SECTION 33 05 07
POLYVINYL CHLORIDE PIPE

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Polyvinyl chloride pipe, couplings, fittings and joint materials.
B. Related work includes but is not limited to,
   1. Excavation, Section 31 23 16.
   2. Trench backfill, Section 33 05 20.

1.2 REFERENCES

A. ASTM D 1784: Standard Specification for Rigid Poly (Vinyl Chloride) (PVC) Compounds and Chlorinated Poly (Vinyl Chloride) (CPVC) Compounds.
B. ASTM D 2241: Standard Specification for Poly (Vinyl Chloride) (PVC) Pressure Rated Pipe (SDR -Series).
C. ASTM D 2321: Standard Practice for Underground Installation of Flexible Thermoplastic Sewer Pipe.
D. ASTM D 2412: Standard Test Method for Determination of External Loading Characteristics of Plastic Pipe by Parallel-Plate Loading.
E. ASTM D 2564: Standard Specification for Solvent Cement for Poly(Vinyl Chloride) (PVC) Plastic Pipe and Fittings.
F. ASTM D 2729: Standard Specification for Poly(Vinyl Chloride) (PVC) Sewer Pipe and Fittings.
G. ASTM D 2774: Standard Recommended Practice for Underground Installation of Thermoplastic Pressure Piping.
H. ASTM D 2855: Standard Practice for Making Solvent Cemented Joints with Poly(Vinyl Chloride) (PVC) Pipe and Fittings.
I. ASTM D 3034: Standard Specification for Type PSM Poly(Vinyl Chloride) (PVC) Sewer Pipe and Fittings.
J. ASTM D 3139: Standard Specification for Joints for Plastic Pressure Pipes Using Flexible Elastomeric Seals.
K. ASTM D 3212: Standard Specification for Joints for Drain and Sewer Plastic Pipes Using Flexible Elastomeric Seals.
L. ASTM F 656: Standard Specification for Primers for Use in Solvent Cement Joints of Poly(Vinyl Chloride) (PVC) Plastic Pipe and Fittings.
M. ASTM F 679: Standard Specification for Poly(Vinyl Chloride) (PVC) Large-Diameter Plastic Gravity Sewer Pipe and Fittings.
N. ASTM F 949: Standard Specification for Poly(vinyl Chloride) (PVC) Corrugated sewer Pipe with a Smooth Interior and Fittings.
O. AWWA C900: AWWA Standard for Polyvinyl Chloride (PVC) Pressure Pipe, 4 In. Through 12 In., for Water Distribution.

1.3 DEFINITIONS

A. Standard Dimension Ratio (SDR): Outside diameter of pipe divided by wall thickness.

PART 2 PRODUCTS

2.1 GRAVITY PIPE SYSTEMS

A. Pipe:
   1. Solid smooth wall, 4 to 15 inch diameter, ASTM D 3034.
   2. 18 to 27 inch diameter, ASTM F 679.
   3. 4 to 10 inches diameter corrugated wall with a smooth interior, ASTM F 949.

B. Fittings: ASTM D 1784.

C. Stiffness: 50 psi minimum when measured at 5 percent deflection, ASTM D 2412.

D. Additives and Fillers: Not to exceed 10 parts by weight; 100 parts of resin in the compound.

E. Joints: Bell and spigot with flexible elastomeric seals, ASTM D 3212.

F. Flattening: No visual evidence of splitting, cracking, or breaking when flattened to 60 percent deflection, ASTM D 2412.

2.2 PRESSURE PIPE SYSTEMS

A. Pipe: Conform to AWWA C900 except use outside diameters defined by ductile iron pipe sizes. Dimensions, class, SDR, and tolerances per ASTM D 2241.

B. Compounds: Type 1, Grade 1, Class 12454A, ASTM D 1784.

C. Joints:
   1. Bell and spigot with flexible elastomeric seals, ASTM D 3139. Use non-toxic lubricant.
   2. Solvent weld, ASTM D 2564.

2.3 PERFORATED PIPE SYSTEMS

A. Pipe: Refer to gravity pipe products above.

B. Perforations: ASTM D 2729.

C. Joints: Push-on, solvent weld or other.

2.4 SOLVENT WELDS

A. Primer, ASTM F 656.

B. Glue, ASTM D 2564.

PART 3 EXECUTION

3.1 INSTALLATION

A. Install pipe per manufacturer's instructions, ASTM D 2321 for gravity systems, AWWA C900 or ASTM D 2774 for pressure systems, And ASTM D 2855 for underground Irrigation Systems.

B. Water distribution and transmission, Section 33 12 19.

END OF SECTION