

PS4021 REHABILITATION & UPGRADE

JANUARY, 2020

BRUNSWICK-GLYNN
JOINT WATER & SEWER COMMISSION
JWSC PROJECT # 904



COMMISSION MEMBERS:

MR. BEN TURNIPSEED, CHAIRMAN
MR. STEVEN A. COPELAND, VICE CHAIRMAN
MR. BOB DUNCAN
MR. DONALD M. ELLIOTT
MR. CORNELL L. HARVEY (CITY OF BWK, MAYOR)
MR. WAYNE NEAL (GLYNN CO. BOC)
MR. TRIPP STEPHENS

EXECUTIVE DIRECTOR:

MR. ANDREW BURROUGHS, PE



VICINITY MAP
SCALE: NTS

OWNER:
BRUNSWICK - GLYNN COUNTY
JOINT WATER AND SEWER COMMISSION
1703 GLOUCESTER STREET
BRUNSWICK, GEORGIA 31520

24-HOUR CONTACT: TODD KLINE, PE, DIRECTOR OF ENGINEERING
EMERGENCY NUMBER: (912) 634-0258
PLANNING AND CONSTRUCTION DIVISION: (912) 261-7126

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NOTES:
CONTRACTOR SHALL NOTIFY BGJWSC PLANNING AND CONSTRUCTION DIVISION 48 HOURS BEFORE STARTING WORK ON THIS PROJECT.



CALL BEFORE YOU DIG!
At least 72 hours prior to commencement of the work, the Contractor is responsible for calling the Utilities Protection Center (UPC) at 1-800-282-7411, to request underground utility locate service.



BRUNSWICK-GLYNN COUNTY
JOINT WATER & SEWER COMMISSION
PLANNING & CONSTRUCTION DIVISION
1703 Gloucester Street
Brunswick, Georgia 31520
(912) 261-7110 Phone
(912) 261-7178 Fax
www.bgjwsc.org

NO.	DATE	COMMENTS
1	07-10-2019	Vicinity Map Revised

PS4021
REHABILITATION & UPGRADE
BRUNSWICK-GLYNN COUNTY JOINT WATER & SEWER COMMISSION
TITLE SHEET

FILE NO.: PS4021
DATE: JAN 09, 2020
SCALE: AS SHOWN
DRAWN BY: HJP
SHEET NO.: T-1
OF 1

**STANDARDS FOR WATER AND SEWER DESIGN AND CONSTRUCTION
APPENDIX 4A**

SANITARY SEWER – LIFT STATION AND FORCE MAINS – ACCEPTABLE MANUFACTURERS		
PARAGRAPH	PRODUCT	MANUFACTURER
4.5.2	SITE REQUIREMENTS	
4.5.2.6	Bypass Pumping Connection Cam Lock	Dixon OPW
	Bypass Piping PVC 1120, Class 150, DR 18	Vulcan Plastics JM Eagle
	DR 18 Sewer Safe Mechanical Joint Fittings	Star Pipe Sigma Corp.
	Bypass Piping Ductile Iron Pipe	Griffin Pipe US Pipe
	Ductile Iron Pipe Sewer Safe Mechanical Joint Fittings	Star Pipe Sigma Corp.
4.5.3	WET WELL CONFIGURATION	
4.5.3.4	Access Hatches	U.S. Foundry, E.I., Consolidated
4.5.4	PRECAST CONCRETE STRUCTURES	
4.5.4.1	Precast Concrete Structures	MST Inc. Hanson Pipe and Precast Mega Cast
4.5.4.2	Moderate Risk Corrosion Protection	SewperCoat Madewell CA
	High Risk Corrosion Protection	SewperCoat Madewell CA
	Significant Risk Corrosion Protection	SewperCoat Madewell CA
4.5.5	FIBERGLASS STRUCTURES	
4.5.5.1	Fiberglass Structures	Xerxes L.F. Manufacturing Flawtite
4.5.7	WET WELL AND DISCHARGE HEADER PIPING	
4.5.7.1	Interior Piping High Density Polyethylene (HDPE) Pipe	Performance Pipe JM Eagle Lamson & Sessions
	Interior Piping Class 53 Flange by Flange Ductile Iron Pipe	Star Pipe Sigma Corp.
4.5.7.2	Exterior Piping Class 53 Flange by Flange Ductile Iron Pipe	Griffin Pipe US Pipe
	Exterior Pipe Fittings Flange by Flange	Star Pipe Sigma Corp.
4.5.8	VALVES AND APPURTENANCES	
4.5.8.1	Isolation (Plug) Valves	Mueller Dezurik
4.5.8.2	Check Valves	Clow
	Air Release Valve	ARI 0.025 w/one way valve
	Discharge Gauge Fittings	
4.5.9	PUMPING STATION	
4.5.9.2	Submersible Pumps	Flygt, KSB, Wilo
4.5.9.3	Grinder Pumps	Flygt, KSB, Wilo
4.5.11	ELECTRICAL EQUIPMENT AND CONTROLS	
4.5.11.1A	Enclosure	Hoffman APX Flygt Bison
4.5.11.2B	Panel Components	Listed Below
4.5.11.2C	Motor Starters Variable Frequency Drives	Square D Yasakawa ABB
4.5.11.2D & E	Circuit Breakers	Square D
4.5.11.2F	Audible Alarm	Federal Signal
4.5.11.2G	Alarm Light	Federal Signal
4.5.11.2H	GFI Receptacles	ISO GE Morriss Levite
4.5.11.2I	Generator Receptacles	Crouse Hinds
4.5.11.2J	Manual Transfer Switch	Square D
4.5.11.2K	Hand Off Auto Switches	Cutler Hammer Square D
4.5.11.2N	Power Monitor	Diversified Electronics
4.5.11.2O	Relays	NTE Allen Bradley AA Electric Idtec
4.5.11.2S	Lighting Arrestors	Ditek Delta
4.5.11.2T	Elapsed Time Meter	ENG Yokogawa
4.5.11.2U	Level Controls	Roto Float Blue Ribbon Vego
4.5.11.2V	Transformers	Warrick GE ACME Square D

**STANDARDS FOR WATER AND SEWER DESIGN AND CONSTRUCTION
APPENDIX 4A**

SANITARY SEWER – LIFT STATION AND FORCE MAINS – ACCEPTABLE MANUFACTURERS		
PARAGRAPH	PRODUCT	MANUFACTURER
4.5.12	REMOTE TERMINAL UNIT	
4.5.12	RTU (SCADA)	VT SCADA
4.5.14	LOW FLOW STATION (ONLY) RTU SYSTEM	
4.5.14.1	RTU (SCADA)	VTSCADA
4.5.16	ON-SITE STANDBY GENERATORS & AUTOMATIC TRANSFER CONTROLS	
4.5.16.1	Standby Generators	Onan Caterpillar
4.5.16.2	Engine-Generator Controls	Onan Caterpillar
4.5.16.3	Auto Transfer Switches	Onan Caterpillar
4.7.6	FORCE MAIN MATERIALS	
4.7.6.1	SDR 21 Class 200 PVC Pipe AWWA C-900/C-905 DR 18	Vulcan Plastics JM Eagle U.S. Plastic Corp.
	DR 11 (HDPE) Pipe High Density Polyethylene	Performance Pipe JM Eagle Lamson & Sessions
	Interior Coated CL52 Ductile Iron Pipe	Griffin Pipe US Pipe
4.7.6.3	Sewer Safe Mechanical Joint Fittings	Star Pipe Sigma Corp.
	Sewer Safe Coupling	HyMax Star Pipe Sigma Corp.
4.7.6.4	Isolation (Plug) Valves Air Release Valves	Clow Mueller ARI

NOTE 1 WHERE NO MANUFACTURER IS LISTED FOR A PARTICULAR ITEM OF MATERIAL OR EQUIPMENT, THE CONTRACTOR MAY SELECT THE MANUFACTURER PROVIDED THAT ALL REQUIREMENTS OF THESE STANDARDS FOR THAT PARTICULAR ITEM OF MATERIAL OR EQUIPMENT ARE MET. SUBMITTALS FOR SUCH ITEMS ARE REQUIRED.

NOTE 2 STANDARD CONSTRUCTION DETAILS MAY BE FOUND ON PLAN SHEETS P-6 OF THESE CONSTRUCTION PLANS.

JWSC WATER & SEWER NOTES

- ALL WATER AND SEWER CONSTRUCTION SHALL CONFORM WITH THE REQUIREMENTS OF THE DESIGN AND CONSTRUCTION STANDARDS AND SPECIFICATION OF THE BRUNSWICK-GLYNN JOINT WATER & SEWER COMMISSION. IN THE EVENT OF A DISCREPANCY BETWEEN THESE CONSTRUCTION PLANS AND THE AFOREMENTIONED STANDARDS AND SPECIFICATIONS, THE DESIGN AND CONSTRUCTION STANDARDS AND SPECIFICATIONS SHALL TAKE PRECEDENCE UNLESS THE DEVIATION HAS BEEN APPROVED IN WRITING BY THE JWSC.
- THE MINIMUM HORIZONTAL AND VERTICAL SEPARATION BETWEEN WATER LINES, SEWER LINES, AND STORM DRAINS SHALL CONFORM TO THE LATEST GEORGIA EPD REQUIREMENTS.
- A MINIMUM DISTANCE OF 20' OR TWO TIMES THE DEPTH OF THE MAIN, WHICHEVER IS GREATER, SHALL BE MAINTAINED FROM ALL BUILDINGS, FOUNDATIONS AND THE TOP OF BANK OF ALL PONDS, ANY DEVIATION FROM THIS REQUIREMENT MUST BE APPROVED IN WRITING BY THE JWSC.
- PRESSURE AND LEAKAGE TESTING SHALL BE PERFORMED IN ACCORDANCE WITH THE DESIGN AND CONSTRUCTION STANDARDS AND SPECIFICATIONS OF THE JWSC.
- AT LEAST 72 HOURS PRIOR TO COMMENCEMENT OF THE WORK, THE CONTRACTOR SHALL NOTIFY THE UTILITIES PROTECTION CENTER (UPC) AT 1-800-282-7411 TO REQUEST UNDERGROUND UTILITY LOCATE SERVICE.
- ALL GRAVITY SEWERS SHALL BE LOW PRESSURE AIR TESTED IN ACCORDANCE WITH JWSC STANDARDS 3.6.9.
- ALL SANITARY SEWER MANHOLES SHALL BE VACUUM TESTED IN ACCORDANCE WITH JWSC STANDARDS 3.6.9.3.
- ALL PORTIONS OF NEW SEWAGE FORCE MAIN SHALL UNDERGO A HYDROSTATIC TEST PER JWSC STANDARDS 4.7.7.
- SEE JWSC STANDARD 2.5.3.3 FOR MINIMUM PIPE COVER REQUIREMENTS.
- RECORD DRAWINGS MUST BE PROVIDED TO JWSC FOR ALL WATER AND SEWER INFRASTRUCTURE IN ACCORDANCE WITH JWSC RECORD DRAWINGS STANDARDS.
- THE CONTRACTOR SHALL IMMEDIATELY REPAIR EXISTING WATER & SEWER SERVICES DAMAGED DURING CONSTRUCTION TO THE CONTRACTORS EXPENSE.
- BYPASS PUMPING UNIT SHALL BE PRESENT AND READY TO OPERATE ON-SITE AT ALL TIMES WHILE IMPROVEMENT WORK IS IN PROGRESS. ALL TEMPORARY BYPASS PUMPING REQUIRED FOR REHAB WORK SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. NO SEPARATE MEASUREMENT OR PAYMENT WILL BE MADE FOR THESE PUMPING REQUIREMENTS. ALL LABOR, DESIGN, EQUIPMENT, MATERIALS, RENTAL FEES, TEMPORARY PIPING AND INCIDENTALS SHALL BE CONSIDERED A SUBSIDIARY OBLIGATION TO THE CONTRACT.
- THE BGIWSC RESERVES FIRST RIGHT OF SALVAGE FOR ALL EQUIPMENT REMOVAL.
- CONTRACTOR MUST SUBMIT A BYPASS PLAN TO BGIWSC FOR REVIEW AND APPROVAL.

GENERAL NOTES

- ALL CONSTRUCTION METHODS AND MATERIALS SHALL CONFORM TO ALL APPLICABLE FEDERAL, STATE, AND LOCAL LAWS.
- ALL PERMITS NECESSARY FOR CONSTRUCTION SHALL BE OBTAINED BY CONTRACTOR PRIOR TO WORK COMMENCEMENT.
- ANY DEVIATION FROM THE PLANS ARE PROHIBITED WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.
- THE CONTRACTOR IS TO IMMEDIATELY CONTACT THE ENGINEER IF ANY UNFORESEEN COMPLICATIONS OR DISCREPANCIES OCCUR.
- CONTRACTOR SHALL COORDINATE THE CONSTRUCTION OF ALL UTILITIES ON SITE WITH THE APPROPRIATE PROVIDER (e.g. POWER, PHONE, CABLE, ETC.)
- THE ENGINEER SHALL NOT BE HELD RESPONSIBLE FOR THE PHYSICAL CONSTRUCTION OF THE SITE.
- CONTRACTOR TO NOTIFY AND ACQUIRE APPROVAL FOR ANY ENCROACHMENT NEEDED FROM ADJACENT BUSINESS OWNER.
- CONTRACTOR SHALL MAINTAIN A SAFE SITE AND MEET ALL APPROPRIATE REGULATIONS CONCERNING SAFETY.
- SURVEY INFO FROM AND SURVEY DONE BY SHUPE SURVEYORS COMPANY, P.C., 3837 DARIEN HIGHWAY, BRUNSWICK, GA 31523. TELEPHONE 912.265.0562. (DATED 08/31/2011)
- EXISTING SURVEY INFORMATION TO BE VERIFIED BY CONTRACTOR PRIOR TO CONSTRUCTION. CONTRACTOR TO NOTIFY OWNER OF ANY DISCREPANCIES IN FIELD OBSERVATIONS VERSUS SURVEY DATA.
- CONTRACTOR TO LOCATE & VERIFY ALL UTILITIES PRIOR TO CONSTRUCTION & OBTAIN PROPER DIG TICKET THROUGH THE CALL BEFORE YOU DIG HOTLINE: 811.

LEGEND:

CIPS CAPPED IRON PIPE SET (SSC PC, LSF 317)	☆ LIGHT POLE
IRF IRON ROD FOUND	● GEORGIA POWER POLE
CMF CONCRETE MONUMENT FOUND	◆ TRAFFIC SIGNAL BOX
SDMH STORM DRAIN MANHOLE	● UTILITY POLE
SMH SANITARY SEWER MANHOLE	☐ TRANSFORMER
CMH CURB INLET MANHOLE	☐ PHONE BOX
RCP REINFORCED CONCRETE PIPE	☐ SIGN
● FIRE HYDRANT	☐ CONCRETE
⊙ WATER METER	☐ BUILDING
○ WATER VALVE	■ ASPHALT
⊙ IRRIGATION CONTROL VALVE	--- TAX PARCEL I.D.
⊙ GAS VALVE	--- OVERHEAD UTILITIES
⊙ CATCH BASIN	--- BOTTOM OF DITCH
⊙ STORM DRAIN MANHOLE	--- TOP OF DITCH
⊙ SEWER CLEAN-OUT	--- UGG UNDERGROUND GAS LINE
⊙ SANITARY SEWER MANHOLE	--- UGW UNDERGROUND WATER LINE
⊙ SANITARY SEWER VAULT	--- UGT UNDERGROUND TELEPHONE LINE
⊙ TELEPHONE MANHOLE	--- UGP UNDERGROUND POWER LINE
	○---○ PROPOSED FENCE



**BRUNSWICK-GLYNN COUNTY
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PLANNING & CONSTRUCTION DIVISION**

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Brunswick, Georgia 31520
(912) 261-7110 Phone
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www.bgjwsc.org

NO.	DATE	COMMENTS
1	07/11/2019	Standards & Notes Revised - 811 Logo Attached

**PS4021
REHABILITATION & UPGRADE**

BRUNSWICK-GLYNN COUNTY JOINT WATER & SEWER COMMISSION
GENERAL CONSTRUCTION NOTES

FILE NO.: PS4021	DATE: JAN 07, 2020	SCALE: NONE	DRAWN BY: HP
SHEET NO.:			G-1



CALL BEFORE YOU DIG!

At least 72 hours prior to commencement of the work, the Contractor is responsible for calling the Utilities Protection Center (UPC) at 1-800-282-7411, to request underground utility locate service.

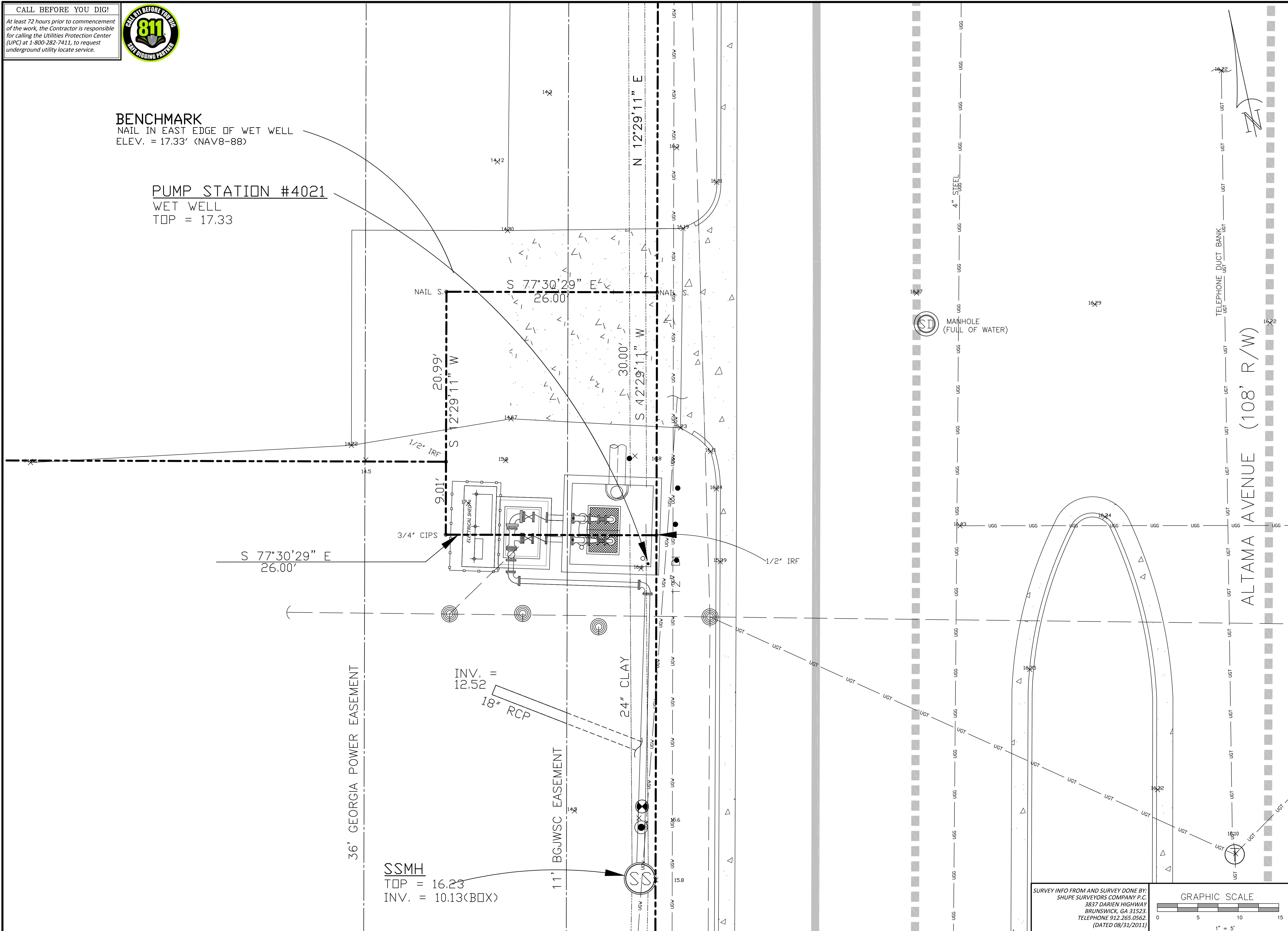
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BENCHMARK
NAIL IN EAST EDGE OF WET WELL
ELEV. = 17.33' (NAV8-88)

PUMP STATION #4021
WET WELL
TOP = 17.33



ALAMA AVENUE (108' R/W)



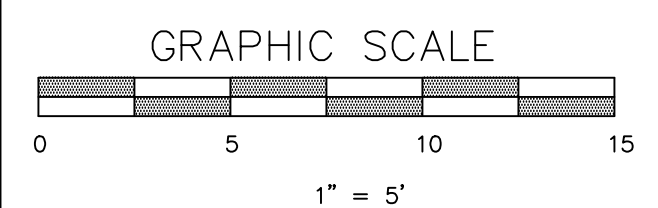
BRUNSWICK-GLYNN COUNTY
JOINT WATER & SEWER COMMISSION
PLANNING & CONSTRUCTION DIVISION
1703 Gloucester Street
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(912) 261-7110 Phone
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NO.	DATE	COMMENTS
1	07/11/2019	Scale Revised & 811 Logo Added

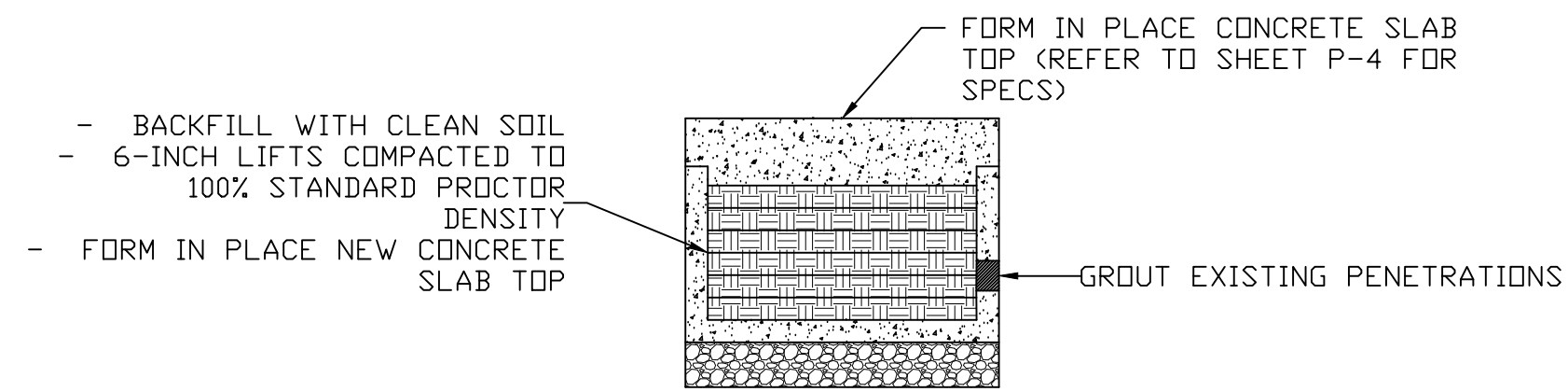
PS4021 REHABILITATION AND UPGRADE
GLYNN COUNTY, GEORGIA
BRUNSWICK-GLYNN COUNTY JOINT WATER & SEWER COMMISSION
SITE (EXISTING)

FILE NO.: PS-4021
DATE: NOV 07, 2019
SCALE: AS SHOWN
DRAWN BY: HP
SHEET NO.: **P-1**
OF 7

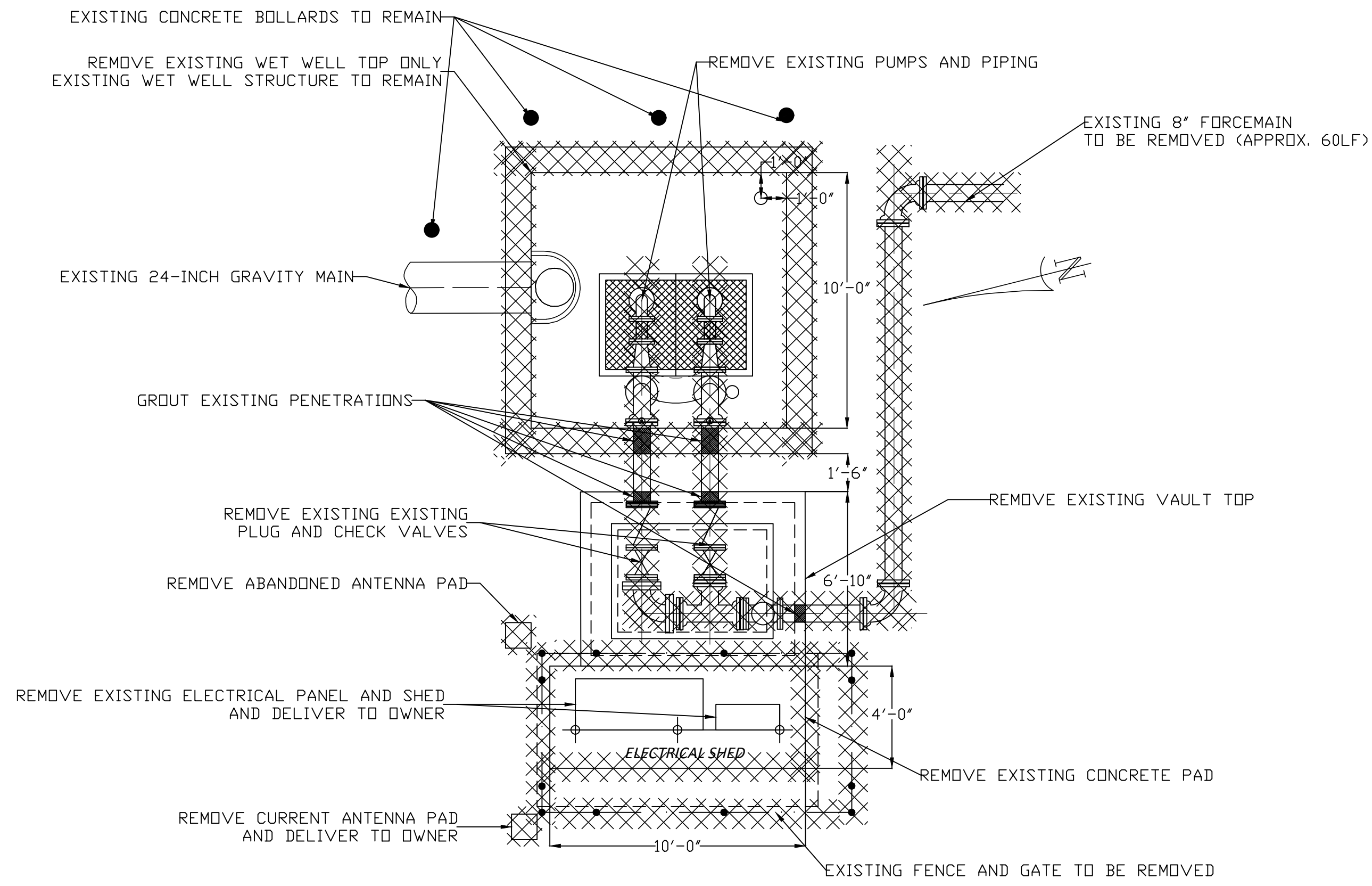
SURVEY INFO FROM AND SURVEY DONE BY:
SHUPE SURVEYORS COMPANY P.C.
3837 DARIEN HIGHWAY
BRUNSWICK, GA 31523
TELEPHONE 912.265.0562
(DATED 08/31/2011)



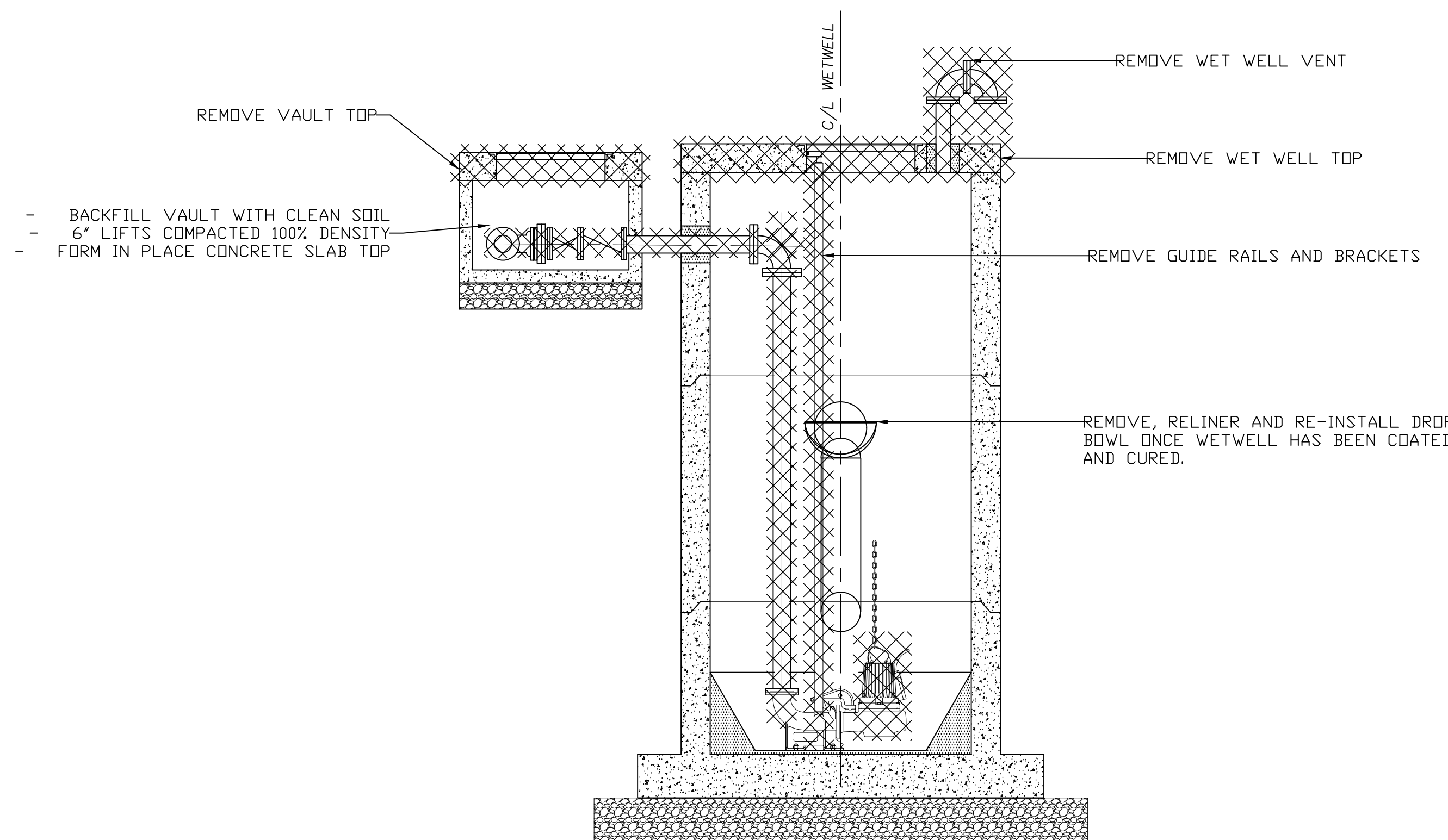
- NOTES THIS SHEET:
- EXISTING FENCE AND GATE TO BE REMOVED AND SALVAGED. WIRE AND FENCE FABRIC TO BE ROLLED UP AND SECURED. ALL POSTS TO BE PULLED.
 - EXISTING ELECTRICAL EQUIPMENT SHED TO BE REMOVED AND DELIVERED TO OWNER FOR STORAGE AT A LOCATION WITHIN GLYNN COUNTY TO BE DESIGNATED BY THE OWNER.
 - EXISTING WETWELL PIPING, PUMPS, VALVES, FENCING AND APPURTENANCES TO BE REMOVED AND DELIVERED TO THE LOCATION DESIGNATED BY THE OWNER.
 - CLEAN INTERIOR OF WET WELL WITH 5000 PSI PRESSURE WASH.
 - REMOVE VAULT TOP FROM EXISTING VALVE PIT AND BACKFILL WITH CLEAN SOIL.



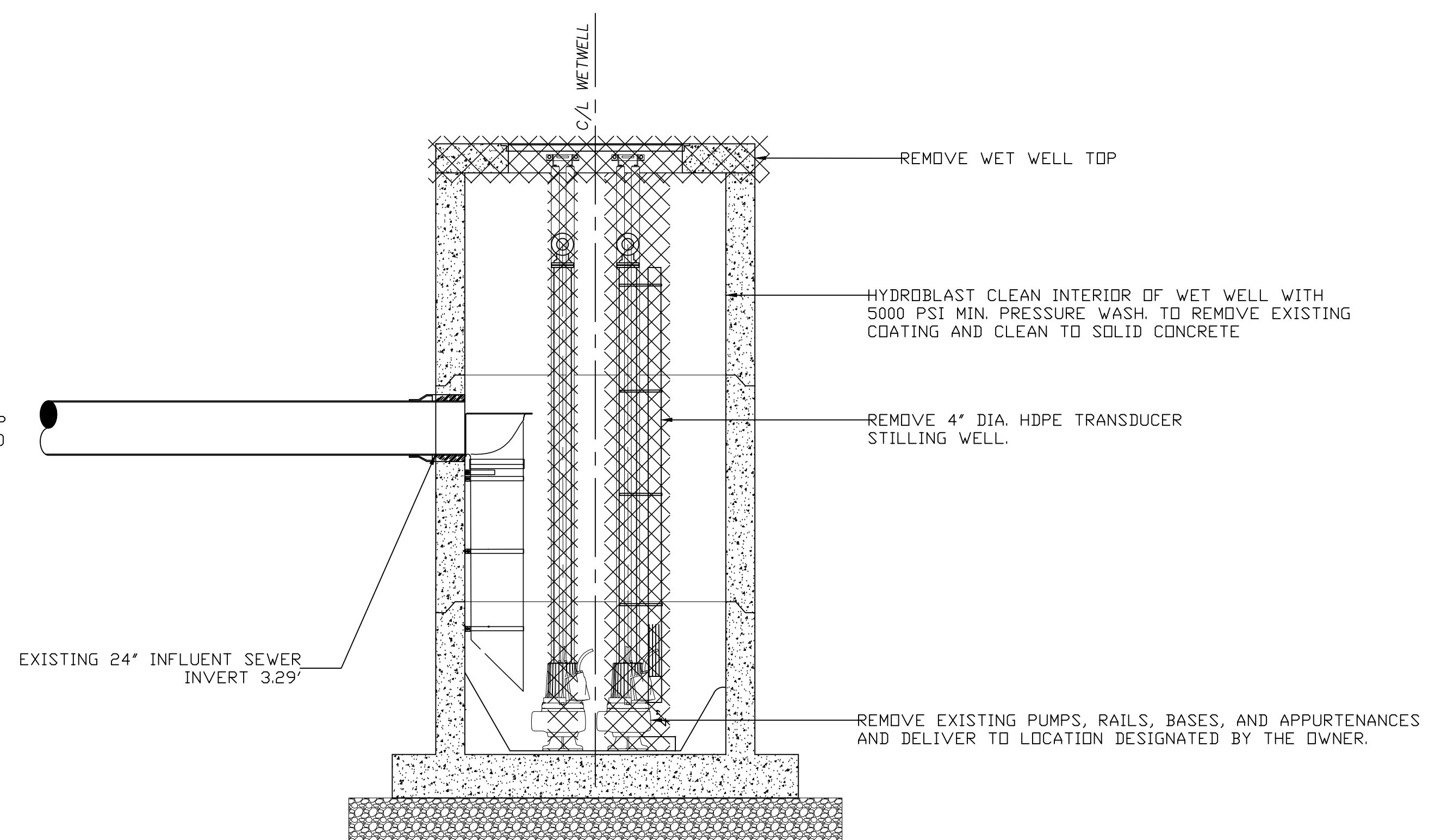
VALVE PIT ABANDONMENT DETAIL (TYP.)
N.T.S.



PLAN VIEW
SCALE: 1/4" = 1'-0"



ELEVATION VIEW
SCALE: 1/4" = 1'-0"



SECTION VIEW
SCALE: 1/4" = 1'-0"



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NO.	DATE	COMMENTS

PS4021 REHABILITATION AND
UPGRADE
GLYNN COUNTY, GEORGIA
BRUNSWICK-GLYNN COUNTY JOINT WATER & SEWER COMMISSION
DEMOLITION PLAN

FILE NO.: PS-0021
DATE: JAN 07, 2020
SCALE: AS SHOWN
DRAWN BY: HP

SHEET NO.:
P-2
OF 7



CALL BEFORE YOU DIG!
At least 72 hours prior to commencement of the work, the Contractor is responsible for calling the Utilities Protection Center (UPC) at 1-800-282-7411, to request underground utility locate service.

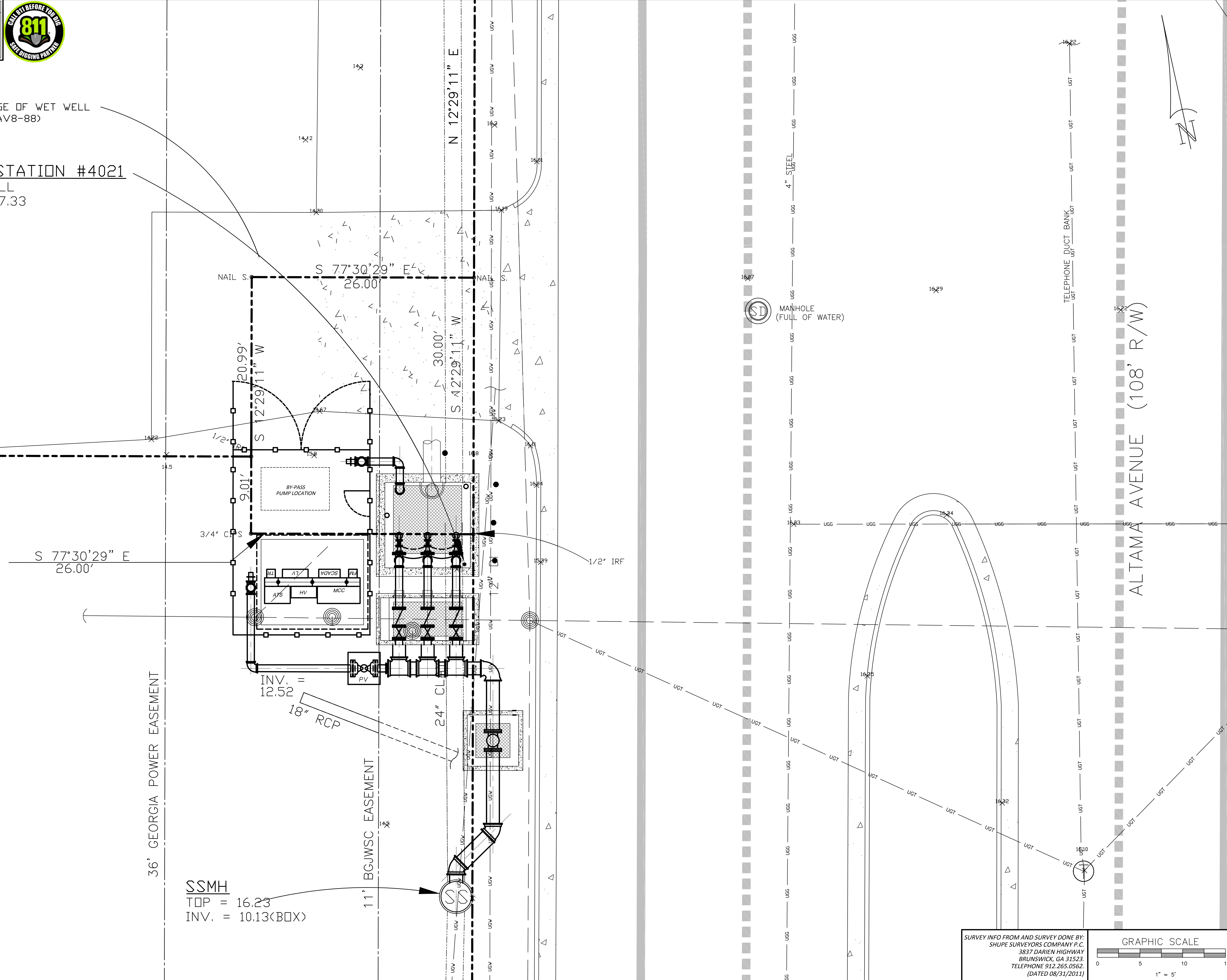
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BENCHMARK
NAIL IN EAST EDGE OF WET WELL
ELEV. = 17.33' (NAV8-88)

PUMP STATION #4021
WET WELL
TOP = 17.33



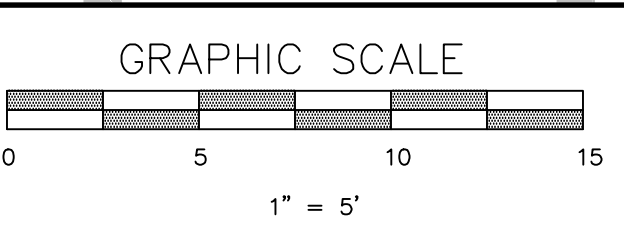
BRUNSWICK-GLYNN COUNTY
JOINT WATER & SEWER COMMISSION
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NO.	DATE	COMMENTS
1	07/11/2019	Scale Revised & 811 Logo Added

PS4021 REHABILITATION AND UPGRADE
GLYNN COUNTY, GEORGIA
BRUNSWICK-GLYNN COUNTY JOINT WATER & SEWER COMMISSION
SITE (PROPOSED)

FILE NO.: PS-4021
DATE: JAN 08, 2020
SCALE: AS SHOWN
DRAWN BY: HP

SURVEY INFO FROM AND SURVEY DONE BY:
SHUPE SURVEYORS COMPANY P.C.
3837 DARIEN HIGHWAY
BRUNSWICK, GA 31523
TELEPHONE 912.265.0562
(DATED 08/31/2011)



SHEET NO.: **P-3**
OF 7

CONTRACTOR TO FIELD VERIFY ALL EXISTING DIMENSIONS & CONDITIONS PRIOR TO CONSTRUCTION OR FABRICATION. NOTIFY OWNER (JWSC) IMMEDIATELY IF CONFLICTS OR CHANGES ARISE.

CONCRETE NOTES:

CONCRETE SHALL BE OF NORMAL WEIGHT (150 PCF) AND SHALL DEVELOP A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI AT 28 DAYS. (INCLUDE POLY FIBER MIX OF 1/2 LB. PER CU. YARD (MIN.))

CONCRETE FINISH TO BE NON-SLIP, BROOMED FINISH.

REINFORCING SHALL CONFORM WITH ASTM A615, GRADE 60, HAVING A MINIMUM YIELD STRENGTH OF 60 KSI.

SITE REQUIREMENTS:

FENCING SHALL BE 6-FEET HIGH CONSISTING OF 2-INCH MESH BY 9 GAUGE ALUMINUM COATED STEEL FABRIC WITH BLACK PVC COATING. THE FENCE SHALL HAVE A 7 GAUGE ALUMINUM COATED STEEL COIL SPRING TENSION WIRE ALONG THE BOTTOM OF THE FENCE FABRIC AND 3 STRANDS OF 12-1/2 GAUGE ALUMINUM COATED STEEL BARBED WIRE ALONG THE TOP OF THE FENCE FABRIC. FENCE POSTS SHALL BE AS FOLLOWS:

- CORNER POSTS - 3 INCH OD GALVANIZED
- LINE POSTS - 2-1/2 INCH OD GALVANIZED

CORNER AND GATE POSTS SHALL HAVE NECESSARY STRUTS AND TIE BRACING WITH WATER TIGHT CLOSURE CAPS. GATE SHALL CONSIST OF A DOUBLE 8'-0" LONG 6'-0" HIGH SECTIONS AND SHALL BE EQUIPPED WITH A LATCH AND HASP ASSEMBLY. A GROUND ANCHOR CAST IN CONCRETE SHALL BE INSTALLED.

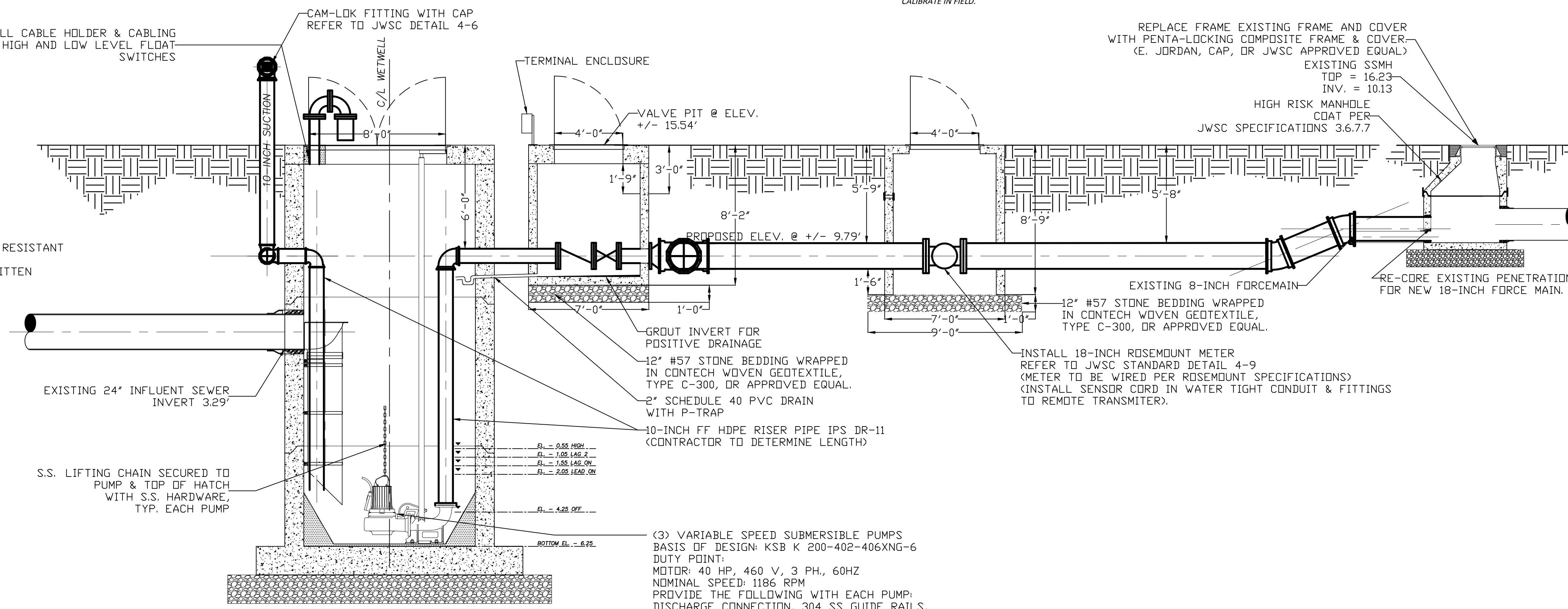
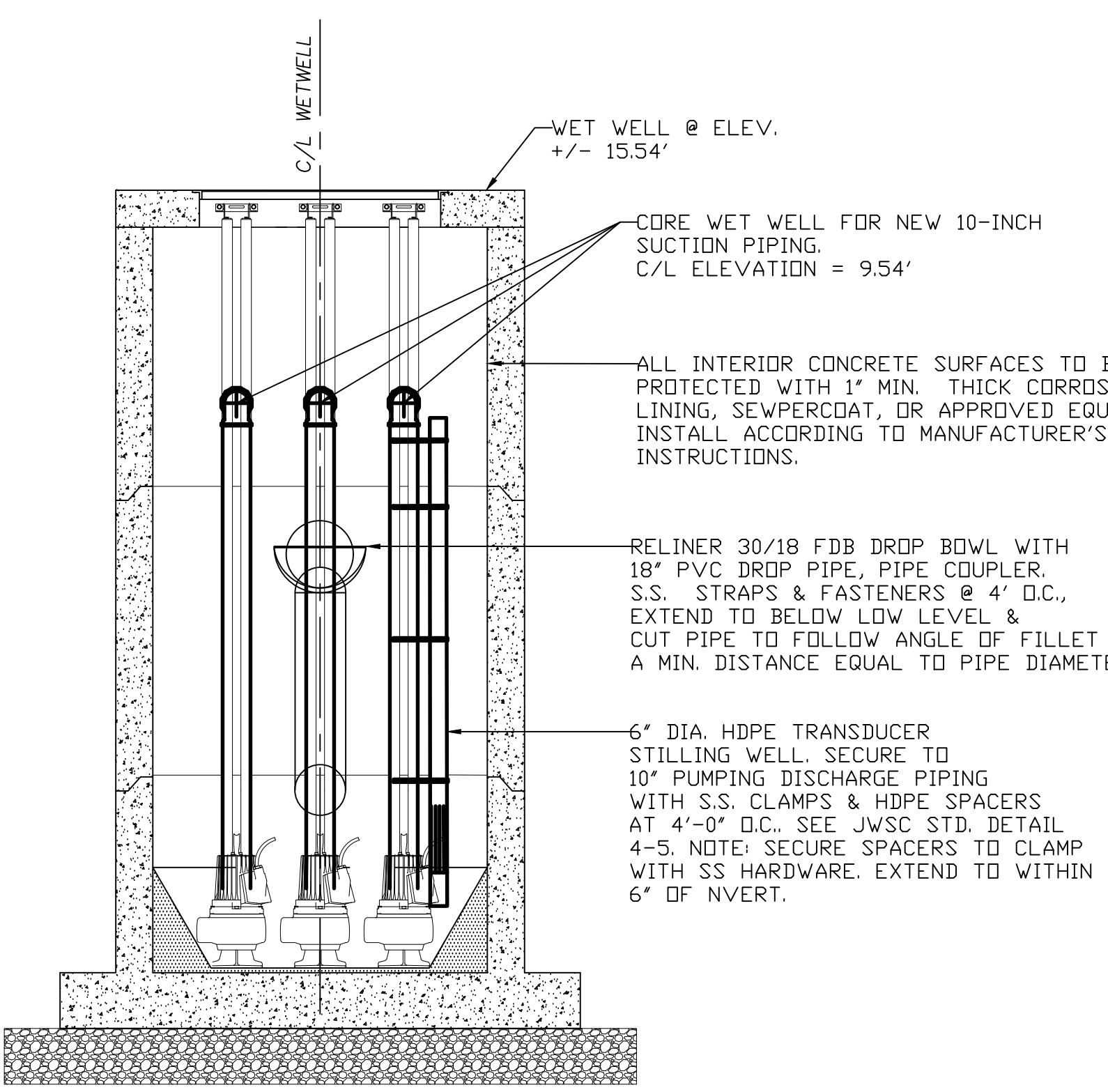
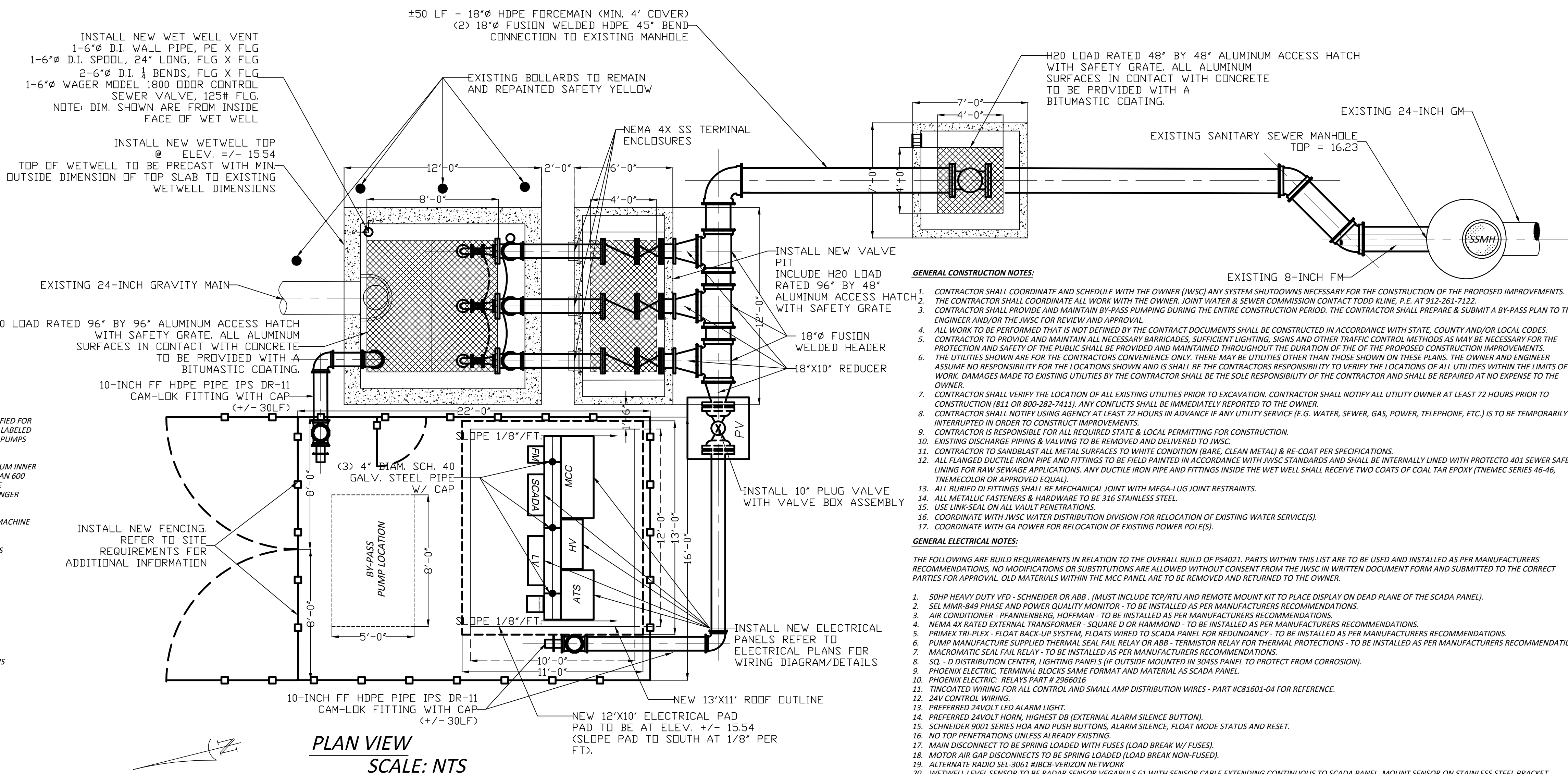
CONTROLS SHALL BE DESIGNATED TO AUTOMATICALLY OPERATE PUMPS IN RESPONSE TO EXCURSIONS IN LIQUID LEVEL AS SPECIFIED FOR THE STATION. CONTROL PANEL SHALL BE UL 508A CERTIFIED AND LISTED, COMPLETELY ASSEMBLED, WIRED, TESTED AND PROPERLY LABELED PRIOR TO SHIPMENT. CONTROL PANEL TO BE REUSED FROM SITE BY REFERRED INTEGRATOR TO ENSURE COMPATIBILITY BETWEEN PUMPS AND CONTROLS.

THE PUMP CONTROLS SHALL BE HOUSED IN A NEMA 4X STAINLESS STEEL ENCLOSURE WITH 3PT PAD LOCKABLE LATCH AND ALUMINUM INNER DOOR. THE INNER DOOR SHALL BE 12 GAUGE WITH A 0.75-INCH 90 DEGREE BREAK ON ALL 4 SIDES. WIRING SHALL HAVE NO LESS THAN 60 VOLT INSULATION WITH A 75° CELSIUS RATING. THE ENCLOSURE SHALL BE ADEQUATELY SIZED TO PROVIDE PROPER SPACING OF THE EQUIPMENT AND HAVE A PROPERLY SIZED COOLING SYSTEM IF REQUIRED, AIR CONDITIONING WHERE APPLICABLE, OR HEAT EXCHANGER WHEN APPROVED BY JWSC.

ELECTRICAL CONTROLS SHALL BE CONTROLLED BY JWSC'S STANDARD SCADA PUMP CONTROLLER AS MANUFACTURED BY ELECTRIC MACHINE CONTROL, INC. (205-661-3988 TRUSSVILLE, ALABAMA)

THE PANEL SHALL CONSIST OF THE FOLLOWING COMPONENTS (APPROVED MANUFACTURERS AS LISTED IN SECTION 4 OF THE JWSC'S STANDARD FOR WATER AND SEWER CONSTRUCTION SHALL BE USED):

- HAND-OFF-AUTOMATIC SWITCH FOR EACH PUMP
- OVERLOAD AND SHORT CIRCUIT PROTECTION FOR EACH PUMP
- CONTROL POWER BREAKER
- GFCI OUTLET ON DEADFRONT OF MCC
- GFCI BREAKER
- 24 VOLT CONTROLS
- RED STROBE HIGH LEVEL ALARM LIGHT
- MOTOR PROTECTION CIRCUITS FOR OVER AND UNDER CURRENT/VOLTAGE AND PHASE CHANGE
- CIRCUIT BREAKER FOR EACH PUMP WITH INNER DOOR LOCK WHEN IN "ON" POSITION
- FIELD WIRING CONNECTION USING TERMINAL STRIPS WITH SEPARATE BLOCKS FOR PUMP, SCADA CONTROL AND SCADA ALARMS
- PUMP STARTING SHALL USE NEMA RATED VFD DRIVES
- RTAC 3505 INSIDE THE SCADA PANEL FOR VFD BYPASS PUMP AND MMR CONTROL
- PUMP SEAL LEAD DETECTION AND MOTOR THERMAL MONITOR RELAY BY THE PUMP MANUFACTURER
- PUMP SEAL FAILURE AMBER WARNING PILOT LIGHT ON MCC
- PUMP THERMAL FAIL RED WARNING PILOT LIGHT ON MCC
- GREEN PUMP RUNNING PILOT LIGHTS ON MCC
- PILOT LIGHTS SHALL BE LED FOR LONG LIFE
- BREAKERS, PILOT LIGHTS, AND SWITCHES SHALL BE OIL TIGHT MOUNTED ON INNER DOOR FOR OPERATOR ACCESS
- RUN TIME HOUR METERS
- SEL MMR 849 RELAY FOR MOTOR/PHASE LOSS PROTECTION
- ALARM HORN WITH SILENCE BUTTON
- ALL MOUNTING SCREWS SHALL BE STAINLESS MACHINE WITH BACKPLATE HOLES DRILLED AND TAPPED
- EQUIPMENT SHED LIGHTING SHALL BE (A) LITHONIA DMS232120 OR APPROVED EQUAL SECURED TO SHELTER STRUCTURE WITH 0 DEGREE F RATED ELECTRONIC BALLAST.



ELEVATION VIEW SCALE: NTS

SECTION VIEW SCALE: NTS



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PLANNING & CONSTRUCTION DIVISION
1703 Gloucester Street
Brunswick, Georgia 31520
(912) 261-7110 Phone
(912) 261-7178 Fax
www.bgjwsc.org

NO.	DATE:	COMMENTS:

PS4021 REHABILITATION AND UPGRADE
GLYNN COUNTY, GEORGIA
BRUNSWICK-GLYNN COUNTY JOINT WATER & SEWER COMMISSION
PROPOSED PLAN

FILE NO.: PS4021
DATE: JAN 08, 2020
SCALE: AS SHOWN
DRAWN BY: HP
SHEET NO.: P-4



CALL BEFORE YOU DIG!
At least 72 hours prior to commencement of the work, the Contractor is responsible for calling the Utilities Protection Center (UPC) at 1-800-282-7411, to request underground utility locate services.

REVISIONS

PROPOSED PLAN

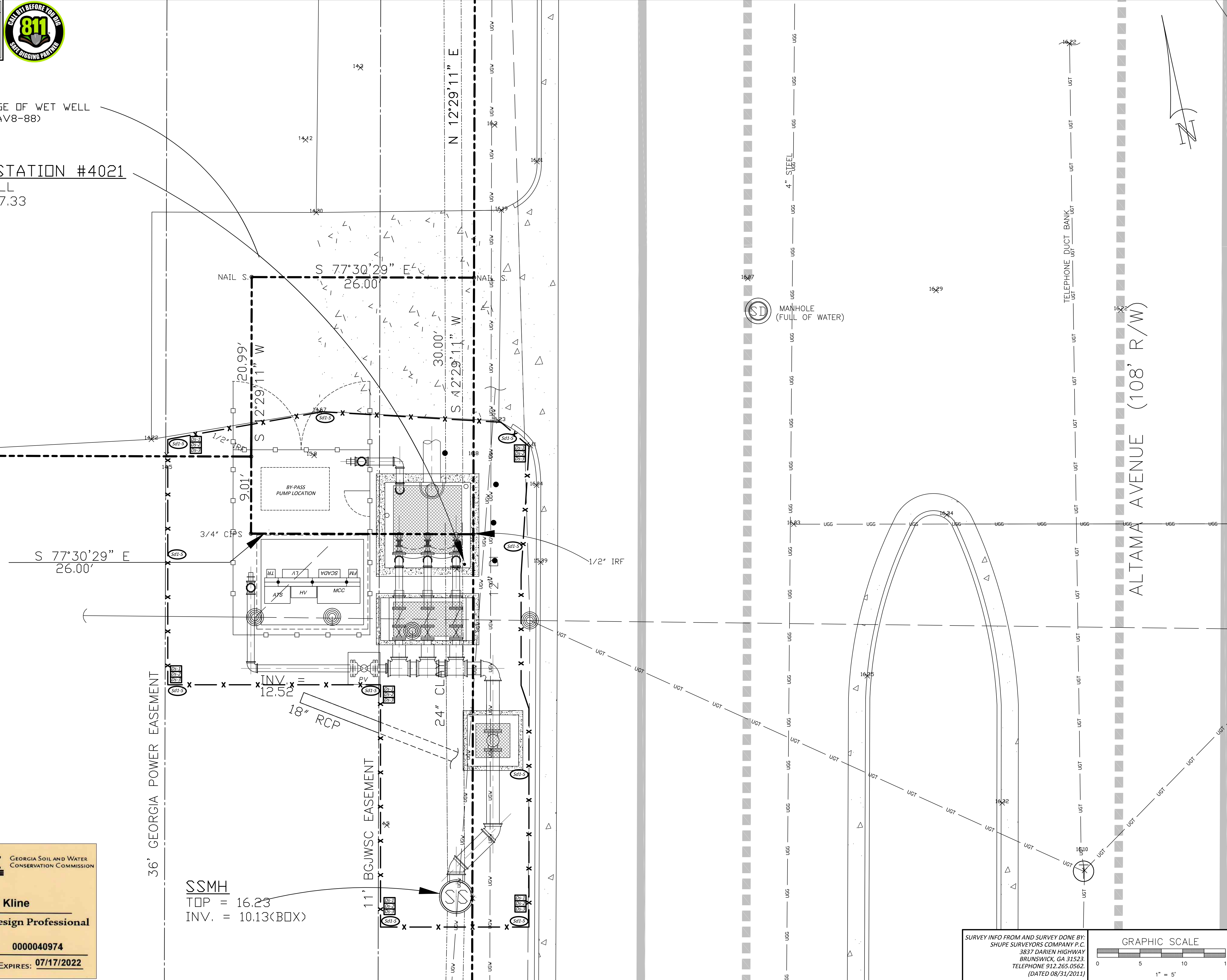
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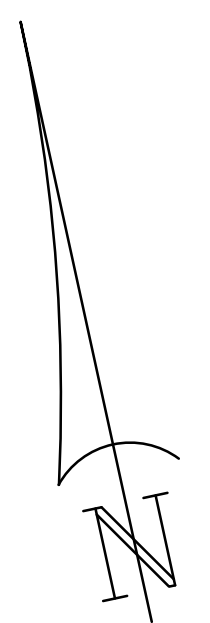
BENCHMARK
NAIL IN EAST EDGE OF WET WELL
ELEV. = 17.33' (NAV8-88)

PUMP STATION #4021
WET WELL
TOP = 17.33



SSMH
TOP = 16.23
INV. = 10.13(BOX)

ALTA MA AVENUE (108' R/W)



BRUNSWICK-GLYNN COUNTY
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NO.	DATE	COMMENTS
1	07/17/2019	Scale Revised & 811 Logo Added

PS4021 REHABILITATION AND UPGRADE
GLYNN COUNTY, GEORGIA
BRUNSWICK-GLYNN COUNTY JOINT WATER & SEWER COMMISSION
EROSION & SEDIMENTATION CONTROL PLAN

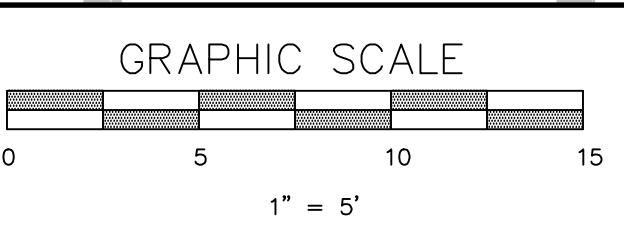
FILE NO.: PS-4021
DATE: JAN 09, 2020
SCALE: AS SHOWN
DRAWN BY: HP
SHEET NO.: **P-5**
OF 7

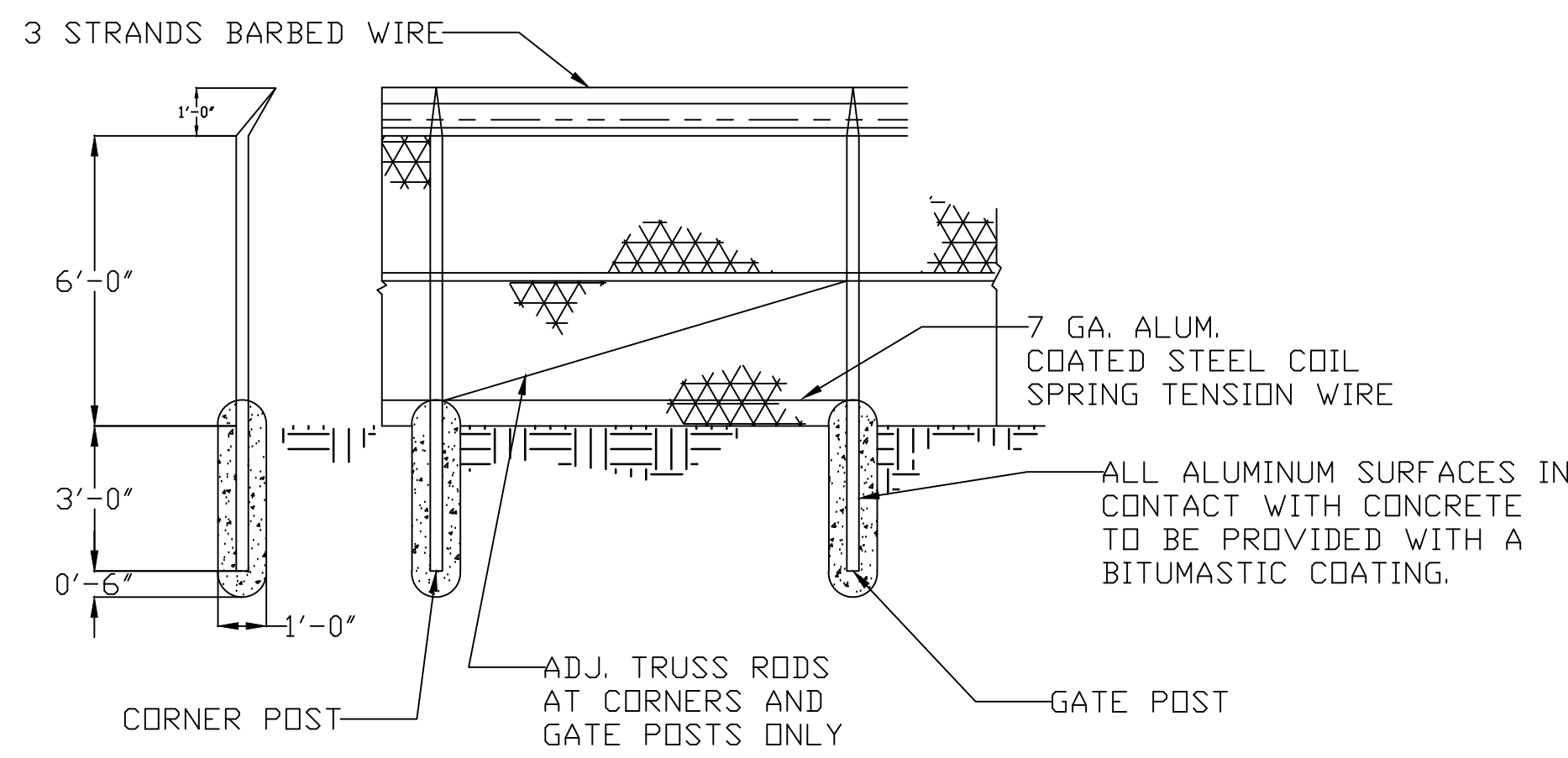
GSWCC GEORGIA SOIL AND WATER CONSERVATION COMMISSION

William T Kline
Level II Certified Design Professional

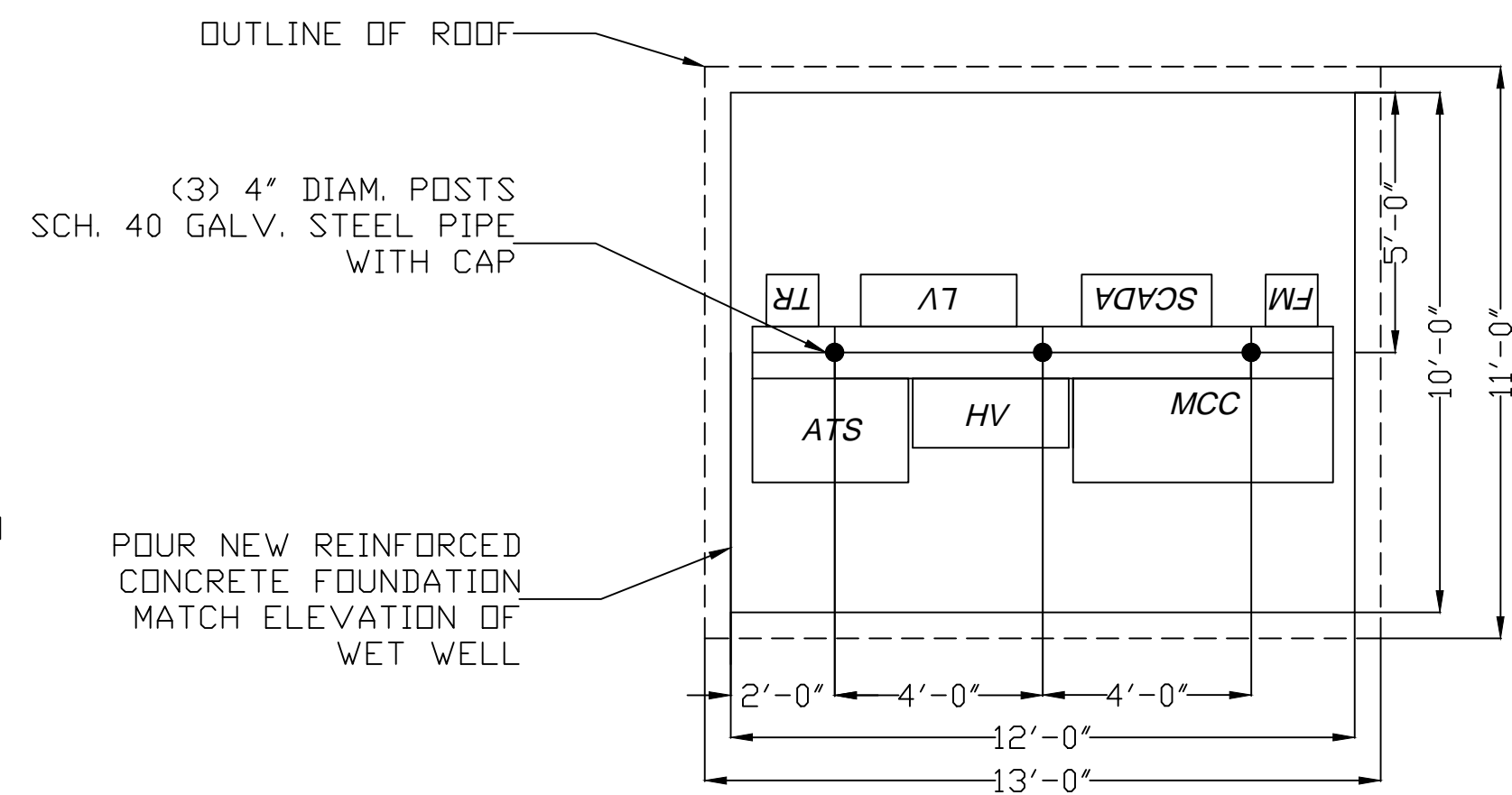
CERTIFICATION NUMBER **0000040974**
ISSUED: **07/17/2019** EXPIRES: **07/17/2022**

SURVEY INFO FROM AND SURVEY DONE BY:
SHUPE SURVEYORS COMPANY P.C.
3837 DARIEN HIGHWAY
BRUNSWICK, GA 31523
TELEPHONE 912.265.0562
(DATED 08/31/2011)

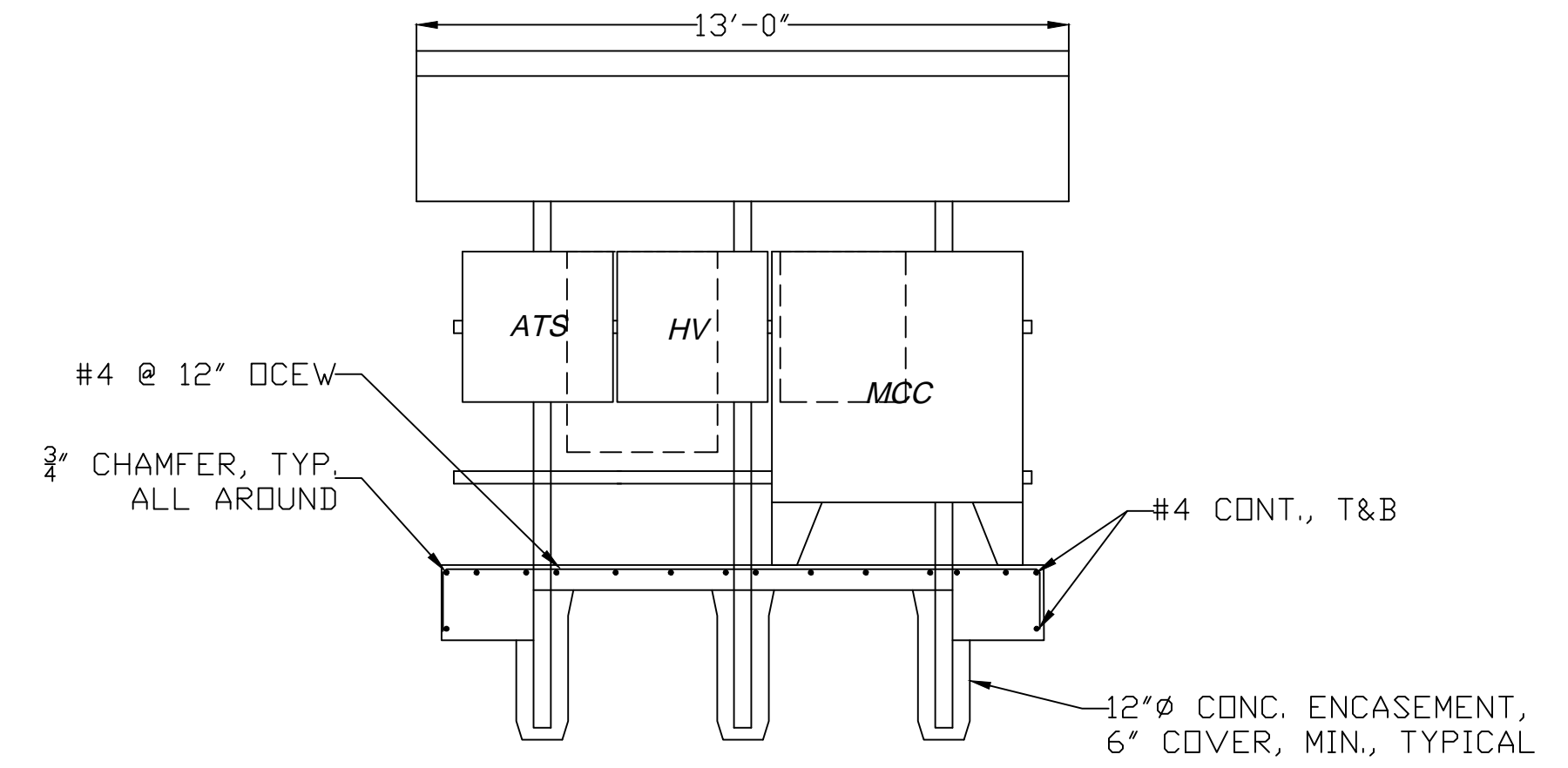




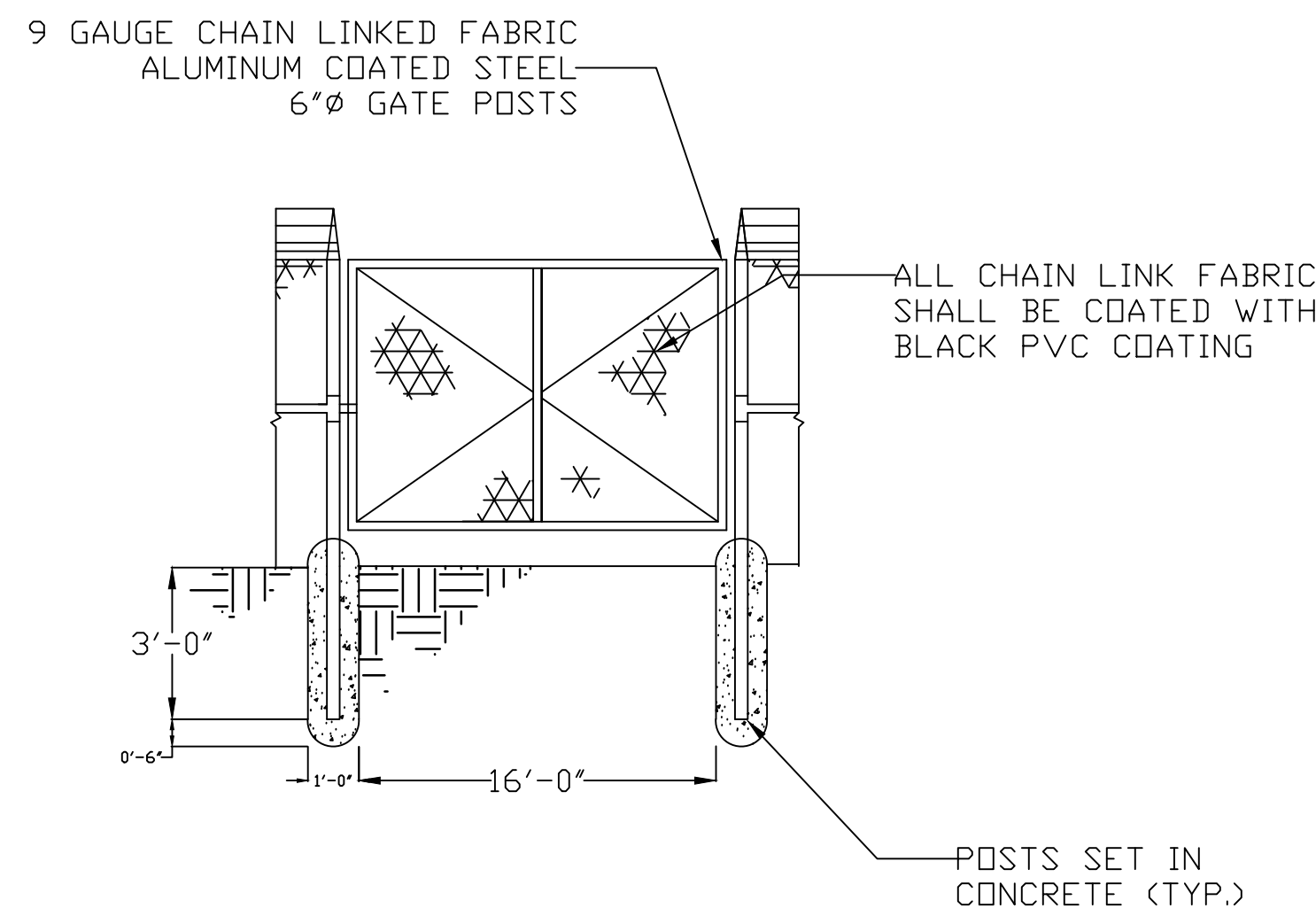
FENCE
N.T.S.



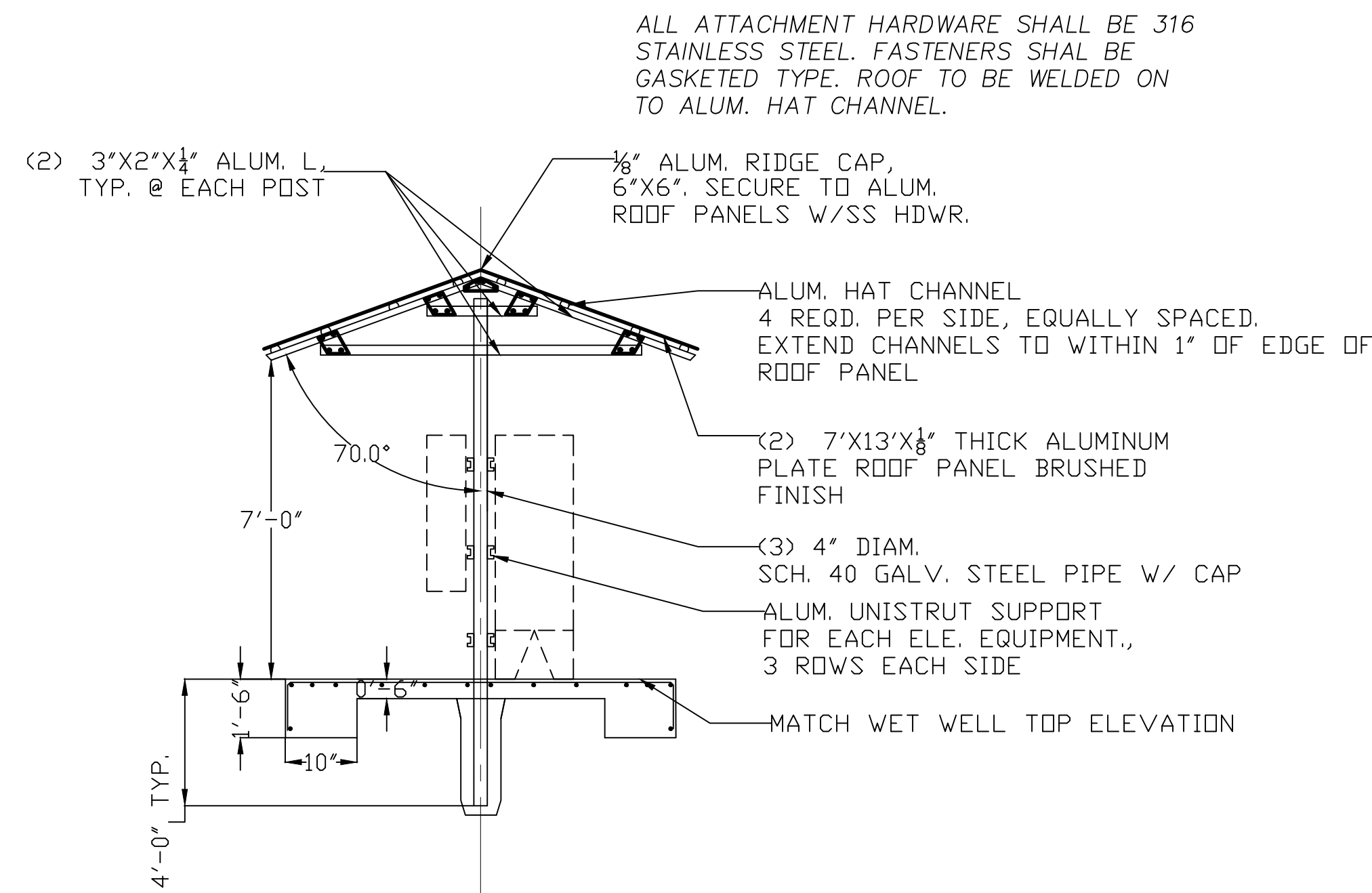
ELEC. EQUIP. SHED - FOUNDATION PLAN
N.T.S.



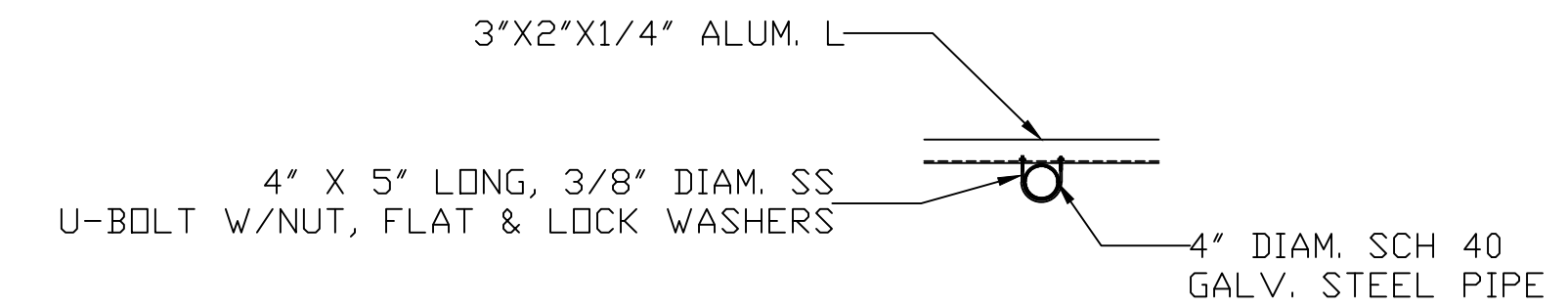
ELEC. EQUIP. SHED - FRONT ELEVATION
N.T.S.



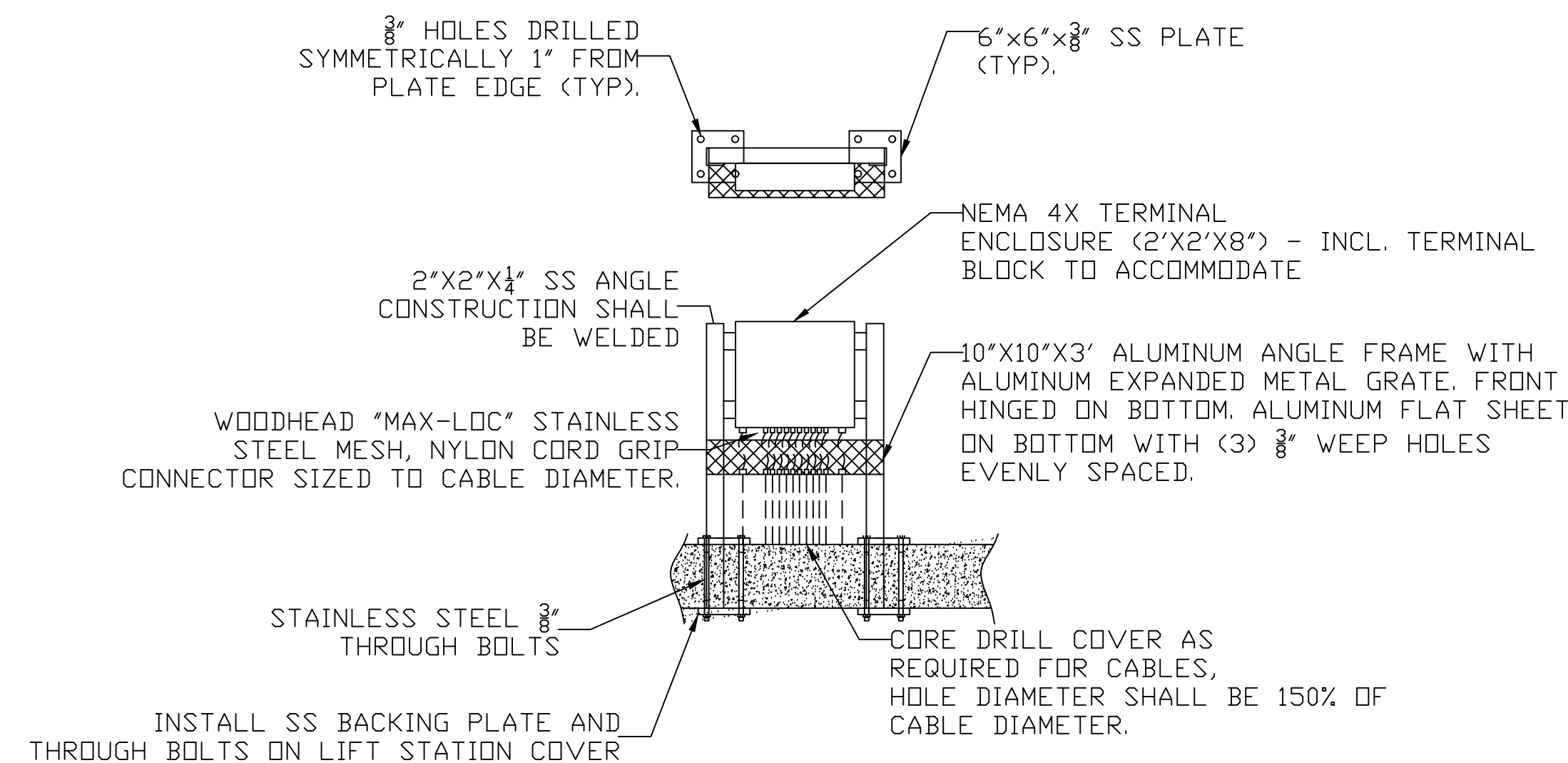
ACCESS GATE
N.T.S.



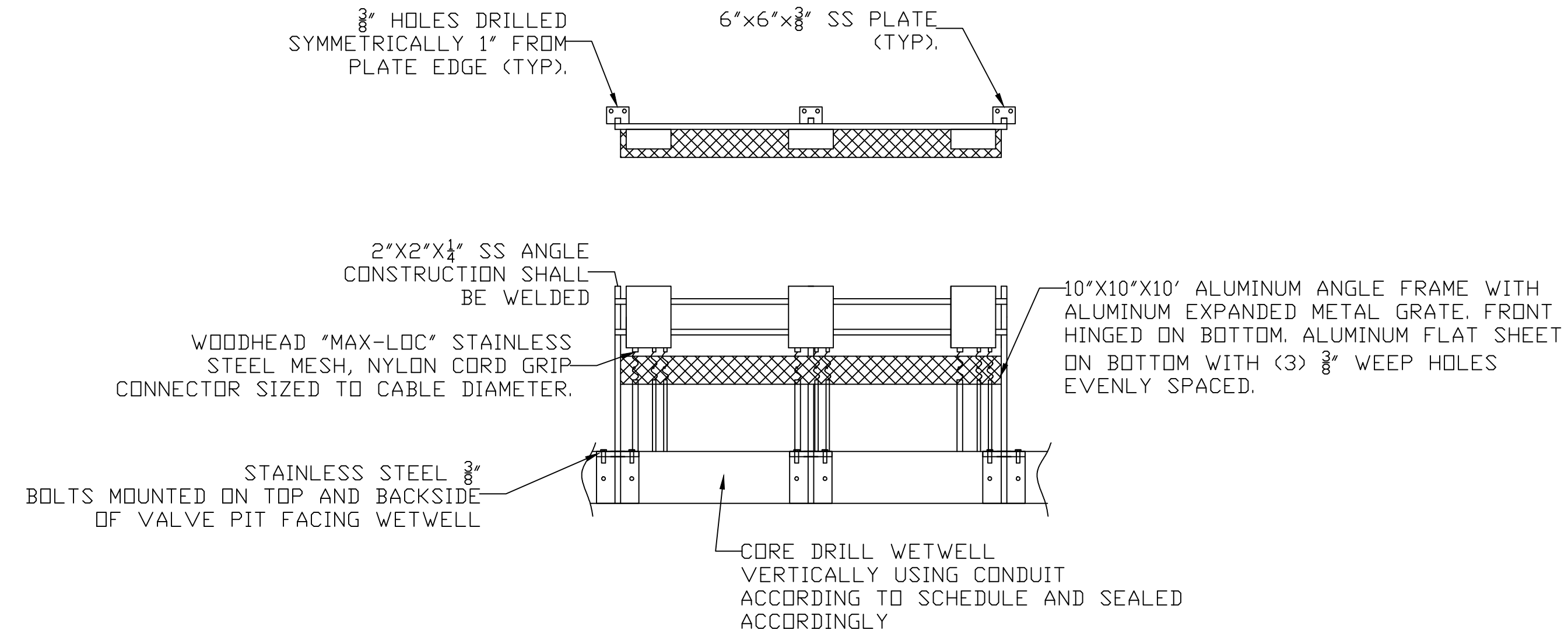
ELEC. EQUIP. SHED - ROOF DETAIL
N.T.S.



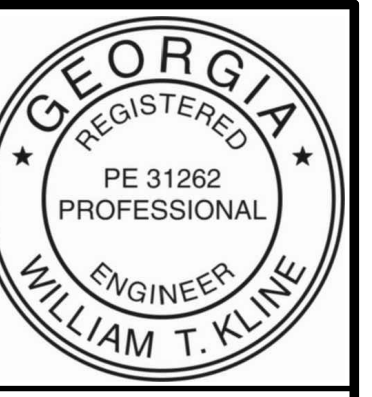
POST CONNECTION (TYP.)
N.T.S.



WETWELL LOW VOLTAGE MOUNTING DETAIL
N.T.S.



WETWELL MOTOR DISCONNECT(S) DETAIL
N.T.S.



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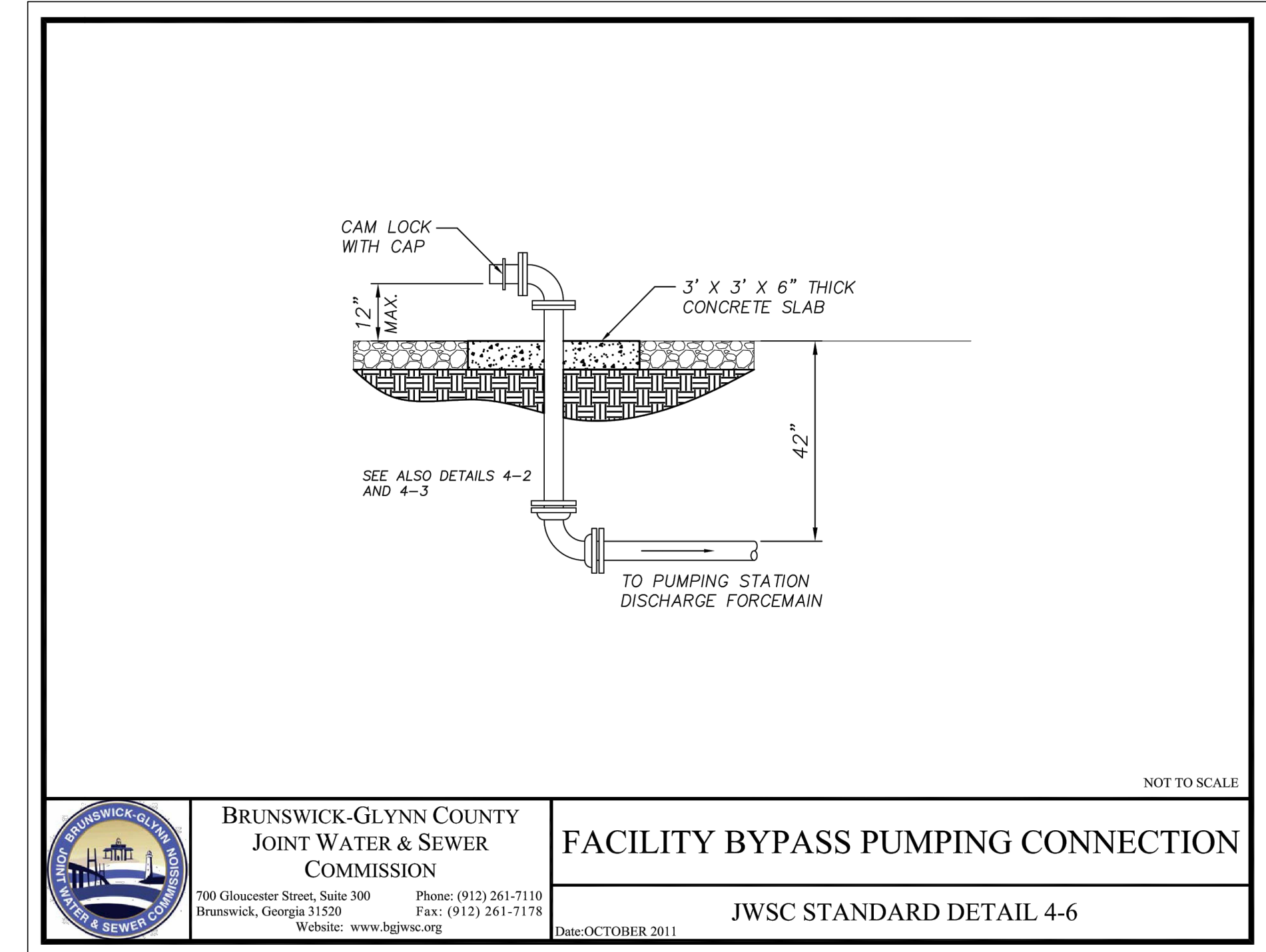
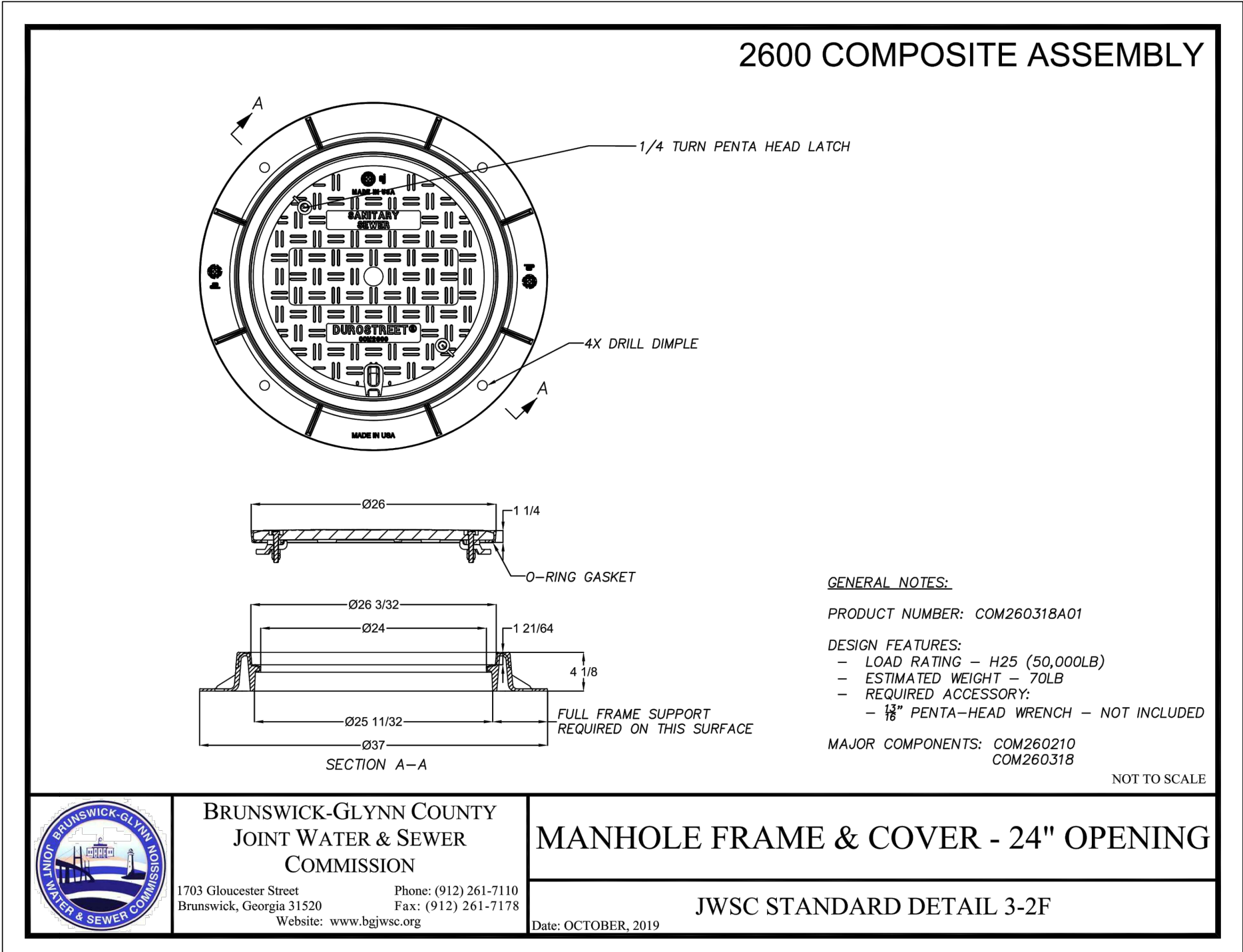
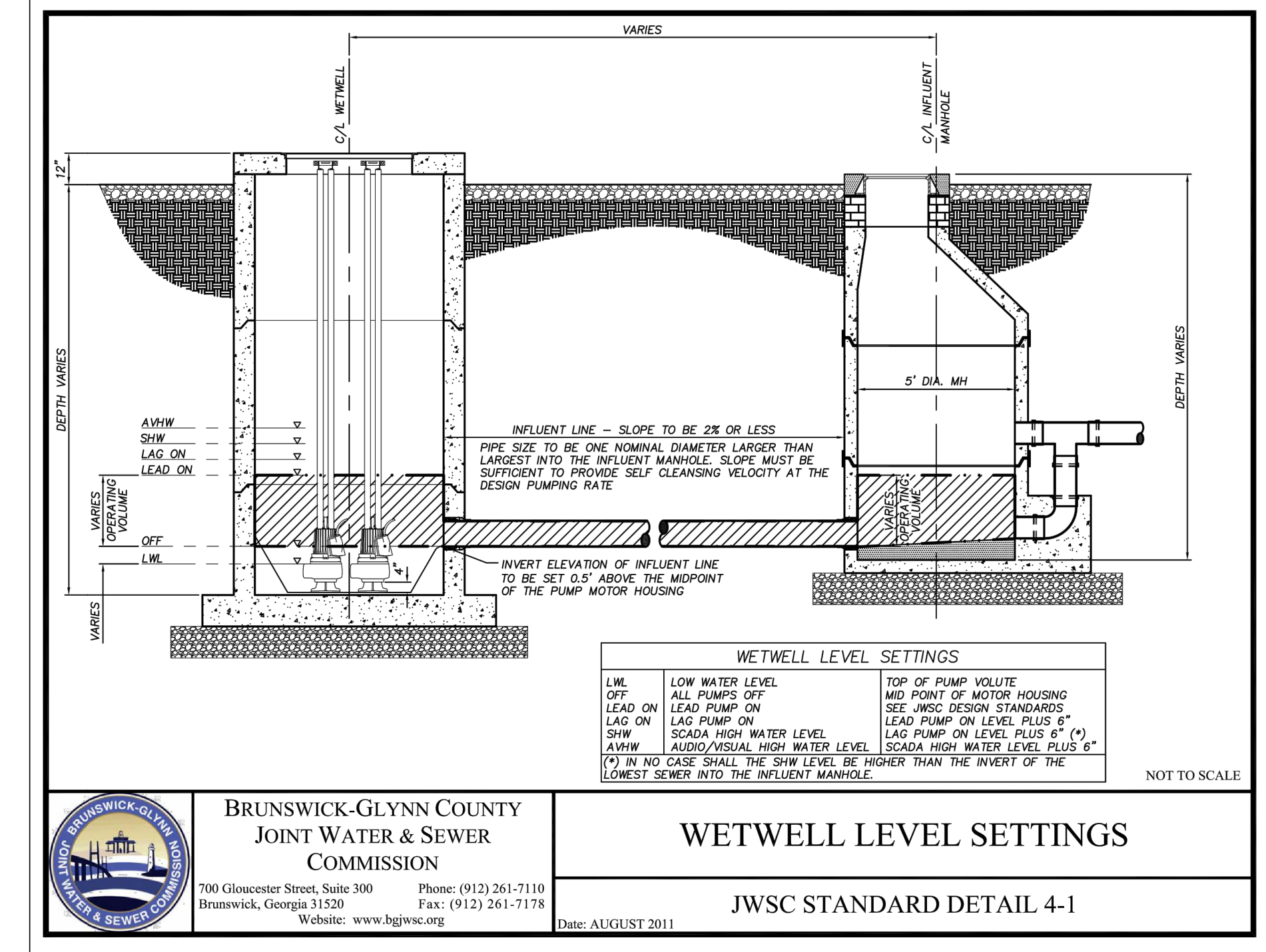
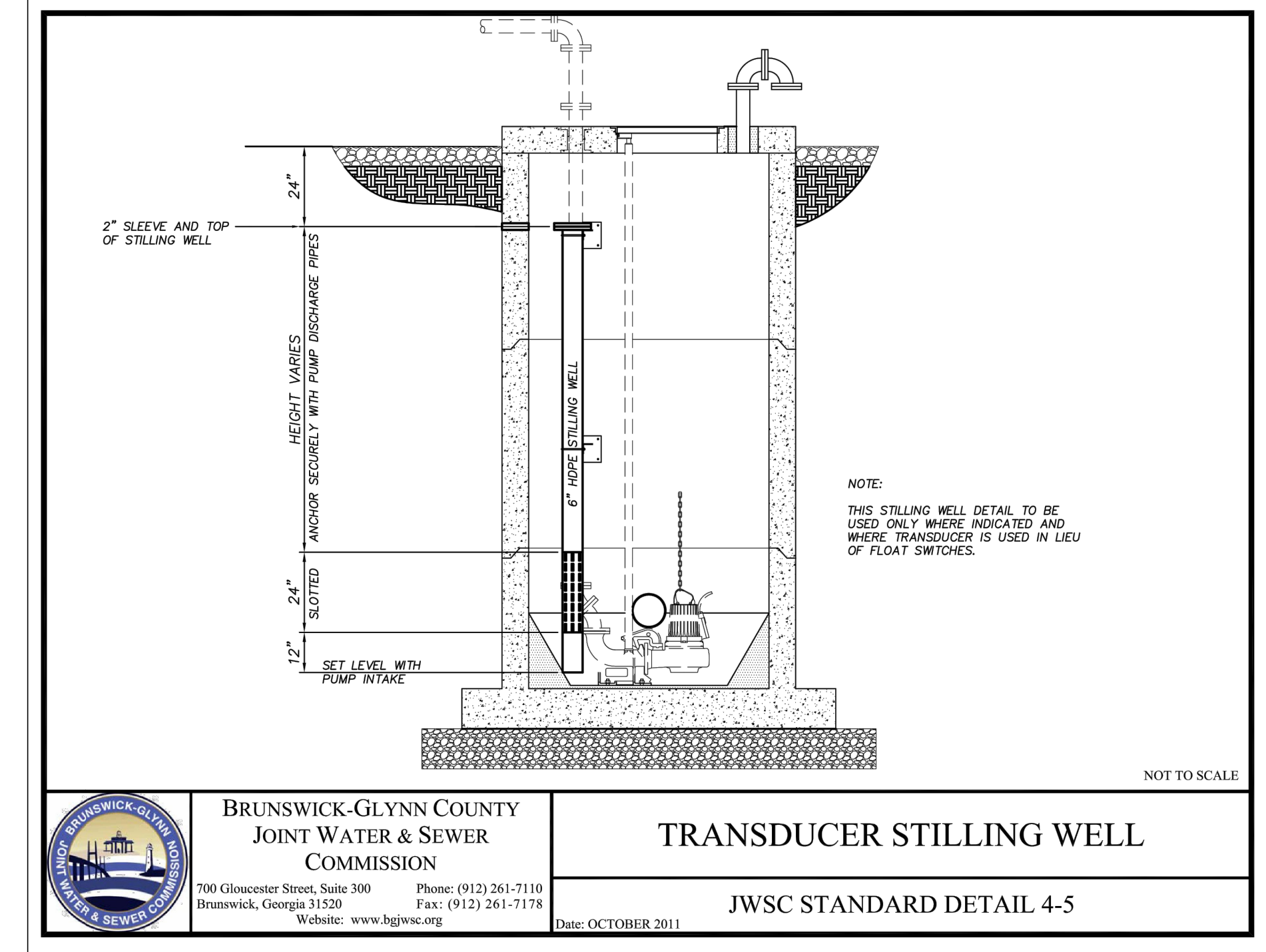
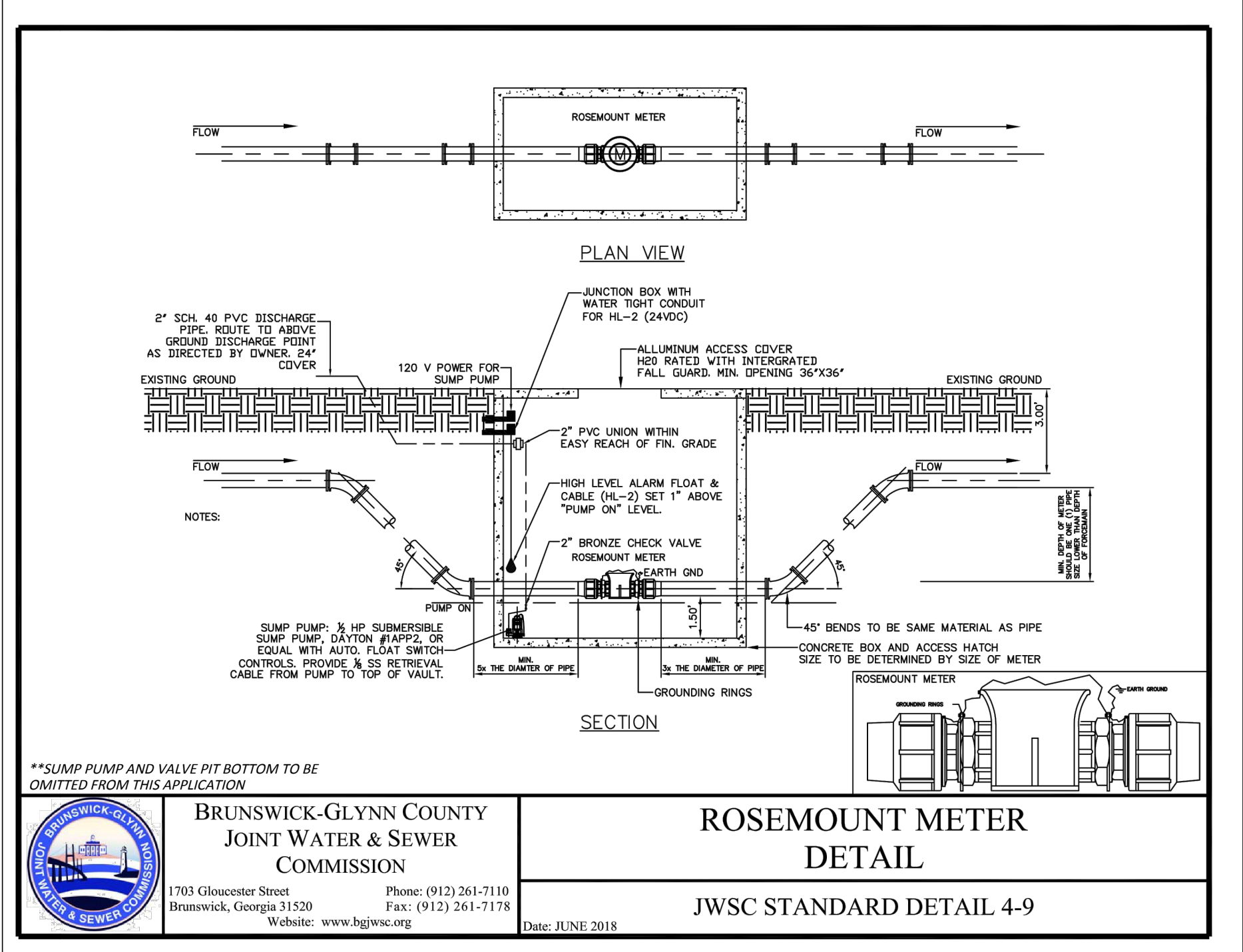
NO.	DATE	COMMENTS

PS4021 REHABILITATION AND
UPGRADE
GLYNN COUNTY, GEORGIA
BRUNSWICK-GLYNN COUNTY JOINT WATER & SEWER COMMISSION

FILE NO.: PS4021	DATE: JAN 08, 2020	SCALE: AS SHOWN	DRAWN BY: HP
SHEET NO.:			OF
P-6			7



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NO.	DATE	COMMENTS

PS4021 REHABILITATION AND UPGRADE
GLYNN COUNTY, GEORGIA
BRUNSWICK-GLYNN COUNTY JOINT WATER & SEWER COMMISSION
JWSC DETAILS

FILE NO.: PS4021
DATE: JAN 08, 2020
SCALE: AS SHOWN
DRAWN BY: HP
SHEET NO.: P-7
OF 7



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NO.	DATE	REVISIONS

COMMENTS:

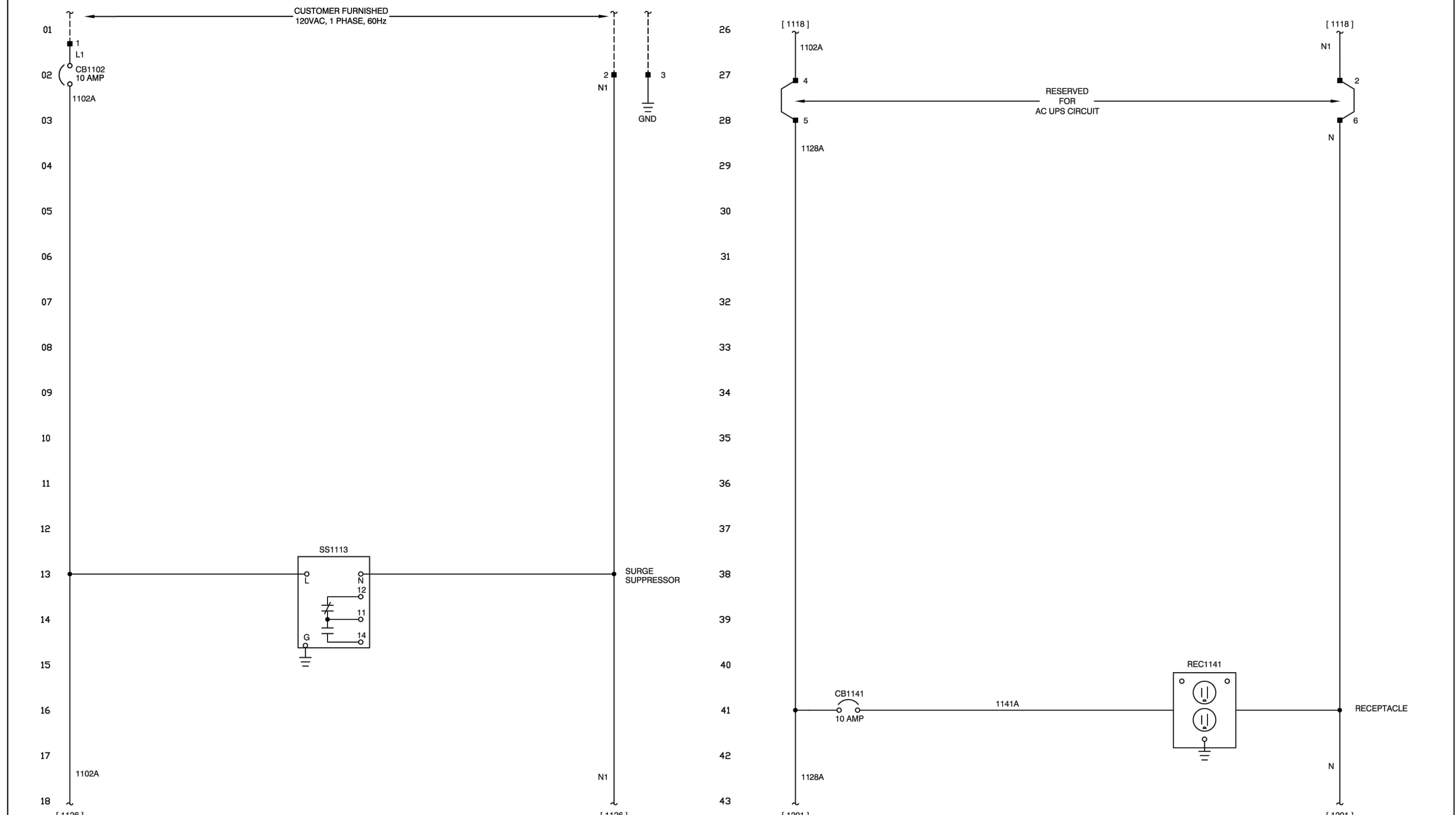
**PS4021 REHABILITATION AND
UPGRADE
GLYNN COUNTY, GEORGIA**
BRUNSWICK-GLYNN COUNTY JOINT WATER & SEWER COMMISSION
ELECTRICAL PLAN

FILE NO.: PS-4021
DATE: JAN 27, 2020
SCALE: AS SHOWN
DRAWN BY:

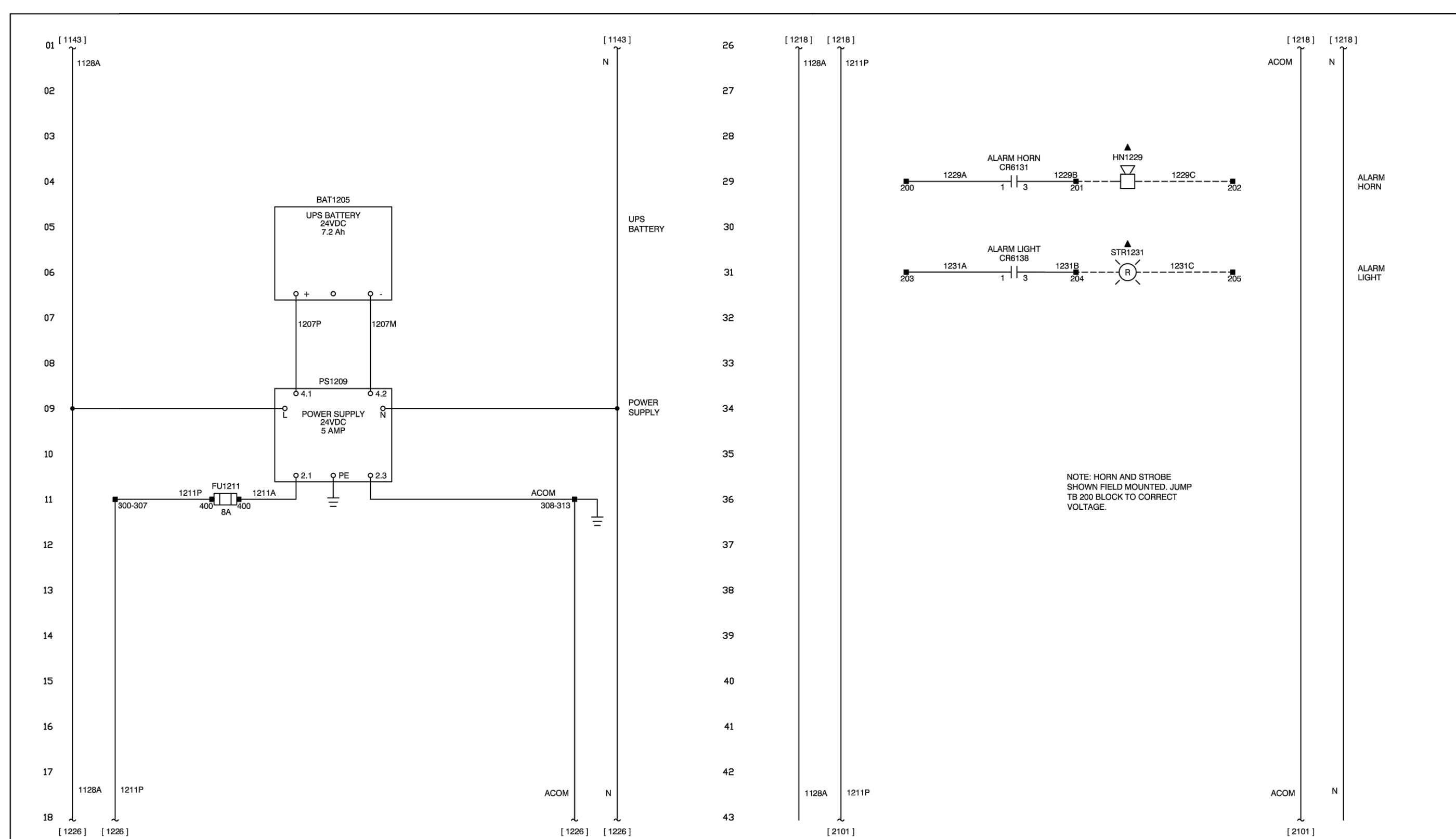
SHEET NO.: **E-1**
OF 6

DRAWING INDEX			DRAWING INDEX			DRAWING INDEX		
SHEET	SUBJECT	EQUIPMENT	SHEET	SUBJECT	EQUIPMENT	SHEET	SUBJECT	EQUIPMENT
00	TITLE SHEET	PUMP CONTROL RTU	41	SCHEMATIC DIAGRAM	PUMP CONTROL RTU	83	(RESERVED)	
00A	DRAWING INDEX	PUMP CONTROL RTU	42	(RESERVED)		84	(RESERVED)	
01	(RESERVED)		43	(RESERVED)		85	(RESERVED)	
02	(RESERVED)		44	(RESERVED)		86	(RESERVED)	
03	(RESERVED)		45	(RESERVED)		87	(RESERVED)	
04	(RESERVED)		46	(RESERVED)		88	(RESERVED)	
05	(RESERVED)		47	(RESERVED)		89	(RESERVED)	
06	(RESERVED)		48	(RESERVED)		90	(RESERVED)	
07	(RESERVED)		49	(RESERVED)		91	(RESERVED)	
08	(RESERVED)		50	(RESERVED)		92	(RESERVED)	
09	(RESERVED)		51	SCHEMATIC DIAGRAM	PUMP CONTROL RTU	93	(RESERVED)	
10	(RESERVED)		52	SCHEMATIC DIAGRAM	PUMP CONTROL RTU	94	SUBPAN LAYOUT	PUMP CONTROL RTU
11	SCHEMATIC DIAGRAM	PUMP CONTROL RTU	53	SCHEMATIC DIAGRAM	PUMP CONTROL RTU	95	(RESERVED)	
12	SCHEMATIC DIAGRAM	PUMP CONTROL RTU	54	(RESERVED)		96	(RESERVED)	
13	(RESERVED)		55	(RESERVED)		97	(RESERVED)	
14	(RESERVED)		56	(RESERVED)		98	(RESERVED)	
15	(RESERVED)		57	(RESERVED)		99	BILL OF MATERIAL	PUMP CONTROL RTU
16	(RESERVED)		58	(RESERVED)		99A	BILL OF MATERIAL	PUMP CONTROL RTU
17	(RESERVED)		59	(RESERVED)				
18	(RESERVED)		60	(RESERVED)				
19	(RESERVED)		61	SCHEMATIC DIAGRAM	PUMP CONTROL RTU			
20	(RESERVED)		62	(RESERVED)				
21	SCHEMATIC DIAGRAM	PUMP CONTROL RTU	63	(RESERVED)				
22	(RESERVED)		64	(RESERVED)				
23	(RESERVED)		65	(RESERVED)				
24	(RESERVED)		66	(RESERVED)				
25	(RESERVED)		67	(RESERVED)				
26	(RESERVED)		68	(RESERVED)				
27	(RESERVED)		69	(RESERVED)				
28	(RESERVED)		70	(RESERVED)				
29	(RESERVED)		71	(RESERVED)				
30	(RESERVED)		72	(RESERVED)				
31	SCHEMATIC DIAGRAM	PUMP CONTROL RTU	73	CONTROLLER WIRING DIAGRAM	PUMP CONTROL RTU			
32	(RESERVED)		74	(RESERVED)				
33	(RESERVED)		75	TERMINAL BLOCK LAYOUT	PUMP CONTROL RTU			
34	(RESERVED)		76	(RESERVED)				
35	(RESERVED)		77	(RESERVED)				
36	(RESERVED)		78	(RESERVED)				
37	(RESERVED)		79	ENCLOSURE LAYOUT	PUMP CONTROL RTU			
38	(RESERVED)		80	(RESERVED)				
39	(RESERVED)		81	DEAD FRONT LAYOUT	PUMP CONTROL RTU			
40	(RESERVED)		82	(RESERVED)				

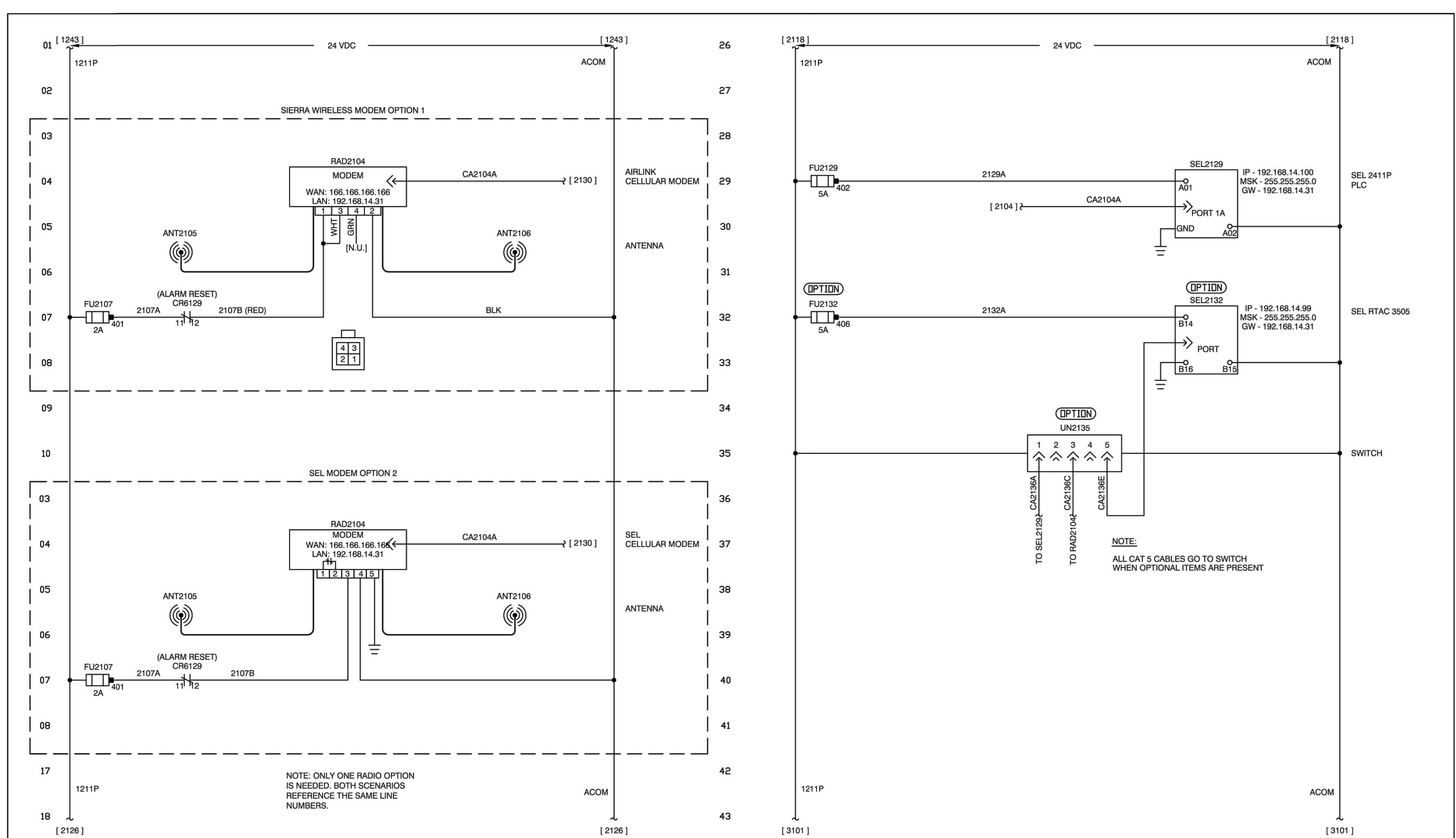
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Notes:	Equipment:	Title:	Customer:	Electric Machine Control, Inc. Trussville, Alabama 35173 205-661-3998	Date: 9/24/19 Drawn By: JWR Design By: JP App'd By: MB	Customer Order No.: VERBAL Cat Version: AUG2019 Scale: NONE	Drawing No.: EM190276 Conf'd Sht.: 12 Sht. No.: 11	REV 1 1/28/19
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Notes:	Equipment:	Title:	Customer:	Electric Machine Control, Inc. Trussville, Alabama 35173 205-661-3998	Date: 9/24/19 Drawn By: JWR Design By: JP App'd By: MB	Customer Order No.: VERBAL Cat Version: AUG2019 Scale: NONE	Drawing No.: EM190276 Conf'd Sht.: 21 Sht. No.: 12	REV 1 1/28/19
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Notes:	Equipment:	Title:	Customer:	Electric Machine Control, Inc. Trussville, Alabama 35173 205-661-3998	Date: 9/24/19 Drawn By: JWR Design By: JP App'd By: MB	Customer Order No.: VERBAL Cat Version: AUG2019 Scale: NONE	Drawing No.: EM190276 Conf'd Sht.: 31 Sht. No.: 21	REV 1 1/28/19
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**BRUNSWICK-GLYNN COUNTY
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PLANNING & CONSTRUCTION DIVISION**

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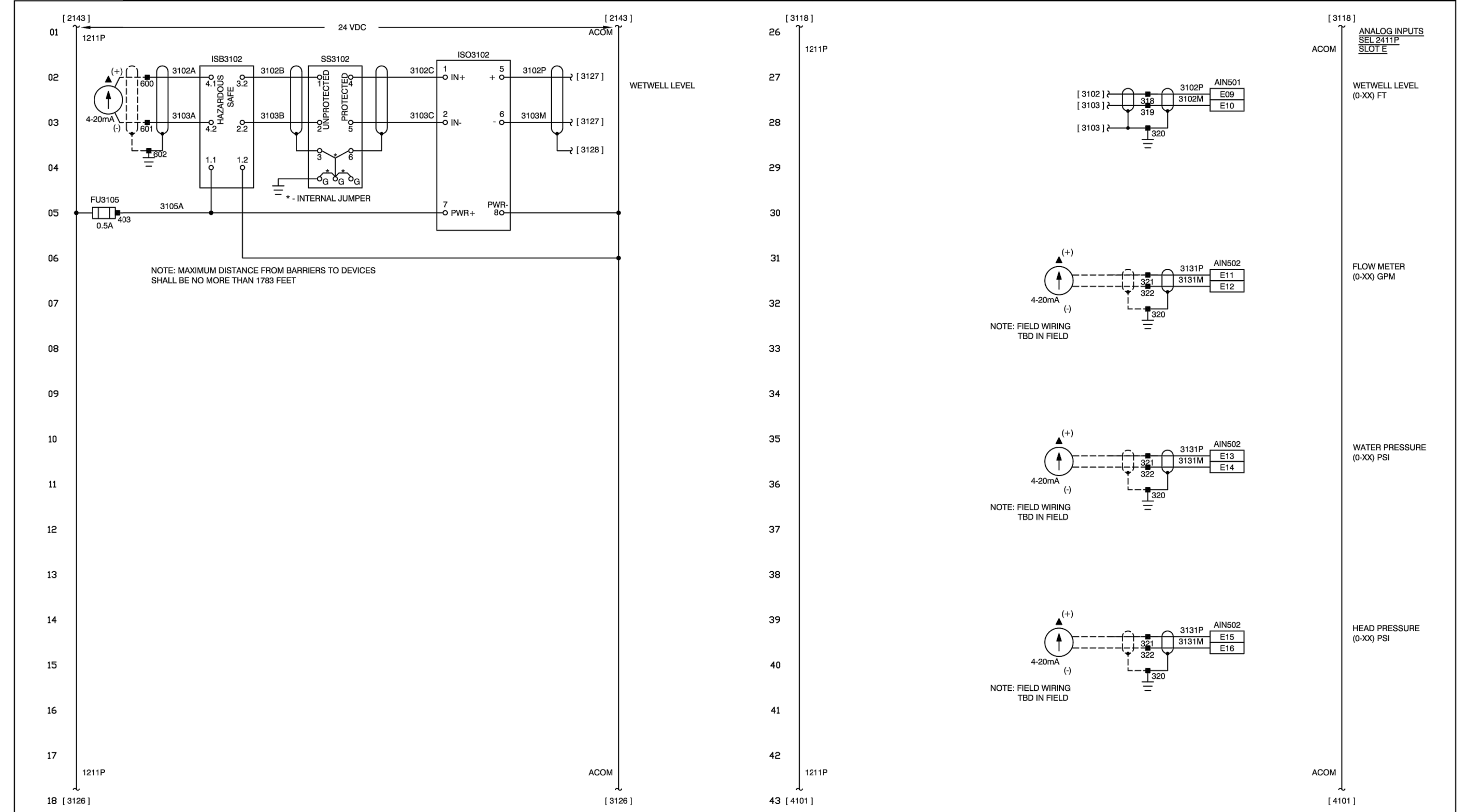
NO.	DATE	REVISIONS

**PS4021 REHABILITATION AND
UPGRADE
GLYNN COUNTY, GEORGIA**

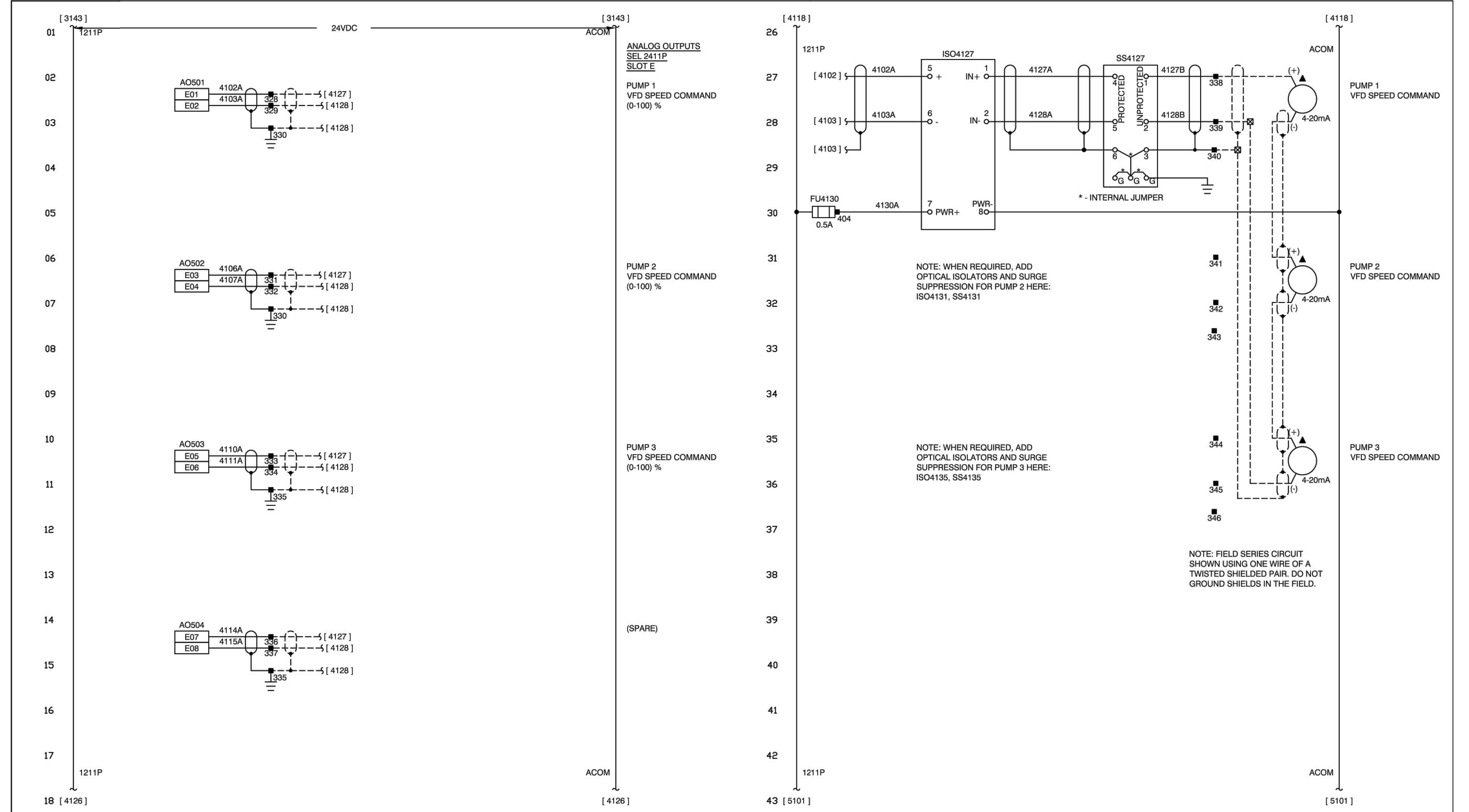
BRUNSWICK-GLYNN COUNTY JOINT WATER & SEWER COMMISSION
ELECTRICAL PLAN CONT.

FILE NO.: PS4021
DATE: JAN 27, 2020
SCALE: AS SHOWN
DRAWN BY:

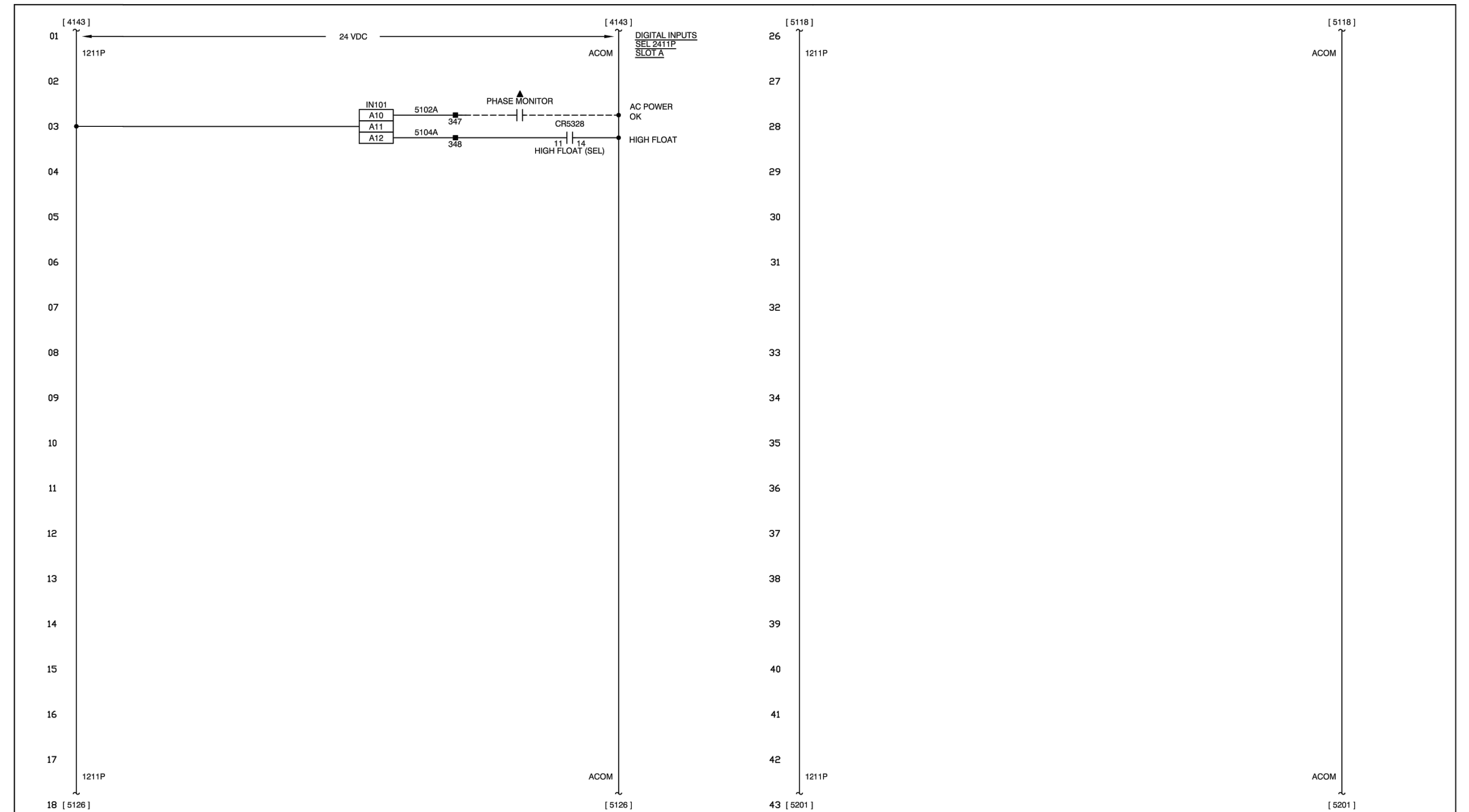
SHEET NO.: **E-2**



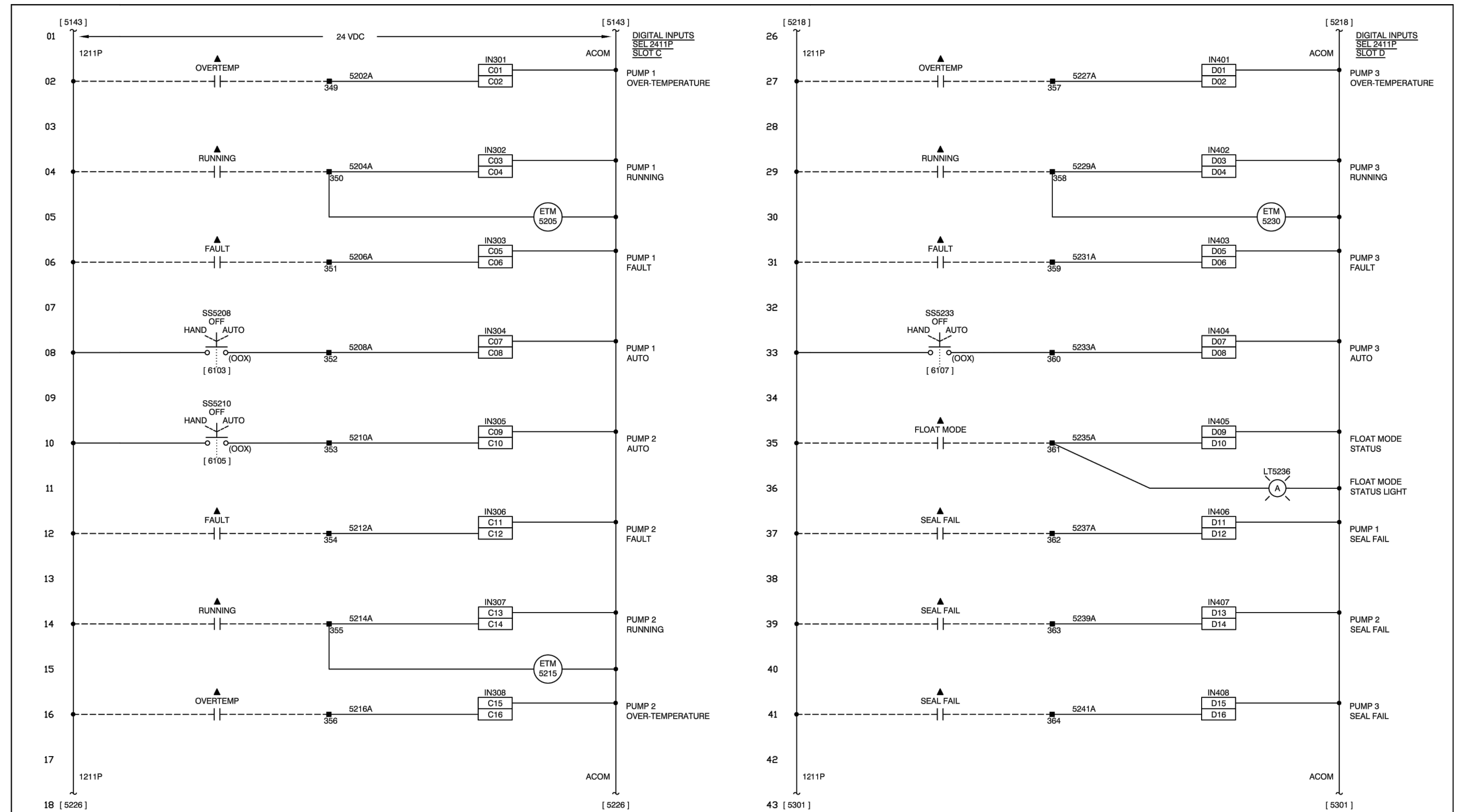
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				EMC	Drawn By:	JWR		
					Design By:	JP		
					Appr'd By:	MB		



Notes:	Equipment:	Title:	Customer:	Electric Machine Control, Inc.	Date:	Customer Order No.:	Drawing No.:	REV
	PUMP CONTROL RTU	SCHEMATIC DIAGRAM	BRUNSWICK	Trussville, Alabama 35173 205-661-3998	9/24/19	VERBAL	EM190276	1
				EMC	Drawn By:	JWR		
					Design By:	JP		
					Appr'd By:	MB		



Notes:	Equipment:	Title:	Customer:	Electric Machine Control, Inc.	Date:	Customer Order No.:	Drawing No.:	REV
	PUMP CONTROL RTU	SCHEMATIC DIAGRAM	BRUNSWICK	Trussville, Alabama 35173 205-661-3998	9/24/19	VERBAL	EM190276	1
				EMC	Drawn By:	JWR		
					Design By:	JP		
					Appr'd By:	MB		



Notes:	Equipment:	Title:	Customer:	Electric Machine Control, Inc.	Date:	Customer Order No.:	Drawing No.:	REV
	PUMP CONTROL RTU	SCHEMATIC DIAGRAM	BRUNSWICK	Trussville, Alabama 35173 205-661-3998	9/24/19	VERBAL	EM190276	1
				EMC	Drawn By:	JWR		
					Design By:	JP		
					Appr'd By:	MB		

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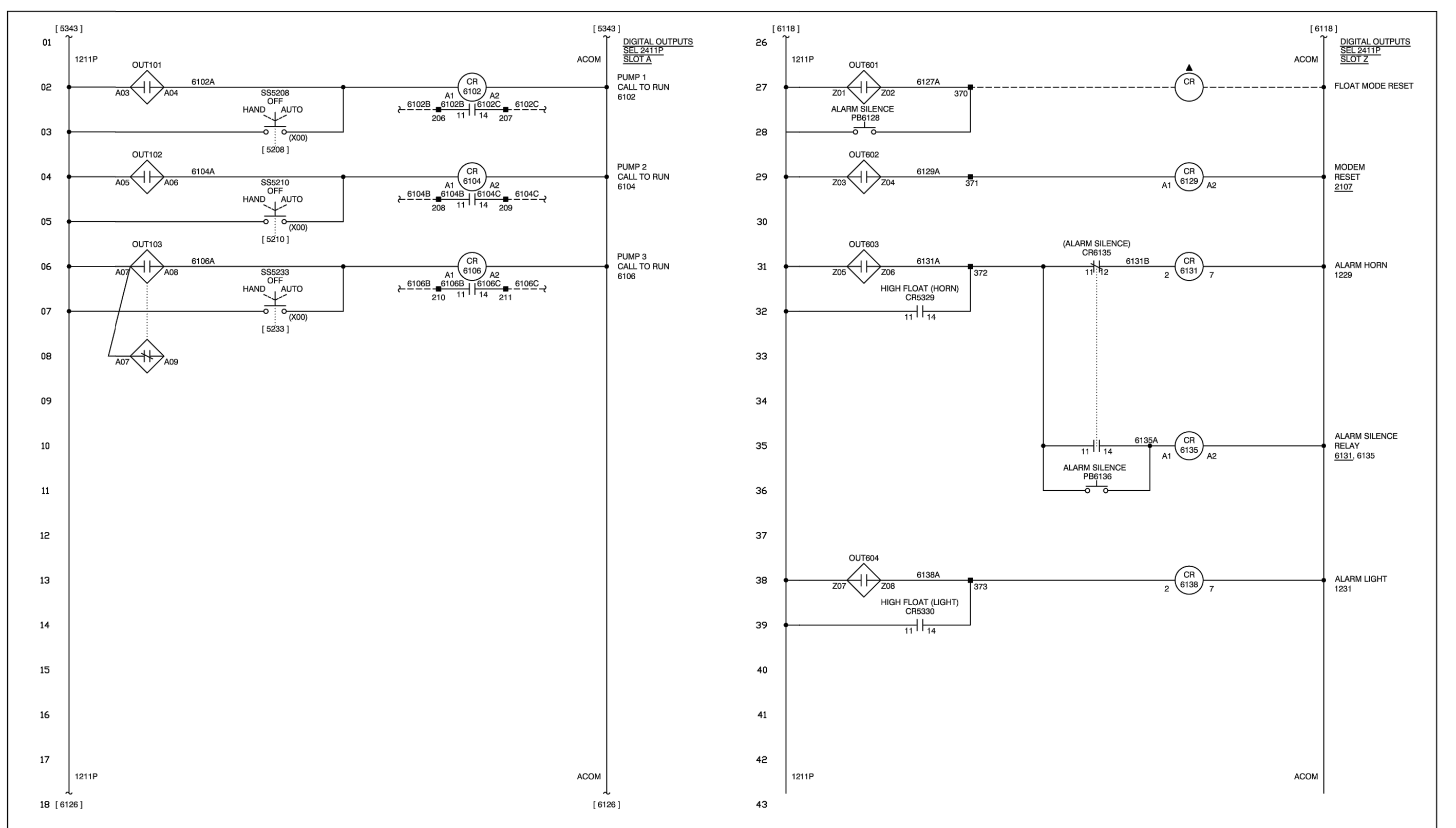


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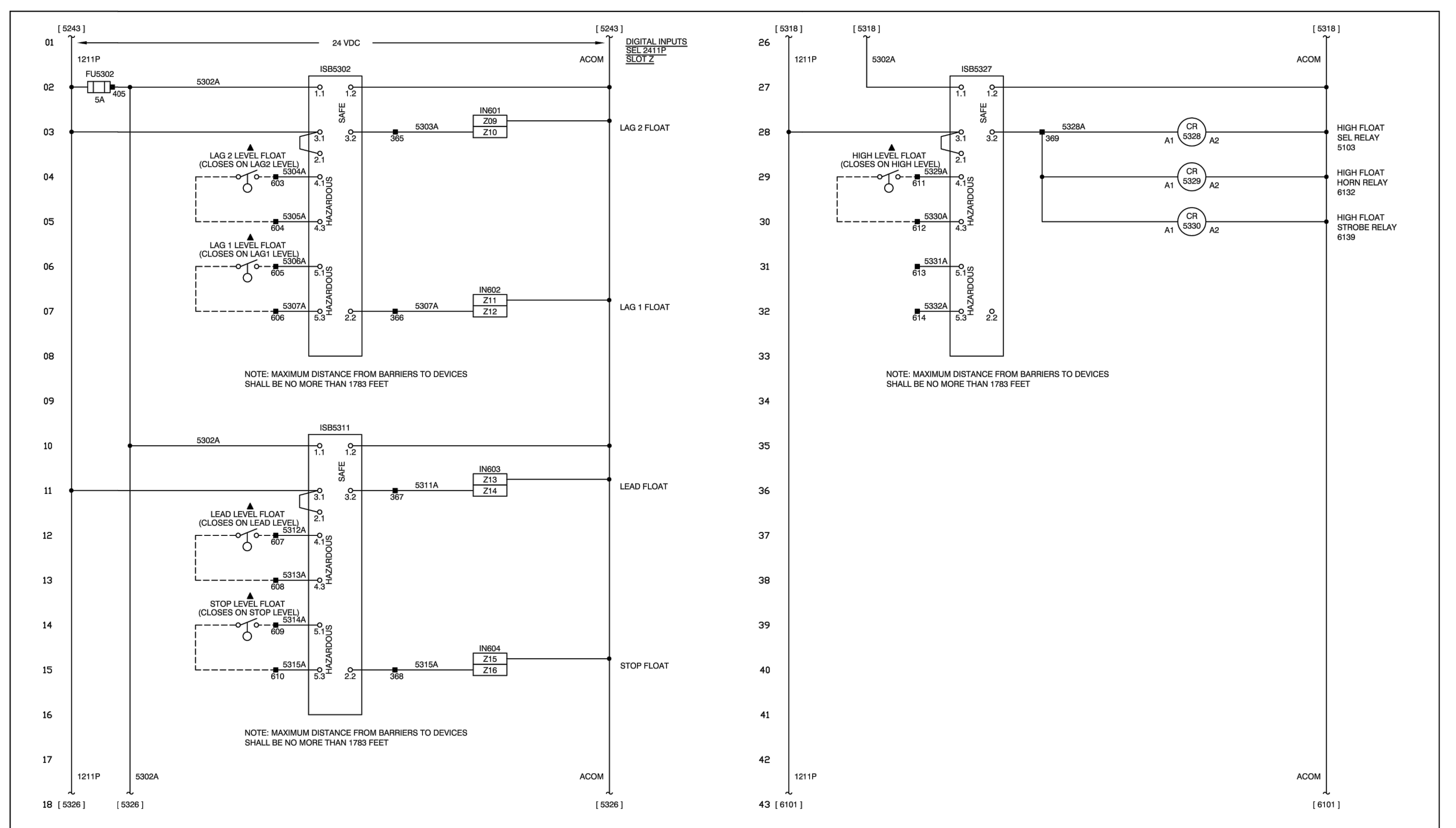
NO.	DATE	COMMENTS

**PS4021 REHABILITATION AND
UPGRADE
GLYNN COUNTY, GEORGIA**
BRUNSWICK-GLYNN COUNTY JOINT WATER & SEWER COMMISSION
ELECTRICAL PLAN CONT.

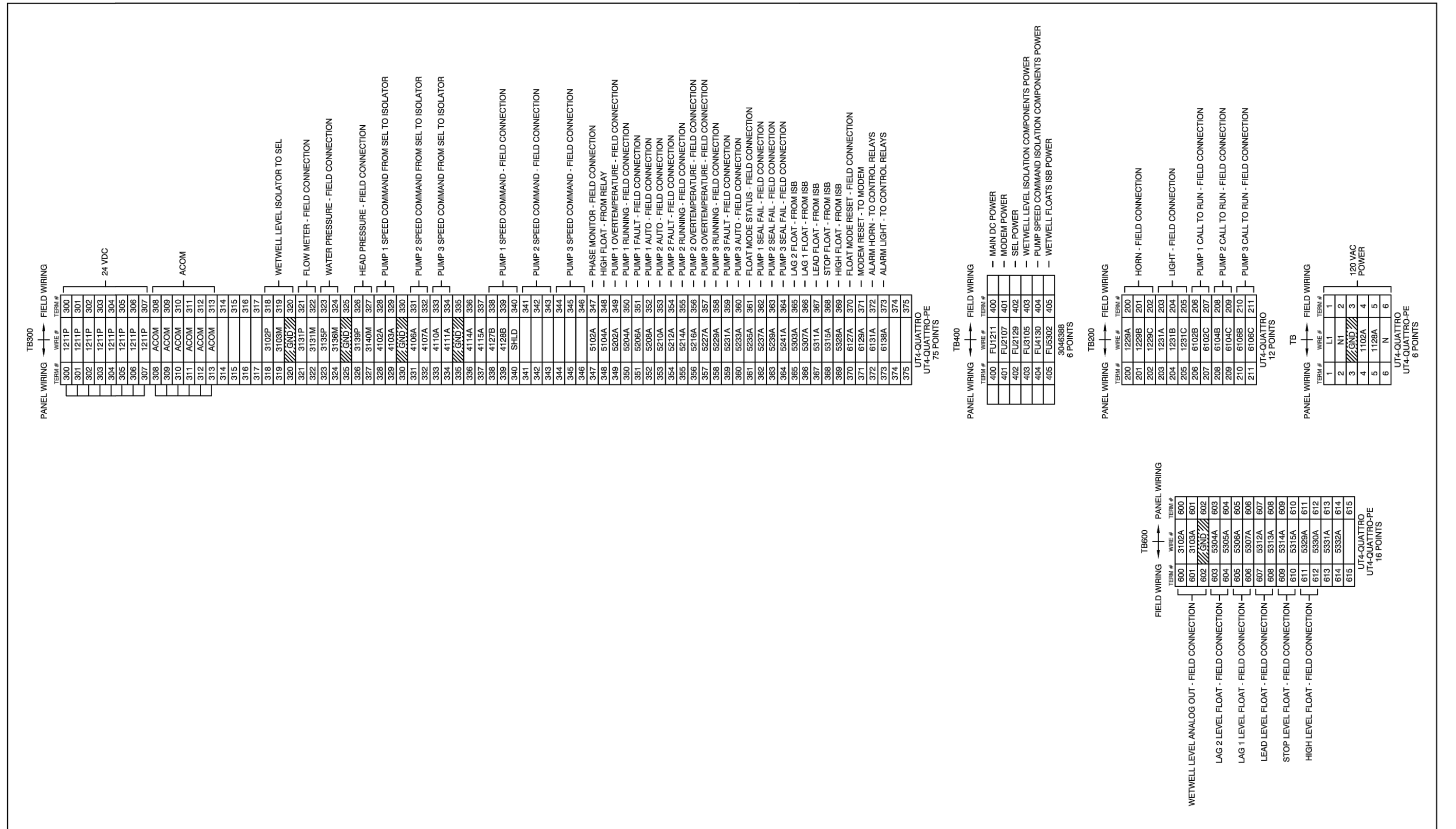
FILE NO.: PS4021
DATE: JAN 27, 2020
SCALE: AS SHOWN
DRAWN BY:
SHEET NO.:
E-3
OF 6



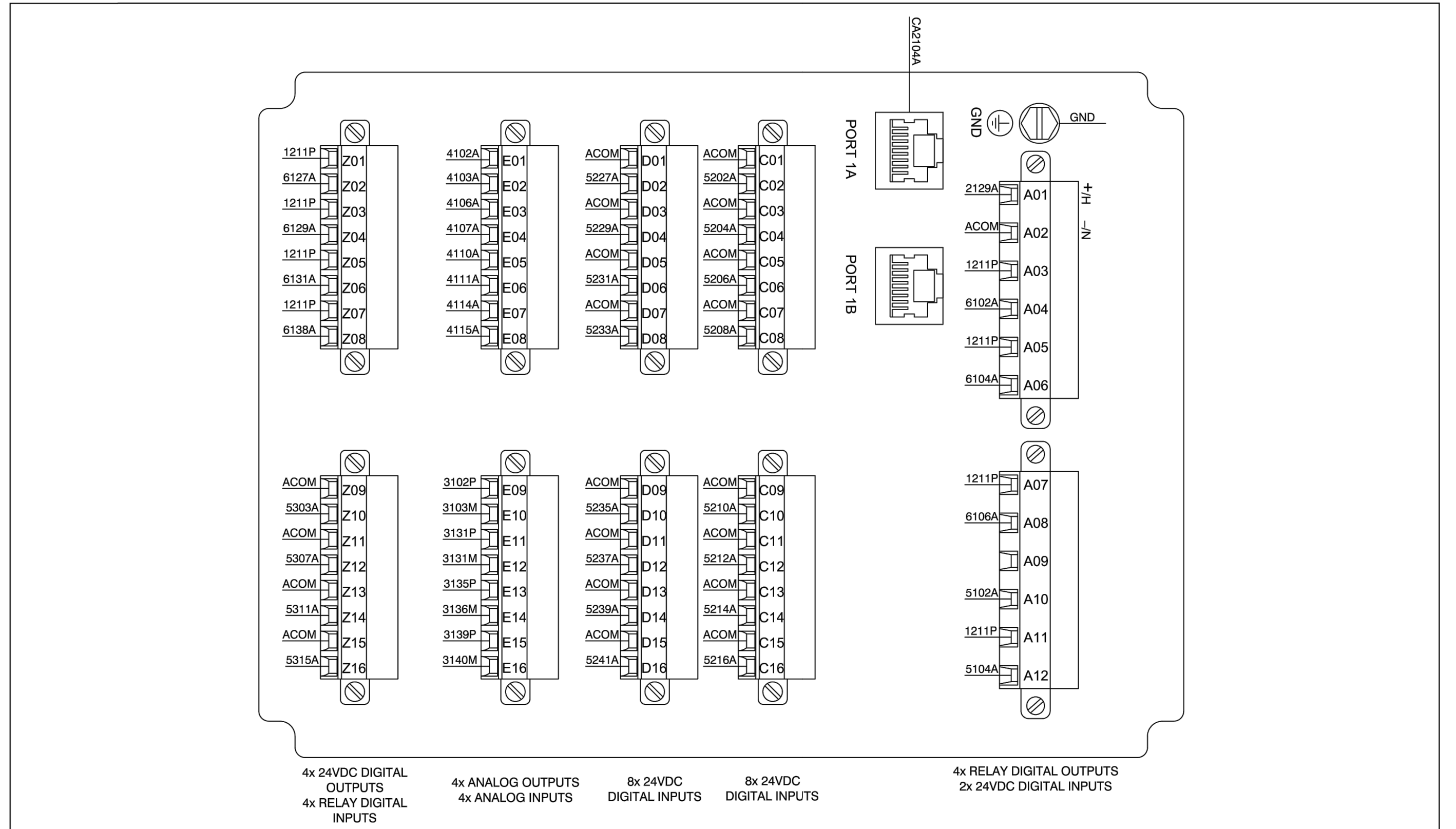
Notes:	Equipment:	Title:	Customer:	Date:	Customer Order No.:	Drawing No.:	REV
ELECTRIC MACHINE CONTROL, INC. warrants this document to be proprietary and therefore prohibits any person to reproduce or disclose it in whole or part without specific written authorization.	PUMP CONTROL RTU	SCHEMATIC DIAGRAM	BRUNSWICK	9/24/19	VERBAL	EM190276	1
Drawn By: JWR	Design By: JP	Appr'd By: MB	Scale: NONE	Cont'd Sht: 61	Sht. No.: 61		



Notes:	Equipment:	Title:	Customer:	Date:	Customer Order No.:	Drawing No.:	REV
ELECTRIC MACHINE CONTROL, INC. warrants this document to be proprietary and therefore prohibits any person to reproduce or disclose it in whole or part without specific written authorization.	PUMP CONTROL RTU	SCHEMATIC DIAGRAM	BRUNSWICK	9/24/19	VERBAL	EM190276	1
Drawn By: JWR	Design By: JP	Appr'd By: MB	Scale: NONE	Cont'd Sht: 61	Sht. No.: 61		



Notes:	Equipment:	Title:	Customer:	Date:	Customer Order No.:	Drawing No.:	REV
ELECTRIC MACHINE CONTROL, INC. warrants this document to be proprietary and therefore prohibits any person to reproduce or disclose it in whole or part without specific written authorization.	PUMP CONTROL RTU	TERMINAL BLOCK LAYOUT	BRUNSWICK	9/24/19	VERBAL	EM190276	1
Drawn By: JWR	Design By: JP	Appr'd By: MB	Scale: NONE	Cont'd Sht: 79	Sht. No.: 79		



Notes:	Equipment:	Title:	Customer:	Date:	Customer Order No.:	Drawing No.:	REV
ELECTRIC MACHINE CONTROL, INC. warrants this document to be proprietary and therefore prohibits any person to reproduce or disclose it in whole or part without specific written authorization.	PUMP CONTROL RTU	CONTROLLER WIRING DIAGRAM	BRUNSWICK	9/24/19	VERBAL	EM190276	1
Drawn By: JWR	Design By: JP	Appr'd By: MB	Scale: NONE	Cont'd Sht: 75	Sht. No.: 75		

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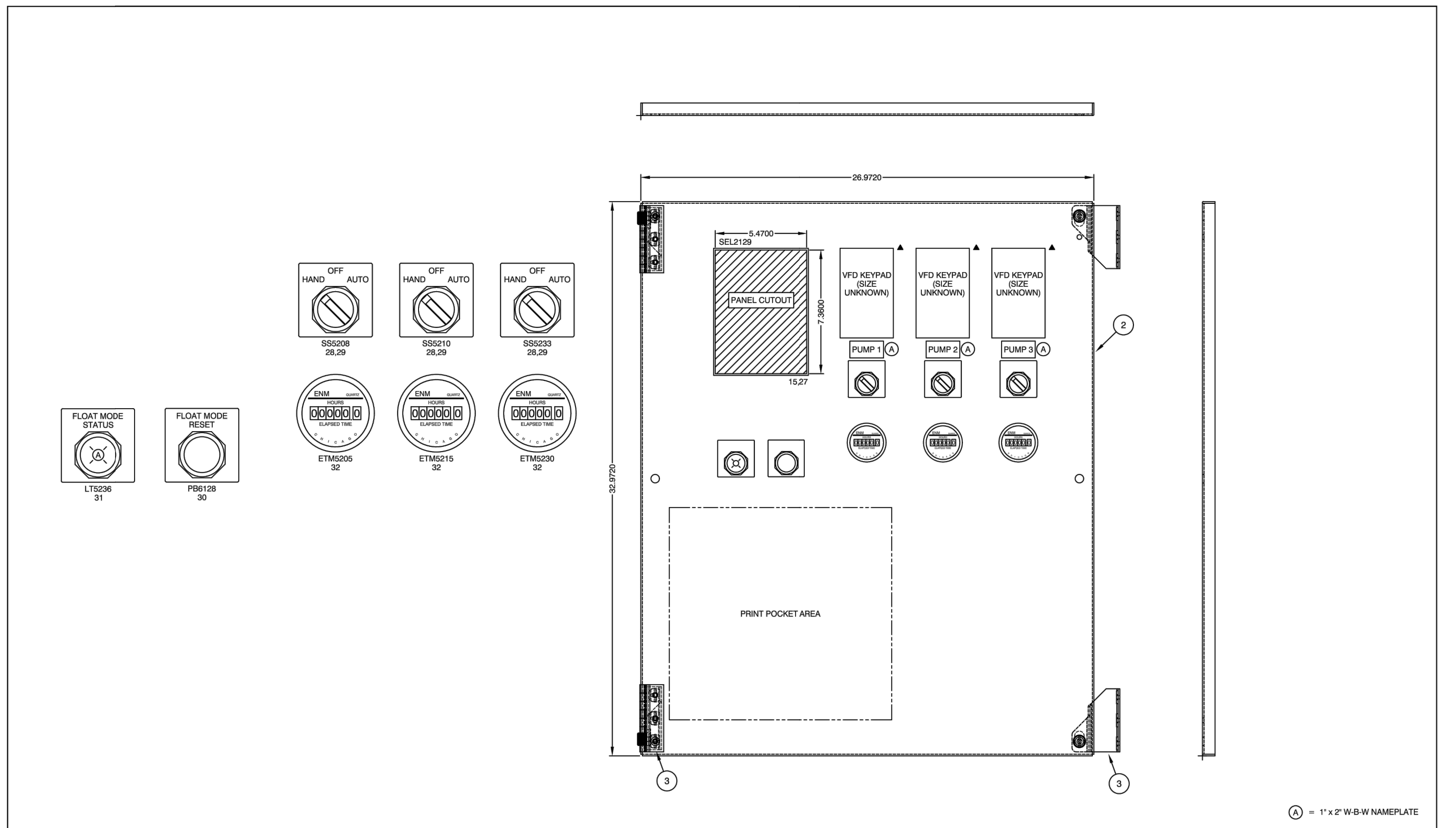
NO.	DATE	COMMENTS

**PS4021 REHABILITATION AND
UPGRADE
GLYNN COUNTY, GEORGIA**
BRUNSWICK-GLYNN COUNTY JOINT WATER & SEWER COMMISSION
ELECTRICAL PLAN CONT.

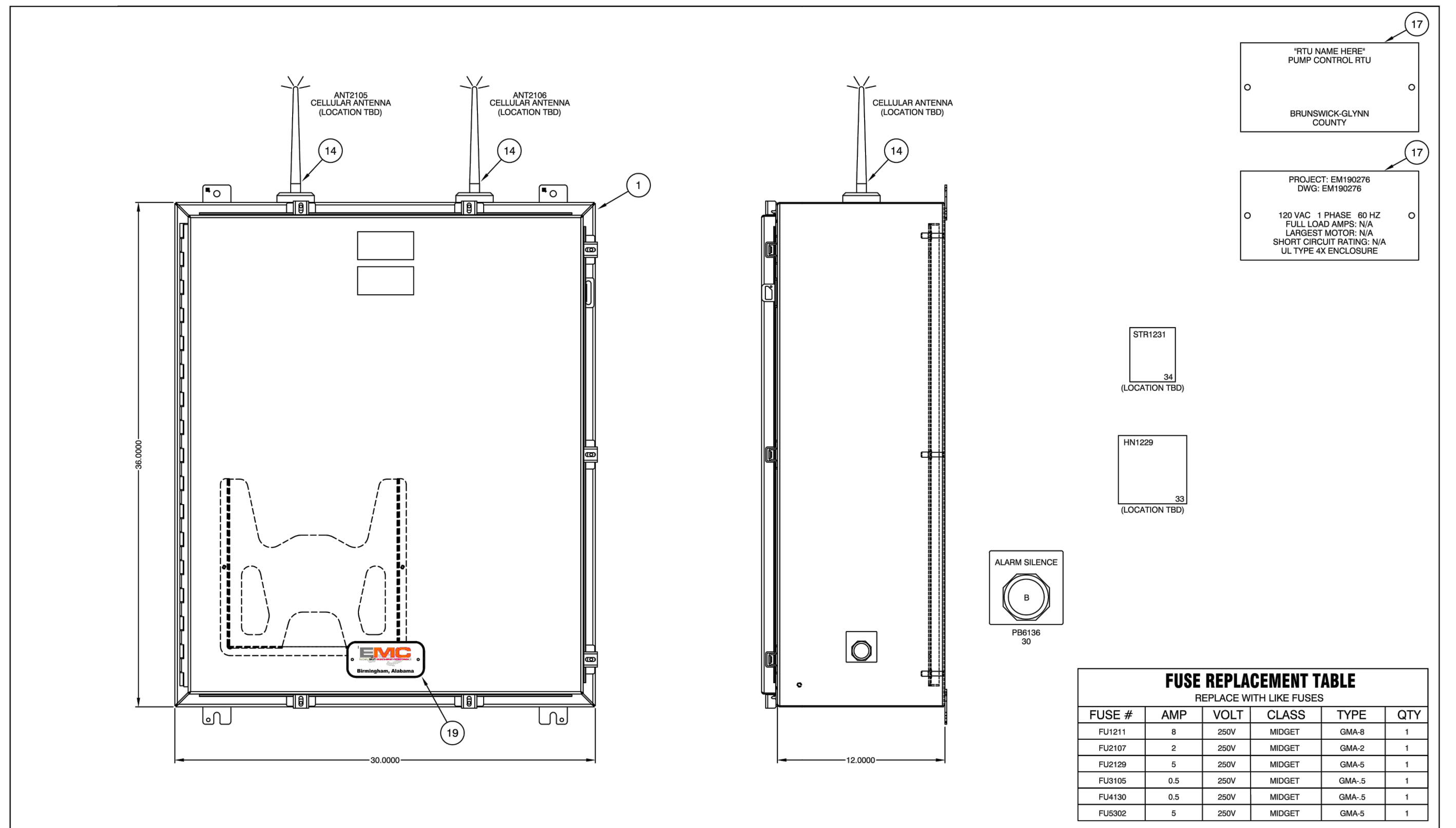
FILE NO.: PS4021	DATE: JAN 27, 2020	SCALE: AS SHOWN	DRAWN BY:
SHEET NO.: E-4			



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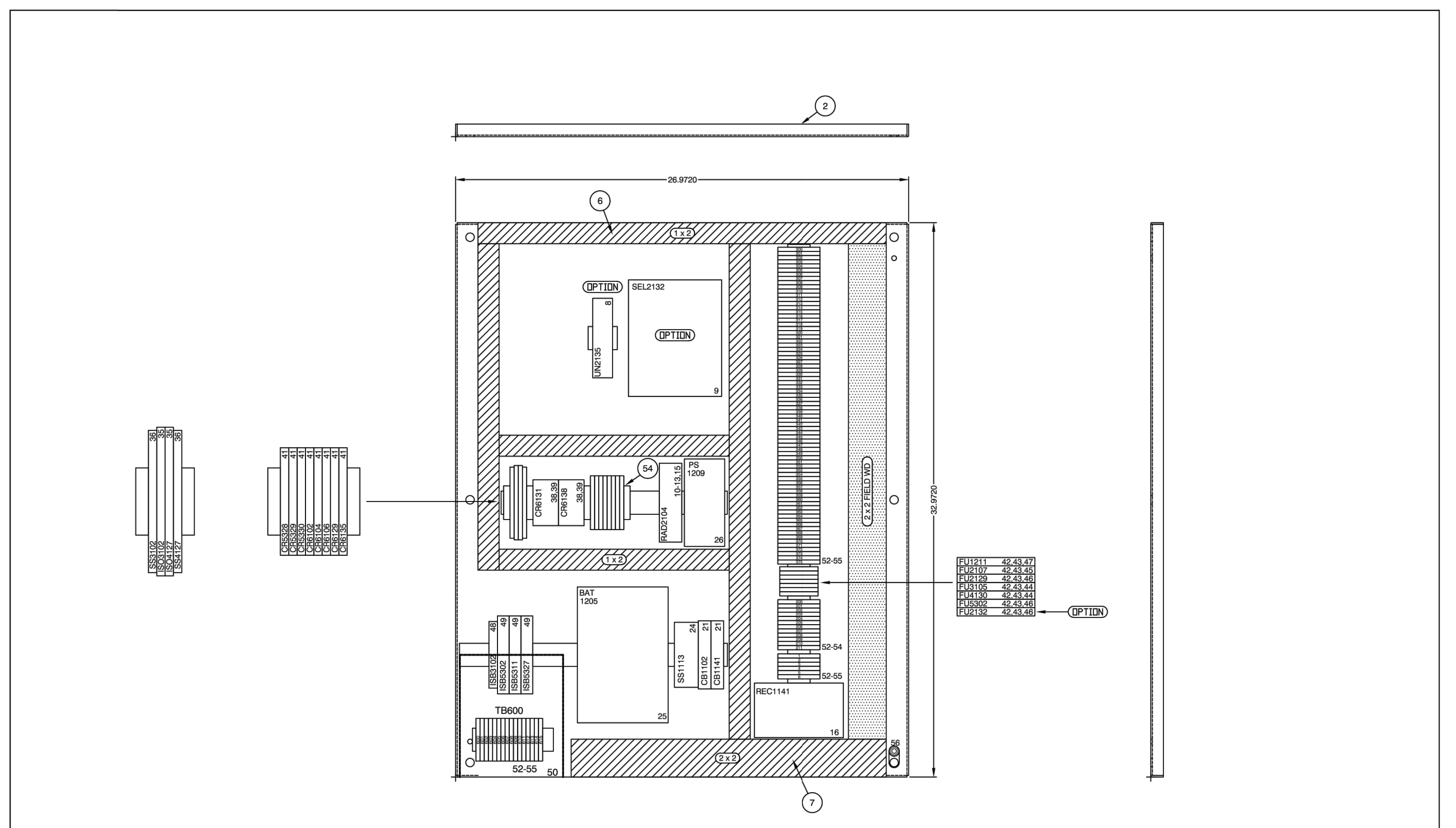
Notes:	Equipment:	Title:	Customer:	Electric Machine Control, Inc.	Date: 9/24/19	Customer Order No. VERBAL	Drawing No. EM190276	REV 1
PUMP CONTROL RTU				DEAD FRONT LAYOUT	BRUNSWICK	Trussville, Alabama 35173 205-661-3998		



FUSE REPLACEMENT TABLE
REPLACE WITH LIKE FUSES

FUSE #	AMP	VOLT	CLASS	TYPE	QTY
FU2111	8	250V	MIDGET	GMA-8	1
FU2107	2	250V	MIDGET	GMA-2	1
FU2128	5	250V	MIDGET	GMA-5	1
FU2105	0.5	250V	MIDGET	GMA-5	1
FU4130	0.5	250V	MIDGET	GMA-5	1
FU3202	5	250V	MIDGET	GMA-5	1

Notes:	Equipment:	Title:	Customer:	Electric Machine Control, Inc.	Date: 9/24/19	Customer Order No. VERBAL	Drawing No. EM190276	REV 1
PUMP CONTROL RTU				ENCLOSURE LAYOUT	BRUNSWICK	Trussville, Alabama 35173 205-661-3998		



Notes:	Equipment:	Title:	Customer:	Electric Machine Control, Inc.	Date: 9/24/19	Customer Order No. VERBAL	Drawing No. EM190276	REV 1
PUMP CONTROL RTU				SUBPAN LAYOUT	BRUNSWICK	Trussville, Alabama 35173 205-661-3998		

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ITEM	SYMBOL	QTY	MANUFACTURER	CATALOG NUMBER	DESCRIPTION
1	EN	1	HOFFMAN	A38H30125SLP	ENCLOSURE, 36"X30"X12", NEMA 4X
2	EN	2	HOFFMAN	A38P30AL	SUB-PANEL/DEADPAN
3	EN	2	HOFFMAN	ANADFK	DEADPAN MOUNT KIT
4					(NOT USED)
5					(NOT USED)
6	EN	2	PHOENIX		WIRE DUCT, 1" X 2"
7	EN	2	PHOENIX		WIRE DUCT, 2" X 2"
8	UN2135	1	PHOENIX	2891152	ETHERNET SWITCH, 5 RJ-45 PORTS (OPTIONAL)
9	SEL2132	1	SCHWEITZER ENGINEERING		SEL-3505 RTAC CONTROLLER (OPTIONAL)
10	RAD2104	1	SIERRA WIRELESS	RV50X	AIRLINK RV50 INDUSTRIAL LTE GATEWAY
11	RAD2104	1	SIERRA WIRELESS	8000659	RV50 DINRAIL MOUNTING BRACKET
12		0	SIERRA WIRELESS	GXAC	POWER SUPPLY
13	RAD2104	1	VERIZON WIRELESS	VZW 4G SIM	SIM CARD
14	ANT2105, 2106	2	TACOLAS	GA.110.301111	ANTENNA
15	CA2104A	1	COMMERCIAL		CATS CABLE
16	REC1141	1	PHOENIX	5600461	DUAL RECEPTACLE
17	NP1, NP2	2	COMMERCIAL		PANEL NAMEPLATE
18					(NOT USED)
19		1	COMMERCIAL		EMC NAMEPLATE
20					(NOT USED)
21	CB1102, 1141	2	SQUARE-D	QQU110	CIRCUIT BREAKER, 10A, 1 POLE
22					(NOT USED)
23					(NOT USED)
24	SS1113	1	PHOENIX	2910349	AC SURGE PROTECTOR
25	BAT1205	1	PHOENIX	2320319	UPS BATTERY, 7.2 AH, 120 VAC
26	PS1209	1	PHOENIX	2907160	POWER SUPPLY/UPS, 24VDC, 5A, 1.3 TO 12 AH
27	SEL2129	1	SCHWEITZER ENGINEERING	2411P2B3838XKB053100	SEL-2411P PUMP AUTOMATION CONTROLLER, KEY: 2966

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ITEM	SYMBOL	QTY	MANUFACTURER	CATALOG NUMBER	DESCRIPTION
28	S65208, 5210, 5233	3	SQUARE-D	9001-KS47B	SELECTOR SWITCH, 3 POSITION
29	S65208, 5210, 5233	3	SQUARE-D	9001-KA1	CONTACT BLOCK, 1 N.O./1 N.C.
30	P89128, 6136	2	SQUARE-D	9001-SKRT1M13	PUSH-BUTTON, 1 N.O., 1 N.C.
31	L15236	1	SQUARE-D	9001-KP35A31	PILOT LIGHT, AMBER
32	ETM3205, 5215, 5230	3	ENM	140445	ELAPSED TIME METER
33	HNT229	1	EDWARDS SIGNALING	876-4N5	HORN, 120VAC, (SHIPPED LOOSE)
34	STR1231	1	EDWARDS SIGNALING	125LEDPR120A	STROBE, LED, NEMA 4X, 120VAC, (SHIPPED LOOSE)
35	ISO3102, 4127	2	PHOENIX	2901998	ANALOG OPTICAL ISOLATOR
36	S63102, 4127	2	PHOENIX	2906761	ANALOG DC SURGE SUPPRESSOR
37		0	RELPOL	R15-2012-23-5120-WTL	RELAY, 120VAC
38	ALL 8 PN RELAYS	2	RELPOL	P28	RELAY BASE
39	CR8131, 6138	2	RELPOL	R15-2012-23-1024-WTL	RELAY, 24 VDC
40					(NOT USED)
41	CR5328, 5329, 5330, 6102, 6104, 6106, 6129, 6135	8	PHOENIX	2966171	RELAY, 24VDC, 1 POLE
42	FU1211, 2107, 2129, 2132, 3105, 4130, 5302	7	PHOENIX	3046388	TERMINAL BLOCK, FUSED, 24VDC
43	FU1211, 2107, 2129, 2132, 3105, 4130, 5302	7	PHOENIX	3209248	FUSE PLUG
44	FU3105, 4130	2	BUSSMAN	GMA-500	FUSE, 0.5A
45	FU2107	1	BUSSMAN	GMA-2	FUSE, 2A
46	FU2129, 2132, 5302	3	BUSSMAN	GMA-5	FUSE, 5A
47	FU1211	1	BUSSMAN	GMA-8	FUSE, 8A
48	ISB3102	1	PHOENIX	2865340	INTRINSICALLY SAFE BARRIER, ANALOG
49	ISB3302, 5311, 5327	3	PHOENIX	2865984	INTRINSICALLY SAFE BARRIER, DIGITAL
50		1	EMC		INTRINSICALLY SAFE BARRIER
51	TB	0	PHOENIX	3044076	TERMINAL BLOCK
52	TB	110	PHOENIX	3044571	TERMINAL BLOCK
53	TB	1	PHOENIX	3030271	TERMINAL BLOCK JUMPERS
54	TB	20	PHOENIX	800886	TERMINAL BLOCK ANCHORS

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BRUNSWICK-GLYNN COUNTY
 JOINT WATER & SEWER COMMISSION
 PLANNING & CONSTRUCTION DIVISION
 1703 Gloucester Street
 Brunswick, Georgia 31520
 (912) 261-7110 Phone
 (912) 261-7178 Fax
 www.bgjwsc.org

NO.	DATE	REVISIONS

PS4021 REHABILITATION AND
 UPGRADE
 GLYNN COUNTY, GEORGIA
 BRUNSWICK-GLYNN COUNTY JOINT WATER & SEWER COMMISSION
 ELECTRICAL PLAN CONT.

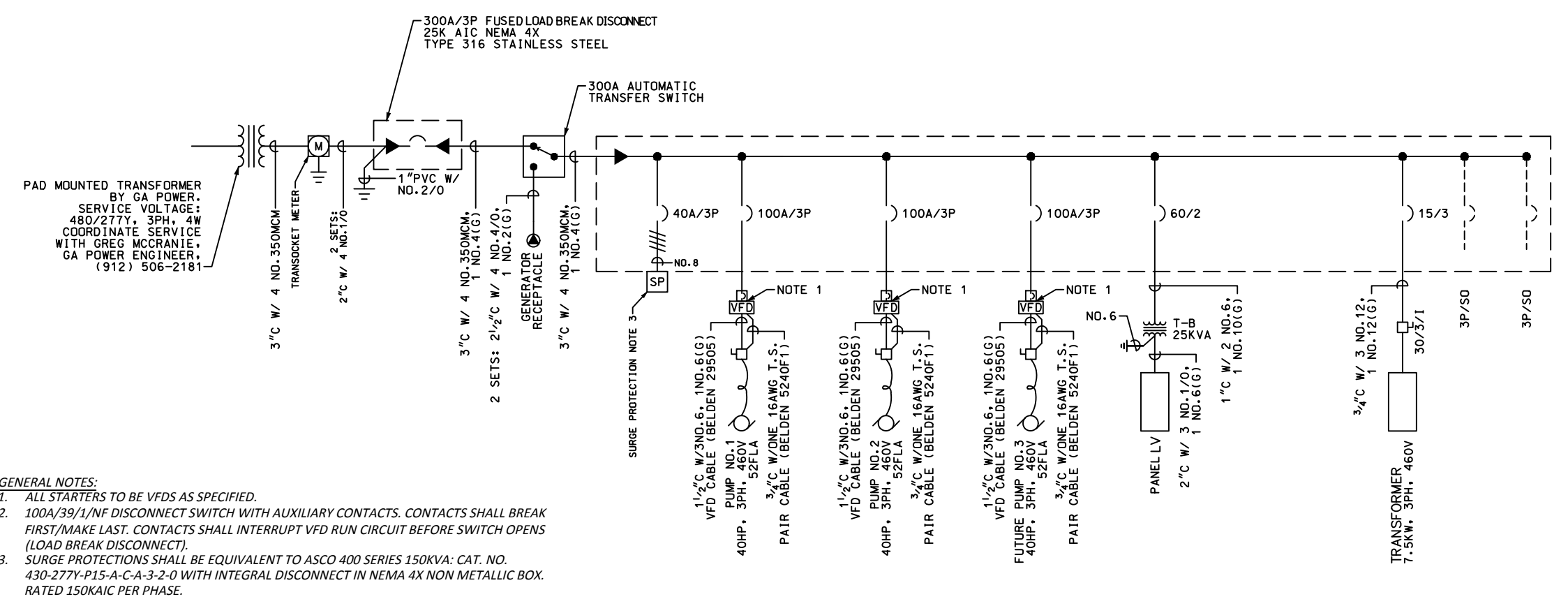
FILE NO.: PS-4021
 DATE: JAN 27, 2020
 SCALE: AS SHOWN
 DRAWN BY:



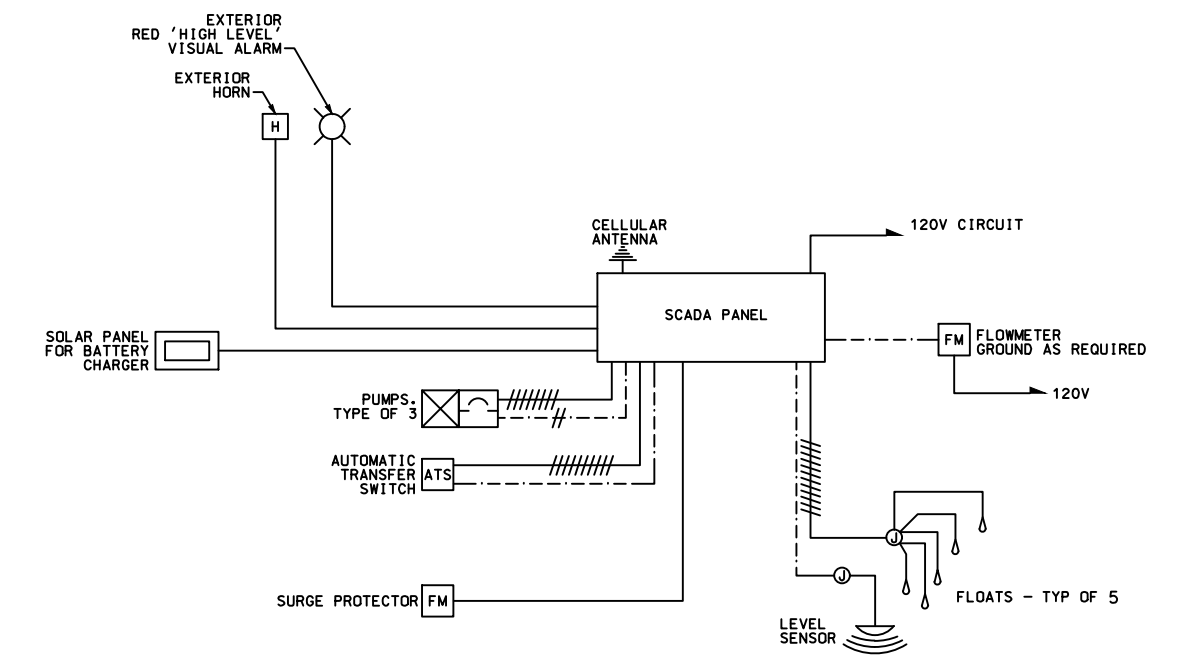
CALL BEFORE YOU DIG!
 At least 72 hours prior to commencement of the work, the Contractor is responsible for calling the Utilities Protection Center (UPC) at 1-800-282-7411, to request underground utility locate service.

SHEET NO.: E-5 OF 6

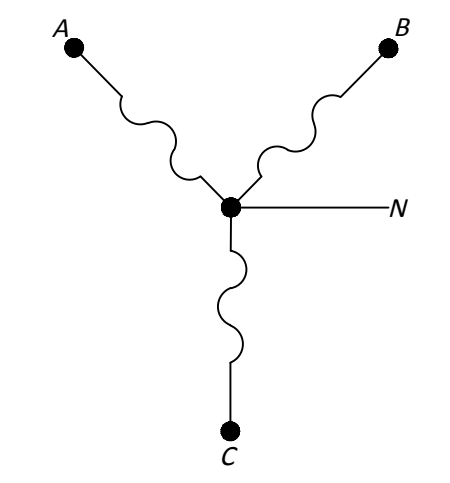
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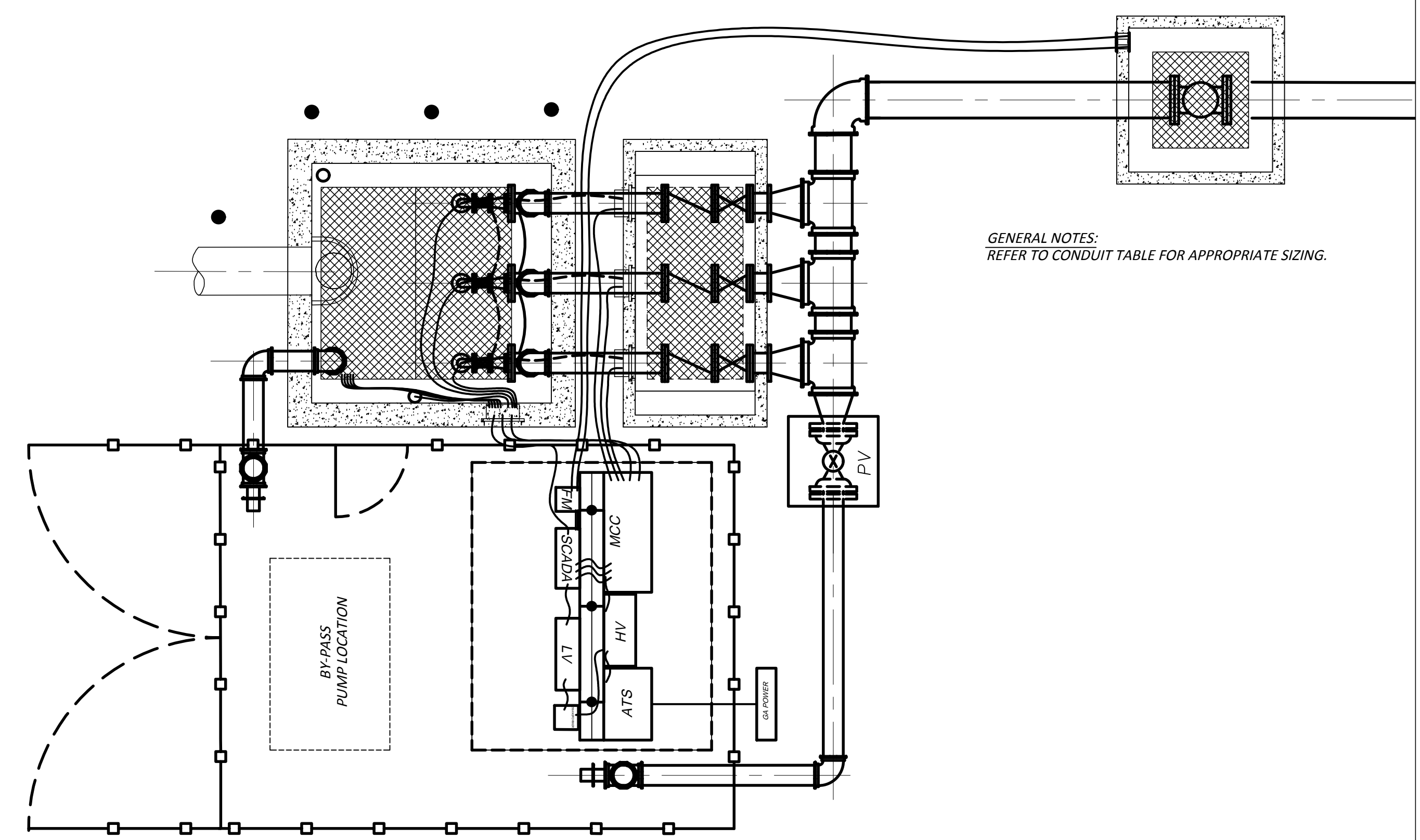
ONE LINE DIAGRAM - PUMPSTATION 4021
N.T.S.



SCADA SYSTEM RISER DIAGRAM
N.T.S.



300A 3-PHASE WYE
N.T.S.



ELECTRICAL LAYOUT
SCALE: NTS

GENERAL NOTES:
REFER TO CONDUIT TABLE FOR APPROPRIATE SIZING.

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LEGEND:
--- CONDUIT AND CONDUCTORS
--- CONDUIT W/ DATA/ETHERNET CABLE

MAIN - 300A								
PANEL								
VOLTAGE - 480Y/3PH/110								
POLE	TRIP	CONDUCTOR	CONDUIT	ITEM	RUNNING AMP	STARTING AMP	HP	LOCATION
3	110A	#4, #6G	3"	KSB SUBMERSIBLE	54.4	348.2	40HP	MCC-DISCONNECT
3	110A	#4, #6G	3"	KSB SUBMERSIBLE	54.4	348.2	40HP	MCC-DISCONNECT
3	110A	#4, #6G	3"	KSB SUBMERSIBLE	54.4	348.2	40HP	MCC-DISCONNECT
3	15A/3	(3) #12 W/ 12G	1"	7.5 KVA TRANSFORMER	X	X	X	HV-TRANSFORMER
3	X	(4) 350 MCM	3"	METER SOCKET	X	X	X	GA POWER METER
3	300A	2 SETS W/ 4 NO. 2, GROUND	2"	FUSED MAIN DISCONNECT	X	X	X	METER-MAIN DISCONNECT
3	300A	(4) 350 MCM W/ (1) NO. 4 (G)	3"	ATS	X	X	X	DISCONNECT-300A ATS
3	300A	(4) 350 MCM W/ 1 NO. 4 (G)	3"	HV PANEL (I-LINE)	X	X	X	ATS - HIGH VOLTAGE PANEL (HV)
3	110A	(3) #4, X 3 PUMPS	3"	MCC	X	X	X	HIGH VOLTAGE PANEL - MCC (1 PER PUMP)
3	X	(2) AWG 9-4	OPEN CUT TO/BORE AND CONDUIT TO WETWELL 3"	KSB LEADS	X	X	40HP	FROM DISCONNECT - PUMP
1	X	MANF. RECOMMENDATION	1"	LV PANEL	X	X	X	TRANSFORMER-LV PANEL
1	X	16GA	2"	I/O	X	X	X	MCC-SCADA
1	X	DIRECT BURY SHIELDED CABLE	1"	I/O	X	X	X	MCC-SCADA
1	20A	12GA	1"	FEEDER TO SCADA	X	X	X	LV-SCADA
1	20A	12GA	1"	FEEDER TO LIGHT SWITCH	X	X	X	LV-LIGHTING SWITCH

WETWELL LOW VOLTAGE PANEL:
(5) FLOATS (OFF, LEAD, LAG, HIGH) - 2" CONDUIT TO MCC FOR FLOATS BYPASS TO THE SCADA PANEL
(1) TRANSDUCER (VEGA RADAR) - 1" CONDUIT TO SCADA PANEL - WWLV - SCADA
(3) SENSOR WIRES (FROM KSB PUMP) - RELAYS FOR FAILURES IN MCC 2" CONDUIT



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OF 6



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