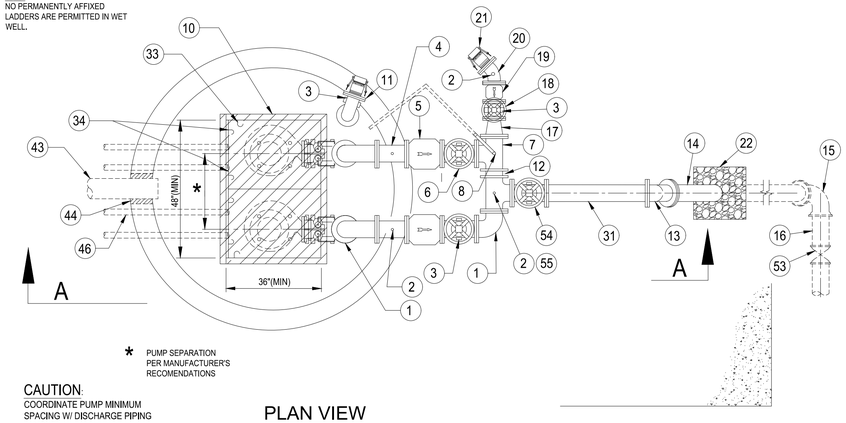
NOTE:
NO PERMANENTLY AFFIXED LADDERS ARE PERMITTED IN WET WELL.



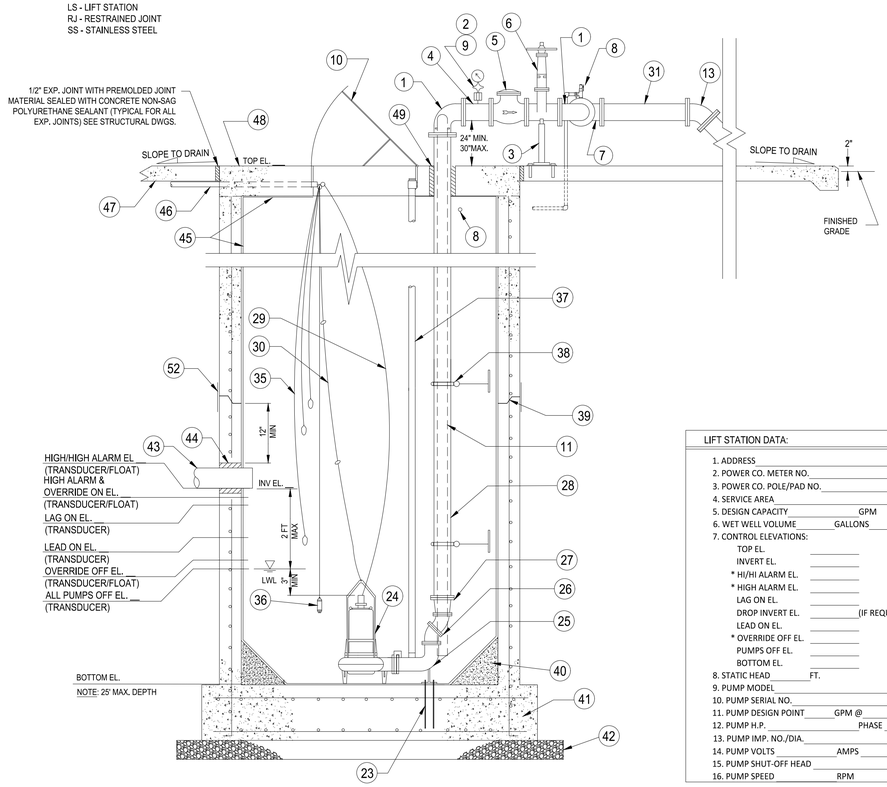
* PUMP SEPARATION PER MANUFACTURER'S RECOMENDATIONS

CAUTION:
COORDINATE PUMP MINIMUM SPACING W/ DISCHARGE PIPING LAYOUT

PLAN VIEW
NOT TO SCALE

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



SECTION A-A
NOT TO SCALE

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. _____
   - * HI/HI ALARM EL. _____
   - * HIGH ALARM EL. _____
   - LAG ON EL. _____
   - DROP INVERT EL. _____ (IF REQUIRED, SEE DWG M3)
   - 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 IMP. NO./DIA. _____
14. PUMP VOLTS _____ AMPS _____
15. PUMP SHUT-OFF HEAD _____ FT.
16. PUMP SPEED _____ RPM

* LEVEL FLOAT SWITCHES

KEY:

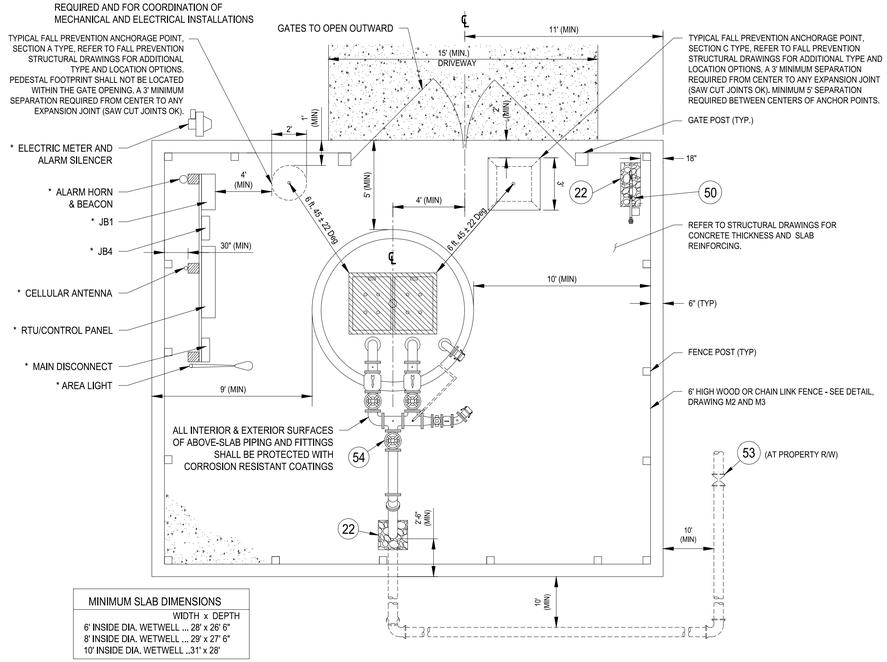
1. __" FG 90° DI BEND (3 REQ.)
2. 1/2" TAP w/ 1/2" x 2" 316 SS NIPPLE & 1/2" LOCKABLE BALL VALVE w/ SS BALL (4 REQ.)
3. ADJUSTABLE PIPE SUPPORT, SIZED AS REQUIRED (5 REQ) - SEE DETAIL, DRAWING M3
4. __" FG DI SPOOL PIECE, LENGTH AS REQUIRED (6" MIN)
5. __" FG IRON BODY FLAPPER DISK CHECK VALVE (2 REQ) PER APP. B
6. __" FG IRON BODY RESILIENT SEAT GATE VALVE (2 REQ.)
7. __" x __" FG DI TEE W/ BOSS (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 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. AUXILIARY SUCTION PIPE ASSEMBLY - SEE DETAIL, DRAWING M2
    NOTE: FOR LIFT STATIONS W/ 6" AND LARGER DISCHARGE PIPING, THE AUX. SUCTION PIPE ASSEMBLY SHALL UTILIZE 6" DIA. PIPE AND FITTINGS. IN ADDITION, ALL FITTINGS FOR BYPASS/ PUMP-IN ASSEMBLY SHALL BE UPSIZED TO 6" (I.E., ITEMS 18,19, 20, & 21 ON THIS SHEET). FOR LIFT STATIONS W/ 6" DIA. WETWELLS, AUX. SUCTION PIPE MAY NEED TO BE LOCATED BETWEEN THE DISCHARGE PIPES.
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 C900 W/ RESTRAINED JOINTS AS REQUIRED (MIN DEPTH OF 48" TO CROWN OF PIPE)
17. __" x 6" FG REDUCER, AS NEEDED - ONLY FOR LIFT STATIONS W/ 8" OR LARGER DISCHARGE PIPING
18. __" FG RESILIENT SEAT GATE VALVE
19. __" FG FLAPPER DISK CHECK VALVE PER APP. B
20. __" FG 45° BEND
21. __" EMERGENCY BYPASS/ PUMP-IN CAMLOCK MALE COUPLER W/ CAP, THREADED NIPPLE AND FLANGE. SEE DETAIL, 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 (2 REQ)
25. BASE ELBOW TO BE PROVIDED BY PUMP SUPPLIER (2 REQ)
26. __" FG 45° BEND, AS REQUIRED FOR DISCHARGE PIPING OFFSET , LOCKING WASHER REQ'D FOR ALL FG CONNECTIONS IN WET WELL
27. __" x __" FG REDUCER, AS REQUIRED, LOCKING WASHER 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 (2 TYP)
34. 316 SS LEVEL CABLE HANGER FOR LEVEL FLOAT SWITCH CABLES - SEE DETAIL, DRAWING M2
35. LEVEL FLOAT SWITCHES (3 REQ'D), TO SERVE AS BACK-UP TO PRESSURE TRANSDUCER
36. PRESSURE TRANSDUCER FOR WATER LEVEL CONTROL, SUSPENDED FROM CABLE HOOK.SET AT 18 INCHES ABOVE BOTTOM
37. 2" (O.D.) 316 SS GUIDE RAILS, FRONT MOUNT (2 PER PUMP), OR PER PUMP MANUFACTURER'S RECOMMENDATION
38. 316 SS INTERIOR PIPE SUPPORT - SEE DETAIL, DRAWING M3
39. ELASTOMERIC GASKET MATERIAL
40. 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 WETWELL RISER SECTION & BASE SLAB SHALL BE MONOLITHICALLY OR INTEGRALLY CAST PER ASTM C478 - REFER TO STRUCTURAL DRAWING S1 & S2
42. LEVEL COURSE OF CRUSHED STONE - 6" MIN. THICKNESS
43. PVC, C900, INFLUENT GRAVITY MAIN, TO EXTEND 4" INSIDE WETWELL. FOR INSIDE DROP, SEE DETAIL, DRAWING M3.
44. FLEXIBLE BOOT, FOR INSIDE DROP, SEE DETAIL, DRAWING M3
45. WETWELL INTERIOR PROTECTIVE COATING
46. ELECTRICAL CONDUITS (SCH 80 PVC, 2" MIN.), INSTALLED UNDER GRADE SLAB AND CENTERED IN WETWELL TOP SLAB FOUR TOTAL - SEE ELECTRICAL DETAILS AND STRUCTURAL DRAWING S2
47. GRADE SLAB - REFER TO STRUCTURAL DRAWING S4
48. WETWELL TOP SLAB - REFER TO STRUCTURAL DRAWING S2
49. LINK SEAL
50. 1" BRASS WATER SERVICE W/ APPROVED BFP AND METER- TO BE INCREASED TO 2" SERVICE FOR ALL MASTER LIFT STATIONS AND/OR FOR LIFT STATIONS WITH WETWELLS DEEPER THAN 20-FT OR GREATER THAN 8-FT IN DIAMETER - SEE DETAIL, DRAWING M2
51. N/A
52. WRAP APPLIED AT EXTERIOR OF WETWELL JOINTS
53. __" MJ ECCENTRIC PLUG VALVE W/ RJ - ISOLATION VALVE, TO BE LOCATED ON LIFT STATION PROPERTY AT RIGHT OF WAY
54. __" FG IRON BODY RESILIENT SEATED GATE VALVE
55. ELECTRONIC PRESSURE TRANSMITTER WITH DIAPHRAGM SEAL (SILICONE FILLED)

NOTE: REFER TO 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 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



MINIMUM SLAB DIMENSIONS
WIDTH x DEPTH
6' INSIDE DIA. WETWELL ... 28' x 26' 6"
8' INSIDE DIA. WETWELL ... 29' x 27' 6"
10' INSIDE DIA. WETWELL ...31' x 28'

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.	DESCRIPTIONS	DATE
3	REVISED, TO REFLECT CURRENT COUNTY STANDARDS	8/20/25
2	REVISED, TO REFLECT CURRENT COUNTY STANDARDS	8/18/23
1	REVISED SLAB DIMENSION	10/28/21

REVISIONS

SEAL

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Hillsborough County Florida
EST. 1834 SM

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

STANDARD WASTEWATER DUPLEX LIFT STATION

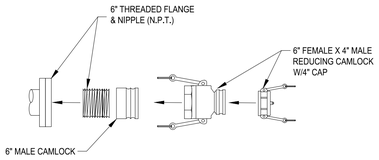
MECHANICAL LAYOUT AND SITE PLAN

ISSUE DATE: OCTOBER 2025
PROJ. #
DRAWN
DESIGNED
CHECKED
PROJ. MGR.

SCALE
HORIZONTAL:
VERTICAL:
NA

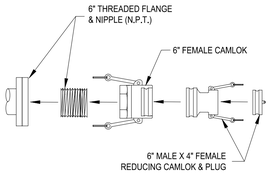
FILE NUMBER
DRAWING NUMBER
M1

STATUS:
FINAL DESIGN



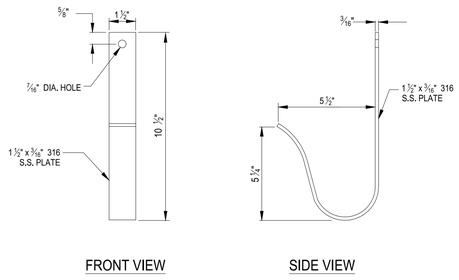
6" EMERGENCY BYPASS/ PUMP-IN CAMLOCK DETAIL

NOT TO SCALE



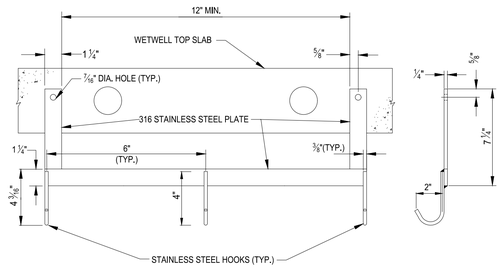
6" AUX. SUCTION CAMLOCK DETAIL

NOT TO SCALE



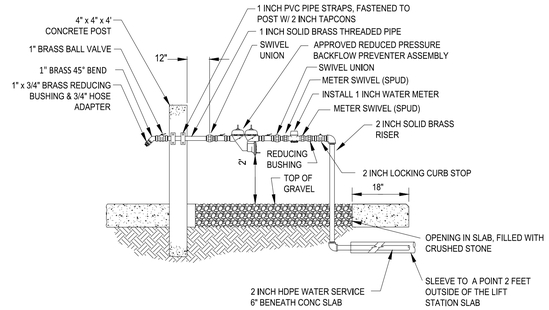
POWER & TRANSDUCER CABLE HOOK DETAIL

NOT TO SCALE



LEVEL CABLE HANGER DETAIL

NOT TO SCALE



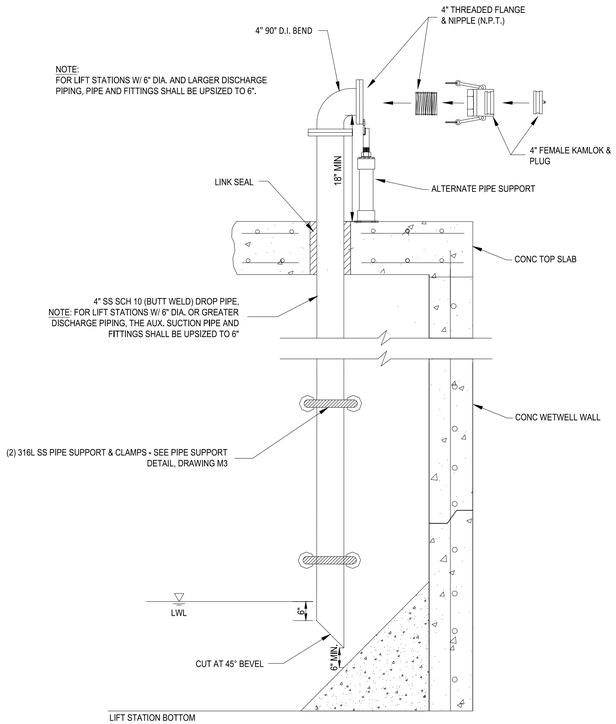
NOTES:

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 LIFT 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

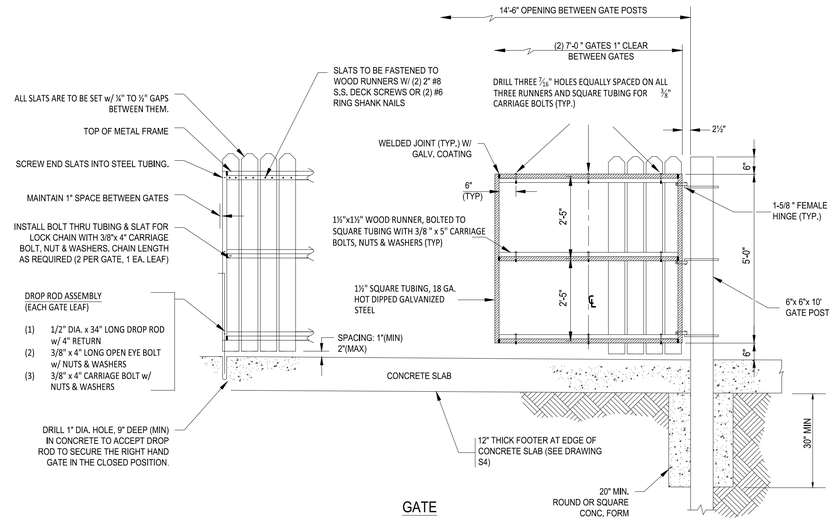
NOT TO SCALE

NOTE:
FOR LIFT STATIONS W/ 6" DIA. AND LARGER DISCHARGE PIPING, PIPE AND FITTINGS SHALL BE UPSIZED TO 6".

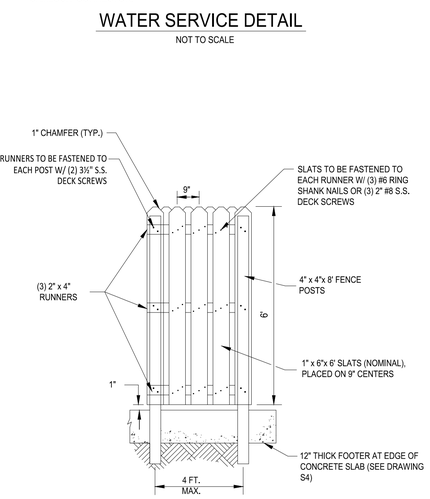


AUX. SUCTION PIPE DETAIL

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 GATE (MINIMUM OF THREE HINGES PER GATE LEAF).
7. SOME LIFT STATION LOCATIONS MAY REQUIRE ARCHITECTURAL STYLE FENCING - CONSULT COUNTY.

LIFT STATION ENCLOSURE DETAIL

NOT TO SCALE

INSTALLATION NOTE:
CONTRACTOR TO REFER TO DRAWINGS M1-M3, E 0.0-E 5.0 AND S1-S4 IN ORDER TO COORDINATE ALL MECHANICAL, ELECTRICAL AND STRUCTURAL INSTALLATIONS.

REV.NO.	DESCRIPTIONS	DATE
1	REVISED, TO REFLECT CURRENT COUNTY STANDARDS	8/18/23

REVISIONS

SEAL

SEAL

Hillsborough County Florida
EST. 1834 SM

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

STANDARD WASTEWATER
DUPLEX LIFT STATION

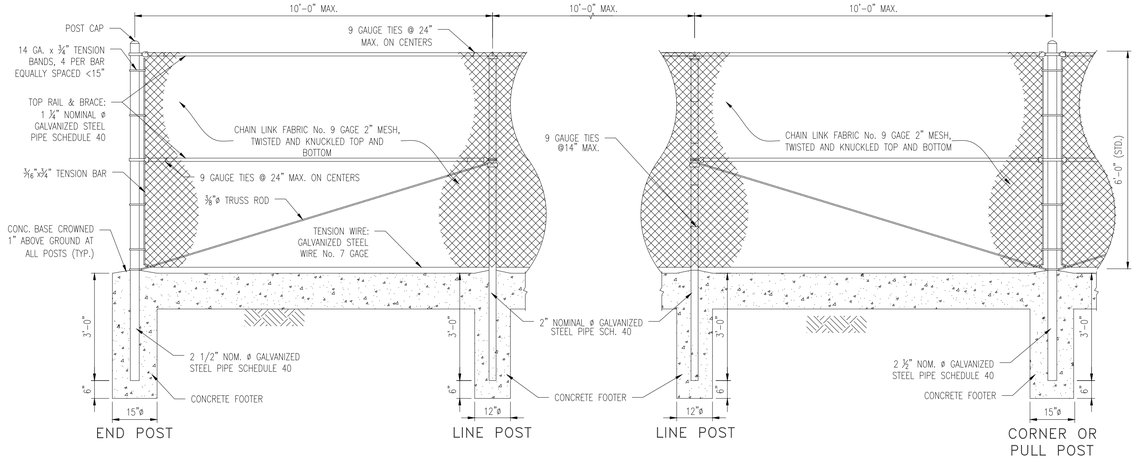
MECHANICAL DETAILS

ISSUE DATE: OCTOBER 2025
PROJ. #
DRAWN
DESIGNED
CHECKED
PROJ. MGR.

SCALE
HORIZONTAL:
VERTICAL:
NA

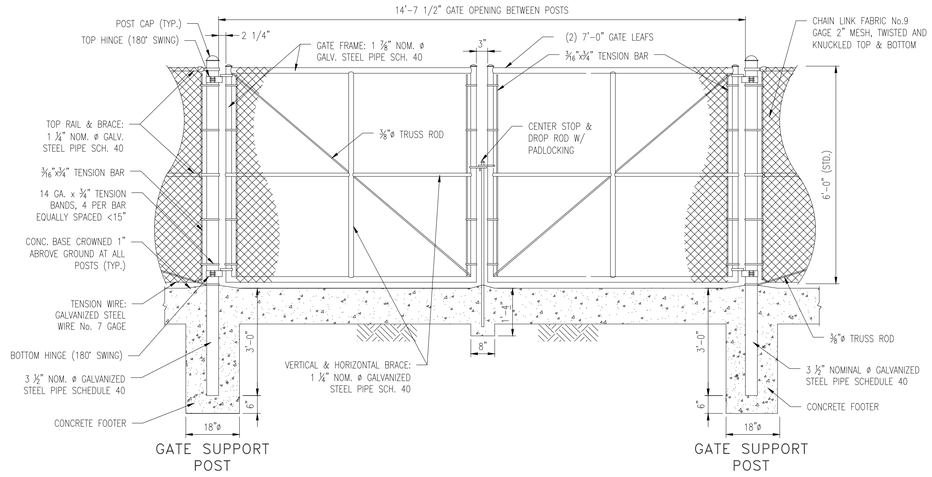
FILE NUMBER
DRAWING NUMBER
M2

STATUS:
FINAL DESIGN



6' HIGH CHAIN LINK FENCE

NOT TO SCALE



DOUBLE SWING GATE DETAIL

NOT TO SCALE

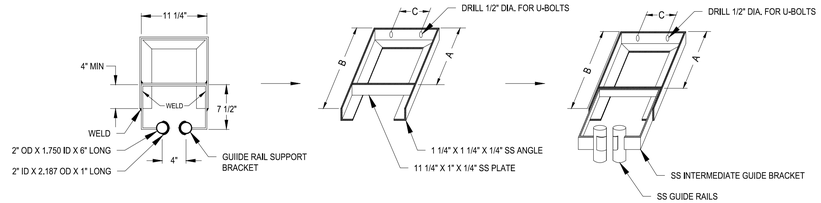
NOTES:

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 333003 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" ABOVE FINISHED GRADE.

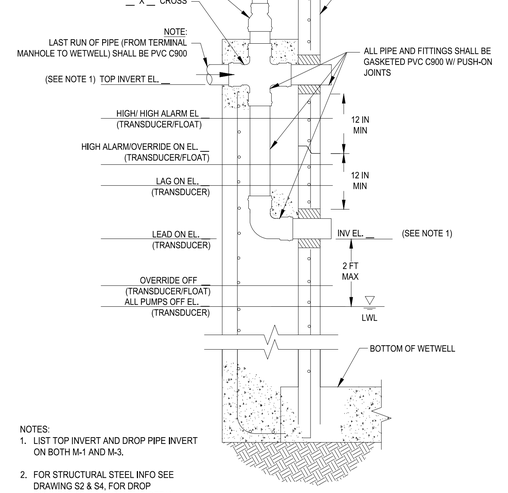
4–. ALL THE REQUIRED UNDERGROUND STRUCTURES FOR SUPPORING THE FENCE AND GATES MUST BE PLACED INSIDE THE PROPERTY.



DISCHARGE PIPE DIA.	A	B	C
4"	5 5/8	9 3/4	5
6"	7	11 1/4	7
8"	7 3/4	12	9

BRACKET EXTENSION DETAIL

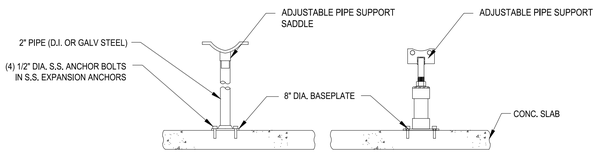
NOT TO SCALE



NOTES:
1. LIST TOP INVERT AND DROP PIPE INVERT ON BOTH M-1 AND M-3.
2. FOR STRUCTURAL STEEL INFO SEE DRAWING S2 & S4, FOR DROP CONNECTION ENCASEMENT DETAIL

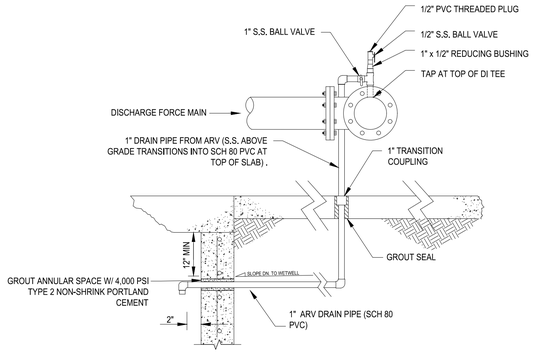
DROP CONNECTION DETAIL

NOT TO SCALE



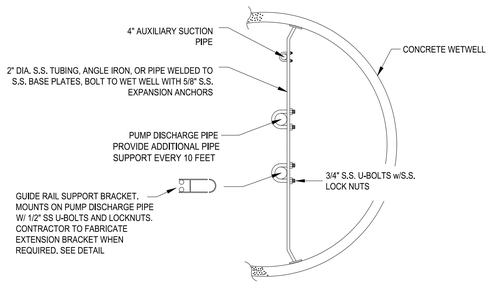
EXTERIOR PIPE SUPPORT DETAIL

NOT TO SCALE



ARV DRAIN PIPE ASSY.

NOT TO SCALE



INTERIOR PIPE & GUIDE RAIL SUPPORTS - TOP VIEW

NOT TO SCALE

REV.NO.	DESCRIPTIONS	DATE
1	REVISED, TO REFLECT CURRENT COUNTY STANDARDS	

REVISIONS

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

STANDARD WASTEWATER DUPLEX LIFT STATION

MECHANICAL DETAILS

ISSUE DATE: OCTOBER 2025
PROJ. #
DRAWN
DESIGNED
CHECKED
PROJ. MGR.

SCALE
HORIZONTAL:
VERTICAL: NA

FILE NUMBER
DRAWING NUMBER
M3

STATUS: FINAL DESIGN