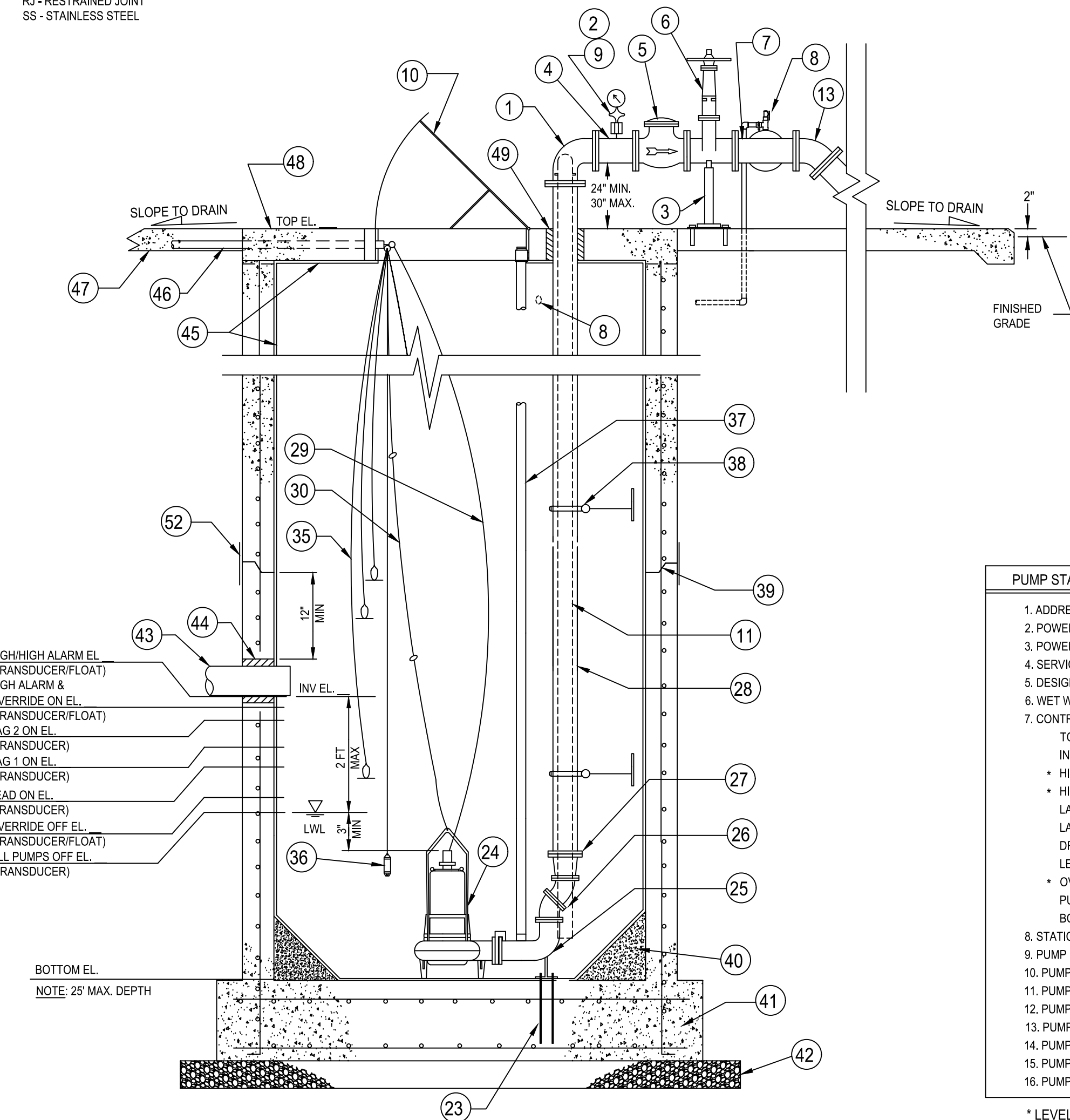
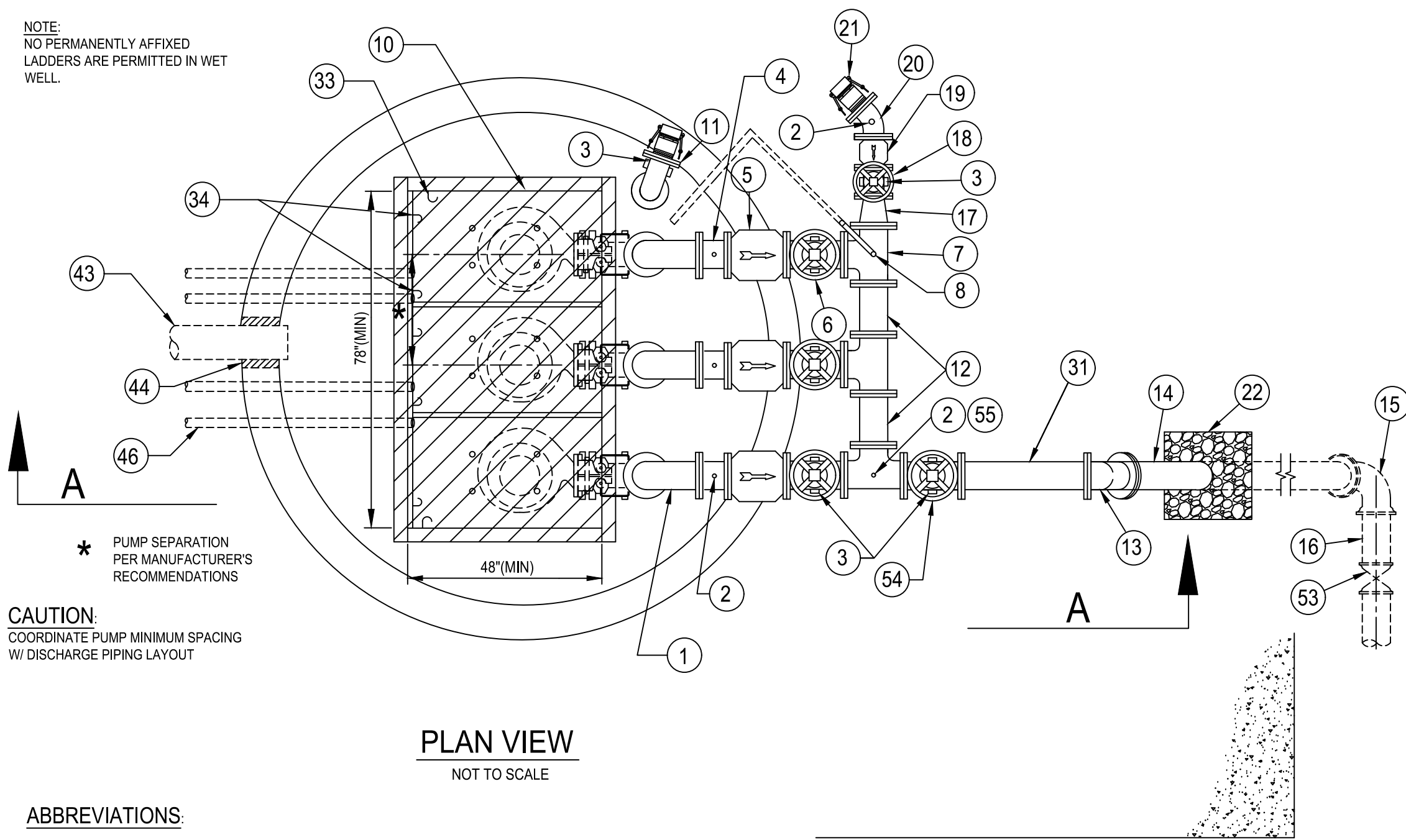


NOTE:  
NO PERMANENTLY AFFIXED  
LADDERS ARE PERMITTED IN WET  
WELL.

CAUTION:  
COORDINATE PUMP MINIMUM SPACING  
W/ DISCHARGE PIPING LAYOUT

#### ABBREVIATIONS:

BFP - BACK-FLOW PREVENTER  
DI - DUCTILE IRON  
FG - FLANGED  
MJ - MECHANICAL JOINT  
PE - PLAIN END  
PS - PUMP STATION  
RJ - RESTRAINED JOINT  
SS - STAINLESS STEEL



SECTION A-A  
NOT TO SCALE

#### KEY:

1. " FG 90° DI BEND (3 REQ.)
2. 1/2" TAP W/ 1/2" x 2" 316 SS NIPPLE & 1/2" LOCKABLE BALL VALVE W/ SS BALL (5 REQ.)
3. ADJUSTABLE PIPE SUPPORT, SIZED AS REQUIRED (5 REQ.) - SEE DETAIL, DRAWING M3
4. " FG DI SPOOL, PIECE, LENGTH AS REQUIRED (6" MIN)
5. " FG IRON BODY FLAPPER DISK CHECK VALVE (3 REQ) PER APP. B
6. " FG IRON BODY RESILIENT SEAT GATE VALVE (3REQ)
7. " x " FG DI TEE W/ BOSS FOR 1" TAP (3 REQ)
8. AIR RELEASE ASSEMBLY TO INCLUDE 1" TAP W/ 1" x 2" 316 SS NIPPLE, 1" SS THREADED TEE, 1" x 1/2" SS REDUCING BUSHING, 1/2" SS BALL VALVE W/ 1/2" PVC THREADED PLUG, AND 1" SS BALL VALVE W/ 1" PVC UNDER-SLAB DRAIN - SEE DETAIL, DRAWING M3
9. COMPOUND PRESSURE GAUGE (STAINLESS STEEL, SILICONE FILLED, W/ SILICONE FILLED DIAPHRAGM SEAL), PROVIDE ONE PER STATION
10. ALUMINUM FRAME & TRIPLE ACCESS HATCHES, HINGED ON DISCHARGE PIPING SIDE CAPABLE OF BEING SECURED IN THE OPEN POSITION. CONTRACTOR SHALL DRILL FOUR 1/2" DIA. HOLES IN EACH HATCH COVER.
11. 6" AUXILIARY SUCTION PIPE ASSEMBLY - SEE DETAIL, DRAWING M2
12. " FG DIP, LENGTH AS REQUIRED
13. " FG 45° BEND
14. " FG x PE DIP, LENGTH AS REQUIRED
15. " MJ 90° BEND W/ RESTRAINED JOINTS
16. " PVC C800 W/ RESTRAINED JOINTS AS REQUIRED (MIN DEPTH OF 48" TO CROWN OF PIPE)
17. " x 1/2" FG REDUCER, AS NEEDED - ONLY FOR PUMP STATIONS W/ 8" OR LARGER DISCHARGE PIPING
18. 6" FG RESILIENT SEAT GATE VALVE
19. 6" FG FLAPPER DISK CHECK VALVE PER APP. B
20. 6" FG 45° BEND
21. EMERGENCY BYPASS/PUMP-IN 6" CAMLOCK COUPLER W/ 6"x4" REDUCING CAMLOCK W/ICAP, SEE DRAWING M2
22. OPENING IN CONCRETE SLAB, GRAVEL FILLED - MINIMUM 6" CLEARANCE AROUND PIPE
23. 3/4" DIA. SS ANCHOR BOLTS & NUTS (DOUBLE NUTS) PER PUMP MANUFACTURER'S RECOMMENDATIONS, EPOXIED INTO BASE SLAB
24. PUMP - HYDROMATIC NON-CLOG OR APPROVED EQUAL W/ FRONT LOAD RAIL SYSTEM (3 REQ)
25. BASE ELBOW TO BE PROVIDED BY PUMP SUPPLIER (3 REQ)
26. " FG 45° BEND, AS REQUIRED FOR DISCHARGE PIPING OFFSET, LOCKING WASHERS REQ'D FOR ALL FG CONNECTIONS IN WET WELL
27. " x " FG REDUCER (3 AS REQUIRED), LOCKING WASHERS REQ'D FOR ALL FG CONNECTIONS IN WET WELL
28. " 316L SS FLANGED DISCHARGE PIPING, LENGTH AS REQUIRED, LOCKING WASHER REQ'D FOR ALL FG CONNECTIONS IN WET WELL
29. PUMP POWER CABLE
30. PUMP LIFTING CABLE (3/8" 316 SS) W/ 4" 316 SS RINGS LOCATED @ 5-FT INTERVALS
31. " FG DI PIPE, LENGTH 36"
32. N/A
33. 316 SS POWER AND TRANSDUCER CABLE HOOKS - SEE DETAIL, DRAWING M2
34. 316 SS CABLE HANGER FOR LEVEL FLOAT SWITCH CABLES - SEE DETAIL, DRAWING M2
35. LEVEL FLOAT SWITCHES (3 REQ'S), TO SERVE AS BACKUP TO PRESSURE TRANSDUCER
36. PRESSURE TRANSDUCER FOR WATER LEVEL CONTROL, SUSPENDED FROM CABLE HOOK, SET AT 18 INCHES ABOVE BOTTOM 2" (O.D.) 316 SS GUIDE RAILS, FRONT MOUNT (2 PER PUMP), OR PER PUMP MANUFACTURER'S RECOMMENDATION
37. 316 SS INTERIOR PIPE SUPPORT - SEE DETAIL, DRAWING M3
38. ELASTOMERIC GASKET
39. NON-SHRINK GROUT FILLET ALL AROUND, 4000 PSI CONCRETE W/ MAX AGGREGATE SIZE OF 3/8" & MIN. SLOPE OF 1:1 (MAX WIDTH:HT. OF 2-FT), TO BE COATED W/ INTERIOR WETWELL PROTECTIVE COATING (SEE #45)
41. FIRST WET WELL RISER SECTION & BASE SLAB SHALL BE MONOLITHICALLY OR INTEGRALLY CAST PER ASTM C478 - REFER TO STRUCTURAL DRAWING S1-S4
42. LEVEL COURSE OF CRUSHED STONE - 6" MIN. THICKNESS
43. PVC, C800, INFLUENT GRAVITY MAIN, TO EXTEND 4" INSIDE WET WELL
44. FLEXIBLE BOOT, FOR INSIDE DROP, SEE DETAIL M3
45. WET WELL INTERIOR PROTECTIVE COATING
46. ELECTRICAL CONDUITS (SCH 80 PVC, 2" MIN.), INSTALLED UNDER GRADE SLAB AND CENTERED IN WET WELL TOP SLAB, FIVE TOTAL - SEE ELECTRICAL DETAILS AND STRUCTURAL DRAWINGS S1-S4
47. GRADE SLAB - REFER TO STRUCTURAL DRAWING S1-S4
48. WET WELL TOP SLAB - REFER TO STRUCTURAL DRAWING S1-S4
49. LINK SEAL
50. 1" BRASS WATER SERVICE W/ APPROVED BFP AND METER - TO BE INCREASED TO 2" SERVICE FOR ALL MASTER PUMP STATIONS, OR FOR PUMP STATIONS WITH WET WELLS DEEPER THAN 20-FT OR GREATER THAN 8-FT IN DIAMETER - SEE DETAIL, DRAWING M2
51. N/A
52. WRAP APPLIED AT EXTERIOR OF WET WELL JOINTS
53. " MJ ECCENTRIC PLUG VALVE W/ RJ - ISOLATION VALVE, TO BE LOCATED ON PUMP STATION PROPERTY AT RIGHT OF WAY
54. " FG IRON BODY RESILIENT SEATED GATE VALVE
55. ELECTRONIC PRESSURE TRANSMITTER AND DIAPHRAGM SEAL (SILICONE FILLED)

NOTE: REFER TO TECHNICAL MANUAL AND/OR TECHNICAL SPECIFICATIONS AS APPLICABLE FOR MATERIALS REQUIREMENTS AND THE LIST OF APPROVED PRODUCTS

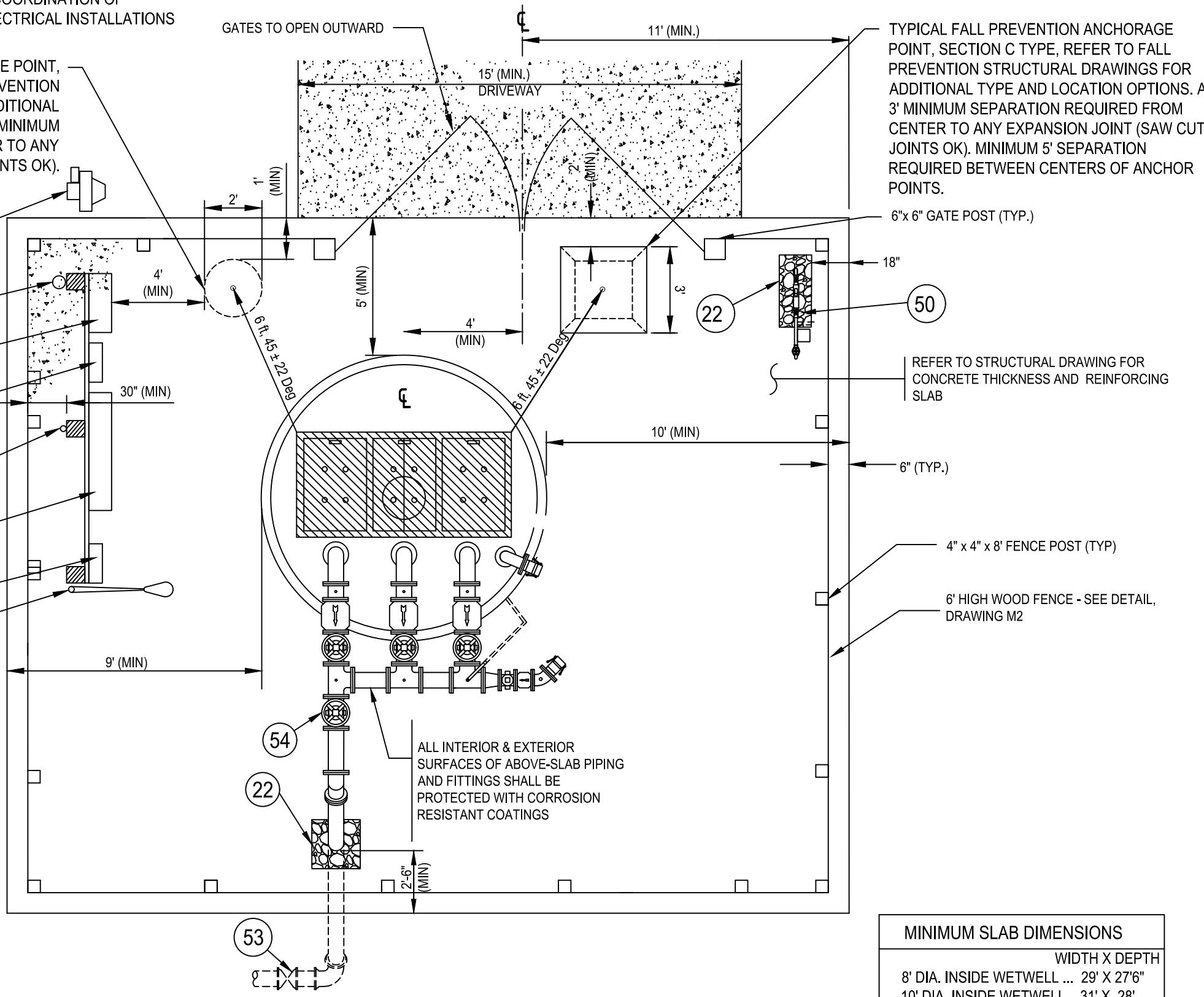
#### PUMP STATION DESIGN NOTES (TYP):

1. IN ORDER TO COORDINATE THE MECHANICAL, ELECTRICAL AND STRUCTURAL INSTALLATION, THE DESIGN ENGINEER SHALL REFER TO HILLSBOROUGH COUNTY'S MECHANICAL DRAWINGS (M1-M3), ELECTRICAL DRAWINGS (E 0.0-E 5.0), STRUCTURAL DRAWINGS (S1-S4), AND THE "HC WATER, WASTEWATER & RECLAIMED WATER TECHNICAL MANUAL FOR SUBDIVISION AND SITE DEVELOPMENT" (LATEST EDITION), AND THE "HC WATER, WASTEWATER & RECLAIMED WATER TECHNICAL SPECIFICATIONS" (LATEST EDITION).
2. THE DESIGN ENGINEER SHALL NOT USE THESE DRAWINGS FOR A SPECIFIC SITE INSTALLATION. A DETAILED SITE PLAN SHALL BE SHOWN IN THE BOX PROVIDED ON THIS SHEET, OR ON A SEPARATE SHEET AS NEEDED. THE SITE PLAN SHALL BE DRAWN TO SCALE AND INCLUDE CRITICAL SITE ELEVATIONS (SU) AS ROAD, SLAB, DRIVEWAY, AND SURROUNDING AREAS - INCLUDING FINISHED FLOOR OF BUILDINGS ON ADJACENT LOTS), DIMENSIONS, HARDSCAPE ELEMENTS, AND THE PUMP STATIONS RELATIONSHIP TO THE SURROUNDING AREA.
3. THESE DRAWINGS REPRESENT THE STANDARD DESIGN FOR ALL HILLSBOROUGH COUNTY WASTEWATER PUMPING STATIONS. IT WAS DEVELOPED TO IMPROVE RELIABILITY AND MAINTAINABILITY, MINIMIZE SPARE PARTS AND INCREASE SERVICE LIFE. ALL REQUESTS FOR DEVIATIONS FROM THIS STANDARD MUST BE MADE IN WRITING TO THE DEVELOPMENT SERVICES DEPARTMENT FOR SUBDIVISION AND SITE DEVELOPMENT, AND TO THE PUBLIC UTILITIES DEPARTMENT (PUD) PROJECT MANAGER FOR ALL CAPITAL IMPROVEMENT PROJECTS. WRITTEN APPROVAL FROM PUD UTILITY DESIGN SECTION MGR. IS REQUIRED BEFORE MODIFICATIONS ARE MADE.
4. THE ENGINEER IS RESPONSIBLE FOR COORDINATING WITH THE PUMP SUPPLIER TO ENSURE THAT PROPER PUMP AND PIPE SPACING IS ACCOMMODATED.
5. PUMP STATION SLAB DIMENSIONS SHALL MEET OR EXCEED MINIMUM SHOWN.
6. THE ENGINEER IS ADVISED THAT COUNTY APPROVAL OF THE PUMP STATION DESIGN DOES NOT CONSTITUTE A RELEASE FROM PROFESSIONAL LIABILITY BY THE ENGINEER NOR SHIFT RESPONSIBILITY FOR ANY DESIGN DECISIONS REPRESENTED HEREIN TO THE COUNTY OR OTHER REGULATORY AGENCY. THE ENGINEER IS RESPONSIBLE FOR THE FINAL ELECTRICAL, MECHANICAL, AND STRUCTURAL DESIGNS.
7. DISCHARGE PIPE SUPPORTS ARE REQUIRED FOR WET WELL DEPTHS GREATER THAN 10 FEET.
8. IF THE INFLUENT INVERT ELEVATION IS GREATER THAN 2-FEET ABOVE LOW WATER LEVEL (LWL), A DROP INVERT CONNECTION SHALL BE REQUIRED. THE DROP INVERT TO BE SET AT THE LEAD-ON ELEVATION (SEE DROP CONNECTION DETAIL, DRAWINGS S2, S4 & M3).
9. LOW WATER LEVEL MUST BE AT LEAST 3" ABOVE TOP OF PUMP. FILL IN THE FOLLOWING INFORMATION: (INSTALLED HEIGHT (PER PUMP MFR.) + 3" = \_\_\_ FT.) ≤ (LWL - BOTTOM EL. = \_\_\_ FT)
10. DUCTILE IRON IN THE WETWELL MUST BE BELOW THE LOW WATER LEVEL.

\* REFER TO ELECTRICAL DRAWINGS FOR  
STANDARD ELECTRICAL DETAILS, EQUIPMENT  
REQUIRED AND FOR COORDINATION OF  
MECHANICAL AND ELECTRICAL INSTALLATIONS

TYPICAL FALL PREVENTION ANCHORAGE POINT,  
SECTION A TYPE, REFER TO FALL PREVENTION  
STRUCTURAL DRAWINGS FOR ADDITIONAL  
TYPE AND LOCATION OPTIONS. A 3' MINIMUM  
SEPARATION REQUIRED FROM CENTER TO ANY  
EXPANSION JOINT (SAW CUT JOINTS OK).

\* ELECTRIC METER AND  
ALARM SILENCER  
\* ALARM HORN  
& BEACON  
\* JB1  
\* JB4  
\* CELLULAR ANTENNA  
\* RTU/CONTROL PANEL  
\* MAIN DISCONNECT  
\* AREA LIGHT



STANDARD FOOTPRINT - MIN. DIMENSIONS  
NOT TO SCALE

SHOW TO SCALE AND INCLUDE ELEVATIONS AS TO ROAD, SLAB, DRIVEWAY  
AND SURROUNDING AREAS.

DETAILED SITE PLAN  
(BY ENGINEER) SCALE: 1"=

REV. NO.	DESCRIPTION	DATE
2	REVISED TO REFLECT CURRENT COUNTY STANDARDS	8/21/23
1	REVISED SLAB DIMENSIONS	10/28/21

SEAL

SEAL

SEAL



**Hillsborough  
County Florida**

PUBLIC UTILITIES DEPARTMENT  
TECHNICAL SERVICES DIVISION  
925 E. TWIGGS STREET/TAMPA FLORIDA 33602/PH. (813) 272-5977

STANDARD WASTEWATER  
TRIPLEX PUMP STATION  
MECHANICAL LAYOUT AND SITE PLAN

ISSUE DATE: OCTOBER 2023  
PROJ. #  
DRAWN  
DESIGNED  
CHECKED  
PROJ. MGR.

SCALE  
HORIZONTAL:  
VERTICAL:  
NA

FILE NUMBER  
DRAWING NUMBER  
M1

STATUS:  
FINAL DESIGN



NOT TO SCALE

NOT TO SCALE

FRONT VIEW

SIDE VIEW

NOT TO SCALE

NOTES:

1. ALL PIPING TO BE 2-INCHES UP THROUGH THE LOCKING CURB STOP.
2. 2 INCH SERVICE LINE SHALL USE A 2 INCH TAPPING SLEEVE & VALVE AT THE WATER MAIN CONNECTION.
3. FOR LARGE PUMP STATIONS (WET WELLS 10 FT. DIA. OR GREATER, OR 20 FT. OR MORE DEPTH), A 2 INCH WATER METER AND SERVICE SHALL BE PROVIDED. HOSE CONNECTION TO BE 2 INCH MALE CAMLOCK CONNECTOR.

## WATER SERVICE DETAIL

NOT TO SCALE

NOT TO SCALE

GATE

FENCE

### FENCE & GATE CONSTRUCTION NOTES

1. ALL WOOD SHALL BE PRESSURE TREATED. POSTS SHALL BE RATED FOR BURIED WOOD.
2. ALL STRUCTURAL MEMBERS AND CROSS BRACING AS SHOWN.
3. CROSS BRACING SHALL BE ON INSIDE OF GATE.
4. USE HOT DIP GALVANIZED OR STAINLESS STEEL HARDWARE, FASTENERS, DROP RODS, CABLES, ETC. FOR ALL FENCE AND GATE CONSTRUCTION.
5. ALL NAIL & SCREW HEADS SHALL BE SET FLUSH W/ WOOD SURFACE (NOT COUNTER-SUNK).
6. USE TAMPER PROOF HEAVY DUTY HINGES AND LATCHES ON MAIN LEAF OF THREE HINGES PER GATE LEAF.
7. SOME PUMP STATION LOCATIONS MAY REQUIRE ARCHITECTURAL STYLE FENCING - CONSULT COUNTY.

### PUMP STATION ENCLOSURE DETAIL

NOT TO SCALE

1	REVISED, TO REFLECT CURRENT COUNTY STANDARDS	8/21/23
REV.NO.	DESCRIPTIONS REVISIONS	DATE



**Hillsborough  
County** Florida

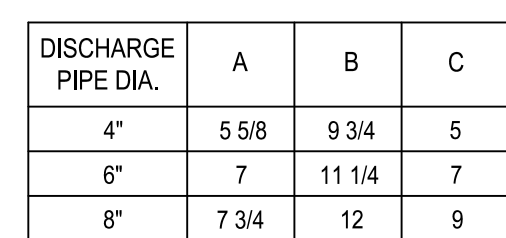
PUBLIC UTILITIES  
WATER RESOURCES DEPARTMENT  
925 E. TWIGGS STREET/TAMPA FLORIDA 33602/PH. (813) 272-5977

## STANDARD WASTEWATER TRIPLEX PUMP STATION

## MECHANICAL DETAILS

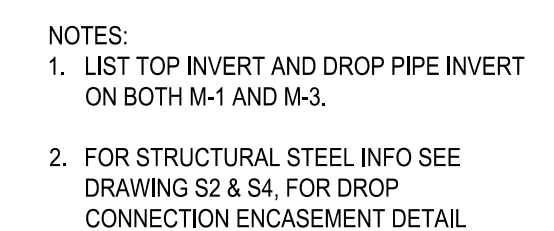
ISSUE DATE: OCTOBER 2023	SCALE	FILE NUMBER
PROJ. #	HORIZONTAL:	DRAWING NUMBER
DRAWN		
DESIGNED	VERTICAL:	M2
CHECKED	NA	
PROJ. MGR.		

STATUS: FINAL DESIGN



**BRACKET EXTENSION DETAIL**

NOT TO SCALE



### DROP CONNECTION DETAIL

NOT TO SCALE

[illegible]

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County** Florida

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WATER RESOURCES DEPARTMENT  
925 E. TWIGGS STREET/TAMPA FLORIDA 33602/PH. (813) 272-5977

STANDARD WASTEWATER  
TRIPLEX PUMP STATION

## MECHANICAL DETAILS

ISSUE DATE: OCTOBER 2023  
 PROJ. # \_\_\_\_\_  
 DRAWN \_\_\_\_\_  
 DESIGNED \_\_\_\_\_  
 CHECKED \_\_\_\_\_  
 PROJ. MGR. \_\_\_\_\_

SCALE  
HORIZONTAL:  
VERTICAL:  
NA

FILE NUMBER  
DRAWING NUMBER  
M3

STATUS: FINAL DESIGN