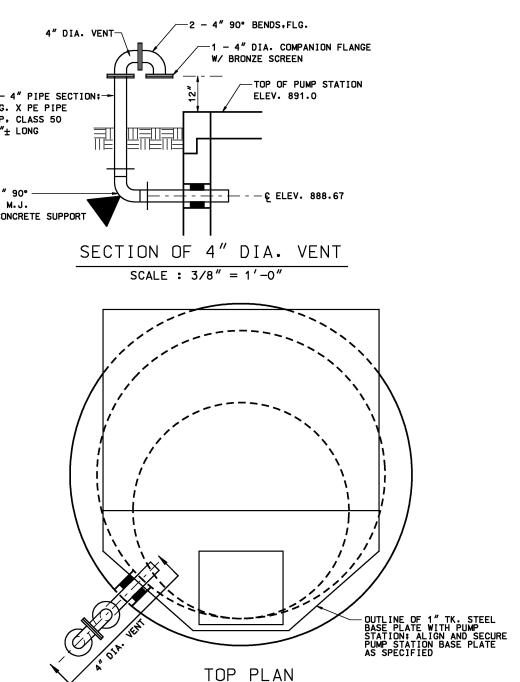


PUMP STATION

SECTION A-A

SCALE : 3/8'' = 1'-0''



SURGE RELIEF PUMP STATION FUTURE SEWAGE OVERFLOW EMERGENCY STORAGE TANK DIMENSIONAL SITE PLAN SCALE : 3/8'' = 1'-0''

GENERAL CONSTRUCTION NOTES SEWAGE PUMP STATION

P:\030066\Sewage Pump Station General Construction Notes.doc

SCALE : 3/8'' = 1'-0''

- Boundary and topographic survey information was obtained from a 2006 field survey by Berkley-Howell & Associates, P.C. Bench marks where shown on the drawings have been established from such field survey.
- 2. All construction shall conform to the applicable IBC 2003 Standards, these plans and specifications. The sewerage facilities will be owned and operated by the Westlake
- The Contractor shall contact Miss Utility at 1-800-552-7001 or 811 at least forty-eight (48) hours prior to any construction activities for field location of existing utilities
- 4. All erosion and sediment controls shall conform to the "Virginia Erosion and Sediment Control Handbook." (Latest edition)
- 5. The Contractor shall be responsible for obtaining any and all required permits and bonds necessary to construct all items snown on these plans. The Contractor shall be responsible for
- all related costs and any processing fees or taxes associated with such permits and bonds. It shall be the responsibility of the Contractor to confirm the location and depth of all utilities within the construction area of these plans. Test pits shall be requested a minimum of of 72
- hours in advance for those utilities requiring them. 7. Wet well and emergency connection vault.

SERVICE AREAS ARE ADDED TO THE PUMP STATION

CONSTRUCTION SPECIFICATIONS ARE MODIFIED TO

INCLUDE ADDITIONAL EMERGENCY STORAGE CAPACITY.

SERVICE AREA AND WHEN THE FRANKLIN COUNTY

- a. Miscellaneous concrete shall be VDOT Class A-4 unless otherwise specified.
- b. All reinforcing shall meet the requirements of ASTM A-615. c. The manhole(s) shall meet the requirements of ASTM C-478.
- d. Manhole joints shall be tapered with O-rings gaskets and shall conform to ASTM C-361. e. Pioneer 301 mastic (or approved equal) shall be used in addition to the joint specified.
- f. The interior of the wet well manhole shall be heavily coated with a bituminous paint. g. Wet well invert fillets shall consist of Portland cement concrete to VDOT specifications
- for Class B-2. The surface shall be hand troweled smooth. h. Influent sewer connections shall be by flexible joints.
- i. Concrete for precast vaults and large wet wells shall be designed to obtain a strength of 5000 psi in 28 days. Material shall meet the requirements of ACI 318.
- Air release and combination air valve assemblies (air release and vacuum relief) and the plug valves on the force main shall conform to the Standard Details and Specifications.
- The force main construction is restricted to the use of the right-of-way and permanent and temporary utility easements as indicated on the plans. All construction on private property shall be coordinated with the Project Engineer and respective property owner.
- 10. Construction of the force main along State Route 122 and within the existing right-of-way of said route shall be coordinated with VDOT and the Owner/Engineer.

11. Pumps and controls

The pumping station shall meet the conditions specified. The sewage pump station shall be an above ground suction lift, Smith & Loveless Duplex Series pumping station. The station will operate as duplex station pumps with 9.25 inch impellers with either pump series capable of delivering 260 GPM at 164' TDH. The standby generator shall be capable of starting the first series and then the second pump series while the first pump and all control appurtenances are operating. The "second pump series start requirement while first pump series is operating" capability shall apply with either pump series in the initial lead/lag sequences.'

EMERGENCY PUMP

CONNECTION

VALVE VAULT

- 12. The automatic transfer switch shall be provided by the generator supplier and shall function in conjunction with the standby power unit and the pumping station. The automatic transfer switch shall be as specified and shall be mounted in an all weather cabinet. Time controls to allow for the automatic, daily exercising of the generating unit shall be provided with the unit.
- 13. The standby generator shall be provided and installed as specified herein. The Contractor shall verify and confirm the adequacy of the generator for the anticipated loads. The generator unit shall include the following:
 - a. A self-contained, base mounted fuel storage facility with capacity as specified. No underground tanks shall be permitted.
- b. An all weather metal enclosure housing as modified to accept the base mounted fuel tank shall be provided for the generator.
- c. The generator shall be mounted on a reinforced concrete pad.
- d. The generator shall include the following accessories among other specified:
- 1) Exhaust Cap
- 2) Muffler Brackets
- 3) Gravity Louvers 4) Skid/Tank Base
- 5) Lifting Eyes 6) Residential Muffler 7) Battery Trickle Charge

in a timely manner.

- 14. Three (3) phase power will be provided to the power pole on site by American Electric Power. The Contractor shall be responsible for the installation of an underground service power line from the on-site service pole to the pump station control panel. The General Contractor shall be required to coordinate with the American Electric Power (AEP) to bring power to the site
- 15. The alarm system shall report high level alarm, generator run and loss of three (3) phase power and other functions as detailed in the specifications. High level alarm and auxiliary power shall also activate an exterior mounted alarm (red bulb in safety cage) and an alarm horn. The automatic telephone dialer system shall be an ADAS DiaLog as manufactured by Acurex Corporation or equal.
- 16. The sewage force main and site piping and the force main off-site shall be provided and installed as specified.

PIPE AND WET WELL WALL COATING

- After installation, all pump discharge pipe and fittings within the wet well, except 316 stainless steel and PVC, shall receive two (2) coats of coal-tar epoxy paint. Each coat must be 8-mil. dry thickness. Coatings shall be those manufactured by Tnemec,
- Interior walls of the wet well shall be coated with an epoxy coating system recommendations.
- The exterior walls of the wet well shall be coated with a coal-tar epoxy system suitable for backfilled surfaces. Coating shall be continuous, free of pinholes and/or voids. Appropriate coating systems as manufactured by Kopper, Tnemec, Sherwin-

After wet well top slab, base and wall sections have been permanently set in place, seal all outside joints with a chemically compatible non-shrink grout prior to placement of exterior application of the protective coal-tar epoxy coating.

Carboline, Sherwin-Williams, PPG or M.A.B. paints.

appropriate for this wetted service. The coatings as manufactured by Raven, Tnemec, Belzona, Carboline or equal shall be applied per the manufacturer's

Williams or equal shall be applied per the manufacturer's recommendations.

DRAWN: CHECKED: REVISIONS DATE 03-04-08 2 | 03-31-08 04-14-08 04-25-08 SCALES HORIZ: AS SHOWN VERT: AS SHOWN COMM. NO. 030066 SHEET NO. 9 OF 19

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FUTURE SEWAGE OVERFLOW

EMERGENCY STORAGE TANK

SECTION

SCALE : 3/8'' = 1'-0''