

## PUMP STATION NOTES:

1. ALL HINGES, GUIDE RAILS, CHAIN HOLDERS, CHAIN, CABLE, NUTS, BOLTS, WASHERS, OTHER FASTENERS, AND ANY EQUIPMENT THAT MAY ENTER THE WETWELL SHALL BE 316 STAINLESS STEEL.
2. ALL ELECTRICAL ENCLOSURES SHALL BE CONSTRUCTED OF 304 STAINLESS STEEL.
3. ALL PIPING SHALL BE PRESSURE CLASS 350 DUCTILE IRON PIPE AND ALL FITTINGS SHALL BE CLASS 160 DUCTILE IRON. ALL PIPE AND FITTINGS SHALL CONFORM TO PROTECTO 401 OR TENEMEC PERMASHIELD 431 FOR INTERNAL LINING. PIPE AND FITTINGS THAT ARE LOCATED ABOVE GRADE ARE TO BE PAINTED CONFORMING TO TENEMEC SPECIFICATIONS. PIPING AND FITTINGS INSIDE OF THE WETWELL SHALL BE EPOXY COATED WITH APPROVED HYDROGEN SULFIDE PROTECTIVE COATING. ALL PIPE AND FITTINGS THAT ARE BURIED SHALL HAVE A BITUMASTIC EXTERNAL COATING.
4. EACH DISCHARGE LINE SHALL BE EQUIPPED WITH FITTINGS, PETCOCK AND A FOUR INCH (4") DIAMETER GLYCERIN-FILLED PRESSURE GAUGE AND DIAPHRAGM. THE GAUGE SHALL HAVE READINGS IN FT. AND PSI, AND THE NORMAL OPERATING PRESSURE FOR THE PUMPS SHALL FALL IN THE MIDDLE OF THE MEASUREMENT RANGE. FITTINGS, PETCOCKS, GAUGE DIAPHRAGM AND GAUGE SHALL BE STAINLESS STEEL.
5. ALL WETWELL HARDWARE SHALL BE MOUNTED SUCH THAT ANY COMPONENT MAY BE REMOVED.
6. WETWELL SECTIONS SHALL CONFORM WITH ASTM C-478 AND BE OF O-RING TYPE. ALL EXPOSED CONCRETE WITHIN THE WETWELL SHALL RECEIVE A HYDROGEN SULFIDE INHIBITING COATING, RAVEN 405 OR BCWS APPROVED EQUAL. MANHOLE(S) DIRECTLY UPSTREAM FROM PUMP STATION SHALL BE COATED WITH RAVEN EPOXY 405 PROTECTIVE LINER.
7. THE ELECTRIC METER SHALL BE INSTALLED WITH A FUSED DISCONNECT AND IN SUCH A MANNER THAT THE METER MAY BE READ WITH OUT ENTERING THE FENCED AREA.
8.
  - a) THE CONTROL PANEL SHALL BE FREE STANDING FOR ANY STATIONS GREATER THAN 10HP.
  - b) THE CONTROL PANEL MAY BE RACK MOUNTED FOR STATIONS 10HP OR LESS.
  - c) ALL RACKS SHALL BE COATED WITH MASTIC AT BASE AT LEAST 2" ABOVE CONCRETE PAD.
9. A WEATHERPROOF BREAKER PANEL SHALL BE PROVIDED. THE PANEL SHALL HAVE SPACE FOR 6 SINGLE POLE BREAKERS.
10. AN EXTERNAL DRY TRANSFORMER SHALL BE PROVIDED FOR 460V STATIONS, TO PROVIDE POWER TO NOTE 9 ABOVE.
11. SECURITY LIGHTS SHALL BE PROVIDED FOR THE STATION. THE LIGHTS SHALL BE LED AND MUST ADEQUATELY ILLUMINATE THE CONTROL PANEL AND WETWELL HATCH.
12. A COMPLETE SCADA SYSTEM SHALL BE INSTALLED. THE SYSTEM SHALL INCLUDE MULTITRODE EQUIPMENT, RADIO, ANTENNA, DC POWER SUPPLY, CABLES, ETC. FOR A COMPLETE SYSTEM.
13. AN ANTENNA POLE WITH PROPER GROUNDING SHALL BE INSTALLED. THE INSTALLED HEIGHT OF THE ANTENNA SHALL BE BETWEEN 47 AND 52 FEET AND THE POLE SHALL BE BURIED A MINIMUM OF 10 FEET. ALUMINUM OR 316 STAINLESS STEEL IS TO BE USED FOR THE ANTENNA CABLE FOR THE BOTTOM 3' OF THE POLE.
14. ALL GROUND ROD CONNECTIONS SHALL BE CAD WELDED. ALL GROUND ROD CONNECTIONS ARE TO BE INSPECTED BY BCWS PRIOR TO BURIAL.
15. THE EXCAVATION FOR THE WETWELL CONSTRUCTION SHALL BE BACKFILLED WITH SELECT FILL MATERIAL AND COMPACTED IN 6" LIFTS TO 95% MODIFIED PROCTOR.
16. THE POWER CABLE IS TO BE WIRED NONSTOP FROM THE PUMP MOTOR TO THE MOTOR STARTER WITH NO JUNCTION BOXES OR SPLICES.
17. STAINLESS STEEL KELLUMS GRIPS SHALL BE INSTALLED ON POWER CABLES FOR THE PUMPS AND MULTITRODE PROBE SO AS TO ADEQUATELY SUPPORT THE CABLES TO PREVENT FALLING AND BEING PULLED INTO THE PUMP WHEN RUNNING. MULTIPLE GRIPS/LOCATIONS MAY BE REQUIRED PER PUMP.
18. PUMPS SHALL BE FLYGT OR ABS.
19. ALL ABOVE GRADE CONDUIT SHALL BE ALUMINUM OR 316 STAINLESS STEEL.
20. PUMPS AND MOTORS SHALL HAVE STAINLESS STEEL CHAIN FOR LIFTING. THE LENGTH OF THE CHAIN SHALL REACH THE TOP OF THE WETWELL PLUS SEVEN FEET (3). A COMBINATION OF S.S. CHAIN AND S.S. WIRE ROPE MAY BE UTILIZED AS LONG AS THE BOTTOM SIX FEET (6') IS CHAIN. ALL COMPONENTS THAT MAKE UP THE FITTING ASSEMBLY SHALL BE RATED FOR OVERHEAD USE.
21. ALL METAL STRUCTURES SHALL BE GROUNDED, INCLUDING BUT NOT LIMITED TO THE CONTROL PANEL AND GENERATOR PER BCWS GROUNDED SPECIFICATIONS.
22. A METAL PLATE SIGN SHALL BE PROVIDED THAT DISPLAYS THE EMERGENCY PHONE NUMBERS AND FACILITY NUMBER. A METAL PLATE SIGN SHALL BE PROVIDED THAT DISPLAYS THE SITE ADDRESS.
23. ALL THRUST BLOCKS MUST BE INSPECTED BY BCWS PRIOR TO POURING THE SLAB.
24. WHEN APPLICABLE, TOSHIBA FLOW METER SHALL BE PLACED DOWNSTREAM OF THE BYPASS TEE ON THE DISCHARGE PIPING. FLOW METER SHALL BE INSTALLED PER MANUFACTURER'S SPACING REQUIREMENTS. INSTALL STAINLESS STEEL/ALUMINUM SUN SHADING/PROTECTION.
25. STAINLESS STEEL HOOKS SHALL BE PROVIDED ON EACH SIDE OF THE WETWELL HATCH OPENING FOR HANGING POWER CABLES FOR EACH PUMP.

## **SEWER PANEL 3F**