



ADDENDUM NO. 1
for
13-0016-UT East WRF Influent Pump Station Rehabilitation
Clearwater, Florida

DATE: November 7, 2023

SUBJECT: Addendum No. 1

TO: Prospective Bidders and Others Concerned

Bidders on the above project are hereby notified that the following Addenda are made to the Contract Documents:

1. Question:	What is the location address?
Answer:	The East WRF is located at 3141 Gulf to Bay Blvd, Clearwater, FL 33759-4506
2. Question:	End Date & Time?
Answer:	The estimated end date is July of 2025
3. Question	At the pre-bid it was mentioned that the contract period is 480 days. However, the specs call for 153 days to substantial and 183 days to final completion. Please advise.
Answer:	It's 480 consecutive/calendar days
4. Question	What is the Engineer's estimated budget?
Answer:	The City will release the EOPCC after the bid is awarded
5. Question:	Confirming the submission package should consist of 1 original 1 copy
Answer:	Only 1 original is needed.
6. Question:	Can Quadex Structure Guard (multi-layered wet well lining system) be considered for this project?
Answer:	Section 03350 Part 2.01 indicates "Approved manufacturers for this project include products of Sprayroq, Raven Lining Systems and Warren Environmental." During the shop drawing review phase, if the contractor fails to submit products from the manufacturers referenced above, substitutions will then be considered for replacement. The contractor is warned that substitutions may not be approved in which case the contractor will be responsible to furnish and install the specified product.
7. Question:	Can GeoKrete Geopolymer (one-step lining system in lieu of multi-layered lining system) be considered for this project?

Answer:	Section 03350 Part 2.01 indicates “Approved manufacturers for this project include products of Sprayroq, Raven Lining Systems and Warren Environmental.” During the shop drawing review phase, if the contractor fails to submit products from the manufacturers referenced above, substitutions will then be considered for replacement. The contractor is warned that substitutions may not be approved in which case the contractor will be responsible to furnish and install the specified product.
8. Question:	Are structural and electrical drawings available?
Answer:	Structural and electrical drawings are attached to this addendum. Structural and electrical drawings were uploaded to the website as well.

GENERAL NOTES:

1. ALL WORK SHALL BE PERFORMED DURING TIME PERIODS ACCEPTABLE TO THE OWNER. SCHEDULE ALL WORK WITH THE OWNER'S REPRESENTATIVE BEFORE PROCEEDING.
2. THE CONTRACTOR SHALL PERFORM ALL TEMPORARY WORK NECESSARY TO MAINTAIN CONTINUITY OF ELECTRICAL SERVICE WHEN CONNECTION IS MADE TO EXISTING SYSTEMS AND FACILITIES. EXISTING SERVICE SHALL NOT BE INTERRUPTED WITHOUT PRIOR CONSENT OF THE OWNER'S REPRESENTATIVE AND MAY BE INTERRUPTED ONLY AT AND FOR THE SPECIFIED TIME DESIGNATED BY OWNER'S REPRESENTATIVE. THE CONTRACTOR SHALL BE GUIDED BY THE OWNER'S REPRESENTATIVE AT ALL TIMES IN MATTERS AFFECTING THE EXISTING FACILITIES.
3. UPON COMPLETION OF THE WORK, THE CONTRACTOR SHALL ENSURE THAT ALL SYSTEMS OPERATE AS DESIGNED AND REQUIRED AND SHALL REVIEW THEIR OPERATION WITH THE OWNER. COMPLETE SET OF AS-BUILT DRAWINGS SHALL BE COMPILED (BY THE CONTRACTOR) AND ISSUED (1 EACH) TO THE ENGINEER UPON COMPLETION OF CONSTRUCTION AND TESTING.
4. ALL ELECTRICAL AND INSTRUMENTATION WIRING AND CONDUIT SHALL BE INSTALLED BELOW GRADE AND SHALL NOT CROSS SIDEWALKS OR WALKWAYS.
5. ABOVE GRADE CONDUITS SHALL BE CONSTRUCTED OF RIGID ALUMINUM PER SPECIFICATION SECTION 16110, 2.01.
6. BELOW GRADE CONDUITS SHALL BE CONSTRUCTED OF SCHEDULE 80 PVC PER SPECIFICATION SECTION 16110, 2.02.

GENERAL DEMOLITION NOTES:

1. REMOVE AND/OR RELOCATE ALL CONDUIT WIRE, OUTLET BOXES, ETC. WHICH ARE MADE UNNECESSARY BECAUSE OF DEMOLITION/NEW CONSTRUCTION. VERIFY LOCATIONS AND QUANTITIES OF ELECTRICAL EQUIPMENT AND WIRING AT THE SITE. CONDUIT TO BE REMOVED OR ABANDONED SHALL BE REMOVED COMPLETELY IF POSSIBLE. WHERE (ABOVE GRADE) REMOVAL IS NOT POSSIBLE, CONDUIT SHALL BE CAPPED AND TAGGED AS SPARE. WHERE (BELOW GRADE) REMOVAL IS NOT POSSIBLE, CONDUIT SHALL BE CUT BELOW THE SURFACE AND CAPPED. ALL MATERIALS REMOVED SHALL BE DISPOSED OF BY THE CONTRACTOR. PATCH CONCRETE FLOOR TO MATCH EXISTING.
2. ANY DEMOLITION OR REMOVAL INDICATED IS SHOWN TO PROVIDE THE GENERAL EXTENT OF DEMOLITION. THIS INFORMATION IS NOT A RECORD DRAWING OF EXISTING CONDITIONS.
3. ANY DEMOLITION OF EXISTING ELECTRICAL EQUIPMENT (AS INDICATED IN NOTES 1 & 2 ABOVE) SHALL BE CONFIRMED AND APPROVED BY OWNER BEFORE EXISTING EQUIPMENT IS DISCONNECTED AND REMOVED.

ELECTRICAL SYMBOL LEGEND		
SYMBOL	DESCRIPTION	MOUNTING
WP/GFI 	DUPLEX RECEPTACLE WITH GROUND FAULT PROTECTION (20A,125V) PROVIDE WITH WEATHERPROOF WHILE-IN-USE COVER	M.H. 18" TO CENTERLINE
	PANELBOARD, 120/208V.	
	JUNCTION BOX OR OUTLET BOX, 4"x2 1/8" DEEP BOX UNLESS OTHERWISE NOTED	SEE SPECIFICATIONS
	RACEWAY CONCEALED IN WALL OR ABOVE CEILINGS	SEE SPECIFICATIONS
	RACEWAY CONCEALED UNDER FLOOR OR BELOW GRADE	SEE SPECIFICATIONS
	RACEWAY EXPOSED ON WALL OR CEILING	SEE SPECIFICATIONS
	HOMERUN TO PANEL, LETTERS INDICATE PANEL, NUMBERS INDICATE CIRCUIT. NOTE: ANY CIRCUIT WITHOUT FURTHER DESIGNATION INDICATES A TWO WIRE CIRCUIT. A GREATER NUMBER OF WIRES IS INDICATED AS SHOWN: (3 WIRES & EQUIPMENT GROUND), (4 WIRES & EQUIPMENT GROUND), ETC.	SEE SPECIFICATIONS
	MOTOR, NUMERAL INDICATES HORSEPOWER	SEE SPECIFICATIONS
	NON-FUSIBLE SAFETY SWITCH	SEE SPECIFICATIONS
	VARIABLE FREQUENCY DRIVES	SEE SPECIFICATIONS
EX	DENOTES EXISTING DEVICE OR CIRCUIT TO REMAIN	
WP	DENOTES WEATHERPROOF	
GFI	DENOTES GROUND FAULT INTERRUPTER TYPE	
AI	ANALOG INPUT	
AO	ANALOG OUTPUT	
DI	DIGITAL INPUT	
DO	DIGITAL OUTPUT	

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RECORD DRAWINGS		1	BID DOCUMENTS	PSC	9/29/2023
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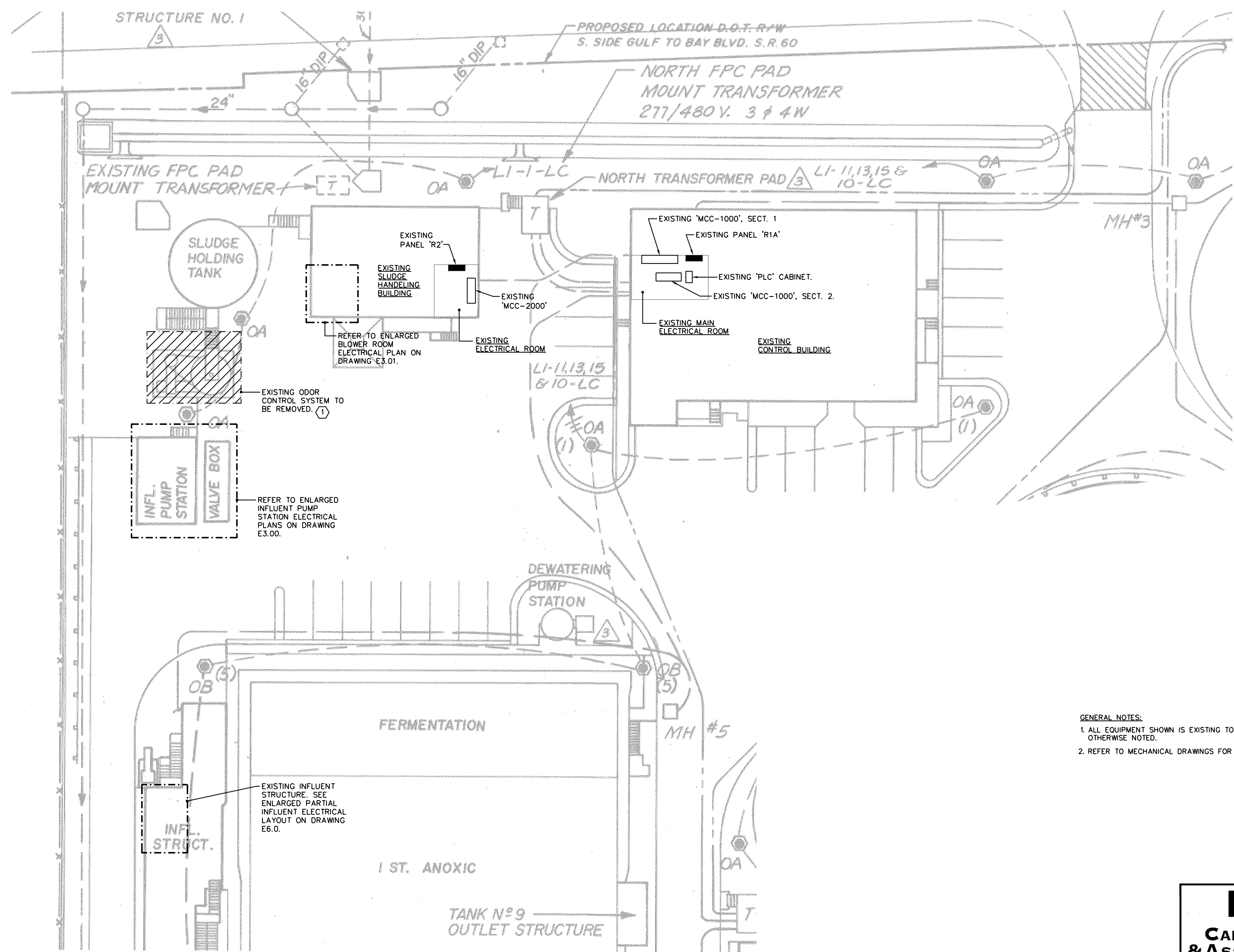
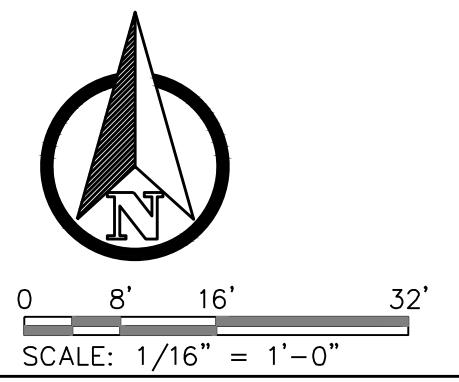


EAST WRF INFLUENT PUMP STATION
REHABILITATION PROJECT
ELECTRICAL SYMBOL LEGEND & NOTES

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6652-E1.00.dwg			N/A
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GENERAL NOTES:
 1. ALL EQUIPMENT SHOWN IS EXISTING TO REMAIN UNLESS OTHERWISE NOTED.
 2. REFER TO MECHANICAL DRAWINGS FOR AREA OF WORK.

DRAWING NOTES:
 ① SEE GENERAL DEMOLITION NOTES ON DRAWING E1.00.

ELECTRICAL SITE PLAN

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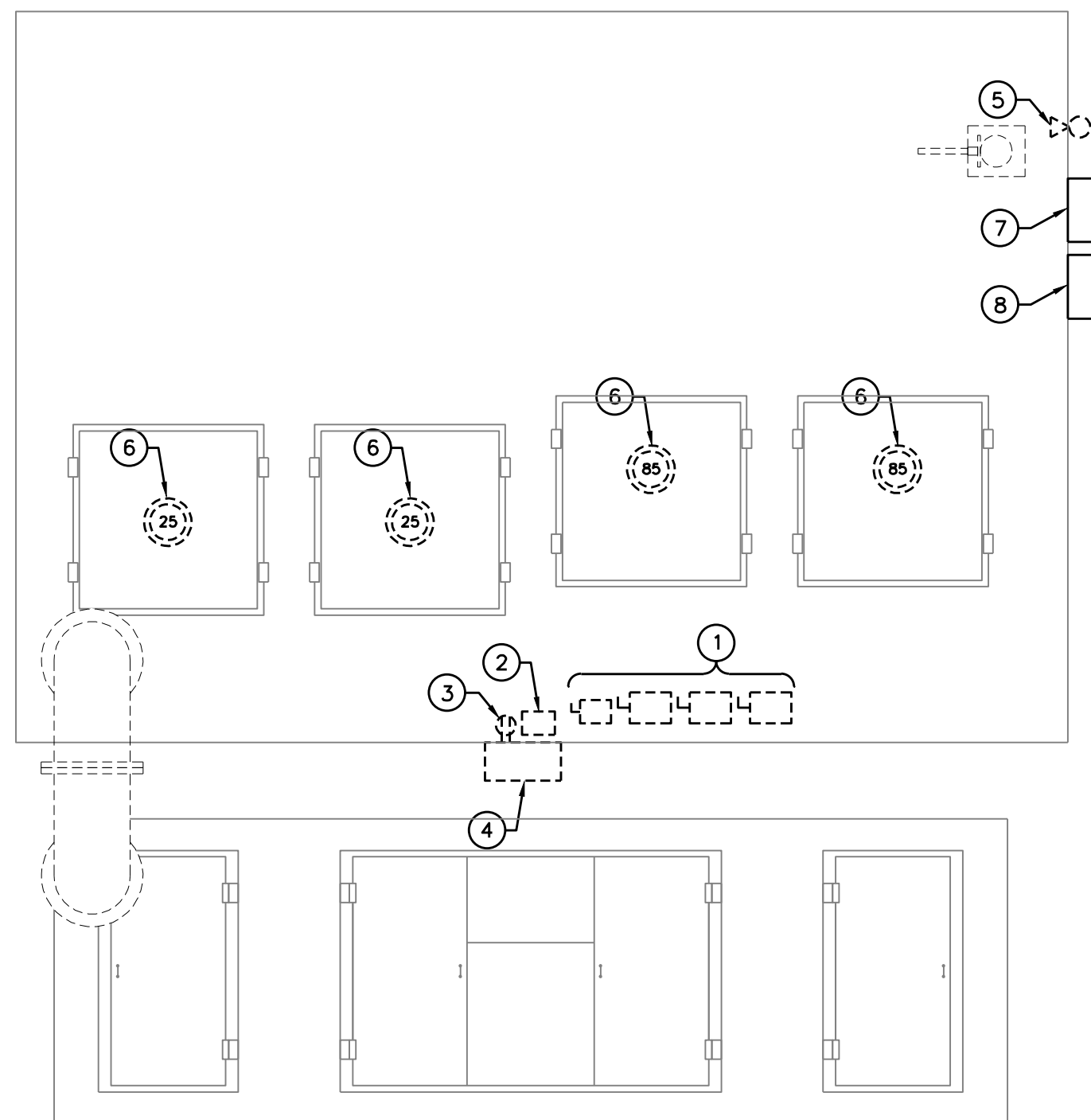
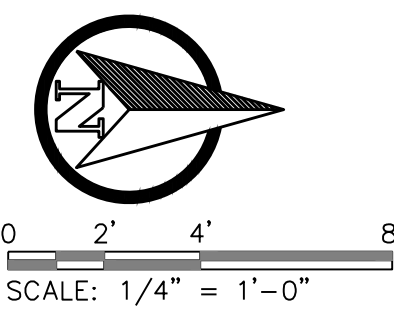
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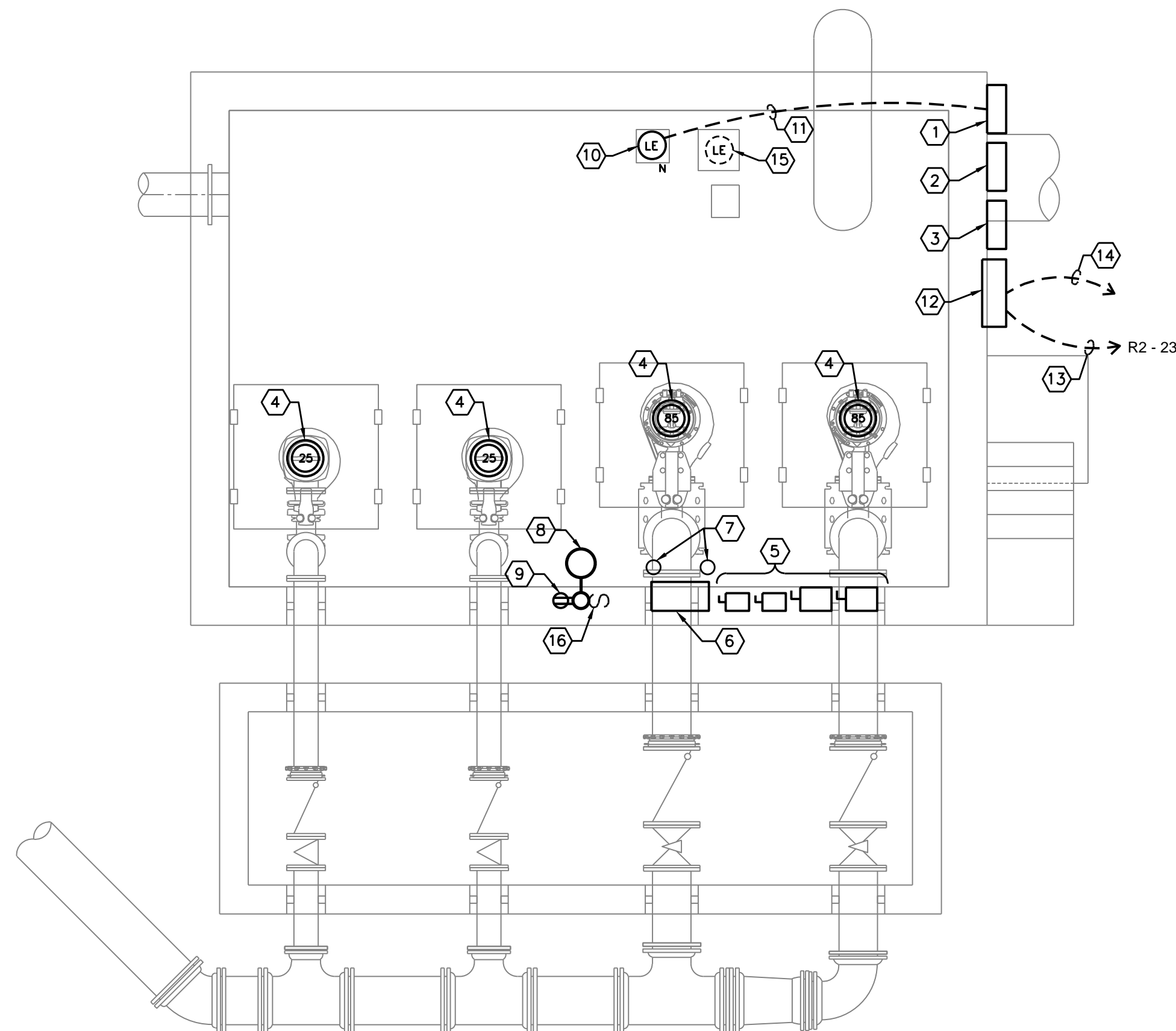
INFLUENT PUMP STATION ELECTRICAL PLAN – DEMOLITION

DEMOLITION NOTES:

- ① EXISTING DISCONNECT SWITCHES TO BE REMOVED.
- ② EXISTING LOW VOLTAGE JUNCTION BOX TO BE REMOVED.
- ③ EXISTING GFI DUPLEX RECEPTACLE TO BE REMOVED.
- ④ EXISTING TERMINATION/JUNCTION TO BE REMOVED.
- ⑤ EXISTING LIGHT FIXTURE AND POLE TO BE REMOVED.
- ⑥ EXISTING SUBMERSIBLE PUMP TO BE REMOVED.
- ⑦ EXISTING (ANALOG) JUNCTION BOX TO BE REMOVED AND RELOCATED TO NEW LOCATION SHOWN ON RENOVATION PLAN. EXTEND EXISTING CONDUIT AND CONDUCTORS TO NEW LOCATION.
- ⑧ EXISTING (DIGITAL) JUNCTION BOX TO BE REMOVED AND RELOCATED TO NEW LOCATION SHOWN ON RENOVATION PLAN. EXTEND EXISTING CONDUIT AND CONDUCTORS TO NEW LOCATION.

GENERAL NOTES:

- 1. PROVIDE AND INSTALL RIGID ALUMINUM CONDUITS FOR ALL ABOVE GRADE INSTALLATIONS. SEE SPECIFICATION SECTION 16110.
- 2. ALL ABOVE GRADE BOXES, FITTINGS AND COVER PLATES TO BE CAST ALUMINUM. SEE SPECIFICATION SECTION 16143.
- 3. PROVIDE AND INSTALL (SCHEDULE 80) PVC CONDUITS FOR ALL BELOW GRADE INSTALLATIONS. SEE ELECTRICAL SPECIFICATIONS FOR ADDITIONAL INFORMATION. SEE SPECIFICATION SECTION 16110.



INFLUENT PUMP STATION ELECTRICAL PLAN – RENOVATION

DRAWING NOTES:

- ① EXISTING LEVEL INDICATING TRANSMITTER CONTROL PANEL TO BE REMOVED AND REPLACED WITH NEW RADAR LEVEL TRANSMITTER. REUSE EXISTING 120 VOLT POWER AND CONTROL WIRING. EXISTING PANEL ENCLOSURE TO REMAIN.
- ② RELOCATED (ANALOG) JUNCTION BOX.
- ③ RELOCATED (DIGITAL) JUNCTION BOX TO REMAIN.
- ④ NEW SUBMERSIBLE PUMP BY OTHERS.
- ⑤ FURNISH AND INSTALL NEW PUMP DISCONNECT SWITCHES.
- ⑥ FURNISH AND INSTALL NEW TERMINAL/JUNCTION BOX.
- ⑦ EXISTING 6" SLEEVE PENETRATIONS TO REMAIN.
- ⑧ FURNISH AND INSTALL NEW POLE MOUNTED (LED) LIGHT FIXTURE. SEE POLE LIGHTING DETAIL ON DRAWING E5.00.
- ⑨ FURNISH AND INSTALL NEW WEATHERPROOF GFI DUPLEX RECEPTACLE WITH IN-USE COVERPLATE. SEE POLE LIGHTING DETAIL ON DRAWING E5.00.
- ⑩ EXISTING ULTRASONIC LEVEL SENSOR TO BE REMOVED AND REPLACED WITH NEW RADAR LEVEL SENSOR.
- ⑪ EXISTING CONDUIT AND WIRING TO BE REMOVED AND REPLACED WITH NEW MANUFACTURER SUPPLIED CABLE(S) IN 3/4" C.
- ⑫ NEW SECONDARY VALVE ENCLOSURE (SVE) PANEL.
- ⑬ FURNISH AND INSTALL NEW 20A., 120V., 1-POLE CIRCUIT BREAKER IN EXISTING PANEL 'R2', LOCATED IN EXISTING ELECTRICAL ROOM WITHIN SLUDGE HANDLING BUILDING. 2 NO. 12 AND 1 NO. 12 E.G. - 3/4" C. BREAKER TYPE AND AIC RATING TO MATCH EXISTING.
- ⑭ NEW 8 NO. #14 - 3/4" C TO 'PLC' CABINET, LOCATED IN EXISTING MAIN ELECTRICAL ROOM WITHIN CONTROL BUILDING. STATUS CONDUCTORS FOR THE FOLLOWING CONDITIONS (RUNNING, ALARM, OVERRIDE, INTERRUPT, INTERRUPT).
- ⑮ EXISTING ULTRASONIC LEVEL SENSOR TO BE REMOVED.
- ⑯ FURNISH AND INSTALL NEW WEATHERPROOF LIGHT SWITCH WITH IN-USE COVERPLATE. SEE POLE LIGHTING DETAIL ON DRAWING E5.00.

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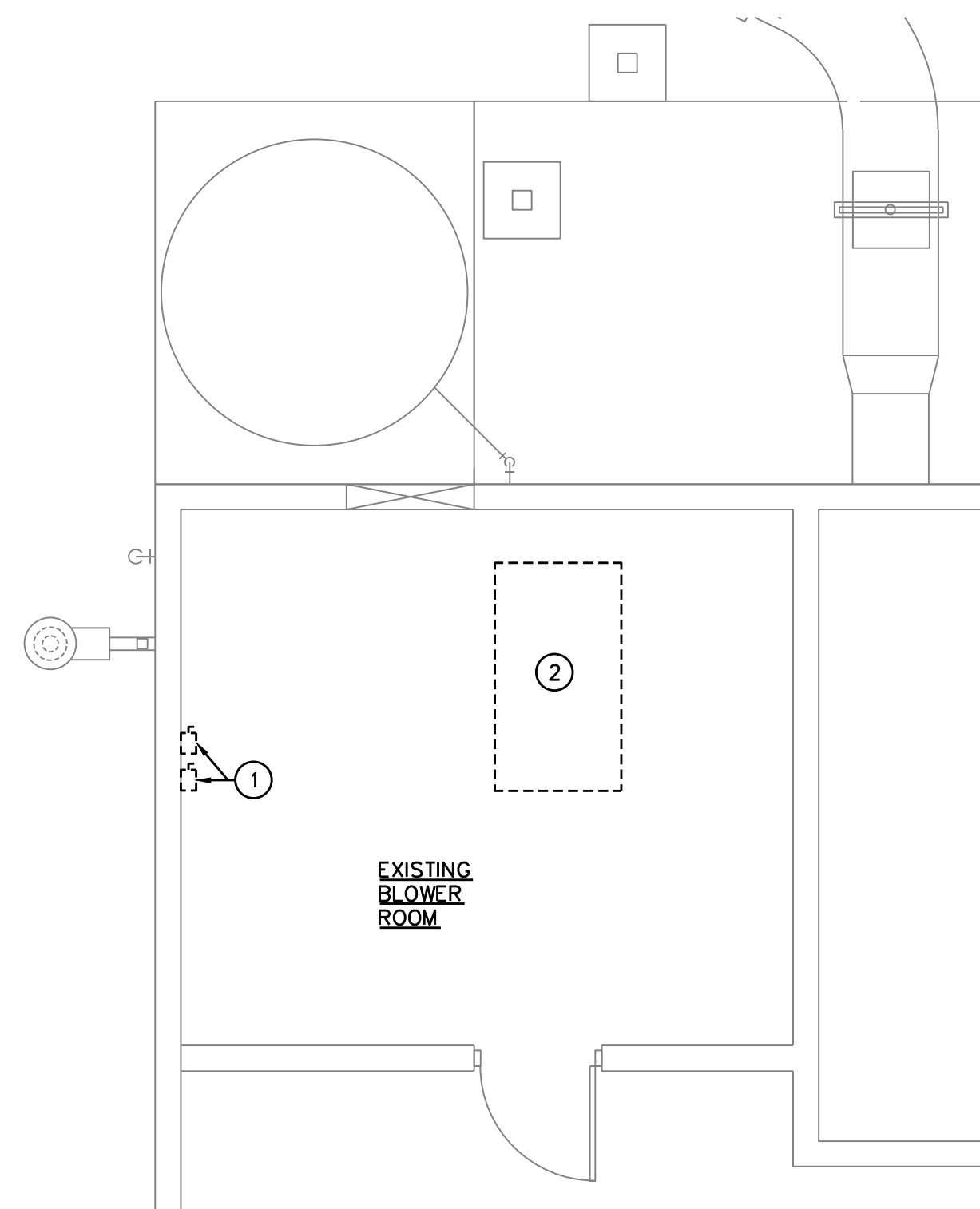
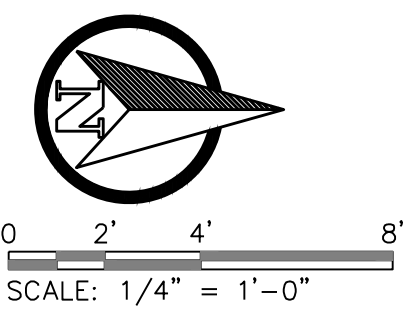
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 INFLUENT PUMP STATION ELECTRICAL PLANS**

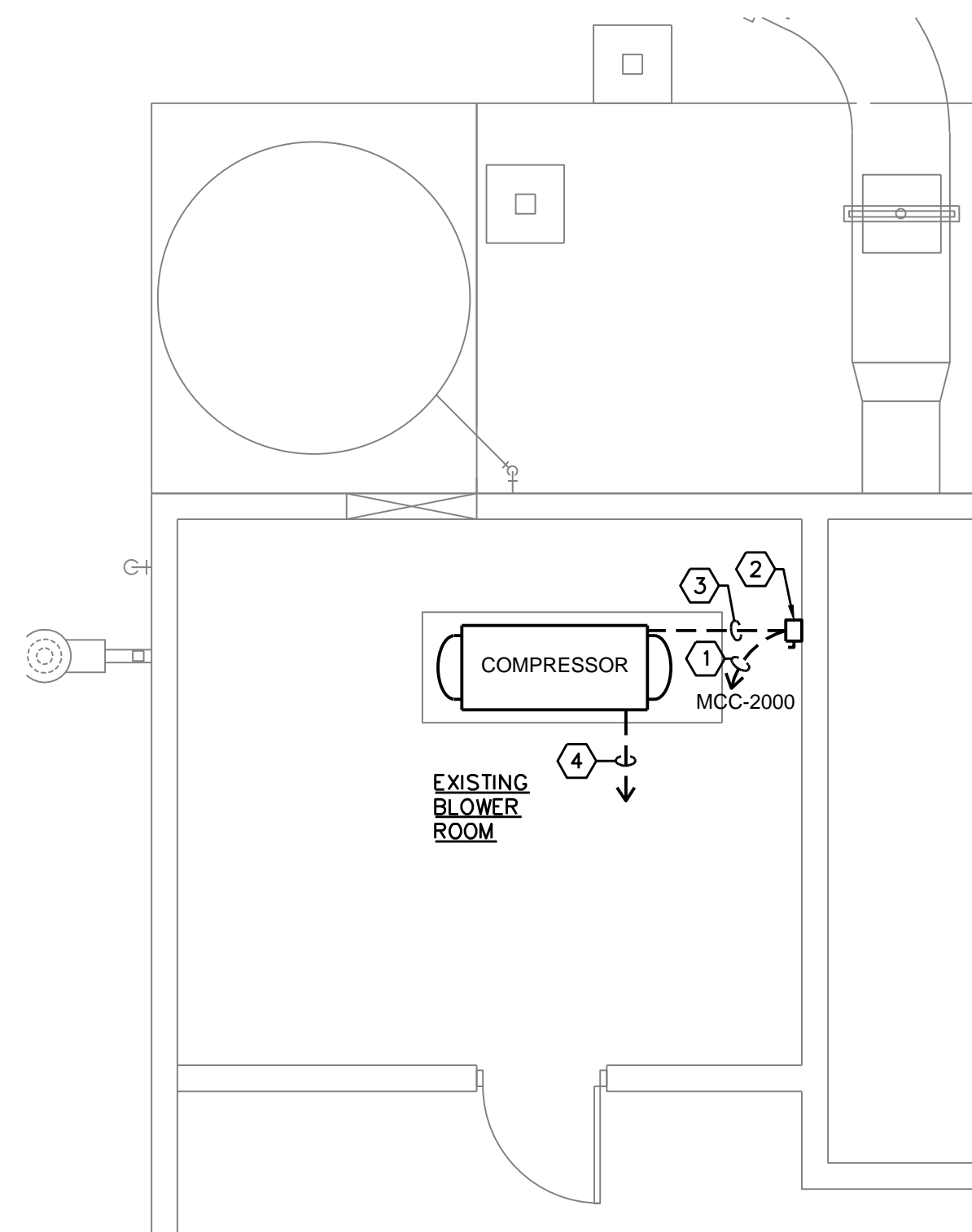
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BLOWER ROOM ELECTRICAL PLAN = DEMOLITION

DEMOLITION NOTES:

- ① EXISTING DISCONNECT SWITCHES TO BE REMOVED.
- ② ABANDONED BLOWER TO BE REMOVED.



BLOWER ROOM ELECTRICAL PLAN – RENOVATION

GENERAL NOTES:

- 1. PROVIDE AND INSTALL RIGID ALUMINUM CONDUITS FOR ALL ABOVE GRADE INSTALLATIONS. SEE SPECIFICATION SECTION 16110.
- 2. ALL ABOVE GRADE BOXES, FITTINGS AND COVER PLATES TO BE CAST ALUMINUM. SEE SPECIFICATION SECTION 16143.

DRAWING NOTES:

- ① SEE POWER ONE-LINE DIAGRAM FOR CONDUIT AND CONDUCTOR SIZES.
- ② SEE POWER ONE-LINE DIAGRAM FOR DISCONNECT SWITCH SIZING.
- ③ NEW 3 NO. 10 AND 1 NO. 10 E.G. – 3/4" C.
- ④ NEW 4 NO. #14 – 3/4" C TO 'PLC' CABINET, LOCATED IN EXISTING MAIN ELECTRICAL ROOM WITHIN CONTROL BUILDING. STATUS CONDUCTORS FOR THE FOLLOWING CONDITIONS (RUNNING, FAULT).

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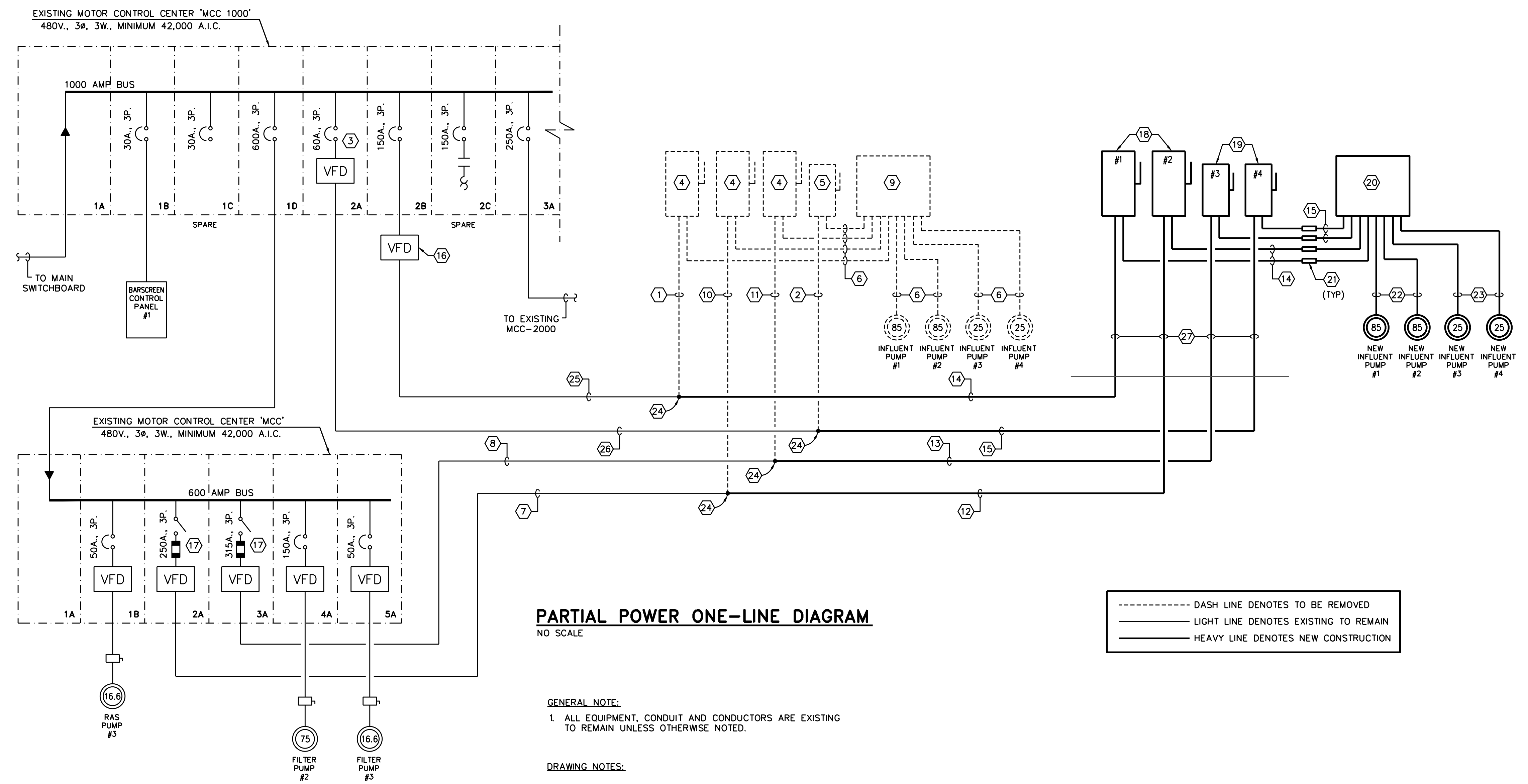
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**EAST WRF INFLUENT PUMP STATION
REHABILITATION PROJECT
ELECTRICAL PLAN – SLUDGE HANDLING BLDG.**

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PARTIAL POWER ONE-LINE DIAGRAM
NO SCALE

----- DASH LINE DENOTES TO BE REMOVED
 _____ LIGHT LINE DENOTES EXISTING TO REMAIN
 _____ HEAVY LINE DENOTES NEW CONSTRUCTION

GENERAL NOTE:

1. ALL EQUIPMENT, CONDUIT AND CONDUCTORS ARE EXISTING TO REMAIN UNLESS OTHERWISE NOTED.

DRAWING NOTES:

- ① EXISTING 3 NO. 1 AND 1 NO. 6 E.G. - 1 1/2" C. TO BE REMOVED.
- ② EXISTING 3 NO. 6 AND 1 NO. 8 E.G. - 1" C. TO BE REMOVED.
- ③ EXISTING CIRCUIT BREAKER AND VFD TO REMAIN.
- ④ EXISTING 200A., 3-POLE, NEMA '4X' (316 STAINLESS STEEL) DISCONNECT SWITCH TO BE REMOVED.
- ⑤ EXISTING 60A., 3-POLE, NEMA '4X' (316 STAINLESS STEEL) DISCONNECT SWITCH TO BE REMOVED.
- ⑥ EXISTING CONDUIT AND WIRE TO BE REMOVED.
- ⑦ REMOVE 3 NO. 1 AND 1 NO. 6 E.G. AND REPLACE WITH NEW 3 NO. 1 AND 1 NO. 6 E.G. IN EXISTING 2" C.
- ⑧ REMOVE 3 NO. 6 AND 1 NO. 8 E.G. AND REPLACE WITH NEW 3 NO. 6 AND 1 NO. 8 E.G. IN EXISTING 2" C.
- ⑨ EXISTING TERMINATION/JUNCTION BOX TO BE REMOVED.
- ⑩ EXISTING 3 NO. 1 AND 1 NO. 6 E.G. - 2" C. TO BE REMOVED.
- ⑪ EXISTING 3 NO. 6 AND 1 NO. 8 E.G. - 2" C. TO BE REMOVED.
- ⑫ NEW 3 NO. 1 AND 1 NO. 6 E.G. IN NEW 2" C.
- ⑬ NEW 3 NO. 6 AND 1 NO. 8 E.G. IN NEW 2" C.
- ⑭ NEW 3 NO. 1 AND 1 NO. 6 E.G. IN NEW 2" C.
- ⑮ NEW 3 NO. 6 AND 1 NO. 8 E.G. IN NEW 1" C.
- ⑯ EXISTING VFD TO REMAIN.
- ⑰ EXISTING DISCONNECT SWITCH, FUSE & VFD TO REMAIN.
- ⑱ NEW 200A., 3-POLE, NEMA '4X' (316 STAINLESS STEEL) DISCONNECT SWITCH FOR PUMPS #1 & #2.
- ⑲ NEW 60A., 3-POLE, NEMA '4X' (316 STAINLESS STEEL) DISCONNECT SWITCH FOR PUMPS #3 & #4.
- ⑳ NEW TERMINATION/JUNCTION BOX.
- ㉑ NEW SEAL-OFF FITTING.
- ㉒ NEW 3 NO. 1 AND 1 NO. 6 E.G. SUBMERSIBLE CABLE INCLUDED WITH PUMP.
- ㉓ NEW 3 NO. 6 AND 1 NO. 8 E.G. SUBMERSIBLE CABLE INCLUDED WITH PUMP.
- ㉔ CONNECT NEW CONDUIT TO EXISTING. NEW CONDUIT & CONDUCTORS SHALL MATCH EXISTING.
- ㉕ REMOVE 3 NO. 1 AND 1 NO. 6 E.G. AND REPLACE WITH NEW 3 NO. 1 AND 1 NO. 6 E.G. IN EXISTING 1 1/2" C.
- ㉖ REMOVE 3 NO. 6 AND 1 NO. 8 E.G. AND REPLACE WITH NEW 3 NO. 6 AND 1 NO. 8 E.G. IN EXISTING 1" C.
- ㉗ PROVIDE ALUMINUM CONDUIT ABOVE GRADE. TYPICAL FOR EACH PUMP CIRCUIT.

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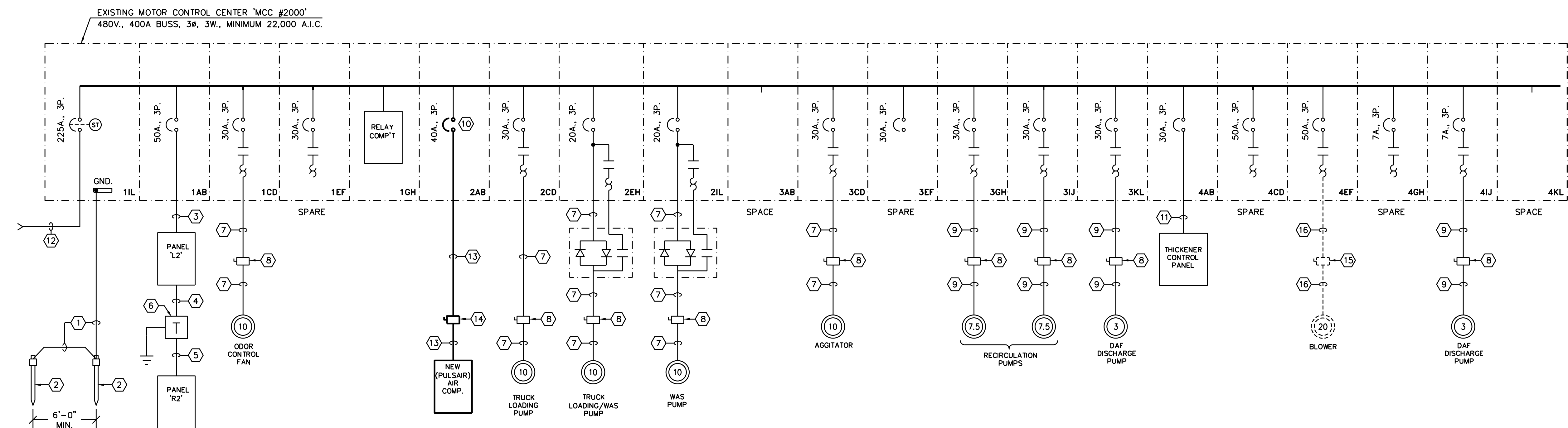
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 PARTIAL POWER ONE-LINE DIAGRAM**

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POWER ONE-LINE DIAGRAM (MCC-2000)
NOT TO SCALE

- DRAWING NOTES:**
- 1 EXISTING GROUND CONDUCTOR TO REMAIN.
 - 2 EXISTING GROUND ROD TO REMAIN.
 - 3 EXISTING 3 NO. 8 AND 1 NO. 10 E.G. - 3/4" C. TO REMAIN.
 - 4 EXISTING 2 NO. 8 AND 1 NO. 10 E.G. - 3/4" C. TO REMAIN.
 - 5 EXISTING 3 NO. 4 AND 1 NO. 6 E.G. - 1" C. TO REMAIN.
 - 6 EXISTING 15KVA (480-120/240V., 1Ø, 3W) DRY TYPE TRANSFORMER TO REMAIN.
 - 7 EXISTING 3 NO. 10 AND 1 NO. 12 E.G. - 3/4" C. TO REMAIN.
 - 8 EXISTING DISCONNECT SWITCH TO REMAIN.
 - 9 EXISTING 3 NO. 12 AND 1 NO. 12 - 3/4" C. TO REMAIN.
 - 10 REMOVE EXISTING 50A., 3-POLE CIRCUIT BREAKER AND REPLACE WITH NEW CIRCUIT BREAKER SHOWN. CIRCUIT BREAKER TO MATCH 65,000 A.I.C. RATING.
 - 11 EXISTING 3 NO. 8 AND 1 NO. 10 E.G. - 3/4" C. TO REMAIN.
 - 12 FED FROM EXISTING MCC-1000, LOCATED IN MAIN ELECTRICAL ROOM WITHIN SLUDGE HANDLING BUILDING.
 - 13 NEW 3 NO. 10 AND 1 NO. 10 E.G. - 3/4" C.
 - 14 NEW 60A., 3-POLE, NEMA '4X' (316 STAINLESS STEEL) DISCONNECT SWITCH.
 - 15 EXISTING DISCONNECT SWITCH TO BE REMOVED.
 - 16 EXISTING CONDUIT AND CONDUCTORS TO BE REMOVED.

LINE LEGEND	
	NEW CONSTRUCTION
	EXISTING TO REMAIN
	TO BE REMOVED

GENERAL NOTE:
1. EXISTING MOTOR CONTROL CENTER ONE-LINE DIAGRAMS SHOWN ABOVE HAS NOT BEEN FIELD VERIFIED FOR ACCURACY. MCC CUBICLE CHANGES MADE TO MCC ARE NOT DEPICTED ABOVE. ACTUAL LOCATION OF LOAD MAY BE DIFFERENT THAN SHOWN ABOVE; TOTAL MCC LOAD IS ACCURATE TO DATE.

P:\1-6699\6652\elec\6652-E4.01.dwg, September 29, 2023 10:37 AM, RICHARD BARBEITO

RECORD DRAWINGS		1	BID DOCUMENTS	PSC	9/29/2023
SURVEYED BY:	DRAWN BY:				
REVIEWED BY:	PROJECT ENGINEER				
APPROVED BY:	DATE				
	REVISION			BY	DATE

CITY OF CLEARWATER, FLORIDA
ENGINEERING DEPARTMENT
100 S. MYRTLE AVE.
CLEARWATER, FL 33756

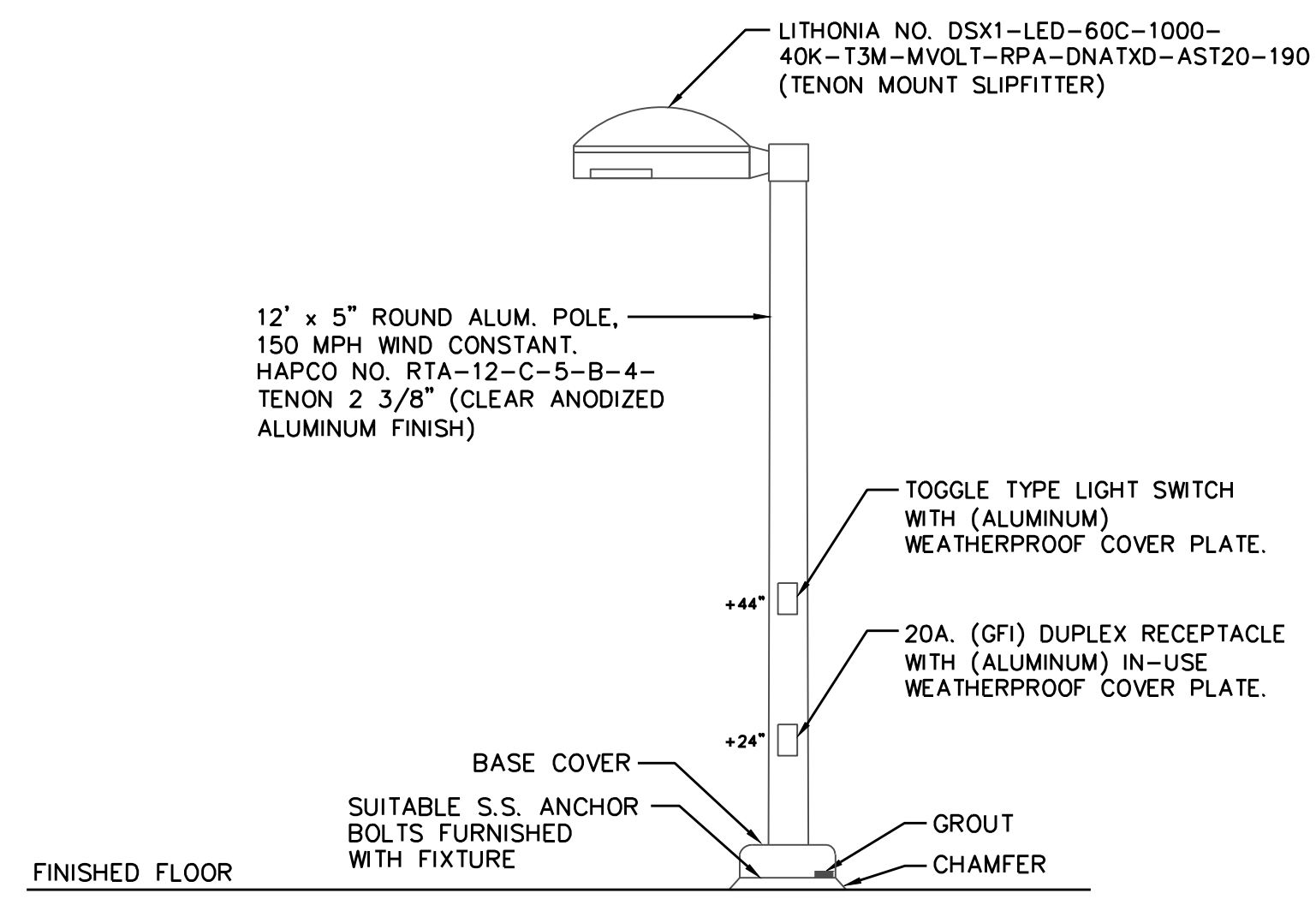
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EAST WRF INFLUENT PUMP STATION
REHABILITATION PROJECT
POWER ONE-LINE DIAGRAM (MCC-2000)

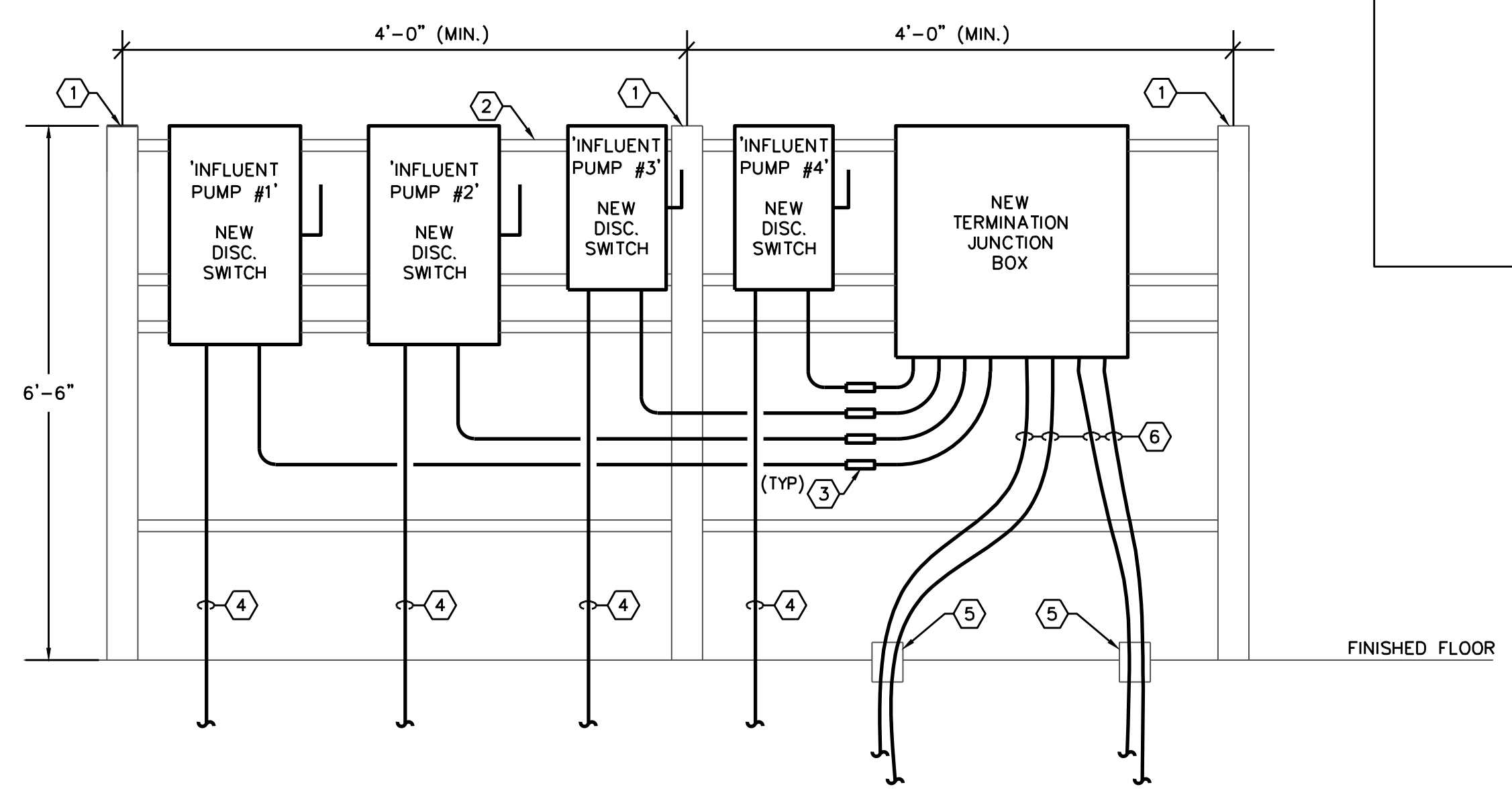
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DWG NAME	6652-E4.01.dwg	FIELD BOOK:		SURVEYED BY:		SCALE:	N/A
CONTRACT NO.:		DATE DRAWN:	9/29/2023	DRAWN BY:	RFB	HORIZ:	AS SHOWN
JOB NO.:	2018-1721-01	DESIGNED BY:	RFB	CHECKED BY:	PSC	SHEET NO.:	34 OF 40
APPROVED BY:		DATE:					

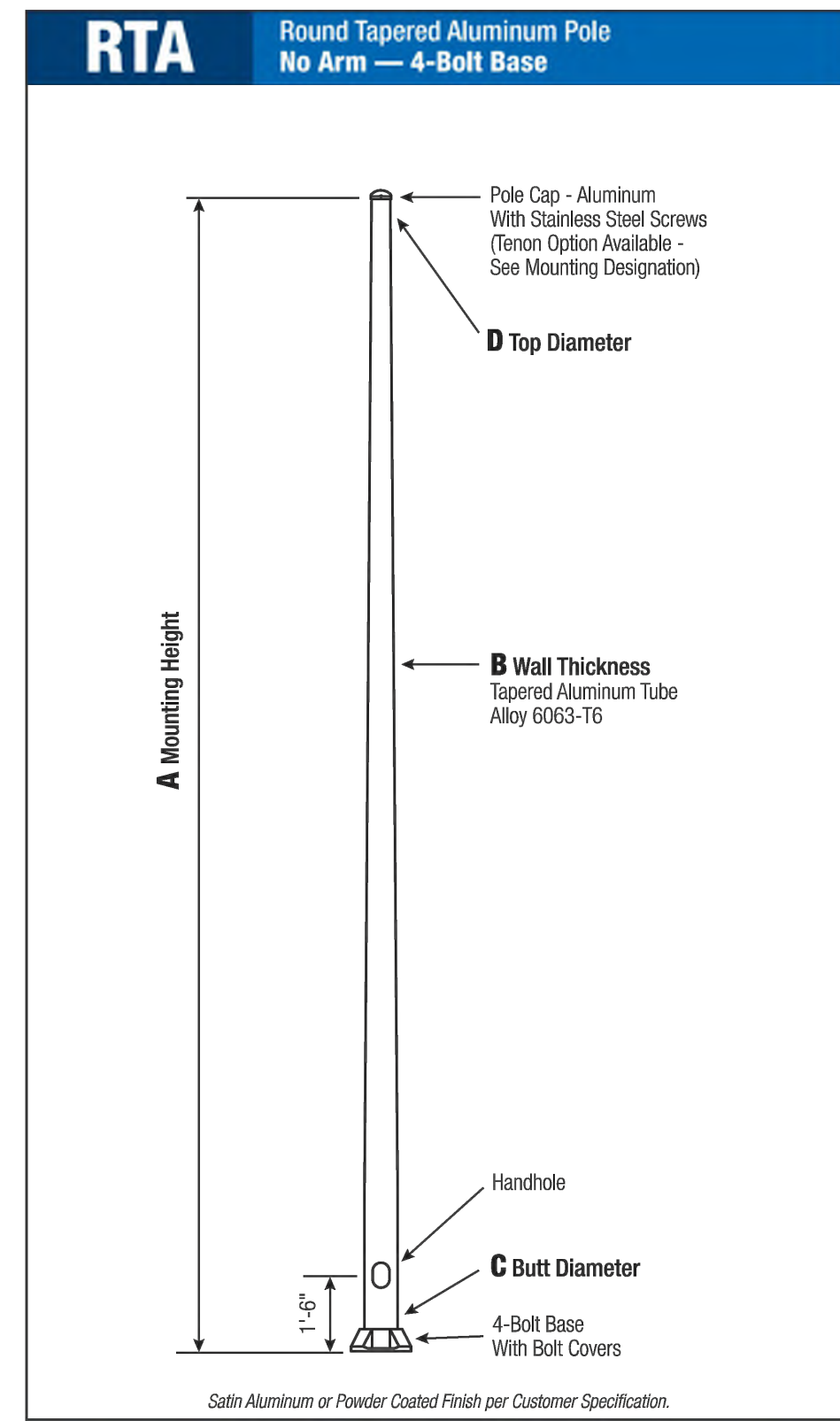


POLE MOUNTED LIGHT FIXTURE DETAIL
SCALE: NONE



ELECTRICAL ELEVATION DETAIL
SCALE: NONE

- GENERAL NOTES:**
- COORDINATE ALL LOCATIONS OF PROPOSED EQUIPMENT WITH CIVIL ENGINEER AND OWNER PRIOR TO INSTALLATION.
 - DISCONNECT SWITCHES & TERMINATION/JUNCTION BOX ELEVATION SHALL BE ABOVE 100-YEAR FLOOD ELEVATION.
- DRAWING NOTES:**
- 8" ROUND ALUMINUM POST, 6'-6" ABOVE FINISHED GRADE.
 - 2 1/2"x2 1/2"x1/4" ALUMINUM ANGLE. (TYPICAL).
 - NEW SEAL-OFF FITTING.
 - SEE PARTIAL POWER ONE-LINE DIAGRAM ON DRAWING E4.00.
 - FEED NEW SUBMERSIBLE PUMP CABLES THROUGH EXISTING 6" PVC SLEEVES.
 - NEW SUBMERSIBLE PUMP CABLES.



C	D	F	G	H	I
Butt Dia.	Top Dia.	Bot. Dia.	Base Sq.	Bot. Dia.	Bot. Dia.
4	3	6.5 - 8	7.5	2	.75 x 17 x 3
5	3	7.5 - 8	7.5	2	.75 x 17 x 3
6	4.5	9 - 10	9.75	2.75	.75 x 30 x 3*
7	4.5	10 - 11	10.5	2.75	1 x 36 x 4
8	4.5	11 - 12	11.25	2.75	1 x 36 x 4
9	4.5	12.5 - 14	12.75	2.75	1 x 36 x 4
10 up to 280"	6	14 - 15	14	3.25	1 x 48 x 4
10 up to 280"	6	14 - 15	14	3.25	1.25 x 48 x 6

Pole
The pole shaft will be constructed of seamless extruded tube of 6063 Aluminum Alloy per the requirements of ASTM B221. The shaft assembly shall be full-length heat treated after base weld to produce a T8 temper.

Base Style
4-Bolt Cast Aluminum Base Flange of Alloy 356-T6 with Aluminum Bolt Covers (Alloy 356-F) and Stainless Steel Hex Head Attaching Screws.

Handhole
4"-5" Butt Diameters - 2" x 4" Handhole with curved Lap Style Aluminum Door and two (2) SS Self-Tapping Attaching Screws. A Grounding Provision incorporating a tapered 1/4"-20NC hole is provided.
6" Butt Diameter - Reinforced, 3" x 5" curved Cast Aluminum Frame (Alloy 356-T6) with Aluminum Door and two (2) SS Hex Head Screws. A Grounding Provision incorporating a 3/8" diameter hole is provided opposite the Handhole.
7"+ Butt Diameters - Reinforced, 4" x 6" curved Cast Aluminum Frame (Alloy 356-T6) with Aluminum Door and two (2) SS Hex Head Screws. Reinforced Frame will contain a tapered 3/8"-10NC Grounding Provision.

Anchorage
Anchorage Kit will include four (4) L-shaped Steel Anchor Bolts conforming to AASHTO M214-90 Grade 55. Ten inches (10") of threaded end will be galvanized per ASTM A153. Kits will contain four (4) Hex Nuts, four (4) Lock Washers, and four (4) Flat Washers (all components Galvanized Steel). A bolt circle template will be provided.

Vibration Damper
When determined necessary by Hapco, a Vibration Damper will be factory-installed inside the pole shaft. Customer specification of the damper is available.

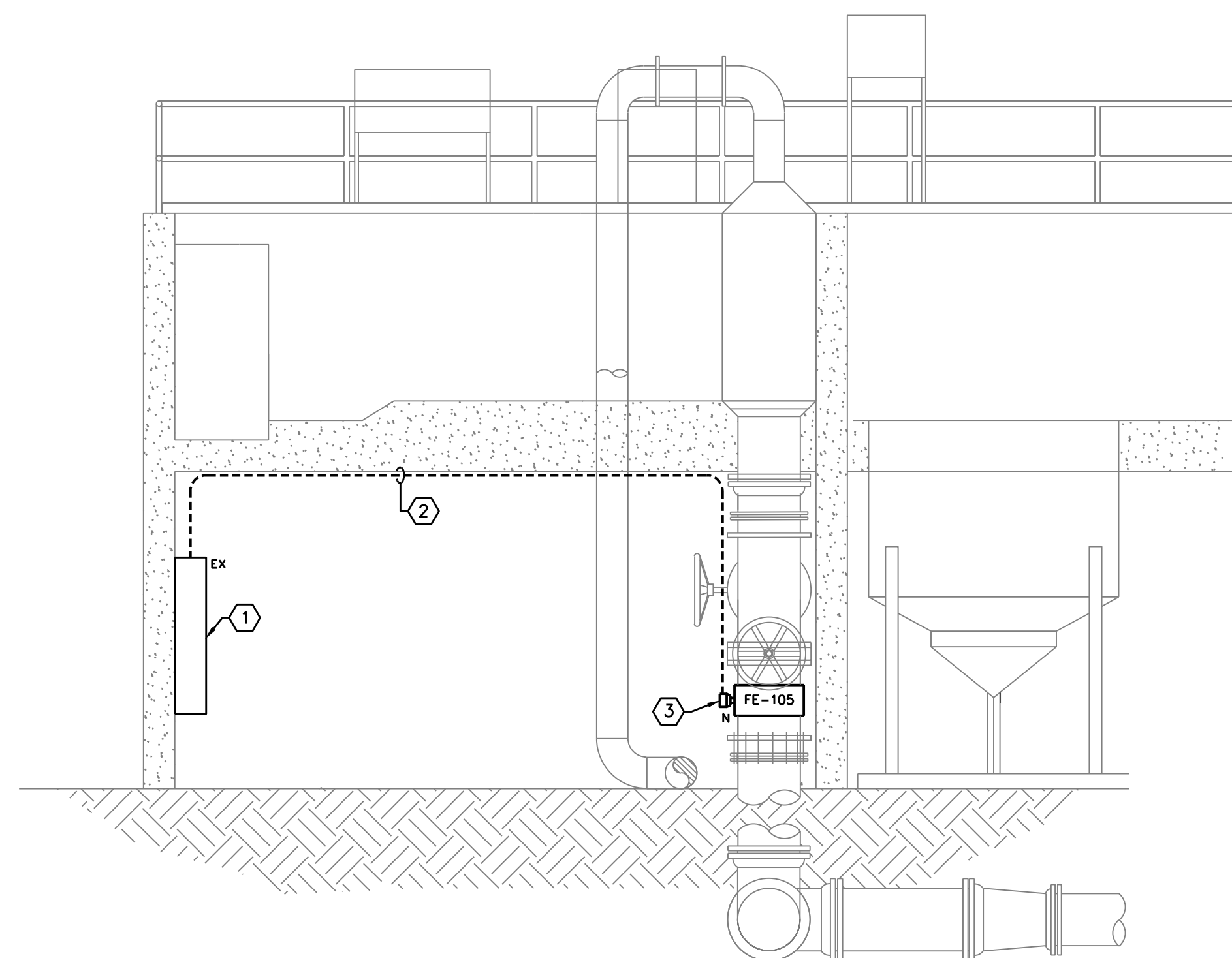
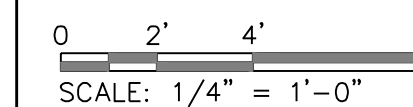
Mounting Designation
Side Drill Mount
For Side Drill Mount applications specify luminaire type, quantity and orientation. A luminaire drilling template must be supplied at time of order.

Tenon Mount - Welded or Spun
For Tenon Mount applications specify both Tenon diameter (2.375", 2.875", 3.5", etc.) and length (3", 4", etc.). Tenon style is factory option. Welded Tenon can be specified.

WARNING: Do not install light pole without luminaire.

LIGHT POLE SPECIFICATIONS
SCALE: NONE

A	B	C	Total	Minimum	Maximum	Minimum	Maximum	Minimum	Maximum	Minimum	Maximum	Minimum	Maximum	Minimum	Maximum	Minimum	Maximum	Minimum	Maximum		
Mts.	Wall	Butt	Height	120	130	140	150	160	170	180	190	200	210	220	230	240	250	260	270	280	
08	0.125	4	125	11.1	0.3	6.0	6.9	8.0	8.2	4.8	78-001	RTA08B44-*									
08	0.125	4	90	7.9	6.6	5.6	4.7	4.0	3.5	3.0	78-002	RTA08B44-*									
08	0.188	4	130	11.8	0.7	8.8	7.1	8.1	5.8	4.7	78-015	RTA08D44-*									
10	0.125	4	65	5.8	4.8	4.0	3.3	2.8	2.3	2.0	78-003	RTA10B44-*									
10	0.188	4	90	8.9	7.8	6.1	6.2	4.4	3.8	3.8	78-004	RTA10B44-*									
10	0.125	5	130	11.5	0.6	8.1	6.9	6.0	5.2	4.5	78-012	RTA10B44-*									
10	0.188	5	200	17.1	14.4	12.3	10.5	8.1	8.0	7.1	78-009	RTA10B44-*									
12	0.125	4	30	4.4	3.5	2.8	2.2	1.8	1.4	1.2	78-004	RTA12B44-*									
12	0.188	4	75	6.8	5.8	4.8	3.8	3.2	2.7	2.2	78-018	RTA12D44-*									
12	0.125	5	105	9.0	7.4	6.2	5.2	4.4	3.8	3.3	78-009	RTA12B44-*									
12	0.188	5	130	11.4	9.5	8.0	6.8	5.8	5.0	4.4	78-009W3	RTA12B44-*									
12	0.188	5	160	13.7	11.5	9.7	8.2	7.1	6.2	5.4	78-009W4	RTA12B44-*									
14	0.125	4	40	3.8	2.4	1.8	1.4	1.0	0.7	-	78-005	RTA14B44-*									
14	0.188	4	60	5.3	4.2	3.4	2.7	2.2	1.7	1.4	78-019	RTA14D44-*									
14	0.125	5	90	7.2	5.8	4.8	3.9	3.2	2.8	2.3	78-010	RTA14B44-*									
14	0.188	5	150	9.2	7.5	6.2	5.2	4.4	3.8	3.2	78-021	RTA14C54-*									
14	0.188	5	130	11.2	9.2	7.7	6.5	5.5	4.6	4.1	78-022	RTA14D54-*									
16	0.188	4	45	4.0	3.1	2.4	1.8	1.3	1.0	0.7	78-027	RTA16D44-*									
16	0.125	5	85	5.8	4.4	3.5	2.8	2.3	1.9	1.8	78-011	RTA16B44-*									
16	0.156	5	85	7.3	5.9	4.8	3.9	3.3	2.7	2.3	78-029	RTA16C54-*									
16	0.188	5	105	8.1	7.4	6.1	5.1	4.2	3.6	3.1	78-030	RTA16D54-*									
16	0.156	6	170	14.5	12.1	10.3	8.8	7.7	6.7	5.9	51-002548	RTA16C84-*									
16	0.188	6	215	17.8	14.9	12.7	10.9	9.5	8.3	7.8	51-002548	RTA16D84-*									
18	0.125	5	50	4.2	3.2	2.5	1.9	1.4	1.1	0.8	78-007	RTA18B54-*									
18	0.156	5	65	5.7	4.5	3.8	2.9	2.3	1.8	1.5	78-031	RTA18B54-*									
18	0.188	5	85	7.2	5.8	4.8	4.1	3.4	2.8	2.4	78-032	RTA18B54-*									
18	0.156	6	140	11.8	9.8	8.3	7.1	6.1	5.3	4.7	51-003	RTA18D64-*									
18	0.188	6	175	14.7	12.3	10.4	8.9	7.7	6.8	5.9	51-004	RTA18D64-*									
18	0.156	7	215	17.8	14.8	12.6	10.9	9.4	8.3	7.8	51-005	RTA18D64-*									
20	0.125	5	40	3.0	2.2	1.5	1.0	0.7	-	-	78-008	RTA20C44-*									
20	0.156	5	60	4.4	3.3	2.5	1.9	1.5	1.1	0.8	78-033	RTA20C54-*									
20	0.188	5	65	5.7	4.4	3.5	2.8	2.2	1.8	1.4	51-001	RTA20D54-*									
20	0.156	6	85	7.2	5.8	4.8	4.1	3.4	2.8	2.4	51-001	RTA20B64-*									
20	0.156	6	115	9.7	8.0	6.7	5.7	4.9	4.2	3.6	51-002	RTA20C64-*									
20	0.188	6	145	12.8	10.1	8.5	7.8	6.3	5.4	4.8	51-003	RTA20D64-*									
20	0.156	7	180	15.0	12.4	10.5	9.0	7.8	6.8	5.9	51-004	RTA20C74-*									
20	0.188	7	225	18.5	15.4	13.1	11.5	9.8	8.5	7.5	51-005	RTA20D74-*									
20	0.156	8	255	21.0	17.6	15.0	12.9	11.2	9.8	8.6	51-006	RTA20C84-*									
20	0.188	8	300	25.8	21.8	18.5	16.9	14.8	12.2	10.7	51-007	RTA20D84-*									
25	0.156	6	65	5.7	4.4	3.6	2.9	2.4	2.0	1.7	51-062	RTA25C64-*									
25	0.188	6	90	7.6	6.0	5.0	4.1	3.5	2.9	2.5	51-063	RTA25D64-*									
25	0.156	7	115	9.7	7.8	6.5	5.5	4.7	4.0	3.4	51-064	RTA25C74-*									
25	0.188	7	150	12.4	10.1	8.5	7.2	6.2	5.3	4.6	51-065	RTA25D74-*									
25	0.156	8	170	14.4	11.8	10.0	8.5	7.3	6.3	5.5	51-066	RTA25C84-*									
25	0.188	8	215	18.0	14.9	12.6	10.8	9.4	8.1	7.1	51-067	RTA25D84-*									
25	0.219	8	260	21.4	17.8	15.2	13.0	11.3	9.8	8.6	51-068	RTA25E84-*									
25	0.250	8	300	24.9	20.7	17.8	15.2	13.2	11.5	10.1	51-069	RTA25F84-*									
25	0.156	9	235	19.6	16.3	13.9	11.9	10.3	8.9	7.8	51-070	RTA25C94-*									
25	0.188	10	300	25.0	21.8	18.6	16.0	13.8	12.1	10.5	51-071	RTA25D94-*									
30	0.156	7	70	6.0	4.5	3.6	2.9	2.4	2.0	1.6	51-124	RTA30C74-*									
30	0.188	7	95	8.1	6.4	5.2	4.3	3.6	3.0	2.6	51-125	RTA30D74-*									
30	0.156	8	115	9.7	7.8	6.4	5.4	4.5	3.9	3.3	51-126	RTA30C84-*									
30	0.188	8	150	12.6	10.3	8.6	7.3	6.2	5.3	4.6	51-127	RTA30D84-*									
30	0.219	8	185	15.4	12.6	10.6	9.0	7.7	6.7	5.8	51-128	RTA30E84-*									
30	0.250	8	220	18.0	14.9	12.5	10.7	9.2	8.0	7.0	51-129	RTA30F84-*									
30	0.188	9	215	17.6	14.																


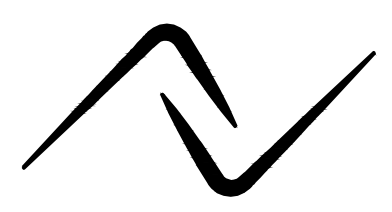


PARTIAL INFLUENT ELECTRICAL LAYOUT

DRAWING NOTES:

- ① EXISTING PANEL TO REMAIN. REMOVE AND REPLACE EXISTING FLOW INDICATING TRANSMITTER WITHIN EXISTING PANEL. REUSE EXISTING 120 VOLT POWER AND CONTROL WIRING.
- ② EXISTING CONDUIT AND CONDUCTOR TO BE REMOVED AND REPLACED WITH NEW MANUFACTURER SUPPLIED CABLE IN 3/4\".
- ③ EXISTING FLOW METER TO BE REMOVED AND REPLACED WITH NEW.

P:\1-669\6652\elec\6652-E6.00.dwg, September 29, 2023 10:39 AM, RICHARD BARBEITO

 CARASTRO & ASSOCIATES NOW BSA LIFESTRUCTURES BSA LifeStructures 2609 W. De Leon St. Tampa FL. 33609 ph 813.874.9494 Reg # - 4968	 4921 Memorial Highway One Memorial Center, Suite 300 Tampa, Florida 33634 Phone: (813) 880-8881 www.Ardurra.com License #2610 COLLABORATE. INNOVATE. CREATE.		
DWG NAME: 6652-E6.00.dwg CONTRACT NO.: JOB NO.: 2018-1721-01	FIELD BOOK: DATE DRAWN: 9/29/2023 DESIGNED BY: RFB	SURVEYED BY: DRAWN BY: RFB CHECKED BY: PSC	SCALE: N/A HORIZ: AS SHOWN SHEET NO.: 36 OF 40
APPROVED BY: _____ DATE: _____			

RECORD DRAWINGS	1	BID DOCUMENTS	PSC	9/29/2023
SURVEYED BY:	DRAWN BY:			
REVIEWED BY:				
PROJECT ENGINEER	DATE			
APPROVED BY:				
	REVISION	BY	DATE	

CITY OF CLEARWATER, FLORIDA
ENGINEERING DEPARTMENT
100 S. MYRTLE AVE.
CLEARWATER, FL 33756



EAST WRF INFLUENT PUMP STATION
REHABILITATION PROJECT
PARTIAL INFLUENT ELECTRICAL LAYOUT

STRUCTURAL GENERAL NOTES:

CONCRETE:

1. ALL CONCRETE WORK SHALL CONFORM TO THE FOLLOWING ACI CODE REQUIREMENTS:
 - A. ACI 318-14 BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE
 - B. ACI 360-10 GUIDE TO DESIGN OF SLABS-ON-GRADE
 - C. ACI 301-14 SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS
 - D. ACI 305R-10 GUIDE TO HOT WEATHER CONCRETING
 - E. ACI 306R-16 GUIDE TO COLD WEATHER CONCRETING
 - F. ACI 315-18 GUIDE TO PRESENTING REINFORCING STEEL DESIGN DETAILS
2. MINIMUM CONCRETE COMPRESSIVE STRENGTH AT 28 DAYS:

CONCRETE WALLS:	4,000 PSI NORMAL WT.
-----------------	----------------------
3. REINFORCING STEEL: ASTM A615, GRADE 60.
4. MINIMUM CLEAR CONCRETE COVER ON REINFORCING:

CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH:	3"
CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND:	3/4"
SLABS, WALLS, JOISTS:	3/4"
5. DOWELS, CONTINUOUS REINFORCING, AND ALL SPICES SHALL BE PROVIDED IN ACCORDANCE WITH ACI MINIMUM LAP SPLICE REQUIREMENTS.
6. REBAR SHALL NOT BE HEATED WITH A TORCH IN THE FIELD.
7. WALL REINFORCING SHALL BE CONTINUOUS AT CORNERS.
8. AIR ENTRAINMENT: 5% +/- 1%
9. CONCRETE FINISH: WALLS - WOOD FLOAT;
10. CURING COMPOUND: WET CURE IN ACCORDANCE WITH ACI 308.1 AND ACI 301/ACI 306.1 (FOR COLD-WEATHER PROTECTION) AND ACI 301/ACI 305.1 (FOR HOT-WEATHER PROTECTION).
 - A. CURE CONCRETE FOR NOT LESS THAN SEVEN (7) DAYS.
11. WATER SHALL NOT BE ADDED TO CONCRETE AT THE JOB SITE BEYOND THE MIX DESIGN AMOUNT. ADDITIONAL WATER SERIOUSLY REDUCES CONCRETE STRENGTH AND INCREASES SHRINKAGE. REQUEST A "HIGH RANGE WATER REDUCER" (SUPERPLASTICIZER) FOR MORE WORKABLE CONCRETE.
12. ALL CONCRETE SHALL BE REINFORCED WITH DEFORMED STEEL REINFORCING BARS. ALL DETAILING, FABRICATION AND PLACING OF REINFORCING STEEL SHALL CONFORM TO ACI 315.
13. UNLESS OTHERWISE NOTED, CHAMFER ALL EXPOSED CONCRETE CORNERS WITH A 3/4" x 45 DEGREE CHAMFER.
14. THE CONTRACTOR SHALL COORDINATE PLACEMENT OF OPENINGS, CURBS, DOWELS, SLEEVES, CONDUITS, BOLTS AND INSERTS PRIOR TO PLACEMENT OF CONCRETE.
15. ALL EMBEDDED STEEL SHALL CONFORM TO ASTM A36.
16. EPOXY BONDING ADHESIVE: ASTM C881, TWO-COMPONENT EPOXY RESIN, CAPABLE OF HUMID CURING AND BONDING TO DAMP SURFACES, OF CLASS SUITABLE FOR APPLICATION TEMPERATURE AND OF GRADE AND CLASS TO SUIT REQUIREMENTS AS FOLLOWS:
 - A. TYPES I AND II, NONLOAD BEARING FOR BONDING HARDENED OR FRESHLY MIXED CONCRETE TO HARDENED CONCRETE.
17. CONTRACTOR SHALL GRP SCAN ALL LOCATIONS TO CONFIRM AREA TO BE CLEAR OF EXISTING REINFORCING BARS PRIOR TO DRILLING. ADHESIVE ANCHOR LAYOUTS MAY BE FIELD ADJUSTED TO MISS EXISTING REINFORCEMENT.

POST-INSTALLED ANCHORS:

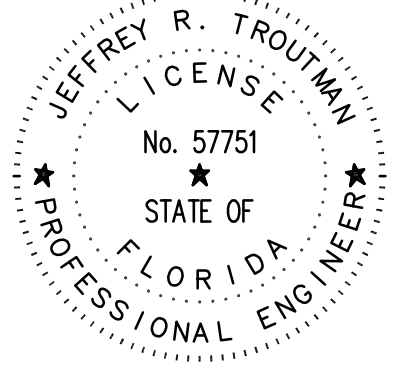
1. INSTALLATION AND INSPECTION OF ALL POST-INSTALLED ANCHORS SHALL CONFORM TO THE MANUFACTURER'S PUBLISHED INSTALLATION INSTRUCTIONS, THE EQUIPMENT MANUFACTURER'S REQUIREMENTS, THE REQUIREMENTS OF THE RESPECTIVE ICC-ES REPORT, AND THE APPLICABLE BUILDING CODE.
2. A MANUFACTURER'S TECHNICAL REPRESENTATIVE (NOT A DISTRIBUTOR OR AGENT) SHALL TRAIN INSTALLERS ON THE PROPER INSTALLATION PROCEDURES AND SHALL OBSERVE INITIAL INSTALLATION OF THE ANCHORS.
3. ADHESIVE ANCHORING SYSTEMS IN CONCRETE SHALL BE AS FOLLOWS:
 - A. HIT-RE 500 V3 BY HILTI, INC. (ICC-ES ESR-3814)
 - B. HIT-HY 200 SAFE SET BY HILTI, INC. (ICC-ES ESR-3187)
 - C. SET-XP BY SIMPSON STRONG-TIE ANCHOR SYSTEMS (ICC-ES ESR-2508)
 - D. APPROVED EQUAL WITH ICC-ES REPORT
 - E. ANCHOR ELEMENTS SHALL CONFORM WITH THE RESPECTIVE ICC-ES REPORT.
4. MECHANICAL ANCHORING SYSTEMS IN CONCRETE SHALL BE AS FOLLOWS:
 - A. KWIK BOLT TZ BY HILTI, INC. (ICC-ES ESR-1917)
 - B. STRONG-BOLT BY SIMPSON STRONG-TIE ANCHOR SYSTEMS (ICC-ES ESR-1771)
 - C. APPROVED EQUAL WITH ICC-ES REPORT
 - D. ANCHORS SHALL BE INSTALLED AND TORQUED IN COMPLETE ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
8. ANCHOR RODS USED IN ADHESIVE ANCHORING SYSTEMS SHALL CONFORM WITH ASTM A193, GRADE B7, 316 STAINLESS STEEL.
9. MECHANICAL ANCHORING SYSTEMS SHALL BE 316 STAINLESS STEEL, UNLESS NOTED OTHERWISE.
10. PROVIDE THE MINIMUM EMBEDMENT DEPTHS INDICATED IN THE FOLLOWING SCHEDULES, UNLESS NOTED OTHERWISE IN A SPECIFIC SECTION OR DETAIL.

ADHESIVE ANCHORS (MINIMUM EMBEDMENT)	
THREADED ANCHOR DIAMETER	CONCRETE
1/2"	4"
5/8"	5"
3/4"	6"
7/8"	7"
1"	8"

MECHANICAL ANCHORS (MINIMUM EMBEDMENT)	
ANCHOR DIAMETER	CONCRETE
1/2"	3 1/2"
5/8"	4 1/2"
3/4"	5 1/2"

CONCRETE TESTING

1. THE CONTRACTOR SHALL WORK WITH THE OWNER'S ITL FOR TESTING THE CONCRETE IN ACCORDANCE WITH ASTM C172, C31 (COMPRESSION TEST SPECIMEN) & C39 (COMPRESSIVE-STRENGTH TESTS) FOR EACH DAY'S PLACEMENT AS FOLLOWS: 1 SET OF 4 STANDARD CYLINDERS FOR EACH SET OF CYLINDERS, TEST 1 SPECIMEN AT 7 DAYS, 2 SPECIMENS AT 28 DAYS. THE FOURTH SPECIMEN SHALL REMAIN IN CASE ADDITIONAL TESTS ARE REQUIRED.
2. CAST AND LABORATORY CURE TWO SETS OF TWO STANDARD CYLINDER SPECIMENS FOR EACH COMPOSITE SAMPLE. CAST AND FIELD CURE TWO SETS OF TWO STANDARD CYLINDER SPECIMENS FOR EACH COMPOSITE SAMPLE.
3. STRENGTH OF EACH CONCRETE MIXTURE WILL BE SATISFACTORY IF EVERY AVERAGE OF ANY THREE CONSECUTIVE COMPRESSIVE-STRENGTH TESTS EQUALS OR EXCEEDS SPECIFIED COMPRESSIVE STRENGTH AND NO COMPRESSIVE-STRENGTH TEST VALUE FALLS BELOW SPECIFIED COMPRESSIVE STRENGTH BY MORE THAN 500 PSI.
4. THE CONTRACTOR SHALL WORK WITH THE OWNER'S ITL FOR TESTING SLUMP IN ACCORDANCE WITH ASTM C143 AND AIR CONTENT IN ACCORDANCE WITH ASTM C143 CONSISTING OF ONE TEST AT POINT OF PLACEMENT FOR EACH COMPOSITE SAMPLE BUT NOT LESS THAN ONE TEST FOR EACH DAY'S POUR. PERFORM ADDITIONAL TESTS WHEN CONCRETE CONSISTENCY APPEARS TO CHANGE.
5. TEST RESULTS SHALL BE REPORTED IN WRITING TO THE ENGINEER, CONCRETE MANUFACTURER AND CONTRACTOR WITHIN 48 HOURS OF TESTING. REPORTS OF COMPRESSIVE-STRENGTH TESTS SHALL CONTAIN PROJECT IDENTIFICATION NAME AND NUMBER, DATE OF CONCRETE PLACEMENT, NAME OF CONCRETE TESTING AND INSPECTING AGENCY, LOCATION OF CONCRETE BATH IN WORK, DESIGN COMPRESSIVE STRENGTH AT 28 DAYS, CONCRETE MIXTURE PROPORTIONS AND MATERIALS, COMPRESSIVE BREAKING STRENGTH AND TYPE OF BREAK FOR BOTH 7- AND 28-DAY TESTS.
6. ADDITIONAL TESTING FOR CONCRETE NOT UP TO STRENGTH OR WHEN TEST RESULTS INDICATE THAT SLUMP, AIR ENTRAINMENT OR OTHER REQUIREMENTS HAVE NOT BEEN MET AND SHALL BE PAID FOR BY THE CONTRACTOR. TESTING AND INSPECTING AGENCY MAY CONDUCT TESTS TO DETERMINE ADEQUACY OF CONCRETE BY CORED CYLINDERS COMPLYING WITH ASTM C42 OR MY OTHER METHODS AS DIRECTED BY THE ENGINEER.
7. WHEN STRENGTH OF FIELD-CURED CYLINDERS IS LESS THAN 85% OF COMPANION LABORATORY-CURED CYLINDERS, CONTRACTOR SHALL EVALUATE OPERATIONS AND PROVIDE CORRECTIVE PROCEDURES FOR PROTECTING AND CURING IN-PLACE CONCRETE.
8. CORRECT DEFICIENCIES IN THE WORK THAT TEST REPORTS AND INSPECTIONS INDICATE DO NOT COMPLY WITH THE CONTRACT DOCUMENTS.



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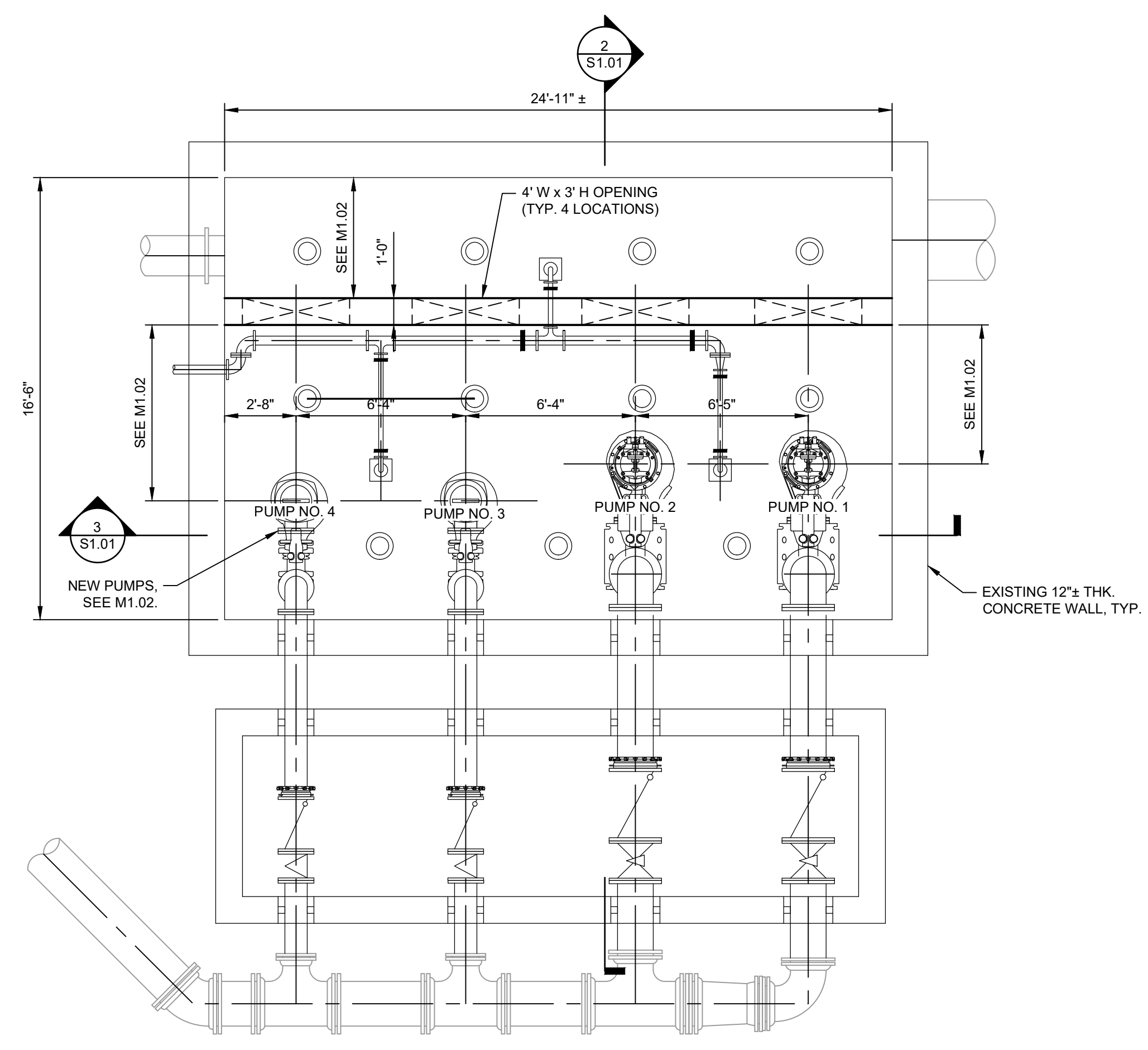
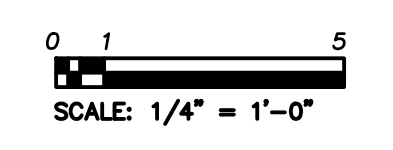
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REVIEWED BY: _____			
APPROVED BY: _____ PROJECT ENGINEER _____ DATE _____			
ENGINEER _____ DATE _____	REVISION	BY	DATE

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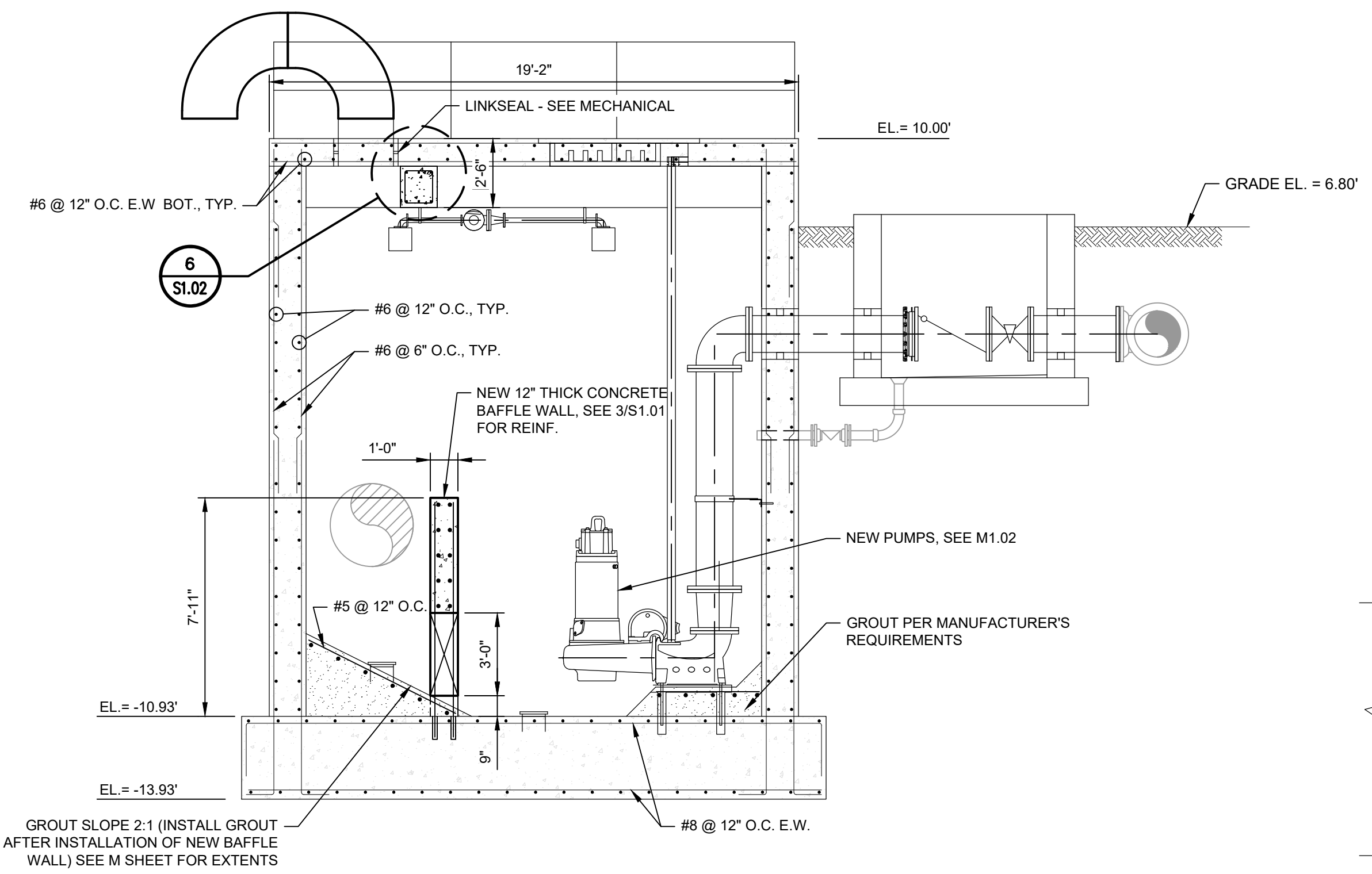


EAST WRF INFLUENT PUMP STATION
 REHABILITATION PROJECT
 STRUCTURAL GENERAL NOTES

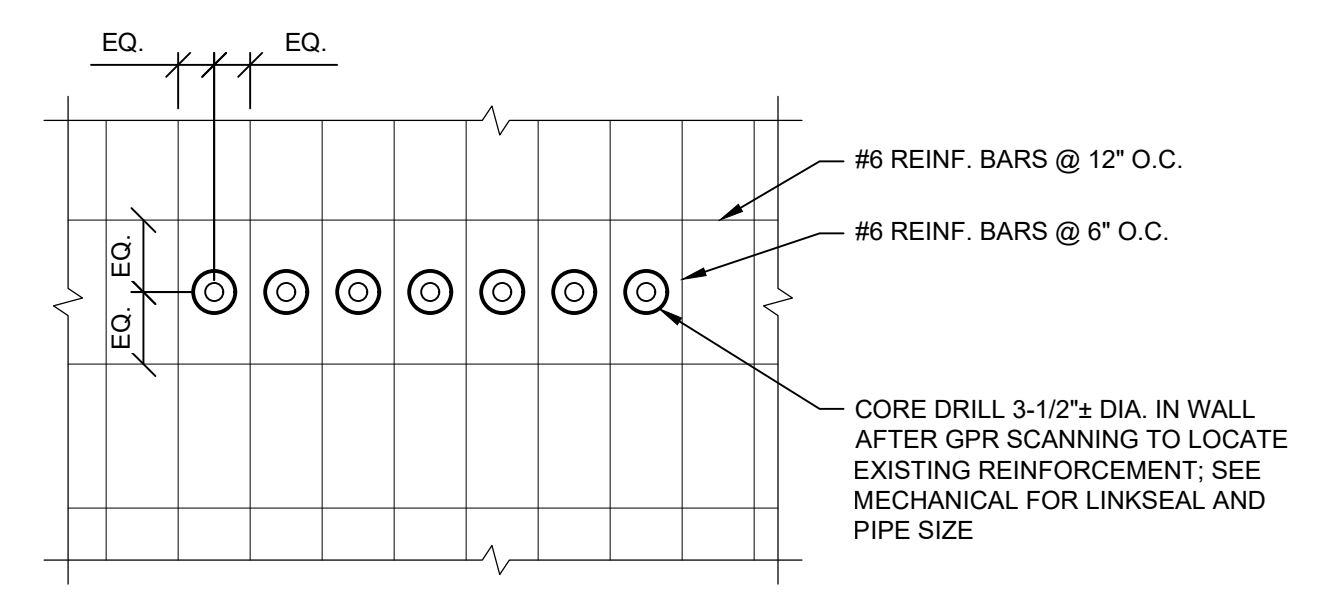
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2018-1721-01	JRT	JRT	25 OF 40
APPROVED FOR CONSTRUCTION _____			



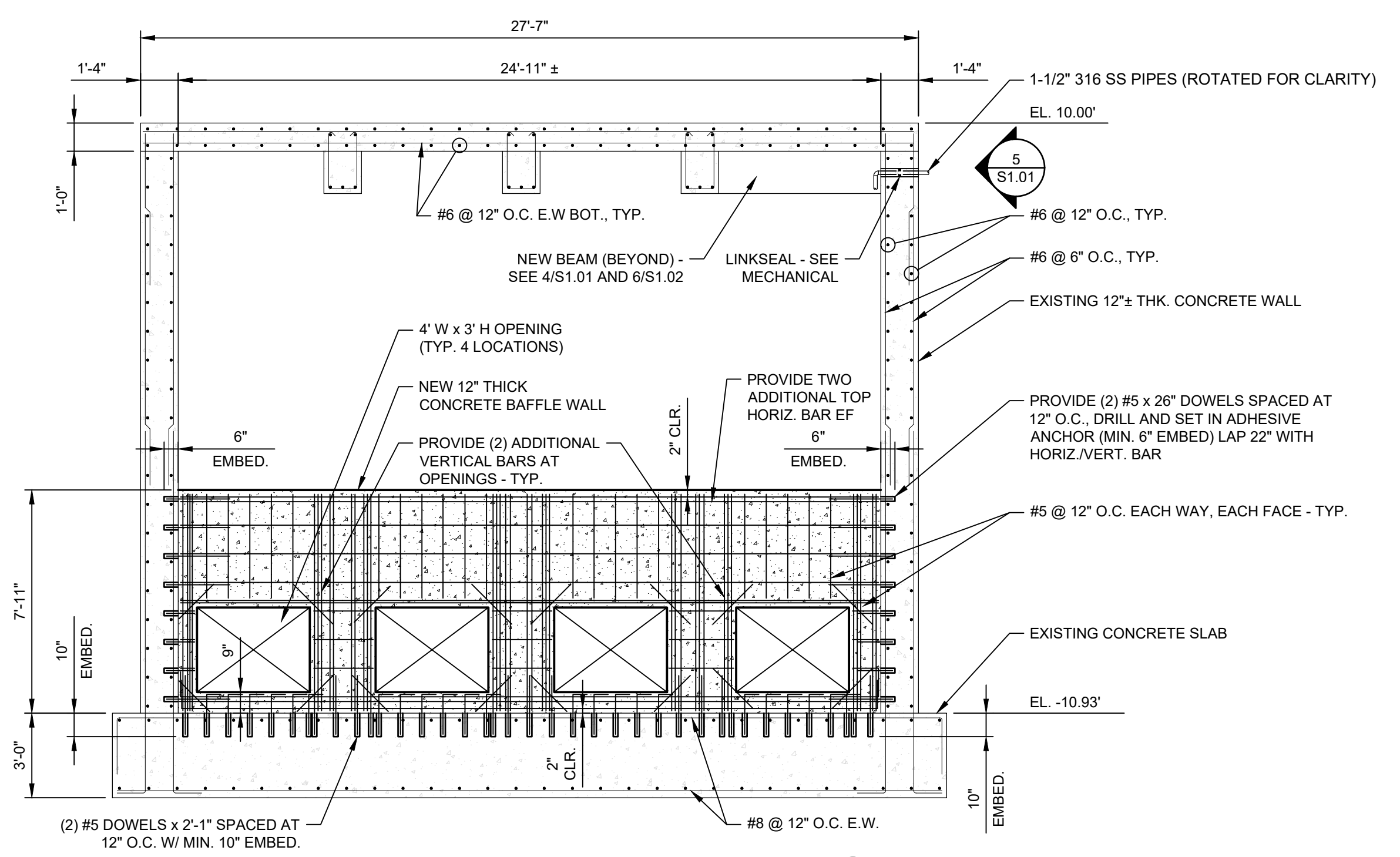
BASE SLAB PLAN
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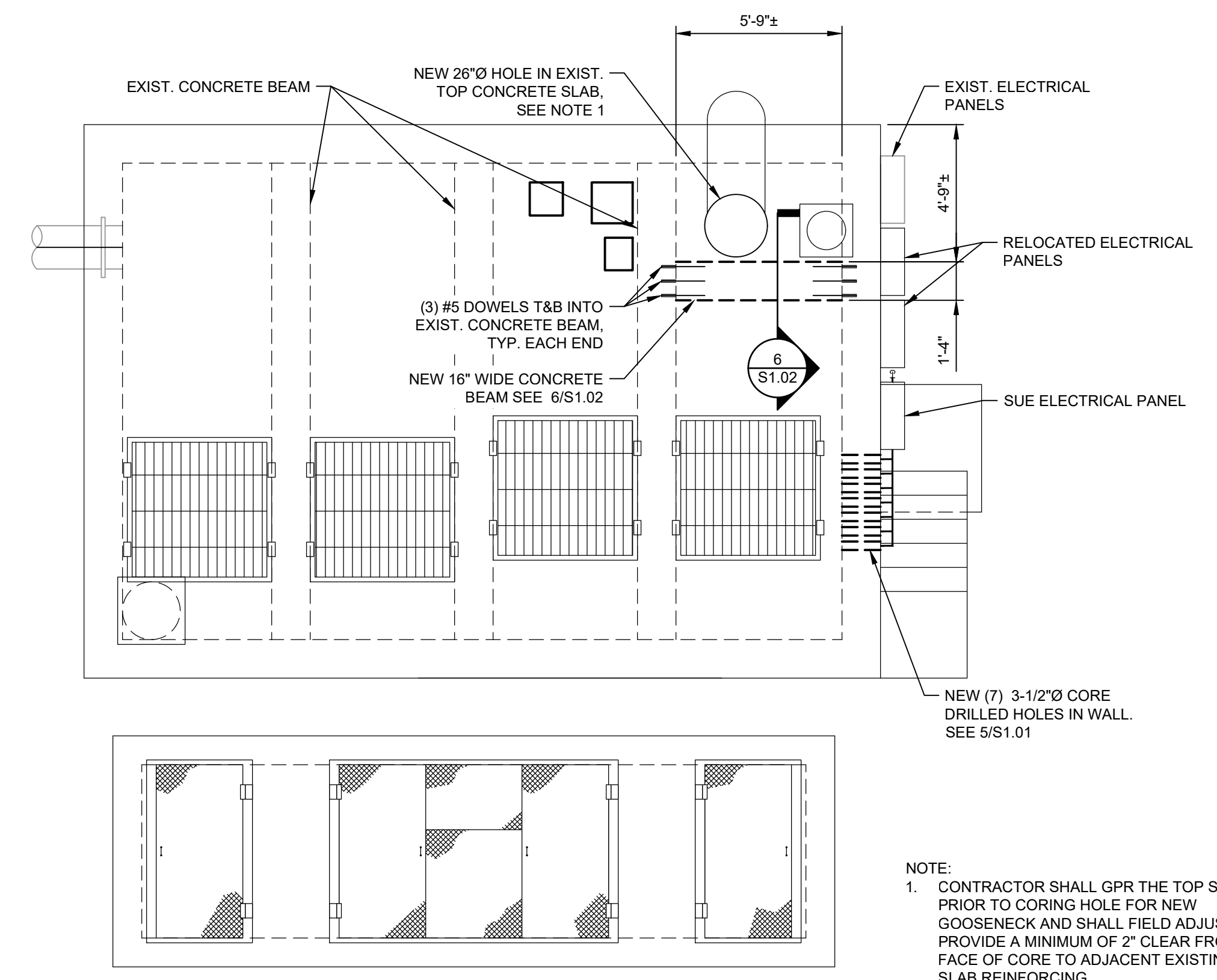
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CORE REINF. WALL FOR AIR LINE - PENETRATION DETAIL
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REF. CIVIL DRAWING FOR LOCATION

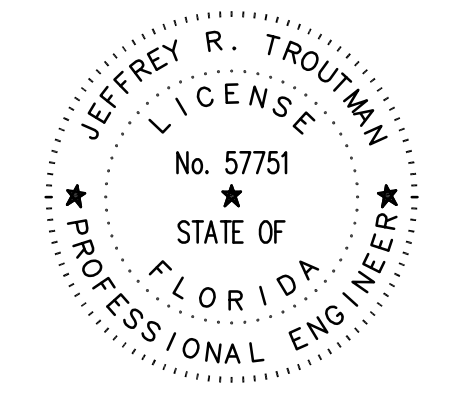


SECTION THRU WET WELL
SCALE: 1/4"=1'-0"



TOP SLAB PLAN
SCALE: 1/4"=1'-0"

NOTE:
1. CONTRACTOR SHALL GPR THE TOP SLAB PRIOR TO CORING HOLE FOR NEW GOOSENECK AND SHALL FIELD ADJUST TO PROVIDE A MINIMUM OF 2" CLEAR FROM FACE OF CORE TO ADJACENT EXISTING SLAB REINFORCING.



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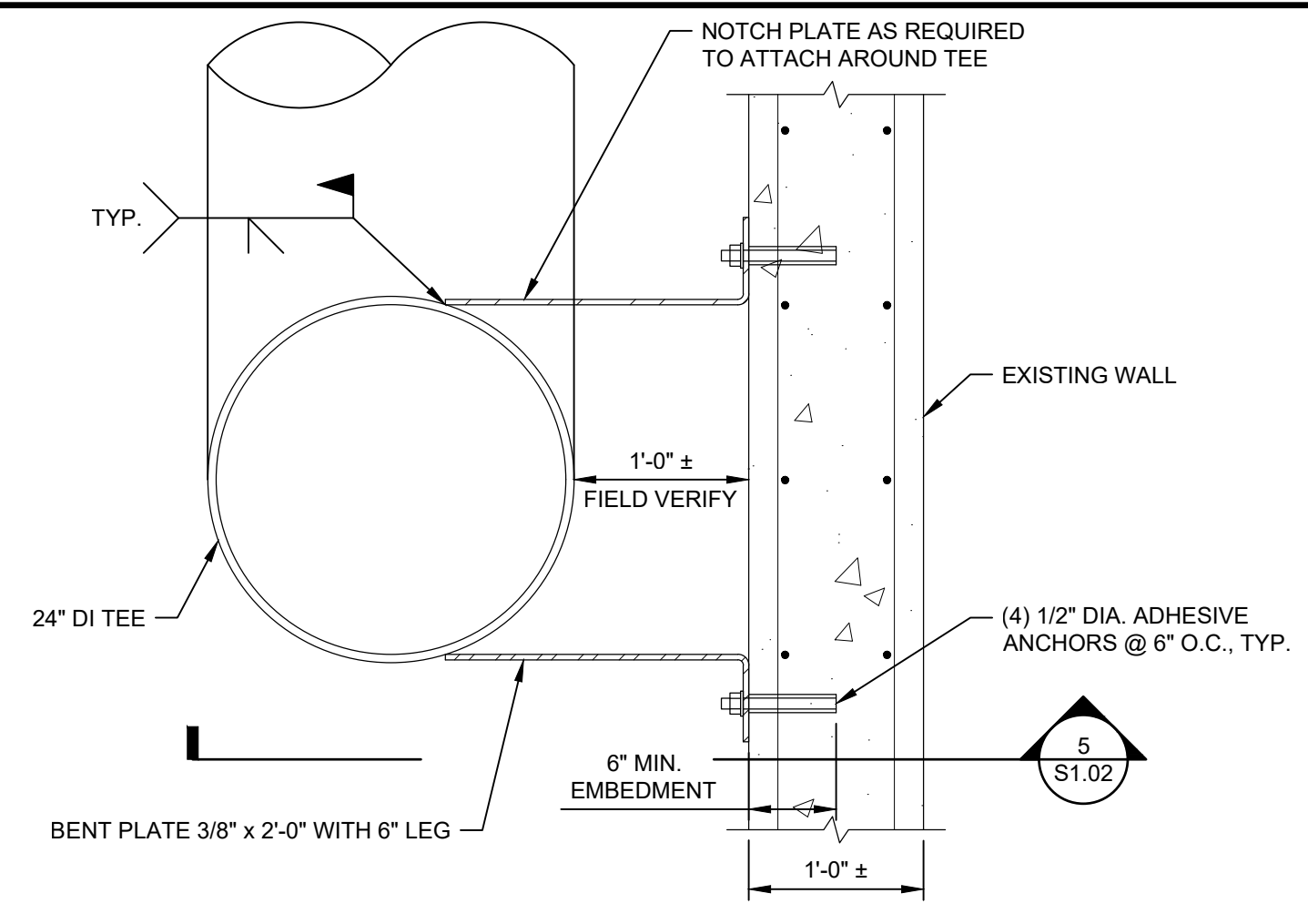
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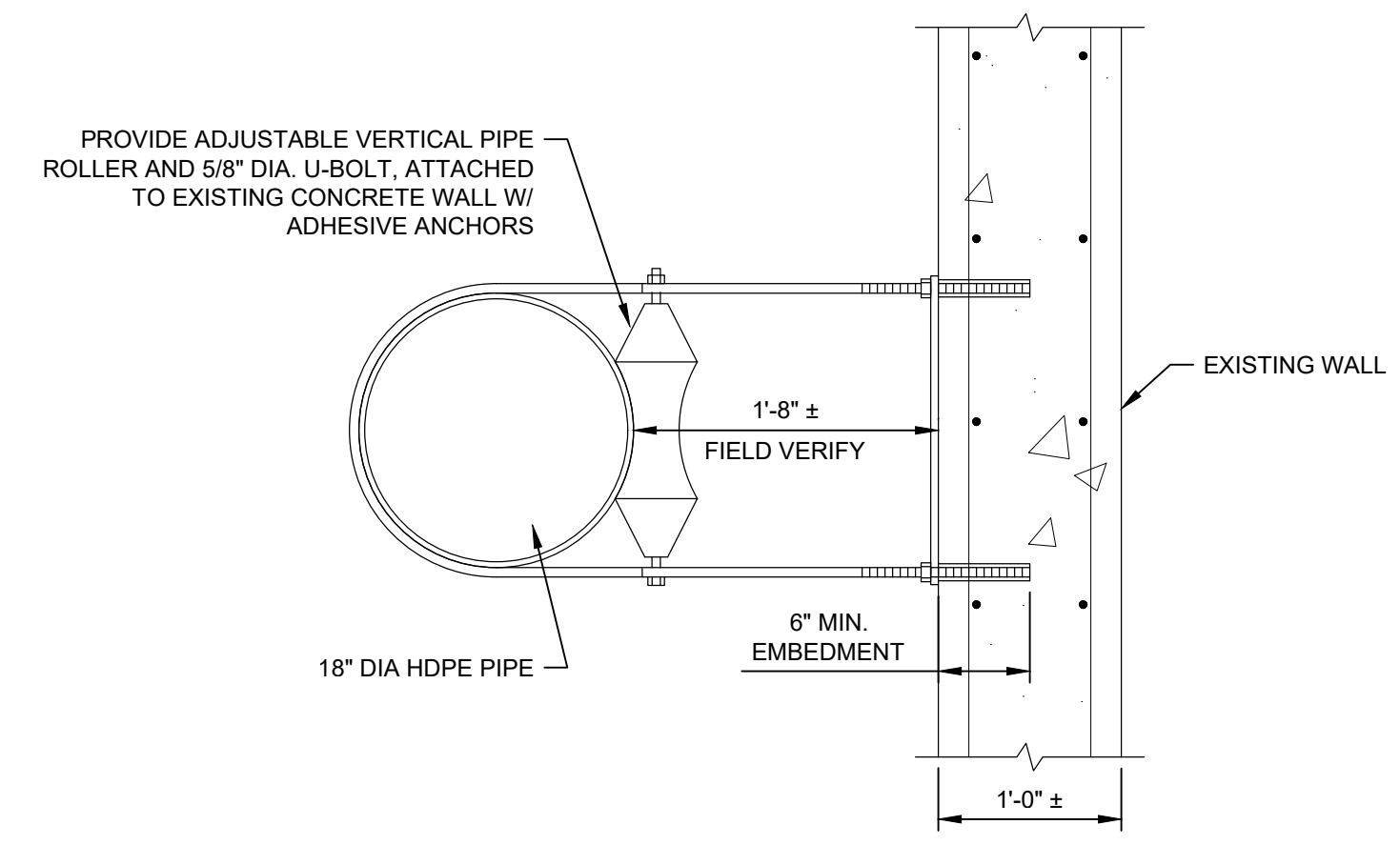


**EAST WRF INFLUENT PUMP STATION
REHABILITATION PROJECT**
HEADWORKS INFLUENT STRUCTURE PIPE SUPPORTS

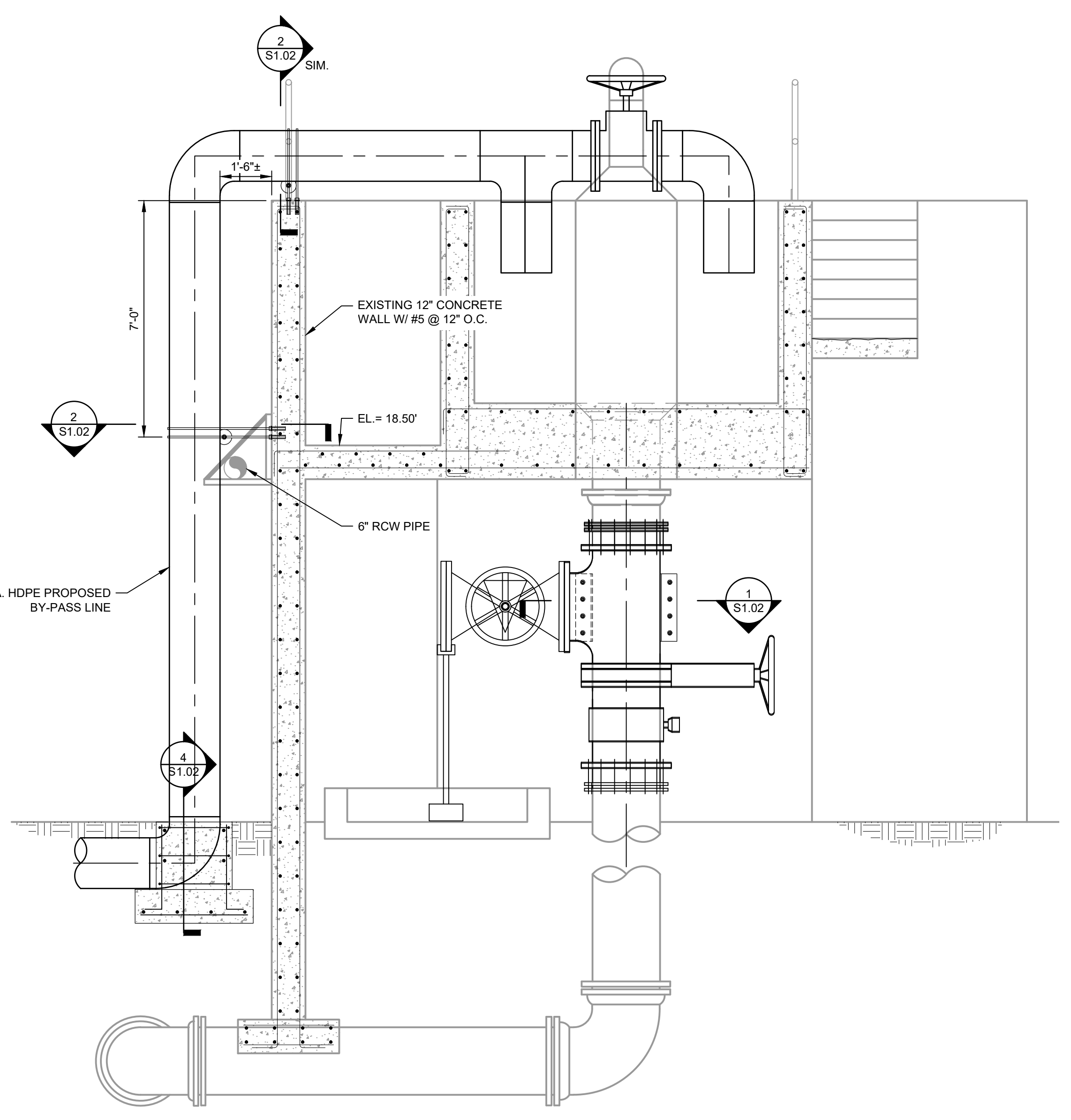
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2018-1721-01			26 OF 40



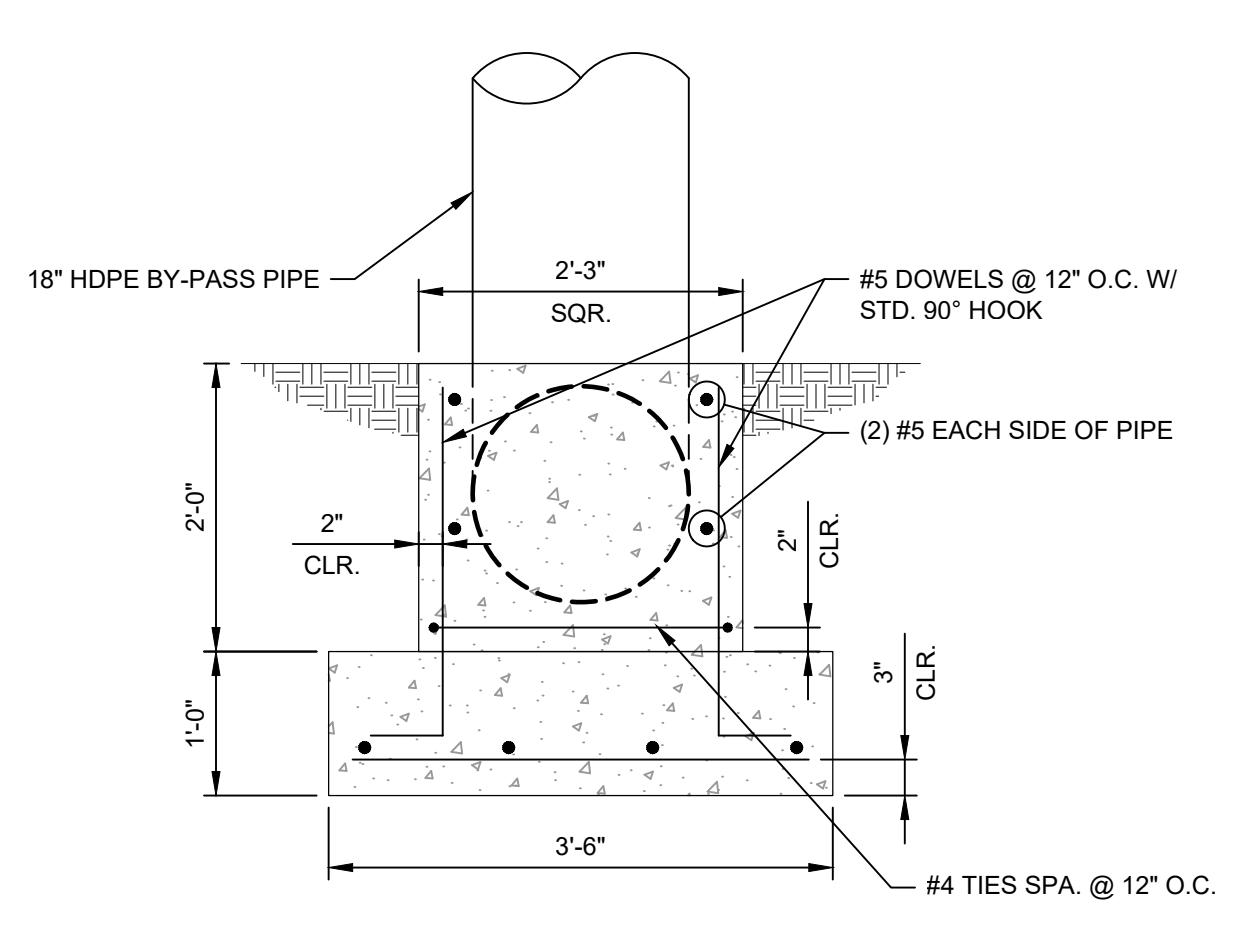
DETAIL - PLAN TEE SUPPORT
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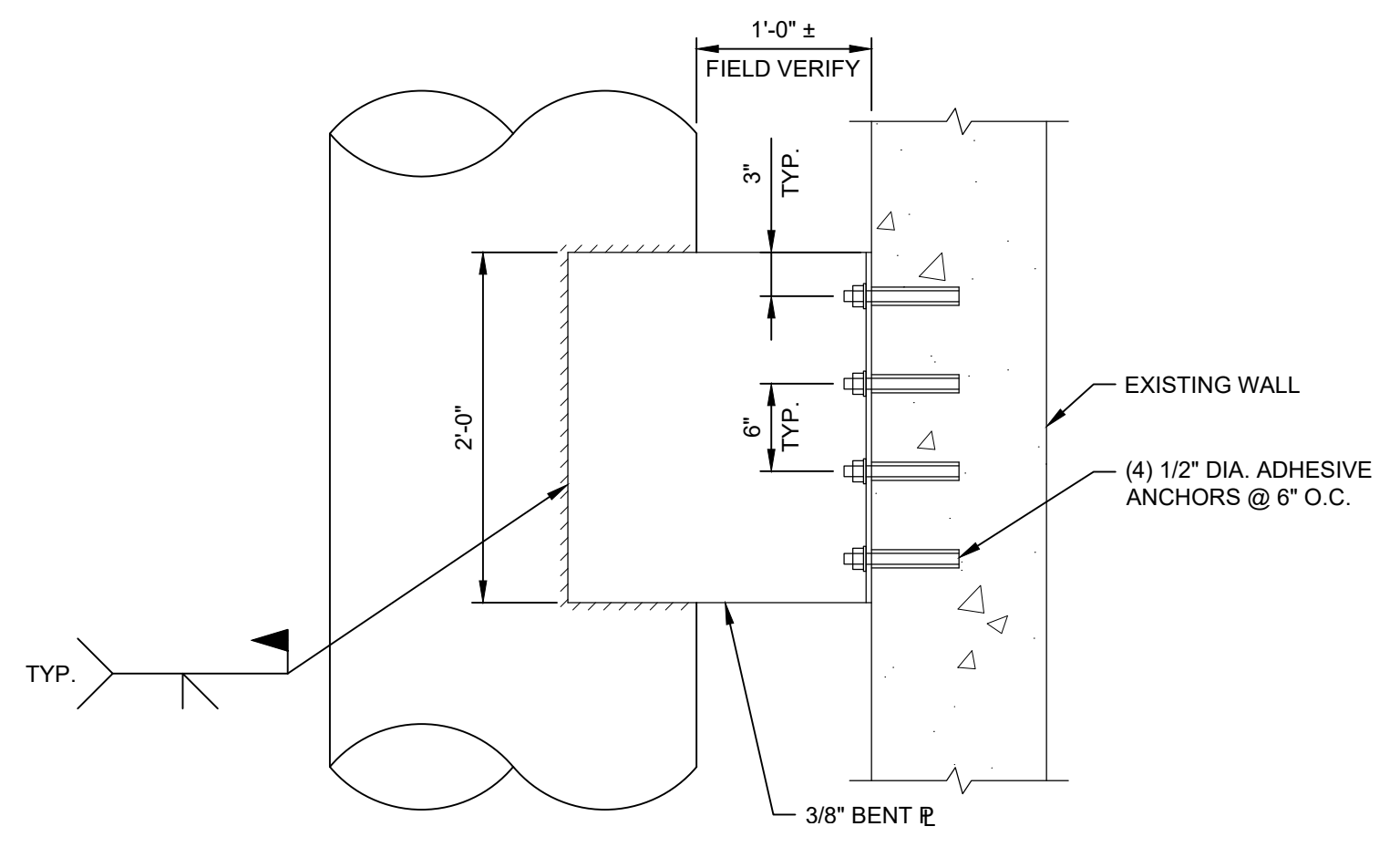
DETAIL - PIPE ROLLER SUPPORT
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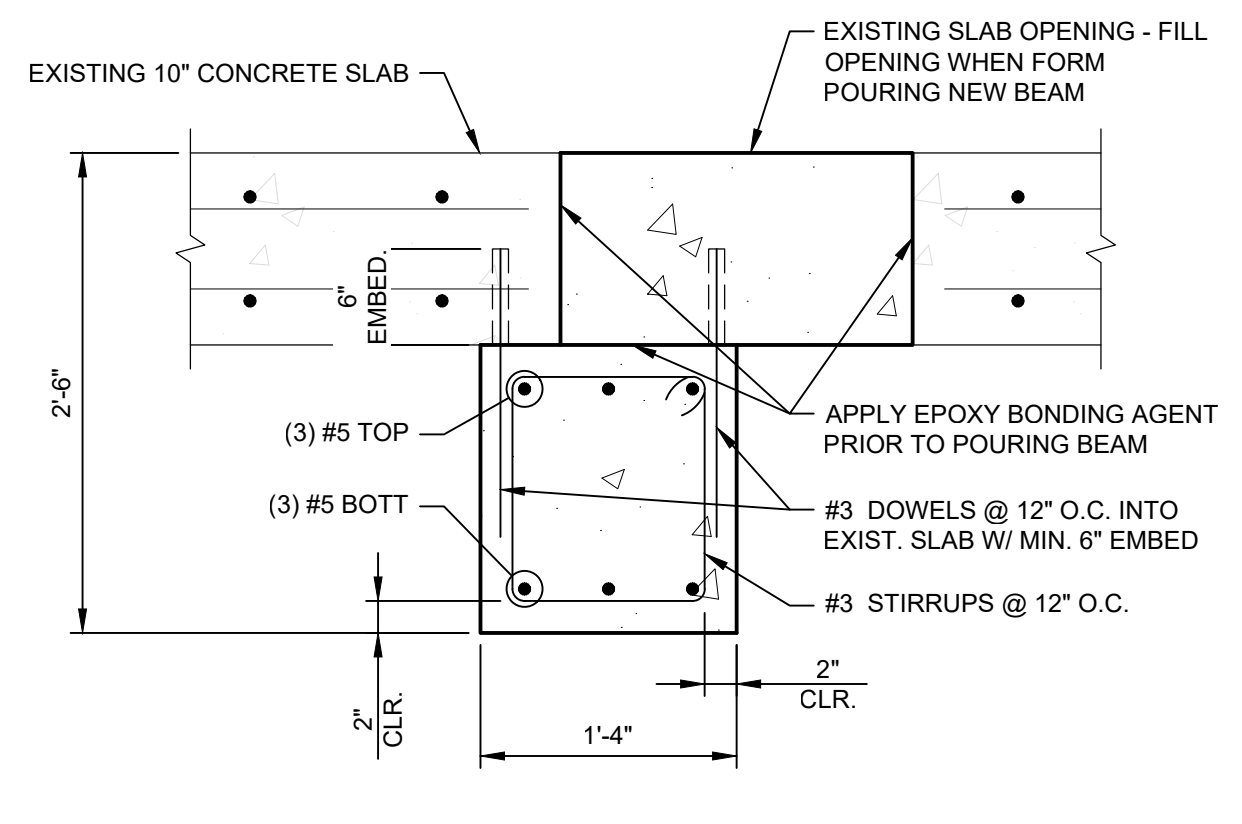
SECTION
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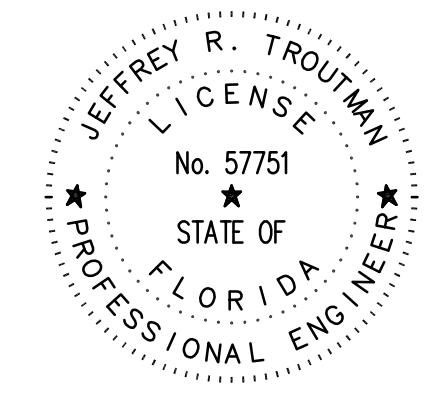
SECTION - PIPE SUPPORT
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DETAIL - SECTION TEE SUPPORT
SCALE: 1"=1'-0"



SECTION THRU CONCRETE BEAM
SCALE: 1"=1'-0"



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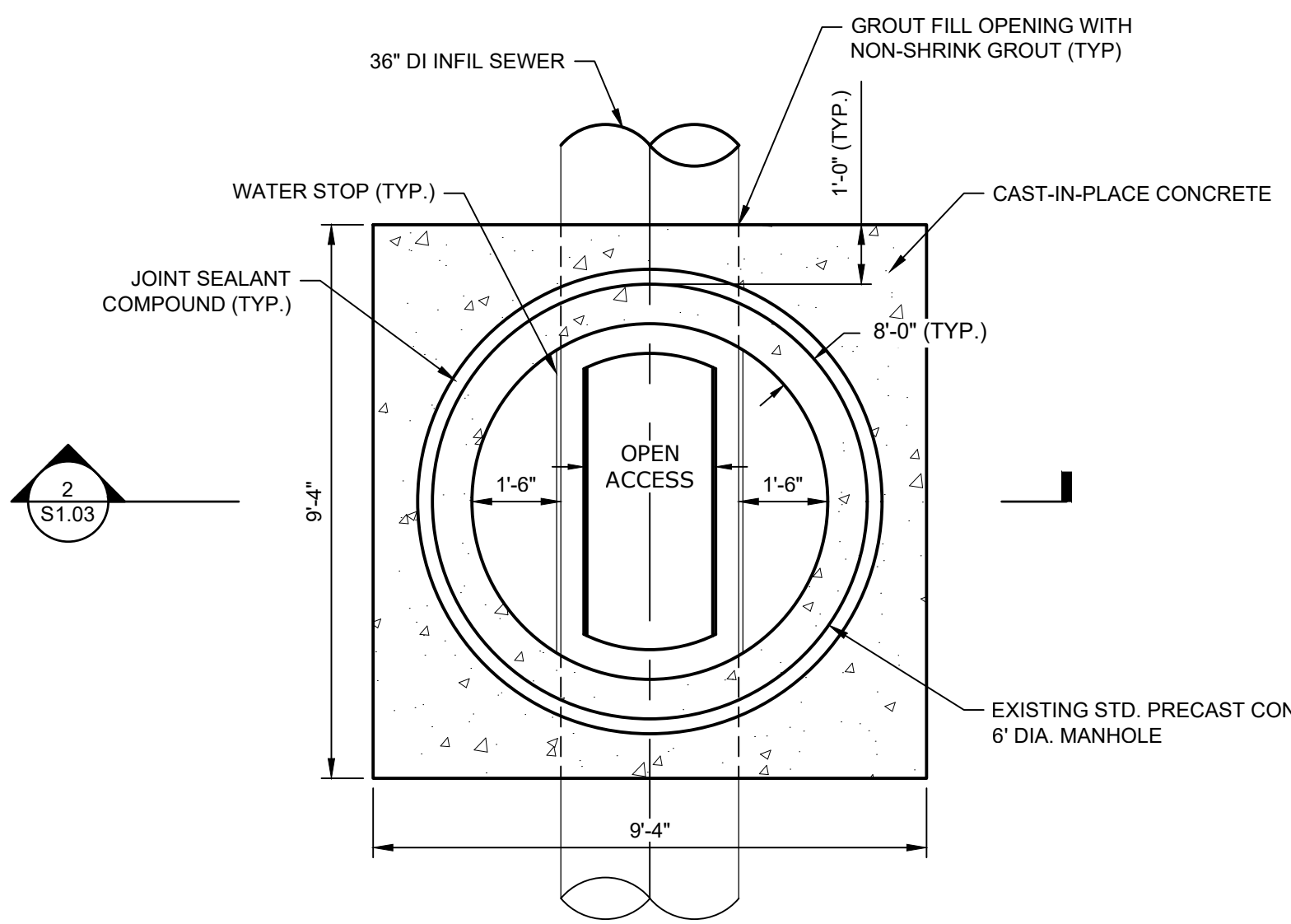
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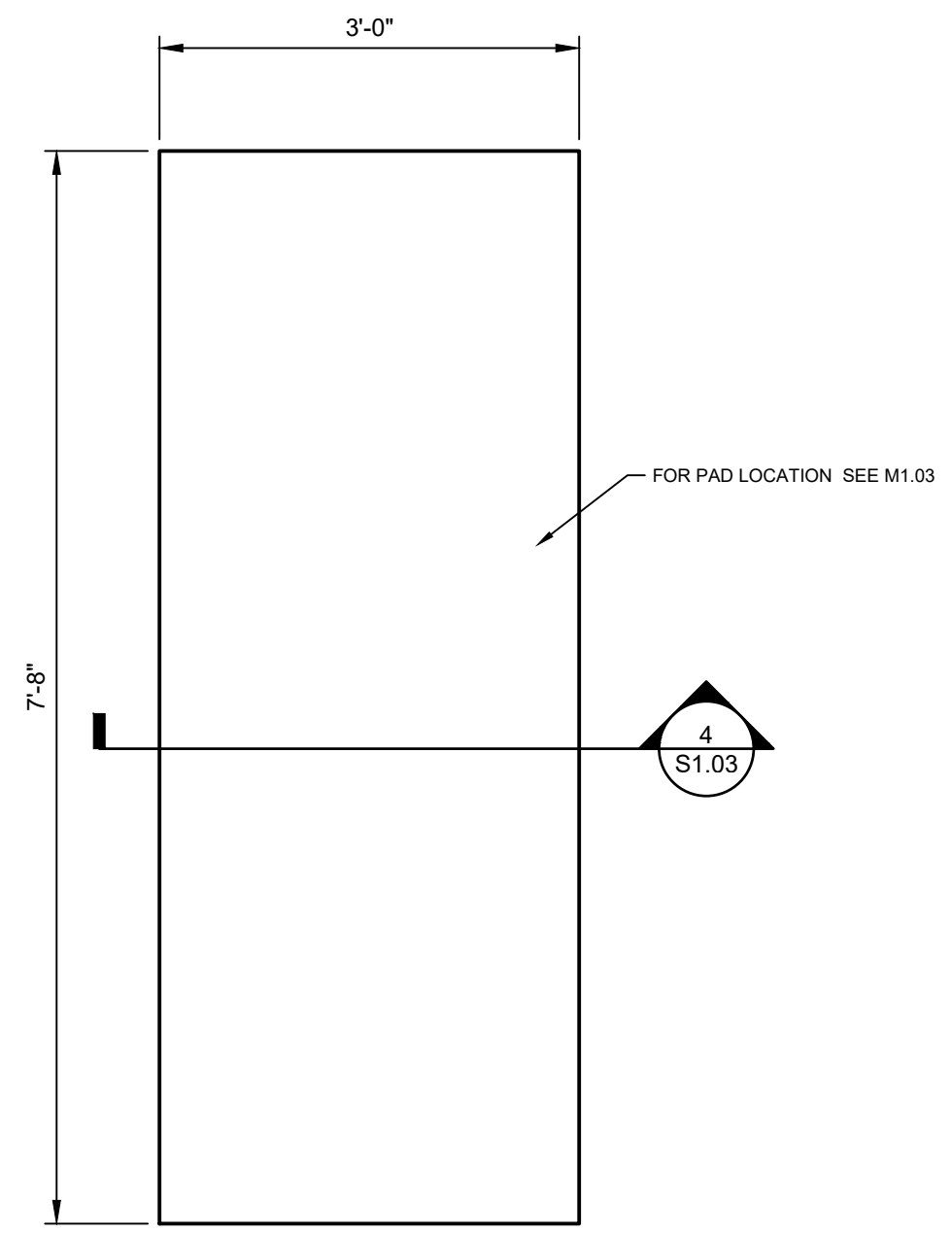


EAST WRF INFLUENT PUMP STATION
REHABILITATION PROJECT
HEADWORKS INFLUENT STRUCTURE PIPE SUPPORTS

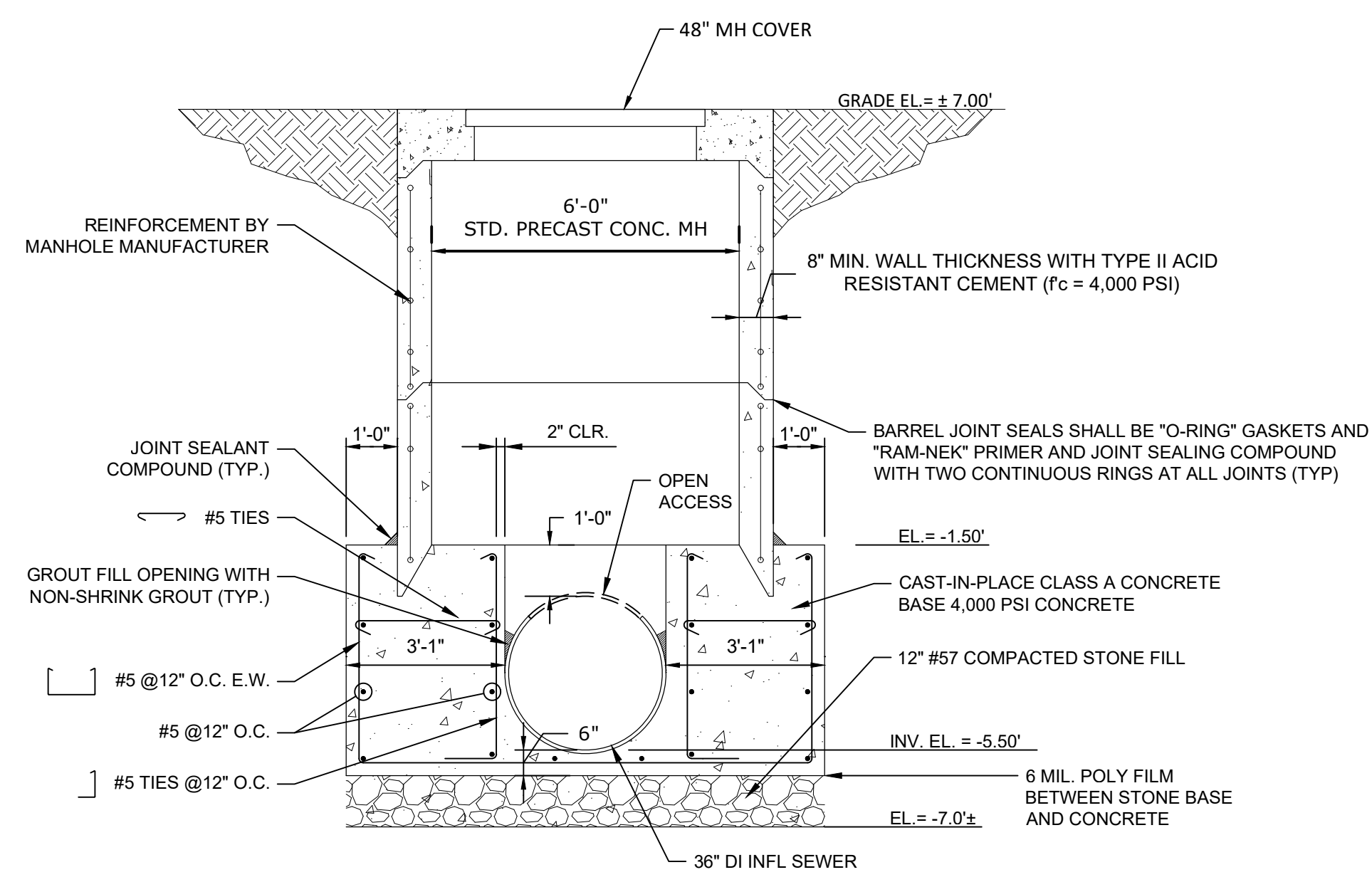
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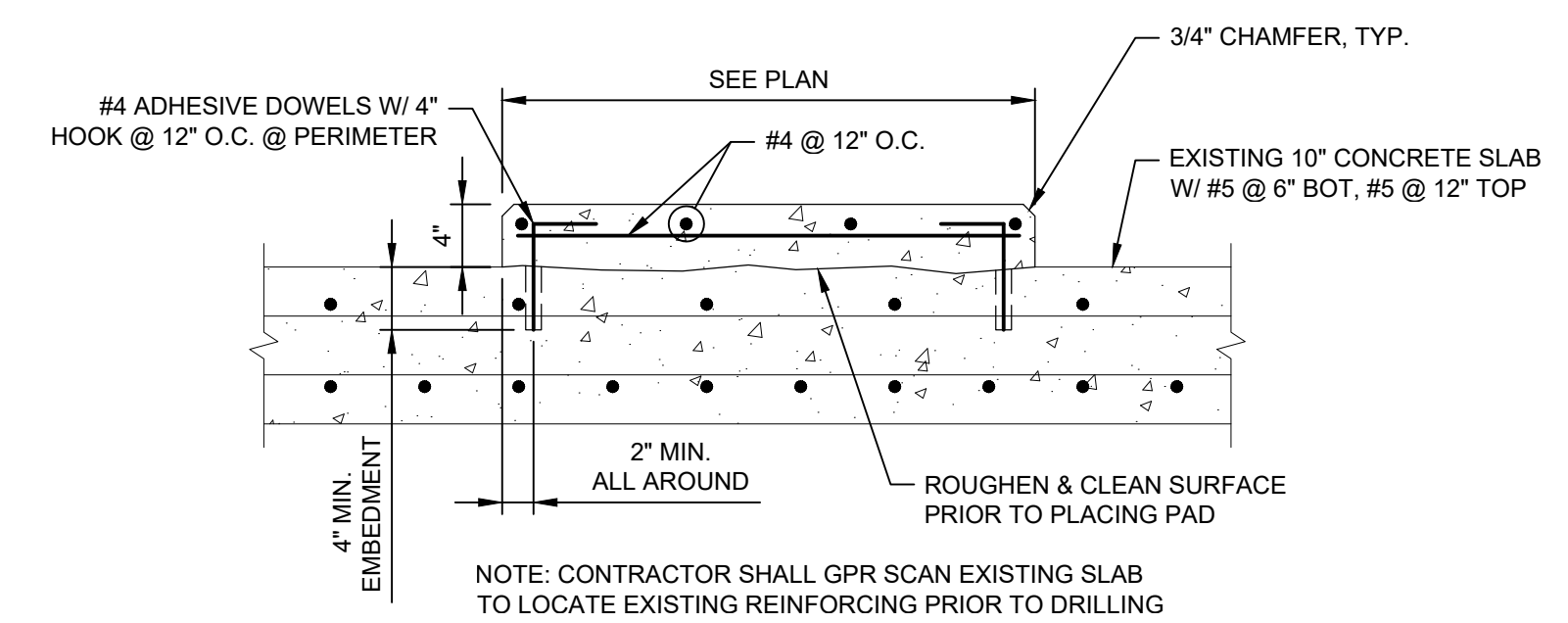
BYPASS MANHOLE PLAN
SCALE: 3/8"=1'-0" 1



EQUIPMENT HOUSEKEEPING PAD
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REF. SHEET M1.03 3

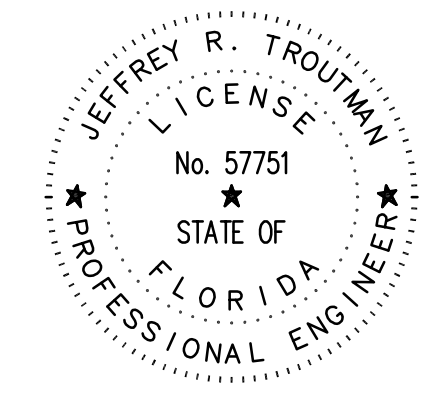


SECTION
SCALE: 3/8"=1'-0" 2



BLOWER ROOM HOUSEKEEPING PAD
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**EAST WRF INFLUENT PUMP STATION
REHABILITATION PROJECT
BYPASS MANHOLE PLAN AND SECTION**

DWG NAME: S0.0.dwg	FIELD BOOK:	SURVEYED BY:	SCALE: VERT. N/A
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