

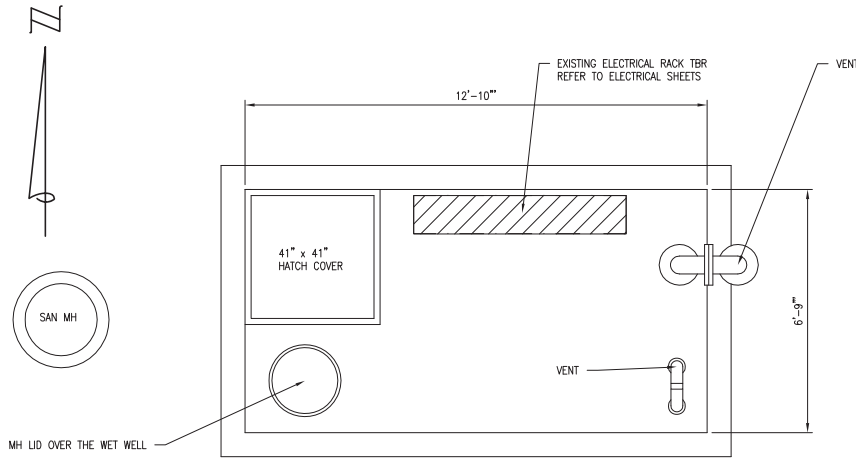
2.4 VENT, SUPPLY FAN AND DUCTWORK

- A. Supply Fan. Loren Cook, Model 8CV15D, or as approved. In-line centrifugal or vane axial type, aluminum construction. Fan automatically activated when floor door is opened. Fan tip speed not to exceed 7,000 fpm, and rated at 200 cfm at 0.20 inch wc ESP. Maximum sones not to exceed 20. Motor rated at 1/20 HP, 115 volt, single-phase, NEMA Class I, Division 2, Group D Hazardous rating. Provide fan with corrosion-resistant finish. Mount fan with vibration isolators. Make connections to equipment with flexible duct connectors. Locate outlet at 1'-0" above floor with opening protected with a 1/4 inch by 1/4 inch mesh screen.
- B. Coordinate ductwork connection to gooseneck vent pipe.
- C. Gooseneck Vent:
 - 1. Fabricate from carbon steel or ductile iron pipe and fittings.
 - a. Carbon Steel Pipe and Fittings:
 - 1) Pipe: ASTM A53, Grade B, Schedule 40.
 - 2) Joints: Beveled ends for electric resistance weld.
 - 3) Fittings: Welded; ASTM A234, Grade WPB.
 - 4) Flanges: Carbon steel, 150 pound, flat face, ASTM A105.
 - b. Ductile Iron Pipe and Fittings:
 - 1) Pipe: AWWA C115, flanged joint.
 - 2) Fittings: AWWA C110 or AWWA C153.
 - 3) Joints: Appendix A of AWWA C115, and ANSI B16.1, Class 125.
 - 4) Flanges: Ductile iron with zinc-plated bolts and nuts.
 - 2. Provide outlet with bronze or stainless steel wire screen held in place between two flanges.
 - 3. Decorative Vent (if required)
 - a. Vent Housing: Rigid welded steel with powder coat finish.
 - b. Stainless Steel insect screen.
 - c. Model MGV6 -6" by Conery Manufacturing, Inc. or equal.
 - d. Vent connection should be coordinated with supply fan provided.
 - e. Vent Pipe: Galvanized schedule 40 steel.

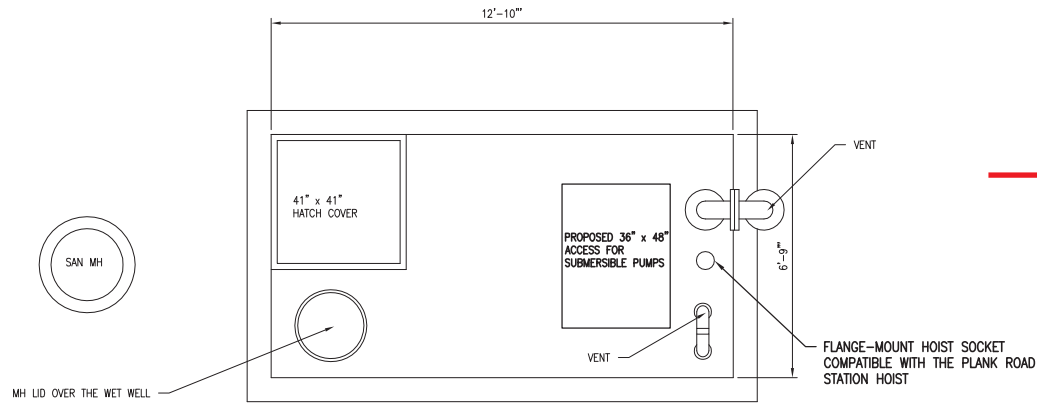
2.5 FIXED FRP LADDER

- A. Materials:
 - 1. Structural fiber reinforced polymer composites consisting of a glass fiber reinforced polyester or ester matrix with approximately 50% glass content. All finished surfaces of FRP sections shall be smooth, resin rich, free of voids, dry spots, cracks or unreinforced areas.
 - 2. Complies with OSHA standards, Section 19 10 .27 "Fixed Ladders".
 - 3. Bolts, Nuts, and Washers: ASTM F593 bolts, ASTM F594 nuts, Type 316 stainless steel.
 - 4. Anchor Bolts and Expansion Anchors: ASTM F593, Type 316 stainless steel.
- B. Fabrication:
 - 1. Side rails, rungs and other FRP members shall be manufactured by the pultrusion process.
 - 2. Ladder rungs are to penetrate the side rails and the connection is to be both chemically bonded and pinned to prevent any possibility of rung rotation or pull-out.
 - 3. Seal all cut, machined edges, holes and notches to provide maximum corrosion resistance. Contractor to coat all field fabricated cuts in accordance with the manufacturer's recommendations.
 - 4. Ladder Side Rails: 2" x 2" x 1/4" min. thickness square tube. Inside ladder dimension: 18".
 - 5. Ladder Rungs: 1-1/4" x 1/8" minimum thickness fluted round tube.
 - 6. Mounting Brackets and Clips: 3/8" thick sections. Maximum ladder attachment spacing is 5'.
 - 7. Rungs shall be located within 6" to 12" of the floor and the slab top.

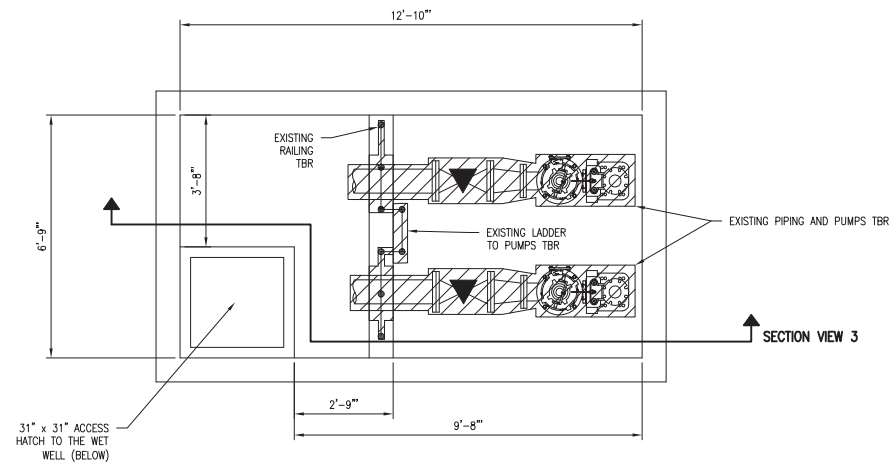
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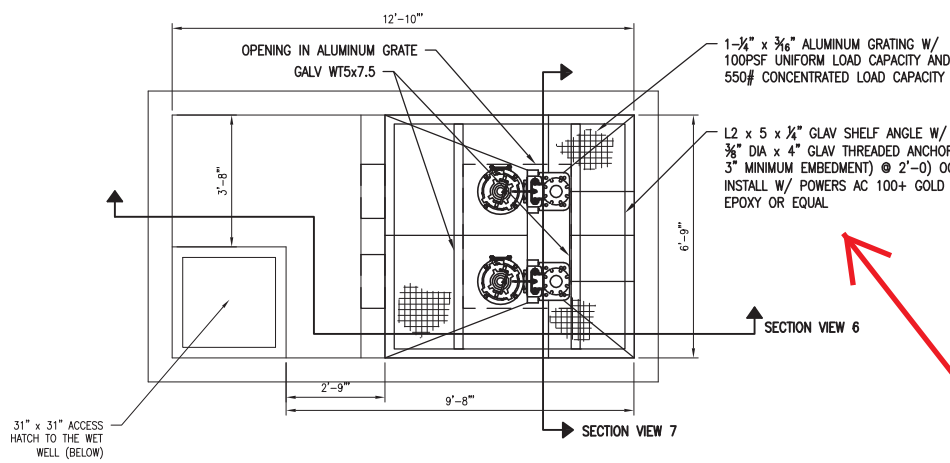
① PLAN VIEW AT GRADE - DEMOLITION
3/8" = 1'-0"



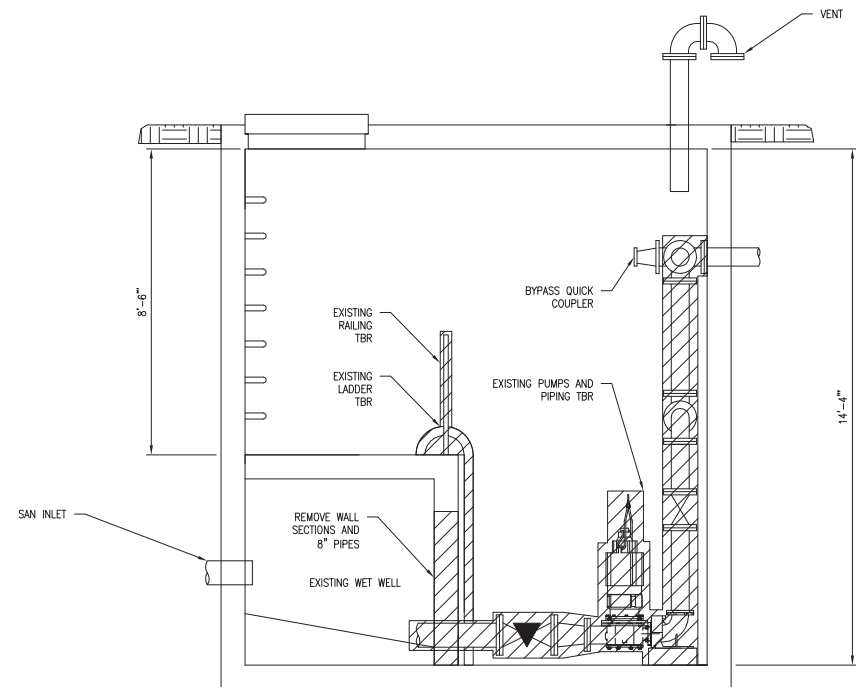
④ PLAN VIEW AT GRADE - PROPOSED
3/8" = 1'-0"



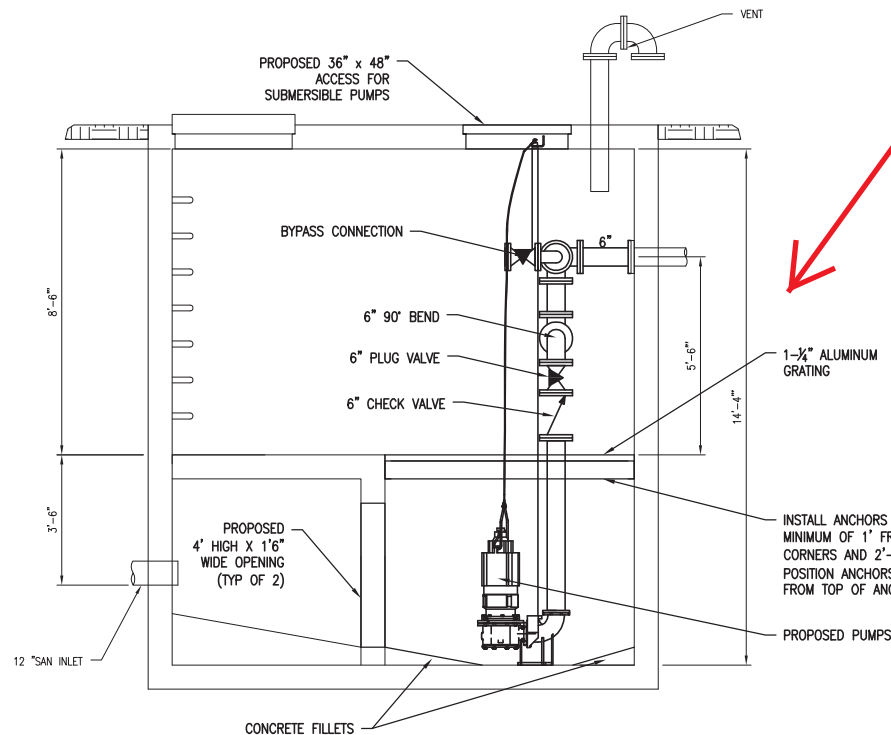
② PLAN VIEW INTERIOR - DEMOLITION
3/8" = 1'-0"



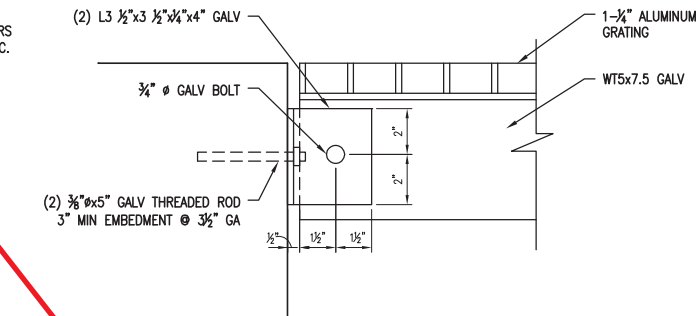
⑤ PLAN VIEW INTERIOR - PROPOSED
3/8" = 1'-0"



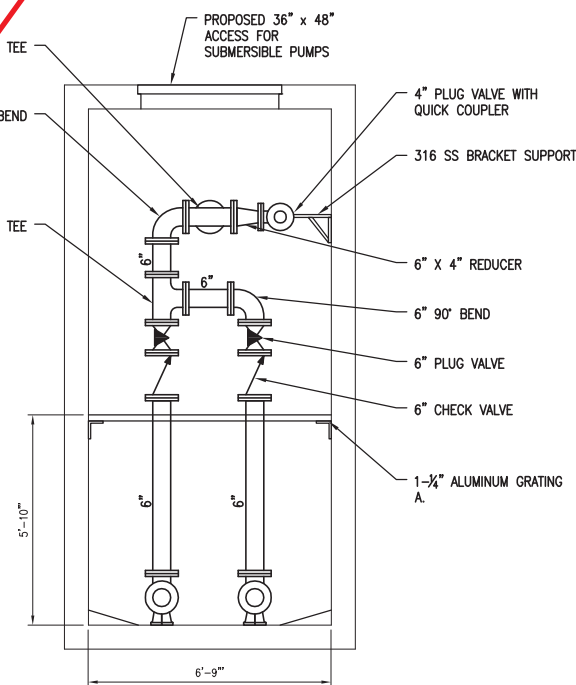
③ SECTION VIEW - DEMOLITION
3/8" = 1'-0"



⑥ SECTION VIEW - PROPOSED
3/8" = 1'-0"



⑦ GRATING SUPPORT DETAIL
3" = 1'-0"



⑧ SECTION VIEW - PROPOSED
3/8" = 1'-0"

NOTES:

1. PROVIDE BYPASS PUMPING WHILE THE PUMPING STATION IS OUT OF SERVICE.
2. REMOVE EXISTING DRY PIT PUMPS, PIPES AND VALVES AS SHOWN.
3. CUT OPENING IN THE TOP SLAB AND INSTALL AN ALUMINUM ACCESS HATCH OVER THE PROPOSED SUBMERSIBLE PUMPS. THE ACCESS HATCH SHALL INCLUDE A FALL PROTECTION GRATE.
4. REMOVE THE EXISTING ELECTRICAL EQUIPMENT RACK AND SEAL OFF ALL SLAB PENETRATIONS.
5. INSTALL NEW SUBMERSIBLE PUMPS, DISCHARGE PIPING, CHECK VALVES, PLUG VALVES AND CONNECT TO EXISTING FORCE MAIN.
6. SAVE AND RE-USE THE EXISTING BYPASS CONNECTION QUICK COUPLER.
7. INSTALL ALUMINUM GRATING AS SHOWN.
8. CUT OUT THE INDICATED PORTION OF THE WALL BETWEEN THE EXISTING WET WELL AND DRY WELL.
9. INSTALL CONCRETE FILLETS AS SHOWN TO SLOPE FLOOR TO THE SUBMERSIBLE PUMPS.
10. REMOVE EXISTING BLOWER AND LIGHTS.
11. REMOVE THE LADDER.
12. FOR PAINTING PIPE, FOLLOW SECTION 33 05 16 PRECAST CONCRETE UTILITY STRUCTURES.
13. ALUMINUM GRATING IN CONTACT WITH DISSIMILAR METALS AND CONCRETE SHALL BE BITUMINOUS COATED

PUMPING STATION DESIGN PARAMETERS:

PUMPING CAPACITY - EACH PUMP PRODUCES 400 G.P.M. @ 20 FT T.D.H.
PUMP TYPE - SUBMERSIBLE "CHOPPER" TYPE, EXPLOSION-PROOF, 7.5 HP
WET WELL - VOLUME = 396 GAL/VERT. FT
AVERAGE INFLUENT FLOW = 47.4 G.P.M.
FILL TIME @ AVERAGE FLOW = 12.5 MIN.
MIN. CYCLE TIME = 15.5 MIN. @ INFLUENT FLOW = 23.7 G.P.M. (DUPLEX ALTERNATION)

PUMPING STATION TABLE	
ACTION	ELEVATION
PUMP #2 TURN ON & HIGH LEVEL ALARM	44"
PUMP #1, ON	38"
PUMP #1, OFF	20"
PUMP LOCKOUT & LOW LEVEL ALARM	15"
BOTTOM OF WET WELL	0"

LEGEND

TBR - TO BE REMOVED



Know what's below.
Call before you dig.

