

700 MATERIAL DETAILS

Materials shall conform to the stated requirements and/or the requirements of the referenced specifications including modifications as noted.

Copies of all Supplemental Specifications referenced in this section are on file with the City of Columbus Transportation Division.

720 - PLASTIC PIPE

720.01 Thermoplastic Pipe for Sewers and Other Gravity Flow Applications.

All plastic sewer pipe and accessories shall conform to the requirements set forth in this section and the stated requirements published in the current applicable ASTM Standards and Manufacturers Specifications. Plastic sewer pipe 1 year or older will not be allowed for use on City projects, *unless the City has a letter on file from the manufacturer authorizing an additional 1 year exposure life.* A list of current Approved Manufacturers, Product Types and Sizes, *and Authorization Letters*, will be maintained on file at the City's testing facility.

720.02 Plastic Pipe Fittings. All fittings will conform to the applicable ASTM, AASHTO, and Manufacturer's Specifications.

720.03 Pipe Markings. All pipe will be legibly marked with the information required in the ASTM Standards with the exception that production dates will be indicated by the standard calendar date (day-month-year) or Julian Date with the current numerical year.

720.04 Testing. Random samples of pipe for each size proposed for use on City projects will be selected for testing from either the Producer or Suppliers yard a minimum of three (3) times per calendar year. Samples should be made available from all plants that may furnish pipe to City project. As directed by the City, the samples will be tested at either the City's testing laboratory or manufacturer's facility for physical and dimensional conformance per the applicable ASTM and/or AASHTO Specifications. Sizes not submitted for testing, or failing to meet the requirements will be prohibited for use on City projects until retested and approved during the next testing consignment. One retest for each failed size will be allowed during each consignment with all associated cost paid by the producer or his supplier. Random samples may also be obtained from materials delivered to the project site or at locations designated by the testing authority for additional conformance verification.

720.05 Testing Equipment. Every manufacturer furnishing plastic pipe under these specifications must have facilities and personnel available to perform tests if so requested.

720.06 Miscellaneous. Solvent cement joints will not be permitted.

720.07 Polyvinyl Chloride Plastic Pipe. This specification covers smooth wall perforated polyvinyl chloride plastic pipe and fittings with nominal sizes of 4, 6, and 8 inch (102, 152, and 203 mm) diameter. The pipe and fittings shall conform to ASTM D-3034 and F758 with following additions:

7.2.4 The pipe shall have a minimum of four rows of perforations.

13.3. The manufacturer's certification and the report of test results shall be furnished.

720.08 Polyvinyl Chloride Plastic Pipe. This specification covers smooth wall polyvinyl chloride (PVC) plastic pipe and fittings with nominal sizes of 6, 8, 10, 12 and 15 inch (150, 200, 250, 300, 375 mm) diameter. The pipe and fittings shall conform to ASTM D-3034, SDR 35. The fittings shall also conform to ASTM F-1336

720.09 Polyvinyl Chloride Large Diameter Plastic Pipe. This specification covers smooth wall (PVC) plastic pipe and fittings for sizes 18 through 36 inches (450 through 900 mm) diameter. The pipe and fittings shall conform to ASTM F-679.

720.10 Polyvinyl Chloride Corrugated Smooth Interior Pipe. This specification covers polyvinyl chloride (PVC) profile wall pipe with a smooth interior. This profile wall pipe consists of an outer corrugated wall fused to a smooth inner wall. This specification includes pipe, joints, and fittings for nominal diameters 4 through 48 inch (100 - 1200 mm). Sewer pipe shall comply with ASTM F-794 and ASTM F-949 with the exception that pipe manufactured under ASTM F-949, shall have a minimum pipe stiffness of 46 PSI.

720.11 Polyvinyl Chloride Closed Profile Wall Pipe. This specification covers polyvinyl chloride (PVC) closed profile wall smooth flow sewer pipe and fittings with integral bell joints. The inside diameters range from 4 through 48 inches (100 - 1200 mm). The pipe and fittings shall conform to ASTM F-1803.

720.12 Corrugated Polyethylene Pipe and Drainage Tubing. This specification covers smooth lined corrugated polyethylene pipe, couplings, and fittings which shall conform to AASHTO M 252, M 294, Type S or SP, and AASHTO MP7.

1. Nominal sizes of 4 to 60 inches (100 mm to 1500 mm) are included.
2. **Pipe Stiffness.** Minimum pipe stiffness shall be as stated in the applicable AASHTO standards for pipe sizes 4 inch through 36 inch (100 through 900 mm) diameter. Sizes 42 through 60 inches (1050 through 1500 mm) shall conform to the current ODOT Specification Manual.
3. Pipe joints shall be "silt tight" and are to be bell & spigot. Bells may be either integrally joined to the pipe or may be separate sleeves (double belled) designed to join the pipe in the field. Spigot ends shall have

factory installed rubber O-ring gaskets meeting the requirements of ASTM F 477 and inserted into the belled end at least two corrugations. Split couplings or separate sleeves may be used to make connections to fittings, or to make field repairs.