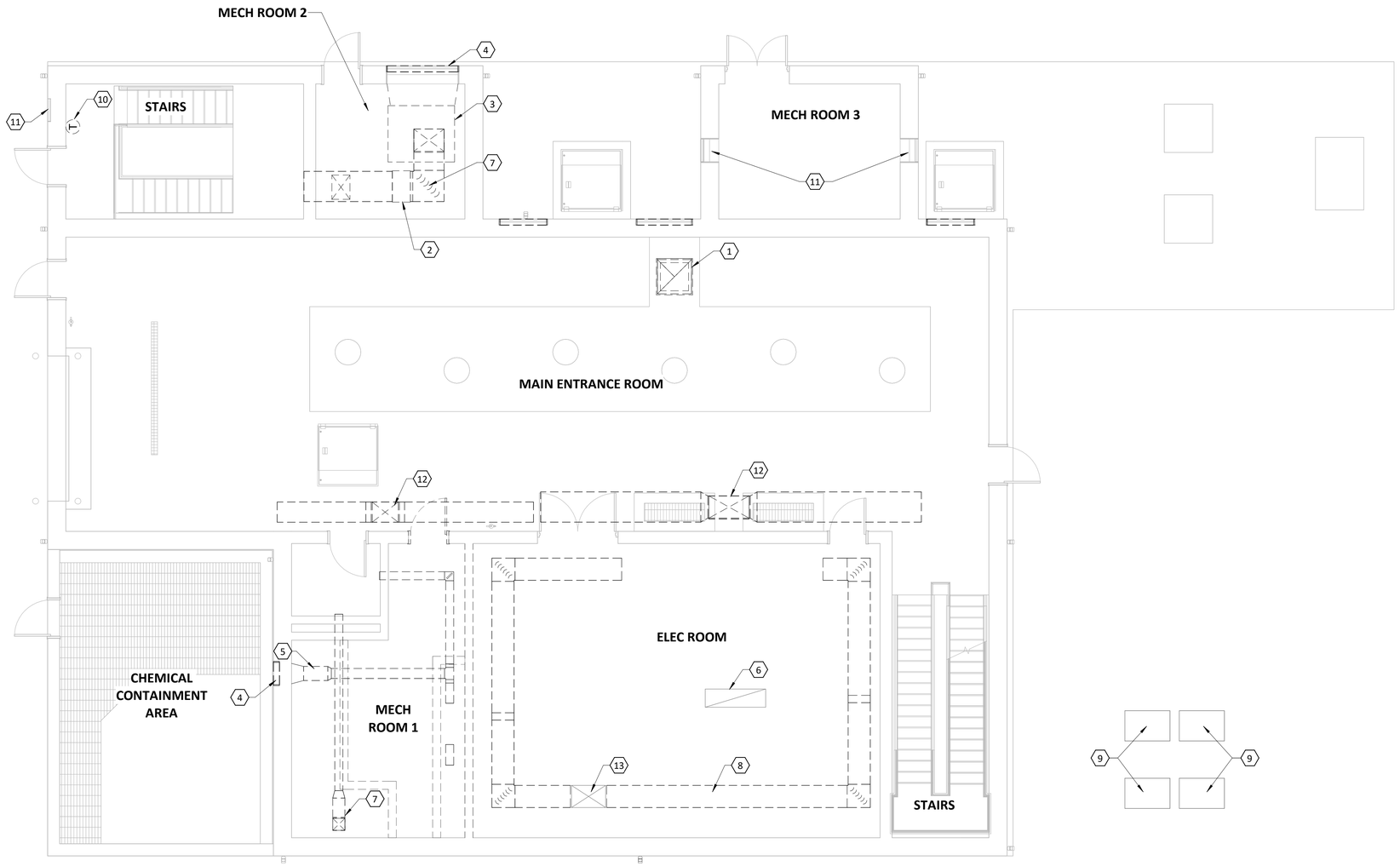
SHEET D-11

SEQ. 55 OF 129

Plot Date: 10/21/2025 11:23:18 AM



1 MAIN LEVEL DEMOLITION PLAN
3/16" = 1'-0"

GENERAL NOTES

1. REFER TO H-1 FOR LEGEND, GENERAL NOTES AND ABBREVIATIONS.
2. DEMOLISH HVAC EQUIPMENT AND SYSTEMS IN THEIR ENTIRETY, UNLESS NOTED OTHERWISE.
3. FIELD VERIFY FOR EXACT LOCATIONS.
4. EQUIPMENT SHALL ONLY BE REMOVED ONCE IT IS NO LONGER NEEDED FOR OPERATION OF THE PUMP STATION. SHUTDOWNS SHALL BE COORDINATED WITH AND APPROVED BY THE OWNER PRIOR.
5. THE CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING UTILITIES AND FINISHES NOT BEING REPLACED OR REMOVED.

NOTES BY SYMBOL "⬡"

1 DEMOLISH INLINE FAN ALONG WITH DUCTWORK AND ASSOCIATED ACCESSORIES AND CONTROLS. REPAIR RESULTING FLOOR PENETRATION FOR RE-USE.
2 DEMOLISH ELECTRIC DUCT HEATER ALONG WITH ASSOCIATED ACCESSORIES AND CONTROLS.
3 DEMOLISH AIR HANDLING UNIT ALONG WITH ASSOCIATED ACCESSORIES, DUCT, AND CONTROLS.
4 DEMOLISH LOUVER. REPAIR RESULTING WALL OPENING FOR RE-USE.
5 DEMOLISH INLINE FAN ALONG WITH DUCTWORK, ASSOCIATED ACCESSORIES AND CONTROLS.
6 RETURN AIR DUCTWORK AND GRILLE TO REMAIN.
7 DEMOLISH SUPPLY DUCTWORK AND ALL ASSOCIATED ACCESSORIES.
8 DEMOLISH SUPPLY AIR DUCTWORK AND ACCESSORIES.
9 EXISTING AIR-COOLED CONDENSING UNITS TO REMAIN.
10 DEMOLISH THERMOSTAT AND CONDUIT/WIRING.
11 EXISTING LOUVER TO REMAIN.
12 DEMOLISH SUPPLY DUCTWORK. PROTECT DUCT SUPPORTS FOR REUSE.
13 SUPPLY AIR DUCTWORK IN VERTICAL TO REMAIN. DEMOLISH TEE FITTING.

0 4' 8'
3/16"=1'-0"

ISSUED FOR BID

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2026

GEORGIA REGISTERED No. PE051583 PROFESSIONAL ENGINEER
10/21/2025

FREESE NICHOLS
2180 Satellite Boulevard
Suite 235
Duluth, GA 30097
Phone - (470) 645-3092
Web - www.freese.com

GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES
SUWANEE CREEK DIVERSION PUMP STATION

BUILDING MECHANICAL
PUMP STATION
DEMOLITION PLAN II

F&N JOB NO. GWR24074
DATE 10/22/2025
DESIGNED DCA
DRAWN DCA
CHECKED WAY

NO.	ISSUE	BY	DATE	REVISED
0	ISSUED FOR BID	JAK	10/22/2025	-

FILE NAME HV-GWR24074-EX-R23.rvt

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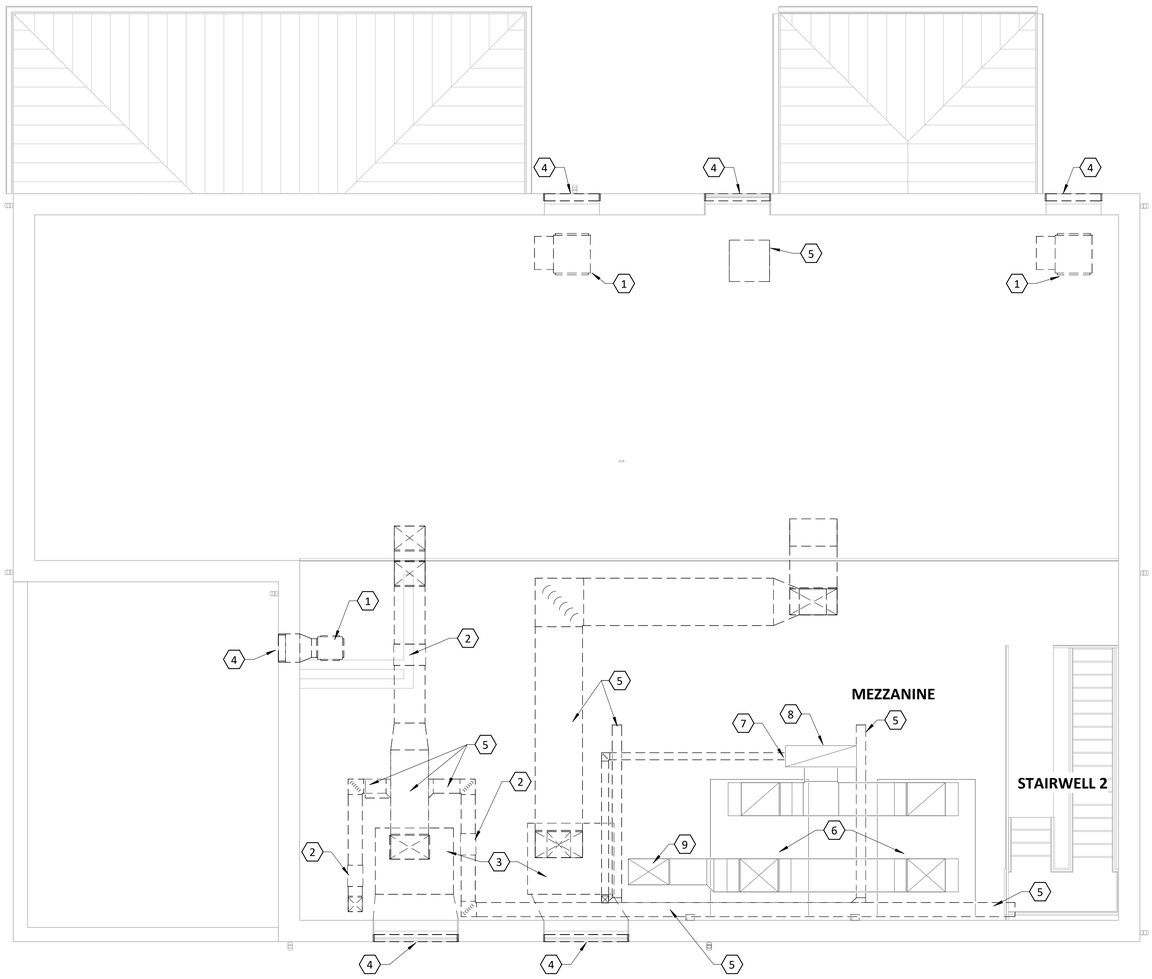
SHEET D-12
SEQ. 56 OF 129

Plot Date: 10/21/2025 11:23:18 AM



1 H-6 MEZZANINE LEVEL DEMOLITION PLAN
3/16" = 1'-0"

GENERAL NOTES

1. REFER TO H-1 FOR LEGEND, GENERAL NOTES AND ABBREVIATIONS.
2. DEMOLISH HVAC EQUIPMENT AND SYSTEMS IN THEIR ENTIRETY, UNLESS NOTED OTHERWISE.
3. FIELD VERIFY FOR EXACT LOCATIONS.
4. EQUIPMENT SHALL ONLY BE REMOVED ONCE IT IS NO LONGER NEEDED FOR OPERATION OF THE PUMP STATION. SHUTDOWNS SHALL BE COORDINATED WITH AND APPROVED BY THE OWNER PRIOR.
5. THE CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING UTILITIES AND FINISHES NOT BEING REPLACED OR REMOVED.

NOTES BY SYMBOL "⬡"

1 DEMOLISH INLINE FAN ALONG WITH DUCTWORK, ASSOCIATED ACCESSORIES AND CONTROLS.

2 DEMOLISH ELECTRIC DUCT HEATER ALONG WITH ASSOCIATED ACCESSORIES AND CONTROLS.

3 DEMOLISH AIR HANDLING UNIT ALONG WITH ASSOCIATED ACCESSORIES, DUCT, AND CONTROLS.

4 DEMOLISH LOUVER. REPAIR RESULTING WALL OPENING FOR RE-USE.

5 DEMOLISH SUPPLY DUCTWORK ALONG WITH ASSOCIATED ACCESSORIES.

6 EXISTING AHU-01 AND AHU-02 TO REMAIN. PROTECT AIR HANDLING UNITS, DUCTWORK, AND ASSOCIATED ACCESSOREIS.

7 DEMOLISH OUTSIDE AIR DUCTWORK. PATCH AND SEAL RETURN AIR DUCT OPENING.

8 60"X18" (APPROX.) RETURN AIR DUCT TO REMAIN.

9 34"X22" (APPROX.) SUPPLY AIR DUCT TO REMAIN.

0 4' 8'
3/16"=1'-0"

ISSUED FOR BID

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2026

GEORGIA REGISTERED No. PE051583 PROFESSIONAL ENGINEER
10/21/2025

FREESE NICHOLS
2180 Satellite Boulevard
Suite 235
Duluth, GA 30097
Phone - (470) 645-3092
Web - www.freese.com

GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES
SUWANEE CREEK DIVERSION PUMP STATION
BUILDING MECHANICAL
PUMP STATION
DEMOLITION PLAN III

F&N JOB NO.	GWR24074
DATE	10/22/2025
DESIGNED	DCA
DRAWN	DCA
REVISED	-
CHECKED	WAY
FILE NAME	HV-GWR24074-EX-R23.rvt

NO.	ISSUE	BY	DATE
0	ISSUED FOR BID	JAK	10/22/2025

VERIFY SCALE Bar is one inch on original drawing. If not one inch on this sheet, adjust scale. 0 1

SHEET D-13
SEQ. 57 OF 129

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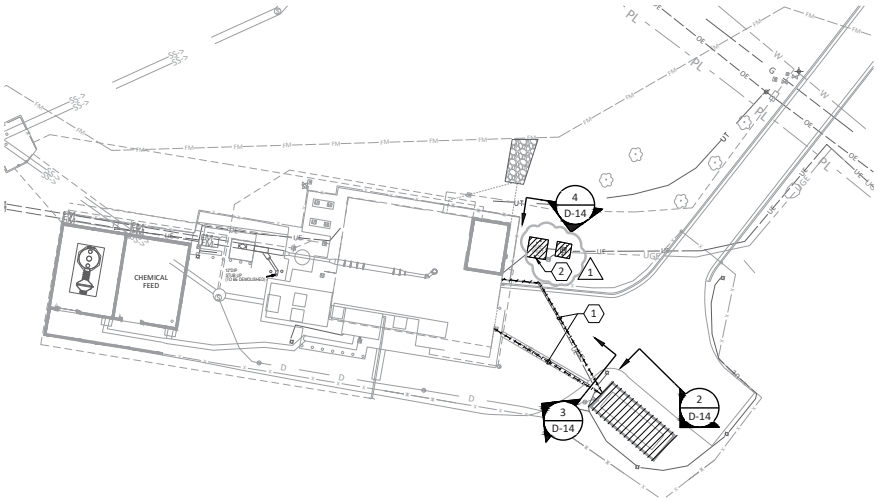


1 — DEMOLITION PUMP STATION SITE PLAN
1"=30'

GENERAL NOTES:

1. ALL EQUIPMENT HATCHED WILL BE REPLACED.
2. EQUIPMENT SHALL ONLY BE REMOVED ONCE IT IS NO LONGER NEEDED FOR OPERATION OF THE PUMP STATION. PUMP STATION SHUTDOWNS SHALL BE COORDINATED WITH AND APPROVED BY THE OWNER PRIOR.
3. DEMOLITION THAT IS REQUIRED IS REPRESENTED BY HATCHING.
4. DEMOLITION SEQUENCING SHALL BE COORDINATED WITH CONSTRUCTION SEQUENCING TO KEEP THE PUMP STATION IN OPERATION WHILE PERFORMING WORK UNDER THIS CONTRACT.
5. CONDUITS DEMOLISHED THAT ARE EMBEDDED IN CONCRETE SHALL BE CUT BELOW GRADE, CAPPED AND GROUTED FOR A SMOOTH FINISHED SURFACE. FINISH ELEVATION SHALL MATCH EXISTING FLOOR.
6. FOR ALL ITEMS BEING DEMOLISHED, REMOVE AND DISPOSE OF ALL ASSOCIATED CONDUCTORS AND EXPOSED CONDUITS TO SOURCE UNLESS STATED OTHERWISE.
7. FIELD VERIFY LOCATION AND FUNCTIONALITY OF ALL CABLES, CONDUITS, AND EQUIPMENT BEING DEMOLISHED PRIOR TO BEGINNING DEMOLITION.
8. CONTRACTOR SHALL CAP ANY ABANDONED UNDERGROUND CONDUITS UNLESS IDENTIFIED TO BE REMOVED.
9. OWNER HAS FIRST RIGHT OF REFUSAL FOR ALL DEMOLISHED EQUIPMENT.

NOTES BY SYMBOL "⬡"

1. REMOVE EXISTING CONDUIT AND CABLE IN DUCT BANKS AND EXISTING SLAB. REMOVE EXISTING DUCT BANKS.
2. REMOVE EXISTING CONDUIT, CABLE AND VAULT. ⬡1

2 — GENERATOR DEMOLITION PHOTO
NOT TO SCALE

3 — GENERATOR CONDUIT ROUTE DEMOLITION PHOTO
NOT TO SCALE

4 — VAULT CONDUIT DEMOLITION PHOTO
NOT TO SCALE

NORTH
0 10' 20' 30' 60'
SCALE IN FEET

ISSUED FOR BID

Francis and Hancock, Inc.
Georgia Registered Engineering Business, Firm PEF-004433

GEORGIA — Expires 12/31/2025 — Registered Professional Engineer

Freese and Nichols
2180 Satellite Boulevard
Suite 235
Duluth, Georgia 30097
Phone: (470) 645-3092
Web: www.freese.com

GWINNETT COUNTY DEPARTMENT OF WATER RESOURCE
SUWANEE CREEK DIVERSION PUMP STATION
ELECTRICAL
DEMOLITION PLAN I

NO.	ISSUE	BY	DATE
2	ADDENDUM NO.3	JJS	12/10/2025
1	ISSUED FOR BID	JJS	10/22/2025

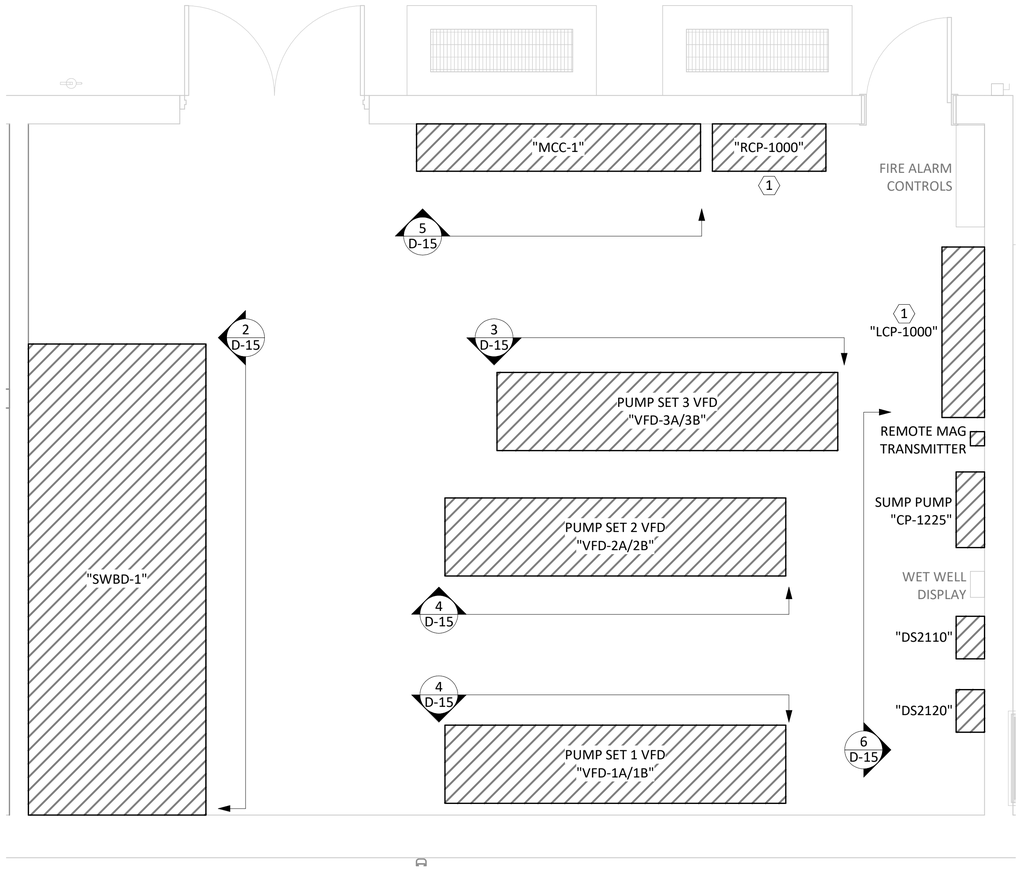
F&N JOB NO. GWR24074
DATE 10/22/2025
DESIGNED DC
DRAWN JTR
CHECKED JNH
APPROVED JJS
FILE NAME EL-ALL-PL-SITE-DM.dwg

VERIFY SCALE Bar Scale is one inch on original drawing. If not one inch on this sheet, adjust scale.
0 1"

SHEET D-14
SEQ. 58 OF 129

ACAD Rel: 24.2s (LMS Tech)
File Name: N:\ELEC\EL-ALL-PL-SITE-DM.dwg
Last Saved: 12/9/2025 11:07 AM Saved By: 09046

Plot Date: 12/9/2025 11:11 AM Plot By: 09046 Filename: N:\ELEC\EL-ALL-PL-SITE-DM.dwg



1 ELECTRICAL ROOM DEMOLITION PLAN
3/8" = 1'-0"

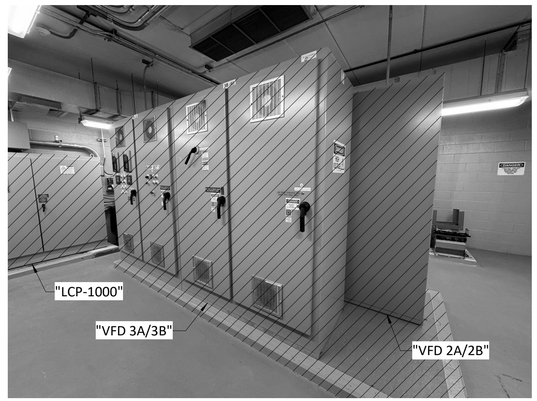
GENERAL NOTES:

1. ALL EQUIPMENT SHOWN DARK OR HATCHED SHALL BE DEMOLISHED AND REPLACED, UNLESS SHOWN OTHERWISE.
2. EQUIPMENT SHALL ONLY BE REMOVED ONCE IT IS NO LONGER NEEDED FOR OPERATION OF THE PUMP STATION. SHUTDOWNS SHALL BE COORDINATED WITH AND APPROVED BY THE OWNER PRIOR.
3. DEMOLITION THAT IS REQUIRED IS REPRESENTED BY HATCH.
4. DEMOLITION SEQUENCING SHALL BE COORDINATED WITH CONSTRUCTION SEQUENCING TO KEEP THE PUMP STATION IN OPERATION WHILE PERFORMING WORK UNDER THIS CONTRACT.
5. CONDUITS DEMOLISHED THAT ARE EMBEDDED IN CONCRETE SHALL BE CUT BELOW GRADE, CAPPED, AND GROUTED FOR A SMOOTH FINISHED SURFACE. FINISH ELEVATION SHALL MATCH EXISTING FLOOR.
6. FOR ALL ITEMS BEING DEMOLISHED, REMOVE AND DISPOSE OF ALL ASSOCIATED CONDUCTORS AND EXPOSED CONDUITS TO SOURCE UNLESS STATED OTHERWISE.
7. FIELD VERIFY LOCATION AND FUNCTIONALITY OF ALL CABLES, CONDUITS, AND EQUIPMENT BEING DEMOLISHED PRIOR TO BEGINNING DEMOLITION.
8. CONTRACTOR SHALL CAP ANY ABANDONED UNDERGROUND CONDUITS UNLESS IDENTIFIED TO BE REMOVED.
9. OWNER HAS FIRST RIGHT OF REFUSAL FOR ALL DEMOLISHED EQUIPMENT.
10. CONTRACTOR SHALL SALVAGE ALL VIBRATION MONITORING EQUIPMENT AND CONTRACTOR SHALL SAFELY STORE ON SITE FOR DWR.

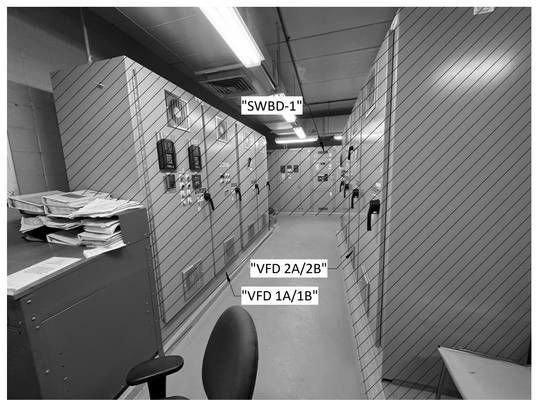
NOTES BY SYMBOL "⬡"

1. CONTRACTOR SHALL COORDINATE WITH OWNER, PROVIDING A MINIMUM OF ONE WEEK'S NOTICE BEFORE DEMOLITION OF PANEL. OWNER SHALL DETERMINE WHICH PARTS OF PANEL ARE TO BE SALVAGED.

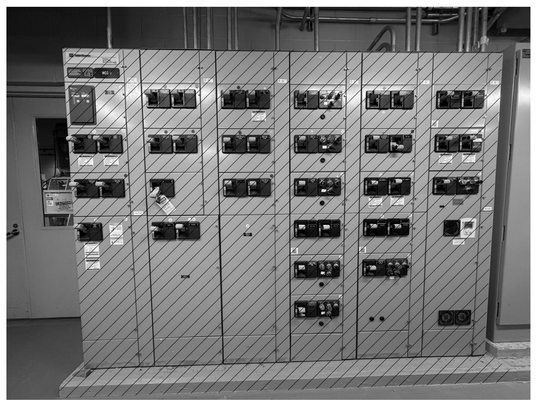
2 "SWBD-1" DEMOLITION PHOTO
NOT TO SCALE



3 VFD-3A/3B DEMOLITION PHOTO
NOT TO SCALE



4 VFD-1A/1B & 2A/2B DEMOLITION PHOTO
NOT TO SCALE



5 "MCC-1" DEMOLITION PHOTO
NOT TO SCALE

6 CONTROLS AND DISCONNECT SWITCHES DEMOLITION PHOTO
NOT TO SCALE

NORTH

0 1' 2' 4'
3/8"=1'-0"

ISSUED FOR BID

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2026

GEORGIA REGISTERED PE050516 PROFESSIONAL ENGINEER JEFFREY J. STOUT
10.22.2025

FREESE NICHOLS
2180 Satellite Boulevard
Suite 235
Duluth, GA 30097
Phone - (470) 645-3092
Web - www.freese.com

GWINNETT COUNTY DEPARTMENT OF WATER RESOURCE
SUWANEE CREEK DIVERSION PUMP STATION
ELECTRICAL
DEMOLITION PLAN II

F&N JOB NO.	GWR24074
DATE	10/22/2025
DESIGNED	DC
DRAWN	JTR
CHECKED	JNH
APPROVED	JJS
FILE NAME	EL-GWR24074-EX-R23.RVT

NO.	ISSUE	BY	DATE
0	ISSUED FOR BID	JJS	10/22/2025

Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.
VERIFY SCALE 0 1"

SHEET D-15
SEQ. 59 OF 129

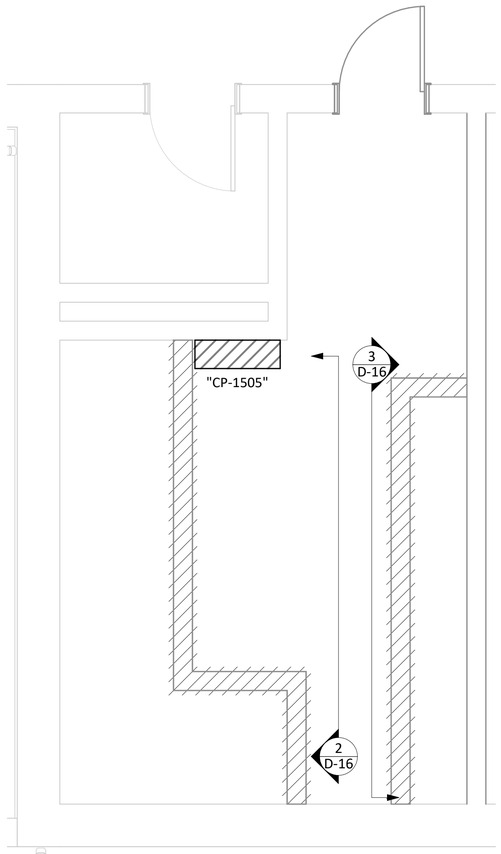
Plot Date: 10/21/2025 3:50:11 PM

GENERAL NOTES:

1. ALL EQUIPMENT SHOWN DARK OR HATCHED SHALL BE DEMOLISHED AND REPLACED, UNLESS SHOWN OTHERWISE.
2. EQUIPMENT SHALL ONLY BE REMOVED ONCE IT IS NO LONGER NEEDED FOR OPERATION OF THE PUMP STATION. SHUTDOWNS SHALL BE COORDINATED WITH AND APPROVED BY THE OWNER PRIOR.
3. DEMOLITION THAT IS REQUIRED IS REPRESENTED BY HATCH.
4. DEMOLITION SEQUENCING SHALL BE COORDINATED WITH CONSTRUCTION SEQUENCING TO KEEP THE PUMP STATION IN OPERATION WHILE PERFORMING WORK UNDER THIS CONTRACT.
5. CONDUITS DEMOLISHED THAT ARE EMBEDDED IN CONCRETE SHALL BE CUT BELOW GRADE, CAPPED, AND GROUTED FOR A SMOOTH FINISHED SURFACE. FINISH ELEVATION SHALL MATCH EXISTING FLOOR.
6. FOR ALL ITEMS BEING DEMOLISHED, REMOVE AND DISPOSE OF ALL ASSOCIATED CONDUCTORS AND EXPOSED CONDUITS TO SOURCE UNLESS STATED OTHERWISE.
7. FIELD VERIFY LOCATION AND FUNCTIONALITY OF ALL CABLES, CONDUITS, AND EQUIPMENT BEING DEMOLISHED PRIOR TO BEGINNING DEMOLITION.
8. CONTRACTOR SHALL CAP ANY ABANDONED UNDERGROUND CONDUITS UNLESS IDENTIFIED TO BE REMOVED.
9. OWNER HAS FIRST RIGHT OF REFUSAL FOR ALL DEMOLISHED EQUIPMENT.

NOTES BY SYMBOL "⬡"

1. DEMOLISH CP-1505.
2. REMOVE DEMO EMERGENCY LIGHTS. REROUTE DEMOLISHED EMERGENCY LIGHT CONDUIT AND CABLE BACK TO SOURCE.
3. REMOVE FIRE ALARM. REROUTE DEMOLISHED FIRE ALARM CONDUIT AND CABLE BACK TO SOURCE.
4. REMOVE EXISTING PAD.



1 MECHANICAL ROOM 1 DEMOLITION PLAN
3/8" = 1'-0"

2 MECHANICAL ROOM 1 NORTH WALL DEMOLITION PHOTO
NOT TO SCALE

3 MECHANICAL ROOM 1 SOUTH WALL DEMOLITION PHOTO
NOT TO SCALE

NORTH

0 1' 2' 4'
3/8"=1'-0"

ISSUED FOR BID

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2026

GEORGIA REGISTERED PE050516 PROFESSIONAL ENGINEER JEFFREY J. STOUT
10.22.2025

FREESE NICHOLS
2180 Satellite Boulevard
Suite 235
Duluth, GA 30097
Phone - (470) 645-3092
Web - www.freese.com

GWINNETT COUNTY DEPARTMENT OF WATER RESOURCE
SUWANEE CREEK DIVERSION PUMP STATION
ELECTRICAL
DEMOLITION PLAN III

F&N JOB NO.	GWR24074
DATE	10/22/2025
DESIGNED	DC
DRAWN	JTR
CHECKED	-
APPROVED	JNH
FILE NAME	EL-GWR24074-EX-R23.RVT

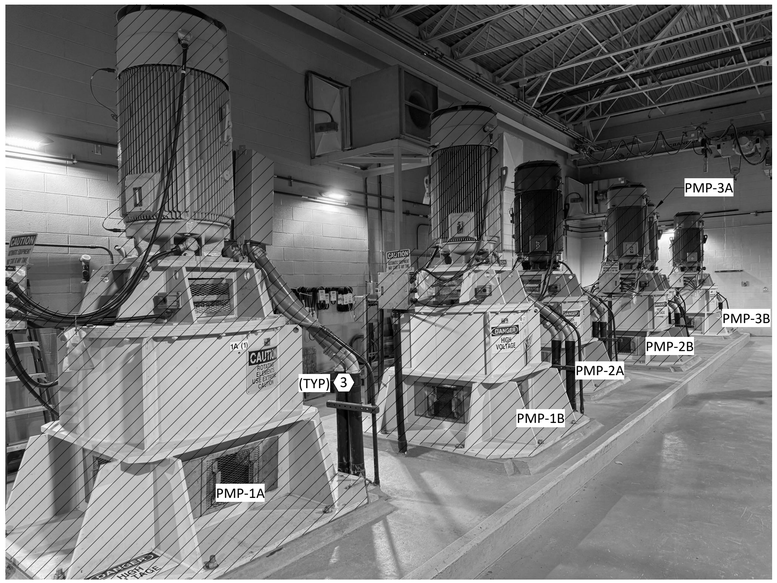
NO.	ISSUE	BY	DATE
0	ISSUED FOR BID	JJS	10/22/2025

VERIFY SCALE Bar is one inch on original drawing. If not one inch on this sheet, adjust scale. 0 1

SHEET D-16
SEQ. 60 OF 129

Plot Date: 10/21/2025 3:50:12 PM

2 COILING DOOR DEMOLITION PHOTO
NOT TO SCALE



3 PUMP MOTOR DEMOLITION PHOTO
NOT TO SCALE

GENERAL NOTES:

1. ALL EQUIPMENT SHOWN DARK OR HATCHED SHALL BE DEMOLISHED AND REPLACED, UNLESS SHOWN OTHERWISE.
2. EQUIPMENT SHALL ONLY BE REMOVED ONCE IT IS NO LONGER NEEDED FOR OPERATION OF THE PUMP STATION. SHUTDOWNS SHALL BE COORDINATED WITH AND APPROVED BY THE OWNER PRIOR.
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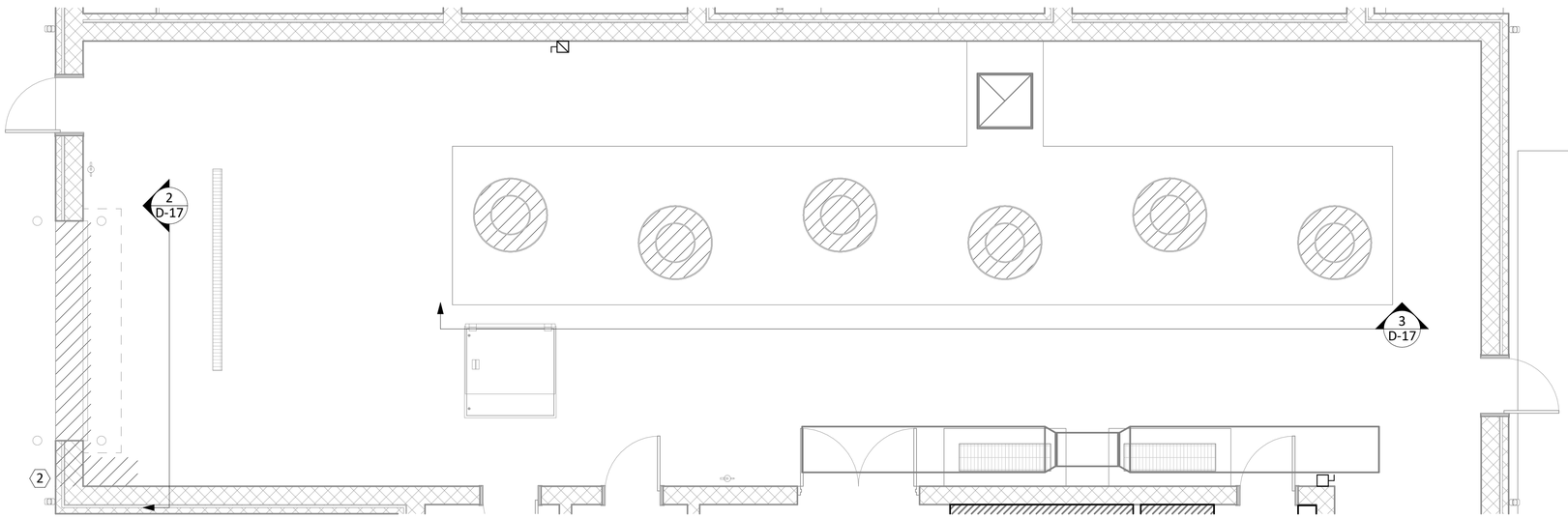
8. CONTRACTOR SHALL CAP ANY ABANDONED UNDERGROUND CONDUITS UNLESS IDENTIFIED TO BE REMOVED.
9. OWNER HAS FIRST RIGHT OF REFUSAL FOR ALL DEMOLISHED EQUIPMENT.

NOTES BY SYMBOL " ⬡ "

1. REMOVE EXISTING MOTOR.
2. IDENTIFY SOURCE AND LOAD OF EXISTING CONDUITS. REMOVE AND RELOCATE CONDUITS ABOVE NEW ROLL UP DOOR.
3. CONDUIT STUB UPS BETWEEN THE MOTOR AND VFD SHALL BE KEPT FOR PROPOSED CONDUIT ROUTING.



1 TOP LEVEL ROOM DEMOLITION PLAN
1/4" = 1'-0"

NORTH

0 2' 4' 8'
1/4"=1'-0"

ISSUED FOR BID

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2026

GEORGIA REGISTERED LIC. PE050516 PROFESSIONAL ENGINEER JEFFREY J. STOUT
10.22.2025

FREESE NICHOLS
2180 Satellite Boulevard
Suite 235
Duluth, GA 30097
Phone - (470) 645-3092
Web - www.freese.com

GWINNETT COUNTY DEPARTMENT OF WATER RESOURCE
SUWANEE CREEK DIVERSION PUMP STATION

ELECTRICAL

DEMOLITION PLAN IV

F&N JOB NO.	GWR24074
DATE	10/22/2025
DESIGNED	DC
DRAWN	JTR
CHECKED	-
APPROVED	JNH

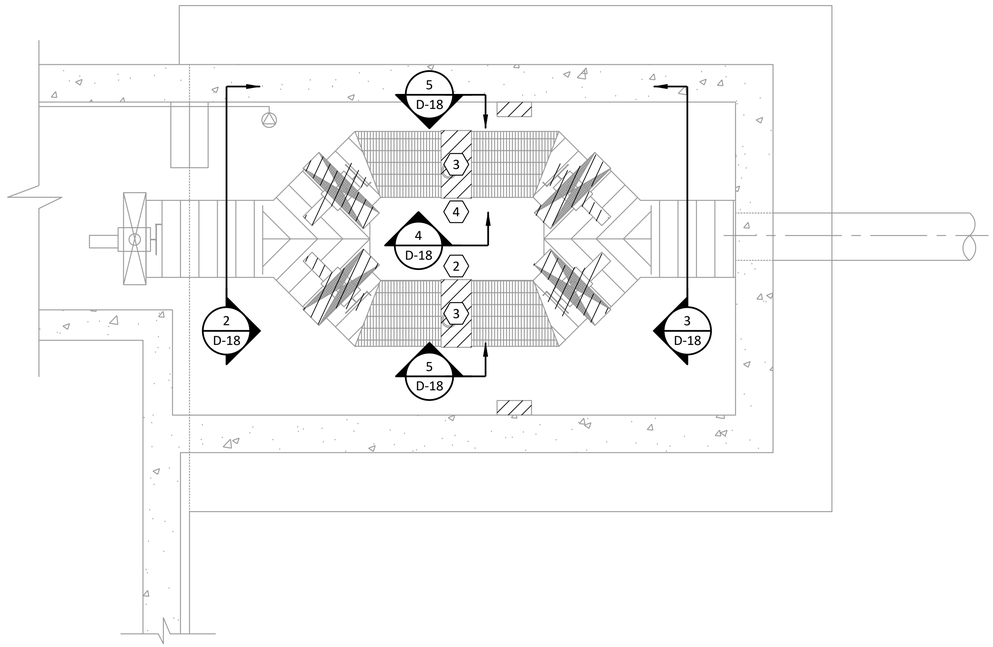
NO.	ISSUE	DATE	BY
0	ISSUED FOR BID	10/22/2025	JJS

FILE NAME EL-GWR24074-EX-R23.RVT

VERIFY SCALE Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.
0 1

SHEET D-17
SEQ. 61 OF 129

Plot Date: 10/21/2025 3:50:12 PM



1 - GRINDER DEMOLITION PLAN
1/4" = 1'-0"

GENERAL NOTES:

1. ALL EQUIPMENT SHOWN DARK OR HATCHED SHALL BE DEMOLISHED AND REPLACED, UNLESS SHOWN OTHERWISE.
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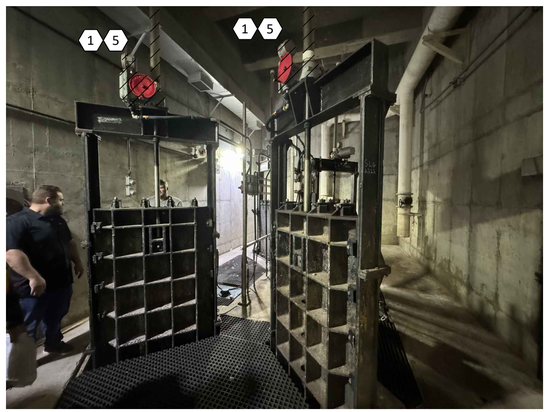
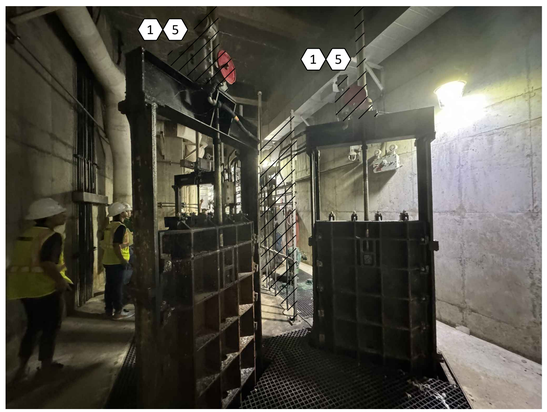
7. FIELD VERIFY LOCATION AND FUNCTIONALITY OF ALL CABLES, CONDUITS, AND EQUIPMENT BEING DEMOLISHED PRIOR TO BEGINNING DEMOLITION.
8. CONTRACTOR SHALL CAP ANY ABANDONED UNDERGROUND CONDUITS UNLESS IDENTIFIED TO BE REMOVED.
9. OWNER HAS FIRST RIGHT OF REFUSAL FOR ALL DEMOLISHED EQUIPMENT.

NOTES BY SYMBOL "⬡"

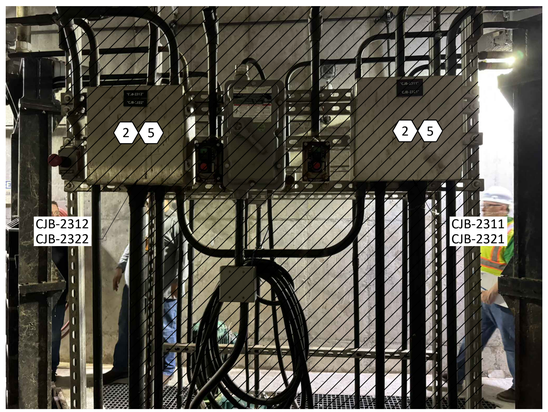
1. REMOVE EXISTING MOTOR.
2. REMOVE EXISTING JUNCTION BOX AND CABLING BACK TO SOURCE.
3. REMOVE EXISTING GRINDER.
4. REFER TO SHEET E-8 FOR MORE DETAIL.
5. REFER TO SHEET D-16 FOR ADDITIONAL DEMOLITION INFORMATION. REMOVE ALL ELECTRICAL APPURTENANCES ASSOCIATED WITH EQUIPMENT REMOVAL.



2 - GRINDER DEMOLITION PHOTO I
NOT TO SCALE



3 - GRINDER DEMOLITION PHOTO II
NOT TO SCALE



4 - GRINDER DEMOLITION PHOTO III
NOT TO SCALE

5 - GRINDER DEMOLITION PHOTO IV
NOT TO SCALE

NORTH
0 1' 2' 4' 8'
1/4"=1'-0"

ISSUED FOR BID

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2026

GEORGIA REGISTERED No. PE050516 PROFESSIONAL ENGINEER JEFFREY J. STOUT
10.22.2025

FREESE NICHOLS
2180 Satellite Boulevard
Suite 235
Duluth, Georgia 30097
Phone - (470)-645-3092
Web - www.freese.com

GWINNETT COUNTY DEPARTMENT OF WATER RESOURCE
SUWANEE CREEK DIVERSION PUMP STATION
ELECTRICAL
DEMOLITION PLAN V

NO.	ISSUE	BY	DATE
1	ISSUED FOR BID	JJS	10/22/2025

VERIFY SCALE Bar Scale is one inch on original drawing. If not one inch on this sheet, adjust scale. 0 1"

F&N JOB NO. GWR24074
DATE 10/22/2025
DESIGNED DC
DRAWN JTR
CHECKED JNH
APPROVED JJS
FILE NAME EL-ALL-PL-DEMO01.dwg

SHEET D-18
SEQ. 62 OF 129

ACAD Rel: 24.2
Filename: N:\ELEC\EL-ALL-PL-DEMO01.dwg
Last Saved: 10/21/2025 2:55 PM Saved By: 04169

Plot Date: 10/21/2025 3:57 PM Plot By: 04169 Filename: N:\ELEC\EL-ALL-PL-DEMO01.dwg

GENERAL NOTES:

1. ALL EQUIPMENT SHOWN DARK OR HATCHED SHALL BE DEMOLISHED AND REPLACED, UNLESS SHOWN OTHERWISE.
2. EQUIPMENT SHALL ONLY BE REMOVED ONCE IT IS NO LONGER NEEDED FOR OPERATION OF THE PUMP STATION. SHUTDOWNS SHALL BE COORDINATED WITH AND APPROVED BY THE OWNER PRIOR.
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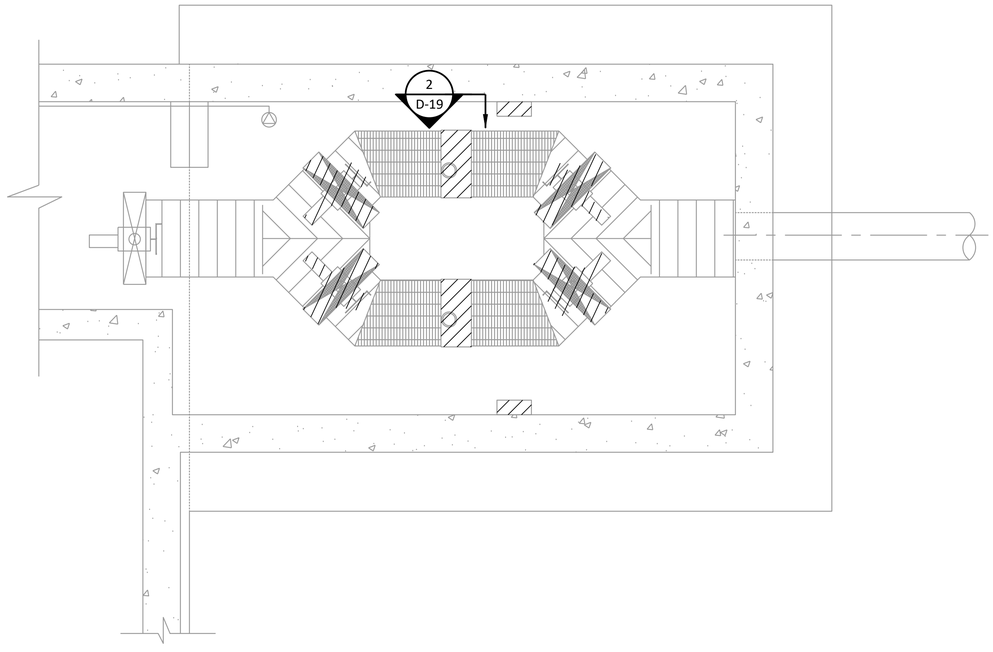
8. CONTRACTOR SHALL CAP ANY ABANDONED UNDERGROUND CONDUITS UNLESS IDENTIFIED TO BE REMOVED.
9. OWNER HAS FIRST RIGHT OF REFUSAL FOR ALL DEMOLISHED EQUIPMENT.

NOTES BY SYMBOL "⬡"

1. REMOVE EXISTING ELECTRICAL EQUIPMENT.



1 — GRINDER DEMOLITION PLAN
1/4" = 1'-0"

2 — GRINDER DEMOLITION PHOTO
NOT TO SCALE

NORTH

0 1' 2' 4' 8'
1/4"=1'-0"

ISSUED FOR BID

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2026

GEORGIA REGISTERED LIC. PE050516 PROFESSIONAL ENGINEER JEFFREY J. STOUT
10.22.2025

FREESE NICHOLS
2180 Satellite Boulevard
Suite 235
Duluth, Georgia 30097
Phone - (470)-645-3092
Web - www.freese.com

GWINNETT COUNTY DEPARTMENT OF WATER RESOURCE
SUWANEE CREEK DIVERSION PUMP STATION
ELECTRICAL
DEMOLITION PLAN VI

NO.	ISSUE	BY	DATE
1	ISSUED FOR BID	JJS	10/22/2025

VERIFY SCALE Bar Scale is one inch on original drawing. If not one inch on this sheet, adjust scale. 0 1

F&N JOB NO.	GWR24074
DATE	10/22/2025
DESIGNED	DC
DRAWN	JTR
CHECKED	JNH
APPROVED	JJS
FILE NAME	EL-ALL-PL-DEMO02.dwg

SHEET D-19
SEQ. 63 OF 129

ACAD Rel: 24.2
Filename: N:\ELEC\EL-ALL-PL-DEMO02.dwg
Last Saved: 9/15/2025 4:51 PM Saved By: 04169

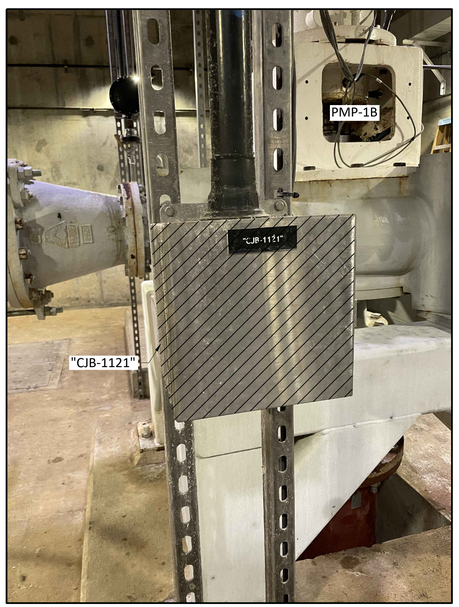
Plot Date: 10/21/2025 3:57 PM Plot By: 04169 Filename: N:\ELEC\EL-ALL-PL-DEMO02.dwg

1 - INTERMEDIATE FLOOR DEMOLITION PHOTO I
NOT TO SCALE

2 - INTERMEDIATE FLOOR DEMOLITION PHOTO II
NOT TO SCALE

3 - INTERMEDIATE FLOOR DEMOLITION PHOTO III
NOT TO SCALE

4 - INTERMEDIATE FLOOR DEMOLITION PHOTO IV
NOT TO SCALE



5 - INTERMEDIATE FLOOR DEMOLITION PHOTO V
NOT TO SCALE

6 - INTERMEDIATE FLOOR DEMOLITION PHOTO VI
NOT TO SCALE

GENERAL NOTES:

1. ALL EQUIPMENT SHOWN DARK OR HATCHED SHALL BE DEMOLISHED AND REPLACED, UNLESS SHOWN OTHERWISE.
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Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2026

GEORGIA REGISTERED No. PE050516 PROFESSIONAL ENGINEER JEFFREY J. STOUT
10.22.2025

FREESE NICHOLS
2180 Satellite Boulevard
Suite 235
Duluth, Georgia 30097
Phone - (470)-645-3092
Web - www.freese.com

GWINNETT COUNTY DEPARTMENT OF WATER RESOURCE
SUWANEE CREEK DIVERSION PUMP STATION

ELECTRICAL

DEMOLITION PHOTOS I

NO.	ISSUE	BY	DATE
1	ISSUED FOR BID	JJS	10/22/2025

VERIFY SCALE Bar Scale is one inch on original drawing. If not one inch on this sheet, adjust scale. 0 1

F&N JOB NO. GWR24074
DATE 10/22/2025
DESIGNED DC
DRAWN JTR
CHECKED JNH
APPROVED JJS
FILE NAME EL-ALL-DT-PHOTO01.dwg

SHEET D-20
SEQ. 64 OF 129

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Plot Date: 10/21/2025 3:58 PM Plot By: 04169 Filename: N:\ELEC\EL-ALL-DT-PHOTO01.dwg

1 - LOWER FLOOR DEMOLITION PHOTO I

NOT TO SCALE

2 - LOWER FLOOR DEMOLITION PHOTO II

NOT TO SCALE

3 - LOWER FLOOR DEMOLITION PHOTO III

NOT TO SCALE

GENERAL NOTES:

1. ALL EQUIPMENT SHOWN DARK OR HATCHED SHALL BE DEMOLISHED AND REPLACED, UNLESS SHOWN OTHERWISE.
2. EQUIPMENT SHALL ONLY BE REMOVED ONCE IS IS NO LONGER NEEDER FOR OPERATION OF THE PUMP STATION. SHUTDOWNS SHALL BE COORDINATED WITH AND APPROVED BY THE OWNER PRIOR.
3. DEMOLITION THAT IS REQUIRED IS REPRESENTED BY HATCH.
4. DEMOLITION SEQUENCING SHALL BE COORDINATED WITH CONSTRUCTION SEQUENCING TO KEEP THE PUMP STATION IN OPERATION WHILE PERFORMING WORK UNDER THIS CONTRACT.
5. CONDUITS DEMOLISHED THAT ARE EMBEDDED IN CONCRETE SHALL BE CUT BELOW GRADE, CAPPED, AND GROUTED FOR A SMOOTH FINISHED SURFACE. FINISH ELEVATION SHALL MATCH EXISTING FLOOR.
6. FOR ALL ITEMS BEING DEMOLISHED, REMOVE AND DISPOSE OF ALL ASSOCIATED CONDUCTORS AND EXPOSED CONDUITS TO SOURCE UNLESS STATED OTHERWISE.
7. FIELD VERIFY LOCATION AND FUNCTIONALITY OF ALL CABLES, CONDUIT, AND EQUIPMENT BEING DEMOLISHED PRIOR TO BEGINNING DEMOLITION.
8. CONTRACTOR SHALL CAP ANY ABANDONED UNDERGROUND CONDUITS UNLESS IDENTIFIED TO BE REMOVED.
9. OWNER HAS FIRST RIGHT OF REFUSAL FOR ALL DEMOLISHED EQUIPMENT.

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Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2026

GEORGIA REGISTERED No. PE050516 PROFESSIONAL ENGINEER JEFFREY J. STOUT
10.22.2025

FREESE NICHOLS
2180 Satellite Boulevard
Suite 235
Duluth, Georgia 30097
Phone - (470)-645-3092
Web - www.freese.com

GWINNETT COUNTY DEPARTMENT OF WATER RESOURCE

SUWANEE CREEK DIVERSION PUMP STATION

ELECTRICAL

DEMOLITION PHOTOS II

NO.	ISSUE	BY	DATE

F&N JOB NO. GWR24074
DATE 10/22/2025
DESIGNED DC
DRAWN JTR
CHECKED JNH
APPROVED JJS
FILE NAME EL-ALL-DT-PHOTO02.dwg

⚠ ISSUED FOR BID — JJS — 10/22/2025

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SHEET D-21

SEQ. 65 OF 129

ACAD Rel: 24.2
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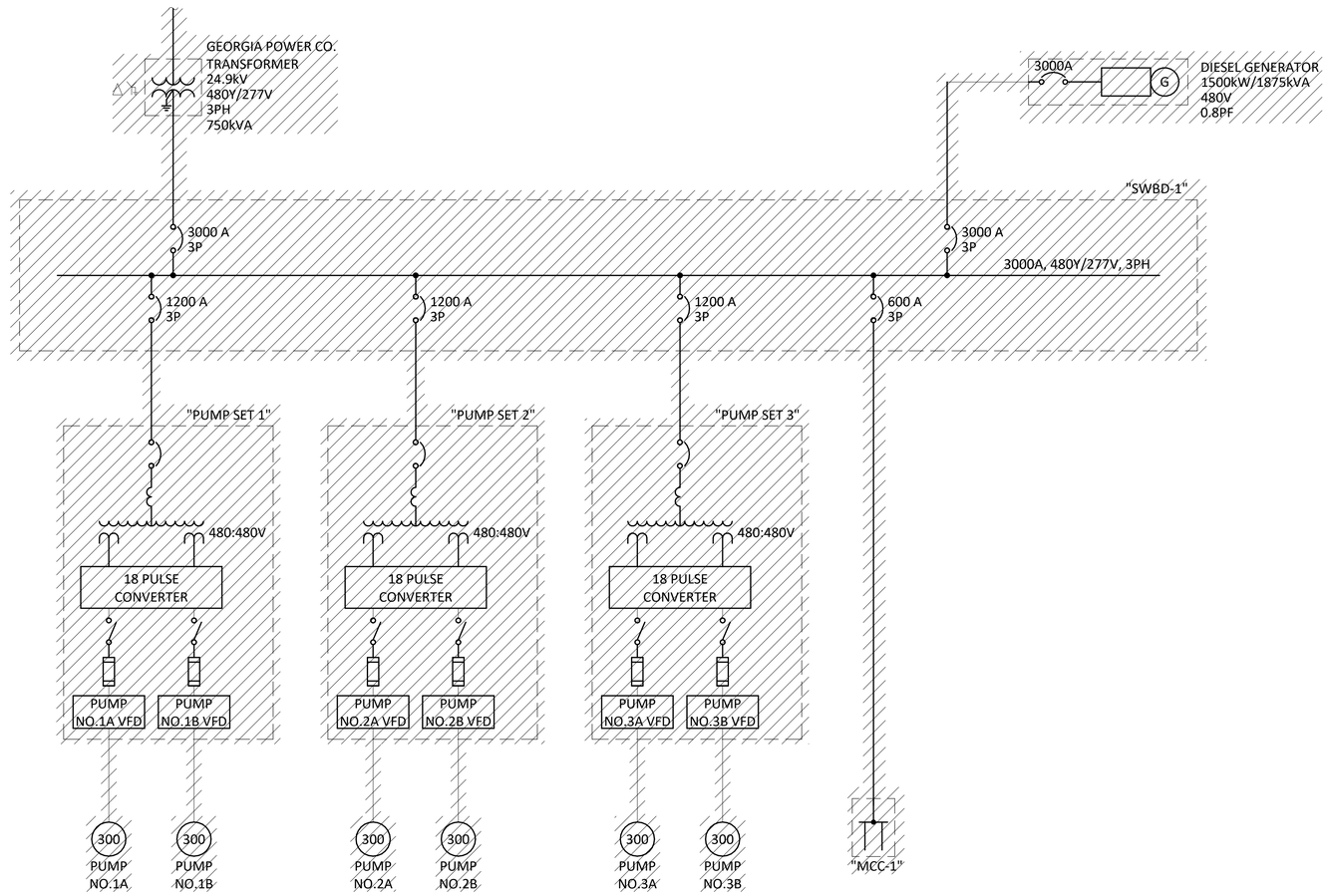
Last Saved: 9/15/2025 4:47 PM Saved By: 04169

Plot Date: 10/21/2025 3:58 PM Plot By: 04169 Filename: N:\ELEC\EL-ALL-DT-PHOTO02.dwg

GENERAL NOTES:

1. ALL EQUIPMENT SHOWN IN DARK AND HATCHED SHALL BE DEMOLISHED.
2. OWNER HAS FIRST RIGHT OF REFUSAL FOR ALL DEMOLISHED EQUIPMENT.



1 DEMOLITION 480V ONE-LINE DIAGRAM
NOT TO SCALE

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Georgia Registered Engineering Firm PEF-004433
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2180 Satellite Boulevard
Suite 235
Duluth, GA 30097
Phone - (470) 645-3092
Web - www.freese.com

GWINNETT COUNTY DEPARTMENT OF WATER RESOURCE
SUWANEE CREEK DIVERSION PUMP STATION

ELECTRICAL

DEMOLITION 480V ONE-LINE DIAGRAM

F&N JOB NO.	GWR24074
DATE	10/22/2025
DESIGNED	DC
DRAWN	JTR
CHECKED	-
APPROVED	JNH

NO.	ISSUE	DATE	BY
0	ISSUED FOR BID	10/22/2025	JJS

FILE NAME EL-GWR24074-EX-R23.RVT

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SHEET D-22

SEQ. 66 OF 129

GENERAL

1. DESIGN IS IN ACCORDANCE WITH 2018 INTERNATIONAL BUILDING CODE, LOCAL AMENDMENTS, AND APPLICABLE CODE REFERENCED STANDARDS.

2. CONSTRUCTION ACTIVITIES SHALL BE IN ACCORDANCE WITH APPLICABLE OSHA, STATE, AND LOCAL REGULATIONS. THIS DESIGN IS NOT INTENDED TO CONFLICT WITH SAFETY OR APPLICABLE REGULATIONS OR TO RELIEVE THE CONTRACTOR OF COMPLIANCE WITH THESE REQUIREMENTS. IN CASE OF CONFLICT WITH SAFETY OR APPLICABLE REGULATIONS, CONTACT THE ENGINEER FOR GUIDANCE BEFORE PROCEEDING WITH FABRICATION OR CONSTRUCTION.

3. PRIOR TO FABRICATION OR CONSTRUCTION:
   A. REVIEW OTHER DISCIPLINE DRAWINGS FOR SIZE AND LOCATION OF ALL OPENINGS, DEPRESSIONS, OFFSETS, SLEEVES, CURBS, PADS, INSERTS, EQUIPMENT REQUIREMENTS, ETCETERA, WHICH ARE NOT SHOWN ON STRUCTURAL DRAWINGS.
   B. VERIFY DIMENSIONS AND LOCATIONS OF ALL OPENINGS, DEPRESSIONS, OFFSETS, SLEEVES, CURBS, PADS, INSERTS, EQUIPMENT REQUIREMENTS, ETCETERA.
   C. FIELD VERIFY (FV) ALL EXISTING CONDITIONS, INCLUDING LOCATION AND DIMENSIONS OF ALL EXISTING CONSTRUCTION AND UTILITIES.
   D. NOTIFY OWNER'S REPRESENTATIVE OF ANY DISCREPANCIES BETWEEN DISCIPLINES, CONSTRUCTABILITY ISSUES, OR EXISTING CONDITIONS.

4. REMOVE ALL ABANDONED FOUNDATIONS, UTILITIES, PIPELINES, ETCETERA THAT INTERFERE WITH NEW CONSTRUCTION.

5. PROVIDE EXCAVATION SHORING TO PROTECT AND SUPPORT FOUNDATION SOILS UNDER EXISTING STRUCTURES.

6. THE STRUCTURE IS DESIGNED FOR STABILITY IN THE FINAL CONDITION ONLY. PROVIDE TEMPORARY BRACING AND SHORING AS REQUIRED FOR STABILITY DURING CONSTRUCTION.

7. PLANS, SECTIONS, AND DETAILS ARE NOT TO BE SCALED FOR DETERMINATION OF QUANTITIES, LENGTHS, OR FIT OF MATERIALS.

8. THE GENERAL NOTES AND TYPICAL DETAILS ARE GENERAL AND APPLY TO THE ENTIRE PROJECT EXCEPT WHERE THERE ARE SPECIFIC INDICATIONS TO THE CONTRARY.

9. THESE NOTES AND DRAWINGS SUPERCEDE PROJECT SPECIFICATIONS WHEN IN CONFLICT. CONTACT OWNER'S REPRESENTATIVE FOR CLARIFICATION IF CONFLICT IS OBSERVED.

LOADS: ASD (SERVICE LEVEL)

1. SUPERIMPOSED DEAD LOADS (NOT INCLUDING STRUCTURAL FRAMING SELF-WEIGHT):
   A. CANOPY ROOF: 6 PSF

2. ROOF LIVE LOAD:
   A. CANOPY ROOF: 20 PSF

3. GROUND SNOW LOAD: Pg = 5 PSF

4. LATERAL LOADS:
   A. RISK CATEGORY III
   B. WIND LOAD:
      i. BASIC WIND SPEED: V = 113 MPH(V_{asd} = 88 MPH)
      ii. WIND EXPOSURE: C
      iii. INTERNAL PRESSURE COEFFICIENT: GCpi = +/-0.55
      iv. COMPONENTS AND CLADDING PRESSURES, FOR VARIOUS ZONES USING AN EFFECTIVE WIND AREA OF 10 FT2 ARE AS FOLLOWS:

ASD DESIGN WIND PRESSURE FOR COMPONENTS AND CLADDING PRESSURES HAVE BEEN MULTIPLIED BY A 0.6 LOAD FACTOR (PSF)				
ZONE	PRESSURE		ZONE	PRESSURE
1	+20/-29		4	+25/-26
2	+10/-47		5	+25/-31
3	+10/-47			

   C. SEISMIC LOAD:
      i. SEISMIC IMPORTANCE FACTOR: I = 1.25
      ii. MAPPED SPECTRAL ACCELERATIONS: S_S = 0.20, S_1 = 0.09
      iii. SITE CLASS: B
      iv. SPECTRAL RESPONSE COEFFICIENT: S_{DS} = 0.13, S_{D1} = 0.06
      v. SEISMIC DESIGN CATEGORY: A
      vi. DESIGN BASE SHEAR V = 0.01W
      vii. ANALYSIS PROCEDURE: GENERAL STRUCTURAL INTEGRITY

5. ROOF RAIN LOAD: RAIN INTENSITY i = 3.5IN/HR

FOUNDATION

1. ALL FOUNDATIONS SHALL BEAR ON SOUND, UNDISTURBED, LEVEL EXCAVATIONS. REMOVE ANY AND ALL LOOSE DEBRIS FROM EXPOSED BEARING SURFACE. SUITABLE BEARING MATERIAL SHALL BE VERIFIED BY A GEOTECHNICAL PROFESSIONAL ENGINEER

2. ALLOWABLE NET BEARING PRESSURES USED FOR FOUNDATION DESIGNS ARE 1,500 PSF ON UNDISTURBED, SOUND, IN SITU SOILS.

CONCRETE

1. CONCRETE SHALL HAVE SPECIFIED COMPRESSIVE STRENGTH, f'c, OF 4,000 PSI AT 28-DAYS (CLASS AA).

2. REINFORCING SHALL BE IN ACCORDANCE WITH ASTM A615, GRADE 60, DEFORMED.

3. CONCRETE CLEAR COVER OVER REINFORCING SHALL BE AS LISTED BELOW, UNLESS NOTED OTHERWISE.
   A. CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH: 3"
   B. ALL OTHER: 2"

4. EXPOSED CONCRETE EDGES SHALL BE CHAMFERED 3/4"x3/4" OR TOOLED TO 3/4" RADIUS.

5. CONSTRUCTION JOINTS (CXJ) SHALL BE THOROUGHLY CLEANED AND PURPOSELY ROUGHENED TO 1/4" PRIOR TO PLACING ADJACENT CONCRETE. DO NOT PROVIDE JOINTS UNLESS SPECIFICALLY SHOWN.

6. CONDUITS AND PIPING EMBEDDED IN CONCRETE SHALL BE SPACED A MINIMUM OF FOUR DIAMETERS AND THE OUTSIDE DIAMETER SHALL BE LESS THAN 30% OF THE MEMBER THICKNESS PLACED BETWEEN LAYERS OF REINFORCING.

7. HOOKS SHALL BE ACI STANDARD HOOKS, UNLESS NOTED OTHERWISE.

8. REINFORCING SHALL BE CONTINUOUS. CONTINUOUS BARS SHALL LAP 48 BAR DIAMETERS OF SMALLER BAR LAPPED, UNLESS NOTED OTHERWISE. ALL REBAR EMBEDMENT LENGTHS SHALL BE 36 BAR DIAMETERS, UNLESS NOTED OTHERWISE.

9. FRP BAR SUPPORTS SHALL BE USED AT ALL EXPOSED CONCRETE SURFACES.

POST-INSTALLED ANCHORS (EXPANSION OR ADHESIVE)

1. INSTALL IN ACCORDANCE WITH MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS (MPII), BUT NOT LESS THAN THAT INDICATED BELOW.

2. ADHESIVE ANCHORS SHALL ONLY BE INSTALLED BY CONSTRUCTION PERSONNEL CERTIFIED UNDER ACI/CRSI ADHESIVE ANCHOR INSTALLER CERTIFICATION PROGRAM OR APPROVED EQUAL. SUBMIT CERTIFICATIONS AS RECORD DATA PRIOR TO ANCHOR INSTALLATION.

3. SUBMIT ANCHOR MATERIAL CERTIFICATIONS AND ALLOW INSPECTION OF UNOPENED ANCHORS ONSITE.

4. ANCHOR DIAMETER AND EMBEDMENT SHALL BE AS INDICATED.

5. HOLES SHALL BE DRILLED USING ROTARY HAMMER DRILLS WITH ANSI MATCHED TOLERANCE CARBIDE-TIPPED DRILL BITS. DRILL BIT DIAMETER SHALL MATCH DIAMETER RECOMMENDED BY MANUFACTURER. DRILL HOLES USING ANCHOR MANUFACTURER'S VACUUM DUST EXTRACTION SYSTEM OR APPROVED EQUAL.

6. USE CARE AND CAUTION WHEN INSTALLING TO AVOID CUTTING OR DAMAGING EXISTING REINFORCING STEEL. FIELD VERIFY EXISTING REINFORCING LOCATIONS PRIOR TO FABRICATION OR CONSTRUCTION, AND THEN COORDINATE REBAR LOCATIONS WITH SHOP DRAWINGS.

7. EXPANSION ANCHORS SHALL BE 316 STAINLESS STEEL, UNLESS NOTED OTHERWISE, AND:
   A. ANCHOR: DEWALT POWER STUD+, HILTI KWIK BOLT TZ2, OR SIMPSON STRONG-TIE STRONG-BOLT 2.
   B. VERIFY HOLE IS CLEAR OF DUST AND DEBRIS.
   C. DRIVE ANCHOR INTO HOLE WITH A HAMMER AND THEN TIGHTEN TO SPECIFIED TORQUE.

8. ADHESIVE ANCHORS (ADH ANCHOR / ADH DWL) SHALL BE DEFORMED REINFORCING BARS (ASTM A615, GR 60) OR 316 STAINLESS STEEL THREADED ROD ASTM A193, GRADE B8M, CLASS 1,UNLESS NOTED OTHERWISE, AND:
   A. ADHESIVE: DEWALT PURE220+, HILTI HIT-RE 500 V3, OR SIMPSON STRONG-TIE SET-3G. USE DEWALT AC200, HILTI HIT-HY 270, SIMPSON STRONG-TIE SET-3G FOR HOLLOW AND GROUTED MASONRY.
   B. ANCHORS SHALL BE CLEAN, FREE OF OIL, GREASE, OR OTHER RESIDUE.
   C. VERIFY HOLE IS CLEAR OF DUST AND DEBRIS.
   D. INSTALL ADHESIVE STARTING AT BACK OF HOLE. USE MANUFACTURER SUPPLIED PISTON PLUG INJECTION SYSTEM FOR ALL HORIZONTAL AND VERTICALLY INCLINED HOLES.
   E. INSTALL ANCHOR BY SIMULTANEOUSLY TWISTING AND INSERTING INTO HOLE.
   F. ALLOW ANCHOR TO REMAIN UNDISTURBED FOR THE REQUIRED TIME.
   G. TIGHTEN NUT. DO NOT OVER-TORQUE.
   H. MINIMUM CONCRETE AGE AT TIME OF INSTALLATION: 28 DAYS
   I. CONCRETE TEMPERATURE RANGE AT TIME OF INSTALLATION SHALL BE: 41DEG F TO 104DEG F.
   J. CONCRETE MOISTURE CONDITION AT TIME OF INSTALLATION: DRY.

STRUCTURAL STEEL

1. STEEL MATERIAL SHALL BE IN ACCORDANCE WITH THE FOLLOWING UNLESS NOTED OTHERWISE:
   A. W-SHAPE & CHANNELS: ASTM A992
   B. M & S-SHAPES, ANGLES, PLATES, MISC.: ASTM A572, GRADE 50
   C. PIPES: ASTM A53, TYPE E OR S, GRADE B
   D. HSS(RECTANGULAR): ASTM A500, GRADE C
   E. HEADED CONCRETE ANCHOR / HEADED STUDS (HCA / HS): AWS D1.1, TYPE B
   F. DEFORMED BAR ANCHOR (DBA): AWS D1.1, TYPE C
   G. ANCHOR RODS: ASTM F1554, GRADE 55, S-1 WELDABLE
   H. BOLTS: ASTM F3125, GRADE A325, TYPE 1

2. ALL BOLT HOLES SHALL BE STANDARD HOLES PER AISC 360 TABLE J3.3, UNLESS NOTED OTHERWISE. DO NOT OVERSIZE, SLOT, OR ENLARGE HOLES UNLESS SPECIFICALLY INDICATED.

3. BOLT HOLES SHALL NOT BE OVERSIZED IN GALVANIZED STEEL UNLESS SPECIFICALLY STATED TO BE OVERSIZED. UNBLOCK AND CLEAN HOLE AFTER GALVANIZING AS REQUIRED FOR BOLT INSTALLATION WITHOUT ENLARGING HOLE DIAMETER IN STEEL MEMBER.

4. WELDING SHALL BE PERFORMED WITH E70XX LOW-HYDROGEN ELECTRODES.

5. ALL WELDS SHALL BE SHOP WELDS UNLESS NOTED OTHERWISE.

6. NO HOLES SHALL BE CUT THROUGH STEEL FRAMING IN FIELD UNLESS APPROVED BY THE ENGINEER.

REINFORCED CONCRETE MASONRY

1. MASONRY SHALL HAVE A SPECIFIED COMPRESSIVE STRENGTH, f'm, OF 2,000 PSI.
   A. CONCRETE MASONRY UNITS: ASTM C90, MINIMUM NET AREA COMPRESSIVE STRENGTH OF 2,000 PSI.
   B. MORTAR: ASTM C270, TYPE S, PORTLAND CEMENT-LIME, TABLE 2.
   C. GROUT: ASTM C476, SPECIFIED COMPRESSIVE STRENGTH, f'g OF 2,000 PSI AT 28 DAYS.

2. ALL REINFORCING SHALL BE IN ACCORDANCE WITH ASTM A 615, GRADE 60, DEFORMED.

3. BRACE TOP OF CMU WALLS UNTIL ROOF FRAMING AND DECK ARE INSTALLED.

STAINLESS STEEL

1. STAINLESS STEEL MATERIAL SHALL BE IN ACCORDANCE WITH:
   A. PLATES (316L SS): ASTM A240, S31603, Fy = 25KSI, Fu = 70 KSI
   B. BOLTS & ANCHOR RODS (316 SS): ASTM A193, GRADE B8M, CLASS 1
2. APPLY ANTISEIZING LUBRICANT TO THREADED CONNECTIONS.

ALUMINUM

1. ALUMINUM CONSTRUCTION SHALL CONFORM TO THE LATEST EDITION OF THE ALUMINUM CONSTRUCTION MANUAL OF THE ALUMINUM ASSOCIATION.

2. UNLESS NOTED OTHERWISE, STRUCTURAL ALUMINUM SHALL BE ALLOY 6061-T6 AS SPECIFIED IN ASTM B308, EXCEPT GUARDRAILS AND HANDRAILS WHICH SHALL BE 6063-T6, UNLESS OTHERWISE NOTED.

3. ALUMINUM IN CONTACT WITH OR EMBEDDED IN CONCRETE OR MASONRY SURFACES SHALL BE COATED WITH A BITUMASTIC COATING.

4. ALL BOLTS USED IN CONNECTION WITH ALUMINUM MEMBERS SHALL BE STAINLESS STEEL AISI 316, UNLESS NOTED OTHERWISE.

STRUCTURAL MODIFICATIONS

1. REFER TO OTHER DISCIPLINE DRAWINGS FOR RELOCATION AND DEMOLITION OF PIPING, CONDUITS, FIXTURES, INSTRUMENTS, ETC. ASSOCIATED WITH STRUCTURES SHOWN TO BE DEMOLISHED.

2. ALL DEMOLITION, REMOVAL AND CONSTRUCTION ACTIVITIES SHALL BE CONDUCTED WITH CONSIDERATION FOR EXISTING FACILITIES STRUCTURES, EQUIPMENT, ETC. ANY DAMAGE WHICH MAY OCCUR BEYOND DESCRIBED DEMOLITION AND CONSTRUCTION SHALL BE REMEDIED TO MATCH OR EXCEED THE EXISTING CONDITION PRIOR TO BEGINNING DEMOLITION, AT CONTRACTOR'S EXPENSE AND OWNER/ENGINEER NOTIFIED. COORDINATE ACCEPTANCE OF FINAL CONDITION WITH OWNER.

3. WHERE DEMOLITION OF EXISTING CONCRETE WILL LEAVE EMBEDDED EXISTING REBARS EXPOSED, AN ADDITIONAL 1 1/2" CONCRETE AND REINFORCEMENT BEYOND LIMITS OF THE DEMOLITION SHALL BE REMOVED. THE 1 1/2" AREAS BEING REMOVED SHALL THEN BE PLACED BACK WITH CONCRETE STRUCTURAL REPAIR MATERIAL AS SPECIFIED TO PROVIDE CORROSION PROTECTION FOR THE EXPOSED EXISTING REBARS, UNLESS NOTED OTHERWISE ON PLAN.

4. ALL EXPOSED EXISTING REBARS SHALL BE CLEANED BY ABRASIVE BLASTING AND COATED WITH AN EPOXY RESIN/PORTLAND CEMENT ADHESIVE BONDING AGENT TO PROVIDE CORROSION PROTECTION.

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2024

GEORGIA REGISTERED 10/21/2025 PETER A. BOODY 36660 PROFESSIONAL ENGINEER STRUCTURAL

FREESE AND NICHOLS
2180 Satellite Boulevard
Suite 235
Duluth, GA 30097
Phone - (470) 645-3092
Web - www.freese.com

GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES
SUWANEE CREEK DIVERSION PUMP STATION

STRUCTURAL

GENERAL NOTES

F&N JOB NO.	GWR24074
DATE	10/22/2025
DESIGNED	PAB
DRAWN	JLM
CHECKED	RCW
REVISED	
DATE	10/22/2025
BY	PAB
FILE NAME	ST-GWR24074-EX-R23.RVT

NO.	ISSUE
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SHEET S-1
SEQ. 67 OF 129

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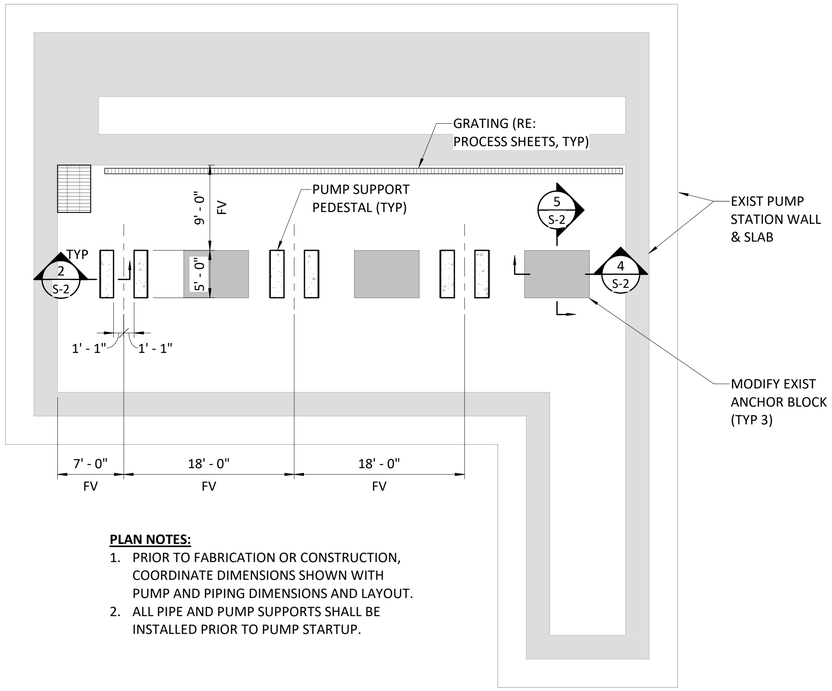
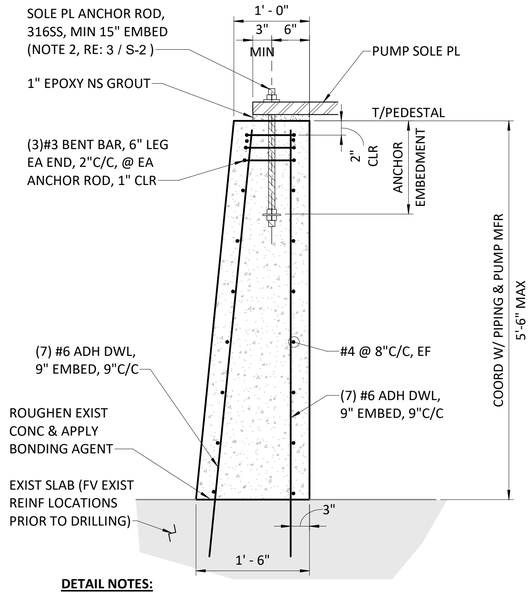


PLAN NOTES:

1. PRIOR TO FABRICATION OR CONSTRUCTION, COORDINATE DIMENSIONS SHOWN WITH PUMP AND PIPING DIMENSIONS AND LAYOUT.
2. ALL PIPE AND PUMP SUPPORTS SHALL BE INSTALLED PRIOR TO PUMP STARTUP.

1 LOWER PUMP ROOM IMPROVEMENTS PLAN

1/8" = 1'-0"

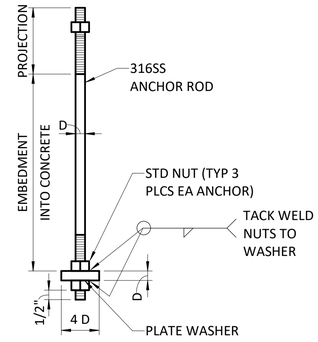


DETAIL NOTES:

1. PRIOR TO FABRICATION OR CONSTRUCTION COORDINATE PEDESTAL AND PEDESTAL LAYOUT WITH EXISTING CONSTRUCTION, PUMP MANUFACTURER, AND PIPING LAYOUT.
2. OORDINATE ANCHOR DIAMETER AND EMBEDMENT WITH PUMP MANUFACTURER. EMBEDMENT SHALL NOT BE LESS THAN THAT RECOMMENDED BY THE PUMP MANUFACTURER.

2 S-2 LOWER ROOM PUMP PEDESTAL

NOT TO SCALE

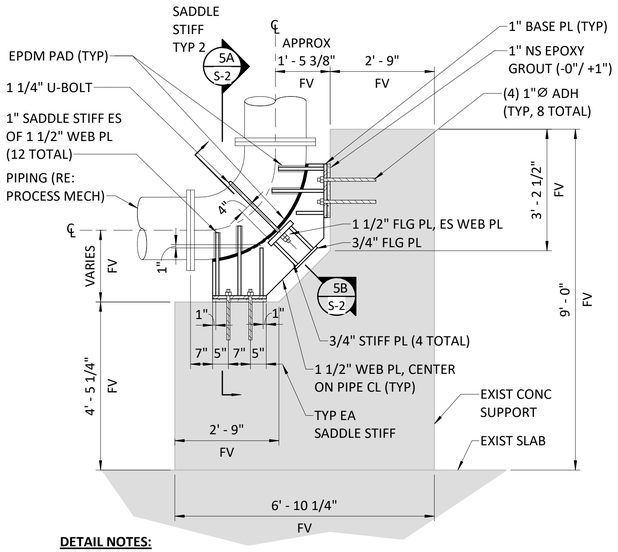


DETAIL NOTES:

1. DO NOT WELD NUT TO ANCHOR.
2. ALL ELEMENTS SHALL BE 316 STAINLESS STEEL.

3 ANCHOR ROD DETAIL

NOT TO SCALE

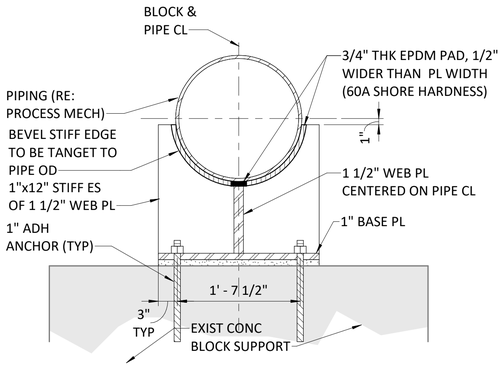


DETAIL NOTES:

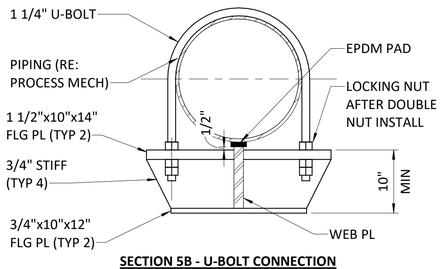
1. COORDINATE CONCRETE PEDESTAL AND FABRICATED STEEL SUPPORTS WITH PIPING CONFIGURATION AND EXISTING CONSTRUCTION PRIOR (INCLUDING AVOIDING EXISTING ANCHORS AND REINFORCING) TO FABRICATION OR CONSTRUCTION.
2. WELD ALL PLATES TOGETHER, EACH SIDE, 5/16" FILLETS WELDS OR PJP WITH EQUIVALENT EFFECTIVE THROAT.
3. FABRICATE SADDLE SUPPORT WITH STRUCTURAL STEEL. REFER TO STRUCTURAL GENERAL NOTES.

4 S-2 SECTION

1/2" = 1'-0"



SECTION 5A - SADDLE STIFFENERS



SECTION 5B - U-BOLT CONNECTION

5 S-2 SECTION

1" = 1'-0"

DETAIL NOTES:

1. PRIOR TO FABRICATION OR CONSTRUCTION COORDINATE LAYOUT AND FABRICATION WITH EXISTING CONSTRUCTION, INCLUDING REINFORCING. FIELD VERIFY ALL DIMENSIONS.
2. ADHERE 1/2" NEOPRENE PAD TO SADDLE PLATE. 40 DUROMETER.
3. AFTER PIPE IS INSTALLED, AND EJ BOLTS ARE FULLY TIGHTENDED, THEN TEMPORARILY STRAP SADDLES TO PIPE PRIOR TO TIGHTENING SADDLE-TO-CHANNEL BOLTS. LATERAL BRACE IS NOT DESIGNED FOR VERTICAL LOADING.

6 LATERAL BRACE - BELOW UPPER PUMP ROOM SLAB

NOT TO SCALE

0 1' 2' 4'
1/2"=1'-0"

0 4' 8' 16'
1/8"=1'-0"

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2024

GEORGIA REGISTERED No. SE000459 STRUCTURAL ENGINEER PETER A. WOOD 10/21/2025

FREESE NICHOLS
2180 Satellite Boulevard
Suite 235
Duluth, GA 30097
Phone - (470) 645-3092
Web - www.freese.com

GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES
SUWANEE CREEK DIVERSION PUMP STATION

STRUCTURAL
LOWER PUMP ROOM
MISCELLANEOUS IMPROVEMENTS I

F&N JOB NO.	GWR24074		
DATE	10/22/2025	DESIGNED	PAB
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		CHECKED	RCW
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0	ISSUED FOR BID	NO.	ISSUE

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SHEET S-2

SEQ. 68 OF 129

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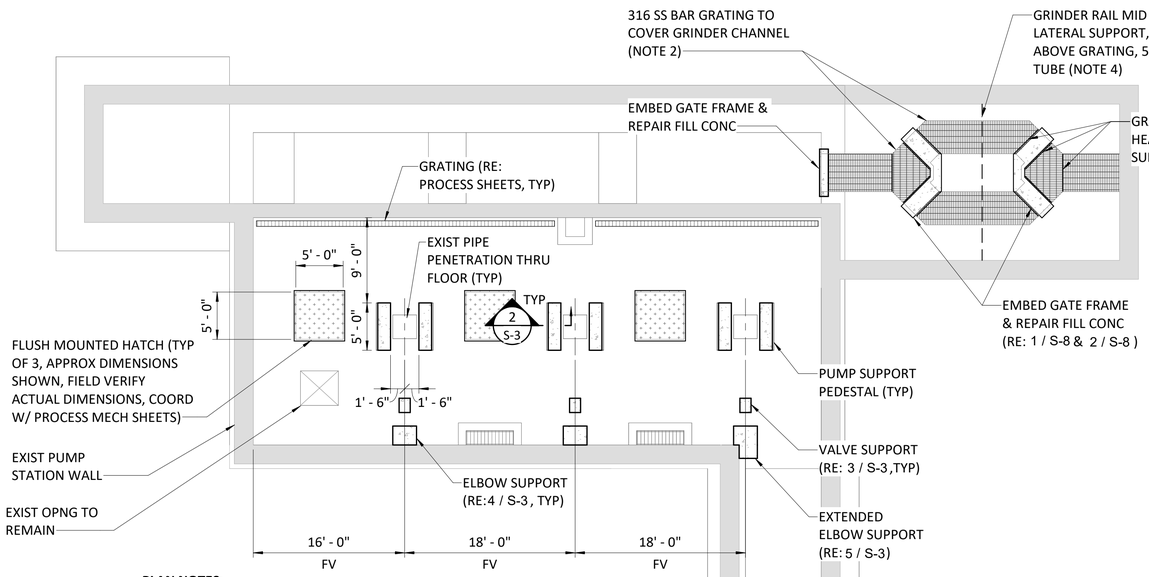
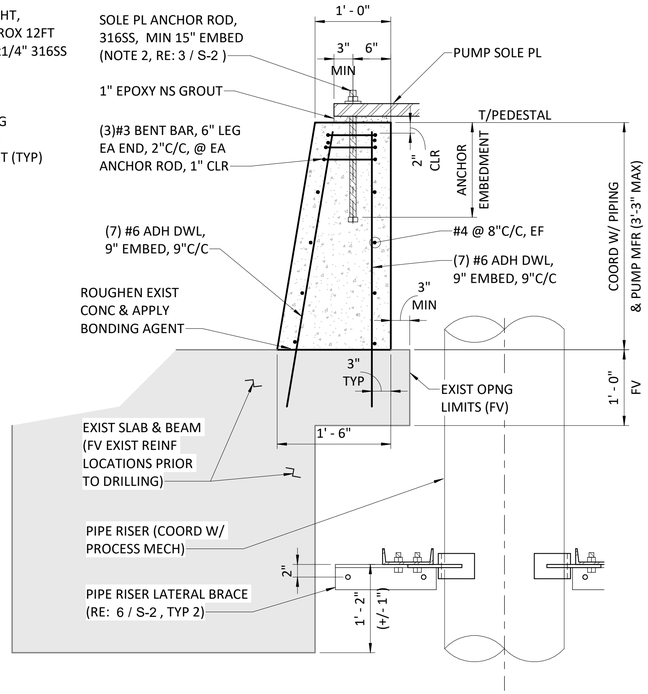


PLAN NOTES:

1. PRIOR TO FABRICATION OR CONSTRUCTION, COORDINATE DIMENSIONS SHOWN WITH PUMP AND PIPING DIMENSIONS AND LAYOUT.
2. FIELD VERIFY (FV) ALL EXISTING CONDITIONS, INCLUDING EXISTING GRATING DEPTH AND SUPPORT ANGLES. FOR BIDDING PURPOSES: ALL MATERIALS SHALL BE 316L STAINLESS STEEL; 1 1/2"x3/16" BEARING BARS AT 1 3/16"C/C, CROSS BARS AT 4"C/C, ALL EXPOSED EDGES SHALL BE BANDED; GRATING HEADER SUPPORTS SHALL BE PROVIDED AT BEARING BARS NOT SUPPORTED ON EDGE ANGLE; SHOP FABRICATION (AWS D1.6 WELDING, NOTCHING, STIFFENING, BANDING, ETC.) AS REQUIRED FOR COMPLETE AND FULLY SUPPORTED GRATING SYSTEM; SECURE IN PLACE WITH SADDLE CLIPS AND APPROPRIATE ADHESIVE ANCHORS. FOR ADDITIONAL TYPICAL GRATING DETAILS, REFER TO 4 / S-6 .
3. ALL PIPE AND PUMP SUPPORTS SHALL BE INSTALLED PRIOR TO PUMP STARTUP.
4. COORDINATE POSITION OF SUPPORT AND RAIL ATTACHMENT WITH GRINDER MANUFACTURER. PROVIDE ADDITIONAL PLATES AND BOLTS AS REQUIRED. AT EACH END CONNECT TUBE TO WALL WITH (2)L4x4x3/8x0'-7", (2) 5/8"Ø THROUGH BOLTS 2 1/2"C/C, (2) 3/4"Ø ADHESIVE ANCHORS WITH 5" EMBED. ALL MATERIALS 316SS.

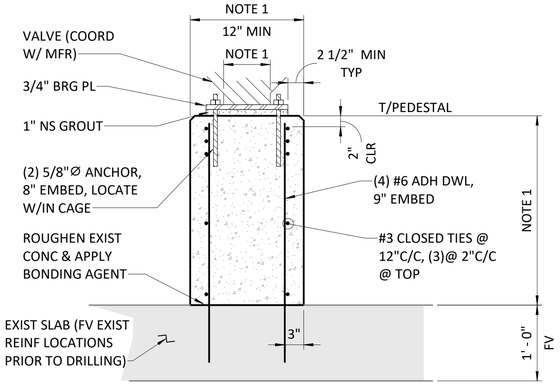
1 UPPER PUMP ROOM IMPROVEMENTS PLAN
1/8" = 1'-0"



2 S-3 UPPER ROOM PUMP PEDESTAL
NOT TO SCALE

DETAIL NOTES:

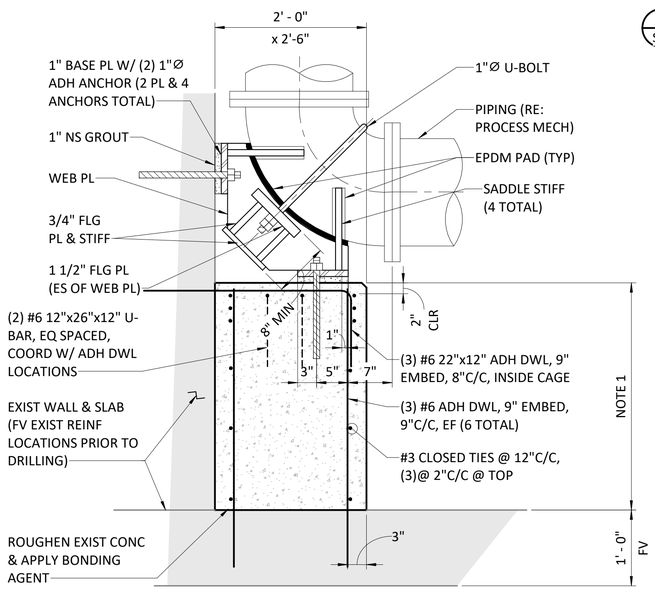
1. PRIOR TO FABRICATION OR CONSTRUCTION COORDINATE PEDESTAL AND PEDESTAL LAYOUT WITH EXISTING CONSTRUCTION, PUMP MANUFACTURER, AND PIPING LAYOUT.
2. COORDINATE ANCHOR DIAMETER AND EMBEDMENT WITH PUMP MANUFACTURER. EMBEDMENT SHALL NOT BE LESS THAN THAT RECOMMENDED BY THE PUMP MANUFACTURER.
3. WITHIN THE PEDESTAL LIMITS, MARK EXISTING REINFORCING ON THE FLOOR AND WHERE ADHESIVE DOWELS WILL BE PLACED. NOTIFY OWNER FOR DIRECTION IF THERE IS A CONFLICT.



DETAIL NOTES:

1. PRIOR TO FABRICATION OR CONSTRUCTION COORDINATE VALVE PEDESTAL DIMENSIONS AND LAYOUT WITH EXISTING CONSTRUCTION, VALVE MANUFACTURER, AND PIPING LAYOUT. INCREASE PEDESTAL DIMENSIONS AS REQUIRED TO MEET MINIMUM BASEPLATE EDGE DISTANCES.
2. ALL ANCHORS SHALL BE LOCATED WITHIN REINFORCING CAGE AND ALL BEARING PLATES SHALL HAVE A MINIMUM EDGE DISTANCE AS SHOWN.

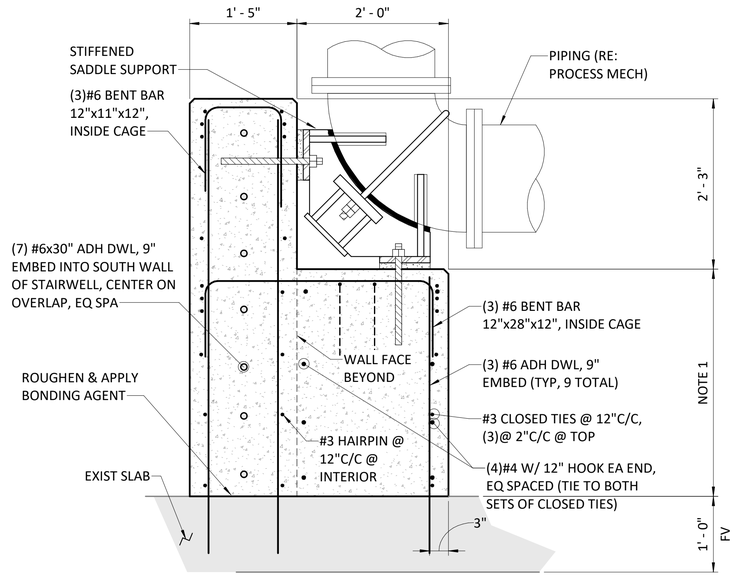
3 S-3 VALVE PEDESTAL
NOT TO SCALE



DETAIL NOTES:

1. COORDINATE CONCRETE PEDESTAL AND FABRICATED STEEL SUPPORTS WITH PIPING CONFIGURATION AND EXISTING CONSTRUCTION PRIOR TO FABRICATION OR CONSTRUCTION.
2. WELD ALL PLATES TOGETHER, EACH SIDE, 5/16" FILLETS WELDS OR PJP WITH EQUIVALENT EFFECTIVE THROAT.
3. STIFFENED SADDLE SUPPORT IS SIMILAR TO 4 / S-2 .
4. FABRICATE SADDLE SUPPORT WITH STRUCTURAL STEEL. REFER TO STRUCTURAL GENERAL NOTES.

4 S-3 ELBOW SUPPORT
NOT TO SCALE



DETAIL NOTES:

1. FOR ADDITIONAL INFORMATION REFER TO 4 / S-3 .
2. SOUTH SIDE OF BLOCK, NOTCHES AROUND EXISTING WALL. ADJUST REINFORCING TO MATCH.

5 S-3 ELBOW SUPPORT
NOT TO SCALE

0 4' 8' 16'
1/8"=1'-0"

ISSUED FOR BID

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2024

GEORGIA REGISTERED No. 53000459 STRUCTURAL ENGINEER PETER ARMOND BARRETT 10/21/2025

FREESE NICHOLS
2180 Satellite Boulevard
Suite 235
Duluth, GA 30097
Phone - (470) 645-3092
Web - www.freese.com

GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES
SUWANEE CREEK DIVERSION PUMP STATION
STRUCTURAL
UPPER PUMP ROOM MISCELLANEOUS IMPROVEMENTS II

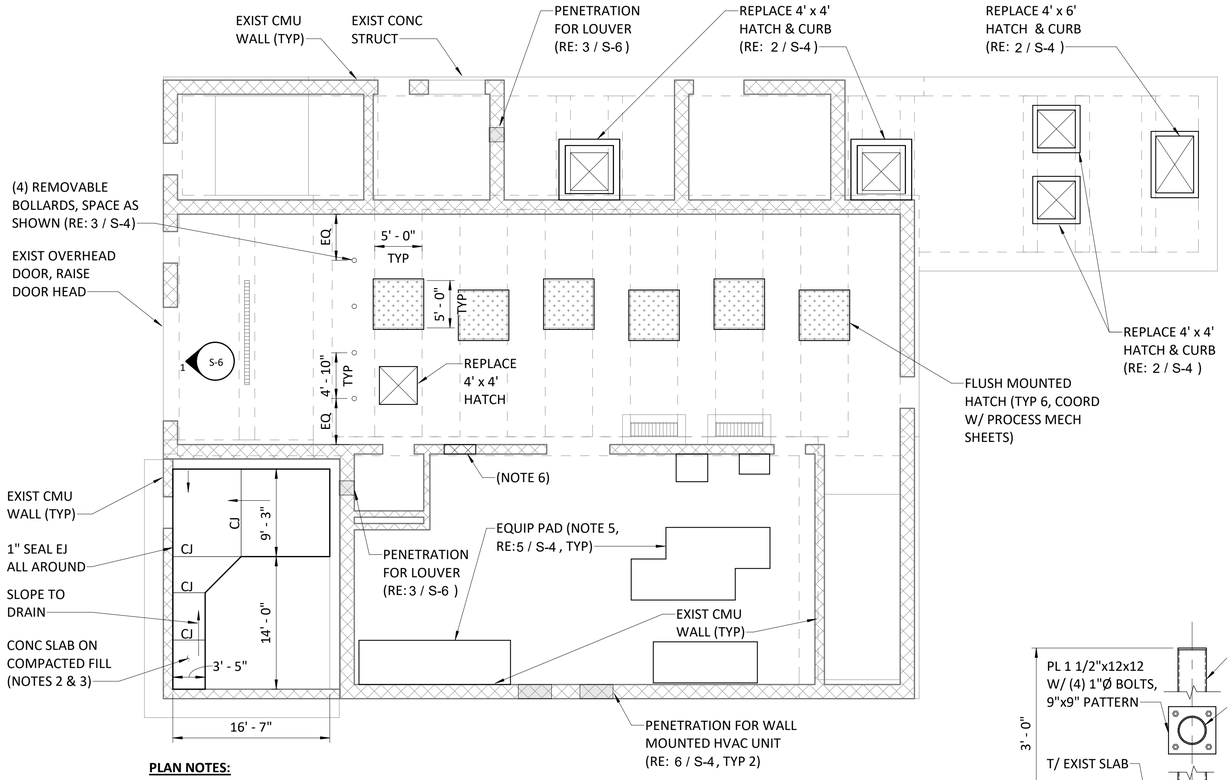
F&N JOB NO.	GWR24074
DATE	10/22/2025
DESIGNED	PAB
DRAWN	JLM
REVISED	
CHECKED	RCW
FILE NAME	ST-GWR24074-EX-R23.RVT

NO.	ISSUE	BY	DATE
0	ISSUED FOR BID	PAB	10/22/2025

Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.
VERIFY SCALE 0 1

SHEET S-3
SEQ. 69 OF 129

Plot Date: 10/21/2025 9:28:23 AM

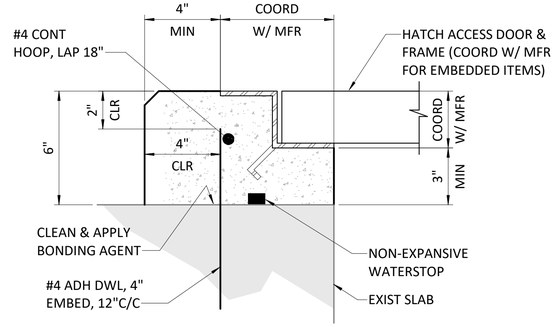


PLAN NOTES:

1. FIELD VERIFY EXISTING DIMENSIONS PRIOR TO FABRICATION OR CONSTRUCTION.
2. 4" CONCRETE SLAB, REINFORCED WITH WWR 6x6 - W5xW5, FLAT SHEETS, ON 2" CHAIRS. PRIOR TO PLACING CONCRETE:
   A. PLUG ALL EXISTING UTILITY PENETRATIONS
   B. FILL DEPRESSED AREA WITH COMPACTED, CRUSHED STONE FILL, APPROXIMATELY 7FT DEEP. MAXIMUM 8" LIFT HEIGHTS.
   C. 8" WWR LAPS, CUT EVERY OTHER WIRE AT CONTROL JOINT LOCATIONS.
3. SLOPE SLAB TO DRAIN OUT DOOR, 1/16" PER FOOT. TOOL CONTROL JOINTS (CJ), 1" DEEP, WHERE INDICATED.
4. FINISH FLOOR MAIN ENTRANCE IS APPROXIMATELY AT FINISH GRADE. FIELD VERIFY.
5. EQUIPMENT PAD SIZES, LOCATIONS, AND QUANTITIES SHALL BE COORDINATED WITH EQUIPMENT SHOWN ON ELECTRICAL SHEETS.
6. IN-FILL EXIST DOOR, MATCH EXISTING CONSTRUCTION & APPEARANCE, PROVIDE TWO 8" DEEP GROUTED BOND BEAMS EQ SPACED, REINF EA BOND BEAM W/ (2)#4x36" ADH DWLS EMBEDDED 4" INTO EXIST JAMB AND LAPPED WITH EA OTHER 24"

1 MAIN ENTRANCE ROOM IMPROVEMENTS PLAN

1/8" = 1'-0"

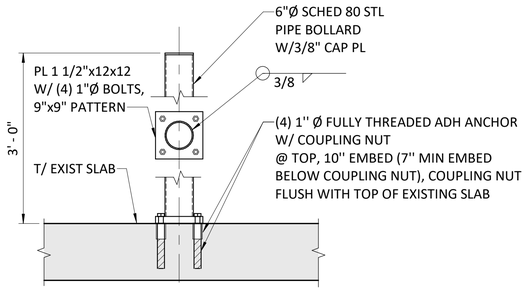


DETAIL NOTES:

1. PREPARE SUBSTRATE, APPLY PRIMER, AND INSTALL WATERSTOP AS RECOMMENDED BY WATERSTOP MANUFACTURER.
2. TOP OF CURB SHALL BE LEVEL. EXIST SLAB MAY SLOPE, FIELD VERIFY.
3. CONCRETE USED FOR CURB REPLACEMENT SHALL CONTAIN AGGREGATE WITH A MAXIMUM SIZE OF 3/8". CONSOLIDATE CONCRETE USING FORM OR PENCIL VIBRATORS.

2 HATCH WITH CURB REPLACEMENT

NOT TO SCALE

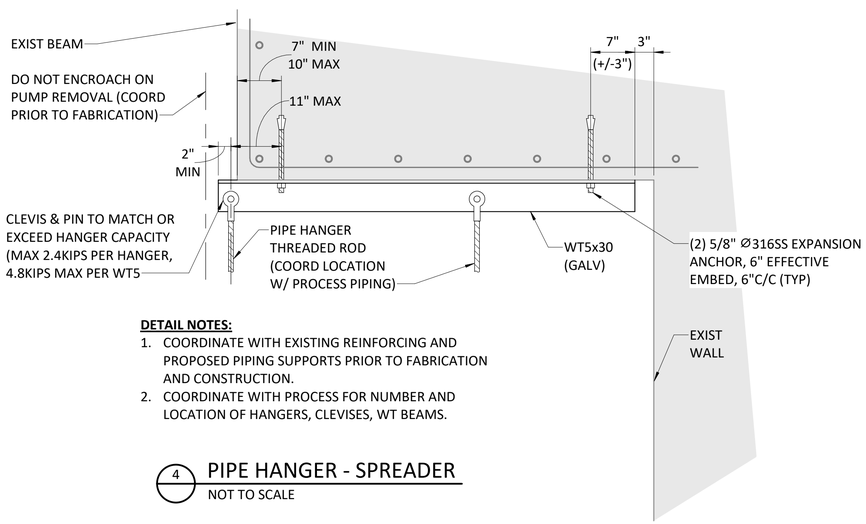


DETAIL NOTES:

1. OVER DRILL ADHESIVE ANCHOR, ONLY IN THE UPPER 3" FOR PLACEMENT OF COUPLING NUT. COUPLING NUT SHALL BE FIXED TO UPPER END OF ADHESIVE ANCHOR AND SHALL BE LOCKED INTO THE SLAB WITH EPOXY.

3 REMOVABLE BOLLARD

NOT TO SCALE

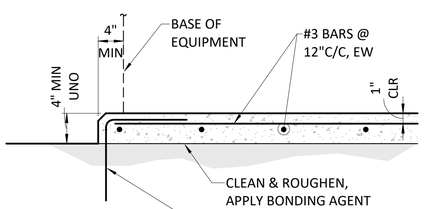


DETAIL NOTES:

1. COORDINATE WITH EXISTING REINFORCING AND PROPOSED PIPING SUPPORTS PRIOR TO FABRICATION AND CONSTRUCTION.
2. COORDINATE WITH PROCESS FOR NUMBER AND LOCATION OF HANGERS, CLEVISES, WT BEAMS.

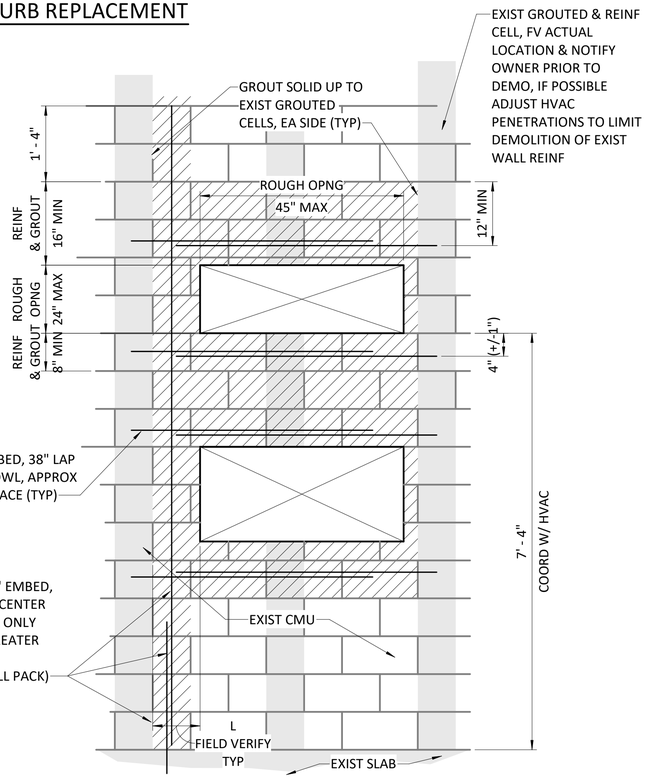
4 PIPE HANGER - SPREADER

NOT TO SCALE



5 INTERIOR EQUIPMENT PAD

NOT TO SCALE



DETAIL NOTES:

1. WATERPROOF AROUND OPENING AT FACE OF CMU, BEHIND VENEER. SIMILAR TO 3 / S-6.
2. WHEN SAW CUTTING, CUT UP TO BUT NOT PAST THE CORNER. DO NOT OVERCUT AT CORNERS.
3. SHORE EXISTING CONSTRUCTION (LOAD BEARING WALL AND VENEER) AS REQUIRED TO PEFORM WORK SHOWN AND TO PROTECT EXISTING CONSTRUCTION TO REMAIN.
4. FOR INSTALLATION OF REINFORCING: AT INTERIOR FACE, CUT INTO CMU FACE TO PLACE REINFORCING, FORM UP AS REQUIRED AND GROUT SOLID.
5. PROVIDE GALVANIZED L5x3 1/2x3/8 LOOSE LINTEL AT VENEER. EXTEND 8" EA SIDE OF OPENING. REMOVE VENEER AND REPLACE AS REQUIRED FOR INSTALLATION OF LINTEL AND WATERPROOFING.

6 S-4 WALL PACK OPENING IN EXISTING CMU

NOT TO SCALE

0 4' 8' 16'

1/8"=1'-0"

ISSUED FOR BID

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2024

GEORGIA REGISTERED No. SE000459 STRUCTURAL ENGINEER PETER ARMOND BARRETT 10/21/2025

FREESE NICHOLS
2180 Satellite Boulevard
Suite 235
Duluth, GA 30097
Phone - (470) 645-3092
Web - www.freese.com

GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES
SUWANEE CREEK DIVERSION PUMP STATION

STRUCTURAL
MAIN ENTRANCE ROOM
MISCELLANEOUS IMPROVEMENTS III

F&N JOB NO.	GWR24074
DATE	10/22/2025
DESIGNED	PAB
DRAWN	JLM
REVISED	
CHECKED	RCW
FILE NAME	ST-GWR24074-EX-R23.RVT

NO.	ISSUE	BY	DATE
0	ISSUED FOR BID	PAB	10/22/2025

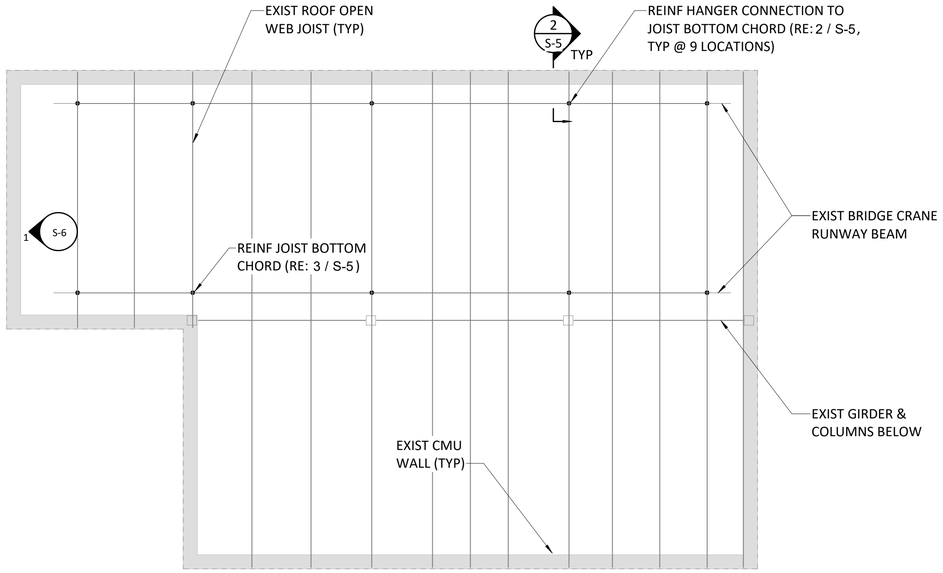
VERIFY SCALE Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.

0 1"

SHEET S-4

SEQ. 70 OF 129

Plot Date: 10/21/2025 9:28:23 AM

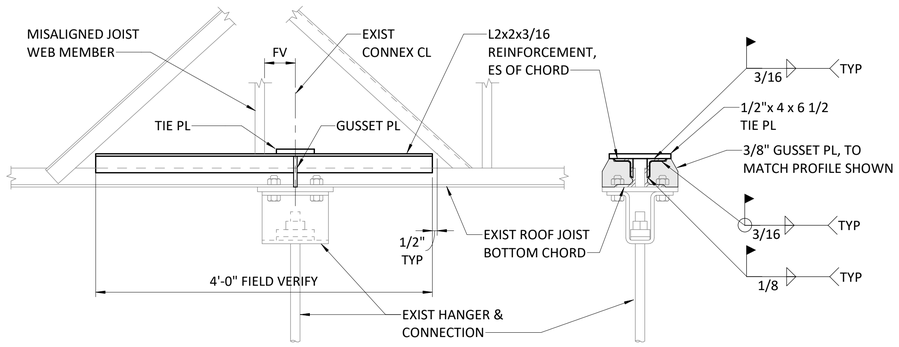


PLAN NOTES:

1. TEMPORARILY SUPPORT JOISTS AND RUNWAY BEAMS DURING WELDING ACTIVITIES. ENGAGE A PROFESSIONAL ENGINEER TO DEVELOP A JOIST SHORING PLAN. DO NOT OVERLOAD EXISTING FLOOR OR DAMAGE EXISTING JOISTS.
2. POSITION BRIDGE CRANE AS REQUIRED TO ENSURE IT IS NOT LOADING PORTIONS OF FRAMING THAT ARE UNDER CONSTRUCTION.
3. BOTTOM OF JOIST IS APPROXIMATELY 21 FT ABOVE FINISH FLOOR.
4. AFTER COMPLETION OF REINFORCING AND PRIOR TO REPAINTING. OPERATE THE CRANE FOR THE FULL EXTENT OF THE ROOM WHILE UNDER LOAD. USE A BELOW-THE-HOOK LOAD OF 10,000 LBS (5 TONS).
5. AFTER LOAD TESTING BRIDGE CRANE SYSTEM: CLEAN WELDS, REMOVE DAMAGED COATINGS, RE-PRIME STEEL AND TOP COAT TO MATCH EXISTING.

1 ROOF FRAMING JOIST AND HANGER REINFORCING PLAN

1/8" = 1'-0"

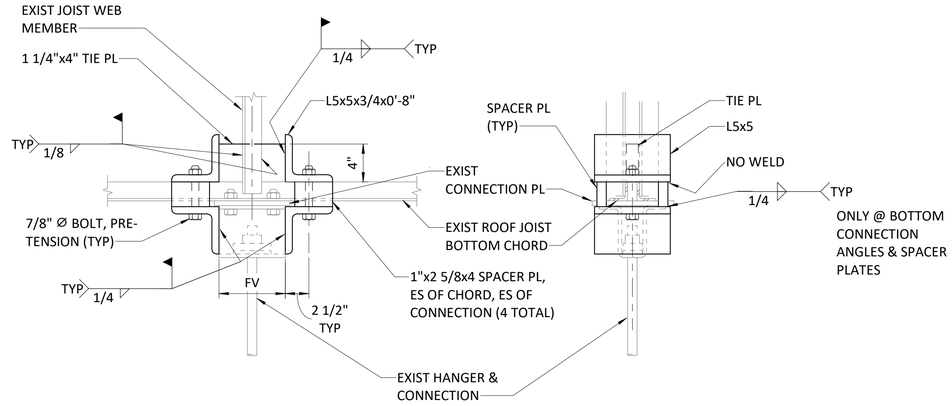


DETAIL NOTES:

1. FIELD VERIFY JOIST REINFORCEMENT LENGTH AS INDICATED.

3 S-5 JOIST BOTTOM CHORD REINFORCING DETAIL

NOT TO SCALE



DETAIL NOTES:

1. FIELD VERIFY ALL EXISTING CONNECTION CONFIGURATIONS AND MEMBER THICKNESSES TO ENSURE FEASIBILITY OF PROPOSED CONNECTION CONFIGURATION. PRIOR TO FABRICATION, CHECK EACH CONNECTION LOCATION USING A TEMPLATE.
2. MOVE EXISTING CONDUITS AND PLUMBING AS REQUIRED TO PLACE CONNECTION.
3. SPACER PLATE HEIGHT (2 5/8") SHALL BE CONFIRMED TO BE 1/8" TALLER THAN THE SUM OF EXISTING CONNECTION PLATE AND EXISTING BOTTOM CHORD HEIGHTS TO ENSURE LOWER L5x5 CLEARS THE EXISTING CONNECTION PLATE.

2 S-5 HANGER REINFORCING DETAIL

NOT TO SCALE

0 4' 8' 16'

1/8"=1'-0"

ISSUED FOR BID

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2024

GEORGIA REGISTERED No. 56006459 STRUCTURAL ENGINEER PETER ARWOOD BARTELS 10/21/2025

FREESE NICHOLS
2180 Satellite Boulevard
Suite 235
Duluth, GA 30097
Phone - (470) 645-3092
Web - www.freese.com

GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES
SUWANEE CREEK DIVERSION PUMP STATION

STRUCTURAL
MAIN ENTRANCE ROOM
ROOF FRAMING MODIFICATIONS

F&N JOB NO.	GWR24074
DATE	10/22/2025
DESIGNED	PAB
DRAWN	JLM
REVISED	
CHECKED	RCW

NO.	ISSUE	BY	DATE
0	ISSUED FOR BID	PAB	10/22/2025

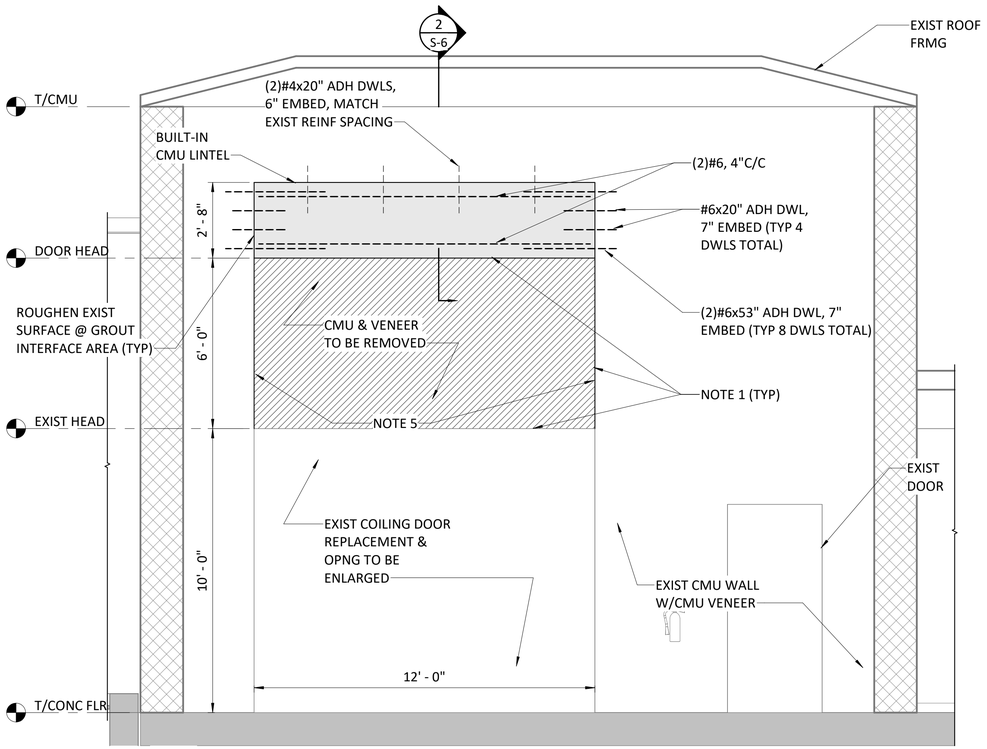
FILE NAME ST-GWR24074-EX-R23.RVT

VERIFY SCALE Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.

SHEET S-5

SEQ. 71 OF 129

Plot Date: 10/21/2025 9:28:24 AM

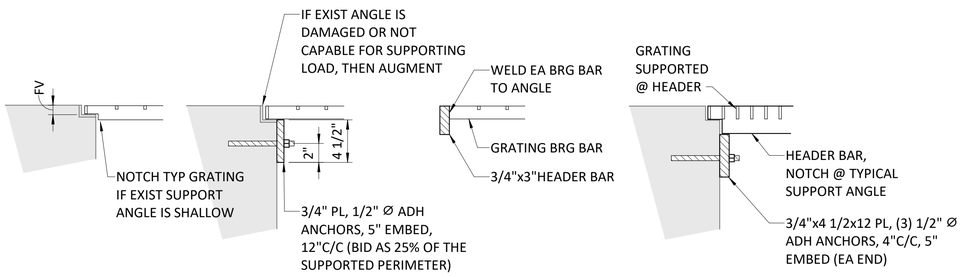


DETAIL NOTES:

1. DO NOT OVERCUT AT EXISTING CMU TO REMAIN. SAW CUT UP TO, CHIP OUT, AND GRIND AS REQUIRED TO ACHIEVE REQUIRED DIMENSIONS.
2. TEMPORARILY SUPPORT EXISTING CMU WALL AND VENEER AS REQUIRED TO INSTALL BUILT-IN CMU LINTEL AND VENEER SUPPORT PLATE. MAINTAIN SHORING UNTIL NEW LINTEL HAS CURED A MINIMUM OF 10 DAYS. REMOVE AND REPLACE EXISTING VENEER ONLY AS REQUIRED FOR INSTALLING WEEPS. REUSE EXISTING BLOCKS OR REPLACE TO MATCH EXISTING. MATCH EXISTING MORTAR. MATCH EXISTING COLOR AND APPEARANCE.
3. FIELD VERIFY ALL EXISTING CONSTRUCTION AND DIMENSIONS, AND COORDINATE WITH DOOR MANUFACTURER PRIOR TO BEGINNING DEMOLITION OR CONSTRUCTION.
4. SCAN EXISTING WALL FOR EXISTING REINFORCING PRIOR TO DRILLING FOR ADHESIVE DOWELS. DO NOT DAMAGE EXISTING WALL REINFORCING.
5. FORM UP AND GROUT EXPOSED ENDS OF BLOCK AS REQUIRED TO PROVIDE A SMOOTH APPEARANCE. EXTEND EXISTING ALUMINUM VENEER CLOSURE PLATE. MATCH EXISTING. USE TWO 18-8 STAINLESS STEEL ANCHORS AT EVERY 24-INCHES ON CENTER AND 4-INCHES FROM EACH END.

1 D-1 COILING DOOR ELEVATION

3/8" = 1'-0"

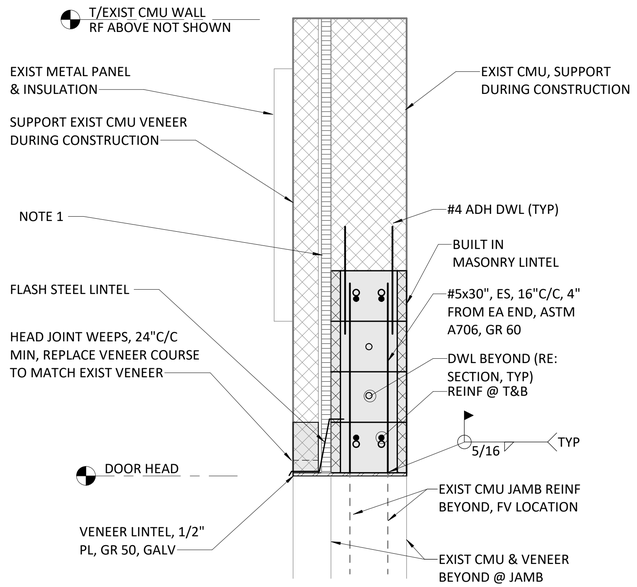


DETAIL NOTES:

1. SUBMIT SHOP DRAWING OF PROPOSED GRATING, HEADER SUPPORT AND AUGMENTED SUPPORT ANGLES AS ERQUIRED BASED ON EXISTING GEOMETRY AND PROPOSED GATES AND GRINDER PUMPS. LAYOUT OF JOINTS / GRATING PANELS SHALL BE COORDINATE WITH OPERATIONS. LIMIT PANEL WEIGHT TO 60 LBS.
2. ALL MATERIALS ARE 316L STAINLESS STEEL. ANCHORS SHALL BE GRADE B8M, CLASS 1.

4 GRINDER AREA - TYPICAL GRATING DETAILS

NOT TO SCALE

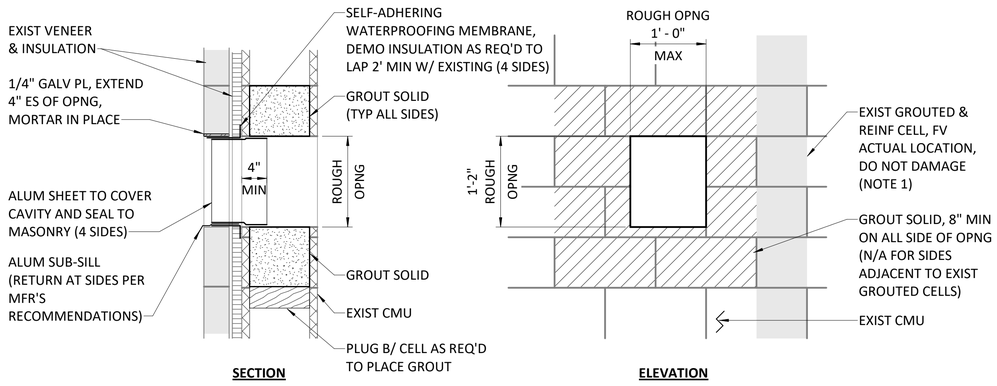


DETAIL NOTES:

1. AIRBARRIER / WATERPROOFING, FLASHING, END DAMS, AND HEAD JOINT WEEPS TO ESTABLISH AND SEAL BUILDING ENVELOPE. AT A MINIMUM, MATCH EXISTING BUILDING ENVELOPE, BUT NOT LESS THAN THAT REQUIRED TO COMPLETELY SEAL ENVELOPE AND DRAIN THE CAVITY SPACE. SUBMIT PHOTOGRAPHS OF EXISTING CONSTRUCTION FOR CONFIRMATION OF EXISTING CONSTRUCTION PRIOR TO DEMOLITION AND AS DEMOLITION PROGRESSES. SUBMIT MATERIALS AND PRODUCTS REQUIRED.

2 S-6 COILING DOOR SECTION

1" = 1'-0"



DETAIL NOTES:

1. FIELD LOCATE ALL WALL REINFORCING PRIOR TO FABRICATION OR CONSTRUCTION. DO NOT DAMAGE EXISTING WALL REINFORCING WITH THE INSTALLATION OF THE OPENING.
2. WHEN SAW CUTTING, CUT UP TO BUT NOT PAST THE CORNER. DO NOT OVERCUT AT CORNERS.
3. GROUT CMU CELLS SOLID AROUND ROUGH OPENING.

3 S-4 LOUVER OPENING IN EXISTING CMU

NOT TO SCALE

0 1' 2' 4'
3/8"=1'-0"

0 6" 1' 2'
1"=1'-0"

ISSUED FOR BID

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2024

GEORGIA REGISTERED No. SE000459 STRUCTURAL ENGINEER PETER ARMOND HARRELL 10/21/2025

FREESE NICHOLS
2180 Satellite Boulevard
Suite 235
Duluth, GA 30097
Phone - (470) 645-3092
Web - www.freese.com

GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES
SUWANEE CREEK DIVERSION PUMP STATION

STRUCTURAL

MISCELLANEOUS DETAILS I

F&N JOB NO.	GWR24074
DATE	10/22/2025
DESIGNED	PAB
DRAWN	JLM
REVISED	
CHECKED	RCW

NO.	ISSUE	DATE	BY
0	ISSUED FOR BID	10/22/2025	PAB

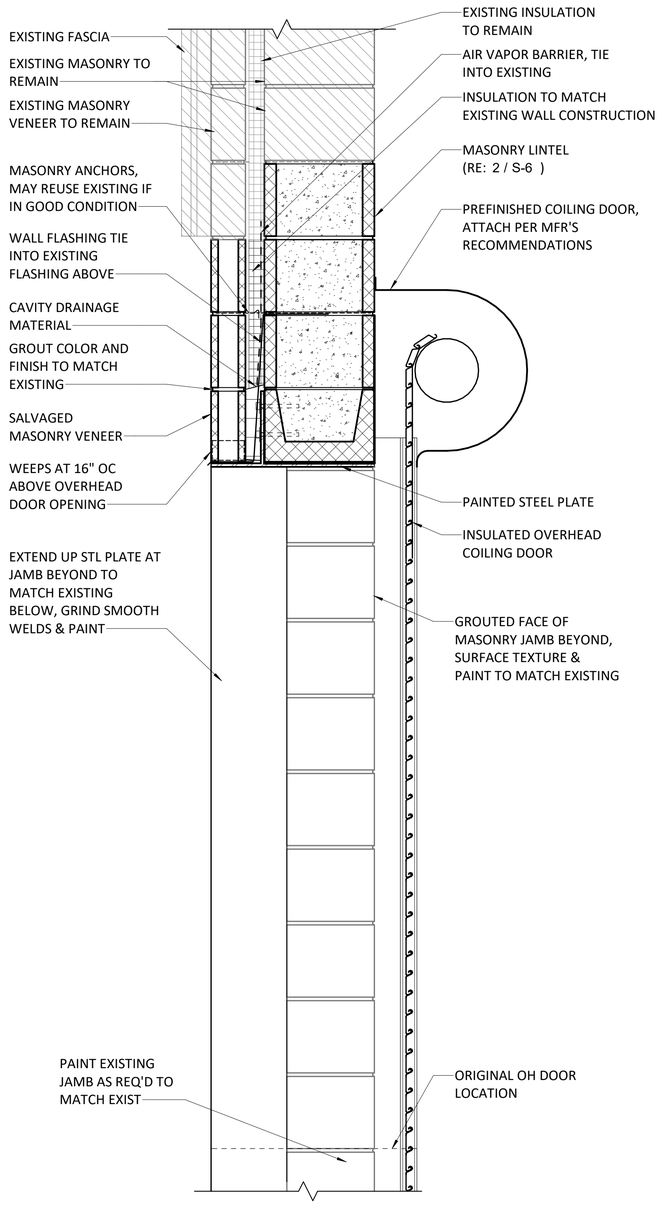
FILE NAME ST-GWR24074-EX-R23.RVT

VERIFY SCALE 0 1
Bar is one inch on original drawing. If not one inch on this sheet adjust scale.

SHEET S-6

SEQ. 72 OF 129

Plot Date: 10/21/2025 9:28:24 AM

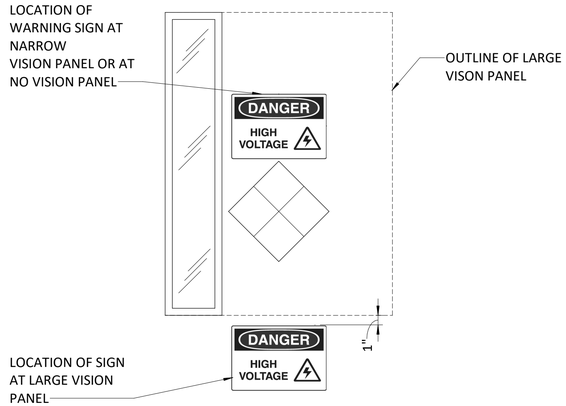


1 OVERHEAD DOOR HEAD DETAIL
1 1/2" = 1'-0"

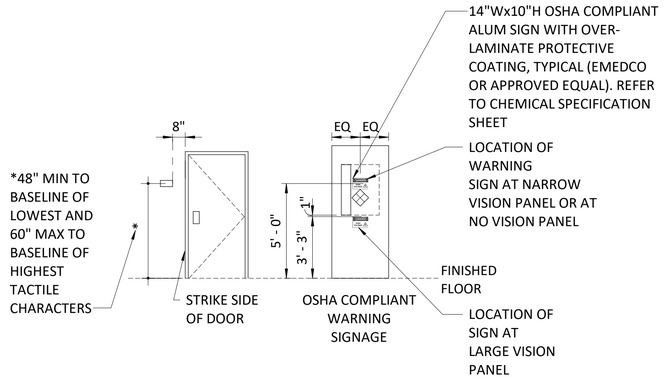
NOTES:

1. REMOVE EXISTING OVERHEAD DOOR AND FRAME CAREFULLY, PATCH AND PREPARE OPENING FOR NEW OVERHEAD DOOR PER MANUFACTURERS RECOMMENDATIONS. MATCH EXISTING PAINTING AND REUSE EXISTING VENEER MASONRY UNITS.
2. REMOVAL OF EXISTING SINGLE DOOR AND FRAME IN NEW ELECTRICAL ROOM, PATCH AND PREPARE OPENING FOR NEW FINISH, INFILL WITH MASONRY TO MATCH ADJACENT WALL, FINISH AND MATERIAL.

2 PHOTOGRAPH - EXISTING OVERHEAD DOOR JAMB
NTS



OSHA COMPLIANT WARNING SIGNAGE



TYPICAL SIGNAGE MOUNTING LOCATION
1/4"=1'-0"

0 2' 4' 8'
1/4"=1'-0"

0 4" 8" 1'
1-1/2"=1'-0"

ISSUED FOR BID

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2024

GEORGIA REGISTERED ENGINEER No. SE000459 STRUCTURAL PETER RAYMOND BARRETT 10/21/2025

FREESE NICHOLS
2180 Satellite Boulevard
Suite 235
Duluth, GA 30097
Phone - (470) 645-3092
Web - www.freese.com

GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES
SUWANEE CREEK DIVERSION PUMP STATION
STRUCTURAL
MISCELLANEOUS DETAILS II

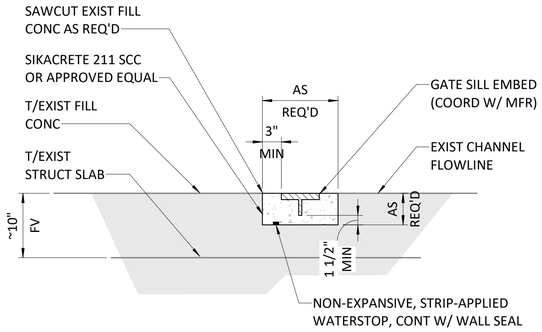
F&N JOB NO.	GWR24074
DATE	10/22/2025
DESIGNED	PAB
DRAWN	JLM
REVISED	
CHECKED	RCW
DATE	10/22/2025
FILE NAME	ST-GWR24074-EX-R23.RVT
BY	PAB

NO.	ISSUE
0	ISSUED FOR BID

VERIFY SCALE 1 0
Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.

SHEET S-7
SEQ. 73 OF 129

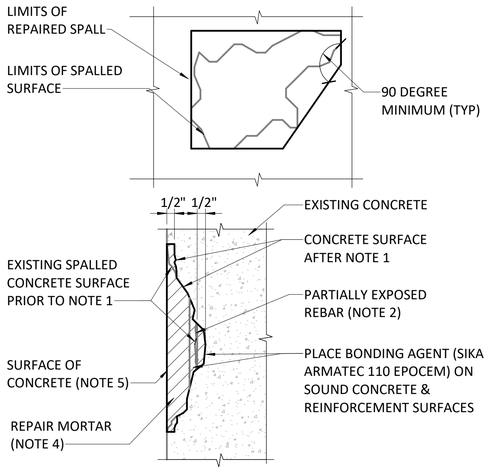
Plot Date: 10/21/2025 9:28:24 AM



DETAIL NOTES:

1. DO NOT DAMAGE EXISTING STRUCTURAL SLAB OR WALLS. ONLY MODIFICATIONS TO CHANNEL AREA FILL CONCRETE IS ALLOWED.
2. COORDINATE REQUIRED DEMOLITION AREA WITH EXISTING EMBEDS AND MANUFACTURER EMBEDS.
3. DO NOT OVERCUT AT CORNERS. CUT UP TO CORNER AND THEN CAREFULLY CHIP/GRIND OUT REMAIN AREA TO BE REMOVED.

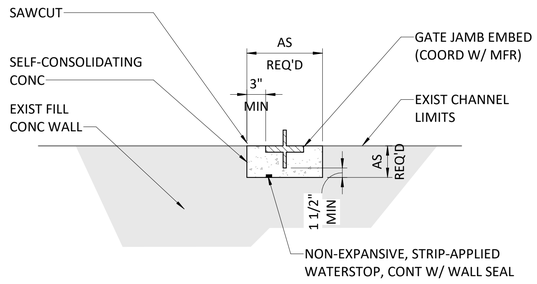
1 GRINDER AREA - SILL DETAIL
NOT TO SCALE



DETAIL NOTES:

1. SAW CUT PERIMETER OF SPALLED AREA. REMOVE CONCRETE WITHIN CUT PERIMETER AS REQUIRED TO PROVIDE A 1/2" MINIMUM REPAIR DEPTH. REMOVE ALL UNSOUND CONCRETE. CLEAN REBAR OF CORROSION AND CONTAMINANTS USING MECHANICAL MEANS.
2. IF ANY REBAR HAS MORE THAN HALF ITS CROSS-SECTION EXPOSED, THEN REMOVE CONCRETE FROM AROUND THE BAR TO A MINIMUM DEPTH OF 1/2".
3. CRACKS IN SOUND CONCRETE, THAT EXTEND OUT FROM THE SPALLED AREA TO BE REPAIRED, SHALL BE PRESSURE INJECTED WITH HIGH STRENGTH, LOW VISCOSITY EPOXY. USE SIKADUR 35, HI-MOD LV. PROVIDE SUPPORT PRODUCTS AND CRACK PREPARATION AS RECOMMENDED BY SIKA.
4. REPAIR MORTAR SHALL BE SIKATOP 123 PLUS. PREPARE, INSTALL, INSTALL IN MULTIPLE LIFTS, FINISH, AND CURE AS RECOMMENDED BY MANUFACTURER.
5. FINISHED SURFACE TEXTURE SHALL MATCH EXISTING FINISH TEXTURE.
6. APPLY DETAIL AS REQUIRED DURING CONSTRUCTION. ASSUME REPAIR QUANTITIES DUE TO EXISTING CONDITIONS: REFER TO SPECIFICATION SECTION 00 41 16, "BID FORM EXHIBIT A". PREPARATION REQUIREMENTS AND COSTS ARE INCIDENTAL TO THE REPAIR QUANTITIES INDICATED. REPAIRS REQUIRED DUE TO DAMAGE ASSOCIATED WITH CONSTRUCTION SHALL BE COMPLETED AT NO COST TO THE OWNER. SUBMIT PROPOSED REPAIRS TO OWNER FOR APPROVAL PRIOR TO COMMENCING REPAIRS.

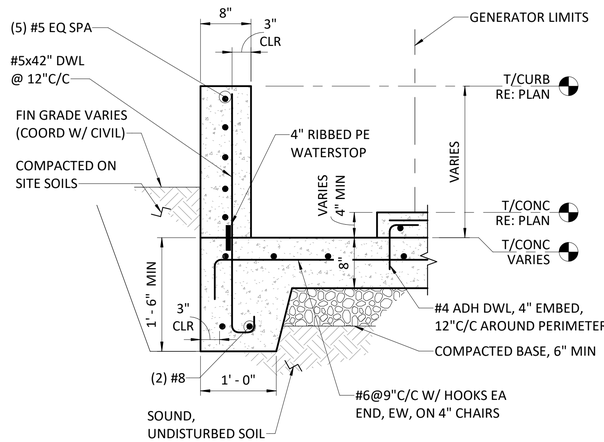
3 TYPICAL CONCRETE SPALL & CRACK REPAIR
NOT TO SCALE



DETAIL NOTES:

1. FOR ADDITIONAL INFORMATION, REFER TO 1 / S-8.

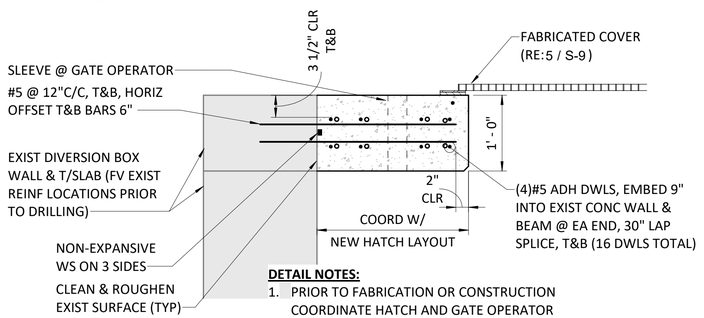
2 GRINDER AREA - JAMB DETAIL
NOT TO SCALE



DETAIL NOTES:

1. BOTTOM OF BEAMS SHALL BE CONSTANT ELEVATION. SLOPE TOP AS INDICATED. BELOW EQUIPMENT SLAB SHALL BE FLAT AND LEVEL.
2. INSTALL WATERSTOP IN ACCORDANCE WITH MANUFACTURER RECOMMENDATIONS.

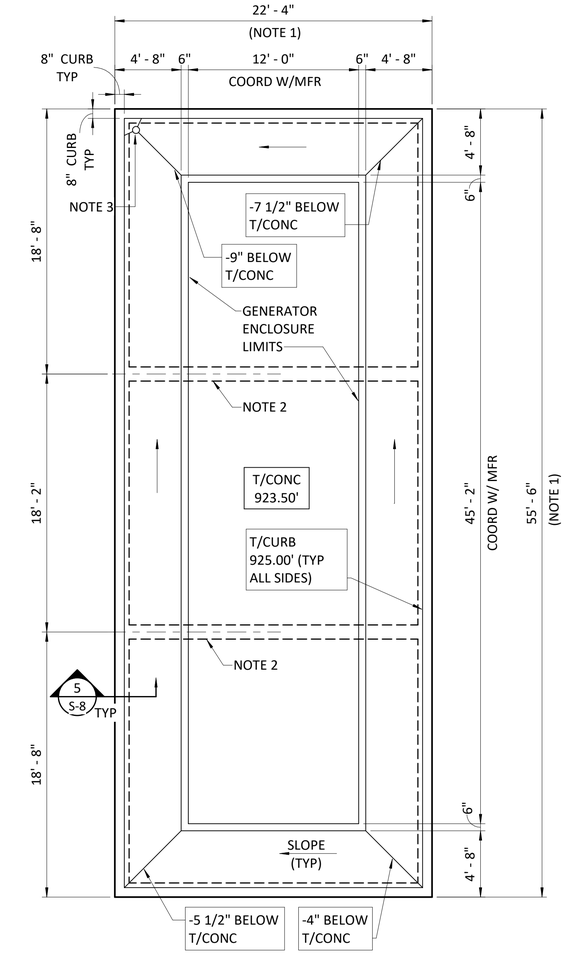
5 / S-8 GENERATOR PAD BEAM SECTION
NOT TO SCALE



DETAIL NOTES:

1. PRIOR TO FABRICATION OR CONSTRUCTION COORDINATE HATCH AND GATE OPERATOR LAYOUT WITH EXISTING CONSTRUCTION.

6 DIVERSION BOX TOP SLAB MODIFICATION
NOT TO SCALE



DETAIL NOTES:

1. ADJUST OVERALL DIMENSIONS AS REQUIRED BASED ON ACTUAL EQUIPMENT DIMENSIONS. COORDINATE WITH THE MANUFACTURER.
2. INTERIOR BEAMS: DEPTH AND REINFORCING IS SIMILAR TO EXTERIOR BEAM.
3. 5" FLOOR DRAIN WITH 4" HUB OUTLET. JOSAM MODEL 30004-5A-2-Y, OR APPROVED EQUAL. CONNECT TO 4", SCH 80 PVC SLOPED MIN 1% TO WET WELL. COORDINATE LOCATION OF DRAIN AND DIRECTION OF GENERATOR PAD SLOPES WITH LOCATION OF DRAIN LINE.

4 GENERATOR PAD PLAN
NOT TO SCALE

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2024

GEORGIA REGISTERED No. 56004969 STRUCTURAL ENGINEER PETER ATWOOD BARRETT 10/21/2025

FREESE NICHOLS
2180 Satellite Boulevard
Suite 235
Duluth, GA 30097
Phone - (470) 645-3092
Web - www.freese.com

GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES
SUWANEE CREEK DIVERSION PUMP STATION

STRUCTURAL

MISCELLANEOUS DETAILS III

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SHEET S-8
SEQ. 74 OF 129

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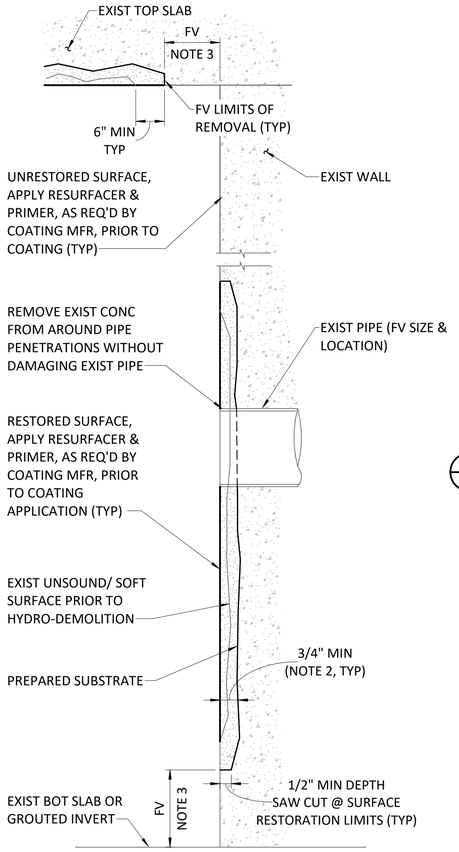
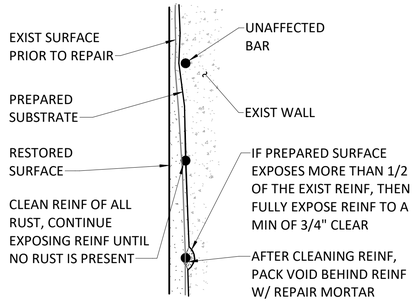


DETAIL NOTES:

1. IF REINFORCING IS EXPOSED DURING THE CLEANING AND SUBSTRATE PREPARATION ACTIVITIES, THEN CLEAN AND PREPARE REINFORCING AND SUPPLEMENT REINFORCING AS REQUIRED. REFER TO 2 / S-9.
2. THE DIMENSION SHOWN IS THE MINIMUM DEPTH REQUIRED. THE ACTUAL DEPTH MAY BE GREATER THAN THIS AS REQUIRED TO ACHIEVE THE STATED SURFACE PREPARATION.
3. FIELD VERIFY THE EXISTING WALL CONDITION. IF CONCRETE IS SOUND AND SURFACE IS UNDAMAGED, THEN MINIMUM SURFACE DEMOLITION AND CLEANING MAY BE STOPPED.
4. THOUGH NOT SHOWN ABOVE, THIS TYPICAL REPAIR SECTION ALSO APPLIES TO BOTTOM SLAB / GROUTED INVERT AND FLOW CONTROL WALLS AS DETERMINED AFTER REMOVING ALL UNSOUND, SOFT, AND DEGRADE CONCRETE AND CONCRETE THAT SURROUNDS CORRODED REINFORCING.

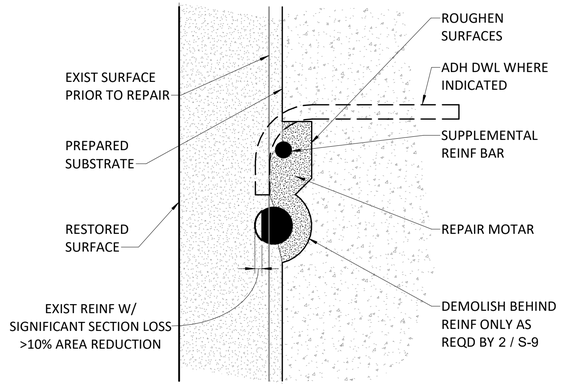
1 TYPICAL WALL REPAIR SECTION
NOT TO SCALE



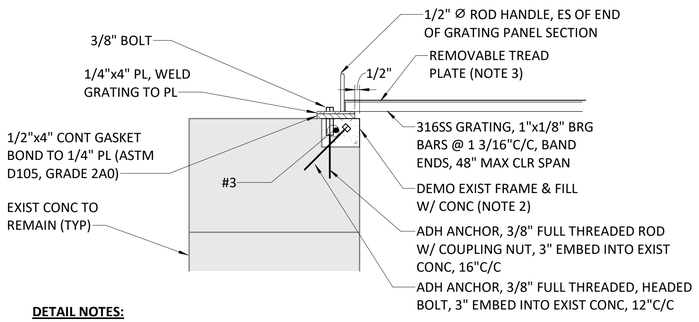
DETAIL NOTES:

1. AFTER CLEANING RUST FROM EXPOSED EXISTING REINFORCING, IF THE REINFORCING IS REDUCED BY MORE THAN 10% OF THE CROSS SECTIONAL AREA ("SIGNIFICANT SECTION LOSS"), THEN SUPPLEMENT EXISTING REINFORCING WITH LAPPED REINFORCING PER 3 / S-9 . NO SUPPLEMENTAL REINFORCING IS REQUIRED FOR AREA REDUCTION LOSS LESS THAN OR EQUAL TO 10% OF THE CROSS SECTIONAL AREA.

2 TYPICAL WALL REPAIR AT EXPOSED REINFORCING
NOT TO SCALE



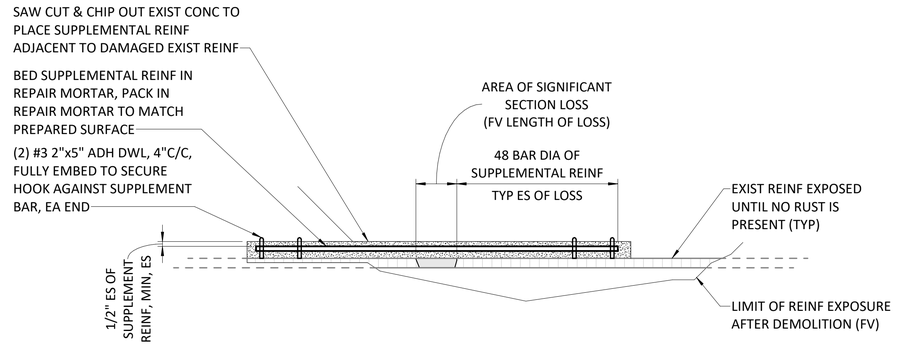
4 SUPPLEMENTAL REINFORCING SECTION
NOT TO SCALE



DETAIL NOTES:

1. PRIOR TO FABRICATION OR CONSTRUCTION COORDINATE DETAIL WITH ALL EXISTING CONDITIONS AND REFLECT THESE IN THE SHOP DRAWINGS. USE TEMPLATE TO CONFIRM LAYOUT AND REMOVAL/REPLACEMENT USE IN FIELD PRIOR TO FABRICATION.
2. DEMOLISH EXISTING FRAME, INSTALL ADHESIVE ANCHOR, REINFORCING, FORM SURFACE, AND PLACE CONCRETE WITH 3/8" MAXIMUM AGGREGATE. TYPICAL 4 SIDES OF OPENING.
3. SECURE 1/8", 316 SS, TREAD PLATE TO GRATING WITH INTERNALLY THREADED LUGS AND BOLTS WITH WASHER. ALL MATERIALS SHALL BE 316 SS, 316L SS FOR WELDED MATERIALS.
4. PROVIDE GRATING AND TREAD PLATE IN 3 SECTIONS TO REDUCE WEIGHT BELOW 45 LBS PER SECTION. 1" OVERLAP BETWEEN TREAD PLATE SECTIONS AND GASKET TO SEAL TREAD PLATE SECTIONS.

5 DIVERSION BOX FABRICATED COVER
NOT TO SCALE



DETAIL NOTES:

1. SUPPLEMENTAL REINFORCING SIZE SHALL BE #4 REINFORCING. HOWEVER, IF REDUCTION OF EXISTING REINFORCING EXCEEDS 30% OF THE EXISTING REINFORCING BAR DIAMETER, THEN PROVIDE SUPPLEMENT REINFORCING BAR SIZE TO MATCH OR EXCEED CROSS-SECTIONAL AREA OF LOSS.
2. PLACE SUPPLEMENTAL REINFORCING AND REPAIR MORTAR TO ENSURE NO VOIDS ARE PRESENT BEHIND SUPPLEMENTAL REINFORCING OR BETWEEN SUPPLEMENTAL AND EXISTING REINFORCING. COAT PREPARED SUBSTRATE WITH SIKA ARMATEC 110 PRIOR TO APPLICATION OF REPAIR MORTAR.
3. IF LOCATION OF EXISTING REINFORCING DAMAGE IS TOO CLOSE TO CORNER OF WALL FOR ACHIEVING THE LAP INDICATED, THEN DRILL AND EPOXY SUPPLEMENTAL REINFORCING BEYOND CORNER, 12" EMBEDMENT.

3 SUPPLEMENTAL REINFORCING ELEVATION OF WALL
NOT TO SCALE

SURFACE RESTORATION SEQUENCE

1. HIGH PRESSURE WASH (3,000 PSI MINIMUM) AND CLEAN ALL INTERIOR EXPOSED SURFACES REGARDLESS OF THE NEED TO RESTORE THE AREA. THIS INCLUDES ALL THE GROUTED INVERT, FLOW CONTROL WALLS, WALLS, AND TOP SLAB/BEAM AREAS. REMOVE DEBRIS THAT IS A RESULT OF THE CLEANING PRIOR TO THE NEXT SEQUENCE STEP.
2. ALL INTACT, SMOOTH SURFACES SHALL BE SOUNDED WITH A HAMMER. THIS INCLUDES THE FLOOR AND WALL AREAS THAT MAY NOT REQUIRE RESTORATION. COORDINATE WITH OWNER AND MARK THE AREAS THAT SOFT AND/OR UNSOUND. SOUNDINGS SHALL BE WITNESSED BY OWNER.
3. SAW CUT LIMITS OF REPAIR AREA. ALL INTERIOR ANGLES OF SAW CUT LIMITS SHALL BE 90^{O} AND GREATER, BUT NOT MORE THAN 180^{O}. SAW CUT THE PERIMETER OF THE REPAIR AREA SO TO PRODUCE NO ACUTE INTERIOR ANGLES AND NO RE-ENTRANT CORNERS.
4. REMOVE ALL CONCRETE WITHIN THE SAW CUT REPAIR AREA TO THE MINIMUM DEPTH INDICATED. REMOVE DEGRADE CONCRETE TO ACHIEVE THE MINIMUM SPECIFIED REPAIR DEPTH INDICATED, BUT NOT LESS THAN THAT REQUIRE TO REMOVE ALL CONCRETE THAT IS SOFT AND/OR UNSOUND. AFTER REMOVING, CONFIRM:
   A. REMAINING CONCRETE SUBSTRATE IS SOUND.
   B. NO RUST STAINING IS PRESENT ON EXPOSED CONCRETE.
   C. ALL EXPOSED REINFORCING IS FREE OF RUST.
5. REMOVE ANY REMAINING CONCRETE THAT IS STAINED WITH RUST AND AS REQUIRED TO CLEAN ALL REINFORCING OF ALL RUST. REMOVE CONCRETE UNTIL RUST-FREE REINFORCING IS EXPOSED. CLEAN REINFORCING WITH MECHANICAL MEANS.
   A. REMOVE CONCRETE FROM AROUND PIPES UNTIL UNCORRODED PIPE IS EXPOSED. IF THIS EXCEEDS 3-INCHES, THEN CONTACT THE OWNER.
6. IF SUPPLEMENTAL REINFORCING IS REQUIRED, THEN SAW CUT AND INSTALL REINFORCING AS INDICATED.
7. PREPARED SUBSTRATE SHALL HAVE A SURFACE PROFILE OF CSP 7, IN ACCORDANCE WITH ICRI, BUT NOT LESS THAN THAT REQUIRED BY THE REPAIR MORTAR MANUFACTURER. (NOTE: ALL SURFACES TO RECEIVE COATING PRIMER AND COATING SHALL HAVE A SURFACE PROFILE IN ACCORDANCE WITH COATING MANUFACTURER'S RECOMMENDATIONS.)
8. SUBSTRATE SHALL HAVE A SATURATED, SURFACE DRY (SSD) CONDITION IN ACCORDANCE WITH COATING MANUFACTURER'S RECOMMENDATIONS.
9. APPLY BONDING AGENT IN ACCORDANCE WITH COATING MANUFACTURER'S RECOMMENDATIONS. BONDING AGENT SHALL BE SIKA ARMATEC 110 EPOCEM OR APPROVED EQUAL.
10. APPLY REPAIR MORTAR AND MOIST CURE IN ACCORDANE WITH MANUFACTURER RECOMMENDATIONS. APPLY IN LIFTS AS REQUIRED. REPAIR MORTAR SHALL BE SIKATOP 123 OR APPROVED EQUAL.
11. APPLY RESURFACER, PRIMER, AND COATING IN ACCORDANCE WITH COATING MANUFACTURER'S RECOMMENDATIONS.

CONCRETE REPAIR BID QUANTITIES FOR EXISTING DIVERSION BOX

1. REFER TO BID ITEMS LISTED IN SPECIFICATION SECTION 00 41 16, "BID FORM EXHIBIT A".
2. ACTUAL REPAIR QUANTITIES SHALL BE DETERMINED AFTER COMPLETION OF DIVERSION BOX REPAIR PREPARATION (WASHING, SOUNDING, REMOVAL OF UNSOUND CONCRETE, SAW-CUTTING AND MINIMUM REPAIR DEPTH FOR REPAIR MORTAR/SUPPLEMENTAL REINFORCING PLACEMENT).
3. PRIOR TO BEGINNING REPAIR MORTAR PLACEMENT, OWNER TO APPROVE EXISTING CONCRETE SURFACE PREPARATION AND SUBMIT FINAL QUANTITIES TO OWNER FOR REVIEW AND APPROVAL OF ACTUAL REPAIR MORTAR/SUPPLEMENTAL REINFORCING QUANTITIES.
4. OTHER MATERIALS NOT EXPLICITY QUANTIFIED, BUT WHICH ARE REQUIRED TO COMPLETE THE DIVERSION BOX REPAIR, ARE SUBSIDIARY TO THE BID ITEMS LISTED IN SPECIFICATION SECTION 00 41 16, "BID FORM EXHIBIT A".

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2024

GEORGIA REGISTERED No. 0050045 STRUCTURAL ENGINEER PETER A. WOOD BARTELS 10/21/2025

FREESE NICHOLS
2180 Satellite Boulevard
Suite 235
Duluth, GA 30097
Phone - (470) 645-3092
Web - www.freese.com

GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES
SUWANEE CREEK DIVERSION PUMP STATION

STRUCTURAL

MISCELLANEOUS DETAILS IV

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DATE	10/22/2025				
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FILE NAME	ST-GWR24074-EX-R23.RVT				

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SHEET S-9
SEQ. 75 OF 129

ISSUED FOR BID

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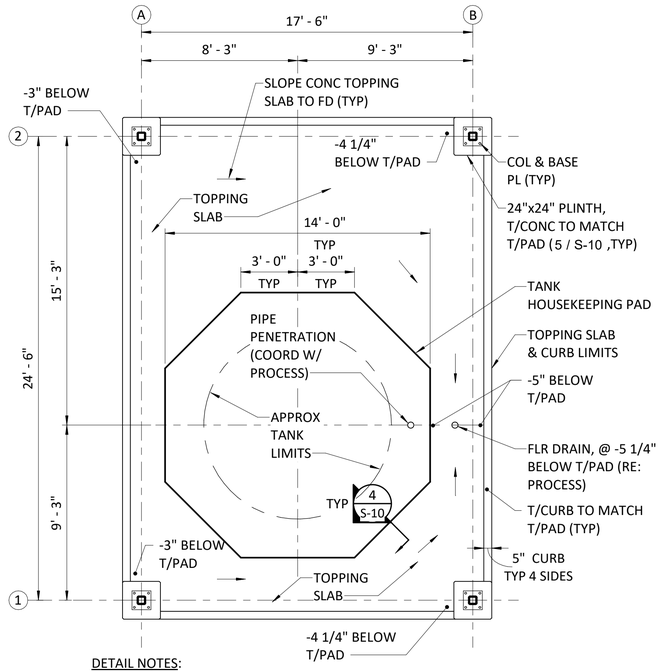
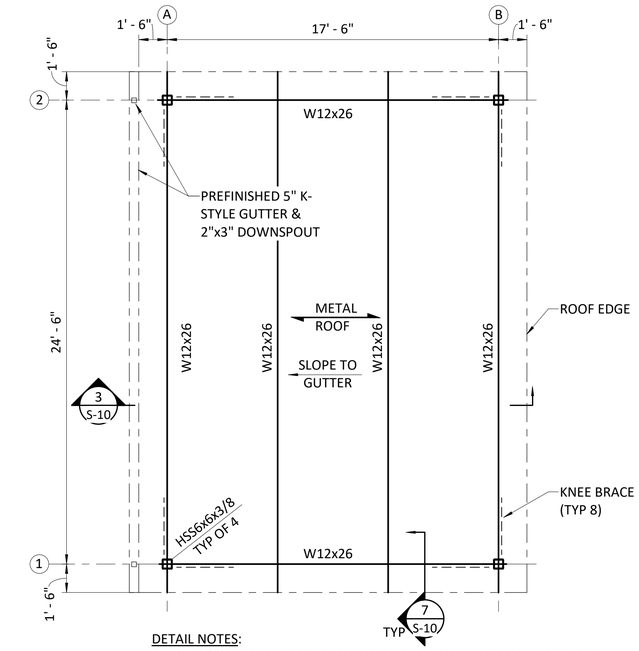


DETAIL NOTES:

1. COORDINATE TANK LOCATION WITH PROCESS MECHANICAL. CENTER PAD ON TANK CENTER.
2. FIELD VERIFY EXISTING CONDITIONS, POSSIBLE CONFLICTS, AND THICKNESS OF SLAB PRIOR TO FABRICATION OR CONSTRUCTION OF TANK AND CANOPY. INDICATE ALL ITEMS ON TANK AND CANOPY SHOP DRAWINGS.
3. ESTABLISH TOP OF CONCRETE AT PAD BASED ON MINIMUM PAD THICKNESS. OTHER TOP OF CONCRETE ELEVATIONS ARE BASED ON ESTABLISHED TOP OF PAD (T/PAD) ELEVATION.

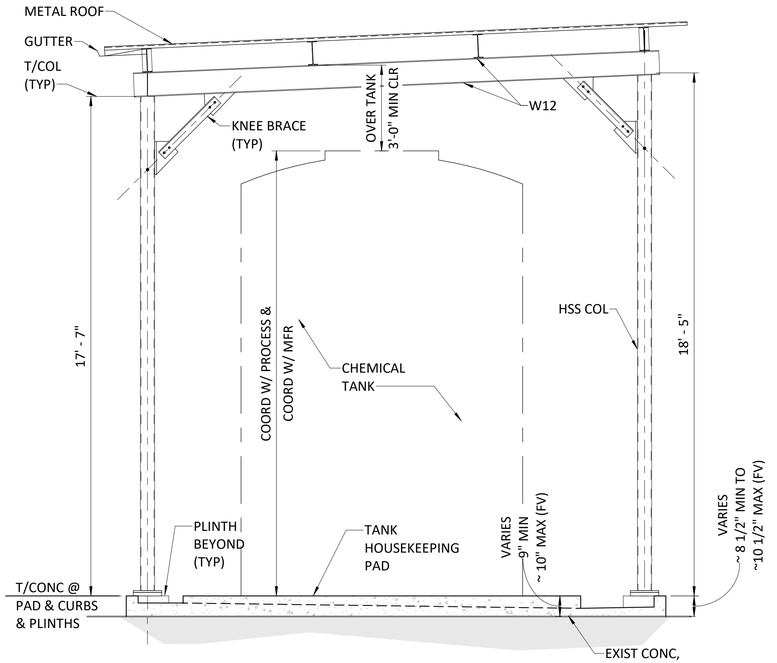
1 FOUNDATION PLAN
1/4" = 1'-0"



DETAIL NOTES:

1. ALL STRUCTURAL STEEL FRAMING AND HARDWARE SHALL BE HOT-DIP GALVANIZED.
2. COORDINATE DOWN SPOUT IN FIELD TO DRAIN IN THE DIRECTION OF GROUND SLOPE AND DIRECTED AWAY FROM THE TANK.
3. BEAMS EQUALLY SPACED BETWEEN COLUMNS.
4. METAL ROOF: MBCI 7.2 PANEL, 24GA, SMOOTH, SIGNATURE 200, COORDINATE COLOR WITH OWNER. OR APPROVED EQUAL. EPDM GASKETED 18-8 SS FASTENERS, #12 SCREWS AT 7.2" C/C FOR ALL SUPPORTS, #10 SIDE LAP FASTENERS AT 20"C/C, TAPED SEAMS, MATCHING TRIM AND GUTTER. ALL FASTENERS AND HARDWARE 304 STAINLESS STEEL.

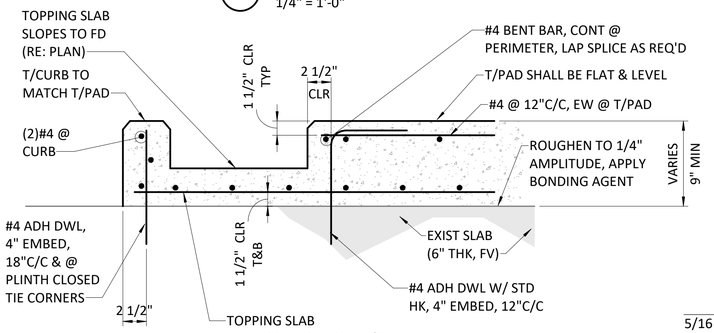
2 ROOF FRAMING PLAN
1/4" = 1'-0"



DETAIL NOTES:

1. CANOPY HEIGHT IS A MINIMUM. COORDINATE WITH TANK MANUFACTURER TO ENSURE MINIMUM CLEARANCE OVER TOP OF TANK IS MAINTAINED. SHOW / CONFIRM COORDINATION ON CANOPY SHOP DRAWINGS.

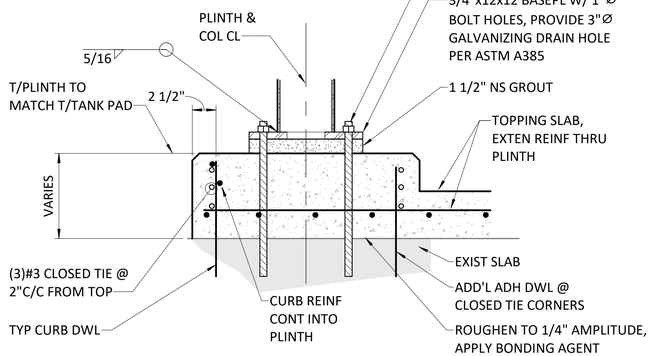
3 SECTION
S-10 3/8" = 1'-0"



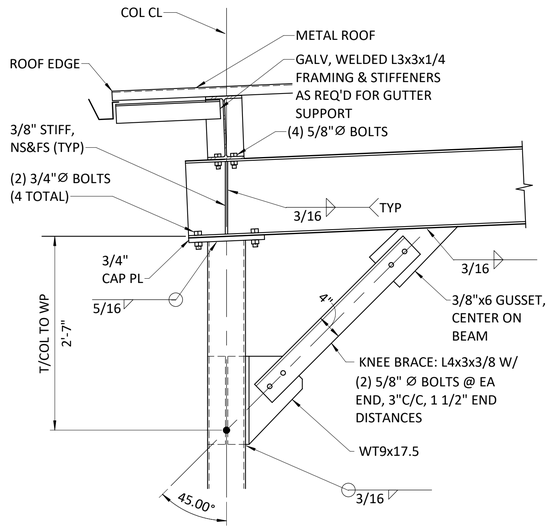
DETAIL NOTES:

1. CAST CURBS, PLINTHS, AND PAD MONOLITHIC WITH TOPPING SLAB.

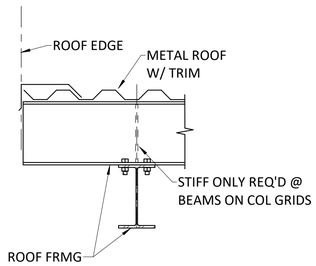
4 TANK HOUSEKEEPING PAD DETAIL
S-10 NOT TO SCALE



5 CANOPY COLUMN PLINTH
NOT TO SCALE



6 CANOPY CONNECTIONS
NOT TO SCALE



7 CANOPY EDGE
S-10 NOT TO SCALE

0 1' 2' 4'
3/8"=1'-0"

0 2' 4' 8'
1/4"=1'-0"

NORTH

ISSUED FOR BID

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
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GEORGIA REGISTERED No. 53000459 STRUCTURAL ENGINEER PETER ARMOND HARRIS 10/21/2025

FREESE NICHOLS
2180 Satellite Boulevard
Suite 235
Duluth, GA 30097
Phone - (470) 645-3092
Web - www.freese.com

GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES
SUWANEE CREEK DIVERSION PUMP STATION

STRUCTURAL
CHEMICAL TANK
FOUNDATION & CANOPY PLANS AND DETAILS

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SHEET S-10
SEQ. 76 OF 129

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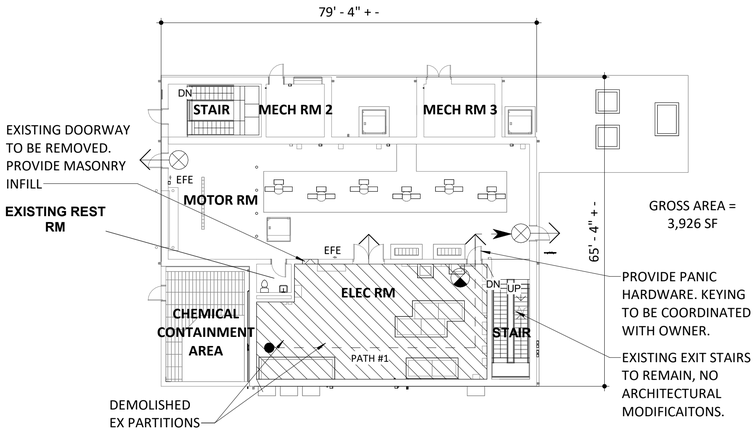
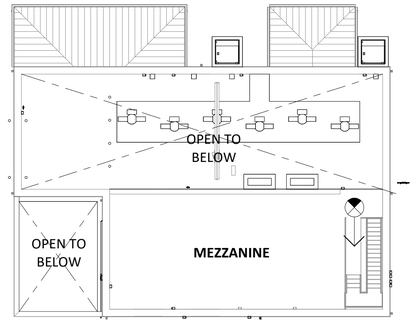
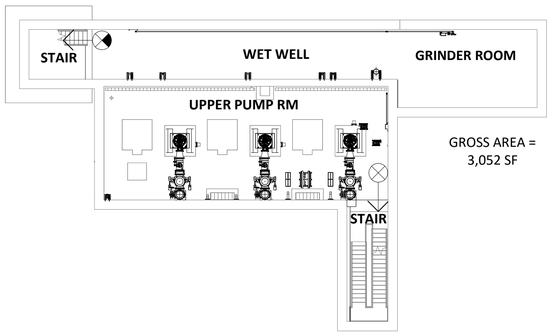


1 MAIN LEVEL
1/16" = 1'-0"

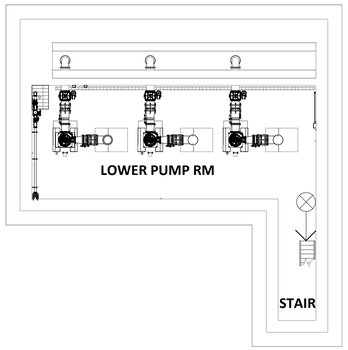


2 MEZZANINE LEVEL
1/16" = 1'-0"

TRAVEL DISTANCES	
Travel Path	Travel Distance
PATH #1	74' - 2"



3 UPPER PUMP ROOM
1/16" = 1'-0"



4 LOWER PUMP ROOM
1/16" = 1'-0"

LEGEND

NEW EXIT SIGN	
EXIT ACCESS	
EXIT ACCESS TRAVEL	PATH #1
EFE	EXISTING FIRE EXTINGUISHER
ARCHITECTURAL MODIFICATIONS LIMITED TO THIS AREA	
EXISTING EXIT SIGN	

FINISHES GENERAL NOTES:

INTERIOR FINISHES:
ALL PREVIOUSLY PAINTED SURFACES TO BE CLEANED AND PREPPED FOR NEW PAINT TO MATCH EXISTING. EXISTING SURFACES TO RECEIVE PAINT FOR THE FIRST TIME, PREP AND PRIME SURFACE AS PER MANUFACTURER DIRECTIONS.
PROTECT CONDUITS AND PIPES FROM WALL PAINT.

ALL DOORS AND FRAMES	TO BE REPAINTED
ALL CONCRETE WALL AND FLOORS	TO BE SEALED
HOUSEKEEPING PADS AND BOLLARDS	TO BE REPAINTED AND SEALED

EXTERIOR FINISHES:
ALL MODIFIED OR DISTURBED SURFACES DURING CONSTRUCTION TO BE PAINTED OR SEALED LIKE NEW TO MATCH EXISTING.

ALL DOORS AND FRAMES	TO BE REPAINTED
OH DOOR JAMB	TO BE REPAINTED
NEW DOWNSPOUT	TO BE PAINTED TO MATCH EXISTING

CODE REVIEW - IBC

PROJECT: SUWANEE CREEK, DIVERSION PUMP STATION EXPANSION

LOCATION: 1758 PEACHTREE INDUSTRIAL BOULEVARD, SUWANEE GEORGIA, 30024

CODES:
- 2018 INTERNATIONAL BUILDING CODE WITH 2020, 2022, 2024, AND 2025 GEORGIA STATE AMENDMENTS
- 2023 NATIONAL ELECTRIC CODE (NEC)
- 2018 INTERNATIONAL MECHANICAL CODE WITH 2020, 2024 AMENDMENTS
- 2018 INTERNATIONAL PLUMBING CODE WITH 2020, 2022, 2023, 2024 AMENDMENTS
- 2015 INTERNATIONAL ENERGY CONSERVATION CODE WITH 2020, 2022, 2023 AMENDMENTS
- 2018 INTERNATIONAL EXISTING BUILDING CODE WITH GEORGIA STATE AMENDMENTS
- 2018 INTERNATIONAL FIRE CODE (AMENDED BY 120-3-3)
- 2012 GWINNETT COUNTY ORDINANCES FOR FIRE PROTECTION AND LIFE SAFETY
- 2018 NFPA 101 LIFE SAFETY CODE (AMENDED BY 120-3-3)
- 2010 AMERICANS WITH DISABILITIES (ADA) STANDARDS
- 2024 LATEST UPDATES FOR OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION (OSHA) FOR EXIT ROUTES
- 2015 GWINNETT COUNTY CONSTRUCTION CODE WITH 2024 AMMENDMENTS
- 2018 INTERNATIONAL FUEL GAS CODE WITH 2020 AND 2022 GEORGIA STATE AMENDMENTS

SCOPE OF WORK:
1. THE SCOPE OF WORK IS INCLUDES REPLACING EXISTING PROCESS MECHANICAL EQUIPMENT.
2. THE SCOPE OF WORK INCLUDES DEMOLITION OF THE PARTITION SEPARATING THE ELECTRICAL RM. FROM THE MECHANICAL RM., AS WELL AS THE EX EXIT DOOR OF THE MECHANICAL RM. ON THE FIRST FLOOR PLAN, DOOR SHOWN AS A DASHED LINE.
3. HVAC UPGRADES, REFER TO HVAC.
4. THE SCOPE INCLUDES THE REPLACEMENT & RAISING THE DOOR HEIGHT OF AN EXISTING ROLL UP DOOR.
5. THE SCOPE INCLUDES THE REINFORCEMENT OF THE STRUCTURAL SUPPORTS OF THE EXISTING CRANE RAIL SYSTEM WITH ADDITION OF STEEL TO THE ROOF FRAMING.
6. CONTRACTOR TO CONFIRM EXIT SIGNS ARE FUNCTIONING PROPERLY. IF NOT FUNCTIONING NOTIFY ENGINEER.
7. FOR INTERIOR AND EXTERIOR FINISHES, REFER TO THE FINISHES GENERAL NOTES IN SHEET A-1 AND SPECIFICATION 09 91 00.

EXISITING BUILDING CODE COMPLIANCE:
1. HAZARD LEVEL – NO INCREASE IN HAZARD LEVEL
   a. NO CHANGE IN BUILDING OCCUPANCY.
   b. NO ADDITION TO BUILDING FOOTPRINT AND HEIGHT.
   c. MINOR CHANGE TO THE EXITING ROUTE DUE TO THE REMOVAL OF THE PARTITION BETWEEN THE MECH. RM. & ELEC. RM. AS WELL AS REMOVAL OF THE MECH. RM. EXIT ACCESS DOOR. THE EXISTING ROLL-UP DOOR REPLACEMENT IS NOT CONSIDERED AN EXIT.
   d. NO CHANGE IN EXISTING STAIRS. (IEBC SEC 704)
   e. NO CHANGE IN EXISTING REST RM.
   f. NEW HVAC SYSTEM IMPACT ON BUILDING THERMAL INSULATION AROUND ENVELOPE OF AREAS SERVICED BY NEW HVAC SYSTEM FOR IECC COMPLIANCE FOR CONDITIONED SPACES.
2. SCOPE OF WORK CATEGORY – LEVEL 2 ALTERATION. (IEBC SEC 603.1)
3. LEVEL 2 ALTERATIONS SHALL COMPLY WITH PROVISIONS OF LEVEL 1 ALTERATIONS (IEBC 603.2)
4. NUMBER OF EGRESS DOORS REQUIRED = 2, NUMBER OF EGRESS DOORS PROVIDED = 2 (IEBC 805.4.1)
5. SINGLE EXIT TRAVEL DISTANCE = 75', OCCUPANT LOAD <49 (IEBC 805.4.1.1.
6. EXIT SIGNS REQUIRED PER IBC (IEBC 805.8.1)
7. ANY NEW CONSTRUCTION WILL NEED TO COMPLY WITH THE CURRENT IBC. (IEBC SEC 702.6)

AREA CLASSIFICATIONS:
REFERENCE ELECTRICAL SHEET E-7.

***NOTE:** PER THE INTERNATIONAL BUILDING CODE (IBC) ALL UNALTERED COMPONENTS IN THE EXISTING BUILDING ARE CONSDERED COMPLIANT AND ACCEPTABLE UNDER CURRENT CODE.

CODE REVIEW, CON'T

INTERNATIONAL BUILDING CODE (IBC) COMPLIANCE:

OCCUPANCY:	
F1	MODERATE-HAZARD, INDUSTRIAL GROUP – (IBC SEC 306.2) WATER TREATMENT FACILITY.
TYPE OF CONSTRUCTION:	II-B NON-COMBUSTIBLE (IBC TABLE 601)
SPRINKLER SYSTEM:	NONE REQUIRED, NONE PROVIDED
BUILDING HEIGHT:	UNLIMITED, SPECIAL INDUSTRIAL OCCUPANCIES – (IBC SEC 503.1.1)

EXITING:

COMBINED ELECTRICAL RM. & MECH. RM. AREA	=	1,120 SF.
USE	=	EQUIPMENT RM. @ 300 SF/PERSON GROSS (IBC TABLE 1004.5)
OCCUPANT LOAD	=	4 OCCPANTS
EXIT ACCESS	=	DOOR SEPARATION DISTANCE PER *IBC SEC 1007.1.1* (DIAG. DISTANCE / 2)

SINGLE EXIT COMPLIES WITH (IBC TABLE 1006.2.1) FOR F OCCUPANCIES WITH <= 30 OCCUPANTS FOR MAX. TRAVEL DISTANCE = 75'.

SPACES WITH ONE EXIT OR EXIT ACCESS DOORWAY: *IBC TABLE 1006.2.1*

F OCCPANCY WITH OCCUPANT LOAD < 30	=	75'

EXIT ACCESS TRAVEL (SPACES WITH 2 OR MORE EXITS): IBC TABLE 1017.2

F-1 OCCUPANCY	=	200' NO SPRINKLER

FIRE EXTINGUISHERS: (IBC 906.1 & TABLE 906.3 (1)).

MAXIMUM ACCESS DISTANCE	=	75’
NFPA 101 LIFE SAFETY CODE CLASS I, DIV 1	=	WET WELL, GRINDER, UPPER AND LOWER PUMP ROOMS AND DIVERSION STRUCTURE.
NFPA 820 STANDARD FOR FIRE PROTECTION IN WASTE WATER TREATMENT AND COLLECTION FACILITIES	=	DESIGN IS COMPLIANT
NFPA 850 RECOMMENDED PRACTICE FOR FIRE PRO-TECTION FOR ELECTRIC GENERATING PLANTS AND HIGH VOLTAGE DIRECT CURRENT CONVERTER STATIONS	=	NOT APPLICABLE

0 8' 16' 32'
1/16"=1'-0"

ISSUED FOR BID

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2026

STATE OF GEORGIA
THOMAS J. SLIWA ROESSLER
CERTIFICATE NO. RA#####
REGISTERED ARCHITECT
10/22/2025

FREESE NICHOLS
2180 Satellite Boulevard
Suite 235
Duluth, GA 30097
Phone - (470) 645-3092
Web - www.freese.com

GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES
SUWANEE CREEK, PH2 PUMP STATION
GWINNETT COUNTY, GEORGIA
ARCHITECTURE
EXISTING PUMP STATION
LIFE SAFETY PLAN & CODE SHEET

F&N JOB NO. GWR24074
DATE 10/22/2025
DESIGNED TJR
DRAWN LAL/FM
CHECKED PKJ

NO.	ISSUE	BY	DATE
0	ISSUED FOR BID	TJR	10/22/2025
-	REVISED		

FILE NAME AR-GWR24074-EX-R23.RVT

VERIFY SCALE Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.
0 1

SHEET A-1
SEQ. 77 OF 129

Plot Date: 10/22/2025 12:40:07 PM

HVAC SYMBOLS

(ALL SYMBOLS SHOWN ARE NOT NECESSARILY USED ON THE DRAWINGS)

ABBREVIATIONS

A/C	AIR CONDITIONING	HP	HORSEPOWER
AFF	ABOVE FINISHED FLOOR	HTG	HEATING
AI	ANALOG INPUT	IN	INCHES
AO	ANALOG OUTPUT	KW	KILOWATT
APPROX	APPROXIMATELY	LAT	LEAVING AIR TEMPERATURE
ARCH	ARCHITECTURE/ARCHITECTURAL	LWT	LEAVING WATER TEMPERATURE
AV	ANALOG VALUE	MAX	MAXIMUM
BI	BINARY INPUT	MECH	MECHANICAL
BHP	BRAKE HORSEPOWER	MCA	MINIMUM CIRCUIT AMPACITY
BO	BINARY OUTPUT	MBH	THOUSANDS BTU's PER HOUR
BOD	BOTTOM OF DUCT	MIN	MINIMUM
BTUH	BRITISH THERMAL UNIT PER HOUR	MOCP	MAXIMUM OVERCURRENT PROTECTION
BV	BINARY VALUE	NFPA	NATIONAL FIRE PROTECTION ASSOC.
C	CELSIUS	NC	NOISE CRITERIA
CC	COOLING COIL	NOM	NOMINAL
CFM	CUBIC FEET PER MINUTE	NTS	NOT TO SCALE
CD	CONDENSATE DRAIN	NO	NUMBER
CONN	CONNECTION	N.C.	NORMALLY CLOSED
dB	DECIBELS	N.O.	NORMALLY OPEN
DI	DIGITAL INPUT	OA	OUTSIDE AIR
DIA	DIAMETER	P/PH	PHASE
DB	DRY BULB	PLBG	PLUMBING
DDC	DIRECT DIGITAL CONTROL	PSI	POUNDS PER SQUARE INCH
DEG	DEGREE	RE	REFER/REFERENCE
DO	DIGITAL OUTPUT	RA	RETURN AIR
DX	DIRECT EXPANSION	RPM	REVOLUTIONS PER MINUTE
DWGS	DRAWINGS	SMACNA	SHEET METAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOC.
ELEC	ELECTRIC/ELECTRICAL		
EAT	ENTERING AIR TEMPERATURE	SQ FT	SQUARE FEET
EWT	ENTERING WATER TEMPERATURE	SP	STATIC PRESSURE
EFF	EFFICIENCY	SA	SUPPLY AIR
EL	ELEVATION	TEMP	TEMPERATURE
EMCS	ENERGY MONITORING AND CONTROL SYSTEM	T-STAT	THERMOSTAT
EXH	EXHAUST	TYP	TYPICAL
F	FAHRENHEIT	VAV	VARIABLE AIR VOLUME
FLEX	FLEXIBLE	VFD	VARIABLE FREQUENCY DRIVE
FPM	FEET PER MINUTE	VD	VOLUME DAMPER
FT	FEET, FOOT	WT	WATTS
GPM	GALLONS PER MINUTE	WTR	WATER
HC	HEATING COIL	WC	WATER COLUMN
HVAC	HEATING, VENTILATION AND AIR CONDITIONING	WG	WATER GAUGE
HZ	HERTZ	WB	WET BULB

DUCTWORK SYMBOLS

- SUPPLY AIR DIFFUSER - ARROWS INDICATE PATTERN. NO ARROWS SHOWN EQUALS 4-WAY.
- RETURN/TRANSFER AIR GRILLE
- EXHAUST GRILLE
- SUPPLY AIR PLENUM SLOT DIFFUSER
- 12" — ROUND DUCTWORK
- 12/12 — RECTANGULAR DUCTWORK. SIZE INDICATED IN INCHES, FIRST NUMBER IS SIDE SHOWN
- FLEXIBLE DUCT
- RADIUS DUCTWORK ELBOW ROUND OR RECTANGULAR
- RECTANGULAR DUCTWORK BRANCH TAKE-OFF W/DAMPER AND 45 DEGREE BRANCH INLET
- ROUND DUCT BRANCH TAKE-OFF FROM RECTANGULAR OR FLAT OVAL MAIN WITH CONICAL TAP. PROVIDE BALANCE DAMPER FOR LOW PRESSURE DUCTWORK ONLY
- DUCTWORK SIZE TRANSITION.
- FLEXIBLE DUCT CONNECTION TO EQUIPMENT
- SA — SUPPLY AIR DUCT UP
- SA — SUPPLY AIR DUCT DOWN
- RA — RETURN AIR DUCT UP
- RA — RETURN AIR DUCT DOWN
- EA — RELIEF OR EXHAUST AIR DUCT UP
- EA — RELIEF OR EXHAUST AIR DUCT DOWN
- 90° ELBOW WITH TURNING VANES
- M — MOTORIZED DAMPER
- MANUAL VOLUME (BALANCE) DAMPER
- FD — FD - FIRE DAMPER, SD - SMOKE DAMPER, CD - COMBINATION FIRE/SMOKE DAMPER

PLAN SYMBOLOGY

NEW PLANS		DOUBLE LINE
DUCTWORK	EXISTING TO REMAIN	
	DEMOLITION	
	NEW	
PIPING	EXISTING TO REMAIN	
	DEMOLITION	
	NEW	
EXISTING EQUIPMENT (FANS, AIR DEVICES, PUMPS, ETC.) TO BE RELOCATED.		R
NEW EQUIPMENT		

EQUIPMENT DESIGNATIONS

AHU	AIR HANDLING UNIT
EDH	ELECTRIC DUCT HEATER
F	FAN
WAC	WALL-MOUNTED PACKAGED DX
UH	UNIT HEATER

MISCELLANEOUS

- A200 — DIFFUSER/GRILLE/REGISTER LABEL: "A" - TYPE/DESIGNATION, "200" - AIRFLOW (CFM)
- (T) — THERMOSTAT (LOCAL CONTROL "X" INDICATES ZONE)
- T — TEMPERATURE SENSOR
- H — HUMIDITY SENSOR
- (P) — PRESSURE SENSOR
- (C) — CO2 SENSOR
- (SP) — DUCT MOUNTED STATIC PRESSURE SENSOR
- (S) — DUCT SMOKE DETECTOR
- DRAWING NOTE REFERENCE
- ∅ — DIAMETER/PHASE
- POINT OF NEW CONNECTION BETWEEN NEW AND EXISTING WORK
- SENSOR WITH LOCKING PROTECTIVE GUARD — X

GENERAL NOTES

1. THIS PROJECT IS DESIGNED BASED ON THE FOLLOWING CODES: INTERNATIONAL MECHANICAL CODE 2018 (WITH GEORGIA AMENDMENTS), INTERNATIONAL ENERGY CONSERVATION CODE 2015 (WITH GEORGIA AMENDMENTS).
2. ALL INFORMATION REQUIRED FOR DESIGN MAY NOT BE COVERED IN THE DRAWINGS. REFER TO DIVISION 23 TECHNICAL SPECIFICATIONS AND OTHER RELATED SECTIONS FOR ADDITIONAL INFORMATION.
3. ALL DUCT SIZES SHOWN ON THE DRAWINGS ARE NET INSIDE CLEAR DIMENSIONS.
4. UTILIZE LONG RADIUS ELBOWS WHERE SPACE PERMITS UNLESS OTHERWISE NOTED. ALL RECTANGULAR ELBOWS SHALL CONTAIN TURNING VANES.
5. COORDINATE WITH OTHER UTILITIES TO AVOID INTERFERENCES WHEN INSTALLING DUCTWORK, PIPING AND EQUIPMENT.
6. FURNISH AND INSTALL ALL EQUIPMENT AS PER MANUFACTURER'S RECOMMENDATIONS AND INSTRUCTIONS. PROVIDE MODIFICATIONS AND ACCESSORIES AS REQUIRED AND RECOMMENDED BY THE MANUFACTURER TO ASSURE PROPER OPERATION OF THE EQUIPMENT.
7. VERIFY DIMENSIONS, LOCATIONS, ELEVATIONS AND CONFIGURATION OF ALL ITEMS ASSOCIATED WITH THE INSTALLATION OF DUCTWORK AND EQUIPMENT.
8. EQUIPMENT, DUCTWORK AND PIPING SHALL NOT BE SUPPORTED OR SECURED TO OTHER EQUIPMENT, DUCTWORK, PIPING OR OTHER UTILITIES.
9. PAINT ALL EQUIPMENT VISIBLE THROUGH AIR DEVICES MATTE BLACK.
10. PROVIDE MANUAL VOLUME DAMPERS IN ALL DUCTWORK AT ALL DUCT SPLITS, BRANCH RUNOUTS AND DUCT COLLARS FOR REGISTERS. ALL MANUAL DAMPERS MAY NOT BE SHOWN ON DRAWINGS.
11. ALL DUCTWORK SHALL BE CONSTRUCTED, SEALED AND INSTALLED IN CONFORMANCE TO SMACNA DUCT CONSTRUCTION STANDARDS.
12. TO RESOLVE FIELD PROBLEMS IN ROUTING DUCTWORK THE CONTRACTOR SHALL USE THE SAME CIRCULAR EQUIVALENT DIAMETER TO TRANSFORM DUCT SIZE FROM THAT SPECIFIED ON THE DRAWINGS.

$$DE = \frac{1.30\,(AB)^{0.625}}{(A+B)^{0.250}}$$

DE = CIRCULAR EQUIVALENT OF RECTANGULAR DUCT IN INCHES
A = LENGTH OF ONE SIDE OF DUCT IN INCHES
B = LENGTH OF OTHER SIDE OF DUCT IN INCHES

13. PROVIDE FIRE DAMPERS IN DUCTWORK AT ALL FIRE BARRIER PENETRATIONS. PROVIDE ACCESS DOORS IN DUCTWORK TO VIEW AND SERVICE FIRE DAMPERS PER SMACNA AND APPLICABLE LOCAL CODES.
14. PROVIDE FIRE RESISTANT FLEXIBLE CONNECTION WHENEVER DUCTWORK IS CONNECTED TO MOTORIZED EQUIPMENT.
15. DUCT MATERIAL SHALL BE ZINC-COATED STEEL WITH METAL AND GALVANIZING THICKNESS AS PER SMACNA CONSTRUCTION STANDARDS.
16. PROVIDE OSHA-REQUIRED CLEARANCES AROUND ALL HVAC EQUIPMENT AND COMPONENTS FOR PERSONNEL ACCESS AND MAINTENANCE.
17. ALL PIPE HANGERS AND SUPPORTS SHALL COMPLY WITH MANUFACTURER'S STANDARDIZATION SOCIETY (MSS) STANDARDS. VERTICAL PIPES MUST BE SUPPORTED AT EACH FLOOR WITH PIPE CLAMPS.
18. INSULATE BACKS AND PLENUMS OF SUPPLY AIR DEVICES WITH MINIMUM 1" MINERAL FIBER.
19. ALL AIR MOVING EQUIPMENT CONTAINING PARTICULATE FILTERS SHALL NOT BE OPERATED WITHOUT PARTICULATE FILTERS IN PLACE.
20. ADD DIELECTRIC CONNECTIONS BETWEEN PIPES OF DIFFERENT METALS.
21. MAINTAIN A VERTICAL SLOPE OF 1/8" PER FOOT IN THE DIRECTION OF FLOW FOR ALL HORIZONTAL CONDENSATE PIPING. ROUTE CONDENSATE DRAIN ALONG WALL TO TERMINATE OPEN-SITE AT MOP SINK.
22. INSTALL ALL PIPING PARALLEL TO BUILDING LINES UNLESS STATED OTHERWISE IN DRAWINGS.

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2026

REGISTERED GEORGIA ENGINEER No. PE051583 PROFESSIONAL
10/21/2025

FREESE NICHOLS
2180 Satellite Boulevard
Suite 235
Duluth, GA 30097
Phone - (470) 645-3092
Web - www.freese.com

GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES
SUWANEE CREEK DIVERSION PUMP STATION

BUILDING MECHANICAL

NOTES, SYMBOLS & ABBREVIATIONS

F&N JOB NO.	GWR24074
DATE	10/22/2025
DESIGNED	DCA
DRAWN	DCA
REVISED	-
CHECKED	WAV
FILE NAME	HV-GWR24074-EX-R23.rvt

NO.	ISSUE	DATE	BY
0	ISSUED FOR BID	10/22/2025	JAK

VERIFY SCALE Bar is one inch on original drawing. If not one inch on this sheet, adjust scale. 0 1

SHEET H-1

SEQ. 78 OF 129

ISSUED FOR BID

Plot Date: 10/21/2025 11:23:20 AM

GENERAL NOTES

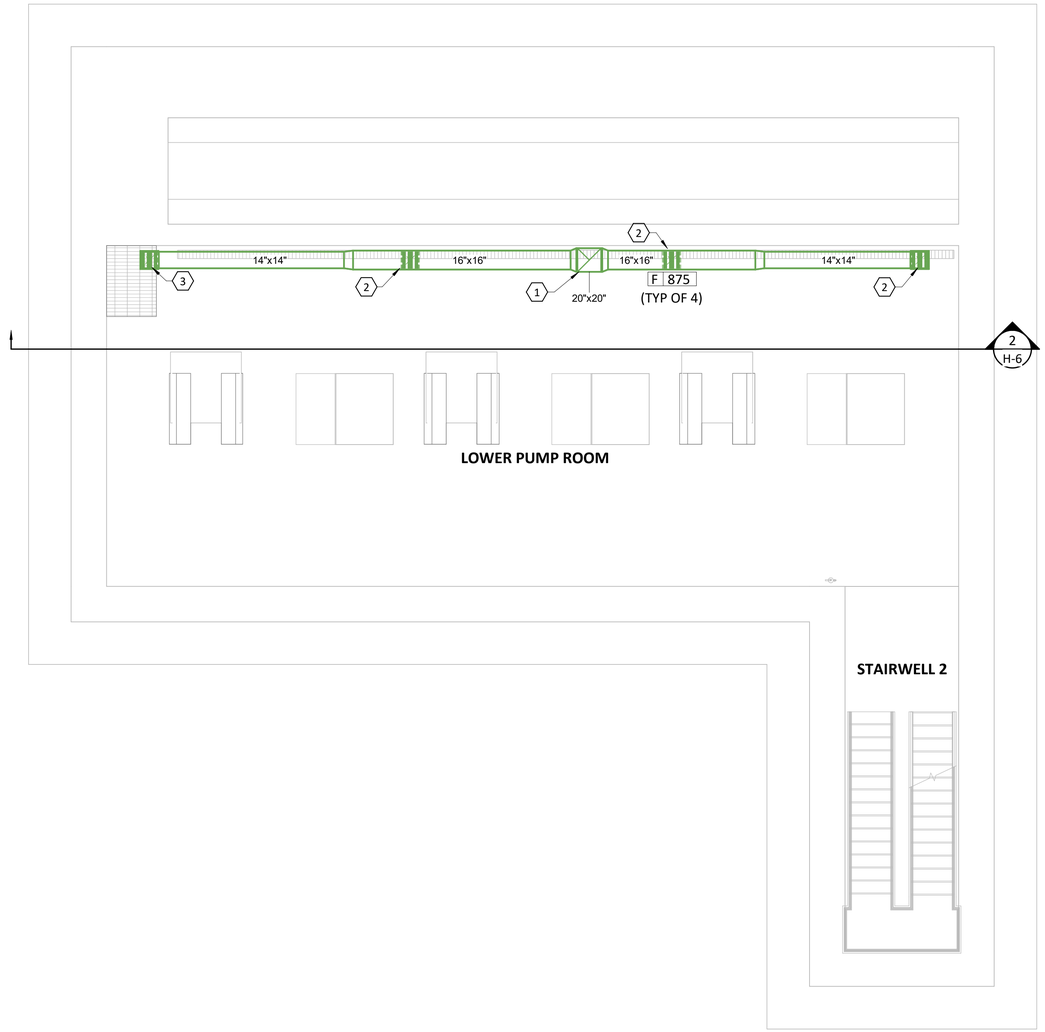
1. REFER TO H-1 FOR LEGEND, GENERAL NOTES AND ABBREVIATIONS.
2. REFER TO DIVISION 23 FOR TECHNICAL SPECIFICATIONS.
3. REFER TO ELECTRICAL DRAWINGS FOR POWER ROUTING/CONNECTION TO MECHANICAL EQUIPMENT.
4. ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL CONDUIT FOR ALL CONTROL WIRING.
5. INSTALL THERMOSTATS/TEMPERATURE SENSORS AT 48" AFF.
6. MAINTAIN 1/8" VERTICAL DROP PER HORIZONTAL FOOT MINIMUM FOR CONDENSATE DRAIN PIPING.

NOTES BY SYMBOL "⬡"

1 EXHAUST AIR DUCT DOWN FROM FLOOR ABOVE THROUGH EXISTING FLOOR OPENING. SEE H-3 FOR CONTINUATION.

2 14"X14" EXHAUST AIR DUCT DOWN IN VERTICAL. TERMINATE 1'-0" AFF WITH GRILLE.

3 14"X14" EXHAUST AIR DUCT DOWN IN VERTICAL. TERMINATE 7'-6" AFF WITH GRILLE.



1 LOWER PUMP ROOM FLOOR PLAN
3/16" = 1'-0"

0 4' 8'
3/16"=1'-0"

ISSUED FOR BID

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2026

GEORGIA REGISTERED No. PE051593 PROFESSIONAL ENGINEER
10/21/2025

FREESE NICHOLS
2180 Satellite Boulevard
Suite 235
Duluth, GA 30097
Phone - (470) 645-3092
Web - www.freese.com

GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES
SUWANEE CREEK DIVERSION PUMP STATION

BUILDING MECHANICAL
PUMP STATION
LOWER PUMP ROOM FLOOR PLAN

F&N JOB NO.	GWR24074
DATE	10/22/2025
DESIGNED	DCA
DRAWN	DCA
REVISED	-
CHECKED	WAY

NO.	ISSUE	DATE	BY
0	ISSUED FOR BID	10/22/2025	JAK

FILE NAME HV-GWR24074-EX-R23.rvt

VERIFY SCALE
Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.
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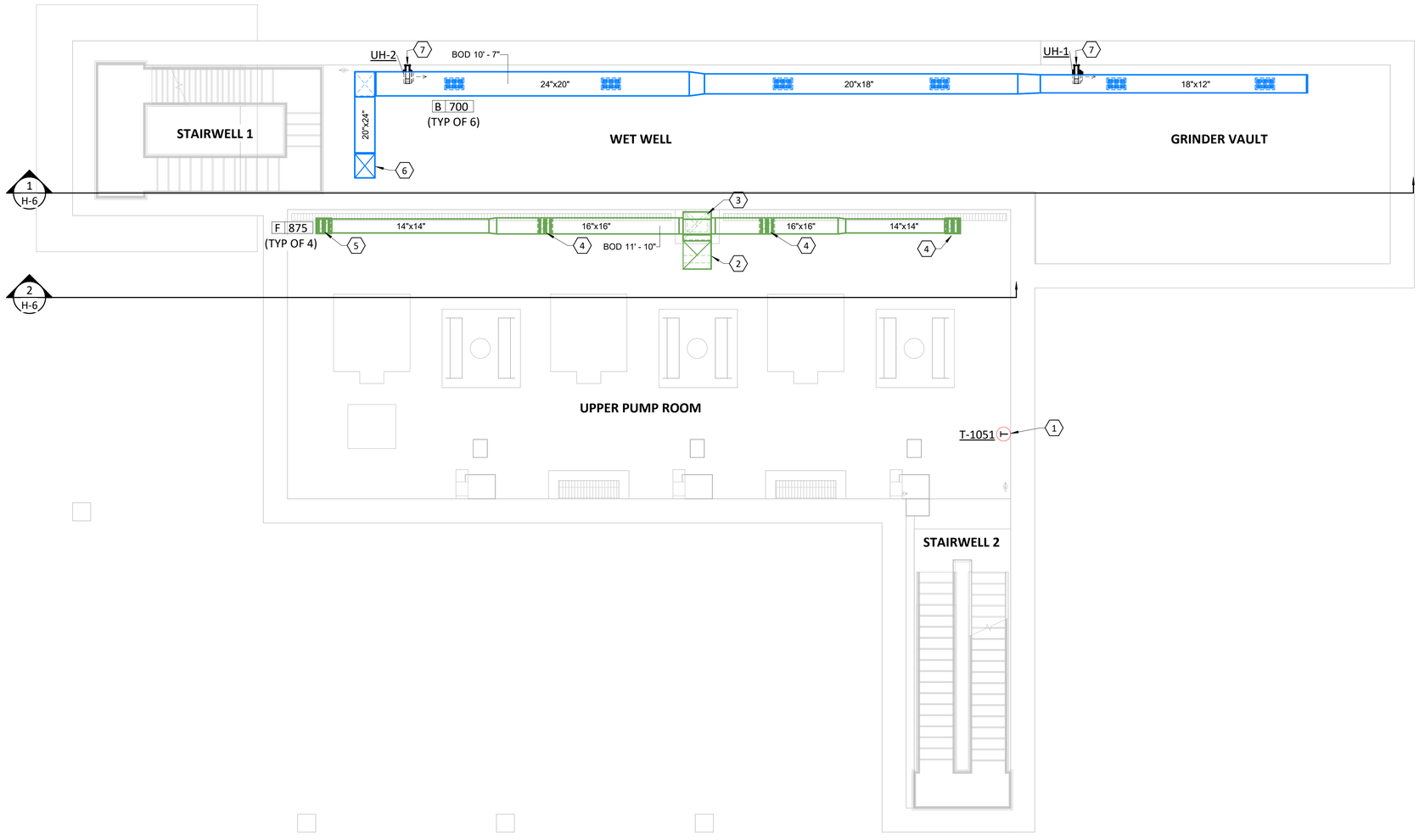
SHEET H-2

SEQ. 79 OF 129

Plot Date: 10/21/2025 11:23:21 AM



1 H-6 UPPER PUMP ROOM FLOOR PLAN
3/16" = 1'-0"

GENERAL NOTES

1. REFER TO H-1 FOR LEGEND, GENERAL NOTES AND ABBREVIATIONS.
2. REFER TO DIVISION 23 FOR TECHNICAL SPECIFICATIONS.
3. REFER TO ELECTRICAL DRAWINGS FOR POWER ROUTING/CONNECTION TO MECHANICAL EQUIPMENT.
4. ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL CONDUIT FOR ALL CONTROL WIRING.
5. INSTALL THERMOSTATS/TEMPERATURE SENSORS AT 48" AFF.
6. MAINTAIN 1/8" VERTICAL DROP PER HORIZONTAL FOOT MINIMUM FOR CONDENSATE DRAIN PIPING.

NOTES BY SYMBOL "⬡"

1 PROVIDE NEMA 4X THERMOSTAT. INTERLOCK WITH AHU-1051.

2 28"X28" EXHAUST AIR DUCT DOWN FROM FLOOR ABOVE THROUGH EXISTING FLOOR OPENING. SEE H-4 FOR CONTINUATION.

3 20"X20" EXHAUST AIR DUCT DOWN TO FLOOR BELOW THROUGH EXISTING FLOOR OPENING. FIELD VERIFY EXISTING OPENING SIZE AND ADJUST DUCT ACCORDINGLY TO PREVENT OPENING MODIFICATION. PROVIDE RISER SUPPORT FOR DUCT AT FLOOR. SEE H-2 FOR CONTINUATION.

4 14"X14" EXHAUST AIR DUCT DOWN IN VERTICAL. TERMINATE 1'-0" AFF WITH GRILLE.

5 14"X14" EXHAUST AIR DUCT DOWN IN VERTICAL. TERMINATE 7'-6" AFF WITH GRILLE.

6 20"X24" SUPPLY AIR DUCT DOWN IN VERTICAL THROUGH EXISTING FLOOR OPENING. FIELD VERIFY EXISTING OPENING SIZE AND ADJUST DUCT ACCORDINGLY TO PREVENT OPENING MODIFICATOIN. SEE H-4 FOR CONTINUATION.

7 PROVIDE EXPLOSION PROOF DUCT HEATER. MOUNT HEATER AT 8' AFF.

0 4' 8'
3/16"=1'-0"

ISSUED FOR BID

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2026

GEORGIA REGISTERED No. PE051583 PROFESSIONAL ENGINEER
10/21/2025

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GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES
SUWANEE CREEK DIVERSION PUMP STATION
BUILDING MECHANICAL
PUMP STATION
UPPER PUMP ROOM FLOOR PLAN

F&N JOB NO.	GWR24074
DATE	10/22/2025
DESIGNED	DCA
DRAWN	DCA
REVISED	-
CHECKED	WAY

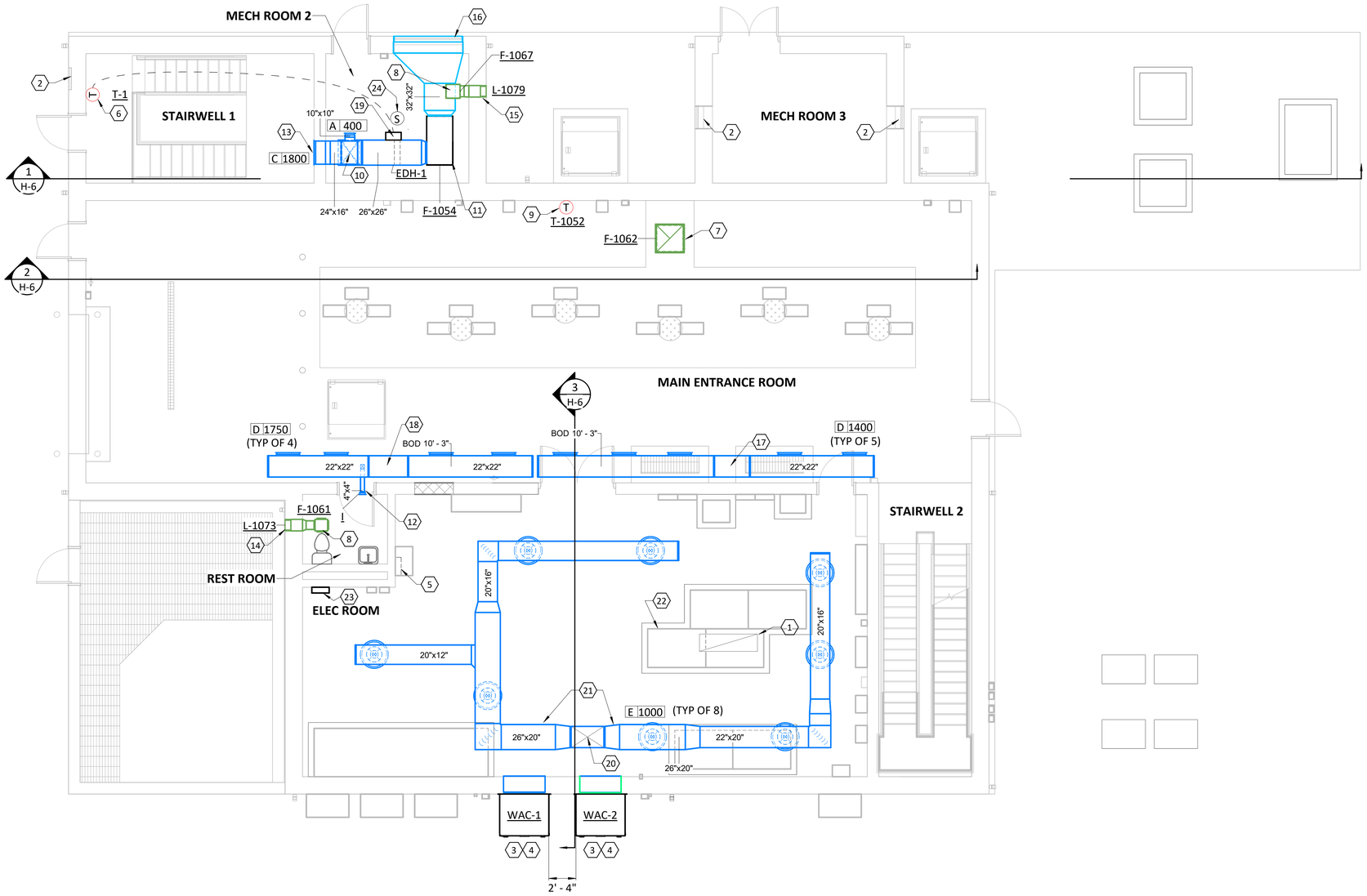
NO.	ISSUE	BY	DATE
0	ISSUED FOR BID	JAK	10/22/2025

FILE NAME HV-GWR24074-EX-R23.rvt

VERIFY SCALE Bar is one inch on original drawing. If not one inch on this sheet adjust scale.
0 1"

SHEET H-3
SEQ. 80 OF 129

Plot Date: 10/21/2025 11:23:23 AM



1 MAIN LEVEL FLOOR PLAN
3/16" = 1'-0"

GENERAL NOTES

1. REFER TO H-1 FOR LEGEND, GENERAL NOTES AND ABBREVIATIONS.
2. REFER TO DIVISION 23 FOR TECHNICAL SPECIFICATIONS.
3. REFER TO ELECTRICAL DRAWINGS FOR POWER ROUTING/CONNECTION TO MECHANICAL EQUIPMENT.
4. ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL CONDUIT FOR ALL CONTROL WIRING.
5. INSTALL THERMOSTATS/TEMPERATURE SENSORS AT 48" AFF.
6. MAINTAIN 1/8" VERTICAL DROP PER HORIZONTAL FOOT MINIMUM FOR CONDENSATE DRAIN PIPING.

NOTES BY SYMBOL "⬡"

1 EXISTING RETURN DUCT AND GRILLE TO REMAIN.

2 EXISTING LOUVER TO REMAIN.

3 PROVIDE WALL-MOUNTED PACKAGED DX UNIT. MOUNT BOTTOM OF SUPPLY AIR DISCHARGE AT 7'-4" AFF SUCH THAT SUPPLY AIR DOES NOT DISCHARGE ONTO SUPPLY DUCTWORK. RE: 1/H-8.

4 PROVIDE FULL-SIZE CONDENSATE DRAIN WITH WET P-TRAP. ROUTE AND TERMINATE PIPING IN DRY WELL. REFER TO CIVIL DRAWINGS FOR EXACT LOCATION. DO NOT TERMINATE CONDENSATE DRAIN ON PAVEMENT OR CONCRETE SURFACE. RE: 2/H-8.

5 PROVIDE LEAD/STANDBY-CAPABLE MULTI-UNIT CONTROLLER FOR WAC UNITS. MOUNT BOTTOM OF CONTROLLER AT 4'-0" AFF.

6 PROVIDE NEMA 7 THERMOSTAT. INTERLOCK WITH EDH-1.

7 PROVIDE INLINE EXHAUST FAN. MOUNT FAN ON EXISTING CONCRETE PAD OVER EXISTING DUCT PENTRATION. PROVIDE DUCT SMOKE DETECTOR IN DUCT AFTER FAN OUTLET. RE: 5/H-8.

8 PROVIDE INLINE EXHAUST FAN. MOUNT BOTTOM OF FAN 9'-0" AFF. SUSPEND FROM CEILING AND CONNECT TO LOUVER WITH NECESSARY DUCT AND FITTINGS. RE: 4/H-8.

9 PROVIDE NEMA 4X THERMOSTAT. INTERLOCK WITH AHU-1052. REFER TO H-11 FOR CONTROL SEQUENCES.

10 TEE TO 20"X24" DUCT DOWN IN VERTICAL TO WET WELL THROUGH EXISTING FLOOR OPENING AND 16"X24" DUCT UP IN VERTICAL. FIELD VERIFY OPENING SIZE AND ADJUST DUCT ACCORDINGLY TO PREVENT OPENING MODIFICATION.

11 PROVIDE TYPE B SPARK RESISTANT INLINE SUPPLY FAN WITH SIDE DISCHARGE. RE: 7/H-8.

12 4"X4" SUPPLY AIR DUCT TEE OFF BOTTOM OF 22"X22" DUCT AND 90 DEGREE TURN TO RESTROOM THROUGH NEW WALL PENETRATION. TERMINATE WITH SUPPLY GRILLE FLUSH WITH WALL.

13 16"X24" SUPPLY AIR DUCT THROUGH EXISTING OPENING IN WALL.

14 PROVIDE STATIONARY LOUVER. INSTALL BOTTOM OF LOUVER IN NEW WALL OPENING AT 9'-0" AFF. RE: 3/H-8.

15 PROVIDE STATIONARY LOUVER. INSTALL BOTTOM OF LOUVER IN NEW WALL OPENING AT 6'-2" AFF. RE: 3/H-8.

16 PROVIDE STATIONARY LOUVER RUSKIN MODEL ELF375DX OR APPROVED EQUIVALENT . INSTALL LOUVER IN EXISTING OPENING. FIELD VERIFY EXISTING OPENING SIZE. RE: 3/H-8.

17 36"X22" SUPPLY AIR DUCTWORK FROM MEZZANINE ABOVE. SEE H-5 FOR CONTINUATION.

18 40"X22" SUPPLY AIR DUCTWORK FROM MEZZANINE ABOVE. SEE H-5 FOR CONTINUATION.

19 PROVIDE EXPLOSION PROOF DUCT HEATER.

20 EXISTING SUPPLY DUCT THROUGH CEILING TO REMAIN.

21 PROVIDE NEW SUPPLY DUCTWORK IN ELECTRICAL ROOM. TIE NEW DUCTWORK INTO EXISTING DUCTWORK THAT IS PENETRATING THE CEILING. DUCTWORK SHALL HAVE 6" OF CLEARANCE BETWEEN TOP OF DUCT AND CEILING AND SHALL NOT BE ROUTED DIRECTLY ABOVE ELECTRICAL EQUIPMENT.

22 ELECTRICAL EQUIPMENT. RE: ELECTRICAL.

23 PROVIDE CONTROL PANEL FOR VENTILATION MONITORING. MOUNT BOTTOM OF CONTROLLER AT 4'-0" AFF. REFER TO ELECTRICAL DRAWINGS FOR DETAILS.

24 PROVIDE CEILING MOUNT EXPLOSION PROOF SMOKE DETECTOR. REFER TO ELECTRICAL DRAWINGS FOR DETAILS.

0 4' 8'
3/16"=1'-0"

ISSUED FOR BID

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2026

GEORGIA REGISTERED No. PE051583 PROFESSIONAL ENGINEER KEVIN MICHAEL WORKMAN 10/21/2025

FREESE NICHOLS
2180 Satellite Boulevard
Suite 235
Duluth, GA 30097
Phone - (470) 645-3092
Web - www.freese.com

GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES
SUWANEE CREEK DIVERSION PUMP STATION

BUILDING MECHANICAL
PUMP STATION
MAIN ENTRANCE ROOM FLOOR PLAN

F&N JOB NO.	GWR24074
DATE	10/22/2025
DESIGNED	DCA
DRAWN	DCA
CHECKED	WAY

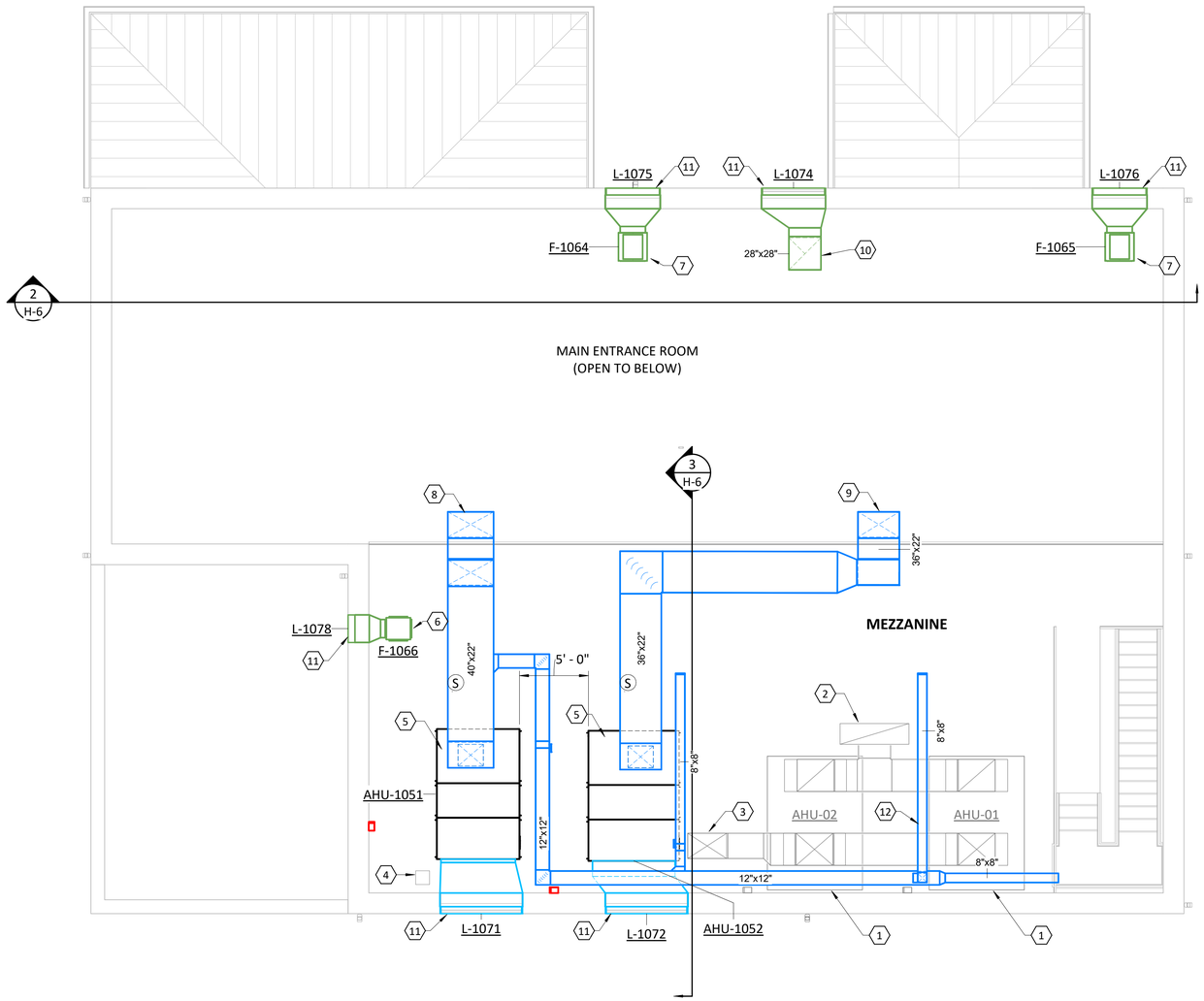
NO.	ISSUE	BY	DATE
0	ISSUED FOR BID	JAK	10/22/2025
-	REVISED		

FILE NAME HV-GWR24074-EX-R23.rvt

Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.
VERIFY SCALE 0 1"

SHEET H-4
SEQ. 81 OF 129

Plot Date: 10/21/2025 11:23:24 AM



1 H-6 MEZZANINE LEVEL FLOOR PLAN

3/16" = 1'-0"

GENERAL NOTES

1. REFER TO H-1 FOR LEGEND, GENERAL NOTES AND ABBREVIATIONS.
2. REFER TO DIVISION 23 FOR TECHNICAL SPECIFICATIONS.
3. REFER TO ELECTRICAL DRAWINGS FOR POWER ROUTING/CONNECTION TO MECHANICAL EQUIPMENT.
4. ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL CONDUIT FOR ALL CONTROL WIRING.
5. INSTALL THERMOSTATS/TEMPERATURE SENSORS AT 48" AFF.
6. MAINTAIN 1/8" VERTICAL DROP PER HORIZONTAL FOOT MINIMUM FOR CONDENSATE DRAIN PIPING.

NOTES BY SYMBOL "⬡"

1 EXISTING AIR HANDLING UNIT. ASSOCIATED EXISTING DUCTWORK SHOWN FOR REFERENCE. FIELD VERIFY FOR EXACT SIZES AND LOCATION.

2 EXISTING 60"X18" (APPROX.) RETURN AIR DUCT IN VERTICAL TO FLOOR BELOW.

3 EXISTING 34"X22" (APPROX.) SUPPLY AIR DUCT IN VERTICAL TO FLOOR BELOW THROUGH 42"X22" (APPROX.) OPENING.

4 COVER EXISTING DUCT PENETRATION WITH 1/4" THICK TREADPLATE THAT EXTENDS 3" BEYOND THE OPENING ON ALL SIDES. ANCHOR DOWN WITH 4 COUNTERSUNK CONCRETE SCREW ANCHORS.

5 PROVIDE AIR HANDLING UNIT. RE: 1/H-9.

6 PROVIDE INLINE EXHAUST FAN. DUCT FAN OUTLET TO LOUVER. RE: 4/H-8.

7 PROVIDE INLINE EXHAUST FAN. MOUNT FAN ON EXISTING STEEL FRAME. MODIFY EXISTING STEEL FRAME AS REQUIRED FOR SUPPORT OF FANS. MODIFY USING FIELD-WELDED STEEL FRAMING. FIELD PREPARE, PRIME AND PAINT AFTER FABRICATING AND WELDING. SUBMIT PROPOSED MODIFICATIONS FOR REVIEW AND APPROVAL PRIOR TO FABRICATION OR CONSTRUCTION. PROVIDE DUCT SMOKE DETECTOR IN DUCT AFTER FAN OUTLET. RE: 6/H-8.

8 40"X22" SUPPLY AIR DUCT DOWN IN VERTICAL. SEE H-4 FOR CONTINUATION.

9 36"X22" SUPPLY AIR DUCT DOWN IN VERTICAL. SEE H-4 FOR CONTINUATION.

10 28"X28" EXHAUST AIR DUCT UP FROM FLOOR BELOW AND ROUTED TO LOUVER. SEE H-4 FOR CONTINUATION.

11 PROVIDE STATIONARY LOUVER. INSTALL LOUVER IN EXISTING OPENING. FIELD VERIFY EXISTING OPENING SIZE. RE: 3/H-8.

12 ROUTE 8"X8" SUPPLY AIR DUCTWORK ABOVE EXISTING DUCTWORK.

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10/21/2025

FREESE NICHOLS
2180 Satellite Boulevard
Suite 235
Duluth, GA 30097
Phone - (470) 645-3092
Web - www.freese.com

GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES
SUWANEE CREEK DIVERSION PUMP STATION

BUILDING MECHANICAL
PUMP STATION
MEZZANINE LEVEL FLOOR PLAN

F&N JOB NO.	GWR24074
DATE	10/22/2025
DESIGNED	DCA
DRAWN	DCA
REVISED	-
CHECKED	WAY
FILE NAME	HV-GWR24074-EX-R23.rvt

NO.	ISSUE	BY	DATE
0	ISSUED FOR BID	JAK	10/22/2025

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VERIFY SCALE 1 0

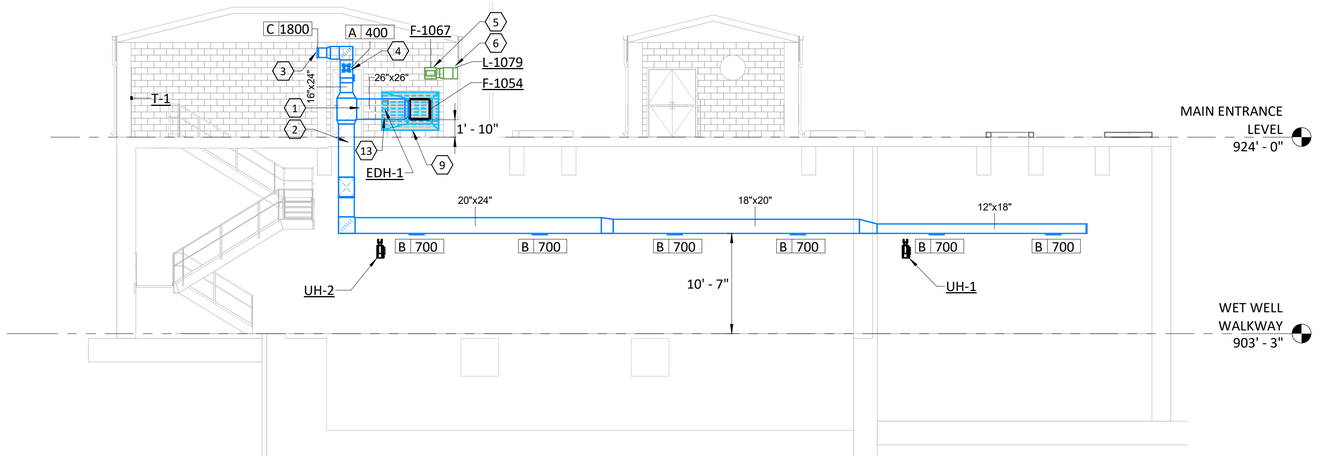
0 4' 8'
3/16"=1'-0"

SHEET H-5

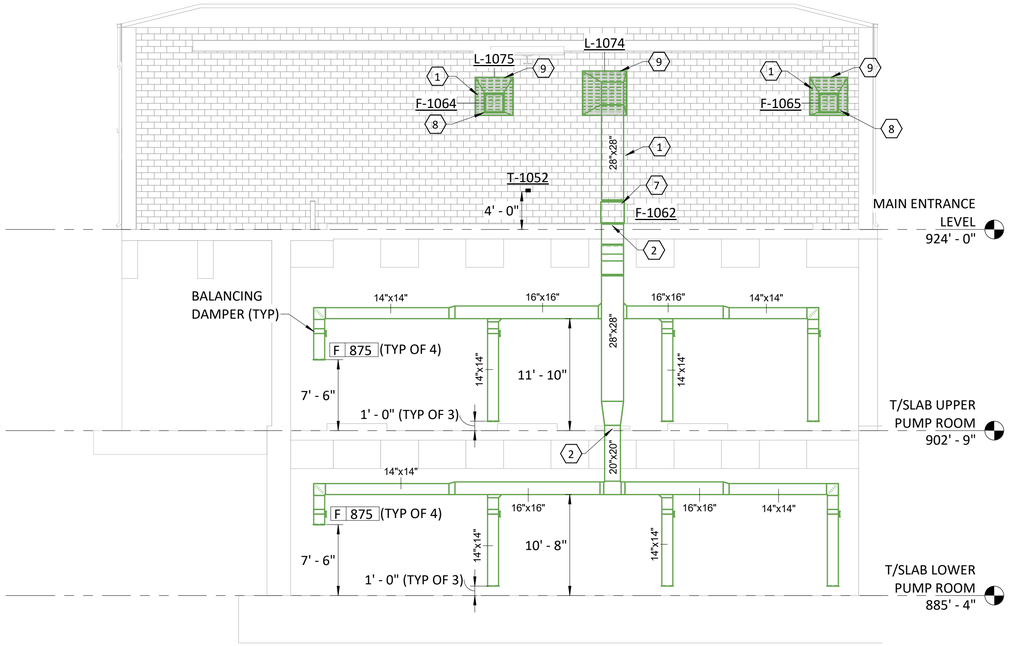
SEQ. 82 OF 129

ISSUED FOR BID

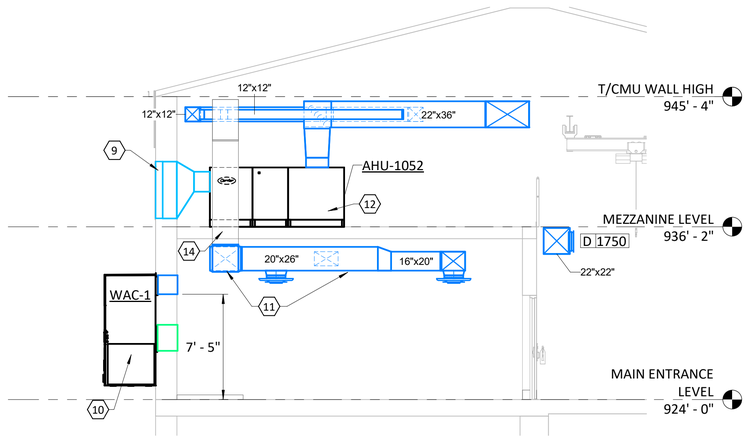
Plot Date: 10/21/2025 11:23:25 AM



1 H-3 SECTION VIEW I
1/8" = 1'-0"



2 H-2 SECTION VIEW II
1/8" = 1'-0"



3 H-4 SECTION VIEW III
3/16" = 1'-0"

NOTES BY SYMBOL "⬡"

1. PROVIDE DUCT-MOUNTED SMOKE DAMPER.
2. FIELD VERIFY EXISTING OPENING SIZE AND ADJUST DUCT ACCORDINGLY TO PREVENT OPENING MODIFICATION.
3. ROUTE SUPPLY AIR DUCTWORK THROUGH EXISTING OPENING IN WALL. TERMINATE WITH REGISTER AS SCHEDULED.
4. 10"X10" SUPPLY AIR DUCT IN HORIZONTAL TO REGISTER.
5. PROVIDE INLINE EXHAUST FAN. DUCT FAN OUTLET TO LOUVER. RE: 4/H-8.
6. PROVIDE STATIONARY LOUVER. INSTALL BOTTOM OF LOUVER IN NEW WALL OPENING AT 6'-2" AFF. RE: 3/H-8.
7. PROVIDE INLINE EXHAUST FAN. MOUNT FAN ON EXISTING CONCRETE PAD OVER EXISTING DUCT PENTRATION. PROVIDE DUCT SMOKE DETECTOR IN DUCT AFTER FAN OUTLET. RE: 5/H-8.
8. PROVIDE INLINE EXHAUST FAN. MOUNT BOTTOM OF FAN 12'-0" AFF ON ANGLE IRON SUPPORTS. PROVIDE DUCT SMOKE DETECTOR IN DUCT AFTER FAN OUTLET. RE: 6/H-8.
9. PROVIDE STATIONARY LOUVER. INSTALL LOUVER IN EXISTING OPENING. FIELD VERIFY EXISTING OPENING SIZE. RE: 3/H-8.
10. PROVIDE WALL-MOUNTED PACKAGED DX UNIT. MOUNT BOTTOM OF SUPPLY AIR DISCHARGE AT 7'-5" AFF SUCH THAT SUPPLY AIR DOES NOT DISCHARGE ONTO DUCTWORK. RE: 1/H-8.
11. PROVIDE NEW SUPPLY DUCTWORK IN ELECTRICAL ROOM. TIE NEW DUCTWORK INTO EXISTING DUCTWORK THAT IS PENETRATING THE CEILING. DUCTWORK SHALL HAVE 6" OF CLEARANCE BETWEEN TOP OF DUCT AND CEILING AND SHALL NOT BE ROUTED DIRECTLY ABOVE ELECTRICAL EQUIPMENT.
12. PROVIDE AIR HANDLING UNIT. RE: 1/H-9.
13. PROVIDE EXPLOSION PROOF DUCT HEATER.
14. EXISTING 34"X22" (APPROX.) SUPPLY AIR DUCT IN VERTICAL TO FLOOR BELOW THROUGH 42"X22" (APPROX.) OPENING.

0 4' 8'
3/16"=1'-0"

0 4' 8' 16'
1/8"=1'-0"

ISSUED FOR BID

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2026

GEORGIA REGISTERED No. PE051583 PROFESSIONAL ENGINEER KEVIN MICHAEL WAY
10/21/2025

FREESE AND NICHOLS
2180 Satellite Boulevard
Suite 235
Duluth, GA 30097
Phone - (470) 645-3092
Web - www.freese.com

GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES
SUWANEE CREEK DIVERSION PUMP STATION

BUILDING MECHANICAL
PUMP STATION
SECTION VIEWS

F&N JOB NO.	GWR24074
DATE	10/22/2025
DESIGNED	DCA
DRAWN	DCA
CHECKED	WAY
FILE NAME	HV-GWR24074-EX-R23.rvt

NO.	ISSUE	BY	DATE
0	ISSUED FOR BID	JAK	10/22/2025

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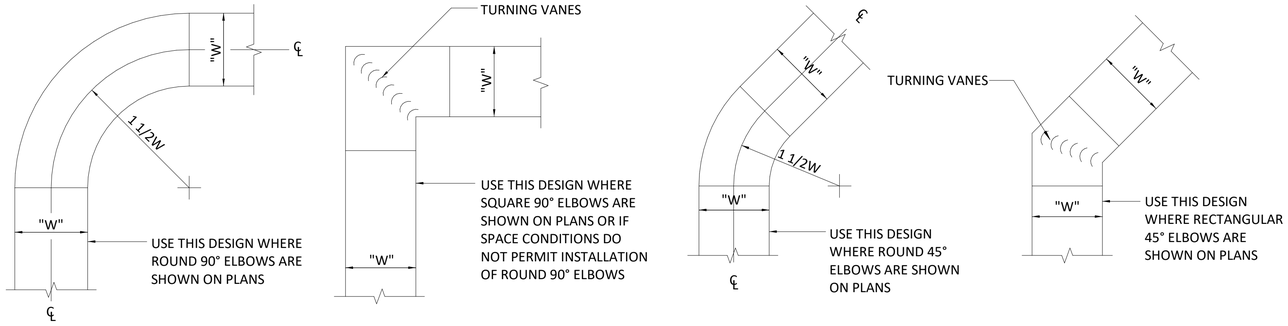
VERIFY SCALE 1 0

SHEET H-6
SEQ. 83 OF 129

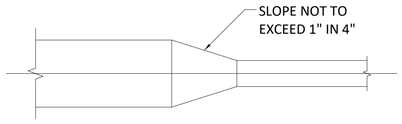
Plot Date: 10/21/2025 11:23:29 AM



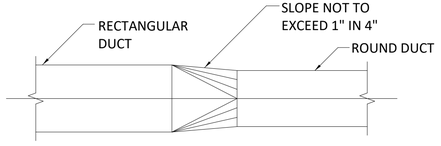
ROUND 90° ELBOW **SQUARE 90° ELBOW** **ROUND 45° ELBOW** **SQUARE 45° ELBOW**

1 CONSTRUCTION OF 90 DEGREE ELBOWS
NOT TO SCALE

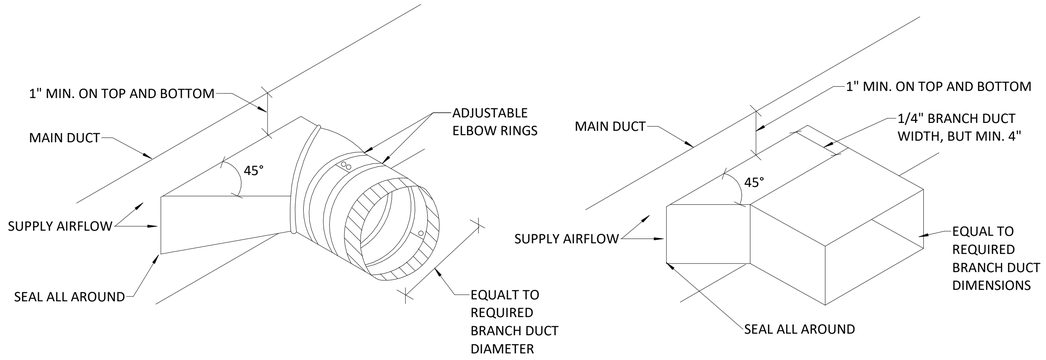
2 CONSTRUCTION OF 45 DEGREE ELBOWS
NOT TO SCALE



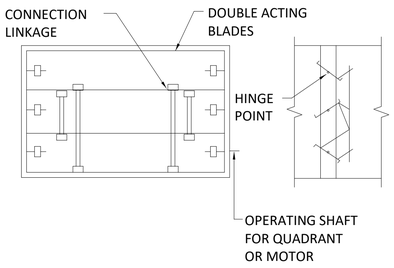
3 TYPICAL RECTANGULAR TRANSITION
NOT TO SCALE



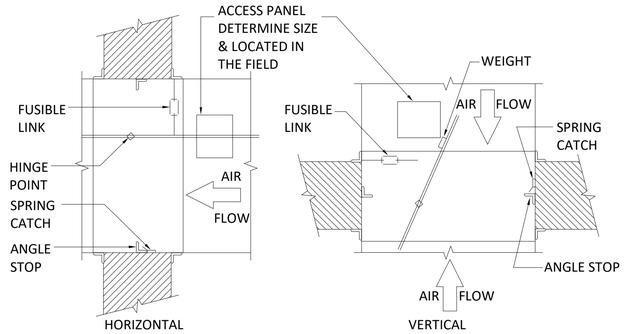
4 TYPICAL RECTANGULAR TO ROUND TRANSITION
NOT TO SCALE



5 TYPICAL BRANCH TAKEOFF
NOT TO SCALE



6 TYPICAL VOLUME DAMPER
NOT TO SCALE



7 TYPICAL FIRE DAMPER
NOT TO SCALE

GENERAL INSTALLATION NOTES

1. ALL DUCTS SHALL BE CONSTRUCTED AND ERECTED IN A NEAT AND WORKMANLIKE MANNER.
2. DUCTS SHALL BE CONSTRUCTED OF THE WEIGHTS, GAUGES, AND MATERIAL SHOWN IN THE SCHEDULE OF THESE DRAWINGS.
3. THE DIMENSION SHOWN FOR ALL DUCTS SHOWN IN PLAN GIVE THE NET INSIDE CLEAR WIDTH FIRST AND THEN THE NET INSIDE CLEAR HEIGHT.
4. AIR TURNING VANES SHALL BE INSTALLED IN ALL ABRUPT ELBOWS TO PREVENT TURBULENCE.
5. DUCTS SHALL BE SECURELY ATTACHED TO THE BUILDING CONSTRUCTION IN AN APPROVED MANNER.
6. DIVERGING TRANSITION PIECE SHALL BE MADE AS GRADUAL AS POSSIBLE.
7. INSTALL FIRE/SMOKE DAMPERS IN ACCORDANCE WITH UL 555.
8. ACCESS PANELS SHOULD BE PLACED BEFORE AND/OR AFTER EQUIPMENT INSTALLED IN THE DUCT.
9. DUCT AREA SHOULD NOT BE DECREASED MORE THAN 10 PERCENT WHEN OBSTRUCTIONS CANNOT BE AVOIDED, AND THEN A STREAMLINED FITTING SHOULD BE USED.
10. FLEXIBLE FABRIC CONNECTIONS (OR EQUAL) SHOULD BE USED ON BOTH INLETS AND OUTLETS OF ALL FAN COIL UNITS.
11. JOINTS AND SEAMS OF SUPPLY DUCTS SHALL BE FASTENED SECURELY AND MADE AIR TIGHT.

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2026

GEORGIA REGISTERED No. PE051583 PROFESSIONAL ENGINEER
10/21/2025

FREESE NICHOLS
2180 Satellite Boulevard
Suite 235
Duluth, GA 30097
Phone - (470) 645-3092
Web - www.freese.com

GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES
SUWANEE CREEK DIVERSION PUMP STATION

BUILDING MECHANICAL

DETAILS I

F&N JOB NO.	GWR24074
DATE	10/22/2025
DESIGNED	DCA
DRAWN	DCA
CHECKED	WAY
FILE NAME	HV-GWR24074-EX-R23.rvt

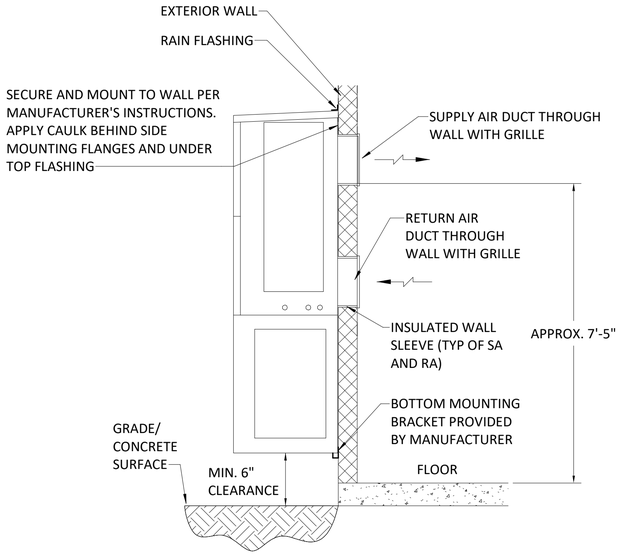
NO.	ISSUE	DATE	BY
0	ISSUED FOR BID	10/22/2025	JAK
1	Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.	-	-

VERIFY SCALE 0 1

SHEET H-7
SEQ. 84 OF 129

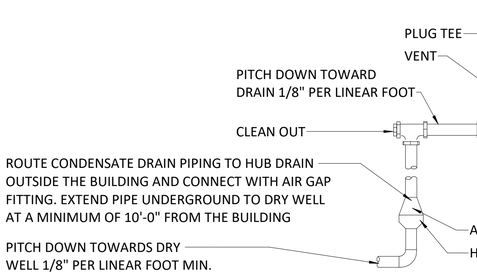
ISSUED FOR BID

Plot Date: 10/21/2025 11:23:29 AM



NOTES:
1. THE SUPPLY AND RETURN OPENINGS SHALL HAVE 1" CLEARANCE FROM THE WALL SLEEVE ON ALL 4 SIDES.

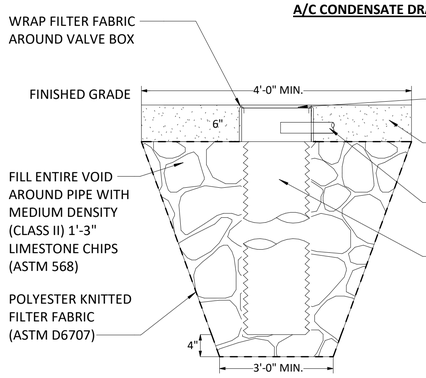
1 WALL-MOUNTED AIR CONDITIONING UNIT DETAIL
NOT TO SCALE



A/C CONDENSATE DRAIN PIPING DETAIL

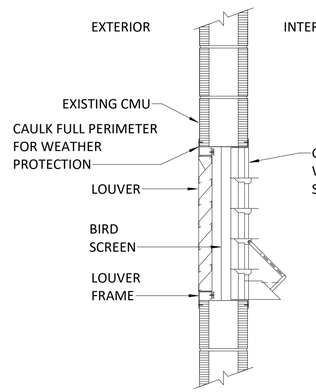
UNIT TYPE	A	B (MIN.)
DRAW-THRU	1" MIN.	1.5X
BLOW-THRU	1" MIN.	2.0X

WHERE X = SCHEDULED FAN STATIC PRESS.



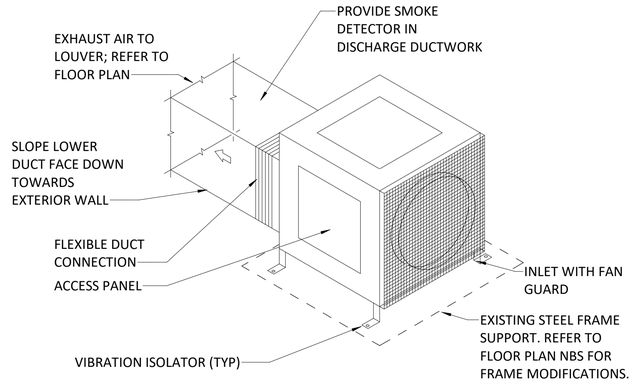
DRY WELL DETAIL

2 A/C CONDENSATE DRAINAGE PIPING DETAIL
NOT TO SCALE

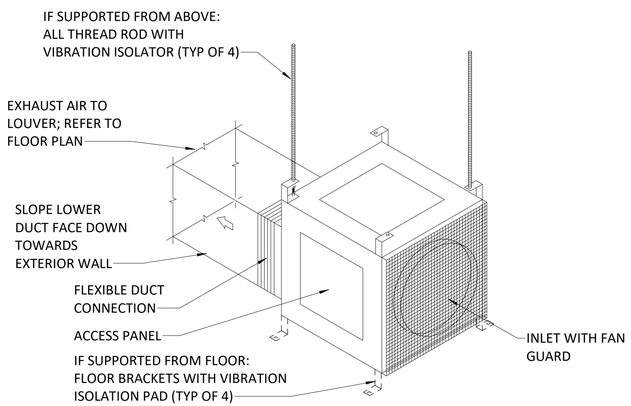


NOTES:
1. SEE PLANS FOR SIZE AND LOCATION.
2. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.
3. REFER TO 3/S-6 FOR STRUCTURAL DETAILS OF NEW LOUVER OPENING INSTALLATION.

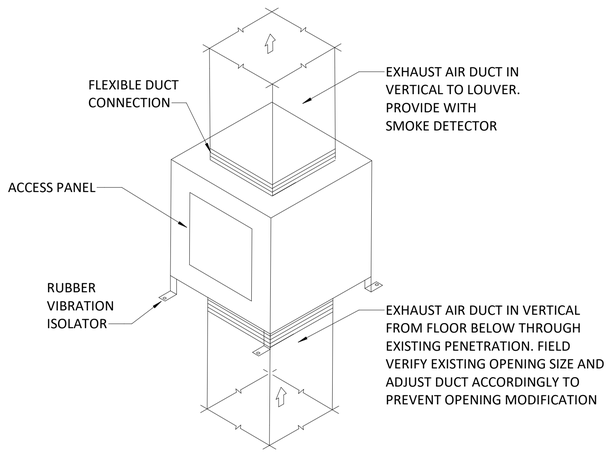
3 LOUVER DETAIL
NOT TO SCALE



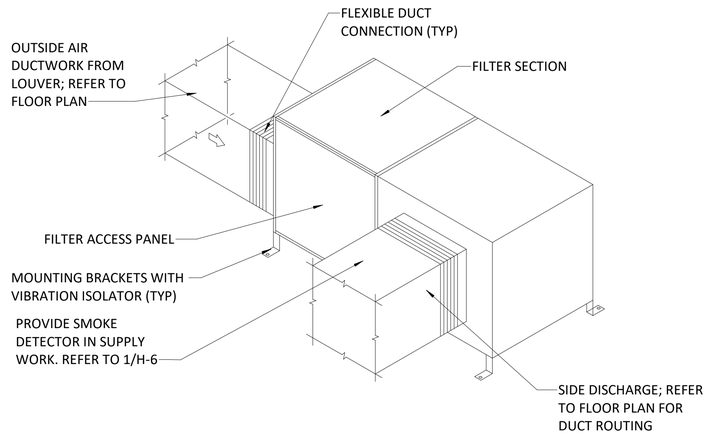
6 F-1064 & F-1065 DETAIL
NOT TO SCALE



4 F-1061 & F-1066 DETAIL
NOT TO SCALE



5 F-1062 DETAIL
NOT TO SCALE



7 F-1054 DETAIL
NOT TO SCALE

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Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2026

GEORGIA REGISTERED No. PE051593 PROFESSIONAL ENGINEER
10/21/2025

FREESE NICHOLS
2180 Satellite Boulevard
Suite 235
Duluth, GA 30097
Phone - (470) 645-3092
Web - www.freese.com

GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES
SUWANEE CREEK DIVERSION PUMP STATION

BUILDING MECHANICAL

DETAILS II

F&N JOB NO.	GWR24074
DATE	10/22/2025
DESIGNED	DCA
DRAWN	DCA
REVISED	-
CHECKED	WAY
FILE NAME	HV-GWR24074-EX-R23.rvt

NO.	ISSUE	DATE	BY
0	ISSUED FOR BID	10/22/2025	JAK

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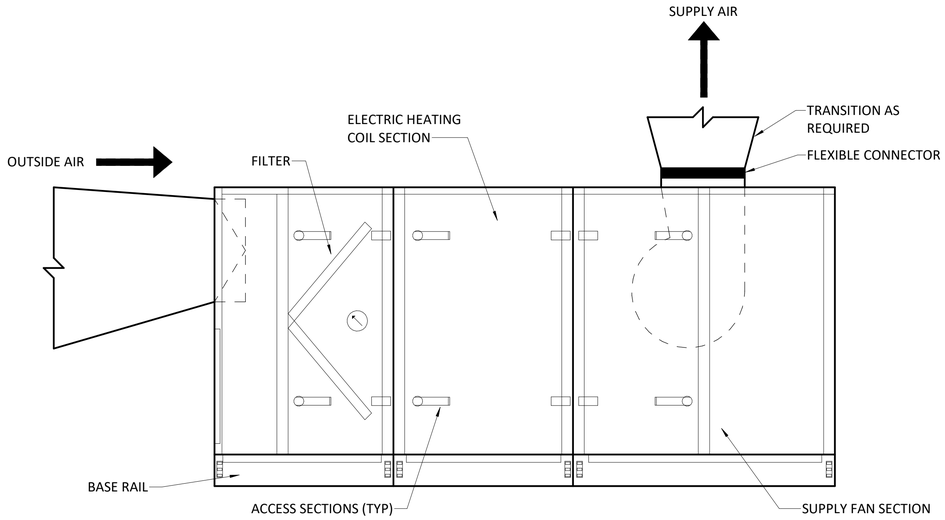
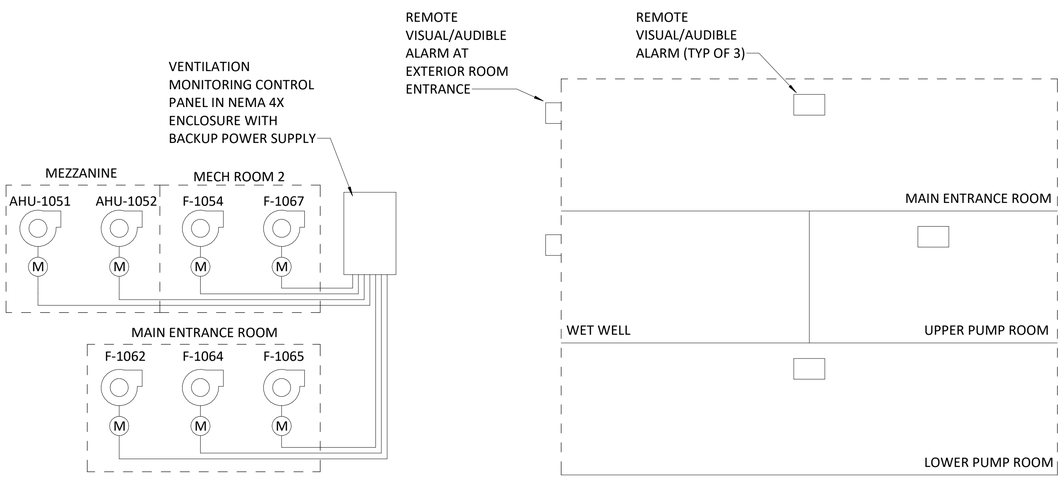
SHEET H-8
SEQ. 85 OF 129

Plot Date: 10/21/2025 11:23:30 AM



NOTE:
AHU-1051 SHALL HAVE RIGHT-HANDED ACCESS DOORS.
AHU-1052 SHALL HAVE LEFT-HANDED ACCESS DOORS
WHICH IS NOT SHOWN IN THIS VIEW.

1 AHU-1051 & AHU-1052 DETAIL
NOT TO SCALE



THE FOLLOWING CONTINUOUS VENTILATION SYSTEMS SERVING THE DRY WELL (LOWER PUMP ROOM, UPPER PUMP ROOM, MAIN ENTRANCE ROOM) AND WET WELL (MECH ROOM 3, GRINDER VAULT/WET WELL) SHALL BE EQUIPPED WITH FLOW DETECTION DEVICES CONNECTED TO ALARM SIGNALING SYSTEMS THAT COMPLIES WITH CHPATER 7, NFPA-820 2020 EDITION. EACH FAN SHALL BE EQUIPPED WITH A CURRENT TRANSFORMER (CT) TO MONITOR THE MOTOR CURRENT. IF THE CURRENT MEASURED AT THE CT IS LESS THAN 25% OF THE FAN FLA, THE ALARM SYSTEM SHALL INITIATE AN AUDIO/VISUAL ALARM.

1. DRY WELL:
   A. AHU-1051
   B. AHU-1052
   C. F-1062
   D. F-1064
   E. F-1065
2. WET WELL:
   A. F-1054
   B. F-1067

ISSUED FOR BID

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2026

GEORGIA REGISTERED No. PE051583 PROFESSIONAL ENGINEER MOHAMMAD YASIN NAZARI
10/21/2025

FREESE NICHOLS
2180 Satellite Boulevard
Suite 235
Duluth, GA 30097
Phone - (470) 645-3092
Web - www.freese.com

GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES
SUWANEE CREEK DIVERSION PUMP STATION
BUILDING MECHANICAL
DETAILS III

F&N JOB NO.	GWR24074
DATE	10/22/2025
DESIGNED	DCA
DRAWN	DCA
REVISED	-
CHECKED	WAY

NO.	ISSUE	DATE	BY
0	ISSUED FOR BID	10/22/2025	JAK

FILE NAME HV-GWR24074-EX-R23.rvt

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SHEET H-9
SEQ. 86 OF 129

Plot Date: 10/21/2025 11:23:30 AM

PACKAGED WALL-MOUNTED A/C UNIT SCHEDULE

MARK	SERVES	EER/[IPLV]	NOM SIZE (TONS)	AIR FLOW		SUPPLY FAN HP	COOLING				UNIT ELECTRICAL				MANUFACTURER/MODEL	NOTES
				OUTSIDE AIR (CFM)	SUPPLY (CFM)		TOTAL CAP (MBH)	SENS CAP. (MBH)	EAT DB/WB (°F)	AMBIENT AIR (°F)	VOLTAGE	PHASE	MCA	MOCP		
WAC-1	ELECTRICAL ROOM	11.7/[15.3]	7.5	150	3,025	5	93,822	73,602	80/67	95	460	3	21	25	BARD/W090FPC00BPXX3X	1-7
WAC-2	ELECTRICAL ROOM	11.7/[15.3]	7.5	150	3,025	5	93,822	73,602	80/67	95	460	3	21	25	BARD/W090FPC00BPXX3X	1-7

REMARKS:
1. ELECTRICAL CONTRACTOR TO PROVIDE AND INSTALL UNIT DISCONNECT. REFER TO ELECTRICAL DRAWINGS FOR DETAILS.
2. EVAPORATOR AND CONDENSER COILS TO BE FULLY COATED WITH BLYGOLD PROTECTIVE COATINGS (OR APPROVED EQUAL).
3. PROVIDE WITH FACTORY SUPPLY AND RETURN GRILLES.
4. PROVIDE FACTORY WALL-MOUNTING ACCESSORIES.
5. PROVIDE MANUFACTURER-PROVIDED MULTI-UNIT CONTROLLER AND TEMPERATURE SENSORS.
6. PROVIDE WITH LOW-AMBIENT CONTROLS DOWN TO 0°F.
7. PROVIDE WITH RETURN AIR SMOKE DETECTOR.

ELECTRIC UNIT HEATER SCHEDULE

MARK	SERVES	TYPE	CAPACITY (KW)	CFM	THROW (FT)	MOUNTING HEIGHT(FT)	UNIT ELECTRICAL				MANUFACTURER/MODEL	NOTES
							FREQUENCY (HZ)	VOLTAGE	PHASE	AMPS		
UH-1	WET WELL	EXPLOSION PROOF	25.0	3,110	65	8	60	480	3	31	INDEECO/233-FC-0256U-C1DKT1	1-5
UH-2	WET WELL	EXPLOSION PROOF	25.0	3,110	65	8	60	480	3	31	INDEECO/233-FC-0256U-C1DKT1	1-5

REMARKS:
1. EXPLOSION PROOF UNIT HEATER OR APPROVED EQUAL.
2. PROVIDE WITH STAINLESS STEEL CORROSION RESISTANT CONSTRUCTION.
3. PROVIDE WITH WALL MOUNTING KIT.
4. PROVIDE UNIT MOUNTED EXPLOSION PROOF THERMOSTAT SET TO 45 DEGREES (ADJUSTABLE).
5. ELECTRICAL CONTRACTOR TO PROVIDE AND INSTALL UNIT DISCONNECT. REFER TO ELECTRICAL DRAWINGS FOR DETAILS.

AIR HANDLING UNIT SCHEDULE

MARK	LOCATION	SERVES	AIR FLOW (CFM)	EXT S.P. (IN WG)	SUPPLY FAN HP	HEATING			FILTER TYPE	UNIT ELECTRICAL				MAXIMUM DIMENSIONS			WEIGHT (LBS)	MANUFACTURER/MODEL	NOTES
						HEATING CAP (KW)	EAT DB (F)	LAT DB (F)		VOLTAGE	PHASE	MCA	MOCP	L (IN)	W (IN)	H (IN)			
AHU-1051	MEZZANINE	MOTOR ROOM/PUMP ROOMS	8,050	0.70	5	88	21.2	55.1	MERV 10	460	3	132	150	113	74	47	1949	CARRIER/39MN	1-6
AHU-1052	MEZZANINE	MOTOR ROOM	7,000	0.60	5	76	21.2	54.9	MERV 10	460	3	114	125	113	83	51	2145	CARRIER/39MN	1-6

REMARKS:
1. UNIT SHALL PROVIDE 100% OUTSIDE AIR.
2. ELECTRICAL CONTRACTOR TO PROVIDE AND INSTALL UNIT DISCONNECT. REFER TO ELECTRICAL DRAWINGS FOR DETAILS.
3. PROVIDE WITH MANUFACTURER-PROVIDED SHIPPING SPLITS FOR EACH AHU SECTION.
4. PROVIDE WITH NEMA 4X THERMOSTAT IN AIR-TIGHT ENCLOSURE.
5. PROVIDE WITH NEMA 4X DUCT SMOKE DETECTOR.
6. PROVIDE WITH MANUFACTURER-PROVIDED CONTROLLER.

EXISTING AIR HANDLING UNIT SCHEDULE

MARK	LOCATION	SERVES	AIR FLOW (CFM)	EXT S.P. (IN WG)	SUPPLY FAN HP	COOLING			FILTER TYPE	UNIT ELECTRICAL				MAXIMUM DIMENSIONS			WEIGHT (LBS)	MANUFACTURER/MODEL	NOTES
						COOLING CAP (KW)	EAT DB (F)	LAT DB (F)		VOLTAGE	PHASE	MCA	MOCP	L (IN)	W (IN)	H (IN)			
AHU-01	MEZZANINE	ELECTRICAL ROOM	8,000	0.75	3	82.3	78.8	52.2	MERV 8	460	3	105	150	116 3/8	82 7/8	46 4/7	1235	VTS/AVS085	-
AHU-02	MEZZANINE	ELECTRICAL ROOM	8,000	0.75	3	82.3	78.8	52.2	MERV 8	460	3	105	150	116 3/8	82 7/8	46 4/7	1235	VTS/AVS085	-

FAN SCHEDULE

MARK	SERVICE	FAN TYPE	DRIVE	SPEED CONTROL	AIR FLOW (CFM)	FAN RPM	ESP (IN W.G)	MAX. SONES	UNIT ELECTRICAL					WEIGHT (LBS)	MANUFACTURER/MODEL	NOTES
									HP	VOLTAGE	PHASE	MCA	MOCP			
F-1054	SUPPLY	MIXED FLOW, INLINE	DIRECT	CONSTANT	6,400	1463	1.99	24	5	460	3	9	15	439	GREENHECK/SQ-20-M2	1,2,3,7,8,10,11
F-1061	EXHAUST	INLINE CABINET	DIRECT	CONSTANT	100	634	0.32	-	1/30	115	1	1	15	24	GREENHECK/CSP-A200	1,4,6,9
F-1062	EXHAUST	MIXED FLOW, INLINE	DIRECT	CONSTANT	7,000	1660	0.86	23	3	460	3	6	15	250	GREENHECK/SQ-18-M2	1,2,3
F-1064	EXHAUST	MIXED FLOW, INLINE	DIRECT	CONSTANT	3,500	1488	0.34	17.3	1	460	3	3	15	137	GREENHECK/SQ-15-M2	1,2,3,5
F-1065	EXHAUST	MIXED FLOW, INLINE	DIRECT	CONSTANT	3,500	1488	0.34	17.3	1	460	3	3	15	137	GREENHECK/SQ-15-M2	1,2,3,5
F-1066	EXHAUST	MIXED FLOW, INLINE	DIRECT	CONSTANT	700	1586	0.30	8.8	1/6	115	1	3.5	15	75	GREENHECK/SQ-95-VG	1,2,3,5,9
F-1067	EXHAUST	MIXED FLOW, INLINE	DIRECT	CONSTANT	400	1383	0.30	6.1	1/6	115	1	3.5	15	75	GREENHECK/SQ-90-VG	1,2,3,5,8,9

REMARKS:
1. ELECTRICAL CONTRACTOR TO PROVIDE AND INSTALL UNIT DISCONNECT. REFER TO ELECTRICAL DRAWINGS FOR DETAILS.
2. PROVIDE WITH HI-PRO POLYESTER COATING (OR APPROVED EQUAL) FOR FAN AND ATTACHED ACCESSORIES FOR CORROSION PROTECTION.
3. PROVIDE WITH FACTORY SUPPORTS FOR GROUND MOUNTING WITH NEOPRENE VIBRATION ISOLATION PADS.
4. PROVIDE WITH HANGING ISOLATION KIT WITH SPRING ISOLATORS.
5. PROVIDE WITH OSHA-COMPLIANT INLET GUARD.
6. PROVIDE WITH GRAVITY BACKDRAFT DAMPER.
7. PROVIDE WITH FILTER BOX WITH MERV 8 FILTERS.
8. PROVIDE SPARK-RESISTANT CONSTRUCTION AND EXPLOSION PROOF MOTOR PER AMCA STANDARD 99-0401, TYPE B CONSTRUCTION.
9. PROVIDE WITH SPEED CONTROLLER.
10. PROVIDE WITH VFD.
11. PROVIDE WITH NEMA 7 SMOKE DETECTOR.

ELECTRIC DUCT HEATER SCHEDULE

MARK	SERVES	TYPE	CAPACITY (KW)	CFM	UNIT ELECTRICAL			MANUFACTURER/MODEL	NOTES
					VOLTAGE	PHASE	AMPS		
EDH-1	WET WELL	DUCT MOUNTED	22.8	6,400	480	3	27	INDEECO/220	1-3

REMARKS:
1. PROVIDE EXPLOSION PROOF DUCT HEATER.
2. PROVIDE EXPLOSION PROOF WALL MOUNTED THERMOSTAT SET TO 45°F (ADJUSTABLE).
3. ELECTRICAL CONTRACTOR TO PROVIDE AND INSTALL UNIT DISCONNECT. REFER TO ELECTRICAL DRAWINGS FOR DETAILS.

DIFFUSER, REGISTER AND GRILLE SCHEDULE

MARK	TYPE	FACE SIZE (INCHES)	NECK SIZE (INCHES)	MANUFACTURER/MODEL	NOTES
A	RECTANGULAR SUPPLY REGISTER	10X10	-	TITUS/272FL	1,2,3
B	RECTANGULAR SUPPLY REGISTER	18X10	-	TITUS/272FL	1,2,3
C	RECTANGULAR SUPPLY REGISTER	24X12	-	TITUS/272FL	1,2,3
D	RECTANGULAR SUPPLY REGISTER	30X18	-	TITUS/272FL	1,2,3
E	ROUND SUPPLY DIFFUSER	29 (DIAMETER)	16 (DIAMETER)	TITUS/TMR-AA	1,2,4
F	SQUARE EXHAUST GRILLE	14X14	-	TITUS/55FL	1,2
I	SQUARE SUPPLY GRILLE	6X6		TITUS/355F	1,2,3
J	INTAKE			RUSKIN/ELF375DX	1,2
K	EXHAUST			RUSKIN/ELF375DX	1,2
M	EXHAUST			RUSKIN/ELF375DX	1,2
N	INTAKE			RUSKIN/ELF375DX	1,2
O	INTAKE			RUSKIN/ELF375DX	1,2

REMARKS:
1. UNITS SHALL BE FURNISHED WITH APPROPRIATE FRAMES FOR DUCT MOUNTING.
2. AIR TERMINAL SHALL HAVE ALUMINUM CONSTRUCTION. ALL NON-ALUMINUM ACCESSORIES AND FASTENERS SHALL BE STAINLESS STEEL AND COATED WITH EPOXY FOR CORRISION RESISTANCE.
3. PROVIDE WITH OPPOSED BLADE DAMPER.
4. PROVIDE WITH FACTORY-FURNSIHED COMBINATION DAMPER AND EQUALIZING GRID (TITUS MODEL AG-65 OR APPROVED EQUAL).

LOUVER SCHEDULE

MARK	LOCATION	TYPE	ASSOCIATED EQUIPMENT	AIR FLOW (CFM)	FREE AREA VELOCITY (FPM)	EX S.P. (IN WG)	FREE AREA (SQ FT)	WIDTH	HEIGHT	MANUFACTURER/MODEL	NOTES
L-1071	MEZZANINE	INTAKE	AHU-1051	8,050	617	0.08	13.05	6' - 0"	4' - 0"	RUSKIN/ELF375DX	1,2
L-1072	MEZZANINE	INTAKE	AHU-1052	7,000	536	0.06	13.05	6' - 0"	4' - 0"	RUSKIN/ELF375DX	1,2
L-1073	REST ROOM	EXHAUST	F-1061	100	297	0.02	0.34	1' - 0"	1' - 0"	RUSKIN/ELF375DX	1,2
L-1074	MAIN ENTRANCE ROOM	EXHAUST	F-1062	7,000	601	0.07	11.65	4' - 8"	4' - 8"	RUSKIN/ELF375DX	1,2
L-1075	MAIN ENTRANCE ROOM	EXHAUST	F-1064	3,500	408	0.03	8.58	4' - 0"	4' - 0"	RUSKIN/ELF375DX	1,2
L-1076	MAIN ENTRANCE ROOM	EXHAUST	F-1064	3,500	408	0.03	8.58	4' - 0"	4' - 0"	RUSKIN/ELF375DX	1,2
L-1077	MECH ROOM 2	INTAKE	F-1054	6,400	460	0.04	13.05	6' - 0"	4' - 0"	RUSKIN/ELF375DX	1,2
L-1078	MEZZANINE	EXHAUST	F-1066	700	361	0.02	1.94	2' - 0"	2' - 0"	RUSKIN/ELF375DX	1,2
L-1079	MECH ROOM 2	EXHAUST	F-1067	330	713	0.09	0.46	1' - 0"	1' - 2"	RUSKIN/ELF375DX	1,2

REMARKS:
1. PROVIDE WITH ALUMINIMUM BIRD SCREEN.
2. REFER TO SPECIFICATION 08 91 00 "LOUVERS AND VENTS" FOR DETAILS.

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Plot Date: 10/21/2025 11:23:33 AM

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2026

REGISTERED ENGINEER No. PE051583 PROFESSIONAL GEORGIA 10/21/2025

FREESE NICHOLS
2180 Satellite Boulevard
Suite 235
Duluth, GA 30097
Phone - (470) 645-3092
Web - www.freese.com

GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES
SUWANEE CREEK DIVERSION PUMP STATION
BUILDING MECHANICAL
SCHEDULES

F&N JOB NO. GWR24074
DATE 10/22/2025
DESIGNED DCA
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FILE NAME HV-GWR24074-EX-R23.rvt

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VERIFY SCALE Bar is one inch on original drawing. If not one inch on this sheet, adjust scale. 0 1

SHEET H-10
SEQ. 87 OF 129

PUMP ROOM CONTROL SEQUENCE (AHU-1051, F-1062)
AHU-1051 AND F-1062 ARE SIZED TO PROVIDE 8 ACH OF CONTINUOUS VENTILATION FOR THE UPPER AND LOWER PUMP ROOMS.

A. THE AIR HANDLING UNIT AHU-1051 SHALL BE CONTROLLED BY A FACTORY-PROVIDED CONTROLLER BASED ON THE FOLLOWING:
   1. AHU-1051 SHALL RUN CONTINUOUSLY.
   2. HEATING: HEATING SHALL BE PROVIDED BY THE ELECTRIC HEATING COIL.
      a. THE HEATER SHALL ENERGIZE WHEN THE SPACE TEMPERATURE DROPS BELOW THE TEMPERATURE SETPOINT OF 45°F (ADJ) READ AT THE WALL-MOUNTED THERMOSTAT.
B. THE EXHAUST FAN F-1062 SHALL BE CONTROLLED BY A START/STOP SWITCH IN THE FAN STARTER.
   a. F-1062 SHALL RUN CONTINUOUSLY.
C. ALARMS:
   1. AIR FLOW ALARM: A FLOW SWITCH LOCATED IN THE SUPPLY AIR DUCTWORK OF AHU-1051 AND THE DOWNSTREAM DUCTWORK OF F-1062 SHALL TRIGGER AN AUDIO/VISUAL ALARM UPON A LOW OR NO AIR FLOW READING. REFER TO I&C DRAWINGS FOR MORE DETAILS.
   2. SMOKE ALARM: THE DUCTWORK ASSOCIATED WITH AHU-1051 AND F-1062 SHALL BE EQUIPPED WITH AN INDIVIDUAL SMOKE DETECTOR. WHEN THE SMOKE DETECTOR SENSE SMOKE, THE CORRESPONDING FAN SHALL SHUT DOWN.

1 PUMP ROOM VENTILATION CONTROL SEQUENCE
NOT TO SCALE

WET WELL VENTILATION CONTROL SEQUENCE (F-1054)
F-1054 IS SIZED TO PROVIDE 12 ACH OF CONTINUOUS SUPPLY AIR FOR THE WET WELL AND GRINDER VAULT.

A. THE FAN F-1054 SHALL BE CONTROLLED BASED ON THE FOLLOWING:
   1. F-1054 SHALL RUN CONTINUOUSLY.
   2. HEATING: HEATING SHALL BE PROVIDED BY THE ELECTRIC DUCT HEATER EDH-1.
      a. EDH-1 SHALL ENERGIZE WHEN THE SPACE TEMPERATURE DROPS BELOW THE TEMPERATURE SETPOINT OF 45°F (ADJ) READ AT THE WALL-MOUNTED THERMOSTAT.
B. ALARMS:
   1. AIR FLOW ALARM: A FLOW SWITCH LOCATED IN THE SUPPLY AIR DUCTWORK OF F-1054 SHALL TRIGGER AN AUDIO/VISUAL ALARM UPON A LOW OR NO AIR FLOW READING. REFER TO I&C DRAWINGS FOR MORE DETAILS.
   2. SMOKE ALARM: THE DUCTWORK ASSOCIATED WITH F-1054 SHALL BE EQUIPPED WITH A SMOKE DETECTOR. WHEN THE SMOKE DETECTOR SENSE SMOKE, THE FAN SHALL SHUT DOWN.

3 WET WELL VENTILATION CONTROL SEQUENCE
NOT TO SCALE

F-1066 CONTROL SEQUENCE

A. THE EXHAUST FAN F-1066 SHALL BE CONTROLLED BY A START/STOP SWITCH IN THE FAN STARTER.
B. F-1066 SHALL RUN CONTINUOUSLY.
C. F-1066 SHALL BE INTERLOCKED WITH AHU-1051.

4 F-1066 CONTROL SEQUENCE
NOT TO SCALE

F-1061 CONTROL SEQUENCE

A. THE EXHAUAST FAN F-1061 SHALL BE CONTROLLED BY A LOCAL START/STOP SWITCH.

5 F-1061 CONTROL SCHEMATIC
NOT TO SCALE

MAIN ENTRANCE ROOM VENTILATION CONTROL SEQUENCE (AHU-1052, F-1064, F-1065)
AHU-1052, F-1064 AND F-1065 ARE SIZED TO PROVIDE 6 ACH OF CONTINUOUS VENTILATION FOR THE MAIN ENTRANCE ROOM.

A. THE AIR HANDLING UNIT AHU-1052 SHALL BE CONTROLLED BY A FACTORY-PROVIDED CONTROLLER BASED ON THE FOLLOWING:
   1. AHU-1052 SHALL RUN CONTINUOUSLY.
   2. HEATING: HEATING SHALL BE PROVIDED BY THE ELECTRIC HEATING COIL.
      a. THE HEATER SHALL ENERGIZE WHEN THE SPACE TEMPERATURE DROPS BELOW THE TEMPERATURE SETPOINT OF 45°F (ADJ) READ AT THE WALL-MOUNTED THERMOSTAT.
B. THE EXHAUST FAN F-1064 SHALL BE CONTROLLED BY A START/STOP SWITCH IN THE FAN STARTER.
   1. F-1064 SHALL RUN CONTINUOUSLY.
   2. F-1064 SHALL BE INTERLOCKED WITH AHU-1052. WHEN AHU-1052 IS ON, F-1064 SHALL BE ON. WHEN AHU-1052 IS OFF, F-1064 SHALL BE OFF.
C. THE EXHAUST FAN F-1065 SHALL BE CONTROLLED BY A START/STOP SWITCH IN THE FAN STARTER.
   1. F-1065 SHALL RUN CONTINUOUSLY.
   2. F-1065 SHALL BE INTERLOCKED WITH AHU-1052. WHEN AHU-1052 IS ON, F-1065 SHALL BE ON. WHEN AHU-1052 IS OFF, F-1065 SHALL BE OFF.
D. ALARMS:
   1. AIR FLOW ALARM: A FLOW SWITCH LOCATED IN THE SUPPLY AIR DUCTWORK OF AHU-1052 AND THE DOWNSTREAM DUCTWORK OF F-1064 AND F-1065 SHALL TRIGGER AN AUDIO/VISUAL ALARM UPON A LOW OR NO AIR FLOW READING. REFER TO I&C DRAWINGS FOR MORE DETAILS.
   2. SMOKE ALARM: THE DUCTWORK ASSOCIATED WITH AHU-1052, F-1064 AND F-1065 SHALL BE EQUIPPED WITH AN INDIVIDUAL SMOKE DETECTOR. WHEN THE SMOKE DETECTOR SENSE SMOKE, THE CORRESPONDING FAN SHALL SHUT DOWN.

2 MOTOR ROOM VENTILATION CONTROL SEQUENCE
NOT TO SCALE

WAC-1 & WAC-2 CONTROL SEQUENCE
UNITS SHALL BE CONTROLLED BY A FACTORY-PROVIDED STAND ALONE PLC BASED ON THE SEQUENCE BELOW:

1. EACH WAC UNIT WILL CONSIST OF A DIRECT EXPANSION (DX) COOLING COIL, VARIABLE SPEED SUPPLY AIR FAN AND SUPPLY AIR DAMPER. THE UNITS WILL BE RESPONSIBLE FOR SERVING A SINGLE ZONE.
2. SYSTEM ENABLE: THE SYSTEM SHALL BE ENABLED TO RUN 24/7.
3. SYSTEM ENERGIZE: THE SYSTEM SHALL ENERGIZE BASED ON THE FOLLOWING:
   1. WHEN THERE IS A CALL FOR COOLING FROM ANY TEMPERATURE SENSOR.
   2. OR MANUAL/REMOTE OVERRIDE OF THE SYSTEM THROUGH THE CENTRAL CONTROLLER.
4. WAC UNIT CONTROL: THE TWO WAC UNITS SHALL BE CONTROLLED BY THE CENTRAL CONTROLLER TO OPERATE IN LEAD/STANDBY FASHION, WITH ONE UNIT RUNNING AT A TIME.
   1. WHEN THE WAC UNIT IS OFF, ALL DAMPERS SHALL BE FULLY CLOSED.
   2. THE LEAD WAC UNIT SHALL ENERGIZE WHEN THE SPACE TEMPERATURE MEASURED AT ANY TEMPERATURE SENSOR EXCEEDS 80°F (ADJ) IN COOLING.
   3. THE LEAD WAC UNIT SHALL MODULATE PER MANUFACTURER'S RECOMMENDATIONS TO MAINTAIN THE SPACE TEMPERATURE SETPOINT.
   4. THE DESIGNATED LEAD AIR CONDITIONING UNIT SHALL ROTATE WHEN RUNTIME EXCEEDS 168 HOURS (ADJ.).
   5. THE SYSTEM SHALL DE-ENERGIZE WHEN THE LEAD UNIT IS AT MINIMUM CAPACITY AND SPACE TEMPERATURE FALLS 2°F BELOW SETPOINT.
   6. WHEN A FAILURE OF THE LEAD UNIT IS DETECTED, THE LAG UNIT SHALL BECOME THE LEAD UNIT AND OPERATE AS INDICATED IN 4.1 THRU 4.5.
5. ALARMS:
   1. SMOKE ALARM: SMOKE DETECTOR LOCATED IN THE RETURN AIR DUCTWORK SHALL BE HARD-WIRED INTO THE MOTOR CONTROL CIRCUIT TO SHUT DOWN THE FAN UPON SENSING SMOKE.
   2. HIGH SPACE AIR TEMPERATURE: THE CENTRAL CONTROLLER SHALL MONITOR THE SPACE TEMPERATURE SENSORS AND GENERATE A COMMON ALARM IF ANY SPACE TEMPERATURE SENSOR READING EXCEEDS 85°F (ADJ.) IN COOLING MODE FOR MORE THAN 15 MINUTES (ADJ.).
   3. COMMON FAILURE ALARM: THE CENTRAL CONTROLLER SHALL MONITOR UNIT STATUS AND GENERATE AN INDIVIDUAL FAILURE ALARM FOR EACH UNIT.

6 WAC-1 & WAC-2 CONTROL SEQUENCE
NOT TO SCALE

Freese and Nichols, Inc.
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GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES
SUWANEE CREEK DIVERSION PUMP STATION

BUILDING MECHANICAL

CONTROL SEQUENCES

F&N JOB NO.	GWR24074
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SHEET H-11
SEQ. 88 OF 129

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Plot Date: 10/21/2025 11:23:33 AM

ABBREVIATIONS

AC	ALTERNATING CURRENT
AF	AMP FRAME
AFD	ADJUSTABLE FREQUENCY DRIVE
AFF	ABOVE FINISHED FLOOR OR GRADE
AG	ABOVE GRADE
AGSB	ABOVE GROUND SPLICE BOX
AIC	AMPERES INTERRUPTING CAPACITY
AL OR ALUM	ALUMINUM
AMP OR A	AMPERE
AT	AMP TRIP
ATS	AUTOMATIC TRANSFER SWITCH
AUTO	AUTOMATIC
AUX	AUXILIARY
AWG	AMERICAN WIRE GAUGE
C.	CONDUIT
CB	CIRCUIT BREAKER
C/C	CENTER TO CENTER
CHH	COMMUNICATION MANHOLE/HANDHOLE
CKT	CIRCUIT
CLF	CURRENT LIMITING FUSE
CONT.	CONTINUATION
CP	CONTROL PANEL
CPT	CONTROL POWER TRANSFORMER
CR	CONTROL RELAY
CS	CONTROL SWITCH OR COMBINATION STARTER
CT	CURRENT TRANSFORMER
CU	COPPER
DC	DIRECT CURRENT
DI	DOOR INTERLOCK
DIA	DIAMETER
DN	DOWN
DP	DIFFERENTIAL PRESSURE
DWG	DRAWING
EC	EMPTY CONDUIT
EHH	ELECTRICAL MANHOLE
ELEC	ELECTRICAL
ELEV	ELEVATION
EM	EMERGENCY
EMH	ELECTRICAL MANHOLE/HANDHOLE
EO	ELECTRICALLY OPERATED
ETM	ELAPSED TIME METER
EUC	ELECTRIC UTILITY CO.
EXIST.	EXISTING
FBO	FURNISHED BY OTHERS
FO	FIBER OPTIC
FRP	FIBERGLASS REINFORCED POLYESTER
FT	FEET
FU	FUSE
G. OR GRND	GROUND
GA.	GAUGE
GCP	GENERATOR CONTROL PANEL
GEN	GENERATOR
GFI	GROUND FAULT INTERRUPTER
GFS	GROUND FAULT SENSING
GO	GATE OPERATOR
GRS	GALVANIZED RIGID STEEL
HH	HANDHOLE
HP	HORSEPOWER
HT	HEIGHT
HTP	HEAT TRACE PANEL
HTR	HEATER
HZ	HERTZ
ID	INTERNAL DIAMETER
IMH	INSTRUMENT MANHOLE
INST	INSTRUMENT
IRP	INTERPOSING RELAY PANEL
JB	JUNCTION BOX
kAIC	KILO AMPERE INTERRUPTING CAPACITY
kVA	KILOVOLT-AMPERE
kW	KILOWATT
LA	LIGHTNING ARRESTER
LC	LIGHTNING CONTACTOR
LED	LIGHT EMITTING DIODE
LP	LIGHTING PANEL
LSI	LONG, SHORT, INSTANTANEOUS
LSIG	LONG, SHORT, INSTANTANEOUS, GROUND
LTG/LTNG	LIGHTS/LIGHTING
MBFV	MOTOR OPERATED BUTTERFLY VALVE
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MCP	MOTOR CIRCUIT PROTECTOR
MFR	MANUFACTURER
MFR'S	MANUFACTURER'S
MH	MANHOLE
ML	MULTILIN
MLO	MAIN LUGS ONLY
MOV	MOTOR OPERATED VALVE
MPR	MOTOR PROTECTION RELAY
MR	MULTIRATIO
MTD	MOUNTED
MTG	MOUNTING
MTS	MANUAL TRANSFER SWITCH

ABBREVIATIONS

NC or N.C.	NORMALLY CLOSED
NF	NON-FUSED
NO or N.O.	NORMALLY OPEN OR NUMBER
NO.	NUMBER
OD	OUTSIDE DIAMETER
OHE	OVERHEAD ELECTRIC
OL	OVERLOAD
OLX	OVERLOAD CONTROL RELAY
P	POLE
PB	PULL BOX OR PUSH BUTTON
PC	PHOTOCELL
PCC	PUMP CONTROL CONSOLE
PFCC	POWER FACTOR CORRECTION CAPACITOR
PFR	PHASE FAILURE RELAY
PH	PHASE
PL.	PLATE
PLC	PROGRAMMABLE LOGIC CONTROLLER
PoE	POWER OVER ETHERNET
PPR	PHASE PROTECTIVE RELAY
PQM	POWER QUALITY METER
PR.	PAIR OR PAIR CABLE
PT	POTENTIAL TRANSFORMER
PTT	PUSH TO TEST TYPE
PVC	POLYVINYL CHLORIDE
QTY	QUANTITY
RC	REMOTE CONTROL
RCP	RELAY CONTROL PANEL
REC.	CIRCUIT RECLOSURE
RECP	RECEPTACLES
REQ'D	REQUIRED
RTD	RESISTANCE TEMPERATURE DETECTOR
RTU	REMOTE TERMINAL UNIT
SC	SURGE CAPACITOR
SCH	SCHEMATIC
SCTB	SHORT CIRCUIT TERMINAL BLOCK
SEC	SECONDS OR SECONDARY
SHLD. OR SH	SHIELD OR SHIELDED
SHT	SHEET
SN OR S/N	SOLID NEUTRAL
SPD	SURGE PROTECTION DEVICES
SSRVS	SOLID-STATE REDUCED VOLTAGE STARTER
SS	STAINLESS STEEL
ST	STARTER
STA.	STATION
STC	SIGNAL TERMINATION CABINET
SV	SOLENOID VALVE
SW	SWITCH
SWGR	SWITCHGEAR
Sz#	MOTOR STARTER WITH SIZE
TC	TERMINATION CABINET OR TRAY CABLE
TEL	TELEPHONE
TO	TIME DELAY ON OPENING
TR.	TRIAD
TS	TEMPERATURE SWITCH
TW	TWISTED
TYP	TYPICAL
UG	UNDERGROUND
UPS	UNINTERRUPTIBLE POWER SUPPLY
UTP	UNSHIELDED TWISTED PAIR CABLE
V	VOLTS
VAR.	VARIABLE
VFD	VARIABLE FREQUENCY DRIVE
VFI	VACUUM FAULT INTERUPTER
VO	VALVE OPERATOR
W	WITH, WIRE OR WATT
WP	WEATHERPROOF
WR	WEATHER RESISTANT
XFMR	TRANSFORMER
XMTR	TRANSMITTER
XP	EXPLOSION PROOF

NOTE:
THIS IS A STANDARD LEGEND. THEREFORE, NOT ALL OF THIS INFORMATION MAY BE USED ON THIS PROJECT.

PLAN SYMBOL	DESCRIPTION
b A	LIGHTING FIXTURE "A" - FIXTURE TYPE "b" - SWITCH NUMBER
A	EMERGENCY BATTERY PACK LIGHT FIXTURE "A" - FIXTURE TYPE
X	CEILING MOUNTED EXIT SIGN "X" - FIXTURE TYPE
X	WALL MOUNTED EXIT SIGN ARROW INDICATES DIRECTION OF EGRESS "X" - FIXTURE TYPE
FACP	FIRE ALARM CONTROL PANEL
F	MANUAL PULL STATION
	CEILING MOUNTED STROBE
	WALL MOUNTED STROBE
	SMOKE DETECTOR
	HEAT DETECTOR
	HORN
	COMBINATION STROBE/HORN
	CONDUIT, EXPOSED/SURFACE MOUNTED
	CONDUIT OR DUCT BANK, CONCEALED
	CONDUIT, EXPOSED/SURFACE MOUNTED, TURNING UP
	CONDUIT, EXPOSED/SURFACE MOUNTED, TURNING DOWN
	CONDUIT STUBBED OUT AND CAPPED
	OVERHEAD ELECTRIC LINE
	UNDERGROUND ELECTRIC LINE
	OVERHEAD PRIMARY LINE
	UNDERGROUND PRIMARY LINE
	OVERHEAD SECONDARY LINE
	UNDERGROUND SECONDARY LINE
	OVERHEAD COMMUNICATION LINE
	UNDERGROUND COMMUNICATION LINE
	OVERHEAD FIBER OPTIC LINE
	UNDERGROUND FIBER OPTIC LINE
	FLEXIBLE METAL CONDUIT
	HEAT TRACE
2 (3 #3/0, #2G., 3"C.)	DENOTES A QUANTITY OF TWO (2) 3" CONDUITS EACH CONTAINING THREE (3) NO. 3/0 AWG CONDUCTORS AND ONE (1) NO.2 AWG GROUND CONDUCTOR
2-2/C#16	DENOTES A QUANTITY OF TWO (2) INSTRUMENT CABLES. EACH CONSISTS OF TWO (2) NO.16 AWG CONDUCTORS
3-4"C.	THREE (3) 4" CONDUITS
MC1-XXX 4 #14, #14G., 3/4"C. (2 #14 SPARE)	CABLE TAG FOUR (4) #14 CONTROL OR POWER CONDUCTORS, ONE (1) #14 GROUND CONDUCTOR. ALL CONDUCTORS IN A 3/4" CONDUIT. TWO (2) OF THE FOUR (4) #14 CONTROL OR POWER CONDUCTORS ARE SPARE
LA-1,3	HOMERUN, CIRCUITS 1 AND 3 RUN TO PANEL "LA" 2 #12, #12G., 3/4"C. UNLESS NOTED OTHERWISE
$b	SINGLE POLE SWITCH "b" - INDICATES SWITCH LEG SHALL CONTROL LIGHT FIXTURES WITH "b" - DESIGNATION
$Xc	MULTI POLE SWITCH "x" - INDICATES NUMBER OF POLE "c" - INDICATES SWITCH SHALL CONTROL LIGHT FIXTURES WITH "c" DESIGNATION
$M	MANUAL MOTOR STARTER /DISCONNECT
$3	3 WAY SWITCH
$4	4 WAY SWITCH
$D D	DIMMER LIGHTING CONTROL SWITCH
$TM TM	TIME SWITCH
	DUPLEX RECEPTACLE, 20A, 120V, 2P, 3W "C" - MOUNTED ABOVE COUNTERTOP "GFI" OR "GF" - GROUND FAULT INTERRUPTER TYPE "WP" - WEATHERPROOF
F	FLOOR MOUNTED RECEPTACLE
	SIMPLEX RECEPTACLE, GROUNDED TYPE
	SPECIAL RECEPTACLE
	QUADPLEX RECEPTACLE

PLAN SYMBOL	DESCRIPTION
J J	JUNCTION BOX
PB	PULL BOX
TC	TERMINAL CABINET
OS	OCCUPANCY SENSOR
PC	PHOTOCELL
PW	PREWIRED
MH	MANHOLE
M	UTILITY METER
M	MOTORIZED LOUVER
DAMP	INDICATES THAT ALL ELECTRICAL EQUIPMENT AND MATERIALS INSTALLED WITHIN THE ROOM OR AREA IN WHICH THIS NOTATION APPEARS SHALL BE OF NEMA 12 CONSTRUCTION UNLESS OTHERWISE NOTED
WET	INDICATES THAT ALL ELECTRICAL EQUIPMENT AND MATERIALS INSTALLED WITHIN THE ROOM OR AREA IN WHICH THIS NOTATION APPEARS SHALL BE OF NEMA 4 CONSTRUCTION UNLESS OTHERWISE NOTED
CORROSIVE	INDICATES THAT ALL ELECTRICAL EQUIPMENT AND MATERIALS INSTALLED WITHIN THE ROOM OR AREA IN WHICH THIS NOTATION APPEARS SHALL BE OF NEMA 4X CONSTRUCTION UNLESS OTHERWISE NOTED
CLASS I, DIV.1, GROUP D	INDICATES THAT ALL ELECTRICAL EQUIPMENT AND MATERIALS INSTALLED WITHIN THE ROOM OR AREA IN WHICH THIS NOTATION APPEARS SHALL CONFORM TO N.E.C REQUIREMENTS FOR THE HAZARDOUS AREA CLASSIFICATION SHOWN

ONE-LINE OR CONTROL DIAGRAM	PLAN	DESCRIPTION
	OR	PANEL
5	M	MOTOR, NUMBER DESIGNATES HORSEPOWER
VM ✳	-	VOLTMETER (WITH SWITCH IF 3-PHASE)
AM ✳	-	AMMETER (WITH SWITCH IF 3-PHASE)
✳	-	METER ✳ WM - WATTMETER WHM - WATTHOUR METER WHDM - WATTHOUR DEMAND METER WHDR - WATTHOUR DEMAND RECORDER PF - POWER FACTOR METER ETM - ELAPSED TIME METER TRANSDUCER AX - CURRENT TRANSDUCER WX - WATT TRANSDUCER
#	-	RELAY, NO. AS INDICATED 25 - SYNCHRONISM CHECK RELAY 27 - UNDER VOLTAGE RELAY 38 - BEARING PROTECTIVE DEVICE 40 - LOSS OF EXCITATION RELAY 42 - RUNNING CONTACTOR/PILOT RELAY 46 - REVERSE PHASE/PHASE BALANCE/CURRENT RELAY 47 - PHASE SEQUENCE VOLTAGE RELAY 48 - MACHINE OR TRANSFORMER THERMAL RELAY 50 - INSTANTANEOUS OVERCURRENT RELAY 50G - INSTANTANEOUS GROUND 51 - TIME OVER CURRENT RELAY, GROUNDING RESISTOR TYPE 51N - TIME OVERCURRENT RELAY, RESIDUAL TYPE 51V - TIME OVERCURRENT RELAY WITH VOLTAGE RESTRAINT 59 - OVER VOLTAGE RELAY 60 - NEGATIVE SEQUENCE VOLTAGE RELAY 62 - TIME DELAY RELAY 63 - OVER PRESSURE RELAY 67 - AC DIRECTIONAL OVERCURRENT RELAY 83 - AUTOMATIC SELECTIVE CONTROL OR TRANSFER RELAY 86 - LOCKING-OUT RELAY 87 - DIFFERENTIAL PROTECTIVE RELAY B - SUFFIX INDICATES "BUS" G - SUFFIX INDICATES "GENERATOR" GF - GROUND FAULT IR - INTERPOSING RELAY PFR - PHASE FAILURE, PHASE REVERSAL, UNDERVOLTAGE, OVERVOLTAGE RELAY ST - SHUNT TRIP T - SUFFIX INDICATES "TRANSFORMER" TRP CAP - CAPACITOR TRIP X - SUFFIX INDICATES "AUXILIARY"

ISSUED FOR BID

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2026

GEORGIA REGISTERED PE050516 PROFESSIONAL ENGINEER JEFFREY J. STOUT
10.22.2025

FREESE NICHOLS
2180 Satellite Boulevard
Suite 235
Duluth, GA 30097
Phone - (470) 645-3092
Web - www.freese.com

GWINNETT COUNTY DEPARTMENT OF WATER RESOURCE
SUWANEE CREEK DIVERSION PUMP STATION

ELECTRICAL

LEGEND I

F&N JOB NO.	GWR24074
DATE	10/22/2025
DESIGNED	DC
DRAWN	JTR
CHECKED	-
APPROVED	JNH
FILE NAME	EL-GWR24074-EX-R23.RVT

NO.	ISSUED FOR BID	DATE	BY
0	ISSUED FOR BID	10/22/2025	JJS

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SHEET E-1
SEQ. 89 OF 129

Plot Date: 10/21/2025 3:50:13 PM

ONE-LINE OR CONTROL DIAGRAM	PLAN	DESCRIPTION
CR#	-	AC INDUSTRIAL CONTROL RELAY COIL, # - NUMBER AS INDICATED
M#	-	MOTOR STARTER COIL, # - NUMBER AS INDICATED
✳	-	SPECIAL CAPACITOR ✳ SC - SURGE CAPACITOR PF - POWER FACTOR CORRECTION CAPACITOR
	-	PUSH BUTTON, MOMENTARY CONTACT, SPRING RETURN, NORMALLY CLOSED
	-	PUSH BUTTON, MOMENTARY CONTACT, SPRING RETURN, NORMALLY OPEN
	-	EMERGENCY STOP PUSH BUTTON WITH RED MUSHROOM HEAD OPERATOR (MAINTAINED CONTACT)
OFF ON	-	OFF/ON SELECTOR SWITCH
B A C X00 00X	-	3 POSITION SELECTOR SWITCH, MAINTAINED CONTACT O-OPEN X-CLOSED (A/B/C) HOA - HAND/OFF/AUTO HOR - HAND/OFF/REMOTE LOR - LOCAL/OFF/REMOTE OCS - OPEN/CLOSE/STOP OOA - ON/OFF/AUTO NOTE: 2 POSITION MULTI-CONTACT SWITCH FOLLOWS SAME CONVENTION
PTT ✳	-	INDICATING LAMP, COLOR INDICATED ✳ R - RED G - GREEN B - BLUE W - WHITE A - AMBER O - ORANGE PTT - PUSH TO TEST
52	-	MEDIUM VOLTAGE DRAWOUT TYPE POWER CIRCUIT BREAKER
AF AT A P CB		LOW VOLTAGE CIRCUIT BREAKER, 3 POLE UNLESS OTHERWISE NOTED A - AMP TRIP, P - POLES
MCP		MOTOR CIRCUIT PROTECTOR
MCP ✳ Sz#	⊠	COMBINATION MOTOR CIRCUIT PROTECTOR AND MAGNETIC MOTOR STARTER, FULL VOLTAGE NON-REVERSING UNLESS OTHERWISE NOTED: ✳FVR - FULL VOLTAGE REVERSING FVNR - FULL VOLTAGE, NON REVERSING RVNR - REDUCED VOLTAGE NON-REVERSING 2S1W - TWO SPEED, ONE WINDING 2S2W - TWO SPEED, TWO WINDING Sz# - NEMA SIZE OF STARTER
✳	▢	NON-FUSIBLE DISCONNECT SWITCH, 600 VOLT, 3 POLE ✳ AMPERE RATING NOTED
✳ ✱	▨	FUSIBLE DISCONNECT SWITCH, 600 VOLT, 3 POLE, AMPERE RATING AND FUSE SIZE AS NOTED ✳ AMPERE RATING NOTED ✱ FUSE RATING
	-	DRAWOUT TYPE EQUIPMENT OR DEVICE
	-	MEDIUM VOLTAGE CABLE TERMINATION
	-	MEDIUM VOLTAGE AIR INTERRUPTER SWITCH
	-	MEDIUM VOLTAGE FUSED AIR INTERRUPTER SWITCH
	-	MEDIUM VOLTAGE FUSED MOTOR CONTROLLER FUSED CONTACTOR DRAWOUT TYPE
VAC	-	VACUUM CONTACTOR
	-	SPEED POTENTIOMETER

ONE-LINE OR CONTROL DIAGRAM	PLAN	DESCRIPTION
TR#		TIMING RELAY RANGE AS NOTED, SET POINT AS NOTED #-NUMBER AS INDICATED TDD-TIME DELAY AFTER DE-ENERGIZATION-OFF DELAY TDE-TIME DELAY AFTER ENERGIZATION-ON DELAY
	-	NOTC-NORMALLY OPEN, TIMED CLOSING WHEN ENERGIZED
		NCTO-NORMALLY CLOSED, TIMED OPENING WHEN ENERGIZED
		NOTO-NORMALLY OPEN, TIMED OPENING WHEN DE-ENERGIZED
		NCTC-NORMALLY CLOSED, TIMED CLOSING WHEN DE-ENERGIZED
✳ -##	✳ -## ⊗	FIELD INSTRUMENT, TAG NO. OR LOOP NO. AS INDICATED ✳ - INDICATES INSTRUMENT TYPE DEFINED ON LOOP SHEETS ## - INDICATES LOOP NO.
	OR ⊗	LIQUID LEVEL (FLOAT) SWITCH NORMALLY CLOSED, OPENS ON FALLING LEVEL
		NORMALLY OPEN, CLOSES ON FALLING LEVEL
		NORMALLY CLOSED, OPENS ON RISING LEVEL
		NORMALLY OPEN, CLOSES ON RISING LEVEL
	PS OR ⊗	PRESSURE OR VACUUM SWITCH NORMALLY OPEN, CLOSES ON RISING PRESSURE
		NORMALLY CLOSED, OPENS ON RISING PRESSURE
		NORMALLY OPEN, CLOSES ON DROPPING PRESSURE
		NORMALLY CLOSED, OPENS ON DROPPING PRESSURE
	T OR TS OR ⊗	TEMPERATURE SWITCH OR THERMOSTAT NORMALLY OPEN, CLOSES ON RISING TEMPERATURE
		NORMALLY OPEN, CLOSES ON DROPPING TEMPERATURE
		NORMALLY CLOSED, OPENS ON RISING TEMPERATURE
		NORMALLY CLOSED, OPENS ON DROPPING TEMPERATURE
	FS OR ⊗	FLOW SWITCH (AIR, WATER, ETC.) NORMALLY OPEN, CLOSES ON INCREASED FLOW
		NORMALLY CLOSED, OPENS ON INCREASED FLOW
	ZS OR ⊗	POSITION (LIMIT) SWITCH NORMALLY OPEN
		NORMALLY OPEN - HELD CLOSED
		NORMALLY CLOSED
		NORMALLY CLOSED - HELD OPEN
	TQ OR ⊗	TORQUE SWITCH NORMALLY CLOSED, OPENS ON HIGH TORQUE
	T	TRANSFORMER, RATINGS AND CONNECTIONS AS NOTED
#CT'S A	-	CURRENT TRANSFORMER # - QUANTITY A - RATIO
#PT'S	-	POTENTIAL TRANSFORMER # - QUANTITY
#CT'S A	-	GROUND CURRENT SENSOR TRANSFORMER # - QUANTITY A - RATIO
	-	CONTROL TRANSFORMER
	-	CONTROL POWER TRANSFORMER
G	-	GENERATOR, RATINGS AND CONNECTIONS AS NOTED
#A ATS-1 N S	-	TRANSFER SWITCH ATS - AUTOMATIC TRANSFER SWITCH MTS - MANUAL TRANSFER SWITCH "N" - INDICATES NORMAL SOURCE "S" - INDICATES STANDBY SOURCE #A - INDICATES CONTINUOUS CURRENT RATING
	-	MOTOR OVERLOAD OVERLOAD RELAY HEATER

SYMBOL	DESCRIPTION
▽	DATA
▼	TELEPHONE
▽▼	COMBINATION TELEPHONE/DATA
▼	FLOOR MOUNTED DATA OUTLET
▽	FLOOR MOUNTED TELEPHONE OUTLET
▽	POKE-THRU DEVICE COMBINATION POWER/DATA/VOICE OUTLET
▽	FLOOR COMBINATION POWER/DATA/VOICE OUTLET
	CATV
✳	SECURITY CAMERA ✳ F - FIXED Z - PAN/TILT/ZOOM
##	SECURITY DEVICE SEC - SECURITY PANEL MAG - MAGNETIC LOCK CR - CARD READERS DR - REMOTE DOOR RELEASE MD - MOTION DETECTOR SK - SECURITY KEYPAD ES - ELECTRIC STRIKE DS - DOOR SWITCH IC - INTERCOM STATION SB - SECURITY PANIC BUTTON

NOTE:
THIS IS A STANDARD LEGEND. THEREFORE, NOT ALL OF THIS INFORMATION MAY BE USED ON THIS PROJECT.

ONE-LINE OR CONTROL DIAGRAM	PLAN	DESCRIPTION
	-	CONDUCTORS OR CONDUITS CROSSING PATHS BUT NOT CONNECTED
	-	CONDUCTORS ELECTRICALLY CONNECTED
	-	INDICATES LIMITS OF EQUIPMENT OR WIRING ENCLOSURE
LA	-	LIGHTNING ARRESTER
	G	GROUND ROD
		GROUND ROD TEST WELL
30A	-	FUSE, AMPERE RATING AS NOTED
	-	HEATER
	-	INDUCTOR
	-	CONTACT, NORMALLY OPEN (NO)
	-	CONTACT, NORMALLY CLOSED (NC)
OL	-	OVERLOAD CONTACT
OR K #	-	KIRK KEY INTERLOCK
	-	MECHANICAL INTERLOCK
○	-	TERMINAL
•	-	NODE
TB	-	TERMINAL OR TEST BLOCK
OR	-	PUSH BUTTON STATION, REFER TO ELECTRICAL SCHEMATIC FOR NUMBER OF DEVICES.
▲	-	LOCATED AT SCADA RTU
◪	-	LOCATED REMOTE
■	-	LOCATED AT MOTOR
	-	FUSED SWITCH/FUSED CUTOUT
Ⓜ	Ⓜ	UTILITY METER

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2026

GEORGIA REGISTERED PE050516 PROFESSIONAL ENGINEER JEFFREY J. STOUT
10.22.2025

FREESE NICHOLS
2180 Satellite Boulevard
Suite 235
Duluth, GA 30097
Phone - (470) 645-3092
Web - www.freese.com

GWINNETT COUNTY DEPARTMENT OF WATER RESOURCE
SUWANEE CREEK DIVERSION PUMP STATION

ELECTRICAL

LEGEND II

F&N JOB NO.	GWR24074					
DATE	10/22/2025					
DESIGNED	DC					
DRAWN	JTR					
CHECKED	-					
APPROVED	JNH					
NO.	ISSUE	BY	DATE	FILE NAME		
0	ISSUED FOR BID	JJS	10/22/2025	EL-GWR24074-EX-R23.RVT		

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SHEET E-2
SEQ. 90 OF 129

ISSUED FOR BID

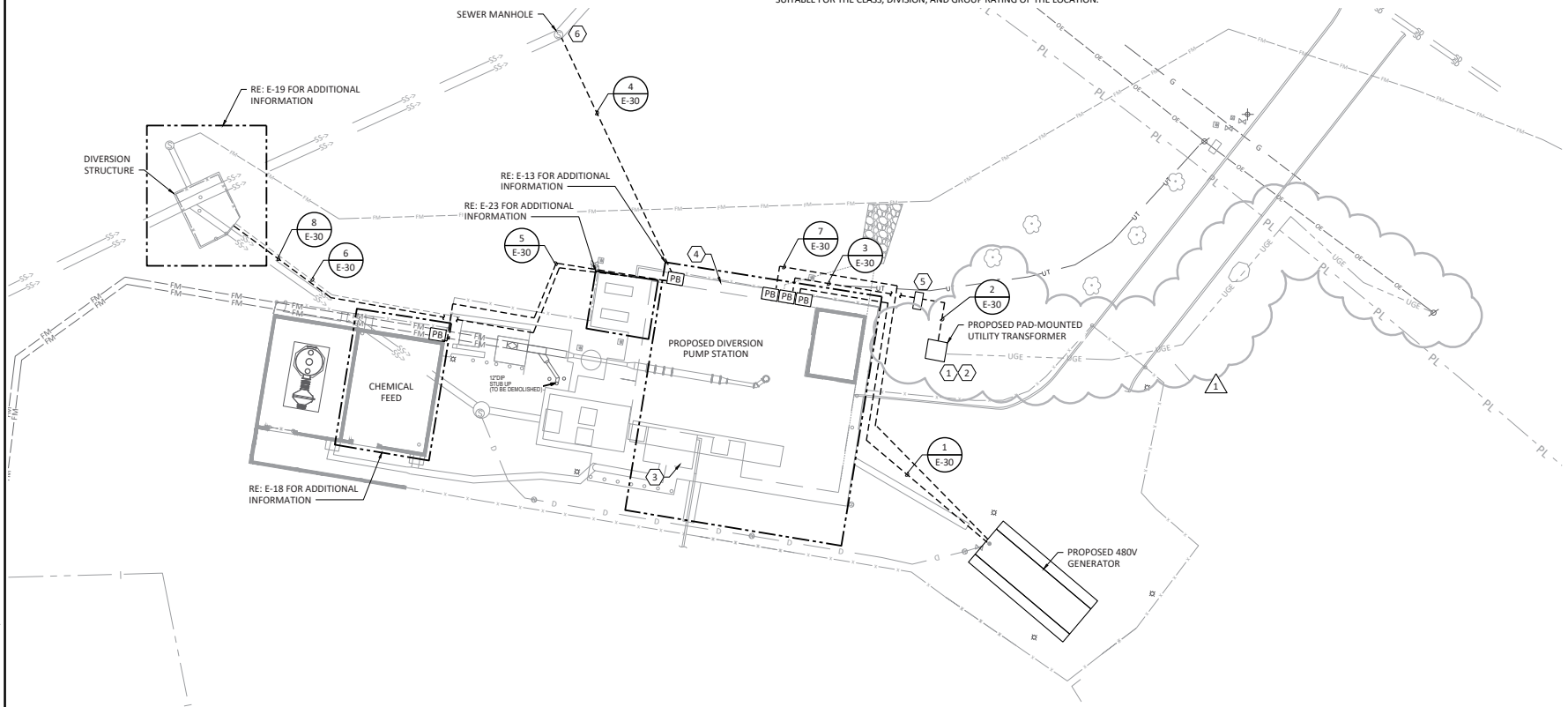
Plot Date: 10/21/2025 3:50:13 PM

GENERAL NOTES:

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SIZING AND PROVIDING ALL PULL BOXES AND JUNCTION BOXES AS REQUIRED BY THE NATIONAL ELECTRICAL CODE.
2. CONDUIT ENTERING AND EXITING A BUILDING STRUCTURE SHALL HAVE EXPANSION FITTINGS CAPABLE OF A 4" EXPANSION MINIMUM IN EITHER DIRECTION TO ACCOUNT FOR THE VERTICAL MOVEMENT OF THE BUILDING.
3. POWER, DISCRETE, ANALOG SIGNAL AND COMMUNICATION CONDUCTORS SHALL BE ROUTED IN SEPARATE CONDUITS.
4. EQUIPMENT ENCLOSURES WITHIN THE NEW ELECTRICAL BUILDING SHALL BE NEMA 1 UNLESS SPECIFIED OTHERWISE. EQUIPMENT LOCATED OUTDOORS OR WITHIN THE LIFT STATION BUILDING SHALL BE NEMA 4X 316 STAINLESS STEEL.
5. COORDINATE WITH GEORGIA POWER FOR INSTALLATION OF THE NEW UTILITY TRANSFORMER. RANDALL BIRD 770-310-6699 (1)
6. EXISTING DUCT BANKS AND PIPING SHALL BE SUPPORTED TO PREVENT COLLAPSING IF DIGGING UNDERNEATH. CONTRACTOR IS RESPONSIBLE FOR PROVIDING LABOR AND MATERIALS FOR REPLACEMENT IF EXISTING DUCT BANK OR PIPING IS DAMAGED AT NO COST TO THE OWNER.
7. CONTRACTOR SHALL INSTALL ALL ELECTRICAL SYSTEMS AND APPURTENANCES INSIDE OF AND TRANSITIONING TO/FROM HAZARDOUS AREAS IN ACCORDANCE WITH THE NEC ARTICLE 500.
8. ELECTRICAL SYSTEMS INSTALLED IN HAZARDOUS LOCATIONS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST VERSION OF NEC CHAPTER 5, ARTICLE 500. ALL EQUIPMENT LOCATED IN HAZARDOUS AREAS SHALL BE SUITABLE FOR THE CLASS, DIVISION, AND GROUP RATING OF THE LOCATION.

NOTES BY SYMBOL "⬡"

1. A NEW PAD-MOUNTED TRANSFORMER AND METER SHALL BE INSTALLED IN THE SAME LOCATION AS THE EXISTING TRANSFORMER TO UTILIZE THE EXISTING PRIMARY UTILITY FEEDERS. CONTRACTOR SHALL COORDINATE WITH GEORGIA POWER FOR INSTALLATION AND UTILITY REQUIREMENTS, CONTACT RANDALL BIRD AT 770-310-6699 FOR ADDITIONAL COORDINATION. THE TRANSFORMER, METER, AND PRIMARY CONNECTION SHALL BE PROVIDED BY GEORGIA POWER. CONTRACTOR SHALL PROVIDE EQUIPMENT PAD SECONDARY CONDUIT AND WIRE, AND ANY ADDITIONAL GEORGIA POWER CONNECTION REQUIREMENTS. (1)
2. COORDINATE WITH GEORGIA POWER TO THE LOCATION OF THE PRIMARY SIDE OF THE UTILITY PAD-MOUNTED TRANSFORMER.
3. WET WELL SHALL BE CLASSIFIED CLASS I, DIV 1, GROUP D IN ACCORDANCE WITH NFPA 820-2020, TABLE 4.2.2, ROW 14 LINE a. COMBUSTIBLE GAS DETECTION IS REQUIRED.
4. DRY WELL SHALL BE UNCLASSIFIED IN ACCORDANCE WITH NFPA 820-2020, TABLE 4.2.2, ROW 15, LINE b, WITH SIX (6) CONTINUOUS AIR CHANGES PER HOUR.
5. PROVIDE 3000A/3P/3000AF SERVICE ENTRANCE RATED ENCLOSED CIRCUIT BREAKER NEMA 4X 316 STAINLESS STEEL.
6. CONTRACTOR SHALL FIELD VERIFY AND LOCATE SEWER MANHOLE. MOUNT TRANSMITTER INSIDE THE ELECTRICAL ROOM.



1 OVERALL SITE PLAN
1" = 20'

NORTH
0 20' 40'
SCALE IN FEET

ISSUED FOR BID

Francis and Hancock, Inc.
Georgia Registered Professional Engineering Firm PEF-004433

GEORGIA REGISTERED PROFESSIONAL ENGINEER 12.10.2025

FRANCIS & HANCOCK
2180 Satellite Boulevard
Suite 235
Duluth, Georgia 30097
Phone: (470) 645-3092
Web: www.fhtek.com

GWINNETT COUNTY DEPARTMENT OF WATER RESOURCE
SUWANEE CREEK DIVERSION PUMP STATION
ELECTRICAL
OVERALL SITE PLAN

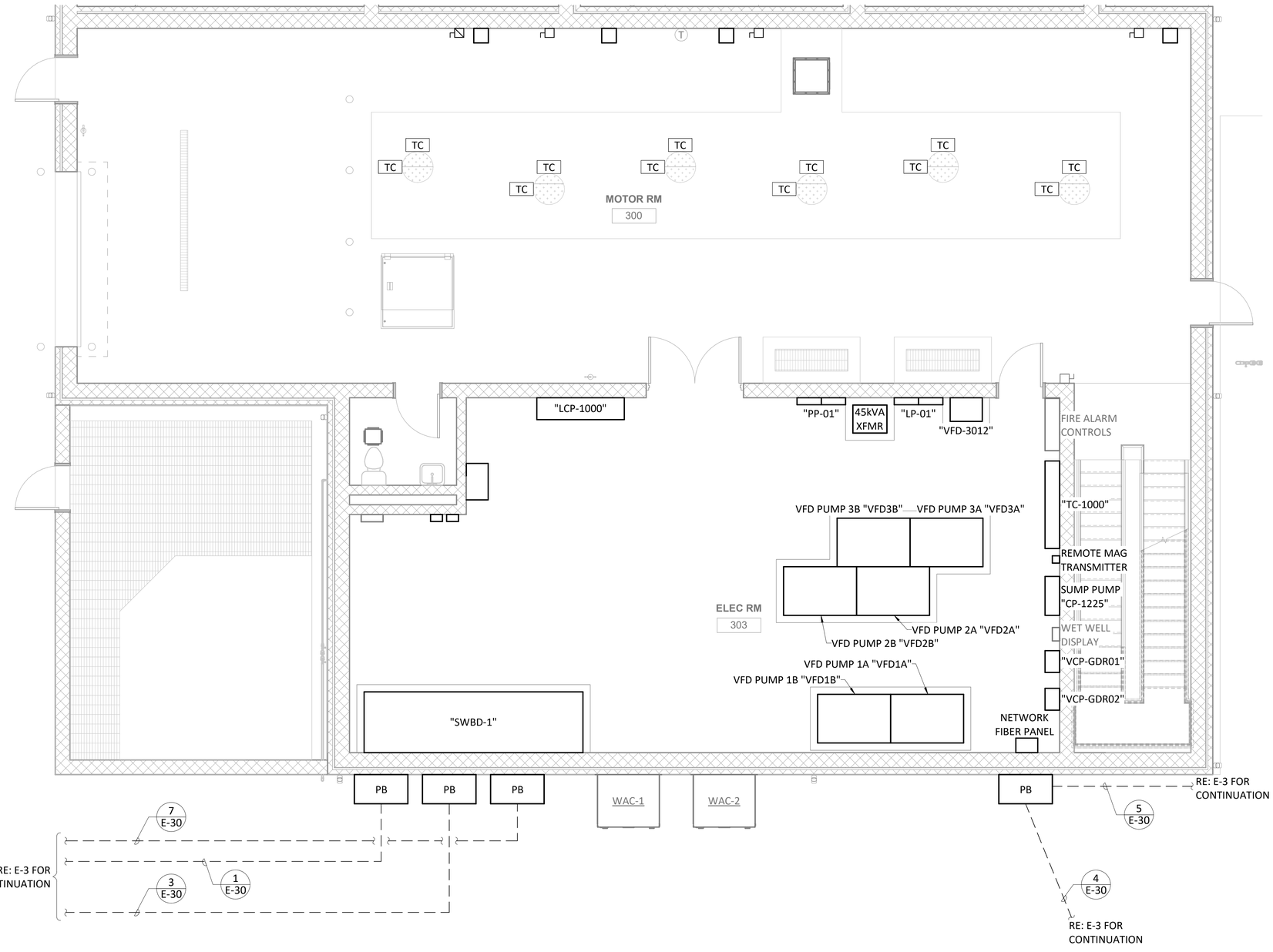
NO.	ISSUE	BY	DATE
3	ADDENDUM NO.3	JJS	12/10/2025
2	ISSUED FOR BID	JJS	10/22/2025
1	VERIFY SCALE Bar Scale is one inch on original drawing. If not one inch on this sheet, adjust scale.	FILE NAME	EL-ALL-PL-SITE01.dwg

F&H JOB NO.	GWR24074
DATE	10/22/2025
DESIGNED	DC
DRAWN	JTR
CHECKED	JNH
APPROVED	JJS

SHEET E-3
SEQ. 91 OF 129

ACAD Rel: 24.2s (LMS Tech)
File Name: N:\ELEC\EL-ALL-PL-SITE01.dwg
Last Saved: 12/9/2025 1:51 PM Saved By: 09046

Plot Date: 12/9/2025 1:54 PM Plot By: 09046 Filename: N:\ELEC\EL-ALL-PL-SITE01.dwg



1 PUMP BUILDING PLAN
1/4" = 1'-0"

NORTH

0 2' 4' 8'
1/4"=1'-0"

ISSUED FOR BID

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2026

GEORGIA REGISTERED LIC. PE050516 PROFESSIONAL ENGINEER JEFFREY J. STOUT
10.22.2025

FREESE NICHOLS
2180 Satellite Boulevard
Suite 235
Duluth, GA 30097
Phone - (470) 645-3092
Web - www.freese.com

GWINNETT COUNTY DEPARTMENT OF WATER RESOURCE
SUWANEE CREEK DIVERSION PUMP STATION

ELECTRICAL

PUMP BUILDING PLAN

F&N JOB NO.	GWR24074
DATE	10/22/2025
DESIGNED	DC
DRAWN	JTR
CHECKED	-
APPROVED	JNH

NO.	ISSUE	DATE	BY
0	ISSUED FOR BID	10/22/2025	JJS

VERIFY SCALE 0 1
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FILE NAME EL-GWR24074-EX-R23.RVT

SHEET E-4

SEQ. 92 OF 129

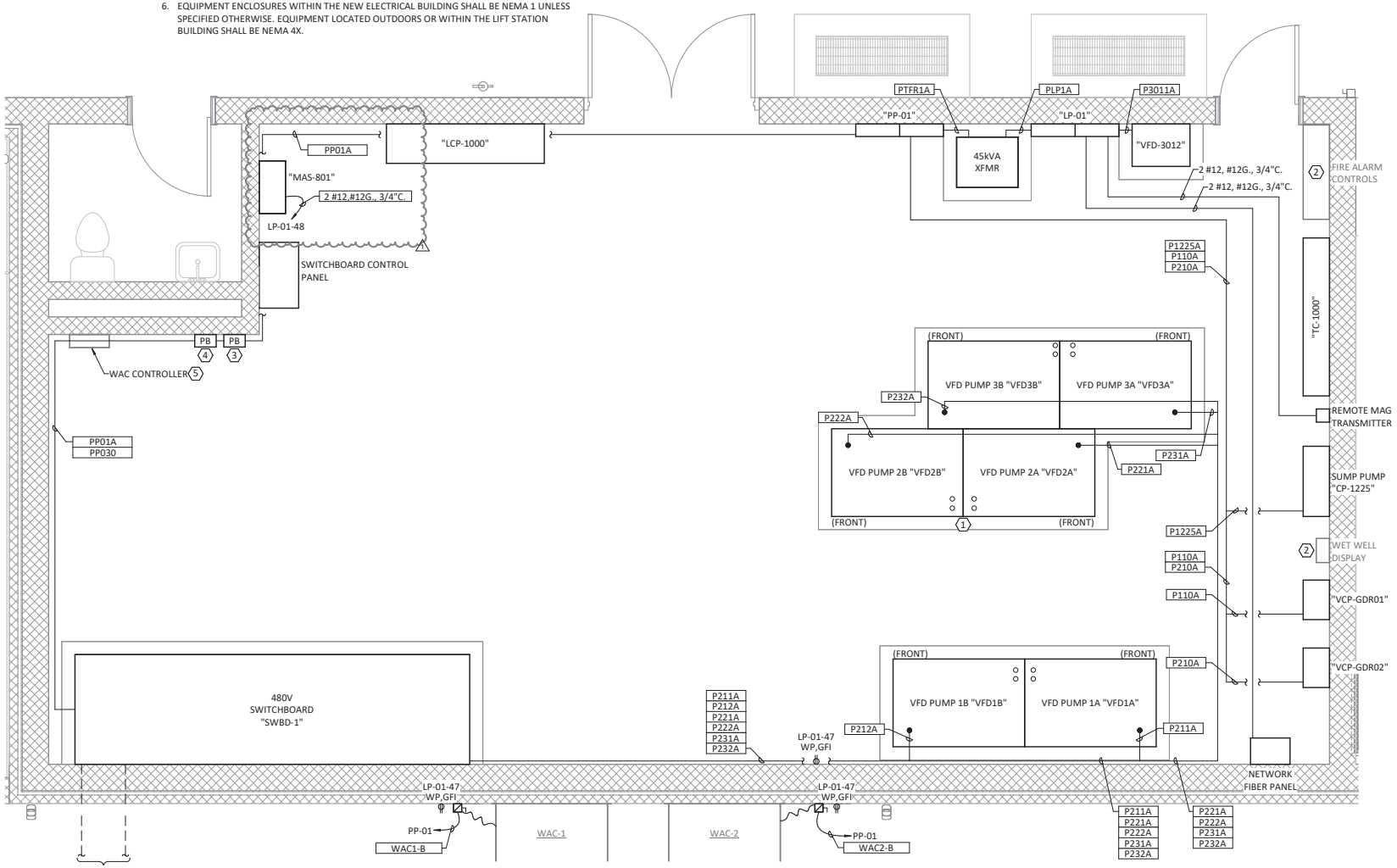
Plot Date: 10/21/2025 3:50:14 PM

GENERAL NOTES:

1. FIELD VERIFY PAD LOCATION AND USE THE EXISTING CONDUIT AND CABLE STUB UP FOR NEW ELECTRICAL EQUIPMENT.
2. THE CONTRACTOR SHALL PROVIDE CONDUIT AS REQUIRED FOR TRANSITION BETWEEN EQUIPMENT. EACH CIRCUIT SHALL BE ROUTED IN ITS OWN CONDUIT. COMBINING CIRCUITS IN CONDUITS IS NOT PERMITTED UNLESS SPECIFIED OTHERWISE. CONDUIT SHALL BE PVC COATED ALUMINUM UNLESS SPECIFIED OTHERWISE.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SIZING AND PROVIDING ALL PULL BOXES AND JUNCTION BOXES AS REQUIRED BY THE NATIONAL ELECTRICAL CODE.
4. CONDUIT ENTERING AND EXITING A BUILDING STRUCTURE SHALL HAVE EXPANSION FITTINGS CAPABLE OF A 4" EXPANSION MINIMUM IN EITHER DIRECTION TO ACCOUNT FOR THE VERTICAL MOVEMENT OF THE BUILDING.
5. POWER, DISCRETE, ANALOG SIGNAL AND COMMUNICATION CONDUCTORS SHALL BE ROUTED IN SEPARATE CONDUITS.
6. EQUIPMENT ENCLOSURES WITHIN THE NEW ELECTRICAL BUILDING SHALL BE NEMA 1 UNLESS SPECIFIED OTHERWISE. EQUIPMENT LOCATED OUTDOORS OR WITHIN THE LIFT STATION BUILDING SHALL BE NEMA 4X.
7. CONDUIT RUNS ARE SHOWN DIAGRAMMATICALLY ONLY AND SHALL BE INSTALLED IN A MANNER TO PREVENT CONFLICTS WITH EQUIPMENT OR STRUCTURAL CONDITIONS. EXPOSED CONDUIT SHALL BE INSTALLED PARALLEL OR PERPENDICULAR TO BEAMS AND WALLS. CONDUIT SHALL NOT BE ROUTED ON THE FLOOR OR CREATE A TRIPPING HAZARD IN ANY WAY.
8. STUB UP AND CAP ALL SPARE CONDUITS AT THE FLOOR WITH A PULL STRING. COORDINATE WITH OTHER DISCIPLINES FOR STUB UP LOCATIONS. STUB UPS SHALL NOT BE MADE THROUGH GRADE BEAM OF THE BUILDING.
9. PROVIDE 4" HOUSEKEEPING PADS FOR ALL FLOOR MOUNTED EQUIPMENT.
10. COORDINATE WITH EQUIPMENT SUPPLIER FOR LOCATION OF CABLE/CONDUIT PENETRATIONS INTO TOP/BOTTOM OF EQUIPMENT IN ELECTRICAL ROOM.
11. 120V CIRCUITS FEEDING MISCELLANEOUS EQUIPMENT TO BE 2 #12, #12G., 3/4"C. UNLESS NOTED OTHERWISE.

NOTES BY SYMBOL "⬡"

1. FIELD VERIFY AND LOCATE STUB UP FOR THE VFD CABLE AND CONDUITS. CONTRACTOR SHALL USE EXISTING STUB UPS TO ROUTE PROPOSED CABLE TO PULLBOX THEN TO PROPOSED VFD.
2. FIELD VERIFY AND LOCATE EXISTING CABLE AND CONDUIT. ROUTE EXISTING EQUIPMENT CABLE AND CONDUIT TO PANEL "LP-01".
3. JUNCTION BOX SHALL INCLUDE ONLY POWER CONDUCTORS.
4. JUNCTION BOX SHALL INCLUDE ONLY COMMUNICATION, DISCRETE, OR ANALOG CONDUCTORS.
5. REFERENCE SHEET H-4.



1 ELECTRICAL ROOM POWER PLAN
1/2" = 1'-0"

NORTH

0 1' 2' 4'
1/2"=1'-0"

ISSUED FOR BID

Freese and Nichols, Inc.
Georgia Registered Engineering Firm P-EF-004433
Expires 6/30/2026

GEORGIA REGISTERED PROFESSIONAL ENGINEER 12.10.2025

FREESE NICHOLS
2180 Satellite Boulevard
Suite 235
Duluth, GA 30097
Phone - (470) 645-3092
Web - www.freese.com

GWINNETT COUNTY DEPARTMENT OF WATER RESOURCE
SUWANEE CREEK DIVERSION PUMP STATION
ELECTRICAL
ELECTRICAL ROOM POWER PLAN

F&N JOB NO.	GWR24074
DATE	10/22/2025
DESIGNED	DC
DRAWN	JTR
CHECKED	-
APPROVED	JNH
FILE NAME	EL-GWR24074-ER-R23.RVT

NO.	ADDENDUM NO 3	BY	DATE
1		JLS	12/10/2025
0	ISSUED FOR BID	JLS	10/22/2025

ISSUE

VERIFY SCALE
Bar is one inch on original drawing. If not one inch on this sheet adjust scale.
0 1"

SHEET E-5
SEQ. 93 OF 129

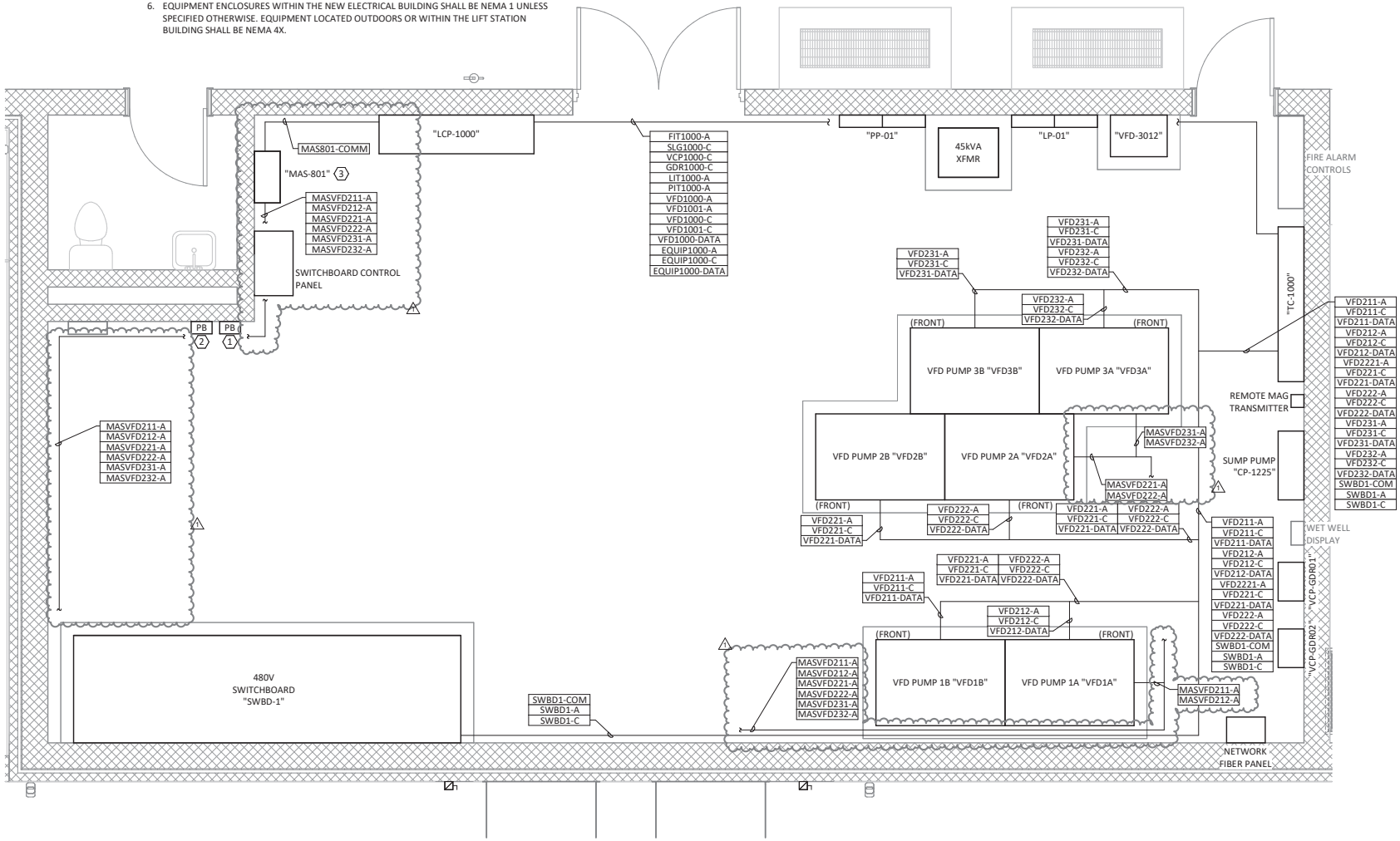
Plot Date: 12/8/2025 10:41:09 AM

GENERAL NOTES:

1. FIELD VERIFY PAD LOCATION AND USE THE EXISTING CONDUIT AND CABLE STUB UP FOR NEW ELECTRICAL EQUIPMENT.
2. THE CONTRACTOR SHALL PROVIDE CONDUIT AS REQUIRED FOR TRANSITION BETWEEN EQUIPMENT. EACH CIRCUIT SHALL BE ROUTED IN ITS OWN CONDUIT. COMBINING CIRCUITS IN CONDUITS IS NOT PERMITTED UNLESS SPECIFIED OTHERWISE. CONDUIT SHALL BE PVC COATED ALUMINUM UNLESS SPECIFIED OTHERWISE.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SIZING ALL PULL BOXES AND JUNCTION BOXES AS REQUIRED BY THE NATIONAL ELECTRICAL CODE.
4. CONDUIT ENTERING AND EXITING A BUILDING STRUCTURE SHALL HAVE EXPANSION FITTINGS CAPABLE OF A 4" EXPANSION MINIMUM IN EITHER DIRECTION TO ACCOUNT FOR THE VERTICAL MOVEMENT OF THE BUILDING.
5. POWER, DISCRETE, ANALOG SIGNAL AND COMMUNICATION CONDUCTORS SHALL BE ROUTED IN SEPARATE CONDUITS.
6. EQUIPMENT ENCLOSURES WITHIN THE NEW ELECTRICAL BUILDING SHALL BE NEMA 1 UNLESS SPECIFIED OTHERWISE. EQUIPMENT LOCATED OUTDOORS OR WITHIN THE LIFT STATION BUILDING SHALL BE NEMA 4X.
7. CONDUIT RUNS ARE SHOWN DIAGRAMMATICALLY AND SHALL BE INSTALLED IN A MANNER TO PREVENT CONFLICTS WITH EQUIPMENT OR STRUCTURAL CONDITIONAL. EXPOSED CONDUIT SHALL BE INSTALLED PARALLEL OR PERPENDICULAR TO BEAMS AND WALLS. CONDUIT SHALL NOT BE ROUTED ON THE FLOOR OR CREATE A TRIPPING HAZARD IN ANY WAY.
8. STUB UP AND CAP ALL SPARE CONDUITS AT THE FLOOR WITH A PULL STRING. COORDINATE WITH OTHER DISCIPLINES FOR STUB UP LOCATIONS. STUB UPS SHALL NOT BE MADE THROUGH GRADE BEAMS OF THE BUILDING.
9. PROVIDE 4" HOUSEKEEPING PADS FOR ALL FLOOR MOUNTED EQUIPMENT.
10. COORDINATE WITH EQUIPMENT SUPPLIER FOR LOCATION OF CABLE/CONDUIT PENETRATIONS INTO TOP/BOTTOM OF EQUIPMENT IN ELECTRICAL ROOM.
11. 120V CIRCUITS FEEDING MISCELLANEOUS EQUIPMENT TO BE 2 #12, #12G., 3/4"C. UNLESS NOTED OTHERWISE.

NOTES BY SYMBOL "⬡"

1. JUNCTION BOX SHALL INCLUDE ONLY POWER CONDUCTORS.
2. JUNCTION BOX SHALL INCLUDE ONLY COMMUNICATION, DISCRETE, OR ANALOG CONDUCTORS.
3. PUMP MANUFACTURER SUPPLIED PUMP MONITORING SYSTEM MAS 801 IN AN ENCLOSURE WITH ASSOCIATED POWER SUPPLIES, TERMINAL STRIPS, ETC. FOR COMPLETE AND OPERATIONAL SYSTEM.



ELECTRICAL ROOM
INSTRUMENTATION & CONTROLS PLAN
1/2" = 1'-0"

NORTH

0 1' 2' 4'
1/2"=1'-0"

ISSUED FOR BID

Freese and Nichols, Inc.
Georgia Registered Engineering Firm P-EF-004433
Expires 6/30/2026

GEORGIA REGISTERED PROFESSIONAL ENGINEER JEFFREY E. STOTT 12.10.2025

FREESE NICHOLS
2180 Satellite Boulevard
Suite 235
Duluth, GA 30097
Phone - (470) 645-3092
Web - www.freese.com

GWINNETT COUNTY DEPARTMENT OF WATER RESOURCE
SUWANEE CREEK DIVERSION PUMP STATION
ELECTRICAL
ELECTRICAL ROOM
INSTRUMENTATION & CONTROLS PLAN

FB & N JOB NO.	GWR24074
DATE	10/22/2025
DESIGNED	DC
DRAWN	JTR
CHECKED	-
APPROVED	JNH
DATE	
BY	
FILE NAME	EL-GWR24074-EX-R23.RVT

NO.	ISSUE	DATE	BY
1	ADDENDUM NO 3	12/5/2025	LLS
0	ISSUED FOR BID	10/22/2025	LLS

Bar is one inch on original drawing. If not one inch on this sheet adjust scale.
VERIFY SCALE 1 0

SHEET E-6
SEQ. 94 OF 129

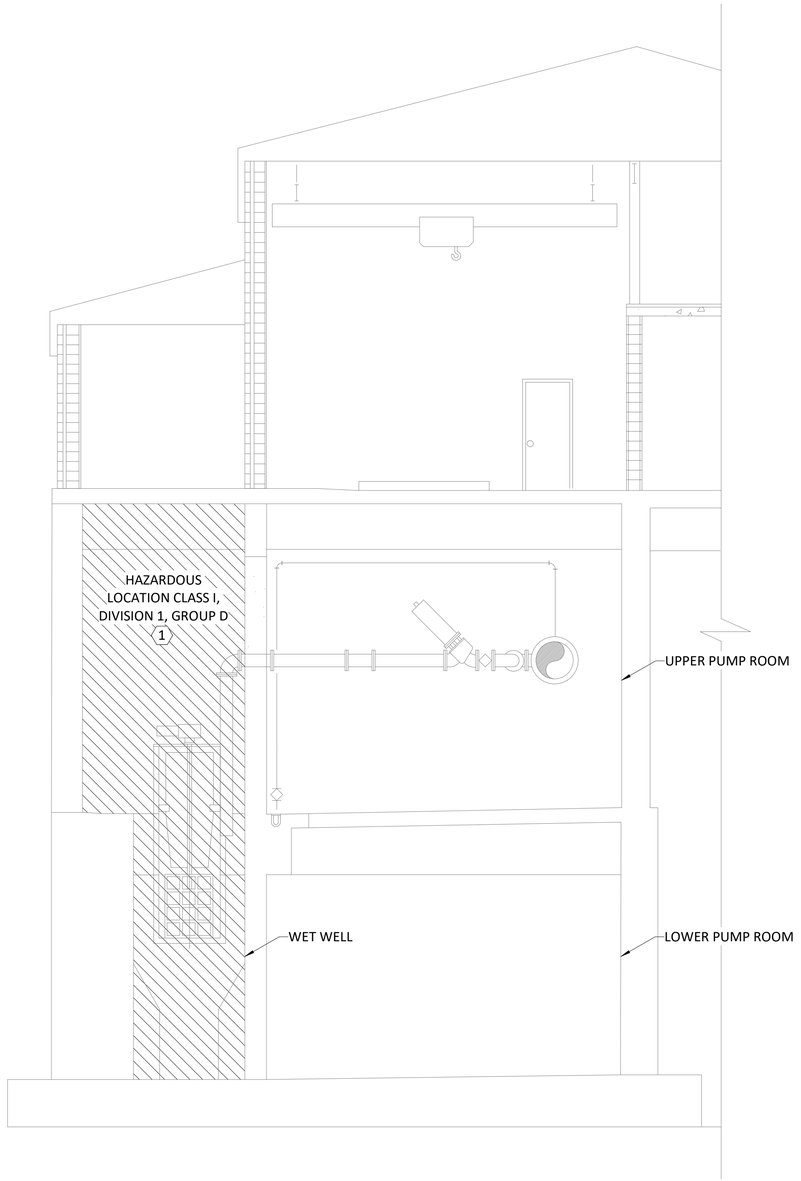
Plot Date: 12/8/2025 10:41:12 AM

GENERAL NOTES:

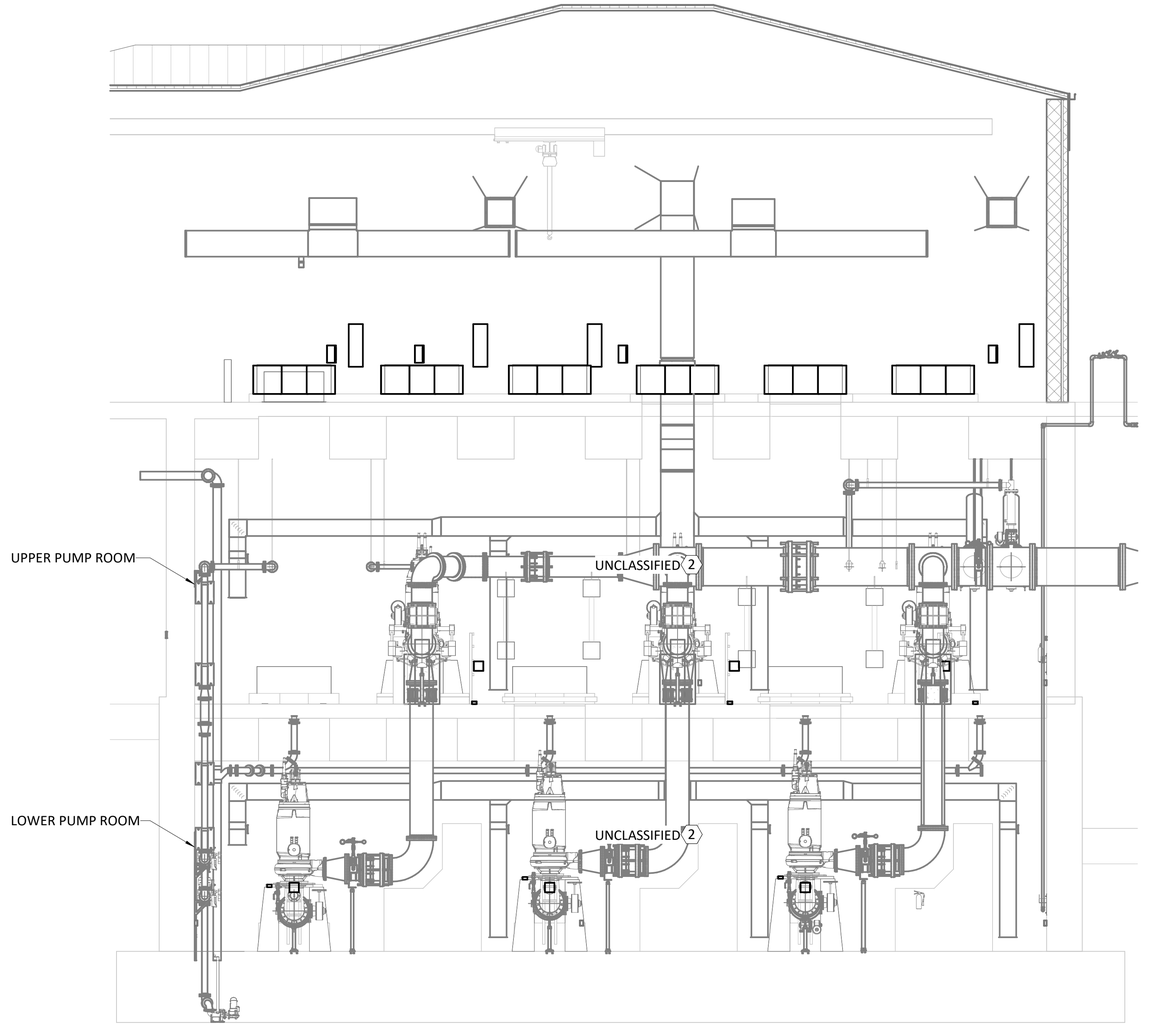
1. EQUIPMENT ENCLOSURES WITHIN THE NEW ELECTRICAL BUILDING SHALL BE NEMA 1 UNLESS SPECIFIED OTHERWISE. EQUIPMENT LOCATED OUTDOORS OR WITHIN THE LIFT STATION BUILDING SHALL BE NAMA 4X 316 STAINLESS STEEL.
2. CONTRACTOR SHALL INSTALL ALL ELECTRICAL SYSTEMS AND APPURTENANCES INSIDE OF AND TRANSITIONING TO/FROM HAZARDOUS AREAS IN ACCORDANCE WITH THE NEC ARTICLE 500.
3. ELECTRICAL SYSTEMS INSTALLED IN HAZARDOUS LOCATIONS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST VERSION OF NEC CHAPTER 5, ARTICLE 500. ALL EQUIPMENT LOCATED IN HAZARDOUS AREAS SHALL BE SUITABLE FOR THE CLASS, DIVISION, AND GROUP RATING OF THE LOCATION.

NOTES BY SYMBOL "⬡"

1. WET WELL SHALL BE CLASSIFIED CLASS I, DIV 1, GROUP D IN ACCORDANCE WITH NFPA 820-2020, TABLE 4.2.2, ROW 14 LINE a. COMBUSTIBLE GAS DETECTION IS REQUIRED.
2. DRY WELL SHALL BE UNCLASSIFIED IN ACCORDANCE WITH NFPA 820-2020, TABLE 4.2.2, ROW 15, LINE b, WITH SIX (6) CONTINUOUS AIR CHANGES PER HOUR.



1 GRINDER AREA SECTION
NOT TO SCALE



2 PUMP STATION SECTION
3/16" = 1'-0"

0 4' 8'
3/16"=1'-0"

ISSUED FOR BID

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2026

GEORGIA REGISTERED LIC. PE050516 PROFESSIONAL ENGINEER JEFFREY J. STOUT
10.22.2025

FREESE AND NICHOLS
2180 Satellite Boulevard
Suite 235
Duluth, GA 30097
Phone - (470) 645-3092
Web - www.freese.com

GWINNETT COUNTY DEPARTMENT OF WATER RESOURCE
SUWANEE CREEK DIVERSION PUMP STATION

ELECTRICAL

GRINDER & PUMP STATION SECTION

F&N JOB NO.	GWR24074
DATE	10/22/2025
DESIGNED	DC
DRAWN	JTR
CHECKED	-
APPROVED	JNH

NO.	ISSUE	BY	DATE
0	ISSUED FOR BID	JJS	10/22/2025

FILE NAME EL-GWR24074-EX-R23.RVT

VERIFY SCALE Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.
0 1"

SHEET E-7
SEQ. 95 OF 129

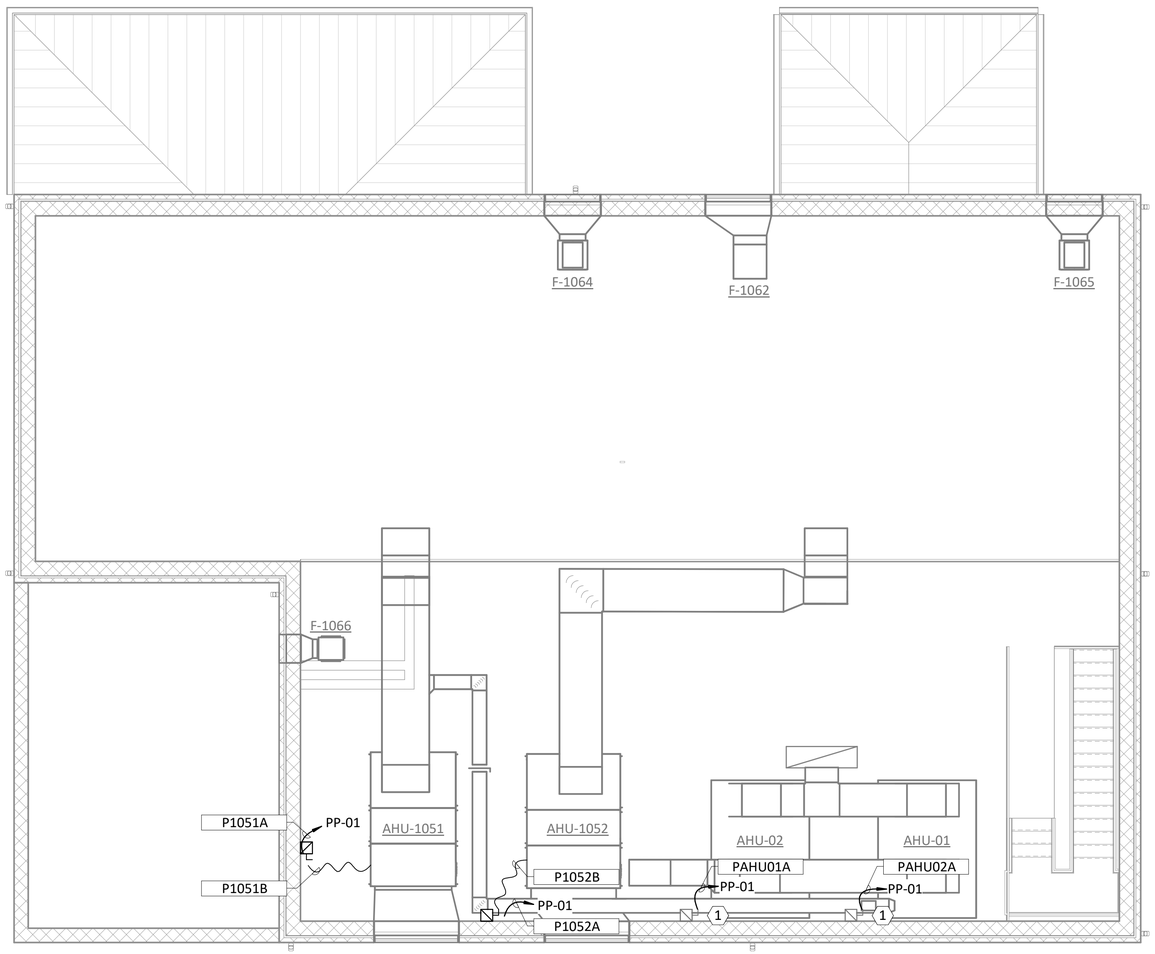
Plot Date: 10/21/2025 3:50:22 PM

GENERAL NOTES:

1. CONTRACTOR SHALL SIZE AND PROVIDE ALL PULL BOXES, JUNCTION BOXES, MANHOLES, ETC. PER THE NATIONAL ELECTRICAL CODE.
2. POWER, CONTROLS, AND COMMUNICATIONS CONDUCTORS SHALL BE ROUTED IN SEPARATE CONDUITS.
3. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF JUNCTION BOXES AND CONDUIT ENTRANCES OF ALL EQUIPMENT AGAINST APPROVED SHOP DRAWINGS BEFORE STUBBING UP CONDUITS.
4. CONDUIT RUNS ARE SHOWN DIAGRAMMATICALLY ONLY AND SHALL BE INSTALLED IN A MANNER TO PREVENT CONFLICTS WITH EQUIPMENT OR STRUCTURAL CONDITIONS. EXPOSED CONDUIT SHALL BE INSTALLED PARALLEL OR PERPENDICULAR TO BEAMS AND WALLS AND NOT POSE A TRIPPING HAZARD.
5. IN THE EVENT OF INTERFERENCE BETWEEN ELECTRICAL EQUIPMENT SHOWN ON THE DRAWINGS AND OTHER EQUIPMENT, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN WRITING AND THE ENGINEER SHALL APPROVE PROPOSED CHANGES BEFORE THEY ARE MADE.
6. CONDUITS INSTALLED IN THIS CONTRACT SHALL BE SEALED AT BOTH ENDS SO HAZARDOUS GASES CANNOT ENTER.
7. EXISTING DUCT BANKS AND PIPING SHALL BE SUPPORTED TO PREVENT COLLAPSING IF DIGGING UNDERNEATH. CONTRACTOR IS RESPONSIBLE FOR PROVIDING LABOR AND MATERIALS FOR REPLACEMENT IF EXISTING DUCT BANK OR PIPING IS DAMAGED AT NO COST TO THE OWNER.

NOTES BY SYMBOL " ⬡ "

1. CONTRACTOR SHALL FIELD VERIFY AND LOCATE EXISTING FUSIBLE DISCONNECT SWITCH FOR AIR HANDLING UNITS. ROUTE NEW POWER FROM SOURCE.



1 MEZAZANINE POWER PLAN
3/16" = 1'-0"

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2026

GEORGIA REGISTERED LIC. PE050516 PROFESSIONAL ENGINEER JEFFREY J. STOUT
10.22.2025

FREESE AND NICHOLS
2180 Satellite Boulevard
Suite 235
Duluth, GA 30097
Phone - (470) 645-3092
Web - www.freese.com

GWINNETT COUNTY DEPARTMENT OF WATER RESOURCE
SUWANEE CREEK DIVERSION PUMP STATION

ELECTRICAL
MEZZANINE
POWER PLAN

F&N JOB NO. GWR24074
DATE 10/22/2025
DESIGNED DC
DRAWN JTR
CHECKED -
APPROVED JNH
FILE NAME EL-GWR24074-EX-R23.RVT

NO.	ISSUE	DATE	BY
0	ISSUED FOR BID	10/22/2025	JJS

VERIFY SCALE Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.
0 1"

NORTH
0 4' 8'
3/16"=1'-0"

ISSUED FOR BID

SHEET E-8
SEQ. 96 OF 129

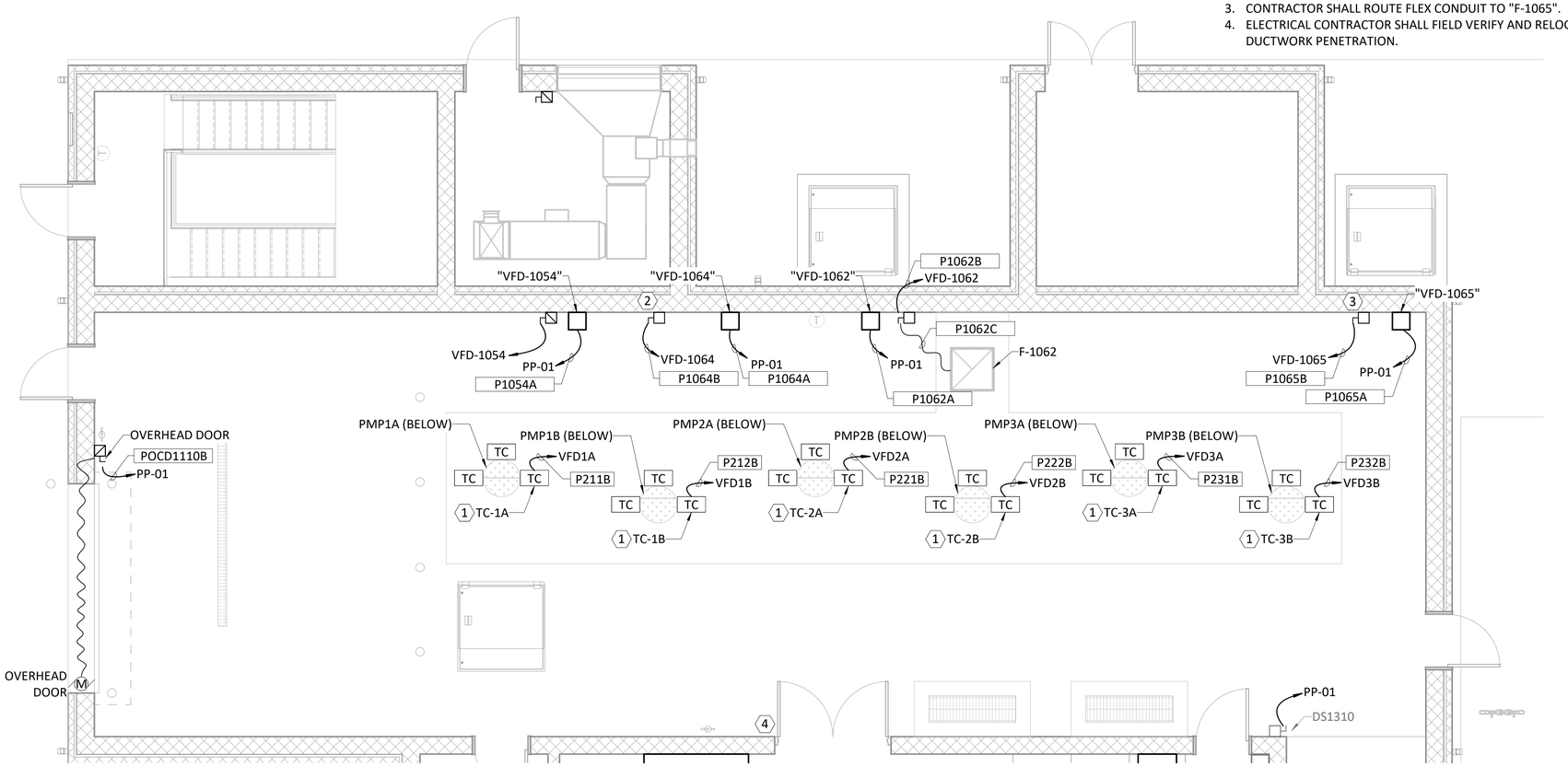
Plot Date: 10/21/2025 3:50:22 PM

GENERAL NOTES:

1. CONTRACTOR SHALL SIZE AND PROVIDE ALL PULL BOXES, JUNCTION BOXES, MANHOLES, ETC. PER THE NATIONAL ELECTRICAL CODE.
2. POWER, CONTROLS, AND COMMUNICATIONS CONDUCTORS SHALL BE ROUTED IN SEPARATE CONDUITS.
3. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF JUNCTION BOXES AND CONDUIT ENTRANCES OF ALL EQUIPMENT AGAINST APPROVED SHOP DRAWINGS BEFORE STUBBING UP CONDUITS.
4. CONDUIT RUNS ARE SHOWN DIAGRAMMATICALLY ONLY AND SHALL BE INSTALLED IN A MANNER TO PREVENT CONFLICTS WITH EQUIPMENT OR STRUCTURAL CONDITIONS. EXPOSED CONDUIT SHALL BE INSTALLED PARALLEL OR PERPENDICULAR TO BEAMS AND WALLS AND NOT POSE A TRIPPING HAZARD.
5. IN THE EVENT OF INTERFERENCE BETWEEN ELECTRICAL EQUIPMENT SHOWN ON THE DRAWINGS AND OTHER EQUIPMENT, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN WRITING AND THE ENGINEER SHALL APPROVE PROPOSED CHANGES BEFORE THEY ARE MADE.
6. CONDUITS INSTALLED IN THIS CONTRACT SHALL BE SEALED AT BOTH ENDS SO HAZARDOUS GASES CANNOT ENTER.
7. EXISTING DUCT BANKS AND PIPING SHALL BE SUPPORTED TO PREVENT COLLAPSING IF DIGGING UNDERNEATH. CONTRACTOR IS RESPONSIBLE FOR PROVIDING LABOR AND MATERIALS FOR REPLACEMENT IF EXISTING DUCT BANK OR PIPING IS DAMAGED AT NO COST TO THE OWNER.
8. ELECTRICAL SYSTEMS INSTALLED IN HAZARDOUS LOCATIONS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST VERSION OF NEC CHAPTER 5, ARTICLE 500. ALL EQUIPMENT LOCATED IN HAZARDOUS AREAS SHALL BE SUITABLE FOR THE CLASS, DIVISION, AND GROUP RATING OF THE LOCATION.

NOTES BY SYMBOL "⬡"

1. CONTRACTOR SHALL FIELD VERIFY AND LOCATE EXISTING STUB UPS. REUSE EXISTING CONDUIT STUB UPS FOR THE MOTOR TO PROPOSED TERMINATION CABINET.
2. CONTRACTOR SHALL ROUTE FLEX CONDUIT TO "F-1064".
3. CONTRACTOR SHALL ROUTE FLEX CONDUIT TO "F-1065".
4. ELECTRICAL CONTRACTOR SHALL FIELD VERIFY AND RELOCATE EXISTING CONDUITS FOR DUCTWORK PENETRATION.



1 TOP LEVEL ROOM POWER PLAN
1/4" = 1'-0"

NORTH

0 2' 4' 8'
1/4"=1'-0"

ISSUED FOR BID

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2026

GEORGIA REGISTERED LIC. PE050516 PROFESSIONAL ENGINEER JEFFREY J. STOUT
10.22.2025

FREESE NICHOLS
2180 Satellite Boulevard
Suite 235
Duluth, GA 30097
Phone - (470) 645-3092
Web - www.freese.com

GWINNETT COUNTY DEPARTMENT OF WATER RESOURCE
SUWANEE CREEK DIVERSION PUMP STATION

ELECTRICAL
PUMP STATION
TOP LEVEL ROOM POWER PLAN

F&N JOB NO.	GWR24074
DATE	10/22/2025
DESIGNED	DC
DRAWN	JTR
CHECKED	-
APPROVED	JNH

NO.	ISSUE	BY	DATE
0	ISSUED FOR BID	JJS	10/22/2025

FILE NAME EL-GWR24074-EX-R23.RVT

VERIFY SCALE Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.
0 1"

SHEET E-9
SEQ. 97 OF 129

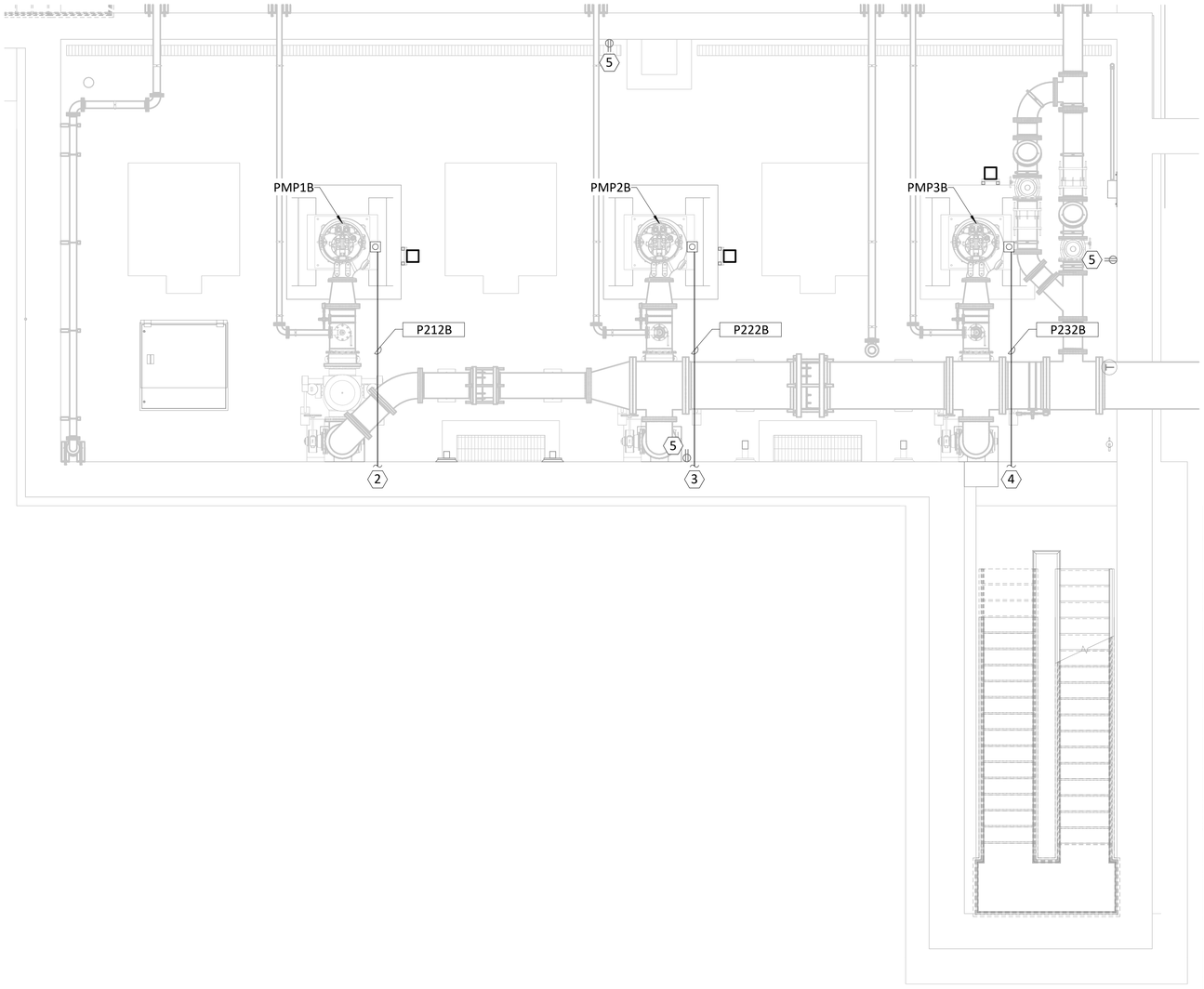
Plot Date: 10/21/2025 3:50:23 PM

GENERAL NOTES:

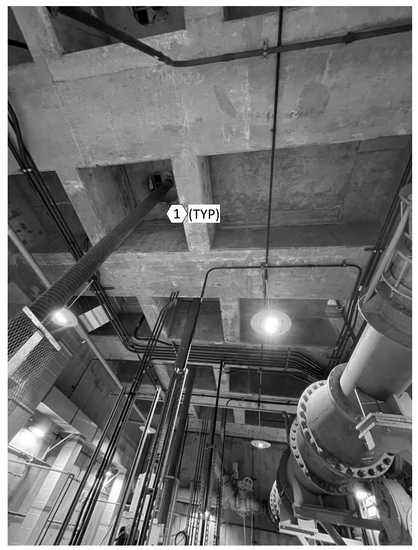
1. CONTRACTOR SHALL SIZE AND PROVIDE ALL PULL BOXES, JUNCTION BOXES, MANHOLES, ETC. PER THE NATIONAL ELECTRICAL CODE.
2. POWER, CONTROLS, AND COMMUNICATIONS CONDUCTORS SHALL BE ROUTED IN SEPARATE CONDUITS.
3. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF JUNCTION BOXES AND CONDUIT ENTRANCES OF ALL EQUIPMENT AGAINST APPROVED SHOP DRAWINGS BEFORE STUBBING UP CONDUITS.
4. CONDUIT RUNS ARE SHOWN DIAGRAMMATICALLY ONLY AND SHALL BE INSTALLED IN A MANNER TO PREVENT CONFLICTS WITH EQUIPMENT OR STRUCTURAL CONDITIONS. EXPOSED CONDUIT SHALL BE INSTALLED PARALLEL OR PERPENDICULAR TO BEAMS AND WALLS AND NOT POSE A TRIPPING HAZARD.
5. IN THE EVENT OF INTERFERENCE BETWEEN ELECTRICAL EQUIPMENT SHOWN ON THE DRAWINGS AND OTHER EQUIPMENT, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN WRITING AND THE ENGINEER SHALL APPROVE PROPOSED CHANGES BEFORE THEY ARE MADE.
6. CONDUITS INSTALLED IN THIS CONTRACT SHALL BE SEALED AT BOTH ENDS SO HAZARDOUS GASES CANNOT ENTER.
7. EXISTING DUCT BANKS AND PIPING SHALL BE SUPPORTED TO PREVENT COLLAPSING IF DIGGING UNDERNEATH. CONTRACTOR IS RESPONSIBLE FOR PROVIDING LABOR AND MATERIALS FOR REPLACEMENT IF EXISTING DUCT BANK OR PIPING IS DAMAGED AT NO COST TO THE OWNER.
8. ELECTRICAL SYSTEMS INSTALLED IN HAZARDOUS LOCATIONS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST VERSION OF NEC CHAPTER 5, ARTICLE 500. ALL EQUIPMENT LOCATED IN HAZARDOUS AREAS SHALL BE SUITABLE FOR THE CLASS, DIVISION, AND GROUP RATING OF THE LOCATION.

NOTES BY SYMBOL "⬡"

1. PULL NEW CONDUCTOR AND CONDUIT FROM THE PROPOSED PUMPS. IDENTIFY AND INTERCEPT EXISTING UNDERGROUND CONDUIT STUB UP ON THE MOTOR FLOOR LEVEL. UTILIZE EXISTING CONDUIT BETWEEN PROPOSED TERMINATION BOX TO INSTALL PROPOSED CONDUCTORS.
2. ROUTE CONDUIT TO TERMINATION JUNCTION BOX "TC-1B".
3. ROUTE CONDUIT TO TERMINATION JUNCTION BOX "TC-2B".
4. ROUTE CONDUIT TO TERMINATION JUNCTION BOX "TC-3B".
5. CONTRACTOR SHALL FIELD VERIFY AND ROUTE EXISTING 120V SOURCE TO "LP-01".



1 INTERMEDIATE LEVEL ROOM POWER PLAN
1/4" = 1'-0"



2 INTERMEDIATE LEVEL CEILING PHOTO
NOT TO SCALE

NORTH
0 2' 4' 8'
1/4"=1'-0"

ISSUED FOR BID

Plot Date: 10/21/2025 3:50:26 PM

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2026

GEORGIA REGISTERED LIC. PE050516 PROFESSIONAL ENGINEER JEFFREY J. STOUT
10.22.2025

FREESE NICHOLS
2180 Satellite Boulevard
Suite 235
Duluth, GA 30097
Phone - (470) 645-3092
Web - www.freese.com

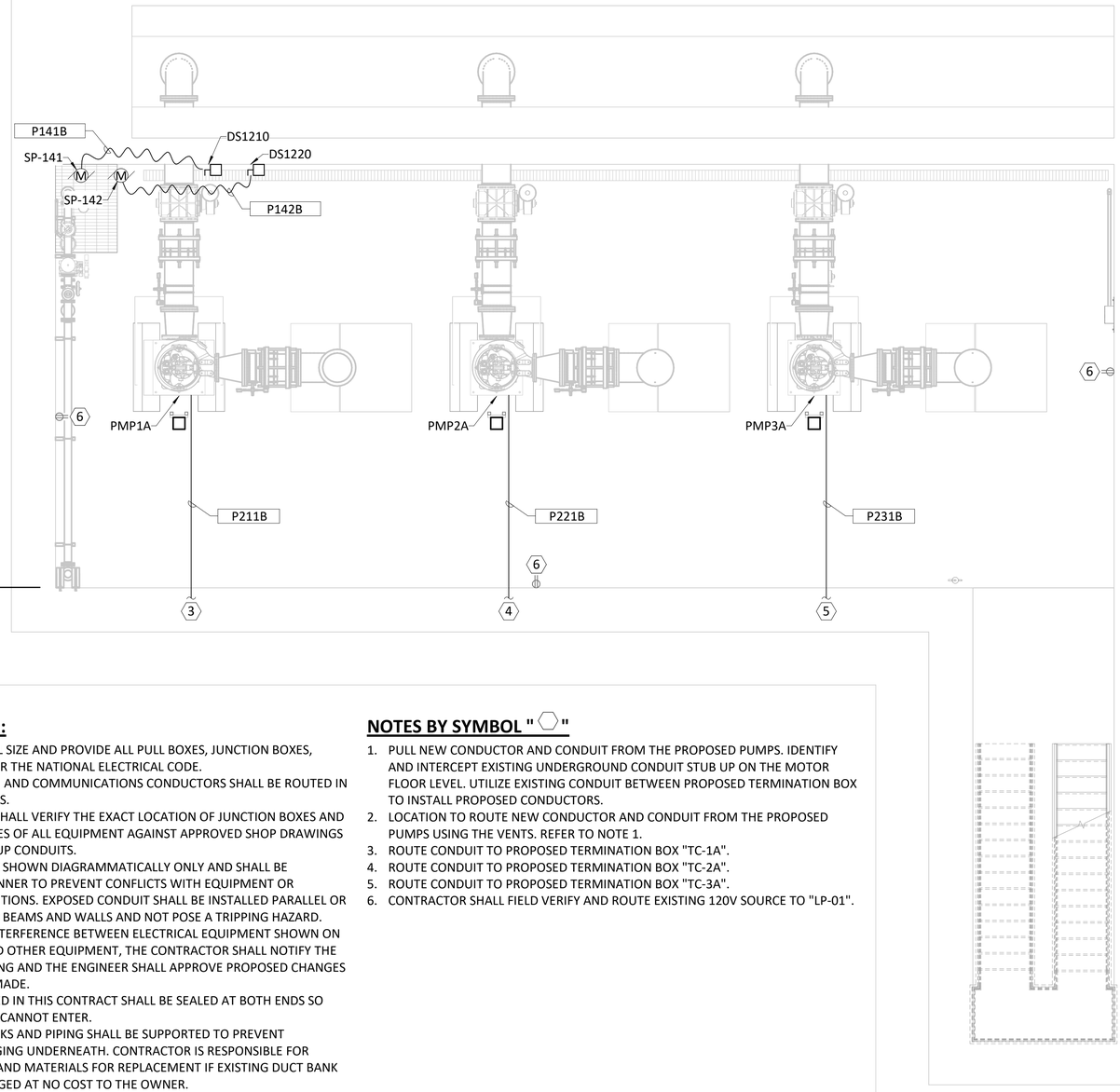
GWINNETT COUNTY DEPARTMENT OF WATER RESOURCE
SUWANEE CREEK DIVERSION PUMP STATION
ELECTRICAL
PUMP STATION
INTERMEDIATE LEVEL ROOM POWER PLAN

F&N JOB NO.	GWR24074
DATE	10/22/2025
DESIGNED	DC
DRAWN	JTR
CHECKED	-
APPROVED	JNH
FILE NAME	EL-GWR24074-EX-R23.RVT

NO.	ISSUE	BY	DATE
0	ISSUED FOR BID	JJS	10/22/2025

VERIFY SCALE
Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.
1 0

SHEET E-10
SEQ. 98 OF 129



GENERAL NOTES:

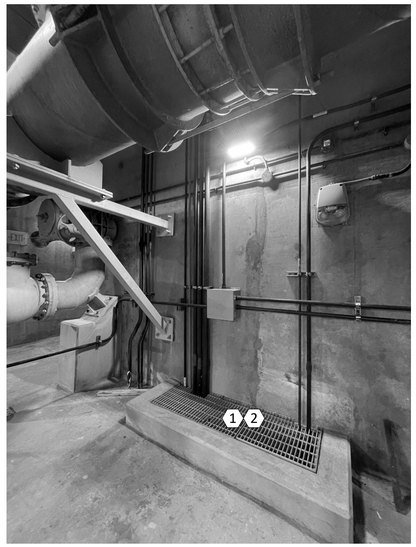
1. CONTRACTOR SHALL SIZE AND PROVIDE ALL PULL BOXES, JUNCTION BOXES, MANHOLES, ETC. PER THE NATIONAL ELECTRICAL CODE.
2. POWER, CONTROLS, AND COMMUNICATIONS CONDUCTORS SHALL BE ROUTED IN SEPARATE CONDUITS.
3. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF JUNCTION BOXES AND CONDUIT ENTRANCES OF ALL EQUIPMENT AGAINST APPROVED SHOP DRAWINGS BEFORE STUBBING UP CONDUITS.
4. CONDUIT RUNS ARE SHOWN DIAGRAMMATICALLY ONLY AND SHALL BE INSTALLED IN A MANNER TO PREVENT CONFLICTS WITH EQUIPMENT OR STRUCTURAL CONDITIONS. EXPOSED CONDUIT SHALL BE INSTALLED PARALLEL OR PERPENDICULAR TO BEAMS AND WALLS AND NOT POSE A TRIPPING HAZARD.
5. IN THE EVENT OF INTERFERENCE BETWEEN ELECTRICAL EQUIPMENT SHOWN ON THE DRAWINGS AND OTHER EQUIPMENT, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN WRITING AND THE ENGINEER SHALL APPROVE PROPOSED CHANGES BEFORE THEY ARE MADE.
6. CONDUITS INSTALLED IN THIS CONTRACT SHALL BE SEALED AT BOTH ENDS SO HAZARDOUS GASES CANNOT ENTER.
7. EXISTING DUCT BANKS AND PIPING SHALL BE SUPPORTED TO PREVENT COLLAPSING IF DIGGING UNDERNEATH. CONTRACTOR IS RESPONSIBLE FOR PROVIDING LABOR AND MATERIALS FOR REPLACEMENT IF EXISTING DUCT BANK OR PIPING IS DAMAGED AT NO COST TO THE OWNER.
8. ELECTRICAL SYSTEMS INSTALLED IN HAZARDOUS LOCATIONS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST VERSION OF NEC CHAPTER 5, ARTICLE 500. ALL EQUIPMENT LOCATED IN HAZARDOUS AREAS SHALL BE SUITABLE FOR THE CLASS, DIVISION, AND GROUP RATING OF THE LOCATION.

NOTES BY SYMBOL "⬡"

1. PULL NEW CONDUCTOR AND CONDUIT FROM THE PROPOSED PUMPS. IDENTIFY AND INTERCEPT EXISTING UNDERGROUND CONDUIT STUB UP ON THE MOTOR FLOOR LEVEL. UTILIZE EXISTING CONDUIT BETWEEN PROPOSED TERMINATION BOX TO INSTALL PROPOSED CONDUCTORS.
2. LOCATION TO ROUTE NEW CONDUCTOR AND CONDUIT FROM THE PROPOSED PUMPS USING THE VENTS. REFER TO NOTE 1.
3. ROUTE CONDUIT TO PROPOSED TERMINATION BOX "TC-1A".
4. ROUTE CONDUIT TO PROPOSED TERMINATION BOX "TC-2A".
5. ROUTE CONDUIT TO PROPOSED TERMINATION BOX "TC-3A".
6. CONTRACTOR SHALL FIELD VERIFY AND ROUTE EXISTING 120V SOURCE TO "LP-01".

1 LOWER LEVEL ROOM POWER PLAN
1/4" = 1'-0"

2 LOWER LEVEL CEILING PHOTO
NOT TO SCALE



3 INTERMEDIATE LEVEL TRAY PHOTO
NOT TO SCALE

NORTH

0 2' 4' 8'
1/4"=1'-0"

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2026

GEORGIA REGISTERED No. PE050516 PROFESSIONAL ENGINEER JEFFREY J. STOUT
10.22.2025

FREESE NICHOLS
2180 Satellite Boulevard
Suite 235
Duluth, GA 30097
Phone - (470) 645-3092
Web - www.freese.com

GWINNETT COUNTY DEPARTMENT OF WATER RESOURCE
SUWANEE CREEK DIVERSION PUMP STATION

ELECTRICAL
PUMP STATION
LOWER LEVEL ROOM POWER PLAN

F&N JOB NO.	GWR24074
DATE	10/22/2025
DESIGNED	DC
DRAWN	JTR
CHECKED	-
APPROVED	JNH
DATE	10/22/2025
BY	JJS
FILE NAME	EL-GWR24074-EX-R23.RVT

NO.	ISSUE
0	ISSUED FOR BID

VERIFY SCALE
Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.
1 0

SHEET
E-11
SEQ.
99 OF 129

ISSUED FOR BID

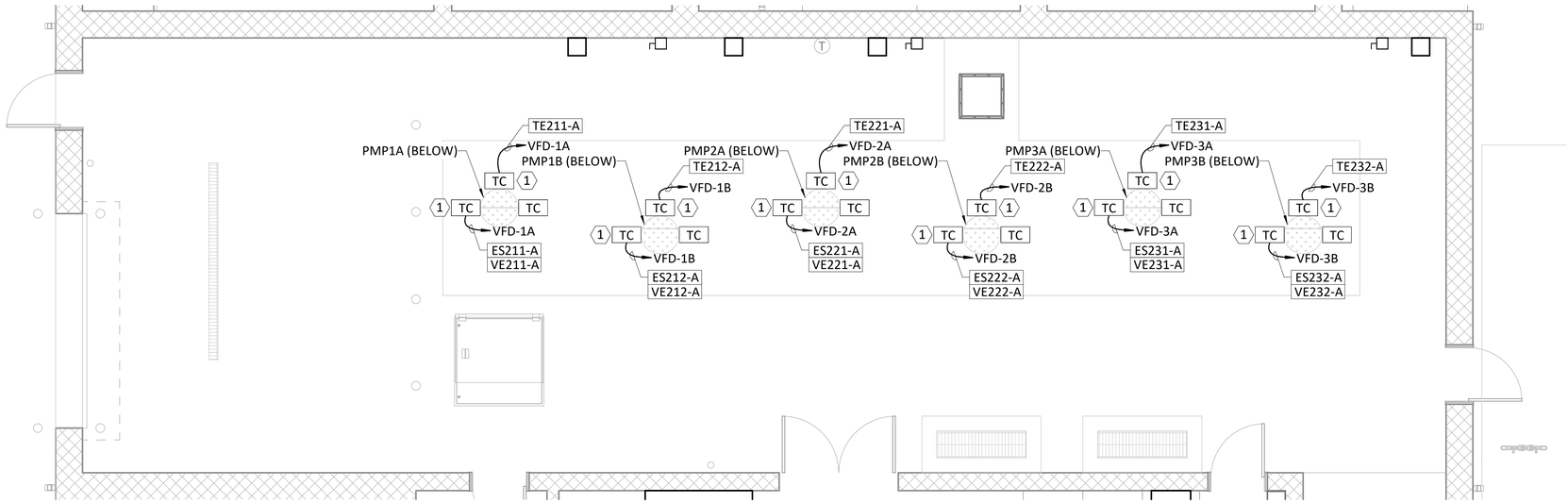
Plot Date: 10/21/2025 3:50:29 PM

GENERAL NOTES:

1. THE CONTRACTOR SHALL PROVIDE CONDUIT AS REQUIRED FOR TRANSITION BETWEEN EQUIPMENT. EACH CIRCUIT SHALL BE ROUTED IN ITS OWN CONDUIT. COMBINING CIRCUITS IN CONDUITS IS NOT PERMITTED UNLESS SPECIFIED OTHERWISE. CONDUIT SHALL BE PVC COATED ALUMINUM UNLESS SPECIFIED OTHERWISE.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SIZING AND PROVIDING ALL PULL BOXES AND JUNCTION BOXES AS REQUIRED BY THE NATIONAL ELECTRICAL CODE.
3. CONDUIT ENTERING AND EXITING A BUILDING STRUCTURE SHALL HAVE EXPANSION FITTINGS CAPABLE OF A 4" EXPANSION MINIMUM IN EITHER DIRECTION TO ACCOUNT FOR THE VERTICAL MOVEMENT OF THE BUILDING.
4. POWER, DISCRETE, ANALOG SIGNAL AND COMMUNICATION CONDUCTORS SHALL BE ROUTED IN SEPARATE CONDUITS.
5. EQUIPMENT ENCLOSURES WITHIN THE NEW ELECTRICAL BUILDING SHALL BE NEMA 1 UNLESS SPECIFIED OTHERWISE. EQUIPMENT LOCATED OUTDOORS OR WITHIN THE LIFT STATION BUILDING SHALL BE NEMA 4X.
6. CONDUIT RUNS ARE SHOWN DIAGRAMMATICALLY ONLY AND SHALL BE INSTALLED IN A MANNER TO PREVENT CONFLICTS WITH EQUIPMENT OR STRUCTURAL CONDITIONS. EXPOSED CONDUIT SHALL BE INSTALLED PARALLEL OR PERPENDICULAR TO BEAMS AND WALLS. CONDUIT SHALL NOT BE ROUTED ON THE FLOOR OR CREATE A TRIPPING HAZARD IN ANY WAY.
7. STUB UP AND CAP ALL SPARE CONDUITS AT THE FLOOR WITH A PULL STRING. COORDINATE WITH OTHER DISCIPLINES FOR STUB UP LOCATIONS. STUB UPS SHALL NOT BE MADE THROUGH GRADE BEAM OF THE BUILDING.
8. EQUIPMENT SHOWN DARK TO BE PROVIDED UNDER THIS CONTRACT. EQUIPMENT SHOWN LIGHT IS EXISTING AS INDICATED. EQUIPMENT SHOWN LIGHT AND DASHED IS FUTURE AS INDICATED.
9. 120V CIRCUITS FEEDING MISCELLANEOUS EQUIPMENT TO BE 2 #12, #12G., 3/4"C. UNLESS NOTED OTHERWISE.
10. ELECTRICAL SYSTEMS INSTALLED IN HAZARDOUS LOCATIONS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST VERSION OF NEC CHAPTER 5, ARTICLE 500. ALL EQUIPMENT LOCATED IN HAZARDOUS AREAS SHALL BE SUITABLE FOR THE CLASS, DIVISION, AND GROUP RATING OF THE LOCATION.
11. ROUTE UNDERGROUND CONDUITS BELOW THE FOUNDATION AND STUB UP AT EQUIPMENT. EXACT CONDUIT STUB-UP LOCATIONS TO BE VERIFIED WITH THE EQUIPMENT MANUFACTURER.
12. IN THE EVENT OF INTERFERENCE BETWEEN ELECTRICAL EQUIPMENT SHOWN ON THE DRAWINGS AND OTHER EQUIPMENT, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN WRITING AND THE ENGINEER SHALL APPROVE PROPOSED CHANGES BEFORE THEY ARE MADE.
13. CONDUITS INSTALLED IN THIS CONTRACT SHALL BE SEALED AT BOTH ENDS SO HAZARDOUS GASES CANNOT ENTER.
14. EXISTING DUCT BANKS AND PIPING SHALL BE SUPPORTED TO PREVENT COLLAPSING IF DIGGING UNDERNEATH. CONTRACTOR IS RESPONSIBLE FOR PROVIDING LABOR AND MATERIALS FOR REPLACEMENT IF EXISTING DUCT BANK OR PIPING IS DAMAGED AT NO COST TO THE OWNER.

NOTES BY SYMBOL "⬡"

1. CONTRACTOR SHALL FIELD VERIFY AND LOCATE EXISTING STUB UPS. REUSE EXISTING STUB UPS FOR DISCRETE, ANALOG, AND COMMUNICATION TO PROPOSED TERMINATION CABINET.



1 TOP LEVEL ROOM INSTRUMENTATION & CONTROLS PLAN
1/4" = 1'-0"

NORTH

0 2' 4' 8'
1/4"=1'-0"

ISSUED FOR BID

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2026

GEORGIA REGISTERED LIC. PE050516 PROFESSIONAL ENGINEER JEFFREY J. STOUT
10.22.2025

FREESE NICHOLS
2180 Satellite Boulevard
Suite 235
Duluth, GA 30097
Phone - (470) 645-3092
Web - www.freese.com

GWINNETT COUNTY DEPARTMENT OF WATER RESOURCE
SUWANEE CREEK DIVERSION PUMP STATION
ELECTRICAL
PUMP STATION
TOP LEVEL ROOM I&C PLAN

F&N JOB NO.	GWR24074
DATE	10/22/2025
DESIGNED	DC
DRAWN	JTR
CHECKED	-
APPROVED	JNH

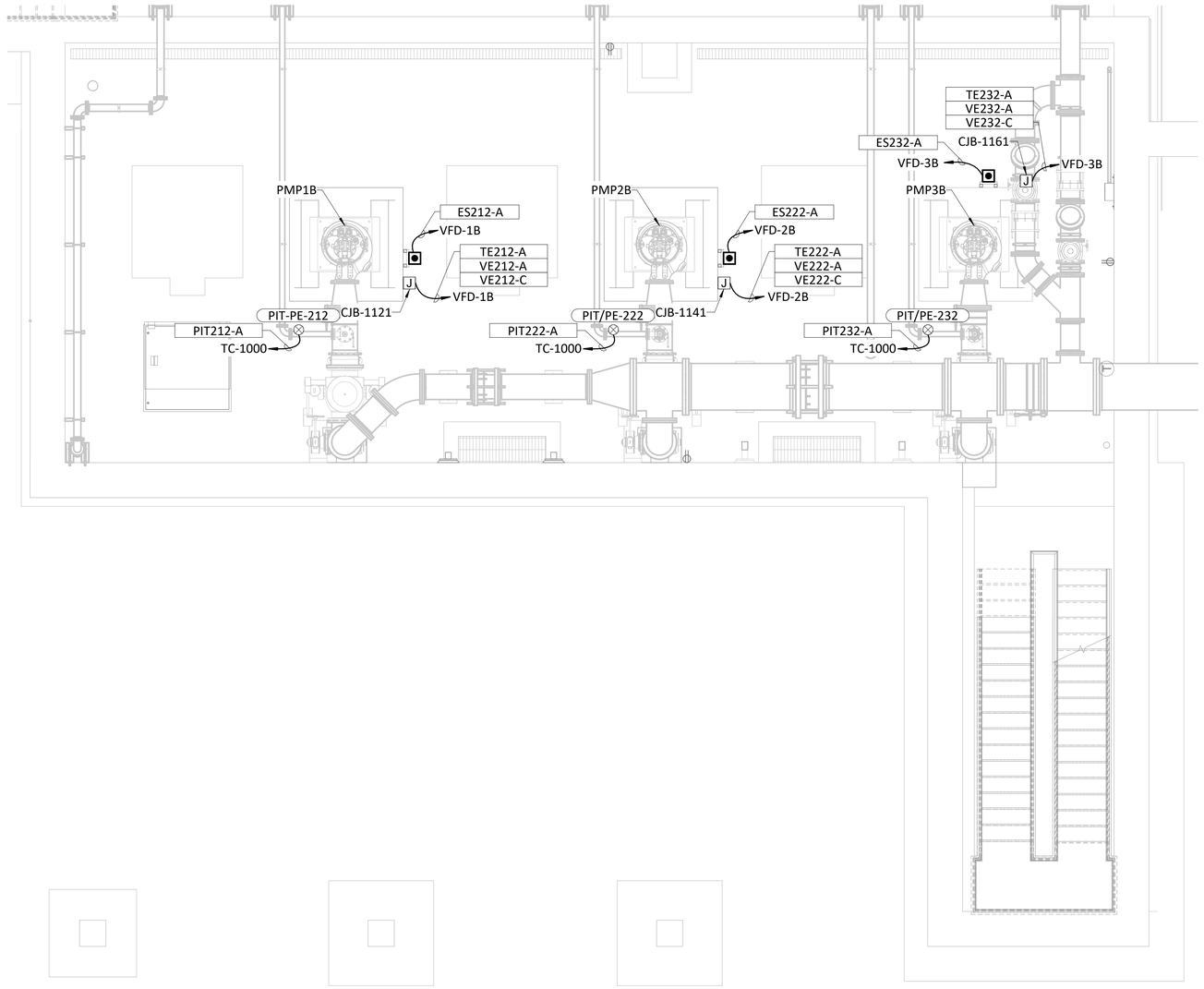
NO.	ISSUE	BY	DATE
0	ISSUED FOR BID	JJS	10/22/2025

FILE NAME EL-GWR24074-EX-R23.RVT

VERIFY SCALE Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.
0 1

SHEET E-12
SEQ. 100 OF 129

Plot Date: 10/21/2025 3:50:30 PM



1 INTERMEDIATE LEVEL ROOM
INSTRUMENTATION & CONTROLS PLAN
1/4" = 1'-0"

GENERAL NOTES:

1. THE CONTRACTOR SHALL PROVIDE CONDUIT AS REQUIRED FOR TRANSITION BETWEEN EQUIPMENT. EACH CIRCUIT SHALL BE ROUTED IN ITS OWN CONDUIT. COMBINING CIRCUITS IN CONDUITS IS NOT PERMITTED UNLESS SPECIFIED OTHERWISE. CONDUIT SHALL BE PVC COATED ALUMINUM UNLESS SPECIFIED OTHERWISE.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SIZING AND PROVIDING ALL PULL BOXES AND JUNCTION BOXES AS REQUIRED BY THE NATIONAL ELECTRICAL CODE.
3. CONDUIT ENTERING AND EXITING A BUILDING STRUCTURE SHALL HAVE EXPANSION FITTINGS CAPABLE OF A 4" EXPANSION MINIMUM IN EITHER DIRECTION TO ACCOUNT FOR THE VERTICAL MOVEMENT OF THE BUILDING.
4. POWER, DISCRETE, ANALOG SIGNAL AND COMMUNICATION CONDUCTORS SHALL BE ROUTED IN SEPARATE CONDUITS.
5. EQUIPMENT ENCLOSURES WITHIN THE NEW ELECTRICAL BUILDING SHALL BE NEMA 1 UNLESS SPECIFIED OTHERWISE. EQUIPMENT LOCATED OUTDOORS OR WITHIN THE LIFT STATION BUILDING SHALL BE NEMA 4X.
6. CONDUIT RUNS ARE SHOWN DIAGRAMMATICALLY ONLY AND SHALL BE INSTALLED IN A MANNER TO PREVENT CONFLICTS WITH EQUIPMENT OR STRUCTURAL CONDITIONS. EXPOSED CONDUIT SHALL BE INSTALLED PARALLEL OR PERPENDICULAR TO BEAMS AND WALLS. CONDUIT SHALL NOT BE ROUTED ON THE FLOOR OR CREATE A TRIPPING HAZARD IN ANY WAY.
7. STUB UP AND CAP ALL SPARE CONDUITS AT THE FLOOR WITH A PULL STRING. COORDINATE WITH OTHER DISCIPLINES FOR STUB UP LOCATIONS. STUB UPS SHALL NOT BE MADE THROUGH GRADE BEAM OF THE BUILDING.
8. EQUIPMENT SHOWN DARK TO BE PROVIDED UNDER THIS CONTRACT. EQUIPMENT SHOWN LIGHT IS EXISTING AS INDICATED. EQUIPMENT SHOWN LIGHT AND DASHED IS FUTURE AS INDICATED.
9. 120V CIRCUITS FEEDING MISCELLANEOUS EQUIPMENT TO BE 2 #12, #12G., 3/4"C. UNLESS NOTED OTHERWISE.
10. ELECTRICAL SYSTEMS INSTALLED IN HAZARDOUS LOCATIONS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST VERSION OF NEC CHAPTER 5, ARTICLE 500. ALL EQUIPMENT LOCATED IN HAZARDOUS AREAS SHALL BE SUITABLE FOR THE CLASS, DIVISION, AND GROUP RATING OF THE LOCATION.
11. ROUTE UNDERGROUND CONDUITS BELOW THE FOUNDATION AND STUB UP AT EQUIPMENT. EXACT CONDUIT STUB-UP LOCATIONS TO BE VERIFIED WITH THE EQUIPMENT MANUFACTURER.
12. IN THE EVENT OF INTERFERENCE BETWEEN ELECTRICAL EQUIPMENT SHOWN ON THE DRAWINGS AND OTHER EQUIPMENT, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN WRITING AND THE ENGINEER SHALL APPROVE PROPOSED CHANGES BEFORE THEY ARE MADE.
13. CONDUITS INSTALLED IN THIS CONTRACT SHALL BE SEALED AT BOTH ENDS SO HAZARDOUS GASES CANNOT ENTER.
14. EXISTING DUCT BANKS AND PIPING SHALL BE SUPPORTED TO PREVENT COLLAPSING IF DIGGING UNDERNEATH. CONTRACTOR IS RESPONSIBLE FOR PROVIDING LABOR AND [illegible] IF EXISTING DUCT BANK OR PIPING IS DAMAGED AT NO COST

NOTES BY SYMBOL "⬡"

1. MOUNT EMERGENCY STOP BUTTON IN NEMA 4X ENCLOSURE FOR EACH PUMP.

NORTH

0 2' 4' 8'
1/4"=1'-0"

ISSUED FOR BID

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2026

GEORGIA REGISTERED PE050516 PROFESSIONAL ENGINEER JEFFREY J. STOUT
10.22.2025

FREESE NICHOLS
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Duluth, GA 30097
Phone - (470) 645-3092
Web - www.freese.com

GWINNETT COUNTY DEPARTMENT OF WATER RESOURCE
SUWANEE CREEK DIVERSION PUMP STATION

ELECTRICAL
PUMP STATION
INTERMEDIATE LEVEL ROOM I&C PLAN

F&N JOB NO.	GWR24074
DATE	10/22/2025
DESIGNED	DC
DRAWN	JTR
CHECKED	-
APPROVED	JNH

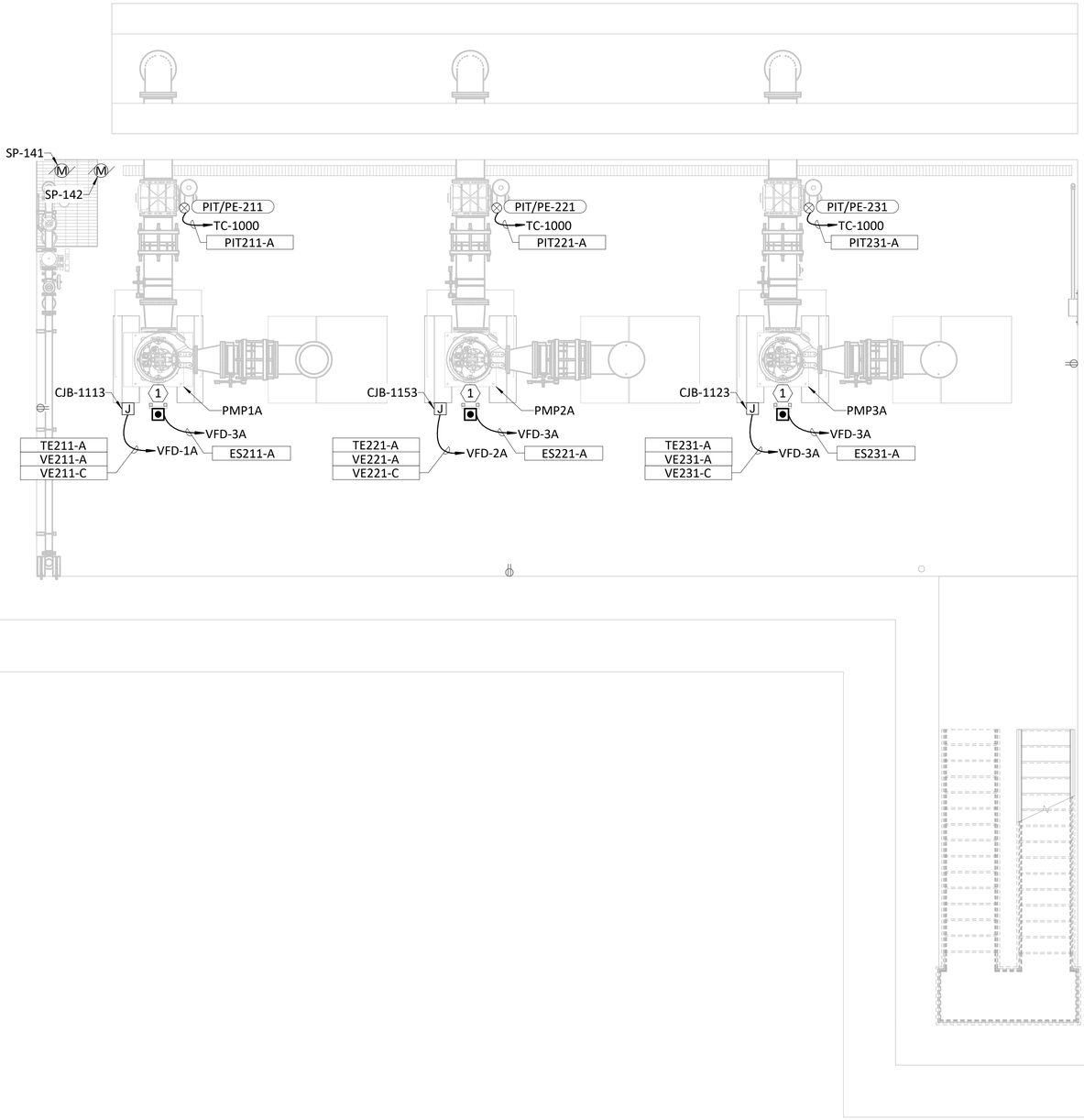
NO.	ISSUE	BY	DATE
0	ISSUED FOR BID	JJS	10/22/2025

FILE NAME EL-GWR24074-EX-R23.RVT

VERIFY SCALE Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.
0 1"

SHEET E-13
SEQ. 101 OF 129

Plot Date: 10/21/2025 3:50:33 PM



1 LOWER LEVEL ROOM INSTRUMENTATION & CONTROLS PLAN
1/4" = 1'-0"

GENERAL NOTES:

1. THE CONTRACTOR SHALL PROVIDE CONDUIT AS REQUIRED FOR TRANSITION BETWEEN EQUIPMENT. EACH CIRCUIT SHALL BE ROUTED IN ITS OWN CONDUIT. COMBINING CIRCUITS IN CONDUITS IS NOT PERMITTED UNLESS SPECIFIED OTHERWISE. CONDUIT SHALL BE PVC COATED ALUMINUM UNLESS SPECIFIED OTHERWISE.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SIZING AND PROVIDING ALL PULL BOXES AND JUNCTION BOXES AS REQUIRED BY THE NATIONAL ELECTRICAL CODE.
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4. POWER, DISCRETE, ANALOG SIGNAL AND COMMUNICATION CONDUCTORS SHALL BE ROUTED IN SEPARATE CONDUITS.
5. EQUIPMENT ENCLOSURES WITHIN THE NEW ELECTRICAL BUILDING SHALL BE NEMA 1 UNLESS SPECIFIED OTHERWISE. EQUIPMENT LOCATED OUTDOORS OR WITHIN THE LIFT STATION BUILDING SHALL BE NEMA 4X.
6. CONDUIT RUNS ARE SHOWN DIAGRAMMATICALLY ONLY AND SHALL BE INSTALLED IN A MANNER TO PREVENT CONFLICTS WITH EQUIPMENT OR STRUCTURAL CONDITIONS. EXPOSED CONDUIT SHALL BE INSTALLED PARALLEL OR PERPENDICULAR TO BEAMS AND WALLS. CONDUIT SHALL NOT BE ROUTED ON THE FLOOR OR CREATE A TRIPPING HAZARD IN ANY WAY.
7. STUB UP AND CAP ALL SPARE CONDUITS AT THE FLOOR WITH A PULL STRING. COORDINATE WITH OTHER DISCIPLINES FOR STUB UP LOCATIONS. STUB UPS SHALL NOT BE MADE THROUGH GRADE BEAM OF THE BUILDING.
8. EQUIPMENT SHOWN DARK TO BE PROVIDED UNDER THIS CONTRACT. EQUIPMENT SHOWN LIGHT IS EXISTING AS INDICATED. EQUIPMENT SHOWN LIGHT AND DASHED IS FUTURE AS INDICATED.
9. 120V CIRCUITS FEEDING MISCELLANEOUS EQUIPMENT TO BE 2 #12, #12G., 3/4"C. UNLESS NOTED OTHERWISE.
10. ELECTRICAL SYSTEMS INSTALLED IN HAZARDOUS LOCATIONS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST VERSION OF NEC CHAPTER 5, ARTICLE 500. ALL EQUIPMENT LOCATED IN HAZARDOUS AREAS SHALL BE SUITABLE FOR THE CLASS, DIVISION, AND GROUP RATING OF THE LOCATION.
11. ROUTE UNDERGROUND CONDUITS BELOW THE FOUNDATION AND STUB UP AT EQUIPMENT. EXACT CONDUIT STUB-UP LOCATIONS TO BE VERIFIED WITH THE EQUIPMENT MANUFACTURER.
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13. CONDUITS INSTALLED IN THIS CONTRACT SHALL BE SEALED AT BOTH ENDS SO HAZARDOUS GASES CANNOT ENTER.
14. EXISTING DUCT BANKS AND PIPING SHALL BE SUPPORTED TO PREVENT COLLAPSING IF DIGGING UNDERNEATH. CONTRACTOR IS RESPONSIBLE FOR PROVIDING LABOR AND MATERIALS FOR REPLACEMENT IF EXISTING DUCT BANK OR PIPING IS DAMAGED AT NO COST TO THE OWNER.

NOTES BY SYMBOL "⬡"

1. MOUNT EMERGENCY STOP BUTTON IN NEMA 4X ENCLOSURE FOR EACH PUMP.

NORTH

0 2' 4' 8'
1/4"=1'-0"

ISSUED FOR BID

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2026

GEORGIA REGISTERED PE050516 PROFESSIONAL ENGINEER JEFFREY J. STOUT
10.22.2025

FREESE AND NICHOLS
2180 Satellite Boulevard
Suite 235
Duluth, GA 30097
Phone - (470) 645-3092
Web - www.freese.com

GWINNETT COUNTY DEPARTMENT OF WATER RESOURCE
SUWANEE CREEK DIVERSION PUMP STATION
ELECTRICAL
PUMP STATION
LOWER LEVEL ROOM I&C PLAN

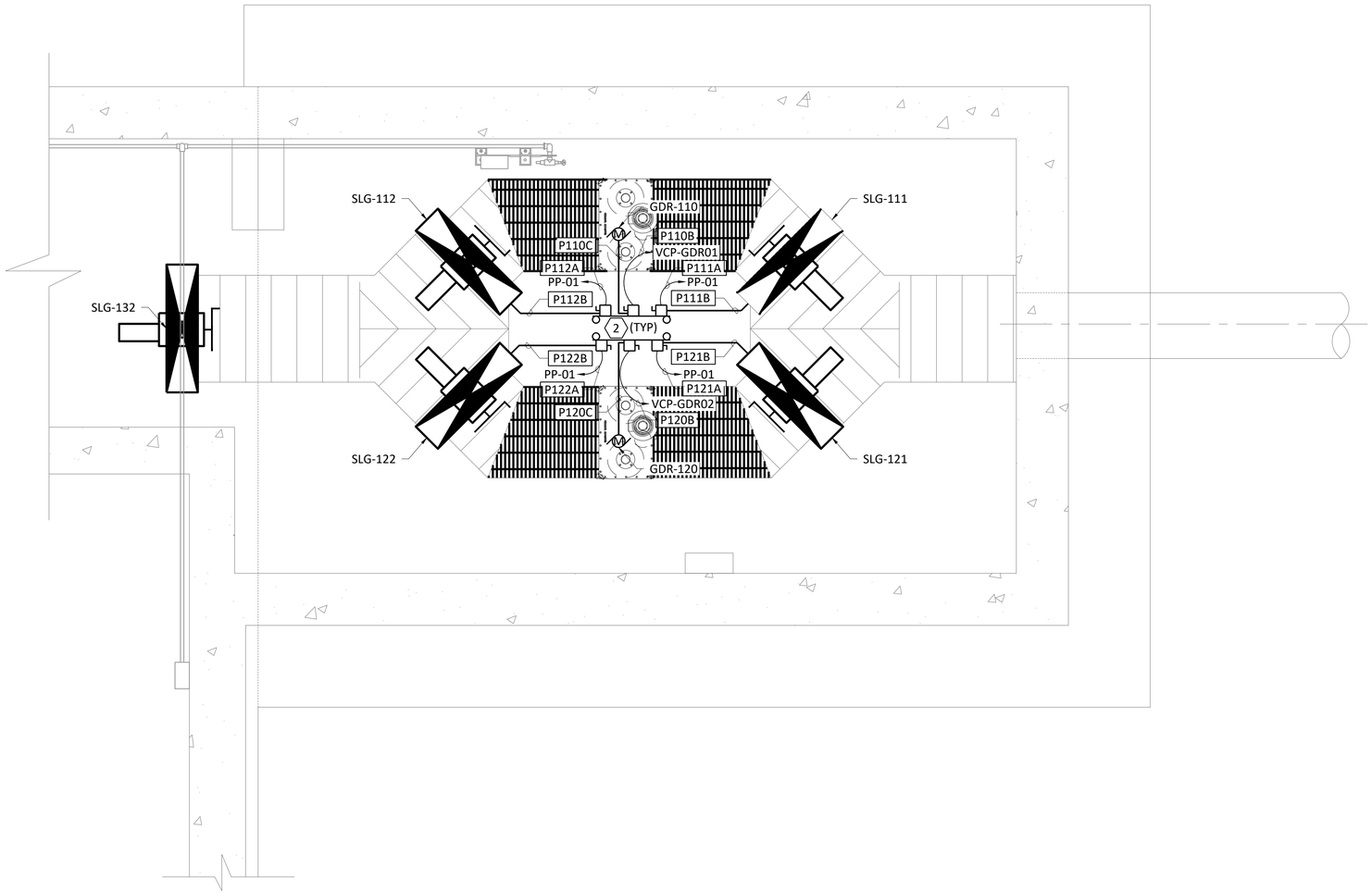
F&N JOB NO. GWR24074
DATE 10/22/2025
DESIGNED DC
DRAWN JTR
CHECKED -
APPROVED JNH
FILE NAME EL-GWR24074-EX-R23.RVT

NO.	ISSUE	BY	DATE
0	ISSUED FOR BID	JJS	10/22/2025

VERIFY SCALE Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.
0 1"

SHEET E-14
SEQ. 102 OF 129

Plot Date: 10/21/2025 3:50:37 PM



1
-

GRINDER AREA
POWER, INSTRUMENTATION, & CONTROLS PLAN

3/8" = 1'-0"

GENERAL NOTES:

1. THE CONTRACTOR SHALL PROVIDE CONDUIT AS REQUIRED FOR TRANSITION BETWEEN EQUIPMENT. EACH CIRCUIT SHALL BE ROUTED IN ITS OWN CONDUIT. COMBINING CIRCUITS IN CONDUITS IS NOT PERMITTED UNLESS SPECIFIED OTHERWISE. CONDUIT SHALL BE PVC COATED ALUMINUM UNLESS SPECIFIED OTHERWISE.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SIZING AND PROVIDING ALL PULL BOXES AND JUNCTION BOXES AS REQUIRED BY THE NATIONAL ELECTRICAL CODE.
3. CONDUIT ENTERING AND EXITING A BUILDING STRUCTURE SHALL HAVE EXPANSION FITTINGS CAPABLE OF A 4" EXPANSION MINIMUM IN EITHER DIRECTION TO ACCOUNT FOR THE VERTICAL MOVEMENT OF THE BUILDING.
4. POWER, DISCRETE, ANALOG SIGNAL AND COMMUNICATION CONDUCTORS SHALL BE ROUTED IN SEPARATE CONDUITS.
5. EQUIPMENT ENCLOSURE WITHIN CLASSIFIED AND HAZARDOUS SPACE SHALL MEET NFPA 820 AND NEC ARTICLE 500 REQUIREMENTS FOR EXPLOSION PROOF.
6. CONDUIT RUNS ARE SHOWN DIAGRAMMATICALLY ONLY AND SHALL BE INSTALLED IN A MANNER TO PREVENT CONFLICTS WITH EQUIPMENT OR STRUCTURAL CONDITIONS. EXPOSED CONDUIT SHALL BE INSTALLED PARALLEL OR PERPENDICULAR TO BEAMS AND WALLS. CONDUIT SHALL NOT BE ROUTED ON THE FLOOR OR CREATE A TRIPPING HAZARD IN ANY WAY.
7. STUB UP AND CAP ALL SPARE CONDUITS AT THE FLOOR WITH A PULL STRING. COORDINATE WITH OTHER DISCIPLINES FOR STUB UP LOCATIONS. STUB UPS SHALL NOT BE MADE THROUGH GRADE BEAM OF THE BUILDING.
8. EQUIPMENT SHOWN DARK TO BE PROVIDED UNDER THIS CONTRACT. EQUIPMENT SHOWN LIGHT IS EXISTING AS INDICATED. EQUIPMENT SHOWN LIGHT AND DASHED IS FUTURE AS INDICATED.
9. 120V CIRCUITS FEEDING MISCELLANEOUS EQUIPMENT TO BE 2 #12, #12G., 3/4"C. UNLESS NOTED OTHERWISE.
10. PROVIDE LIQUIDTIGHT FLEXIBLE METALLIC CONDUIT TO CONNECT TO TRANSFORMER.
11. ROUTE UNDERGROUND CONDUITS BELOW THE FOUNDATION AND STUB UP AT EQUIPMENT. EXACT CONDUIT STUB-UP LOCATIONS TO BE VERIFIED WITH THE EQUIPMENT MANUFACTURER.
12. IN THE EVENT OF INTERFERENCE BETWEEN ELECTRICAL EQUIPMENT SHOWN ON THE DRAWINGS AND OTHER EQUIPMENT, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN WRITING AND THE ENGINEER SHALL APPROVE PROPOSED CHANGES BEFORE THEY ARE MADE.
13. CONDUITS INSTALLED IN THIS CONTRACT SHALL BE SEALED AT BOTH ENDS SO HAZARDOUS GASES CANNOT ENTER.
14. EXISTING DUCT BANKS AND PIPING SHALL BE SUPPORTED TO PREVENT COLLAPSING IF DIGGING UNDERNEATH. CONTRACTOR IS RESPONSIBLE FOR PROIVIDING LABOR AND MATERIALS FOR REPLACEMENT IF EXISTING DUCT BANK OR PIPING IS DAMAGED AT NO COST TO THE OWNER.

NOTES BY SYMBOL "⬡"

1. GRINDER AREA SHALL BE CLASSIFIED CLASS I, DIV 1, GROUP D IN ACCORDANCE WITH NFPA 820-2020, TABLE 4.2.2, ROW 14 LINE A.
2. EQUIPMENT RACK, UNISTRUCT, FUSIBLE DISCONNECT, ANY ADDITIONAL ELECTRICAL EQUIPMENT SHALL BE RATED EXPLOSION PROOF PER NEC ARTICLE 500.

NORTH

0 1' 2' 4'
3/8"=1'-0

ISSUED FOR BID

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2026

GEORGIA REGISTERED No. PE050516 PROFESSIONAL ENGINEER JEFFREY J. STOUT
10.22.2025

FREESE NICHOLS
2180 Satellite Boulevard
Suite 235
Duluth, Georgia 30097
Phone - (470)-645-3092
Web - www.freese.com

GWINNETT COUNTY DEPARTMENT OF WATER RESOURCE
SUWANEE CREEK DIVERSION PUMP STATION

ELECTRICAL
GRINDER AREA
POWER, INSTRUMENTATION, & CONTROLS PLAN

NO.	ISSUE	BY	DATE
1	ISSUED FOR BID	JJS	10/22/2025

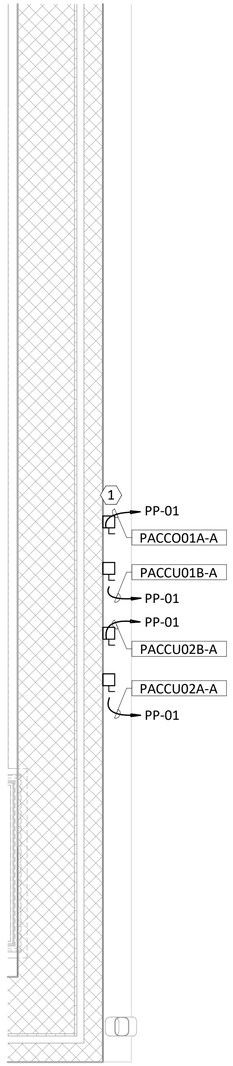
VERIFY SCALE Bar Scale is one inch on original drawing. If not one inch on this sheet, adjust scale. 0 1

F&N JOB NO. GWR24074
DATE 10/22/2025
DESIGNED DC
DRAWN JTR
CHECKED JNH
APPROVED JJS
FILE NAME EL-ALL-PL-CTRL01.dwg

SHEET E-15
SEQ. 103 OF 129

ACAD Rel: 24.2
Filename: N:\ELEC\EL-ALL-PL-CTRL01.dwg
Last Saved: 10/7/2025 8:33 AM Saved By: 04169

Plot Date: 10/21/2025 3:57 PM Plot By: 04169 Filename: N:\ELEC\EL-ALL-PL-CTRL01.dwg



ACCU01-A 2

ACCU01-B 2

ACCU02-A 2

ACCU02-B 2

1 HVAC POWER PLAN
3/4" = 1'-0"

GENERAL NOTES:

1. CONTRACTOR SHALL SIZE AND PROVIDE ALL PULL BOXES, JUNCTION BOXES, MANHOLES, ETC. PER THE NATIONAL ELECTRICAL CODE.
2. POWER, CONTROLS, AND COMMUNICATIONS CONDUCTORS SHALL BE ROUTED IN SEPARATE CONDUITS.
3. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF JUNCTION BOXES AND CONDUIT ENTRANCES OF ALL EQUIPMENT AGAINST APPROVED SHOP DRAWINGS BEFORE STUBBING UP CONDUITS.
4. CONDUIT RUNS ARE SHOWN DIAGRAMMATICALLY ONLY AND SHALL BE INSTALLED IN A MANNER TO PREVENT CONFLICTS WITH EQUIPMENT OR STRUCTURAL CONDITIONS. EXPOSED CONDUIT SHALL BE INSTALLED PARALLEL OR PERPENDICULAR TO BEAMS AND WALLS AND NOT POSE A TRIPPING HAZARD.
5. IN THE EVENT OF INTERFERENCE BETWEEN ELECTRICAL EQUIPMENT SHOWN ON THE DRAWINGS AND OTHER EQUIPMENT, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN WRITING AND THE ENGINEER SHALL APPROVE PROPOSED CHANGES BEFORE THEY ARE MADE.
6. CONDUITS INSTALLED IN THIS CONTRACT SHALL BE SEALED AT BOTH ENDS SO HAZARDOUS GASES CANNOT ENTER.
7. EXISTING DUCT BANKS AND PIPING SHALL BE SUPPORTED TO PREVENT COLLAPSING IF DIGGING UNDERNEATH. CONTRACTOR IS RESPONSIBLE FOR PROVIDING LABOR AND MATERIALS FOR REPLACEMENT IF EXISTING DUCT BANK OR PIPING IS DAMAGED AT NO COST TO THE OWNER.

NOTES BY SYMBOL "⬡"

1. FIELD VERIFY AND LOCATE EXISTING 120V RECEPTACLE. ROUTE EXISTING CONDUIT AND CABLE TO "LP-01".
2. FIELD VERIFY AND LOCATE EXISTING HVAC UNIT. ROUTE EXISTING CONDUIT AND CABLE TO "PP-01".

NORTH

0 6" 1' 2'
3/4"=1'-0"

ISSUED FOR BID

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2026

GEORGIA REGISTERED PE050516 PROFESSIONAL ENGINEER JEFFREY J. STOUT
10.22.2025

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GWINNETT COUNTY DEPARTMENT OF WATER RESOURCE
SUWANEE CREEK DIVERSION PUMP STATION

ELECTRICAL
PUMP STATION
HVAC POWER PLAN

F&N JOB NO. GWR24074
DATE 10/22/2025
DESIGNED DC
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NO.	ISSUE	DATE	BY
0	ISSUED FOR BID	10/22/2025	JJS

VERIFY SCALE
Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.
0 1"

SHEET
E-16

SEQ.
104 OF 129

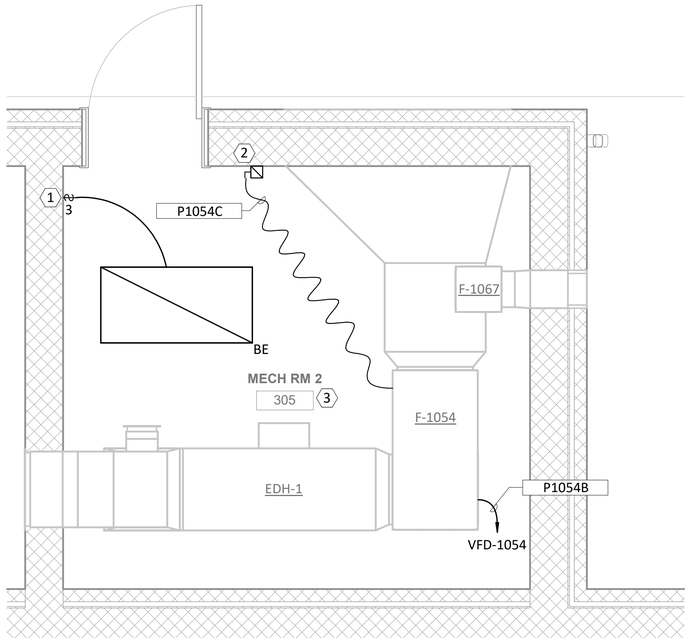
Plot Date: 10/21/2025 3:50:37 PM

GENERAL NOTES:

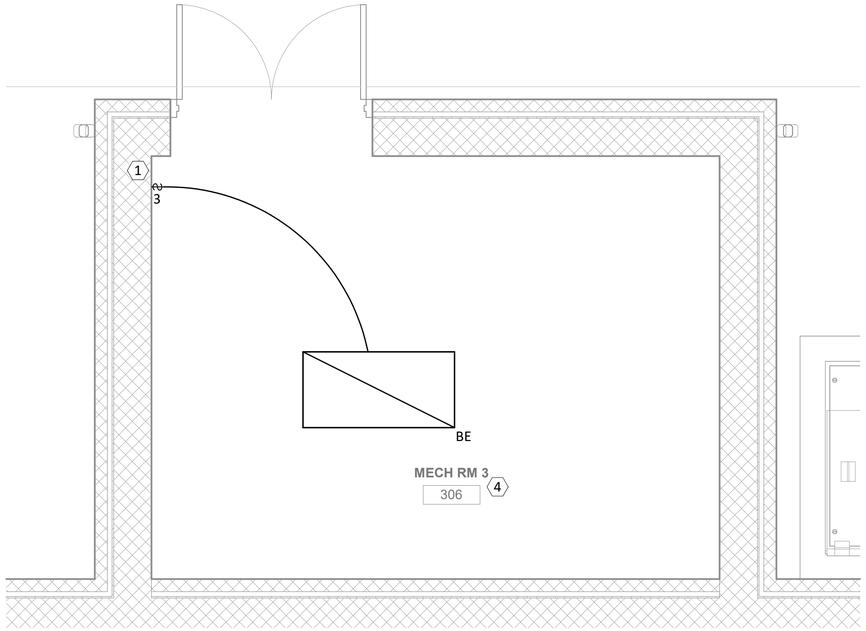
1. THE CONTRACTOR SHALL PROVIDE CONDUIT AS REQUIRED FOR TRANSITION BETWEEN EQUIPMENT EACH CIRCUIT SHALL BE ROUTED IN IT'S OWN CONDUIT. COMBINING CIRCUITS IN CONDUITS IS NOT PERMITTED UNLESS SPECIFIED OTHERWISE. CONDUIT SHALL BE PVC COATED ALUMINUM UNLESS SPECIFIED OTHERWISE.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SIZING AND PROVIDING ALL PULL BOXES AND JUNCTION BOXES AS REQUIRED BY THE NATIONAL ELECTRICAL CODE.
3. CONDUIT ENTERING AND EXITING A BUILDING STRUCTURE SHALL HAVE EXPANSION FITTINGS CAPABLE OF A 4" EXPANSION MINIMUM IN EITHER DIRECTION TO ACCOUNT FOR THE VERTICAL MOVEMENT OF THE BUILDING.
4. POWER, DISCRETE, ANALOG SIGNAL AND COMMUNICATION CONDUCTORS SHALL BE ROUTED IN SEPARATE CONDUITS.
5. EQUIPMENT ENCLOSURES WITHIN THE NEW ELECTRICAL BUILDING SHALL BE NEMA1 UNLESS SPECIFIED OTHERWISE. EQUIPMENT LOCATED OUTDOORS OR WITHIN THE LIFT STATION BUILDING SHALL BE NEMA 4X.
6. ALL LIGHTING SHALL BE #10, #10G., 3/4"C. UNLESS NOTED OTHERWISE. CONTRACTOR SHALL PROVIDE ALL WIRING AND CONDUIT AS REQUIRED BETWEEN LIGHTS AND LIGHTING SWITCHES.
7. MOUNT FIXTURE TYPE "B" 10'-0" AFF.

NOTES BY SYMBOL "⬡"

1. PROVIDE EDS EXPLOSION PROOF RATED SWITCH PER CLASS I, DIV 1 REQUIREMENTS IN ARTICLE 500.
2. PROVIDE EXPLOSION PROOF FUSIBLE DISCONNECT SWITCH PER CLASS I, DIV 1 REQUIREMENTS IN ARTICLE 500.
3. MECHANICAL ROOM 2 SHALL BE CLASSIFIED CLASS I, DIV 1, GROUP D IN ACCORDANCE WITH NFPA 820-2020, TABLE 4.2.2, ROW 14 LINE a.
4. MECHANICAL ROOM 3 SHALL BE UNCLASSIFIED.



MECHANICAL ROOM 2
POWER & LIGHTING PLAN
1 1/2" = 1'-0"



MECHANICAL ROOM 3
POWER & LIGHTING PLAN
2 1/2" = 1'-0"

NORTH

0 1' 2' 4'
1/2"=1'-0"

ISSUED FOR BID

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2026

GEORGIA REGISTERED PE050516 PROFESSIONAL ENGINEER JEFFREY J. STOUT
10.22.2025

FREESE AND NICHOLS
2180 Satellite Boulevard
Suite 235
Duluth, GA 30097
Phone - (470) 645-3092
Web - www.freese.com

GWINNETT COUNTY DEPARTMENT OF WATER RESOURCE
SUWANEE CREEK DIVERSION PUMP STATION

ELECTRICAL
MECHANICAL ROOM 2 & 3
POWER PLAN

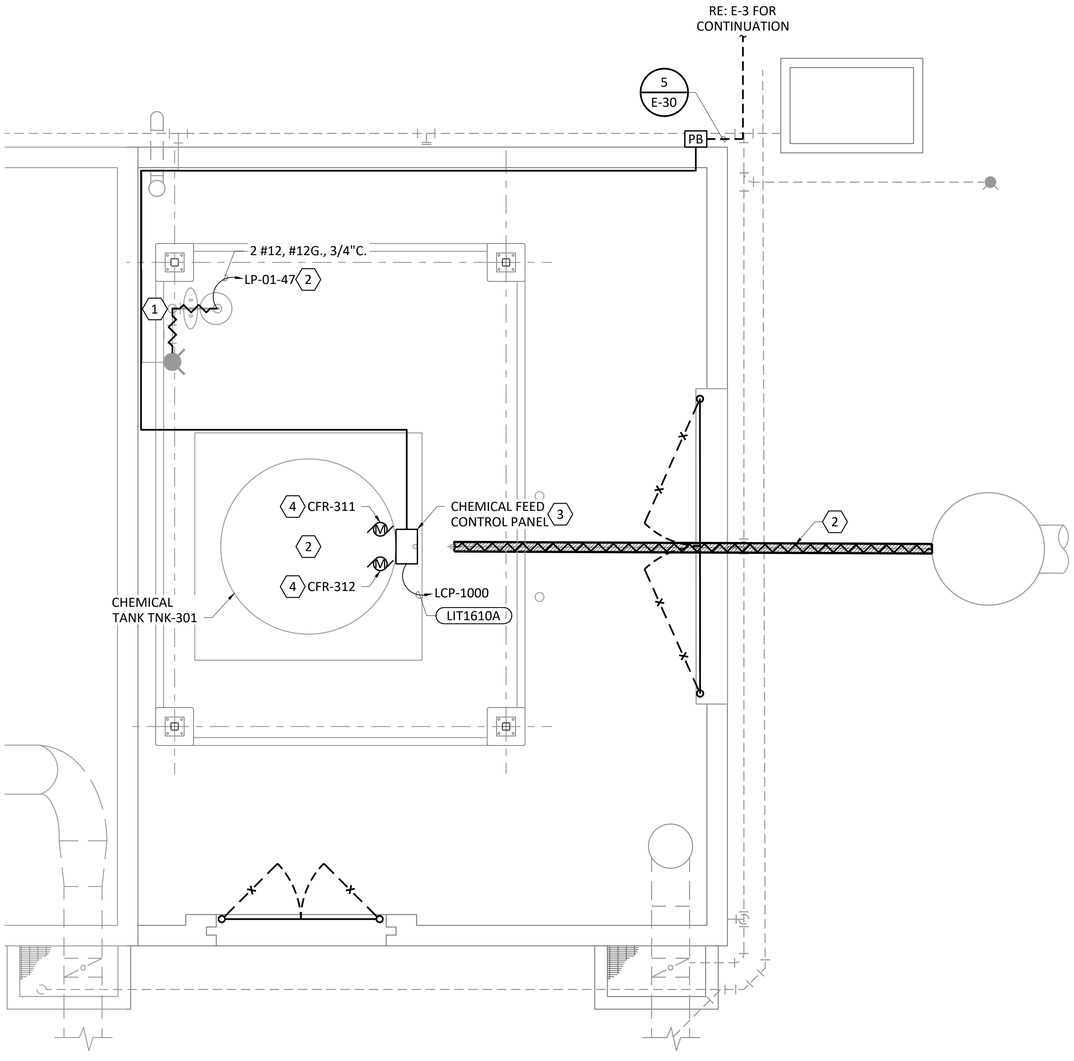
F&N JOB NO.	GWR24074
DATE	10/22/2025
DESIGNED	DC
DRAWN	JTR
CHECKED	-
APPROVED	JNH
FILE NAME	EL-GWR24074-EX-R23.RVT

NO.	ISSUE	BY	DATE
0	ISSUED FOR BID	JJS	10/22/2025

VERIFY SCALE Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.
0 1

SHEET E-17
SEQ. 105 OF 129

Plot Date: 10/21/2025 3:50:38 PM



1 / - CHEMICAL FEED POWER, INSTRUMENTATION, & CONTROLS PLAN

1/4" = 1'-0"

GENERAL NOTES:

1. THE CONTRACTOR SHALL PROVIDE CONDUIT AS REQUIRED FOR TRANSITION BETWEEN EQUIPMENT. EACH CIRCUIT SHALL BE ROUTED IN ITS OWN CONDUIT. COMBINING CIRCUITS IN CONDUITS IS NOT PERMITTED UNLESS SPECIFIED OTHERWISE. CONDUIT SHALL BE PVC COATED ALUMINUM UNLESS SPECIFIED OTHERWISE.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SIZING AND PROVIDING ALL PULL BOXES AND JUNCTION BOXES AS REQUIRED BY THE NATIONAL ELECTRICAL CODE.
3. CONDUIT ENTERING AND EXITING A BUILDING STRUCTURE SHALL HAVE EXPANSION FITTINGS CAPABLE OF A 4" EXPANSION MINIMUM IN EITHER DIRECTION TO ACCOUNT FOR THE VERTICAL MOVEMENT OF THE BUILDING.
4. POWER, DISCRETE, ANALOG SIGNAL AND COMMUNICATION CONDUCTORS SHALL BE ROUTED IN SEPARATE CONDUITS.
5. EQUIPMENT ENCLOSURES WITHIN THE NEW ELECTRICAL BUILDING SHALL BE NEMA 1 UNLESS SPECIFIED OTHERWISE. EQUIPMENT LOCATED OUTDOORS OR WITHIN THE LIFT STATION BUILDING SHALL BE NEMA 4X.
6. CONDUIT RUNS ARE SHOWN DIAGRAMMATICALLY ONLY AND SHALL BE INSTALLED IN A MANNER TO PREVENT CONFLICTS WITH EQUIPMENT OR STRUCTURAL CONDITIONS. EXPOSED CONDUIT SHALL BE INSTALLED PARALLEL OR PERPENDICULAR TO BEAMS AND WALLS. CONDUIT SHALL NOT BE ROUTED ON THE FLOOR OR CREATE A TRIPPING HAZARD IN ANY WAY.
7. STUB UP AND CAP ALL SPARE CONDUITS AT THE FLOOR WITH A PULL STRING. COORDINATE WITH OTHER DISCIPLINES FOR STUB UP LOCATIONS. STUB UPS SHALL NOT BE MADE THROUGH GRADE BEAM OF THE BUILDING.
8. EQUIPMENT SHOWN DARK TO BE PROVIDED UNDER THIS CONTRACT. EQUIPMENT SHOWN LIGHT IS EXISTING AS INDICATED. EQUIPMENT SHOWN LIGHT AND DASHED IS FUTURE AS INDICATED.
9. 120V CIRCUITS FEEDING MISCELLANEOUS EQUIPMENT TO BE 2 #12, #12G., 3/4"C. UNLESS NOTED OTHERWISE.
10. PROVIDE LIQUIDTIGHT FLEXIBLE METALLIC CONDUIT TO CONNECT TO TRANSFORMER.
11. ROUTE UNDERGROUND CONDUITS BELOW THE FOUNDATION AND STUB UP AT EQUIPMENT. EXACT CONDUIT STUB-UP LOCATIONS TO BE VERIFIED WITH THE EQUIPMENT MANUFACTURER.

NOTES BY SYMBOL "⬡"

1. CONTRACTOR SHALL FIELD VERIFY AND LOCATE FREEZE PROTECTED EYEWASH/SHOWER. ROUTE 120V POWER FROM "LP-01-X".
2. CONTRACTOR SHALL FIELD VERIFY EQUIPMENT AND LOCATE. CONTRACTOR SHALL PROVIDE HEAT TRACING AND INSULATION.
3. REFER TO SHEET PM-11 FOR ADDITIONAL INFORMATION.
4. CHEMICAL FEED PUMP IS INTEGRAL TO THE SKID CONTRACTOR SHALL ROUTE POWER FROM "LP-01".

NORTH

0 1' 2' 4' 8'

1/4"=1'-0"

ISSUED FOR BID

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2026

GEORGIA REGISTERED PE050516 PROFESSIONAL ENGINEER JEFFREY J. STOUT
10.22.2025

FREESE NICHOLS
2180 Satellite Boulevard
Suite 235
Duluth, Georgia 30097
Phone - (470)-645-3092
Web - www.freese.com

GWINNETT COUNTY DEPARTMENT OF WATER RESOURCE
SUWANEE CREEK DIVERSION PUMP STATION

ELECTRICAL
CHEMICAL FEED
POWER, INSTRUMENTATION, & CONTROLS PLAN

NO.	ISSUE	BY	DATE
1	ISSUED FOR BID	JJS	10/22/2025

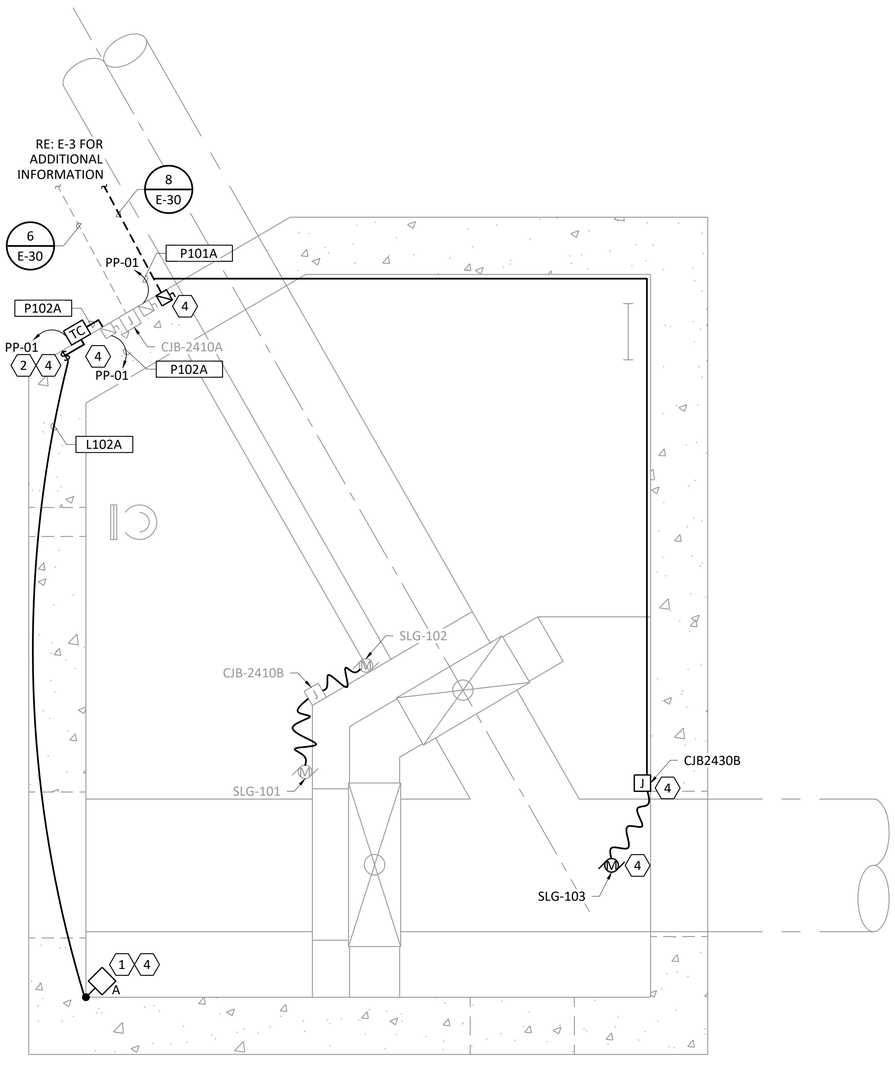
VERIFY SCALE Bar Scale is one inch on original drawing. If not one inch on this sheet, adjust scale. 0 1"

F&N JOB NO. GWR24074
DATE 10/22/2025
DESIGNED DC
DRAWN JTR
CHECKED JNH
APPROVED JJS
FILE NAME EL-ALL-PL-POWR03.dwg

SHEET E-18
SEQ. 106 OF 129

ACAD Rel: 24.2
Filename: N:\ELEC\EL-ALL-PL-POWR03.dwg
Last Saved: 9/15/2025 5:26 PM Saved By: 04169

Plot Date: 10/21/2025 3:58 PM Plot By: 04169 Filename: N:\ELEC\EL-ALL-PL-POWR03.dwg



DIVERSION STRUCTURE
POWER, INSTRUMENTATION, & CONTROLS PLAN

1/2" = 1'-0"

GENERAL NOTES:

1. THE CONTRACTOR SHALL PROVIDE CONDUIT AS REQUIRED FOR TRANSITION BETWEEN EQUIPMENT. CONDUIT SHALL BE SIZED PER THE NATIONAL ELECTRICAL CODE. EACH CIRCUIT SHALL BE ROUTED IN ITS OWN CONDUIT. COMBINING CIRCUITS IN CONDUITS IS NOT PERMITTED UNLESS SPECIFIED OTHERWISE.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SIZING AND PROVIDING ALL PULL BOXES AND JUNCTION BOXES AS REQUIRED BY THE NATIONAL ELECTRICAL CODE.
3. EXTERIOR RECEPTACLES SHALL BE GFI TYPE RATED FOR OUTDOOR USE.
4. RECEPTACLE, LIGHTING, AND MISCELLANEOUS EQUIPMENT WIRING LESS THAN 150'-0" IN LENGTH SHALL BE 2 #12 AWG, #12G., 1"C. MINIMUM UNLESS SPECIFIED OTHERWISE. RECEPTACLE, LIGHTING, AND MISCELLANEOUS EQUIPMENT WIRING OVER 150'-0" IN LENGTH SHALL BE 2 #10 AWG, #10G., 1"C. MINIMUM UNLESS SPECIFIED OTHERWISE.
5. EXTERIOR LIGHTS SHALL BE PHOTOCELL ACTIVATED LED-TYPE. THE PHOTOCELL SHALL BE LOCATED ON THE TOP OF FIXTURE.
6. POWER, DISCRETE, ANALOG SIGNAL AND COMMUNICATION CONDUCTORS SHALL BE ROUTED IN SEPARATE CONDUITS.
7. CONDUIT RUNS ARE SHOWN DIAGRAMMATICALLY ONLY AND SHALL BE INSTALLED IN A MANNER TO PREVENT CONFLICTS WITH EQUIPMENT OR STRUCTURAL CONDITIONS. EXPOSED CONDUIT SHALL BE INSTALLED PARALLEL OR PERPENDICULAR TO BEAMS AND WALLS. CONDUIT SHALL NOT BE ROUTED ON THE FLOOR OR CREATE A TRIPPING HAZARD IN ANY WAY.

NOTES BY SYMBOL "⬡"

1. POLE MOUNTED LIGHT FIXTURE REFER TO SHEET 5/E-36 FOR ADDITIONAL INFORMATION.
2. CONTRACTOR SHALL PROVIDE HEAVY DUTY OUTDOOR RATED SWITCH - CROUSE HINDS OR APPROVED EQUAL.
3. CONTRACTOR SHALL FIELD VERIFY AND LOCATE RACK. PROVIDE A 4X 316 STAINLESS STEEL FUSIBLE DISCONNECT SWITCH FOR NEW SLG103.
4. EQUIPMENT SHALL BE RATED EXPLOSION PROOF PER CLASS I, DIV 1, NFPA 820 REQUIREMENTS.

NORTH

0 1' 2' 4'

1/2"=1'-0"

ISSUED FOR BID

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2026

GEORGIA REGISTERED PE050516 PROFESSIONAL ENGINEER JEFFREY J. STOUT
10.22.2025

FREESE NICHOLS
2180 Satellite Boulevard
Suite 235
Duluth, Georgia 30097
Phone - (470)-645-3092
Web - www.freese.com

GWINNETT COUNTY DEPARTMENT OF WATER RESOURCE
SUWANEE CREEK DIVERSION PUMP STATION

ELECTRICAL
DIVERSION STRUCTURE
POWER, INSTRUMENTATION, & CONTROLS PLAN

NO.	ISSUE	BY	DATE
1	ISSUED FOR BID	JJS	10/22/2025

VERIFY SCALE Bar Scale is one inch on original drawing. If not one inch on this sheet, adjust scale. 1" 0

F&N JOB NO.	GWR24074
DATE	10/22/2025
DESIGNED	DC
DRAWN	JTR
CHECKED	JNH
APPROVED	JJS
FILE NAME	EL-ALL-PL-POWR02.dwg

SHEET E-19

SEQ. 107 OF 129

ACAD Rel: 24.2
Filename: N:\ELEC\EL-ALL-PL-POWR02.dwg
Last Saved: 9/15/2025 4:50 PM Saved By: 04169

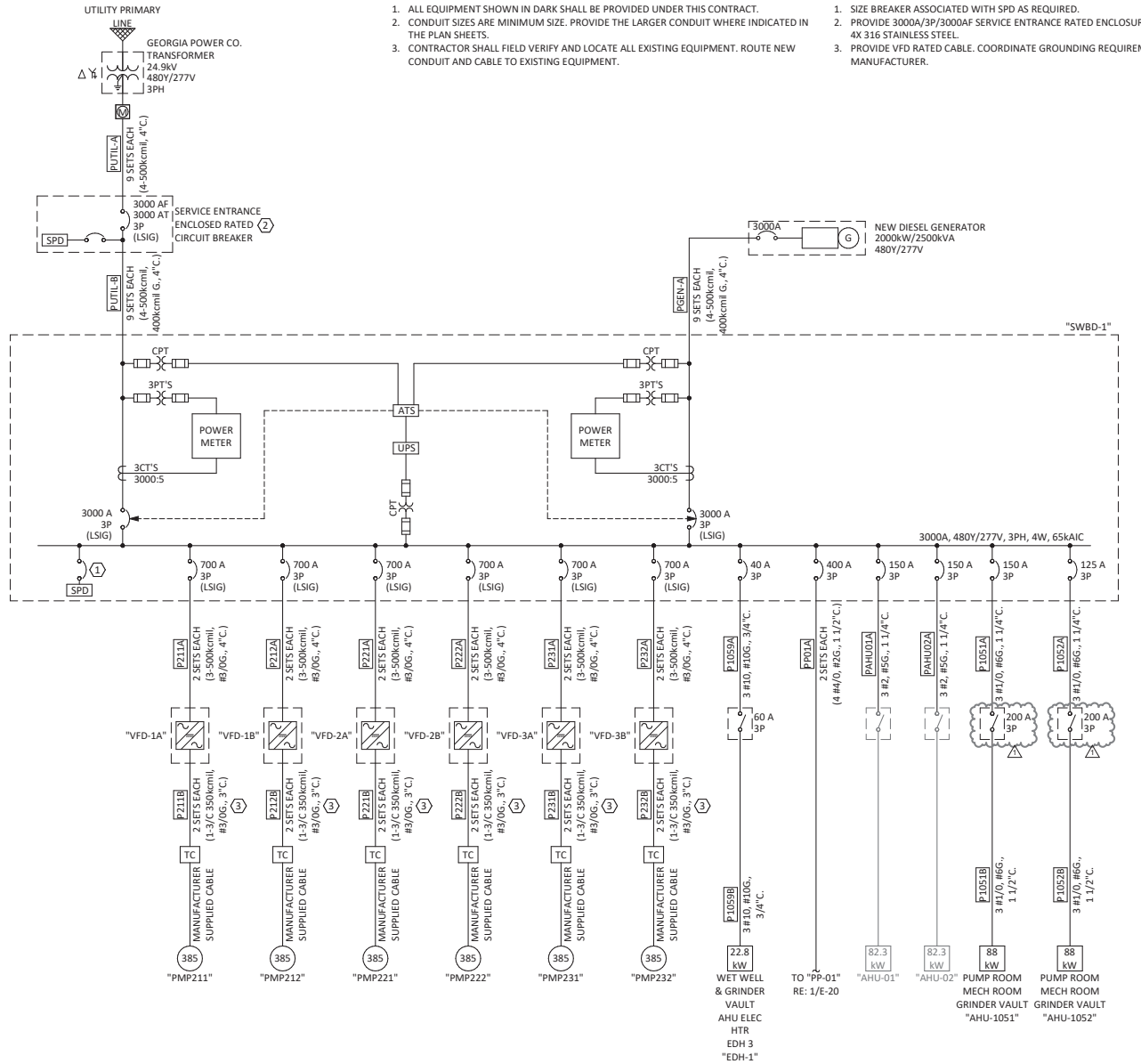
Plot Date: 10/21/2025 3:58 PM Plot By: 04169 Filename: N:\ELEC\EL-ALL-PL-POWR02.dwg

GENERAL NOTES:

1. ALL EQUIPMENT SHOWN IN DARK SHALL BE PROVIDED UNDER THIS CONTRACT.
2. CONDUIT SIZES ARE MINIMUM SIZE. PROVIDE THE LARGER CONDUIT WHERE INDICATED IN THE PLAN SHEETS.
3. CONTRACTOR SHALL FIELD VERIFY AND LOCATE ALL EXISTING EQUIPMENT. ROUTE NEW CONDUIT AND CABLE TO EXISTING EQUIPMENT.

NOTES BY SYMBOL "⬡"

1. SIZE BREAKER ASSOCIATED WITH SPD AS REQUIRED.
2. PROVIDE 3000A/3P/3000AF SERVICE ENTRANCE RATED ENCLOSURE CIRCUIT BREAKER NEMA 4X 316 STAINLESS STEEL.
3. PROVIDE VFD RATED CABLE. COORDINATE GROUNDING REQUIREMENTS WITH VFD MANUFACTURER.



1 480V SWITCHBOARD ONE-LINE DIAGRAM I
NOT TO SCALE

ISSUED FOR BID

Freese and Nichols, Inc.
Georgia Registered Engineering Firm P-EF-004433
Expires 6/30/2026

GEORGIA REGISTERED PROFESSIONAL ENGINEER 12.10.2025

FREESE NICHOLS
2180 Satellite Boulevard
Suite 235
Duluth, GA 30097
Phone - (470) 645-3092
Web - www.freese.com

GWINNETT COUNTY DEPARTMENT OF WATER RESOURCE
SUWANEE CREEK DIVERSION PUMP STATION
ELECTRICAL
480V SWITCHBOARD ONE-LINE DIAGRAM I

F&N JOB NO.	GWR24074
DATE	10/22/2025
DESIGNED	DC
DRAWN	JTR
CHECKED	-
APPROVED	JNH

NO.	ISSUE	BY	DATE
1	ADDENDUM NO 3	HS	12/10/2025
0	ISSUED FOR BID	HS	10/22/2025

FILE NAME: EL-GWR24074-EK-R23.RVT

VERIFY SCALE
Bar is one inch on original drawing. If not one inch on this sheet adjust scale.
0 1"

SHEET E-20
SEQ. 108 OF 129

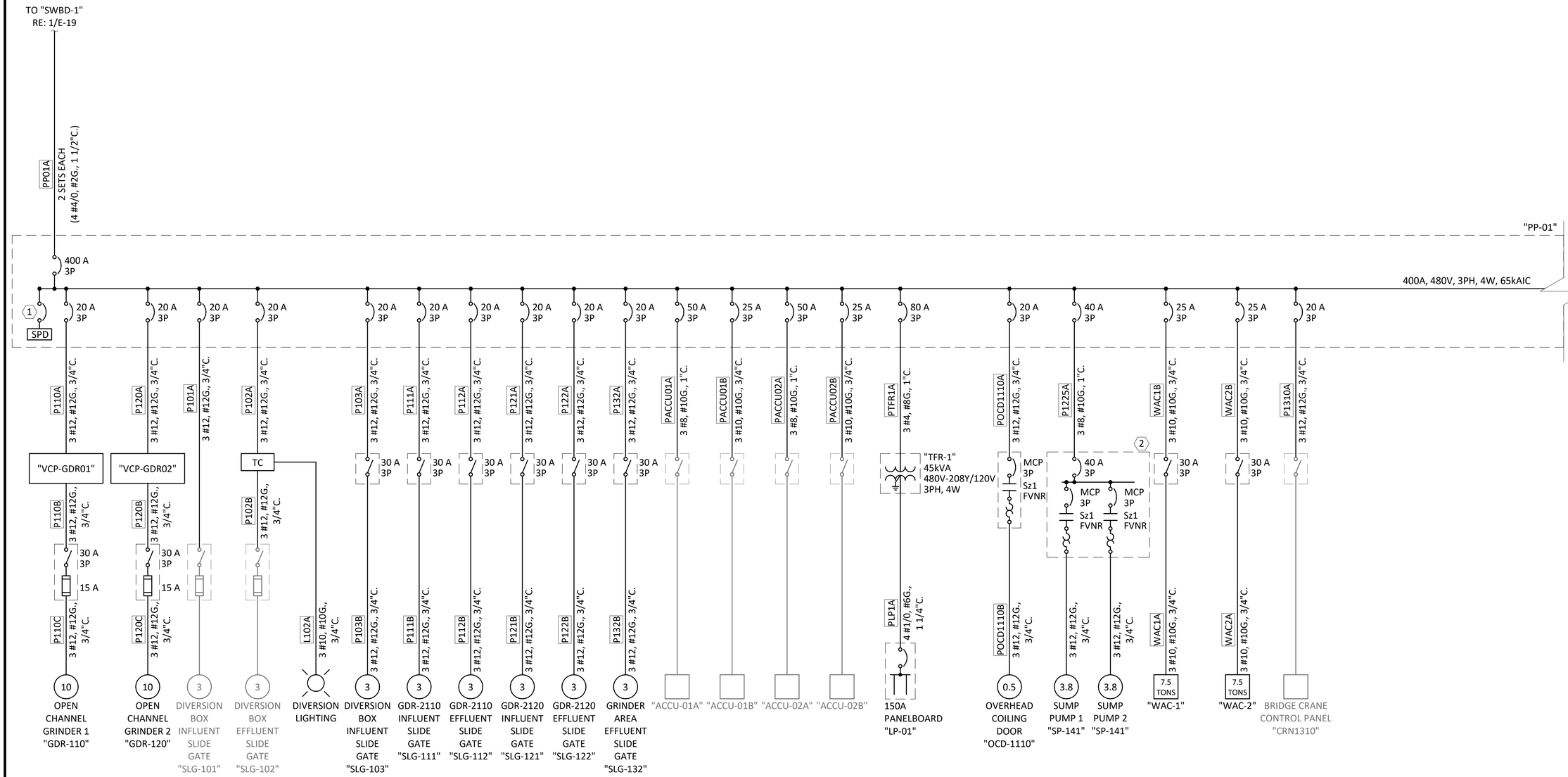
Plot Date: 12/8/2025 10:41:14 AM

GENERAL NOTES:

1. ALL EQUIPMENT SHOWN IN DARK SHALL BE PROVIDED UNDER THIS CONTRACT.
2. CONDUIT SIZES ARE MINIMUM SIZE. PROVIDE THE LARGER CONDUIT WHERE INDICATED IN THE PLAN SHEETS.
3. CONTRACTOR SHALL FIELD VERIFY EXISTING EQUIPMENT.

NOTES BY SYMBOL " ⬡ "

1. SIZE BREAKER ASSOCIATED WITH SPD AS REQUIRED.
2. SUMP PUMP CONTROL PANEL "CPI225".



1 480V PANELBOARD ONE-LINE DIAGRAM I
NOT TO SCALE

ISSUED FOR BID

Plot Date: 10/21/2025 3:50:39 PM

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2026

GEORGIA REGISTERED LIC. PE050516 PROFESSIONAL ENGINEER JEFFREY J. STOUT
10.22.2025

FREESE AND NICHOLS
2180 Satellite Boulevard
Suite 235
Duluth, GA 30097
Phone - (470) 645-3092
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GWINNETT COUNTY DEPARTMENT OF WATER RESOURCE
SUWANEE CREEK DIVERSION PUMP STATION
ELECTRICAL
480V PANELBOARD ONE-LINE DIAGRAM I

F&N JOB NO. GWR24074
DATE 10/22/2025
DESIGNED DC
DRAWN JTR
CHECKED -
APPROVED JNH
FILE NAME EL-GWR24074-EX-R23.RVT

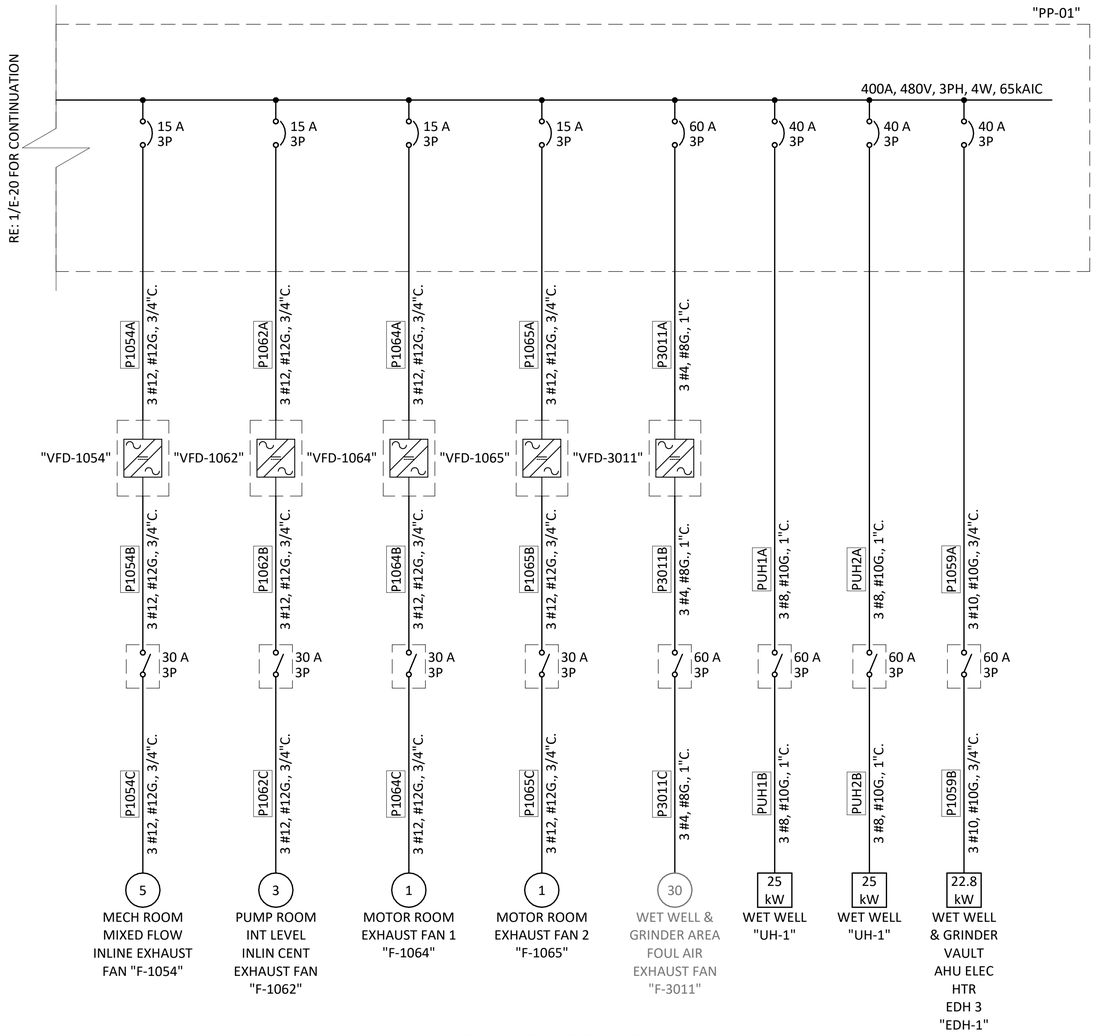
NO.	ISSUE	BY	DATE
0	ISSUED FOR BID	JJS	10/22/2025

VERIFY SCALE Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.
0 1

SHEET E-21
SEQ. 109 OF 129

GENERAL NOTES:

1. ALL EQUIPMENT SHOWN IN DARK SHALL BE PROVIDED UNDER THIS CONTRACT.
2. CONDUIT SIZES ARE MINIMUM SIZE. PROVIDE THE LARGER CONDUIT WHERE INDICATED IN THE PLAN SHEETS.



1 480V PANELBOARD ONE-LINE DIAGRAM II
12" = 1'-0"

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2026

GEORGIA REGISTERED PE050516 PROFESSIONAL ENGINEER JEFFREY J. STOUT
10.22.2025

FREESE NICHOLS
2180 Satellite Boulevard
Suite 235
Duluth, GA 30097
Phone - (470) 645-3092
Web - www.freese.com

GWINNETT COUNTY DEPARTMENT OF WATER RESOURCE
SUWANEE CREEK DIVERSION PUMP STATION

ELECTRICAL

480V PANELBOARD ONE-LINE DIAGRAM II

F&N JOB NO.	GWR24074
DATE	10/22/2025
DESIGNED	DC
DRAWN	JTR
CHECKED	-
APPROVED	JNH
FILE NAME	EL-GWR24074-EX-R23.RVT

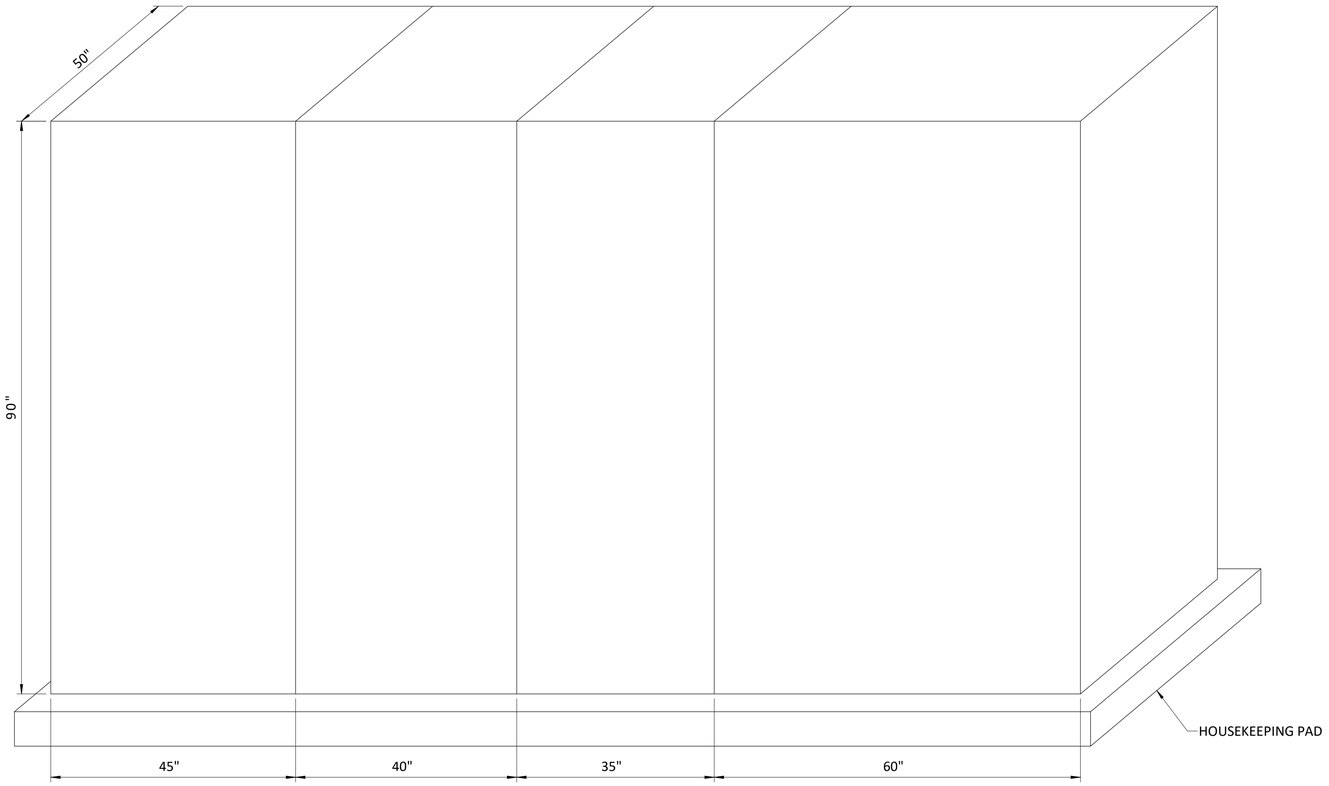
NO.	ISSUE	BY	DATE
0	ISSUED FOR BID	JJS	10/22/2025

VERIFY SCALE Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.
0 1

SHEET E-22
SEQ. 110 OF 129

ISSUED FOR BID

Plot Date: 10/21/2025 3:50:39 PM



1 480V SWITCHBOARD "SWBD-1" ELEVATION
NOT TO SCALE

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2026

GEORGIA REGISTERED LIC. PE050516 PROFESSIONAL ENGINEER JEFFREY J. STOUT 10.22.2025

FREESE NICHOLS
2180 Satellite Boulevard
Suite 235
Duluth, GA 30097
Phone - (470) 645-3092
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GWINNETT COUNTY DEPARTMENT OF WATER RESOURCE
SUWANEE CREEK DIVERSION PUMP STATION

ELECTRICAL

EQUIPMENT ELEVATIONS I

F&N JOB NO. GWR24074
DATE 10/22/2025
DESIGNED DC
DRAWN JTR
CHECKED -
APPROVED JNH

NO.	ISSUE	BY	DATE
0	ISSUED FOR BID	JJS	10/22/2025

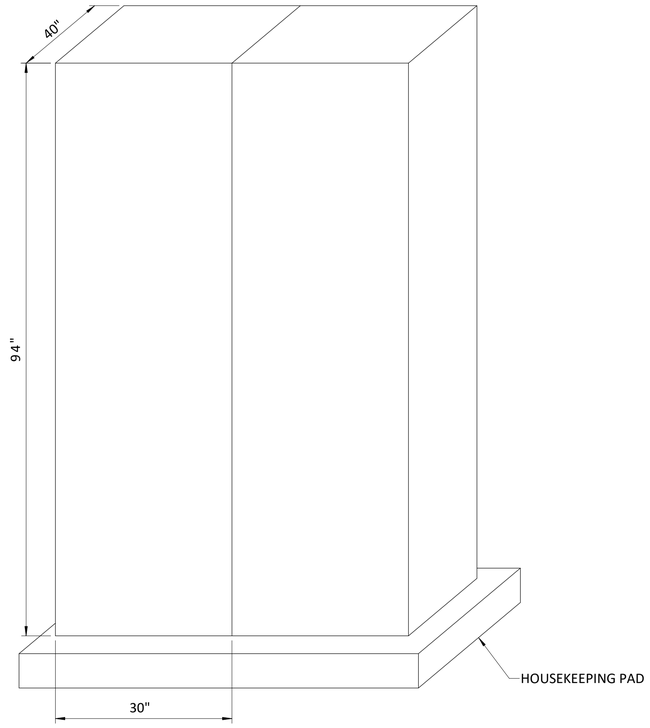
FILE NAME EL-GWR24074-EX-R23.RVT

VERIFY SCALE Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.
0 1

SHEET E-23
SEQ. 111 OF 129

ISSUED FOR BID

Plot Date: 10/21/2025 3:50:39 PM



1 480V AFE VFD "VFD-XXX" ELEVATION
NOT TO SCALE (TYP FOR 1A, 1B, 2A, 2B, 3A, 3B)

ISSUED FOR BID

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2026

GEORGIA REGISTERED PE050516 PROFESSIONAL ENGINEER JEFFREY J. STOUT
10.22.2025

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Suite 235
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GWINNETT COUNTY DEPARTMENT OF WATER RESOURCE
SUWANEE CREEK DIVERSION PUMP STATION

ELECTRICAL

EQUIPMENT ELEVATIONS II

F&N JOB NO.	GWR24074
DATE	10/22/2025
DESIGNED	DC
DRAWN	JTR
CHECKED	-
APPROVED	JNH

NO.	ISSUE	DATE	BY
0	ISSUED FOR BID	10/22/2025	JJS

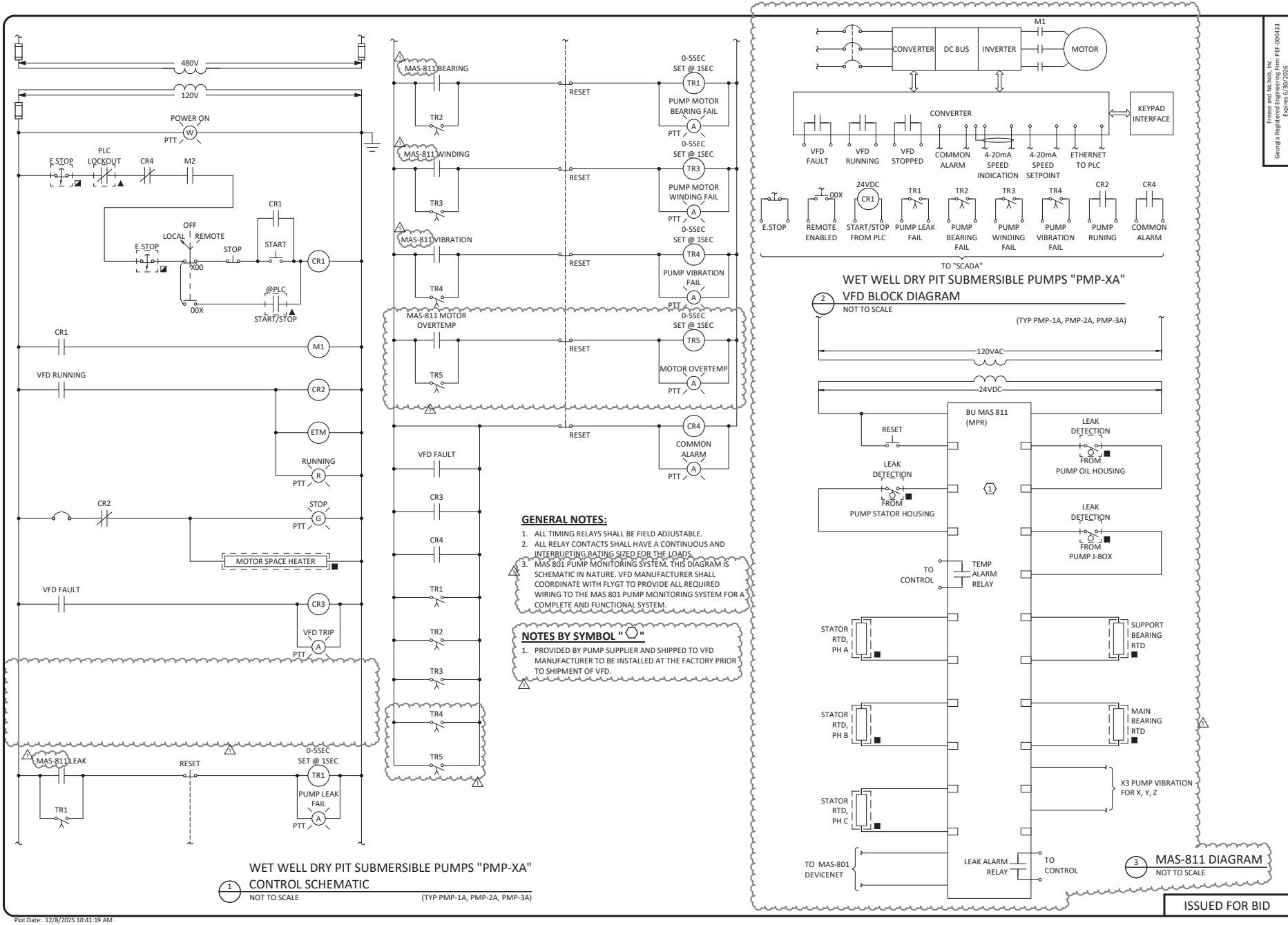
VERIFY SCALE Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.
0 1

FILE NAME EL-GWR24074-EX-R23.RVT

SHEET E-24

SEQ. 112 OF 129

Plot Date: 10/21/2025 3:50:39 PM



Freese and Nichols, Inc.
Georgia Registered Engineering Firm P-EF-004433
Expires 6/30/2026

GEORGIA REGISTERED PROFESSIONAL ENGINEER 12.10.2025

FREESE NICHOLS
2180 Satellite Boulevard
Suite 235
Duluth, GA 30097
Phone - (470) 645-3092
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GWINNETT COUNTY DEPARTMENT OF WATER RESOURCE
SUWANEE CREEK DIVERSION PUMP STATION
ELECTRICAL
PUMP CONTROL SCHEMATICS I

F&N JOB NO.	GWR24074
DATE	10/22/2025
DESIGNED	DC
DRAWN	JTR
CHECKED	-
APPROVED	JNH

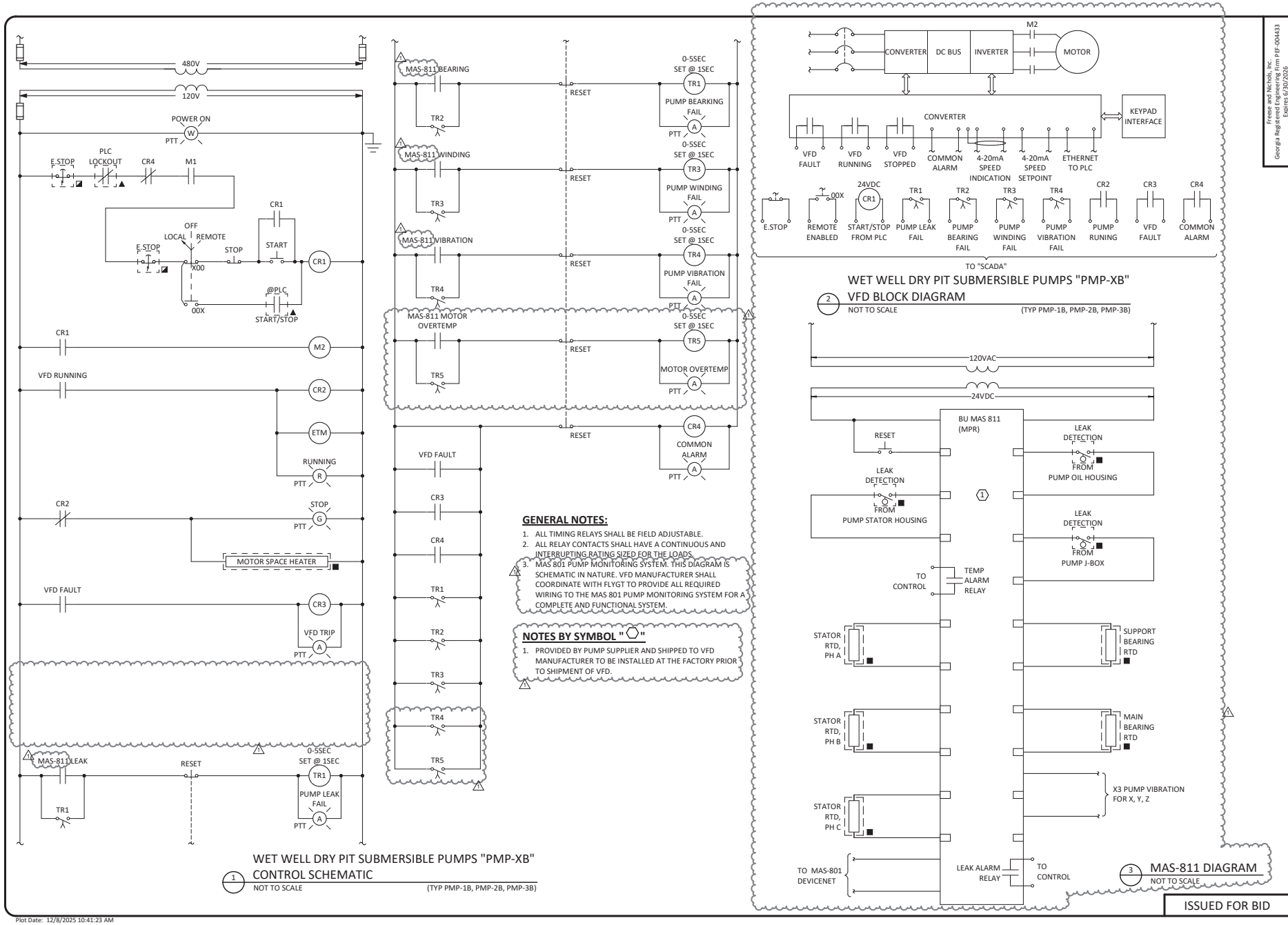
NO.	ISSUE	BY	DATE
0	ISSUED FOR BID	BS	10/22/2025
1	ADDENDUM NO 3	BS	12/5/2025

FILE NAME: EL-GWR24074-ER-R23.RVT

VERIFY SCALE
Bar is one inch on original drawing. If not one inch on this sheet adjust scale.
0 1"

SHEET E-25
SEQ. 113 OF 129

Plot Date: 12/8/2025 10:41:19 AM



1 WET WELL DRY PIT SUBMERSIBLE PUMPS "PMP-XB"
CONTROL SCHEMATIC
NOT TO SCALE (TYP PMP-1B, PMP-2B, PMP-3B)

2 WET WELL DRY PIT SUBMERSIBLE PUMPS "PMP-XB"
VFD BLOCK DIAGRAM
NOT TO SCALE (TYP PMP-1B, PMP-2B, PMP-3B)

3 MAS-811 DIAGRAM
NOT TO SCALE

ISSUED FOR BID

Freese and Nichols, Inc.
Georgia Registered Engineering Firm P-EF-004433
Expires 6/30/2026

FREESE NICHOLS
2180 Satellite Boulevard
Suite 235
Duluth, GA 30097
Phone - (470) 645-3092
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GWINNETT COUNTY DEPARTMENT OF WATER RESOURCE
SUWANEE CREEK DIVERSION PUMP STATION
ELECTRICAL
PUMP CONTROL SCHEMATICS II

F&N JOB NO.	GWR24074
DATE	10/22/2025
DESIGNED	DC
DRAWN	JTR
CHECKED	-
APPROVED	JNH
FILE NAME	EL-GWR24074-ER-R23.RVT

NO.	ISSUE	BY	DATE
1	ADDENDUM NO 3	LES	12/10/2025
0	ISSUED FOR BID	LES	10/22/2025

Bar is one inch on original drawing. If not one inch on this sheet adjust scale.
VERIFY SCALE 0 1"

SHEET E-26
SEQ. 114 OF 129

Plot Date: 12/8/2025 10:41:23 AM

INTERCONNECTION DIAGRAM

LOOP	EQUIPMENT DESCRIPTION	FIELD DEVICE/FIELD WIRING						
100	CROOKED CREEK FLOW METER	FIT/FE-102	FIT102-A 1PR. #18 SHLD., 3/4"C.				FIT1000-A 2PR. #18 SHLD., 2"C. (2PR. SPARE)	
	DIVERSION BOX EFFLUENT SLIDE GATE 101	SLG-101	SLG101-C 12 #14, #14G., 3/4"C. (4 #14 SPARE)				SLG1000-C 36 #14, #14G., 2"C. (12 #14 SPARE)	
	DIVERSION BOX EFFLUENT SLIDE GATE 102	SLG-102	SLG102-C 12 #14, #14G., 3/4"C. (4 #14 SPARE)					
	DIVERSION BOX EFFLUENT SLIDE GATE 103	SLG-103	SLG103-C 12 #14, #14G., 3/4"C. (4 #14 SPARE)					
110	OPEN CHANNEL GRINDER I	GDR-110	③ JUNCTION BOX ④	VCP-GDR01	VCPGDR01-C 10 #14, #14G., 1"C. (4 #14 SPARE)		VCP1000-C 20 #14, #14G., 2"C. (8 #14 SPARE)	
	OPEN CHANNEL GRINDER II	GDR-120	③ JUNCTION BOX ⑤	VCP-GDR02	VCPGDR02-C 10 #14, #14G., 1"C. (4 #14 SPARE)			
	GDR-2110 INFLUENT SLIDE GATE	SLG-111	SLG111-C 12 #14, #14G., 3/4"C. (4 #14 SPARE)				GDR1000-C 60 #14, #14G., 2"C. (20 #14 SPARE)	
	GDR-2110 EFFLUENT SLIDE GATE	SLG-112	SLG112-C 12 #14, #14G., 3/4"C. (4 #14 SPARE)					
120	GDR-2120 INFLUENT SLIDE GATE	SLG-121	SLG121-C 12 #14, #14G., 3/4"C. (4 #14 SPARE)				LIT1000-A 4PR. #18 SHLD., 2"C. (4PR. SPARE)	
	GDR-2120 EFFLUENT SLIDE GATE	SLG-122	SLG122-C 12 #14, #14G., 3/4"C. (4 #14 SPARE)					
	DIVERSION BOX INFLUENT SLIDE GATE	SLG-132	SLG132-C 12 #14, #14G., 3/4"C. (4 #14 SPARE)				LIT1000-A 9PR. #18 SHLD., 2"C. (9PR. SPARE)	
130	WET WELL LEVEL TRANSMITTER I	LIT/LE-130A	LIT130A-A 1PR. #18 SHLD., 3/4"C.					
	WET WELL LEVEL TRANSMITTER II	LIT/LE-130B	LIT130B-A 1PR. #18 SHLD., 3/4"C.				VFD1000-A 12PR. #18 SHLD., 2"C. (6PR. SPARE)	
140	SUMP PUMP LEVEL TRANSMITTER	LE-140	LE140-A 1PR. #18 SHLD., 3/4"C.					
200	FORCE MAIN FLOW	FIT/FE-200	FIT200-A 1PR. #18 SHLD., 3/4"C.				VFD1001-A 12PR. #18 SHLD., 2"C. (6PR. SPARE)	
	PUMP MOTOR NO.1A PRESSURE TRANSMITTER	PI/PIT-210	PIT210-A 1PR. #18 SHLD., 3/4"C.					
200	PUMP MOTOR NO.1A WINDING AND BEARING RTD'S	TE-211	TE211-A 5-1 TRI, #18, 1 1/2"C. ⚠1	⑦ ⚠1 "VFD-1A"	VFD211-A 4PR. #18 SHLD., 1"C. (2PR. SPARE)		VFD1000-C 54 #14, #14G., 2"C. (24 #14 SPARE)	
	PUMP MOTOR NO.1A VIBRATION	VE-211	VE211-A 2PR. #18 SHLD., 3/4"C. VE211-C 6 #14, #14G., 3/4"C.		VFD211-C 18 #14, #14G., 2"C. (8 #14 SPARE) VFD211-DATA CAT6, 3/4"C.		VFD1001-C 54 #14, #14G., 2"C. (24 #14 SPARE)	
	PUMP MOTOR NO.1A E.STOP	ESTOP-211	ES211-A 6 #14, #14G., 3/4"C.		MAS-801 CONTROLLER ⚠1			
	PUMP MOTOR NO.1B PRESSURE TRANSMITTER	PI/PIT-211	PIT211-A 1PR. #18 SHLD., 3/4"C.				VFD1000-DATA 6-CAT6, 2"C.	
	PUMP MOTOR NO.1B WINDING AND BEARING RTD'S	TE-212	TE212B-A 5-1 TRI, #18, 1 1/2"C. ⚠1	⑦ ⚠1 "VFD-1B"	VFD212-A 4PR. #18 SHLD., 1"C. (2PR. SPARE)		EQUIP-A ② 4PR. #18 SHLD., 2"C. (4PR. SPARE)	
	PUMP MOTOR NO.1B VIBRATION	VE-212	VE212-A 2PR. #18 SHLD., 3/4"C. VE212-C 6 #14, #14G., 3/4"C.		VFD212-C 18 #14, #14G., 2"C. (8 #14 SPARE) VFD212-DATA CAT6, 3/4"C.			
	PUMP MOTOR NO.1B E.STOP	ESTOP-212	ES212-A 6 #14, #14G., 3/4"C.		MAS-801 CONTROLLER ⚠1		EQUIP-C ② 34 #14, #14G., 2"C. (24 #14 SPARE)	
	PUMP MOTOR TRAIN 1 PRESSURE TRANSMITTER	PI/PIT-212	PIT212-A 1PR. #18 SHLD., 3/4"C.				EQUIP-DATA ② 2-CAT6, 2"C.	

"TC-1000" — LCP-1000

NOTES BY SYMBOL "⬡"

1. REFER TO SHEET E-27 FOR ALL CONDUIT GOING FROM "TC-1000" TO "LCP-1000".
2. COMBINE GENERATOR AND "SWBD-1" CONTROL CONDUCTORS.
3. MANUFACTURER SUPPLIED CABLE.
4. 10 #14, #14G., 1"C. (4#14 SPARE). CABLE TAG SHALL BE GDR110-C.
5. 10 #14, #14G., 1"C. (4#14 SPARE). CABLE TAG SHALL BE GDR120-C.
6. 4PR. #18 SHLD., 2"C. (4PR. SPARE).
7. MAS-811 BASE UNIT SUPPLIED BY PUMP MANUFACTURER. ⚠1

INTERCONNECTION DIAGRAM

LOOP	EQUIPMENT DESCRIPTION	FIELD DEVICE/FIELD WIRING				
	PUMP MOTOR NO.2A PRESSURE TRANSMITTER	PI/PIT-220	PIT220-A 1PR. #18 SHLD., 3/4"C.			
	PUMP MOTOR NO.2A WINDING AND BEARING RTD'S	TE-221	TE221-A 5-1 TRI, #18, 1 1/2"C. ⚠1	⑦ ⚠1 "VFD-2A"	VFD221-A 4PR. #18 SHLD., 1"C. (2PR. SPARE)	
	PUMP MOTOR NO.2A VIBRATION	VE-221	VE221-A 2PR. #18 SHLD., 3/4"C. VE221-C 6 #14, #14G., 3/4"C.		VFD221-C 18 #14, #14G., 2"C. (8 #14 SPARE) VFD221-DATA CAT6, 3/4"C.	
	PUMP MOTOR NO.2A E.STOP	ESTOP-221	ES221-A 6 #14, #14G., 3/4"C.		MAS-801 CONTROLLER ⚠1	
	PUMP MOTOR NO.2B PRESSURE TRANSMITTER	PI/PIT-221	PIT221-A 1PR. #18 SHLD., 3/4"C.			
	PUMP MOTOR NO.2B WINDING AND BEARING RTD'S	TE-222	TE222-A 5-1 TRI, #18, 1 1/2"C. ⚠1	⑦ ⚠1 "VFD-2B"	VFD222-A 4PR. #18 SHLD., 1"C. (2PR. SPARE)	
	PUMP MOTOR NO.2B VIBRATION	VE-222	VE222-A 2PR. #18 SHLD., 3/4"C. VE222-C 6 #14, #14G., 3/4"C.		VFD222-C 18 #14, #14G., 2"C. (8 #14 SPARE) VFD222-DATA CAT6, 3/4"C.	
	PUMP MOTOR NO.2B E.STOP	ESTOP-222	ES222-A 6 #14, #14G., 3/4"C.		MAS-801 CONTROLLER ⚠1	
	PUMP MOTOR TRAIN 2 PRESSURE TRANSMITTER	PI/PIT-222	PIT222-A 1PR. #18 SHLD., 3/4"C.			
	PUMP MOTOR NO.3A PRESSURE TRANSMITTER	PI/PIT-230	PIT230-A 1PR. #18 SHLD., 3/4"C.			
	PUMP MOTOR NO.3A WINDING AND BEARING RTD'S	TE-231	TE231-A 5-1 TRI, #18, 1 1/2"C. ⚠1	⑦ ⚠1 "VFD-3A"	VFD231-A 4PR. #18 SHLD., 1"C. (2PR. SPARE)	
	PUMP MOTOR NO.3A VIBRATION	VE-231	VE231-A 2PR. #18 SHLD., 3/4"C. VE231-C 6 #14, #14G., 3/4"C.		VFD231-C 18 #14, #14G., 2"C. (8 #14 SPARE) VFD231-DATA CAT6, 3/4"C.	
	PUMP MOTOR NO.3A E.STOP	ESTOP-231	ES231-A 6 #14, #14G., 3/4"C.		MAS-801 CONTROLLER ⚠1	
	PUMP MOTOR NO.3B PRESSURE TRANSMITTER	PI/PIT-231	PIT231-A 1PR. #18 SHLD., 3/4"C.			
	PUMP MOTOR NO.3B WINDING AND BEARING RTD'S	TE-232	TE232-A 2PR. #18 SHLD., 3/4"C. ⚠1	⑦ ⚠1 "VFD-3B"	VFD232-A 4PR. #18 SHLD., 1"C. (2PR. SPARE)	
	PUMP MOTOR NO.3B VIBRATION	VE-232	VE232-A 2PR. #18 SHLD., 3/4"C. VE232-C 6 #14, #14G., 3/4"C.		VFD232-C 18 #14, #14G., 2"C. (8 #14 SPARE) VFD232-DATA CAT6, 3/4"C.	
	PUMP MOTOR NO.3B E.STOP	ESTOP-232	ES232-A 6 #14, #14G., 3/4"C.		MAS-801 CONTROLLER ⚠1	

① "TC-1000" — LCP-1000

ISSUED FOR BID

Freese and Nichols, Inc.
Georgia Registered Engineering Firm P-EF-004433
Expires 6/30/2026

GEORGIA REGISTERED PROFESSIONAL ENGINEER — 12.10.2025

FREESE NICHOLS
2180 Satellite Boulevard
Suite 235
Duluth, GA 30097
Phone - (470) 645-3092
Web - www.freese.com

GWINNETT COUNTY DEPARTMENT OF WATER RESOURCE
SUWANEE CREEK DIVERSION PUMP STATION
ELECTRICAL
INTERCONNECTION DIAGRAMS I

F&N JOB NO.	GWR24074
DATE	10/22/2025
DESIGNED	DC
DRAWN	JTR
CHECKED	-
APPROVED	JNH
FILE NAME	EL-GWR24074-DX-R23.RVT

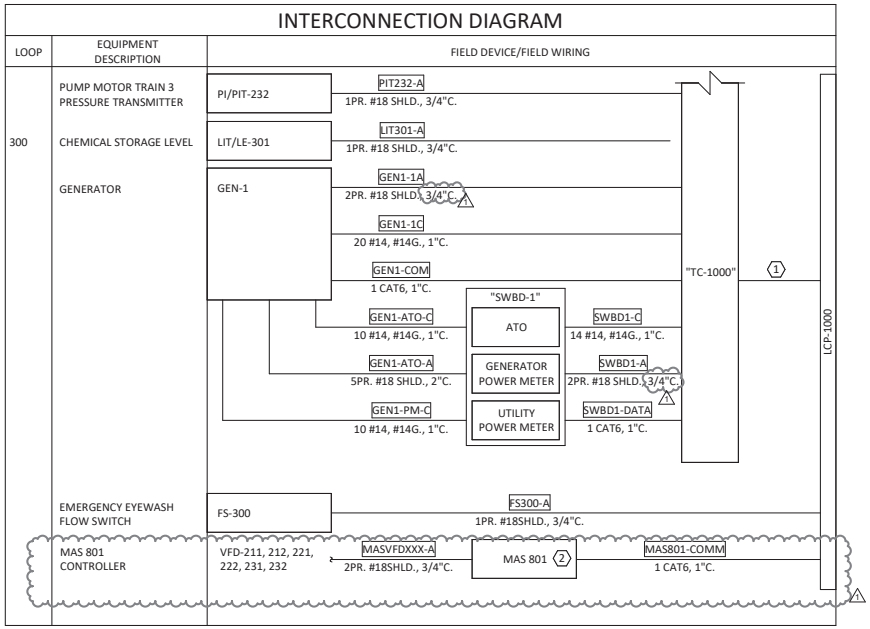
NO.	ISSUE	BY	DATE
1	ADDENDUM NO 3	JJS	12/1/2025
0	ISSUED FOR BID	JJS	10/22/2025

VERIFY SCALE
Bar is one inch on original drawing. If not one inch on this sheet adjust scale.
0 1"

SHEET E-27
SEQ. 115 OF 129

Plot Date: 12/8/2025 10:41:27 AM

INTERCONNECTION DIAGRAM



NOTES BY SYMBOL "⬡"

1. REFER TO SHEET E-27 FOR ALL CONDUIT GOING FROM "TC-1000" TO "LCP-1000".
2. MAS-801 BASE UNIT SUPPLIED BY PUMP MANUFACTURER.

Freese and Nichols, Inc.
Georgia Registered Engineering Firm P-EF-004433
Expires 6/30/2026

12.10.2025

FREESE NICHOLS
2180 Satellite Boulevard
Suite 235
Duluth, GA 30097
Phone - (470) 645-3092
Web - www.freese.com

GWINNETT COUNTY DEPARTMENT OF WATER RESOURCE
SUWANEE CREEK DIVERSION PUMP STATION

ELECTRICAL

INTERCONNECTION DIAGRAMS II

F&N JOB NO. GWR24074
DATE 10/22/2025
DESIGNED DC
DRAWN JTR
CHECKED -
APPROVED JNH
DATE
BY
NO. ISSUED FOR BID
0 ADDENDUM NO 3
1 ADDENDUM NO 4
10/7/2025
10/22/2025
FILE NAME EL-GWR24074-EX-R23.RVT

VERIFY SCALE
Bar is one inch on original drawing. If not one inch on this sheet adjust scale.
0 1"

SHEET E-28
SEQ. 116 OF 129

ISSUED FOR BID

Plot Date: 12/8/2025 10:41:28 AM

LIGHTING FIXTURE SCHEDULE						
TYPE	MANUFACTURER	CATALOG NO.	DESCRIPTION	LAMPS	VOLT.	WATTS
A	HOLOPHANE	ATB0-P303-XVOLT-R3-3K	AUTOBHAN SERIES ATB0, 15351 LUMENS, 480V, ROADWAY TYPE III, 3000K CCT, 70 CRI MIN.	LED	XVOLT	106
BE	HOLOPHANE	HXPL-L48-2-5L-120-NDM-40K-EM10W CP	EXPLOSION PROOF LED, CLASS 1, DIV 1 GROUP C AND D, 5000 LUMENS, 120V, NON DIMMING, 40K, 10 WATT INTERNAL EMERGENCY DRIVER	LED	120	46.9

PANEL NO. LP-01

SERVICE VOLTAGE 208Y/120V
A.I.C. 10,000
MCB RATING 150 A
BUS RATING 150 A
NEUTRAL BUS 100%
LOCATION ELEC RM 303
FEED FROM TFR-1
SECTIONS 2

CKT NO.	DESCRIPTION	POLE	TRIP	A		B		C		TRIP	POLE	DESCRIPTION	CKT NO.
1	EXISTING LOAD	1	20 A	0	0					20 A	1	EXISTING LOAD	2
3	EXISTING LOAD	1	20 A			0	0			20 A	1	EXISTING LOAD	4
5	EXISTING LOAD	1	20 A					0	0	20 A	1	EXISTING LOAD	6
7	EXISTING LOAD	1	20 A	0	0					20 A	1	EXISTING LOAD	8
9	EXISTING LOAD	1	20 A			0	0			20 A	1	EXISTING LOAD	10
11	EXISTING LOAD	1	20 A					0	0	20 A	1	EXISTING LOAD	12
13	EXISTING LOAD	1	20 A	0	0					20 A	1	EXISTING LOAD	14
15	EXISTING LOAD	2	20 A			0	0			20 A	1	EXISTING LOAD	16
17								0	0	20 A	1	EXISTING LOAD	18
19	EXISTING LOAD	1	20 A	0	0					20 A	1	EXISTING LOAD	20
21	EXISTING LOAD	1	20 A			0	0			20 A	3	EXISTING LOAD	22
23	EXISTING LOAD	1	20 A					0	0				24
25	EXISTING LOAD	1	20 A	0	0								26
27	EXISTING LOAD	1	20 A			0	0			20 A	2	EXISTING LOAD	28
29	EXISTING LOAD	1	20 A					0	0				30
31	EXISTING LOAD	1	20 A	0	0					20 A	1	EXISTING LOAD	32
33	EXISTING LOAD	1	20 A			0	0			20 A	1	EXISTING LOAD	34
35	EXISTING LOAD	1	20 A					0	0	20 A	1	EXISTING LOAD	36
37	EXISTING LOAD	1	20 A	0	0					20 A	1	EXISTING LOAD	38
39	EXISTING LOAD	1	20 A			0	0			20 A	1	EXISTING LOAD	40
41	EXISTING LOAD	1	20 A					0	0	20 A	1	EXISTING LOAD	42
43	F-1061	1	20 A	120	480					20 A	1	F-1066	44
45	F-1067	1	20 A			360	150			20 A	1	FREZE PROTECTED EYEWASH/SHOWER	46
47	ELECTRICAL ROOM RECEPTACLES	1	20 A					540	500	20 A	1	MAS-801 PANEL 1	48
49	SPARE	1	20 A	0	0				1	20 A	1	SPARE	50
51	SPARE	1	20 A			0	0			20 A	1	SPARE	52
53	SPARE	1	20 A					0	0	20 A	1	SPARE	54
55													56
57													58
59													60
61													62
63													64
	PHASE TOTALS			600 VA		510 VA		1030 VA					
				5 A		4 A		9 A					
	PANEL UNBALANCE			87 %									

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND
Receptacle	540 VA	100.00%	540 VA

PANEL TOTALS	
TOTAL CONNECTED LOAD:	1650 VA
TOTAL CONNECTED AMPS:	5 A
NON COINCIDENT LOAD:	0 VA
NON COINCIDENT AMPS:	0 A
TOTAL DEMAND LOAD:	1650 VA
TOTAL DEMAND LOAD AMPS:	5 A

NOTES:

ISSUED FOR BID

Plot Date: 12/8/2025 10:41:28 AM

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2026

FREESE NICHOLS
2180 Satellite Boulevard
Suite 235
Duluth, GA 30097
Phone - (470) 645-3092
Web - www.freese.com

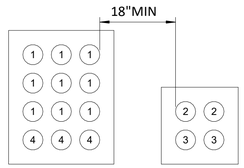
GWINNETT COUNTY DEPARTMENT OF WATER RESOURCE
SUWANEE CREEK DIVERSION PUMP STATION
ELECTRICAL
SCHEDULES

FB & N JOB NO.	GWR24074
DATE	10/22/2025
DESIGNED	DC
DRAWN	JTR
CHECKED	-
APPROVED	JNH
FILE NAME	EL-GWR24074-DX-R23.RVT

NO.	ISSUE	DATE	BY
1	ADDENDUM NO 3	12/10/2025	JS
0	ISSUED FOR BID	10/22/2025	JS

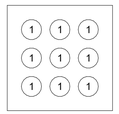
VERIFY SCALE
Bar is one inch on original drawing. If not one inch on this sheet adjust scale.
0 1"

SHEET E-29
SEQ. 117 OF 129



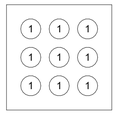
1	PGEN-A	4"C.
2	GEN-CONTROLS	2"C.
3	SPARE	2"C.
4	GEN HOUSE POWER	2"C.

1 DUCT BANK NO.1
NOT TO SCALE



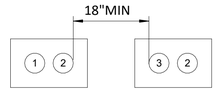
1	PUTIL-A	4"C.

2 DUCT BANK NO.2
NOT TO SCALE



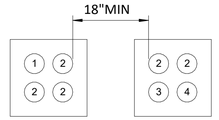
1	PUTIL-B	4"C.

3 DUCT BANK NO.3
NOT TO SCALE



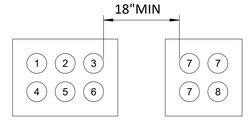
1	FIT2400A-A	2"C.
2	SPARE	2"C.
3	120V POWER	2"C.

4 DUCT BANK NO.4
NOT TO SCALE



1	120V CHEMICAL FEED CONTROL PANEL	2"C.
2	SPARE	2"C.
3	LIT310-A	2"C.
4	FIBER	2"C.

5 DUCT BANK NO.5
NOT TO SCALE

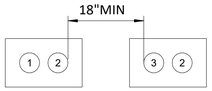


1	P101A	2"C.
2	P102A	2"C.
3	TC2420A	2"C.
4	L2420A	2"C.
5	P103A	2"C.
6	SPARE	2"C.
7	COMMUNICATION	2"C.
8	SPARE	2"C.

6 DUCT BANK NO.6
NOT TO SCALE

1	GEN1A-A	2"C.
2	GEN1-C	2"C.
3	GEN1-ATO-C	2"C.
4	GEN1-ATO-A	2"C.
5	GEN1-PM-C	2"C.
6	SPARE	2"C.

7 DUCT BANK NO.7
NOT TO SCALE



1	P103-A	2"C.
2	SPARE	2"C.
3	CONTROL	2"C.

8 DUCT BANK NO.8
NOT TO SCALE

ISSUED FOR BID

Plot Date: 10/21/2025 3:50:43 PM

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2026

GEORGIA REGISTERED PE050516 PROFESSIONAL ENGINEER JEFFREY J. STOUT 10.22.2025

FREESE NICHOLS
2180 Satellite Boulevard
Suite 235
Duluth, GA 30097
Phone - (470) 645-3092
Web - www.freese.com

GWINNETT COUNTY DEPARTMENT OF WATER RESOURCE
SUWANEE CREEK DIVERSION PUMP STATION

ELECTRICAL

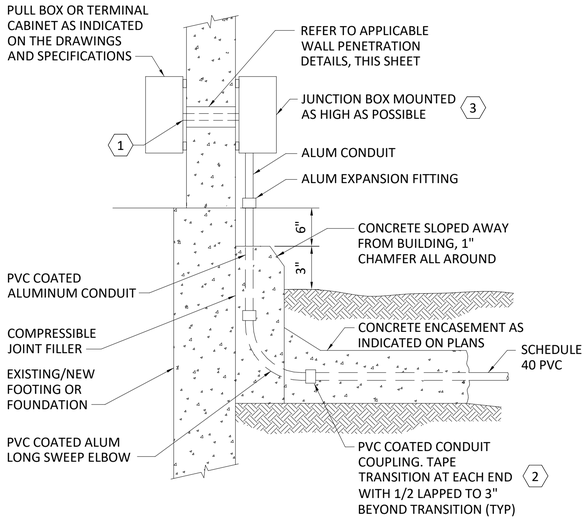
DUCT BANK DETAILS

F&N JOB NO. GWR24074
DATE 10/22/2025
DESIGNED DC
DRAWN JTR
CHECKED -
APPROVED JNH
FILE NAME EL-GWR24074-EX-R23.RVT

NO.	ISSUE	DATE	BY
0	ISSUED FOR BID	10/22/2025	JJS

VERIFY SCALE Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.
0 1

SHEET E-30
SEQ. 118 OF 129

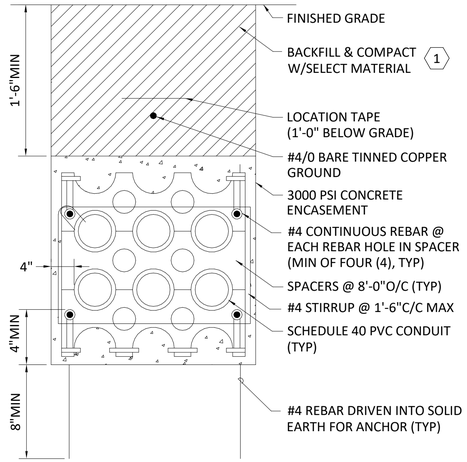


NO.1 NOTES BY SYMBOL "⬡"

1. SEAL ALL CONDUITS ENTERING ENCLOSURES WITH REMOVABLE SILICON CAULK.
2. APPLY RUBBER ELECTRICAL TAPE TO ALL EXPOSED METAL CONDUIT OR CONDUIT THREADS. EXTEND TAPE A MINIMUM 2" IN BOTH DIRECTIONS BEYOND EXPOSED CONDUIT.
3. ALLOW MINIMUM OF 12" OF WIRES SLACK IN JUNCTION BOX TO ACCOMMODATE EXPANSION JOINT.

1 - ABOVE GRADE CONDUIT TERMINATION

NOT TO SCALE



NO.2 GENERAL NOTES:

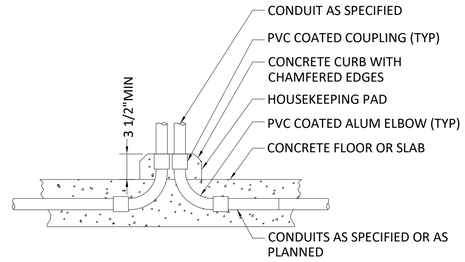
1. CONTRACTOR SHALL PROVIDE CHAIRS FOR REBAR ROUTED ALONG BOTTOM OF DUCT BANK TO VERIFY THAT REBAR IS FULLY ENCASED WITH 4" OF CONCRETE.

NO.2 NOTES BY SYMBOL "⬡"

1. SELECT BACKFILL TO BE CLASS 4 EARTH FILL. FILL SHALL CONSIST OF MATERIALS WHICH ARE CLASSIFIED AS SP, SM, SC, CL OR DUAL CLASSIFICATIONS THEREOF, WHICH HAVE A LIQUID LIMIT LESS THAN OR EQUAL TO 35 AND A PLASTICITY INDEX OF A MINIMUM OF 4 AND A MAXIMUM OF 15, WHICH ARE FREE OF ORGANIC MATERIALS.

2 - CONCRETE ENCASED DUCT BANK DETAIL

NOT TO SCALE



3 - INTERIOR OR EXTERIOR CONCEALED CONDUIT INSTALLATION CONCRETE SLAB

NOT TO SCALE

ISSUED FOR BID

Plot Date: 10/21/2025 3:50:43 PM

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2026

GEORGIA REGISTERED PE050516 PROFESSIONAL ENGINEER JEFFREY J. STOUT 10.22.2025

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GWINNETT COUNTY DEPARTMENT OF WATER RESOURCE

SUWANEE CREEK DIVERSION PUMP STATION

ELECTRICAL

DETAILS I

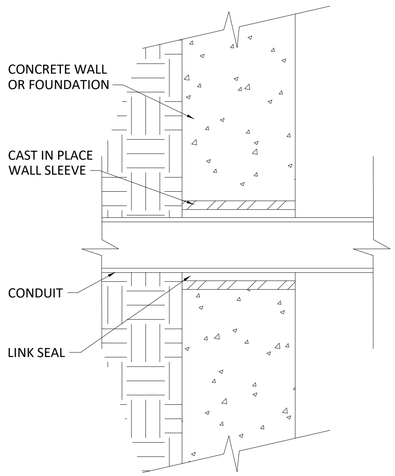
F&N JOB NO.	GWR24074
DATE	10/22/2025
DESIGNED	DC
DRAWN	JTR
CHECKED	-
APPROVED	JNH
FILE NAME	EL-GWR24074-EX-R23.RVT

NO.	ISSUE	BY	DATE
0	ISSUED FOR BID	JJS	10/22/2025

VERIFY SCALE Bar is one inch on original drawing. If not one inch on this sheet, adjust scale. 0 1

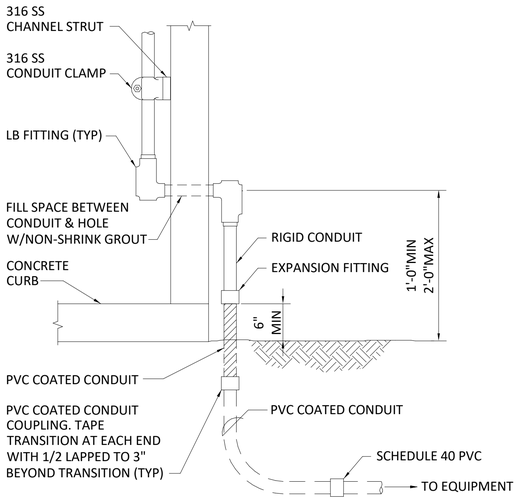
SHEET E-31

SEQ. 119 OF 129



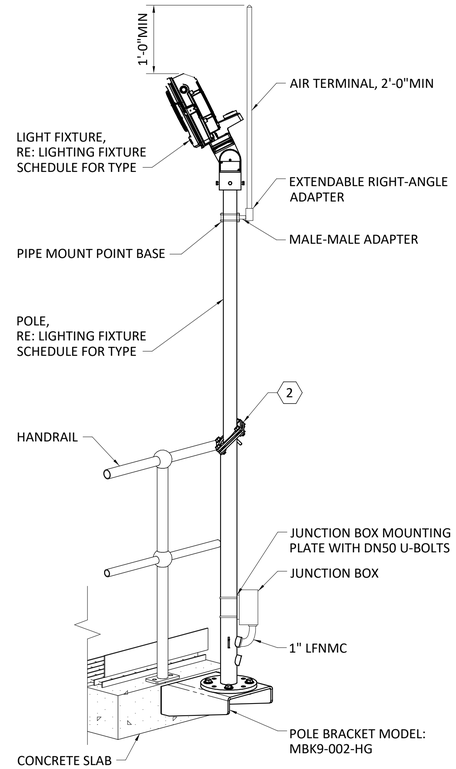
1 — TYPICAL WALL PENETRATION BELOW GRADE

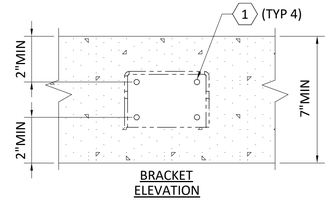
NOT TO SCALE



2 — WALL PENETRATION

NOT TO SCALE





NO.5 GENERAL NOTES:

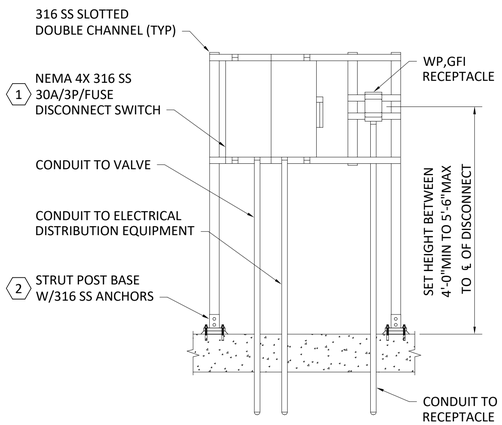
1. FOR LIGHT POLES MOUNTED TO STRUCTURES WHERE LIGHTNING PROTECTION SYSTEMS ARE SPECIFIED, AIR TERMINALS ARE NOT PERMITTED TO BE MOUNTED TO LIGHT FIXTURES. MOUNT AIR TERMINAL TO LIGHT POLE. EXTEND AIR TERMINAL ABOVE LIGHT FIXTURE.

NO.5 NOTES BY SYMBOL "⬡"

1. ANCHORS SHALL BE 5/8" DIA 304 STAINLESS STEEL HILTI HIT RE 500 V3 OR APPROVE EQUAL WITH 3 1/8" EMBEDMENT. DO NOT DAMAGE STRUCTURE DURING ANCHOR INSTALLMENT.
2. PROVIDE ENOUGH SLACK IN DOWN CONDUCTOR TO ALLOW POLE TO MAKE FULL ROTATION.

5 — WALKWAY MOUNTED LIGHT POLE DETAIL

NOT TO SCALE



NO.4 GENERAL NOTES:

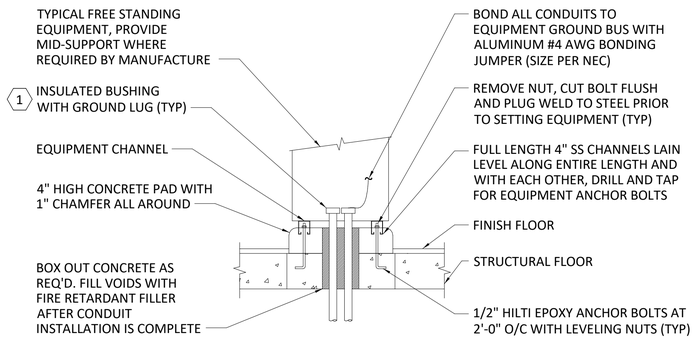
1. NEC REQUIRED CLEARANCE FOR THE DISCONNECT.

NO.5 NOTES BY SYMBOL "⬡"

1. COORDINATE FUSE SIZE WITH VALVE OPERATOR MANUFACTURER.
2. ANCHORS SHALL BE 1/2"DIA 316 STAINLESS STEEL KWIK BOLT III WITH 3 1/2" EMBEDMENT. DO NOT DAMAGE EXISTING STRUCTURE DURING ANCHOR INSTALLMENT.

4 — DISCONNECT MOUNTING ON CONCRETE SLAB/FOUNDATION

NOT TO SCALE



NO.3 NOTES BY SYMBOL "⬡"

1. SEAL ALL CONDUITS ENTERING ENCLOSURES WITH REMOVABLE SILICON CAULK.

3 — EQUIPMENT PAD DETAIL

NOT TO SCALE

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2026

GEORGIA REGISTERED PE050516 PROFESSIONAL ENGINEER JEFFREY J. STOUT
10.22.2025

FREESE AND NICHOLS
2180 Satellite Boulevard
Suite 235
Duluth, GA 30097
Phone - (470) 645-3092
Web - www.freese.com

GWINNETT COUNTY DEPARTMENT OF WATER RESOURCE

SUWANEE CREEK DIVERSION PUMP STATION

ELECTRICAL

DETAILS II

F&N JOB NO.	GWR24074
DATE	10/22/2025
DESIGNED	DC
DRAWN	JTR
CHECKED	-
APPROVED	JNH
FILE NAME	EL-GWR24074-EX-R23.RVT

NO.	ISSUE	BY	DATE
0	ISSUED FOR BID	JJS	10/22/2025

Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.

VERIFY SCALE 0 1"

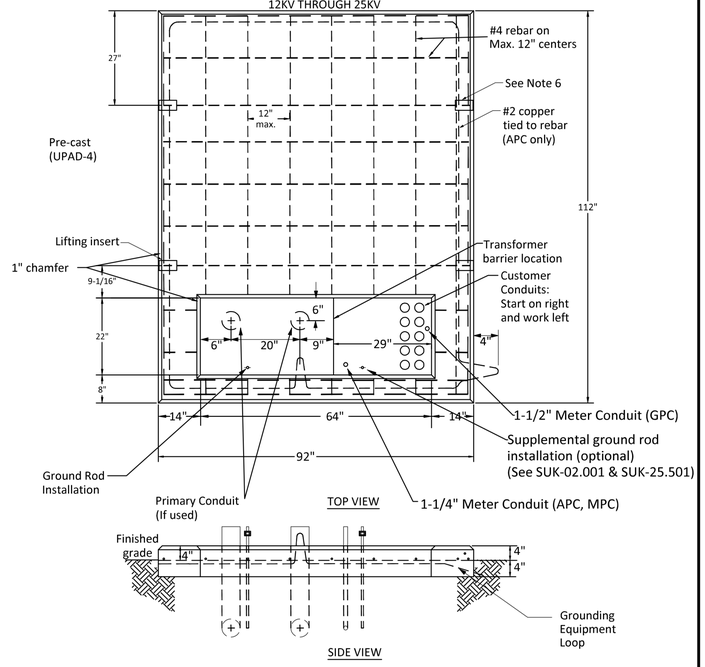
SHEET E-32

SEQ. 120 OF 129

ISSUED FOR BID

Plot Date: 10/21/2025 3:50:44 PM

STANDARD PAD FOR 500 KVA THROUGH 3750 KVA LOOP FEED
AND 500KVA THROUGH 2500KVA RADIAL STEP-UP/DOWN PAD MOUNTED TRANSFORMER
12KV THROUGH 25KV



NOTES:
1. Maintain 2 in. of clear concrete between rebar and all outer surfaces.
2. Reinforce with No. 4 rebars with a 12"x 12" grid, 4 in. below top of pad except as shown above.
3. Concrete shall have a minimum ultimate 28 day compressive strength of not less than 3,000 psi, pad shall be cured not less than 72 hours.
4. Average weight of pad is 5,800 pounds.
5. Mounting surface shall be level, smooth and uniform with minimal irregularities.
6. Lifting insert for 1 in. diameter threaded bolt, 4" depth, Meadow Burke FX-14 or equivalent, 4 locations (omit if poured in place).

SUBJECT UNDERGROUND DISTRIBUTION			
DETAIL EQUIPMENT PADS AND VAULTS - STANDARD PAD FOR 500KVA THROUGH 3750KVA LOOP FEED AND 500KVA THROUGH 2500KVA RADIAL STEP-UP/DOWN PAD-MOUNTED TRANSFORMER, 12KV THROUGH 25KV			
Date 02-26-99	REVISED 09-25-00, 01-26-02, 01-09-07, 12-20-13 03-26-15, 04-05-18, 10-23-18, 01-09-19	Southern Company	A- SUH16001

SUH-16.001

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2026

GEORGIA REGISTERED No. PE050516 PROFESSIONAL ENGINEER JEFFREY J. STOUT
10.22.2025

FREESE NICHOLS
2180 Satellite Boulevard
Suite 235
Duluth, GA 30097
Phone - (470) 645-3092
Web - www.freese.com

GWINNETT COUNTY DEPARTMENT OF WATER RESOURCE
SUWANEE CREEK DIVERSION PUMP STATION
ELECTRICAL
DETAILS III

F&N JOB NO. GWR24074
DATE 10/22/2025
DESIGNED DC
DRAWN JTR
CHECKED -
APPROVED JNH
FILE NAME EL-GWR24074-EX-R23.RVT

NO.	ISSUE	DATE	BY
0	ISSUED FOR BID	10/22/2025	JJS

VERIFY SCALE Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.
0 1

SHEET E-33
SEQ. 121 OF 129

ISSUED FOR BID

Plot Date: 10/21/2025 3:50:44 PM

INSTRUMENT AND FUNCTION SYMBOLS

	PRIMARY LOCATION NORMALLY ACCESSIBLE TO OPERATOR	FIELD MOUNT	AUXILIARY LOCATION NORMALLY ACCESSIBLE TO OPERATOR	NORMALLY INACCESSIBLE OR BEHIND THE PANEL DEVICES OR FUNCTIONS
DISCRETE INSTRUMENTS	XXX 000	XXX 000	XXX 000	XXX 000
SHARED DISPLAY, SHARED CONTROL (OIT, HMI, SCADA)	XXX 000		XXX 000	XXX 000
PROGRAMMABLE LOGIC CONTROL	XXX 000		XXX 000	XXX 000
COMPUTER FUNCTION	XXX 000		XXX 000	XXX 000

I 000 — RELAY INTERLOCK LOGIC

I 000 — PLC INTERLOCK

XXX 000 XXX 000 — SINGLE INSTRUMENT OR OTHER COMPONENT HAVING MULTIPLE FUNCTIONS OR SHARING A COMMON HOUSING

XXX 000 (ZZZ) — DESIGNATIONS OF CONTROL FUNCTIONS (ZZZ) ASSOCIATED WITH INSTRUMENT OR OTHER COMPONENTS.

ACK	ACKNOWLEDGE	OOS	OUT OF SERVICE
AHC	AUTO/HOLD/CLOSE	OSC	OPEN/STOP/CLOSED
ALM	ALARM	PID	PID CONTROL BLOCK
AM	AUTO/MANUAL	POT	POTENTIOMETER
DEV	DEVIATION	REM	REMOTE
FOR	FORWARD/OFF/REVERSE	REV	REVERSE
FWD	FORWARD	RL	RAISE/LOWER
JOG	MOMENTARY ENERGIZATION	RS	RUN/STOP
HOA	HAND/OFF/AUTO	RSL	RAISE/STOP/LOWER
HOR	HAND/OFF/REMOTE	SD	SHUTDOWN
LOR	LOCAL/OFF/REMOTE	SEL	SELECT
LOS	LOCKOUT STOP	SP	SET POINT
LR	LOCAL/REMOTE	SR	START/RESET
MOA	MANUAL/OFF/AUTO	SS	STOP/START
OC	OPEN/CLOSED	SYNC	SYNCHRONIZE
OO	ON/OFF	TOT	TOTALIZER

PLC / REMOTE I/O POINTS

ANALOG INPUT — DISCRETE INPUT — DATA SIGNAL ANALOG INPUT * — DATA SIGNAL DISCRETE INPUT *

ANALOG OUTPUT — DISCRETE OUTPUT — DATA SIGNAL ANALOG OUTPUT * — DATA SIGNAL DISCRET OUTPUT *

* FIELD NETWORK INTERFACE. SEE SPECIFICATION FOR MORE INFORMATION

FY * 000 — INSTRUMENT PANEL MOUNTED WITH COMPUTING OR CONVERTING FUNCTION

CONVERT */* — E - VOLTAGE; I - CURRENT; P - PNEUMATIC; A - ANALOG; B - BINARY; H - HYDRAULIC; O - ELECTROMAGNETIC, SONIC; R - RESISTANCE (ELECT.); D - DIGITAL

COMPUTE * — SUMMING; SUBTRACTOR; MULTIPLYING; DIVIDING; ROOT EXTRACTION; PROPORTIONAL; DERIVATIVE; AVERAGING; RATIO; DIFFERENCE; HIGH SELECTING; LOW SELECTING; INTEGRAL; PID

XXX 000 — PANEL MOUNTED PILOT LIGHT

NON-ANALYTICAL FIELD INSTRUMENTS NOT IDENTIFIED BY SYMBOLS

XXX 000 ** — ** = R - RADAR; TD - THERMAL DISPERSION; RF - ADMITTANCE / CAPACITANCE

INSTRUMENT IDENTIFICATION LETTERS

	FIRST LETTER		SUCCEEDING LETTERS		
	MEASURED OR INITIATING VARIABLE	MODIFIER	READOUT OR PASSIVE FUNCTION	OUTPUT FUNCTION	MODIFIER
A	ANALYSIS		ALARM OR PLC/DCS DISCRETE INPUT		
B	BURNER, COMBUSTION		USER'S CHOICE	USER'S CHOICE	BYPASS
C	CONDUCTIVITY (ELECTRICAL)			CONTROLLER	CLOSE, CLOSED
D	DENSITY (MASS) OR SPECIFIC GRAVITY	DIFFERENTIAL			DRIVE (VFD)
E	VOLTAGE (EMF)		PRIMARY ELEMENT		
F	FLOW	RATIO (FRACTION)			FORWARD
G	FIRE, SMOKE		GAUGE, GLASS		
H	HAND SWITCH (SELECTOR SWITCH)				HIGH
I	CURRENT (ELECTRICAL)		INDICATE OR PLC/DCS ANALOG INPUT		
J	POWER	SCAN			
K	TIME OR TIME- SCHEDULE	TIME RATE OF CHANGE		CONTROL STATION	
L	LEVEL		LIGHT (PILOT)		LOW
M	MOISTURE OR HUMIDITY	MOMENTARY			MIDDLE OR INTERMEDIATE
N	EQUIPMENT STATUS		USER'S CHOICE	USER'S CHOICE	USER'S CHOICE
O	DISSOLVED OXYGEN		ORIFICE (RESTRICTION)		OPEN, OPENED
P	PRESSURE OR VACUUM		POINT (TEST CONNECTION)		
Q	QUANTITY		INTEGRATE OR TOTALIZE		
R	RADIATION	REMOTE CONTROL	RECORD OR PRINT		REVERSE
S	SPEED OR FREQUENCY	SAFETY		SWITCH	
T	TEMPERATURE			TRANSMIT	
U	MULTIVARIABLE		MULTIFUNCTION	MULTIFUNCTION	MULTIFUNCTION
V	VIBRATION			VALVE, DAMPER OR LOUVER	
W	WEIGHT, TORQUE OR FORCE		WELL		
X	EVENT, STATE OR PRESENCE		NOTIFY OR PLC/DCS DISCRETE INPUT		
Y	USER'S CHOICE			COMPUTE, CONVERT, RELAY	
Z	POSITION, DIMENSION, DIRECTION			DRIVE, ACTUATOR OR UNCLASSIFIED FINAL CONTROL ELEMENT	

TAG SCHEMA

TAGGING CONVENTIONS:

AAAAAA-DDDD-99###Z

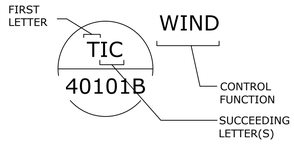
WHERE:

AAAAAA - SITE ID
DDDD - EQUIP / VALVE / INSTRUMENT / VESSEL / PANEL / IO IDENTIFIER
99 - PROCESS AREA ID
- LOOP NUMBER
Z - SUFFIX

TYPICAL EQUIPMENT TAG FORMAT

WFPSC-BLR-40101 — FULL TAG (DATABASE)
BLR-40101 — PARTIAL TAG (P&ID)
LOOP NUMBER
PROCESS AREA ID
EQUIPMENT ID
SITE ID

TYPICAL INSTRUMENT AND CONTROL VALVE TAG FORMAT



WFPSC-TIC-40101B — FULL TAG (DATABASE)
TIC-40101B — PARTIAL TAG (P&ID)
SUFFIX
LOOP NUMBER
PROCESS AREA ID
INSTRUMENT ID
SITE ID

TYPICAL MANUAL VALVE TAG FORMAT

WFPSC-BFV-40101A — FULL TAG (DATABASE)
BFV-40101A — PARTIAL TAG (P&ID)
SUFFIX
LOOP NUMBER
PROCESS AREA ID
VALVE ID
SITE ID

TYPICAL SHEET NUMBER TAG FORMAT

10 I-101

WFPSC-10 I-101 — FULL TAG (DATABASE)
10 I-101 — PARTIAL TAG (P&ID)
SHEET NUMBER
DISCIPLINE
PROCESS AREA ID
SITE ID

TYPICAL PIPELINE TAG FORMAT

1" NPW-PVC

1" NPW-PVC — FULL TAG (P&ID)
PIPE MATERIAL
PROCESS ABBREVIATION
NOMINAL PIPE DIAMETER

TYPICAL PANEL TAG FORMAT

LCP-40101

LCP-40101 — FULL TAG (P&ID)
LOOP NUMBER
PROCESS AREA ID
PANEL ID

NOTE:
REFER TO GENERAL SHEET 00 I-003 FOR EQUIPMENT ID, VALVE ID, PROCESS ABBREVIATIONS, PANEL ID AND PIPE MATERIAL LIST.

GENERAL SHEET NOTES

1. THE SYMBOLS AND NOMENCLATURE SHEETS ARE REPRESENTATIVE OF A GENERAL STANDARD. THEREFORE, IT SHOULD BE UNDERSTOOD THAT NOT ALL INFORMATION PRESENTED WILL BE RELEVANT TO THIS PROJECT.
2. ADDITIONAL INSTRUMENTATION AND CONTROL SYMBOLS MAY BE USED AS REQUIRED. SYMBOLS AND NOMENCLATURE WILL BE EITHER BASED ON ISA STANDARD 5.1-INSTRUMENTATION SYMBOLS AND IDENTIFICATION OR DEFINED ELSEWHERE IN THE P&ID SET.
3. TO CAPTURE THE COMPLETE PROCESS CONTROL INTENT, THE P&IDS MUST TO BE REVIEWED IN CONJUNCTION WITH THE PROJECT CONTROL PHILOSOPHY (SPEC SECTION 40 93 00), THE PROJECT I/O AND INSTRUMENT SCHEDULES AND OTHER SECTIONS REFERENCED HEREIN.

SITE ID

RWP01	LANIER INTAKE PUMP STATION
RWP02	SHOAL CREEK INTAKE PUMP STATION
WBSBO	BOGAN BOOSTER PUMP STATION
WBSGR	GRAYSON BOOSTER PUMP STATION
WBSKN	KNOLLWOOD BOOSTER PUMP STATION
WBSLM	LANIER MOUNTAIN BOOSTER PUMP STATION AND TANK
WBSNO	NORCROSS BOOSTER PUMP STATION
WBSRO	ROCKBRIDGE BOOSTER PUMP STATION
WBSRQ	ROCK QUARRY BOOSTER PUMP STATION
WBSWC	WALTON COURT BOOSTER PUMP STATION
WFPLN	LANIER WATER FILTER PLANT
WFPSC	SHOAL CREEK WATER FILTER PLANT
WTKL01	LANIER SURGE TANK
WTKN01	NOB HILL TANK

ANALYTICAL

AIT 000 XXXX — ANALYSIS INDICATING TRANSMITTER

XXXX =

ALK	-	ALKALINITY
CH4	-	METHANE CONCENTRATION
CL2	-	CHLORINE CONCENTRATION
COMB	-	COMBUSTIBLE GAS
CON	-	CONDUCTIVITY
DO	-	DISSOLVED OXYGEN
H2S	-	HYDROGEN SULFIDE
LEL	-	LOWER EXPLOSIVE LIMIT
MEOH	-	METHANOL VAPOR CONCENTRATION
O2	-	OXYGEN CONCENTRATION
O3	-	OZONE
ORP	-	OXIDATION/REDUCTION POTENTIAL
PETRO	-	PETROLEUM VAPOR
PH	-	HYDROGEN ION CONCENTRATION
SO2	-	SULFUR DIOXIDE
TH	-	TOTAL HARDNESS
TSS	-	TOTAL SUSPENDED SOLIDS
TURB	-	TURBIDITY
UV	-	ULTRAVIOLET

FREESE NICHOLS
2180 Satellite Blvd, Suite 235
Duluth, Georgia 30097
Phone – (404) 334-4310
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2026

CONSULTANT PROJ. NO. GWR24074

GEORGIA REGISTERED No. PE052858 PROFESSIONAL ENGINEER JUSTIS P. WEAVER
10/21/2025

Gwinnett Water Resources
LAWRENCEVILLE, GA

GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES

SUWANEE CREEK DIVERSION PUMP STATION EXPANSION

1758 PEACHTREE INDUSTRIAL BLVD. SUWANEE, GA 30024

GCDWR PROJ. NO. F01469

NO	DATE	ISSUED FOR	BY
0	10/22/2025	ISSUED FOR BID	JPW

DATE 10/22/2025
DESIGNED BY JPW
DRAWN BY JLF
CHECKED BY NC
CHECKED BY
CHECKED BY

SHEET TITLE

INSTRUMENTATION

GENERAL SYMBOLS & NOMENCLATURE - I

SCALE: NOT TO SCALE

I-1

SHEET 122 OF 129

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MECHANICAL EQUIPMENT SYMBOLS

CENTRIFUGAL PUMP	PROGRESSIVE CAVITY PUMP	CENTRIFUGAL WET PIT (OR DRY-PIT SUBMERSIBLE) PUMP	CHOPPER PUMP
PISTON PUMP	GEAR PUMP	ROTARY LOBE PUMP OR BLOWER (POSITIVE DISPLACEMENT)	AXIAL-FLOW PUMP
CHEMICAL FEED PUMP	VERTICAL PUMP	SCREW CENTRIFUGAL PUMP	HOSE PUMP
SPLIT-CASE PUMP	HORIZONTAL CENTRIFUGAL PUMP	BLOWER (CENTRIFUGAL SINGLE STAGE)	MULTISTAGE CENTRIFUGAL BLOWER
POSITIVE DISPLACEMENT BLOWER	COMPRESSOR (CENTRIFUGAL), OR TURBINE	ROTARY SCREW COMPRESSOR	COMPRESSOR (PISTON)
INLINE GRINDER	MIXER	ROTARY FEEDER	VENTILATION FAN

VALVE SYMBOLS

GATE VALVE	PLUG VALVE	GLOBE VALVE	BALL VALVE
BALL VALVE (3 WAY)	AUTOMATIC AIR VENT (GAS SYSTEMS)	PINCH VALVE	COMBINATION VACUUM / PRESSURE RELIEF VALVE
BUTTERFLY VALVE	SWING CHECK VALVE	BALL CHECK VALVE	DIAPHRAGM VALVE
NEEDLE VALVE	ANGLE VALVE	ROTARY VALVE	DIFFERENTIAL PRESSURE REGULATOR
PRESSURE RELIEF OR SAFETY VALVE	VACUUM RELIEF VALVE	PRESSURE-REDUCING REGULATOR	BACKPRESSURE REGULATOR
BACKFLOW PREVENTOR	SLUICE GATE	STOP/SLIDE GATE	Y STRAINER
PUMP CONTROL VALVE	AIR RELEASE VALVE	DAMPER	TELESCOPING VALVE
WAFER-TYPE CHECK VALVE	MUD VALVE	COMBINATION AIR RELEASE VALVE	

MISCELLANEOUS SYMBOLS

PRESSURE TRANSMITTER WITH FLUSH-MOUNTED DIAPHRAGM SEAL	DIAPHRAGM SEAL	BLIND FLANGE	FLAME TRAP	ELECTRIC MOTOR
ELECTRIC MOTOR SPACE HEATER	VENT TO ATMOSPHERE	AIR GAP	DRAIN	HORN
ANNULAR DIAPHRAGM SEAL	EXPANSION TANK	FLEX PIPING CONNECTOR	FLOAT SWITCH	RUPTURE DISK
CALIBRATION CYLINDER	PULSATION DAMPENER	INJECTOR OR EDUCTOR	FLEXIBLE HOSE	QUICK CONNECT
ULTRASONIC LEVEL OR FLOW SENSOR	SUBMERSIBLE LEVEL (PRESSURE) SENSOR	RADAR LEVEL OR FLOW SENSOR	RELAY	HORN/STROBE LIGHT
AIR FILTER	CONCENTRIC AND ECCENTRIC PIPE REDUCER / INCREASER	PIPE MATERIAL CHANGE	PIPE ROUTING CHANGE	EMERGENCY EYEWASH
STRAINER - BASKET TYPE	STRAINER - DUPLEX BASKET TYPE	OIL MOISTURE TRAP		

VALVE / GATE ACTUATORS

SOLENOID	ROTARY MOTOR	VALVE ACTUATOR ELECTRO- PNEUMATIC CONVERTER	ELECTRO-HYDRAULIC	PNEUMATIC

VALVE / GATE ACTUATORS POSITIONER

SOLENOID WITH POSITIONER	ROTARY MOTOR WITH POSITIONER	VALVE ACTUATOR ELECTRO- PNEUMATIC CONVERTER WITH POSITIONER	ELECTRO-HYDRAULIC WITH POSITIONER	PNEUMATIC WITH POSITIONER

FLOW METERS

MAGNETIC FLOWMETER	VORTEX SENSOR	PADDLE WHEEL	FLUME	SONIC FLOW METER "DOPPLER" OR "TRANSIT TIME" TEXT MAY BE ADDED
ORIFICE PLATE (MOUNTED IN FLANGE UNION)	VENTURI/INSERT TYPE FLOW TUBE	WEIR	VARIABLE AREA ROTAMETER(R)	POSITIVE-DISPLACEMENT TYPE
SINGLE PORT PITOT TUBE	TURBINE-OR PROPELLER TYPE	THERMAL MASS FLOW METER		

LINE SYMBOLS AND LEGEND

- STRUCTURES OR CHANNELS
- PRIMARY OR MAJOR PROCESS PIPE
- SECONDARY PROCESS PIPE OR CHEMICAL PIPING
- DRAIN AND SAMPLE PIPE
- EXISTING (SCREENED)
- FUTURE EQUIPMENT (DASH)
- HEAT TRACED PIPE
- INSULATED PIPE
- DOUBLE CONTAINMENT PIPE
- VENDOR SKID / PACKAGE LIMIT
- AIR SUPPLY FOR PNEUMATIC CONTROL
- HYDRAULIC SIGNAL
- MECHANICAL LINKAGE
- ELECTRICAL SIGNAL
- DATA SIGNAL / FIELD NETWORK
- PROCESS / SIGNALS NOT CONNECTED (CROSSING)
- DATALINK / SIGNAL LINE CONNECTION POINT
- EXTENDED LINE BREAK
- ELECTRICAL SOURCE VOLTAGE / PHASE (ES 120/1, ES 24VDC/1, ES 24VAC/1, ES 480V/3)
- (X) SIGNAL CONTINUED ELSEWHERE ON SHEET
- * 04 | 20 I-101 — TO PROCESS / EQUIPMENT — PROCESS OR LOGIC CONNECTION TO DRAWING 20 I-101
- 20 I-101 | * 02 — FROM PROCESS / EQUIPMENT — PROCESS OR LOGIC CONNECTION FROM DRAWING 20 I-101
- XX | XXX — PROCESS OR LOGIC CONNECTION CONTINUES TO UNREPRESENTED DRAWING

* OFF-PAGE CONNECTOR NUMBERS WILL BE MATCHED WITH THE NUMBERS FROM CONNECTING SHEET.

FREESE AND NICHOLS
2180 Satellite Blvd, Suite 235
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CHECKED BY

SHEET TITLE

INSTRUMENTATION

GENERAL SYMBOLS & NOMENCLATURE - II

SCALE: NOT TO SCALE

I-2

SHEET 123 OF 129

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PROCESS ABBREVIATIONS

CODE	PROCESS	CODE	PROCESS
AAB	BLOWER AIR	NAG	NATURAL GAS
AAI	INSTRUMENT AIR	NPW	UTILITY WATER (NON-POTABLE WATER)
AAP	PROCESS AIR	NRCY	NITRIFIED RECYCLE
AAS	SERVICE AIR / PLANT AIR	OVFL	OVERFLOW
AER	AERATION	OZON	OZONE
AGA	AGITATION AIR	OZW	OZONATED WATER
AS	AIR SCOUR	PAC	POWDERED ACTIVATED CARBON
BEQ	BACKWASH EQUALIZATION	PEFF	PRIMARY CLARIFIER EFFLUENT
BPB	BACKWASH PRECLARIFICATION	PER	PERMEATE
BWS	BACKWASH WATER SUPPLY	PINF	PRIMARY CLARIFIER INFLUENT
BWW	BACKWASH WASTE	PLY	POLYMER
CAE	CARBON ADSORBER EFFLUENT	POW	POTABLE WATER
CAI	CARBON ADSORBER INFLUENT	PSC	PRIMARY SCUM
CAP	COAGULANT (FLOCCULENT) AID POLYMER	PSL	PRIMARY SLUDGE
CAS	CARBON SOURCE	RAS	RE-CIRCULATED ACTIVATED SLUDGE
CAU	CAUSTIC	RAW	RAW WATER
CCE	CHEMICAL CLARIFIER EFFLUENT	RCE	RECARBONATION EFFLUENT
CCI	CHEMICAL CLARIFIER INFLUENT	REF	RESERVOIR EFFLUENT
CDWR	CONDENSATE WATER RETURN	RFL	WASTEWATER FILTRATION
CDWS	CONDENSATE WATER SUPPLY	RIN	RESERVOIR INFLUENT
CEN	CENTRATE	ROF	RESERVOIR OVERFLOW
CGW	COAGULATED WATER	RWW	RAW WASTE WATER
CHC	CHEMICAL CONTAINMENT	SCB	SCUM
CHD	CHEMICAL DRAIN	SCCE	SOLIDS CONTACT CLARIFIER EFFLUENT
CHE	CHEMICAL (MISC.)	SCCI	SOLIDS CONTACT CLARIFIER INFLUENT
CHI	CHEMICAL INJECTION	SCR	SCREENINGS
CHWR	CHILLED WATER RETURN	SEFF	SECONDARY CLARIFIER EFFLUENT
CHWS	CHILLED WATER SUPPLY	SFA	SULFURIC ACID
CIH	CORROSION INHIBITOR	SH	SODIUM HYPOCHLORITE
CIP	CLEAN IN PLACE	SLD	SOLIDS
CIT	CITRIC ACID	SLG	SLUDGE
CLB	CHLORINE BUILDING	SLW	SEAL WATER
CLL	CHLORINE LIQUID	SND	SAND SLURRY
CLP	CHLORINE GAS (PRESSURE)	SPW	SAMPLE WATER
CLS	CHLORINE SOLUTION	SRW	SERVICE WATER
CLV	CHLORINE GAS (VACUUM)	SSC	SECONDARY SCUM
CMW	CHEMICAL WASTE	STW	SETTLED WATER
CND	CONDENSATE DRAIN	SUN	SUPERNATANT
CON	CONDENSATE	SUP	SUMP PUMP DISCHARGE
CRW	CARRIER WATER	TPS	TRANSFER PUMP STATION
CSL	CHEMICAL SLUDGE	TSL	THICKENED SLUDGE
CWR	COOLING WATER RETURN	UDR	UNDERDRAIN
CWS	COOLING WATER SUPPLY	ULV	ULTRAVIOLET
DF	DIESEL FUEL	WAS	WASTE ACTIVATED SLUDGE
DFL	DECANT FILTRATE	WLW	WELL WATER
DG	DIGESTER GAS	WSS	WASTE SECONDARY SLUDGE
DRP	DRAIN	WWW	WELL WATER TO WASTE
DSL	DIGESTED SLUDGE		
DST	DISTRIBUTION (POTABLE WATER)		
DWT	DEWATERING		
EEX	ENGINE EXHAUST		
EFF	EFFLUENT		
FAP	FILTER AID POLYMER		
FCL	FERRIC CHLORIDE		
FE	FINAL EFFLUENT		
FES	FERRIC SULFATE		
FLC	FLOCCULATION		
FLU	FLUORIDE		
FNW	FINISHED WATER		
FOA	FOUL AIR		
FOR	FUEL OIL RETURN		
FOS	FUEL OIL SUPPLY		
FSWW	FILTER SURFACE WASH WATER		
FTW	FILTER TO WASTE		
FWW	FILTER WASTE WATER		
GAC	GRANULAR ACTIVATED CARBON		
GRT	GRIT		
GTH	GRAVITY THICKENERS		
HWR	HEATING WATER RETURN		
HWS	HEATING WATER SUPPLY		
INF	INFLUENT		
LIM	LIME SLURRY		
LOX	LIQUID OXYGEN		
LPG	LIQUIFIED PETROLEUM GAS		
LUB	LUBRICANT		
MEFF	MEMBRANE EFFLUENT		
MES	METAL SALT		
ML	MIXED LIQUOR		

EQUIPMENT ABBREVIATIONS

CODE	EQUIPMENT DESCRIPTION	CODE	EQUIPMENT DESCRIPTION	CODE	EQUIPMENT DESCRIPTION
ACP	AIR CONDITIONER (PACKAGED)	HEX	HEAT EXCHANGER (RADIATOR, AFTER-COOLER, ETC.)	VLV	VALVE
AHU	AIR HANDLING UNIT			VP	VACUUM PUMP
ALV	ALTITUDE VALVE	HP	HEAT PUMP	VRV	VACUUM RELIEF VALVE OR VACUUM REGULATING VALVE
ANT	ANTENNA	HPR	HOPPER		
ARV	AIR RELIEF VALVE	HPU	HYDRAULIC POWER UNIT	WEL	WELL
ATS	AUTOMATIC TRANSFER SWITCH	HTR	HEATER	WH	WATER HEATER
BFP	BACK FLOW PREVENTER	HYT	HYDRO PNEUMATIC TANK	WHR	WASHER (GRIT, ETC.)
BFV	BUTTERFLY VALVE	JYL	POWER LOSS RELAY	WPM	WELL PUMP
BLR	BLOWER	KGV	KNIFE GATE VALVE	WSH	OVERLOAD TORQUE SWITCH
BLU	BLENDING UNIT	LCP	LOCAL CONTROL PANEL	WSHH	SHEAR PIN LIMIT SWITCH
BLV	BALL VALVE	LPL	LIGHTING PANEL	WWL	WET WELL
BOL	BOILER	MAU	MAKEUP UNIT	XMR	TRANSFORMER
BPM	BOOSTER PUMP	MCC	MOTOR CONTROL CENTER	YTS	WYE TYPE STRAINER
BPV	BACK PRESSURE SUSTAINING VALVE	MFU	MICRO-FILTRATION UNIT		
BSN	BASIN	MIX	MIXER		
BTP	BELT PRESS	MPM	METERING PUMP		
CFR	CHEMICAL FEEDER (LIME SHAKER, POLYMER, SULFONATOR, CHLORINATOR, ETC.)	MTR	MOTOR		
		MTS	MANUAL TRANSFER SWITCH		
CHGR	BATTERY CHARGER	MX	MIXER (FLASH, EDUCTOR, ETC.)		
CHR	CHILLER	NLV	NEEDLE VALVE		
CHV	CHECK VALVE	PBD	DIVISION 16 PANEL BOARD		
CMP	COMPRESSOR	PBU	POLYMER BLENDING UNIT		
CNT	CENTRIFUGE	PCV	PRESSURE CONTROL VALVE		
CNTR	CONTACTOR	PDC	POWER DISTRIBUTION CENTER		
COL	COLLECTOR	PDP	POWER DISTRIBUTION PANEL		
COM	COMMINUTER	PGT	PERSONNEL GATE		
CON	CONVEYOR (BELT, BUCKET ELEVATOR, SCREW) OR COMPACTOR	PGV	PLUG VALVE		
		PLC	PROGRAMMABLE LOGIC CONTROLLER		
CSU	CONDENSING UNIT	PMP	PUMP		
CTR	CONTAINER	PNL	DIVISION 11 CONTROL PANEL		
CV	CONTROL VALVE	PPL	POWER PANEL		
CWL	CLEARWELL	PQM	POWER QUALITY METER		
DPR	DAMPER	PRV	PRESS RELIEF VALVE OR PRESSURE REGULATING VALVE		
DS	DISCONNECT SWITCH				
DSN	DRUM SCREEN	PSCP	PUMP STATION CONTROL PANEL (PUMP STATION MAIN CONTROL PANEL, DIVISION 17)		
E	ENGINE (TURBINE, DIESEL, GAS, ETC.)				
EEW	EMERGENCY EYEWASH	PSV	PRESSURE SUSTAINING VALVE		
EHH	ELECTRIC HAND HOLE	RCPT	RECEPTACLE		
EMH	ELECTRIC MAN HOLE	REC	RECEIVER		
ES	ELECTRIC SUPPLY	ROT	ROTAMETER		
ESV	EMERGENCY SHUT-OFF VALVE	RTU	REMOTE TERMINAL UNIT		
EVP	EVAPORATIVE COOLING UNIT	RVSS	REDUCED VOLTAGE SOFT STARTER		
EXF	EXHAUST FAN	RWR	ROTATING WEIR		
F	FAN (PROPELLER, CENTRIFUGAL, ETC.)	S	SILENCER		
FCU	FAN COIL UNIT	SCN	SCREEN (BAR, ETC.)		
FCV	FLOW CONTROL VALVE	SCR	SCRUBBER		
FDP	CHEMICAL FEEDER	SEP	SEPARATOR (SEDIMENTATION TRAP, DRIP TRAP, STEAM SEPARATOR, CYCLONE, STRAINER, ETC.)		
FE	FLOW ELEMENT				
FEA	FLOW ELEMENT, ANNUBAR	SF	SUPPLY FAN		
FED	FLOW ELEMENT, DIFFERENTIAL PRESSURE	SG	SLUICE GATE		
FEF	FLOW ELEMENT, FLUME	SLG	SLIDE GATE		
FEK	FLOW ELEMENT, MASS	SLV	SOLENOID VALVE		
FEM	FLOW ELEMENT, MAGNETIC	SMP	SAMPLER		
FEP	FLOW ELEMENT, TURBINE/PROPELLER	SMX	SUBMERSIBLE MIXER		
FES	FLOW ELEMENT, ULTRASONIC	SP	SUMP PUMP		
FET	FLOW ELEMENT, PITOT	SSS	SOLID-STATE STARTER OR SOFT START		
FEV	FLOW ELEMENT, VENTURI	SUB	SUBSTATION		
FG	FLAP GATE	SW	SPRAY WATER		
FIL	FILTER	SWBD	SWITCHBOARD		
FJB	FLOW SPLITTER (FLOW JUNCTION BOX)	SWGR	SWITCHGEAR		
FLC	FLOCCULATOR	TEL	TELEPHONE		
FP	FILTER PRESS	TFR	TRANSFORMER		
FPU	FLUID POWER UNIT	TM	TIMER		
FS	FUSIBLE SWITCH	TNK	TANK (NONPRESSURE TYPE: E.G. STORAGE, FUEL, ETC.)		
FT	FUEL TANK				
FUR	FURNACE	TSS	TRANSIENT SURGE SUPPRESSOR		
GA	GAS ANALYZER	TVS	TRANSIENT VOLTAGE SURGE SUPPRESSION		
GAC	GRANULATED ACTIVATED CARBON FILTER	UH	UNIT HEATER		
GDR	GRINDER	UPS	UNINTERRUPTIBLE POWER SUPPLY		
GDT	GENERATOR DAY TANK	UVU	ULTRAVIOLET UNIT		
GEN	GENERATOR	VAV	VARIABLE AIR VOLUME UNIT		
GOV	GLOBE VALVE	VCP	VENDOR CONTROL PANEL (FURNISHED WITH VENDOR SUPPLIED EQUIPMENT)		
GRB	GRIT BASIN				
GT	GATE (SLUICE, FLAP, ETC.)	VFD	VARIABLE FREQUENCY DRIVE		
GTV	GATE VALVE	VGT	VEHICLE GATE		
H	MONORAIL OR HOIST				

PIPING MATERIALS

CODE	DESCRIPTION
ACP	ASBESTOS CEMENT PIPE
BS	BLACK STEEL
C20	CARPENTER 20 ALLOY
CI	CI - CAST IRON PIPE
CPVC	CHLORINATED POLYVINYL CHLORIDE
CSTL	CARBON STEEL
CU	COPPER
DIP	DUCTILE IRON PIPE
DIPEL	DUCTILE IRON PIPE, EPOXY LINED
FCH	FLEXIBLE CHEMICAL HOSE
FRP	FIBER REINFORCED PLASTIC PIPE
HDPE	HIGH DENSITY POLYETHYLENE
PCCP	PRESTRESSED CONCRETE CYLINDER PIPE
PVC	POLYVINYL CHLORIDE
PVDF	POLYVINYLIDENE FLUORIDE
RCP	REINFORCED CONCRETE PIPE
SST	STAINLESS STEEL
STL	STEEL PIPE (FABRICATED)
VCP	VITRIFIED CLAY PIPE

GENERAL ABBREVIATIONS

ATM	ATMOSPHERE
BRG	BEARING
PF	POWER FACTOR
PRESS	PRESSURE
TEMP	TEMPERATURE
WIND	WINDING

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2180 Satellite Blvd, Suite 235
Duluth, Georgia 30097
Phone – (404) 334-4310
Georgia Registered Engineering
Firm PEF-004433
Expires 6/30/2026

CONSULTANT PROJ. NO. GWR24074

GEORGIA REGISTERED No. PE052858 PROFESSIONAL ENGINEER JUSTIS P. WEAVER
10/21/2025

Gwinnett Water Resources
LAWRENCEVILLE, GA

GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES

SUWANEE CREEK DIVERSION PUMP STATION EXPANSION

1758 PEACHTREE INDUSTRIAL BLVD. SUWANEE, GA 30024

GCDWR PROJ. NO. F01469

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SHEET TITLE

INSTRUMENTATION

GENERAL SYMBOLS & NOMENCLATURE - III

SCALE: NOT TO SCALE

I-3

SHEET 124 OF 129

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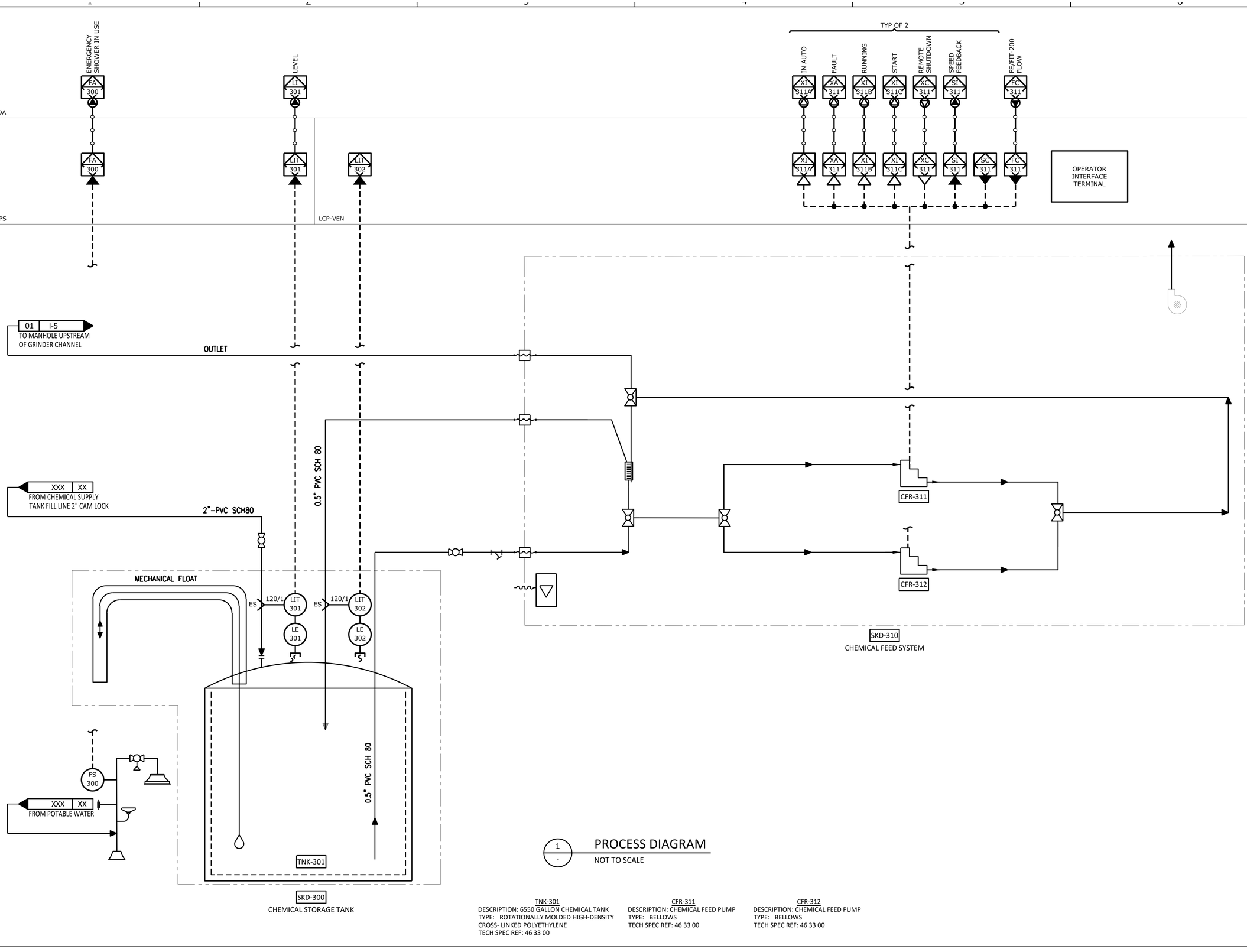

1 - PROCESS DIAGRAM
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TNK-301
DESCRIPTION: 6550 GALLON CHEMICAL TANK
TYPE: ROTATIONALLY MOLDED HIGH-DENSITY CROSS- LINKED POLYETHYLENE
TECH SPEC REF: 46 33 00

CFR-311
DESCRIPTION: CHEMICAL FEED PUMP
TYPE: BELLOWS
TECH SPEC REF: 46 33 00

CFR-312
DESCRIPTION: CHEMICAL FEED PUMP
TYPE: BELLOWS
TECH SPEC REF: 46 33 00

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Duluth, Georgia 30097
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10/21/2025

GEORGIA REGISTERED No. PE045447 PROFESSIONAL ENGINEER SHAY DICKERSON COGGINS
10/22/2025

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SHEET TITLE

INSTRUMENTATION

CHEMICAL STORAGE & PUMP

SCALE: NOT TO SCALE

I-4

SHEET 125 OF 129

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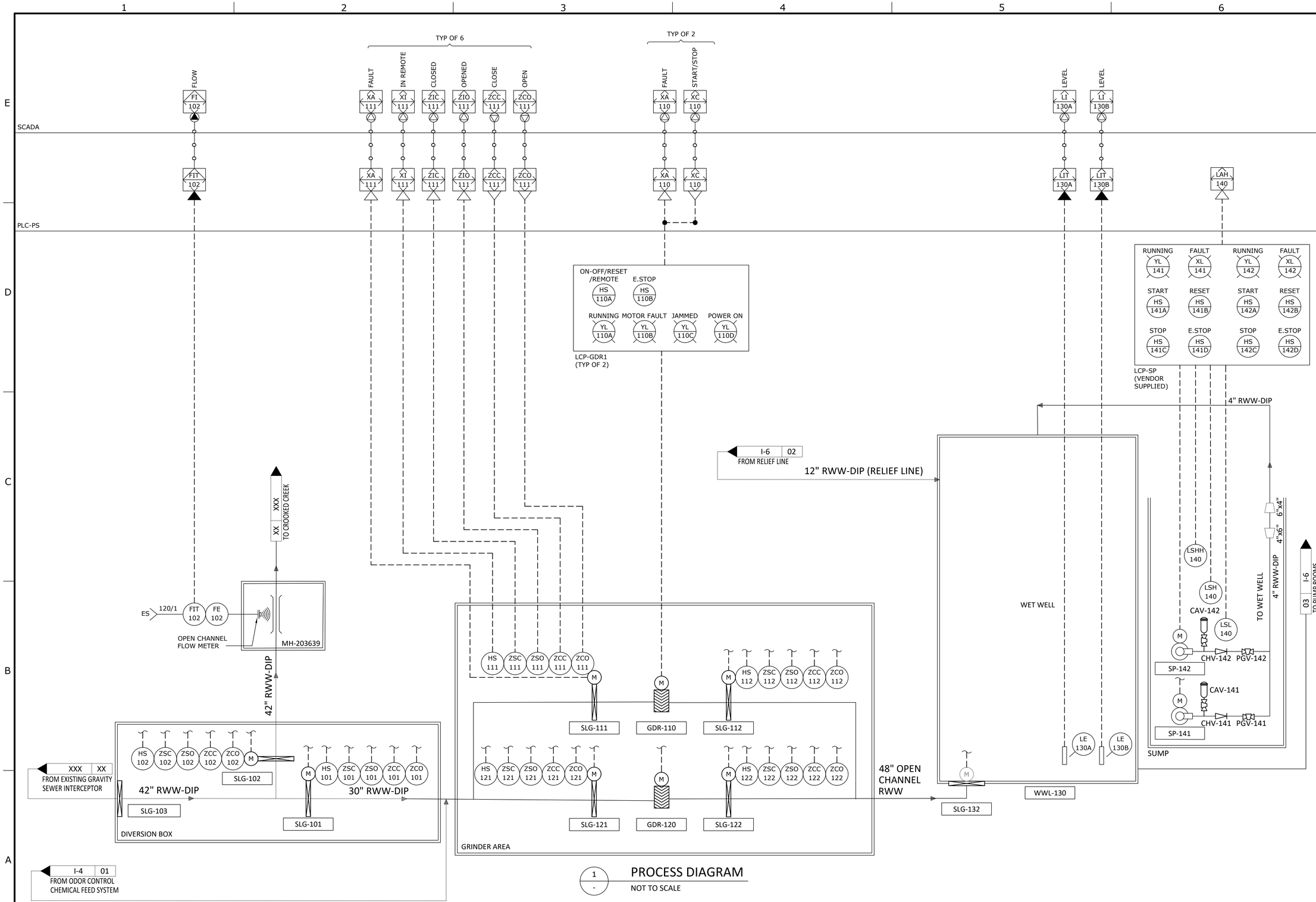

SLG-101
DESCRIPTION: DIVERSION BOX EFFLUENT SLIDE GATE (SCPS)
TYPE: ELEC. ACTUATED
TECH SPEC REF: 40 05 50

SLG-102
DESCRIPTION: DIVERSION BOX EFFLUENT SLIDE GATE (CCWRF)
TYPE: ELEC. ACTUATED
TECH SPEC REF: 40 05 50

SLG-103
DESCRIPTION: DIVERSION BOX INFLUENT SLIDE GATE
TYPE: ELEC. ACTUATED
TECH SPEC REF: 40 05 50

SLG-111
DESCRIPTION: GRINDER INFLUENT SLIDE GATE (GDR-110)
TYPE: ELEC. ACTUATED
TECH SPEC REF: 40 05 50

SLG-112
DESCRIPTION: GRINDER EFFLUENT SLIDE GATE (GDR-110)
TYPE: ELEC. ACTUATED
TECH SPEC REF: 40 05 50

SLG-121
DESCRIPTION: GRINDER INFLUENT SLIDE GATE (GDR-120)
TYPE: ELEC. ACTUATED
TECH SPEC REF: 40 05 50

SLG-122
DESCRIPTION: GRINDER EFFLUENT SLIDE GATE (GDR-120)
TYPE: ELEC. ACTUATED
TECH SPEC REF: 40 05 50

GDR-110
DESCRIPTION: GRINDER
TYPE: OPEN CHANNEL
TECH SPEC REF: 46 33 00

GDR-120
DESCRIPTION: GRINDER
TYPE: OPEN CHANNEL
TECH SPEC REF: 46 33 00

SLG-132
DESCRIPTION: GRINDER CHANNEL SLIDE GATE
TYPE: ELEC. ACTUATED
TECH SPEC REF: 40 05 50

SP-141
DESCRIPTION: SUMP PUMP
TYPE: SUBMERSIBLE
TECH SPEC REF: 44 42 60

SP-142
DESCRIPTION: SUMP PUMP
TYPE: SUBMERSIBLE
TECH SPEC REF: 44 42 60

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GEORGIA REGISTERED No. PE052858 PROFESSIONAL ENGINEER JUSTIS P. WEAVER 10/21/2025
GEORGIA REGISTERED No. PE051805 PROFESSIONAL ENGINEER JOSHUA CADE STARLING 10/22/2025

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SHEET TITLE

INSTRUMENTATION

DIVERSION STRUCTURE & WET WELL

SCALE: NOT TO SCALE

I-5

SHEET 126 OF 129

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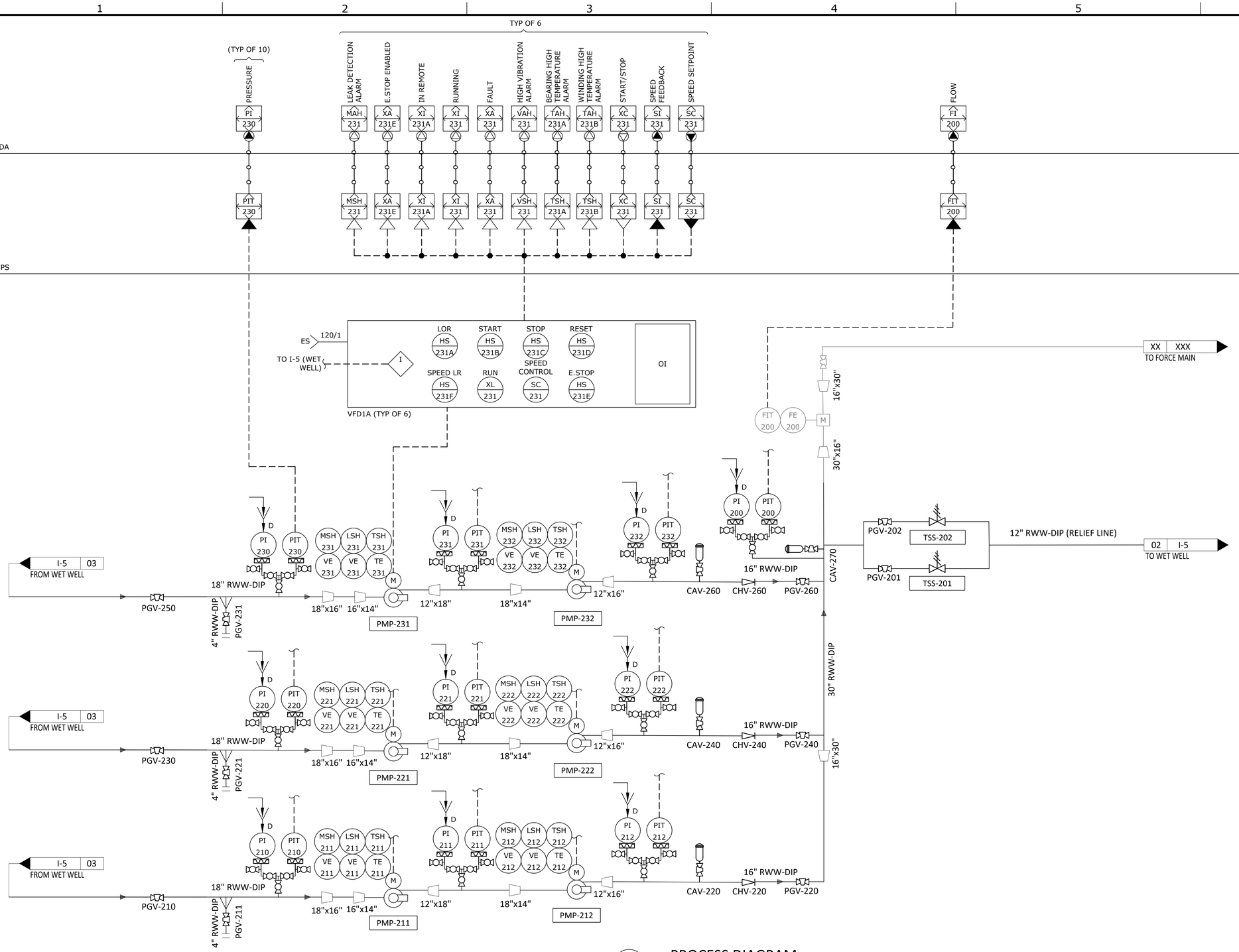

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NOT TO SCALE

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TECH SPEC REF: 43 21 39

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TYPE: SUBMERSIBLE
TECH SPEC REF: 43 21 39

PMP-221
DESCRIPTION: STAGE 1 PUMP
TYPE: SUBMERSIBLE
TECH SPEC REF: 43 21 39

PMP-222
DESCRIPTION: STAGE 2 PUMP
TYPE: SUBMERSIBLE
TECH SPEC REF: 43 21 39

PMP-231
DESCRIPTION: STAGE 1 PUMP
TYPE: SUBMERSIBLE
TECH SPEC REF: 43 21 39

PMP-232
DESCRIPTION: STAGE 2 PUMP
TYPE: SUBMERSIBLE
TECH SPEC REF: 43 21 39

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SHEET TITLE

INSTRUMENTATION

PUMP ROOMS

SCALE: NOT TO SCALE

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SHEET 127 OF 129

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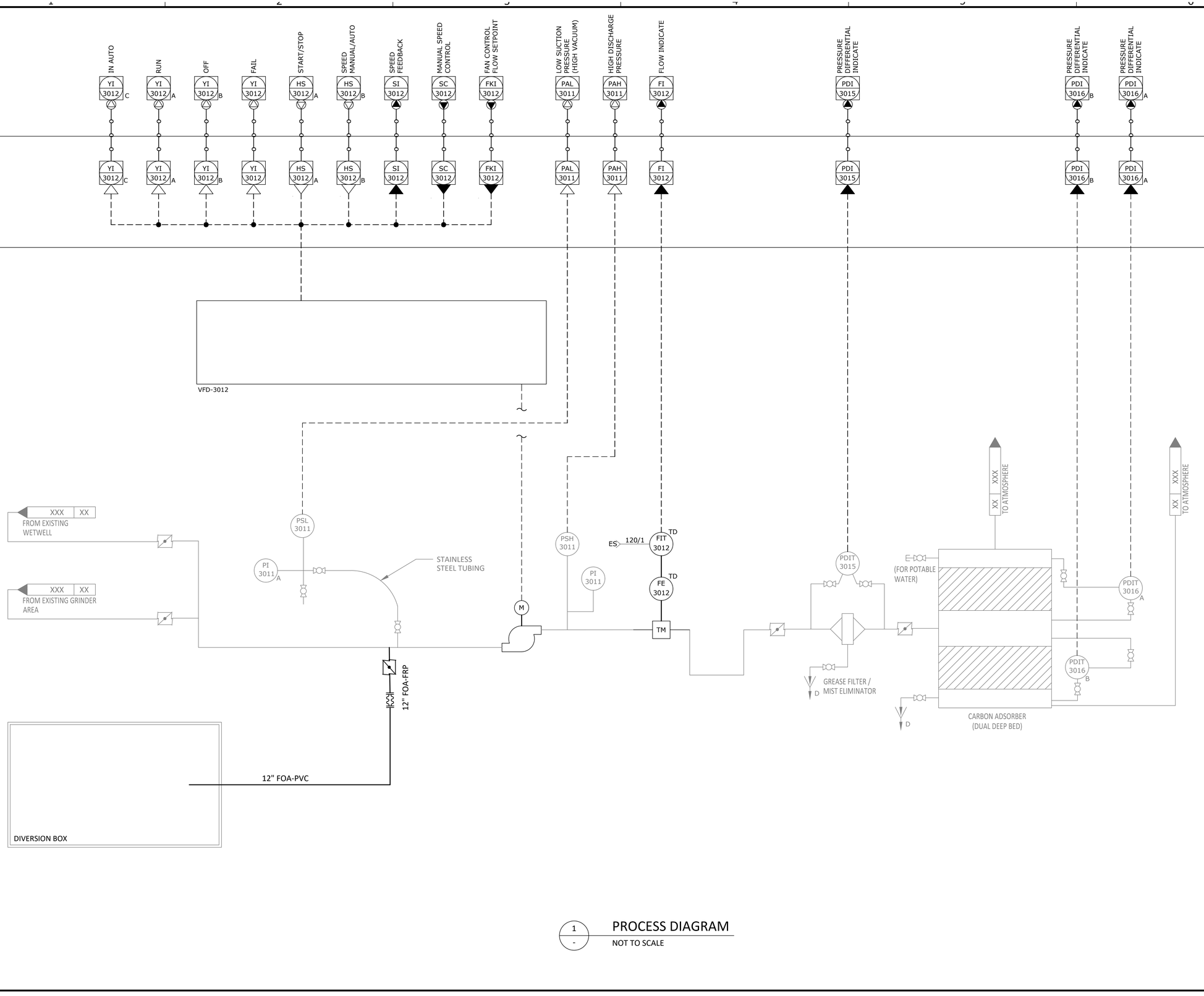

1 / - PROCESS DIAGRAM
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SHEET TITLE

INSTRUMENTATION

ODOR CONTROL SYSTEM

SCALE: NOT TO SCALE

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SHEET 128 OF 129

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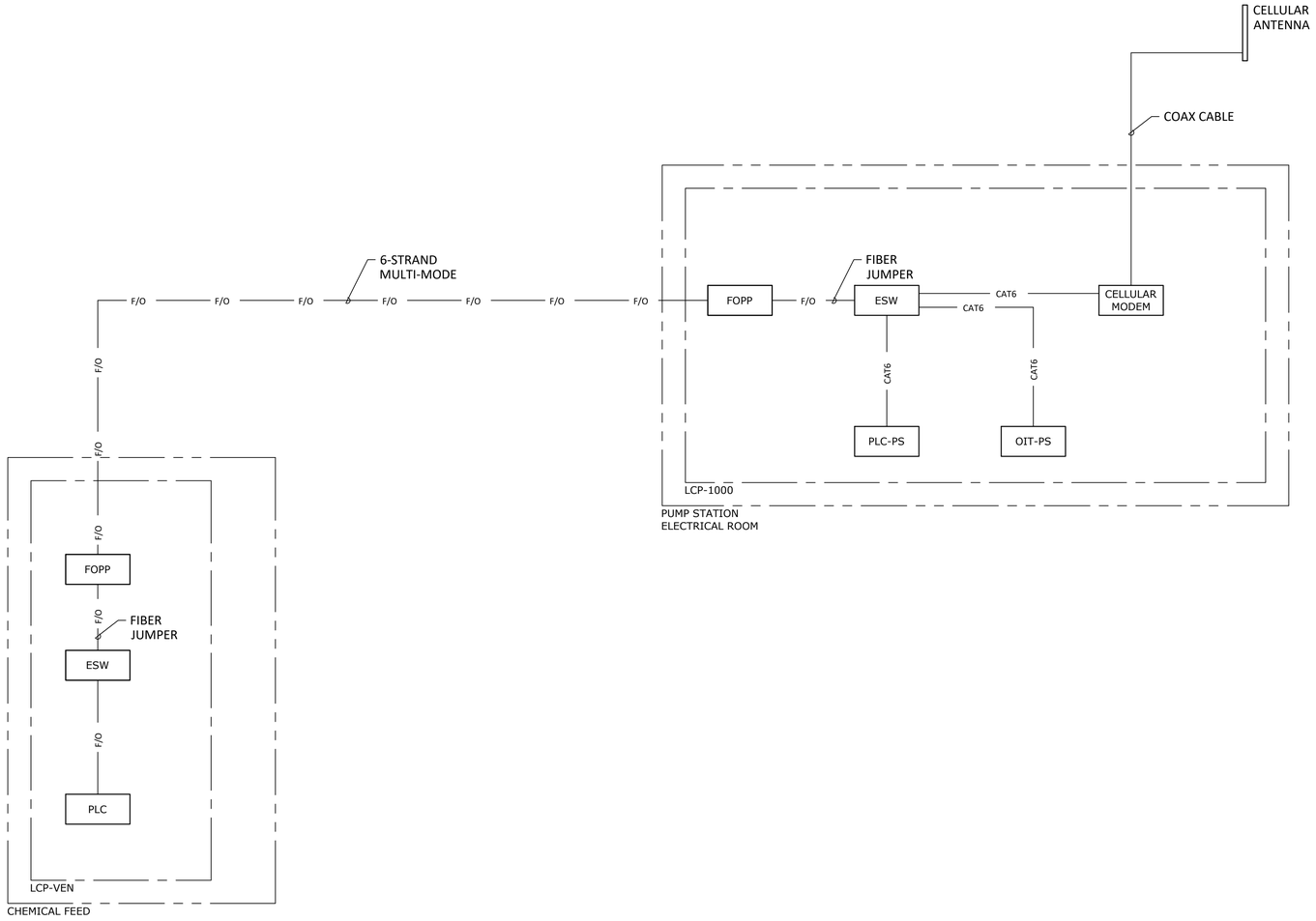

1 - SYSTEM ARCHITECTURE

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INSTRUMENTATION

SYSTEM ARCHITECTURE

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SHEET 129 OF 129

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