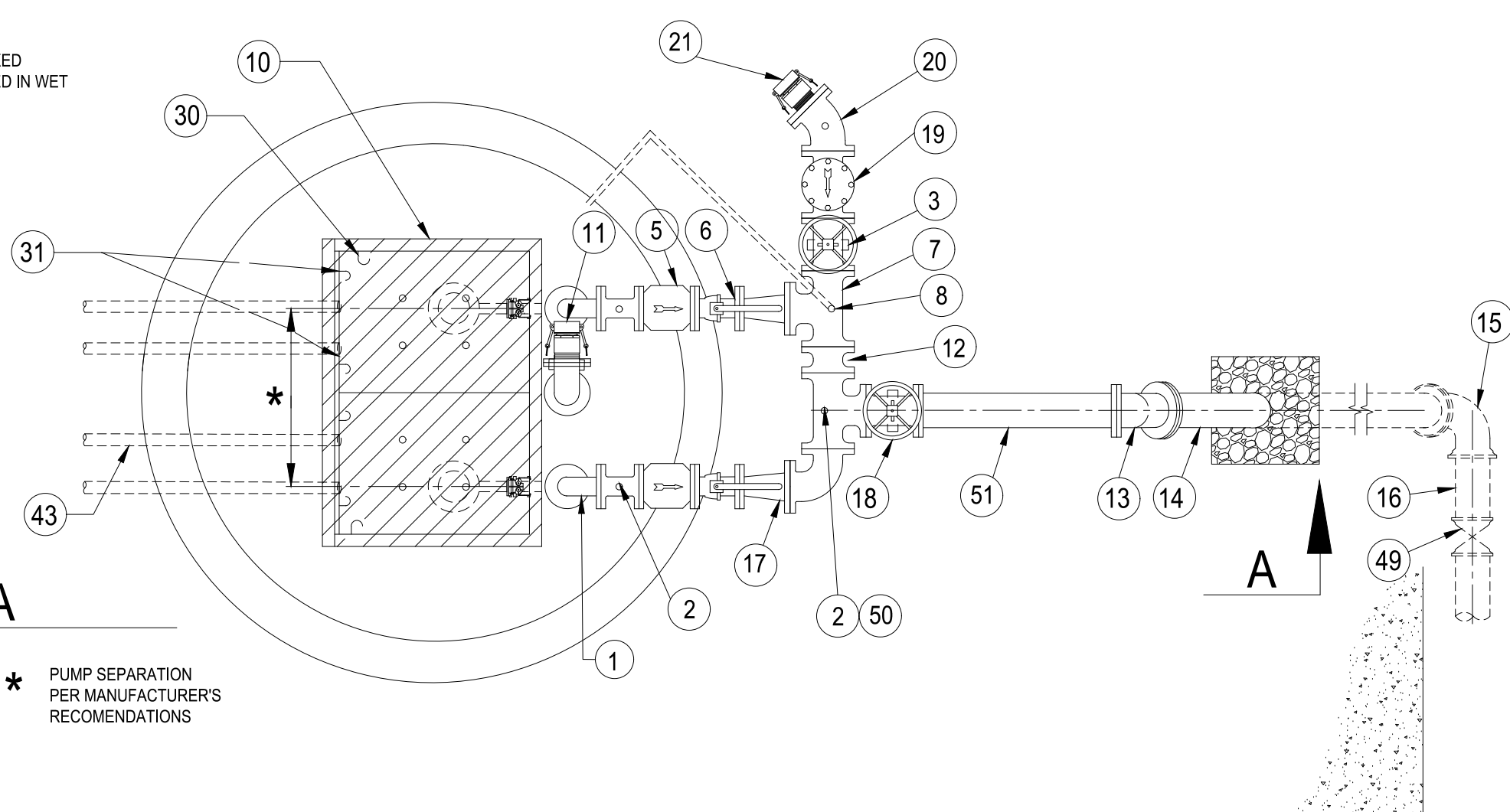


NOTE:  
NO PERMANENTLY AFFIXED  
LADDERS ARE PERMITTED IN WET  
WELL.



**PLAN VIEW**  
NOT TO SCALE

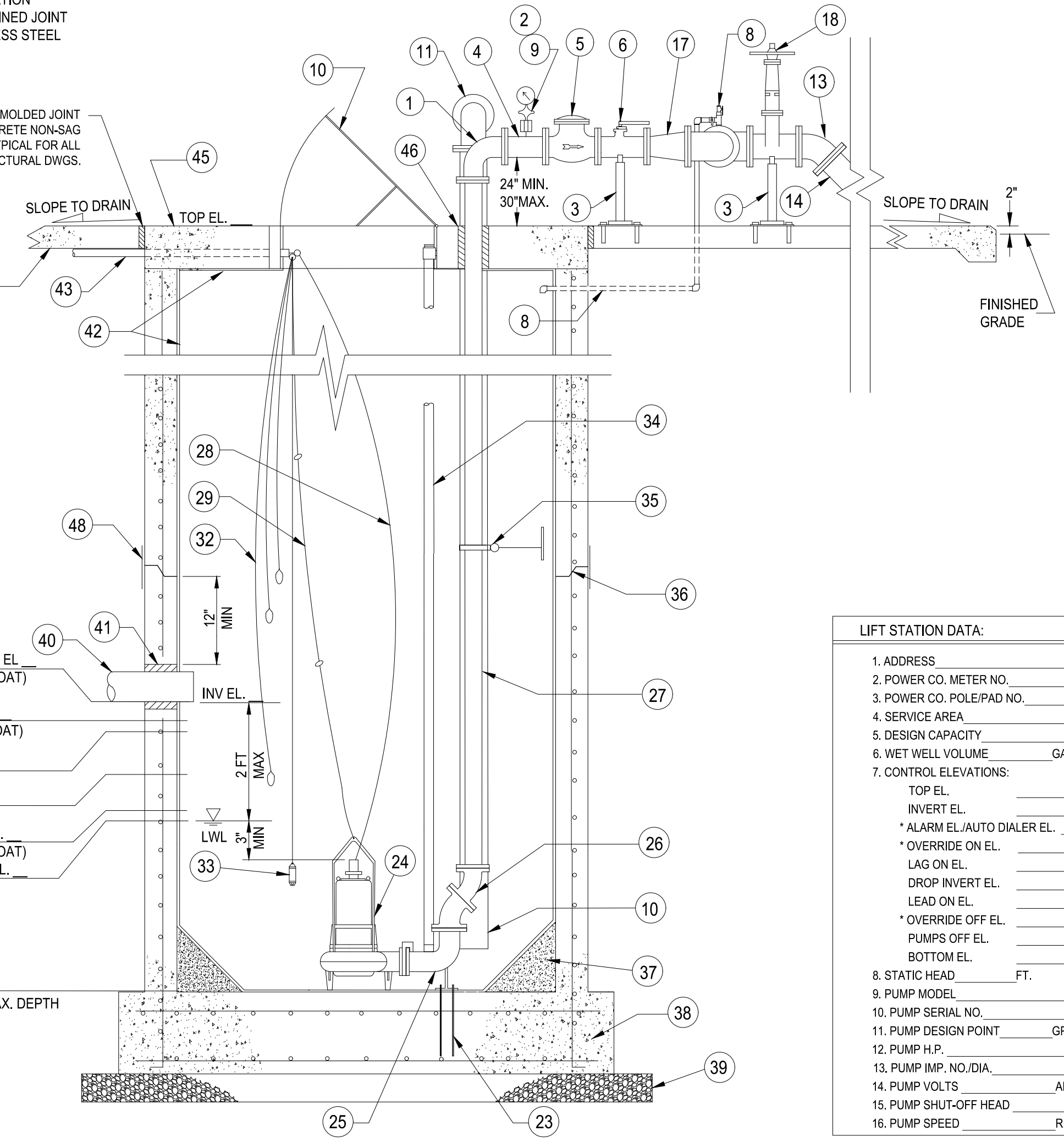
**CAUTION:**  
COORDINATE PUMP MINIMUM  
SPACING W/ DISCHARGE PIPING  
LAYOUT

**ABBREVIATIONS:**

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

LOCKING WASHER REQ'D FOR ALL FG CONNECTIONS IN WET WELL

1/2" EXP. JOINT WITH REMOLDED JOINT MATERIAL SEALED WITH CONCRETE NON-SAG POLYURETHANE SEALANT (TYPICAL FOR ALL EXP. JOINTS) SEE STRUCTURAL DWGS.



**SECTION A-A**  
NOT TO SCALE

- HIGH/HIGH ALARM EL. (TRANSDUCER/FLOAT)
- HIGH ALARM/OVERRIDE ON EL. (TRANSDUCER/FLOAT)
- LAG ON EL. (TRANSDUCER)
- LEAD ON EL. (TRANSDUCER)
- OVERRIDE OFF EL. (TRANSDUCER)
- ALL PUMPS OFF EL. (TRANSDUCER)

LIFT STATION DATA:	
1. ADDRESS	_____
2. POWER CO. METER NO.	_____
3. POWER CO. POLE/PAD NO.	_____
4. SERVICE AREA	_____
5. DESIGN CAPACITY	_____ GPM
6. WET WELL VOLUME	_____ GALLONS FT. DIA.
7. CONTROL ELEVATIONS:	
TOP EL.	_____
INVERT EL.	_____
* ALARM EL./AUTO DIALER EL.	_____
* OVERRIDE ON EL.	_____
LAG ON EL.	_____
DROP INVERT EL.	_____ (IF REQUIRED)
LEAD ON EL.	_____
* OVERRIDE OFF EL.	_____
PUMPS OFF EL.	_____
BOTTOM EL.	_____
8. STATIC HEAD	_____ FT.
9. PUMP MODEL	_____
10. PUMP SERIAL NO.	_____
11. PUMP DESIGN POINT	_____ GPM @ _____ TDH
12. PUMP H.P.	_____ PHASE
13. PUMP I.M.P. NO./DIA.	_____
14. PUMP VOLTS	_____ AMPS
15. PUMP SHUT-OFF HEAD	_____ FT.
16. PUMP SPEED	_____ RPM

\* LEVEL FLOAT SWITCHES

**KEY:**

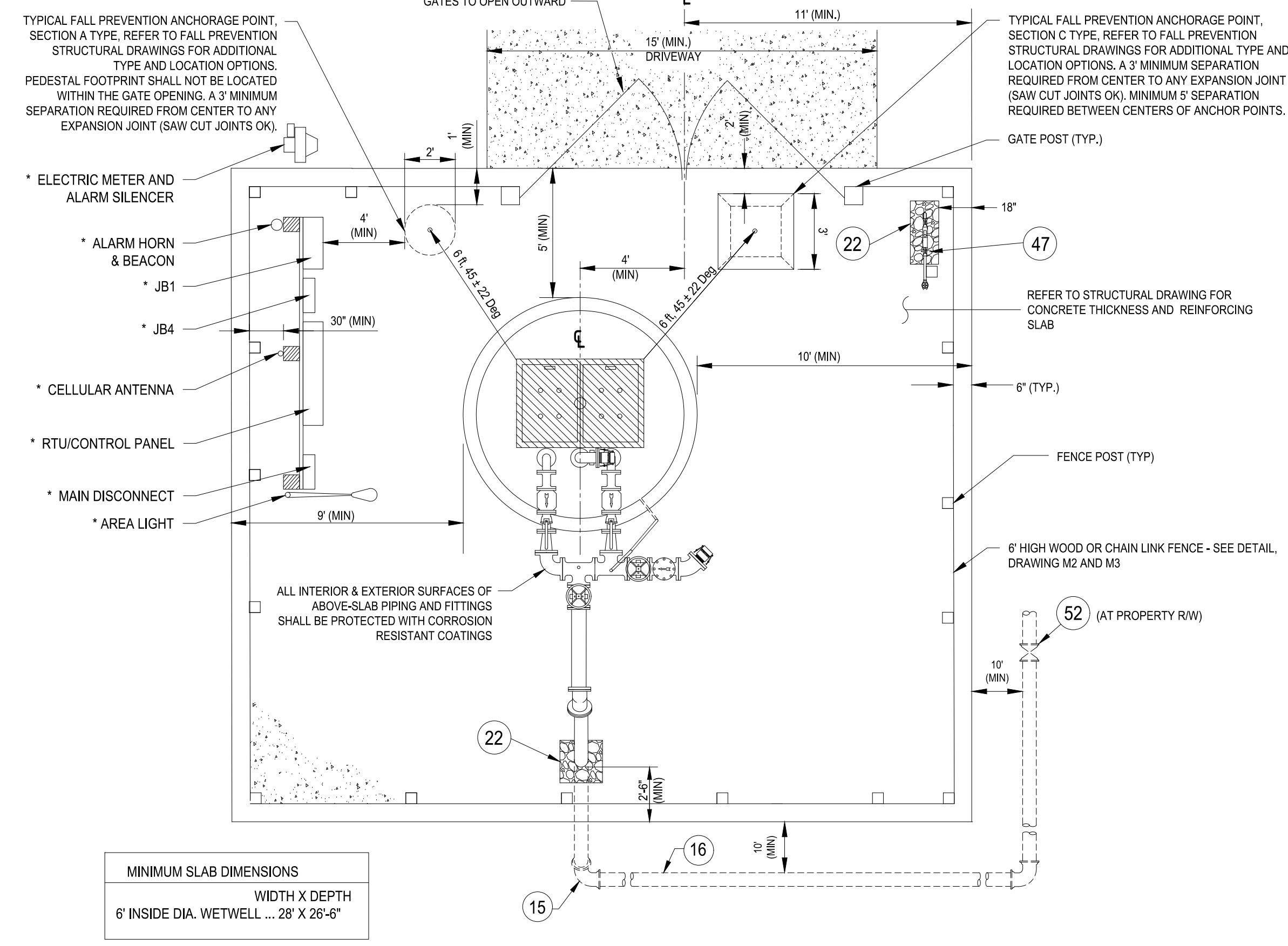
1. 2" FG 90° SS BEND (2 REQ.)
2. 1/2" TAP W/ 1/2" x 2" 316 SS NIPPLE & 1/2" LOCKABLE BALL VALVE W/ SS BALL (4 TYP.)
3. ADJUSTABLE PIPE SUPPORT, SIZED AS REQUIRED (4 REQ.) - SEE DETAIL, DRAWING M3
4. 2" FG SS SPOOL PIECE, LENGTH AS REQUIRED (8" MIN)
5. 2" FG SS FLAPPER DISK CHECK VALVE (2 REQ)
6. 2" FG SS LOCKABLE BALL VALVE (2 REQ)
7. 4" x 4" FG DI TEE W/ BOSS FOR TAP (2 REQ.)
8. MANUAL 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 & DOUBLE ACCESS HATCH W/ 30" x 36" MIN. OPENING, HINGED ON DISCHARGE PIPING SIDE AND CAPABLE OF BEING SECURED IN THE OPEN POSITION. CONTRACTOR SHALL DRILL EIGHT 1/2" DIA. HOLES IN HATCH COVER. AUXILIARY SUCTION PIPE ASSEMBLY - SEE DETAIL, DRAWING M2
11. 4" FG DIP, LENGTH AS REQUIRED
12. 4" FG 45° BEND
13. 4" FG x PE DIP, LENGTH AS REQUIRED
14. 4" MU 90° BEND W/ RESTRAINED JOINTS
15. 4" PVC C900 W/ RESTRAINED JOINTS AS REQUIRED (MIN DEPTH OF 48" TO CROWN OF PIPE)
16. 2" x 4" FG SS REDUCER
17. 4" FG RESILIENT SEAT GATE VALVE (2 REQ)
18. 4" FG FLAPPER DISK CHECK VALVE PER APP. B
19. 4" FG 45° BEND
20. EMERGENCY BYPASS PUMP-IN 4" CAMLOCK MALE COUPLER W/ CAP, THREADED NIPPLE AND FLANGE
21. OPENING IN CONCRETE SLAB, GRAVEL FILLED - MINIMUM 6" CLEARANCE AROUND PIPE
22. 3/4" DIA. SS ANCHOR BOLTS & NUTS (DOUBLE NUTS) PER PUMP MANUFACTURER'S RECOMMENDATIONS, EPOXIED INTO BASE SLAB
23. PUMP - GRINDER W/ FRONT LOAD RAIL SYSTEM (2 REQ)
24. BASE ELBOW TO BE PROVIDED BY PUMP SUPPLIER (2 REQ), OUTLET TO HAVE THREADED NIPPLE AND FLANGE.
25. 2" FG 45° BEND (2 - AS REQUIRED FOR OFFSET IN WET WELL), LOCKING WASHER REQ'D FOR ALL FG CONNECTIONS IN WET WELL
26. 2" 316L SS SCHEDULE 40 FLANGED DISCHARGE PIPING, LENGTH AS REQUIRED. LOCKING WASHER REQ'D FOR ALL FG CONNECTIONS IN WET WELL
27. POWER CABLES TO PUMPS
28. PUMP LIFTING CABLES (3/8" 316 SS) W/ 4" 316 SS RINGS LOCATED @ 5-FT INTERVALS
29. 316 SS POWER CABLE HOOKS - SEE DETAIL, DRAWING M2
30. 316 SS CONTROL CABLE HANGER FOR LEVEL TRANSDUCER AND FLOAT SWITCH CABLES - SEE DETAIL, DRAWING M2
31. LEVEL FLOAT SWITCHES (3 MIN.), TO SERVE AS BACK-UP LEVEL SENSORS TO PRESSURE TRANSDUCER
32. PRESSURE TRANSDUCER FOR WATER LEVEL CONTROL, SUSPENDED FROM CONTROL CABLE HOOK. SET AT 18 INCHES ABOVE BOTTOM
33. 3/4" (O.D.) 316 SS GUIDE RAILS, FRONT MOUNT (2 PER PUMP), OR PER PUMP MANUFACTURER'S RECOMMENDATION
34. 316 SS INTERIOR PIPE SUPPORT - SEE DETAIL, DRAWING M3
35. ELASTOMERIC GASKET
36. 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 WET WELL PROTECTIVE COATING (SEE #42)
37. ASTM C478 - REFER TO STRUCTURAL DRAWING S1-S4
38. LEVEL COURSE OF CRUSHED STONE - 4" MIN. THICKNESS
39. PVC, C900 INFLUENT GRAVITY MAIN, TO EXTEND 4" INSIDE WET WELL
40. FLEXIBLE SEAL
41. WET WELL INTERIOR PROTECTIVE COATING
42. ELECTRICAL CONDUITS (SCH 80 PVC, 2" MIN.), INSTALLED UNDER GRADE SLAB AND CENTERED IN WET WELL TOP SLAB. FOUR TOTAL - SEE ELECTRICAL DETAILS AND STRUCTURAL DRAWING S1-S4
43. GRADE SLAB - REFER TO STRUCTURAL DRAWING S1-S4
44. WET WELL TOP SLAB - REFER TO STRUCTURAL DRAWING S1-S4
45. LINK SEAL
46. 1" BRASS WATER SERVICE W/ APPROVED BFP AND METER - SEE DETAIL, DRAWING M2
47. WRAP APPLIED AT EXTERIOR OF WET WELL JOINTS
48. 4" MJ PLUG VALVE W/ RJ - ISOLATION VALVE, TO BE LOCATED ON LIFT STATION PROPERTY AT RIGHT OF WAY.
49. ELECTRONIC PRESSURE TRANSMITTER WITH DIAPHRAGM SEAL (SILICONE FILLED).
50. 4" FG DI PIPE, LENGTH 36"
51. 4" MJ ECCENTRIC PLUG VALVE W/ RJ - ISOLATION VALVE, TO BE LOCATED ON LIFT STATION PROPERTY AT RIGHT OF WAY.

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

**LIFT 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 (SUCH AS ROAD, SLAB, DRIVEWAY, AND SURROUNDING AREAS - INCLUDING FINISHED FLOOR OF BUILDINGS ON ADJACENT LOTS), DIMENSIONS, HARDSCAPE ELEMENTS, AND THE LIFT STATION'S RELATIONSHIP TO THE SURROUNDING AREA.
3. THESE DRAWINGS REPRESENT THE STANDARD DESIGN FOR ALL HILLSBOROUGH COUNTY WASTEWATER LIFT 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. LIFT STATION SLAB DIMENSIONS SHALL MEET OR EXCEED MINIMUM SHOWN.
6. THE ENGINEER IS ADVISED THAT COUNTY APPROVAL OF THE LIFT 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 THE LOW WATER LEVEL (LWL), A DROP INVERT CONNECTION SHALL BE REQUIRED. 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]

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



MINIMUM SLAB DIMENSIONS  
WIDTH X DEPTH  
6" INSIDE DIA. WETWELL ... 28" X 26"-6"

**STANDARD FOOTPRINT - MIN. DIMENSIONS**  
SCALE: 1" = 4'-0"

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

**DETAILED SITE PLAN**  
(BY ENGINEER) SCALE: 1" = 4'-0"

REV. NO.	DESCRIPTIONS / REVISIONS	DATE
3	REVISED TO REFLECT CURRENT COUNTY STANDARDS	8/20/25
2	REVISED TO REFLECT CURRENT COUNTY STANDARDS	8/17/23
1	REVISED SLAB DIMENSIONS	10/28/21

SEAL

SEAL

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

STANDARD WASTEWATER GRINDER LIFT STATION

MECHANICAL LAYOUT AND SITE PLAN

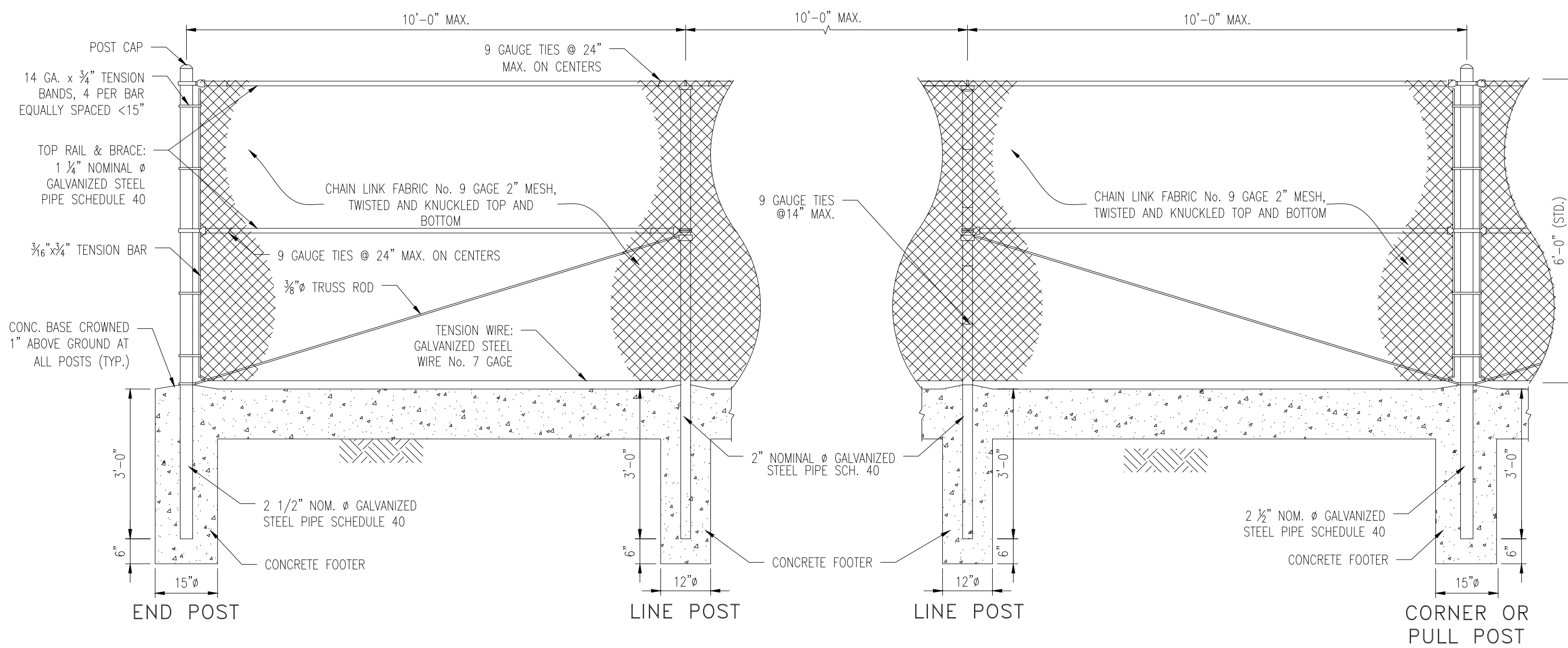
ISSUE DATE: OCTOBER 2025

SCALE: HORIZONTAL

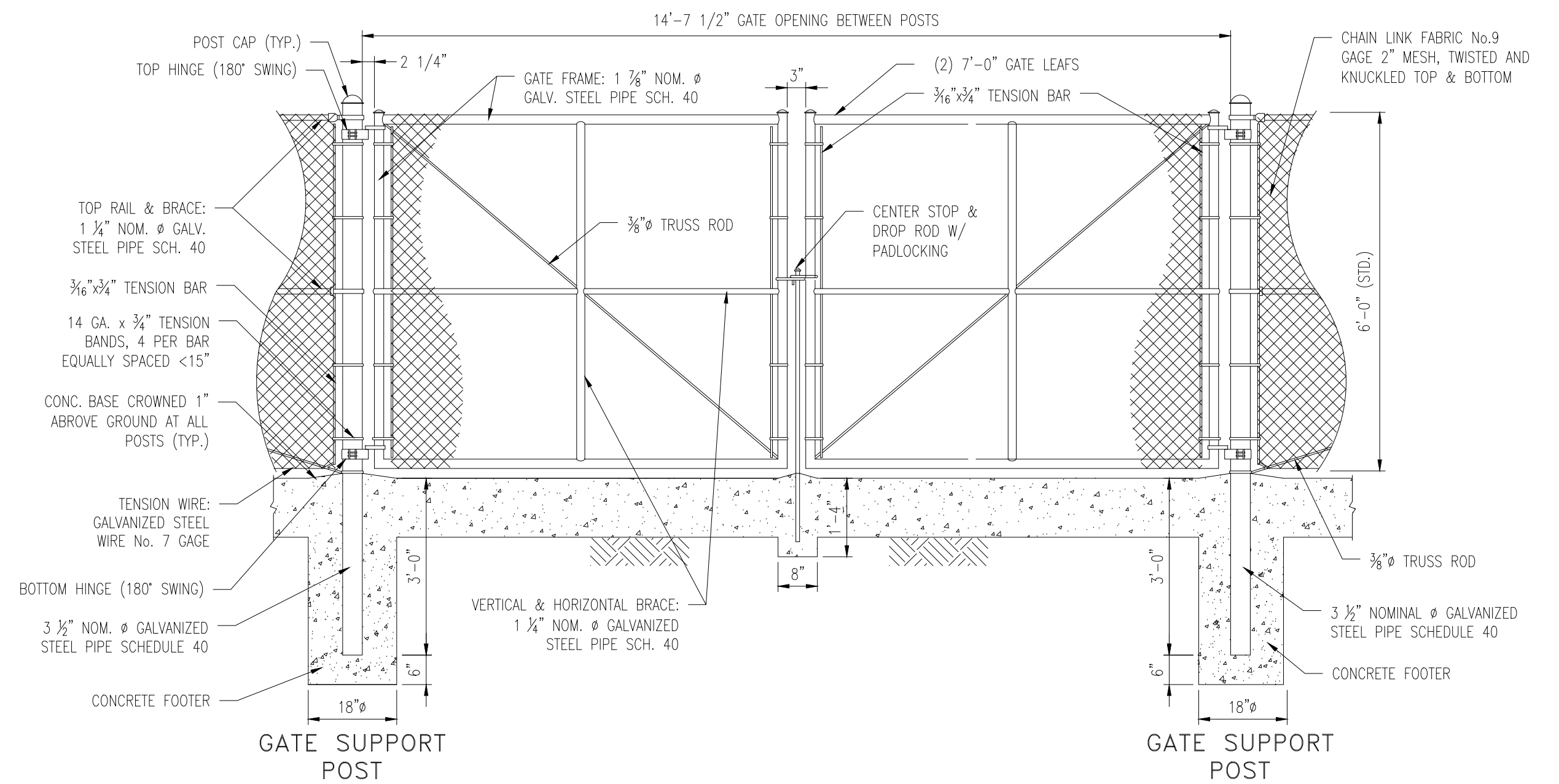
FILE NUMBER: M1

STATUS: FINAL DESIGN





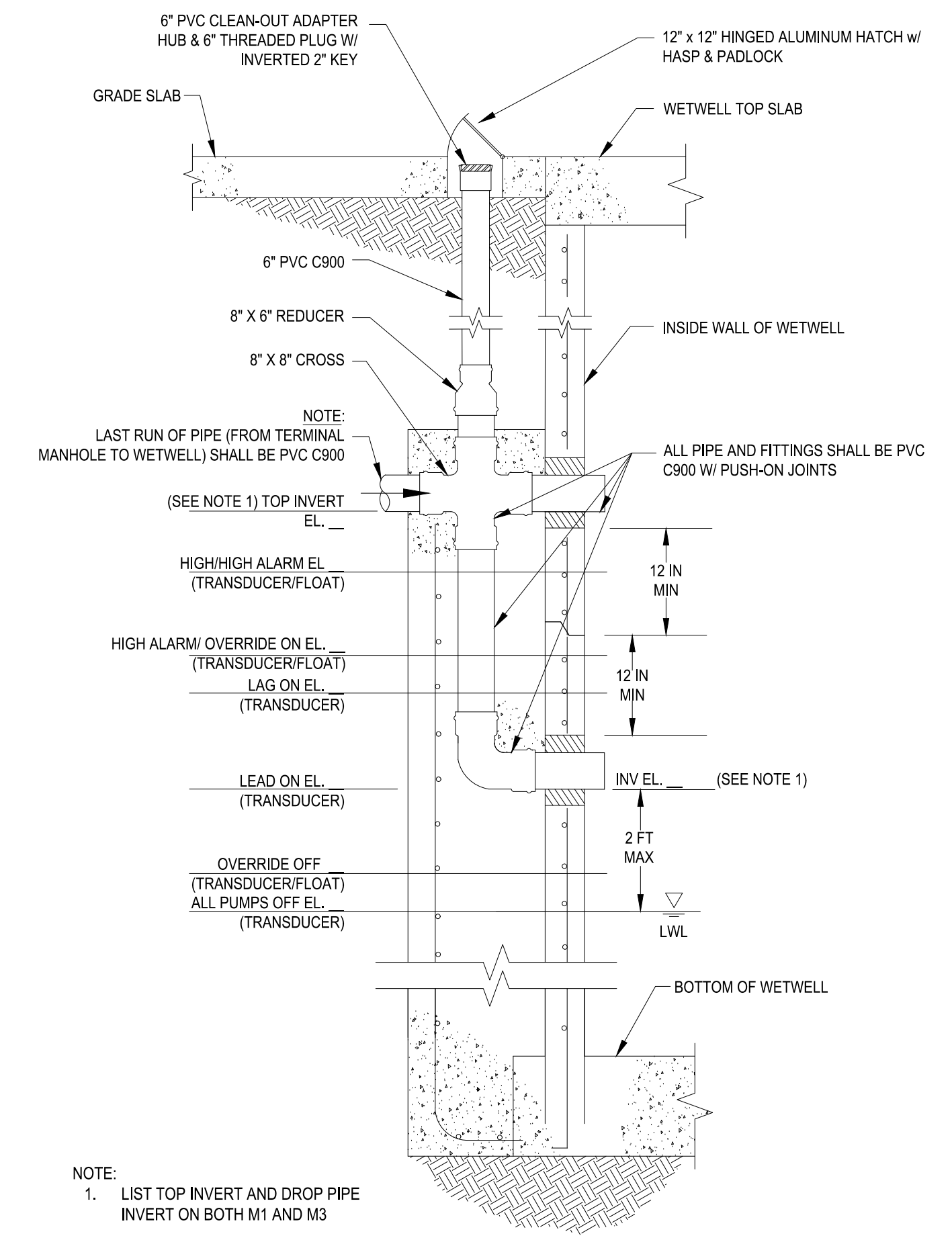
**6' HIGH CHAIN LINK FENCE**  
NOT TO SCALE



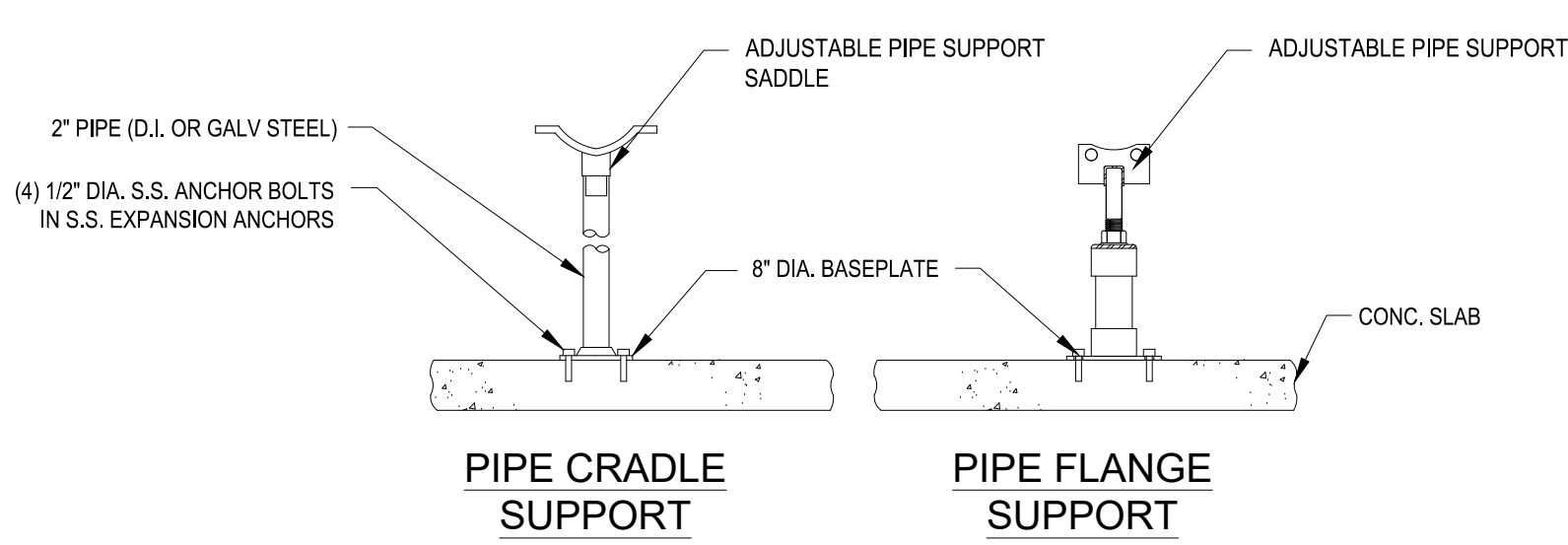
**DOUBLE SWING GATE DETAIL**  
NOT TO SCALE

**NOTES:**

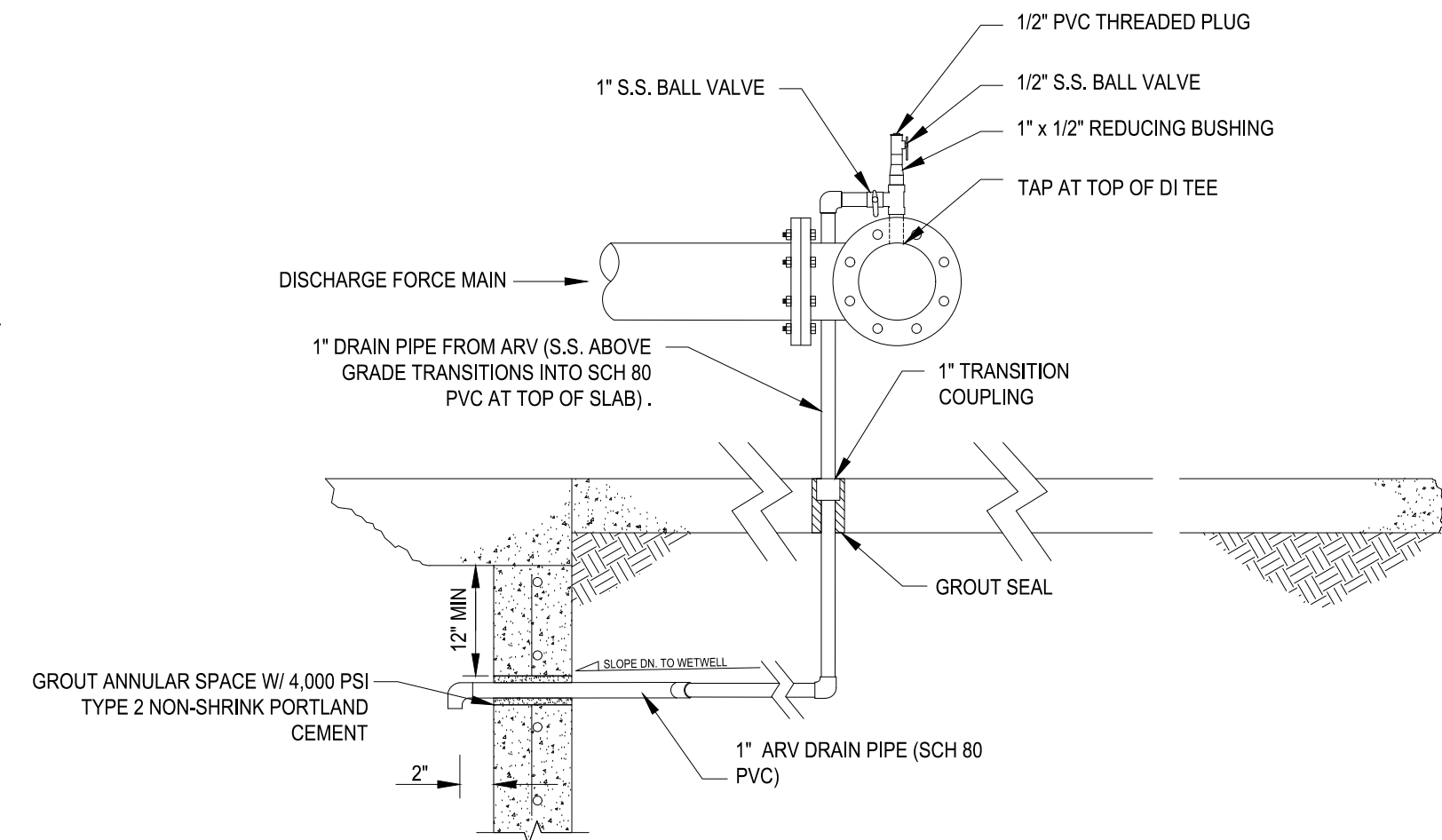
- 1- ALL FENCE, GATE, RAILS, POSTS, BRACKETS, BOLTS, ETC. USED FOR LIFT STATION ENCLOSURE SHALL BE ZINC DIPPED AND BLACK PVC COATED IN ACCORDANCE WITH HILLSBOROUGH COUNTY SPECIFICATION 335003 WASTEWATER LIFT STATION.
- 2- BOND FENCE TO STATION GROUNDING SYSTEM.
- 3- EMBEDDED CONCRETE PORTION OF FENCE POSTS SHALL HAVE MASTIC SEAL OR EQUAL COATING TO A MINIMUM OF 6\"/>



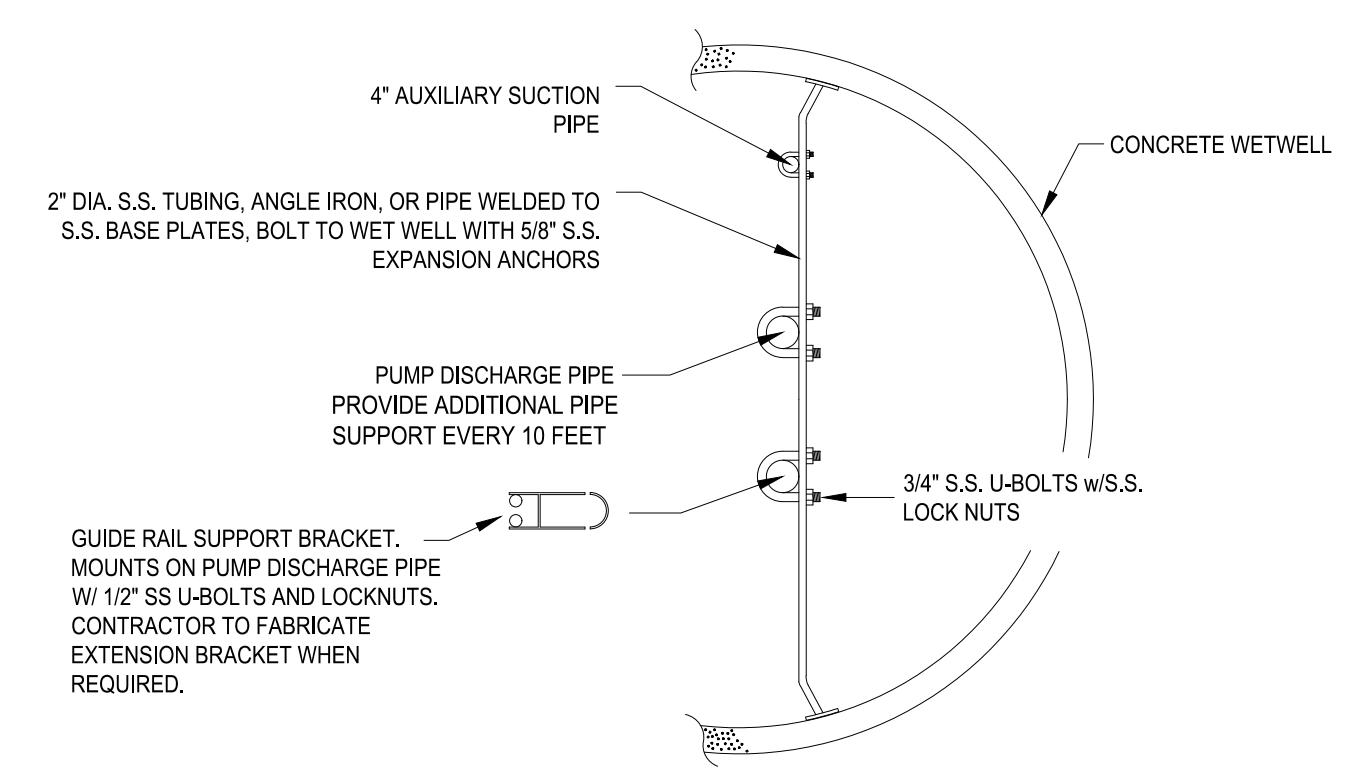
**DROP CONNECTION DETAIL**  
NOT TO SCALE



**EXTERIOR PIPE SUPPORT DETAIL**  
NOT TO SCALE



**ARV DRAIN PIPE ASSY.**  
NOT TO SCALE



**INTERIOR PIPE & GUIDE RAIL SUPPORTS - TOP VIEW**  
NOT TO SCALE

**INSTALLATION NOTE:**  
CONTRACTOR TO REFER TO DRAWINGS M1, M2, M3, E 0-D-E 5.0, AND S1-S4 IN ORDER TO COORDINATE ALL MECHANICAL, ELECTRICAL AND STRUCTURAL INSTALLATIONS.

REV. NO.	DESCRIPTION	DATE
1	REVISED TO REFLECT CURRENT COUNTY STANDARDS	8/20/25

SEAL	SEAL



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

**STANDARD WASTEWATER  
GRINDER LIFT STATION**  
  
MECHANICAL DETAILS

ISSUE DATE: OCTOBER 2025	SCALE: HORIZONTAL	FILE NUMBER: M3
PROJ. #	VERTICAL: NA	DRAWING NUMBER
DRAWN		
DESIGNED		
CHECKED		
PROJ. MGR.		
STATUS: FINAL DESIGN		