

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

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

\* INFILL PS:  
50 HOMES OR LESS  
L1 - FLOAT ALL PUMPS OFF/OVERRIDE OFF  
L2 - FLOAT LEAD ON  
L3 - FLOAT LAG ON  
L4 - FLOAT HIGH ALARM SIGNAL TO  
HTE/ALARM/OVERRIDE ON

SECTION A-A  
NOT TO SCALE

2. 1/2" Fg 90° SS BEND (2 REQ.)
3. 1/2" TAP W/ 1/2" x 3/16 SS NIPPLE & 1/2" LOCKABLE BALL VALVE W/ SS BALL
4. ADJUSTABLE PIPE SUPPORT, SIZED AS REQUIRED (4 REQ.) - SEE DETAIL, DRAWING M3
5. 2" FG SS SPOOL, PIECE, LENGTH AS REQUIRED (6" MIN)
6. 2" FG SS FLAPPER DISK CHECK VALVE (2 REQ)
7. 2" FG SS LOCKABLE BALL VALVE (2 REQ)
8. AIR RELEASE ASSEMBLY TO INCLUDE 1" TAP W/ 1" x 2" 3/16 SS NIPPLE, 1" SS THREADED TEE, 1" x 1/2" SS REDUCING BRUSHING, 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 M2
9. COMPOUND PRESSURE GAUGE (STAINLESS STEEL, SILICONE FILLED, W/ SILICONE FILLED DIAPHRAGM SEAL), PROVIDE ONE PER STATION.
10. ALUMINUM FRAME & SINGLE ACCESS HATCH W/ 30"x36" 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.
11. AUXILIARY SUCTION PIPE ASSEMBLY - SEE DETAIL, DRAWING M2
12. AUX. SUCTION PIPE TO LOCALLY BE LOCATED BETWEEN THE DISCHARGE PIPES.
13. 4" FG DIP, LENGTH AS REQUIRED
14. 4" FG 90° BEND
15. 4" FG X PIPE DIP, LENGTH AS REQUIRED
16. 4" MJ 90° BEND W/ RESTRAINED JOINTS
17. 4" PVC C900 W/ RESTRAINED JOINTS AS REQUIRED (MIN DEPTH OF 48" TO CROWN OF PIPE)
18. 2" x 4" FG SS REDUCER
19. 4" FG RESILIENT SEAT GATE VALVE (2 REQ)
20. 4" FG FLAPPER DISK CHECK VALVE PER APP. B
21. EMERGENCY BYPASS/PUMP-IN 4" CAMLOCK MALE COUPLER W/ CAP, THREADED NIPPLE AND FLANGE
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 - GRINDER W/ FRONT LOAD RAIL SYSTEM (2 REQ)
25. BASE FLOOR TO BE PROVIDED BY PUMP SUPPLIER (2 REQ), OUTLET TO HAVE THREADED NIPPLE AND FLANGE.
26. 2" FG 45° BEND (AS REQUIRED FOR OFFSET IN WETWELL), LOCKING WASHER REQD FOR ALL FG CONNECTIONS IN WET WELLS.
27. 2" 316L SS SCHEDULE 40 FLANGED DISCHARGE PIPING, LENGTH AS REQUIRED, LOCKING WASHER REQD FOR ALL FG CONNECTIONS IN WET WELLS.
28. POWER CABLES TO PUMPS
29. PUMP LIFTING CABLES (3/8" 316 SS) W/ 4" 316 SS RINGS LOCATED @ 5-FT INTERVALS
30. 1" DRAIN FROM ARV
31. 316 SS POWER CABLE HOOKS - SEE DETAIL, DRAWING M2
32. 316 SS CONTROL CABLE HANGER FOR FLOAT SWITCH CABLES - SEE DETAIL, DRAWING M2
33. LEVEL FLOAT SWITCHES (4 REQ)
34. N/A
35. 3/4" (O.D.) 316 SS GUIDE RAILS, FRONT MOUNT (2 PER PUMP), OR PER PUMP MANUFACTURER'S RECOMMENDATION
36. 316 SS INTERIOR PIPE SUPPORT - SEE DETAIL, DRAWING M3
37. ELASTOMERIC GASKET
38. NON-SHRINK GROUT FILLET ALL AROUND, 4000 PSI CONCRETE W/ MAX AGGREGATE SIZE OF 3/8" & MIN. SLAB OR JOINT (MAX WIDTH OF 2-FT)
39. WET WELLS TO BE COATED W/ INTERIOR WETWELL PROTECTIVE COATING (SEE #41)
40. FIRST WET WELLS RISER SECTION & BASE SLAB SHALL BE MONOLITHICALLY CAST PER ASTM C478 - REFER TO STRUCTURAL, DRAWING S1-54
41. LEVEL COURSE OF CRUSHED STONE - 6" MIN. THICKNESS
42. PVC, C900 INFLUENT GRAVITY MAIN, TO EXTEND 4" INSIDE WETWELL
43. FLEXIBLE SEAL
44. WET WELLS INTERIOR PROTECTIVE COATING
45. 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 S1-54
46. GRADE SLAB - REFER TO STRUCTURAL, DRAWING S1-54
47. WET WELLS TOP SLAB - REFER TO STRUCTURAL, DRAWING S1-54
48. LINK SEAL
49. 1" BRASS WATER SERVICE W/ APPROVED BFP AND METER - SEE DETAIL, DRAWING M2
50. WRAP APPLIED AT EXTERIOR OF WETWELL JOINTS
51. MJ PLUG VALVE W/ RJ - ISOLATION VALVE, TO BE LOCATED ON PUMP STATION
52. PROPERTY AT RIGHT OF WAY.
53. 4" x 4" FG DI TEE (2 REQ.)
54. N/A

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

1. IN ORDER TO COORDINATE THE MECHANICAL, ELECTRICAL, AND STRUCTURAL INSTALLATION, THE DESIGN ENGINEER SHALL REFER TO HILLSBOROUGH COUNTY'S MECHANICAL DRAWINGS (M-1-M3), ELECTRICAL DRAWINGS (E 0.04-5.0), 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 REQUIRED TO INCLUDE CRITICAL SITE ELEVATIONS (SUICH AS ROAD, SLAB, DRIVEWAY), AND SURROUNDING AREAS - INCLUDING FINISHED FLOOR OF BUILDINGS ON ADJACENT LOTS, DIMENSIONS, HARDCAPE 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 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 SIZING 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 OF 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)

SCALE: 1" = 4'-0"

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

(BY ENGINEER) SCALE: 1"=



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

SCALE

HORIZONTAL:

VERTICAL:

NA

|                |
|----------------|
| FILE NUMBER    |
| DRAWING NUMBER |
| M1             |





