

PART 405 – PIPELINE AND INSTALLATION

405.1 GENERAL

- 405.1.1 INTENT: The work under this item shall include furnishing, hauling, placing, and jointing of cast iron, ductile iron, vitrified clay pipe and PVC pipe in the trench in specific conformity with the lines and levels given.
- 405.1.2 RELATED WORK: Testing, and other general requirements for construction of pipe utilities are included in other sections of the Specifications.
- 405.1.3 PRESSURE PIPELINES: All fittings or specials included as pipe shall be restrained or blocked in accordance with the Standard Details and/or as determined by the Engineer. Restrained joint lengths as determined by the Engineer shall be shown in the plan and profile drawings. Where restrained joints are specified or required, they shall be of a mechanical type or push-on type assembly easily removed in field once assembled without special equipment. Assemblies shall be ANSI/AWWA rated. Thrust blocks for joint restraint shall not be installed without prior approval by the Director of Water and Sewer. Set screw type retainer glands will not be permitted.

405.2 QUALITY CONTROL

- 405.2.1 The Engineer shall have the right to reject pipe based upon visual defects including out-of-roundness, rough interior, discoloration, warping, or other visual defects which, in the opinion of the Engineer, affect the function or life of the pipe.

405.3 MATERIALS – DUCTILE IRON PIPE

- 405.3.1 Materials shall conform to Part 203 – Ductile Iron Pipe, Ductile and Cast-Iron Fittings, and Valves.
- 405.3.2 Sleeve couplings shall be Dresser Style 38 or equal, 7" x 3/8" designed for the specified pipe pressure class and shall have middle rings equal in thickness to that of the adjoining pipe. Couplings shall have plain gaskets, Grade 27. All fittings, bolts and related components shall be epoxy coated. Unless noted otherwise, joint harnesses shall be provided at sleeve couplings.

405.4 COATING, LINING, AND POLYETHYLENE WRAP

- 405.4.1 Cast iron and ductile iron pipe and fittings 12" I.D. and smaller shall be bituminous coated outside in accordance with AWWA C151, and cement-mortar lined inside with seal coat in accordance with American Standard for Cement Mortar Lining for Cast Iron Pipe and Fittings for Water, AWWA Designation C104. See section 203.1.6 for coatings associated with sanitary sewer lines 15" I.D. and larger.
- 405.4.2 Polyethylene tube shall be furnished with all DIP pipe and fittings per section 202.3 of City of Tulsa Standard Specifications. Polyethylene tube shall be in accordance with AWWA C105. It shall be made from virgin polyethylene resin in accordance with ASTM