

Section 02515

HYDROSTATIC TESTING OF PIPELINES

PART 1 G E N E R A L

1.01 SECTION INCLUDES

- A. Field hydrostatic testing of newly installed water pipelines.

1.02 MEASUREMENT AND PAYMENT

- A. Unit Prices.

- 1. No payment will be made for hydrostatic testing of pipelines under this Section. Include cost in unit price of pipelines being tested.
- 2. Refer to Section 01270 - Measurement and Payment for unit price procedures.

- B. Stipulated Price (Lump Sum). If Contract is Stipulated Price Contract, payment for work in this Section is included in total Stipulated Price.

PART 2 P R O D U C T S - Not Used

PART 3 E X E C U T I O N

3.01 PREPARATION

- A. Disinfect water system pipelines prior to hydrostatic testing.
- B. Hydrostatically test newly installed water pipelines after disinfection, when required, and before connecting to City water distribution system.
- C. Water for testing will be charged to Contractor in accordance with City Ordinances. Prior to hydrostatic testing, provide a transient meter and have it tested, approved, and sealed by City's Department of Public Works and Engineering meter repair shop. Cost to certify Contractor's meter will be at no additional cost to City.
- D. For large diameter water lines, test pipelines in lengths between valves, or plugs, of not more than 4400 feet.
- E. Test small diameter pipelines in lengths between valves, or plugs, of not more than 1500 feet.

- F. Conduct hydrostatic tests in presence of City Engineer.

3.02 TEST PROCEDURES

- A. Furnish, install, and operate connections, pump, meter and gages necessary for hydrostatic testing.
- B. Allow pipeline to sit minimum of 24 hours from time it is initially disinfected until testing begins, to allow pipe wall or lining material to absorb water. Periods of up to 7 days may be required for mortar lining to become saturated.
- C. For small diameter pipelines, expel air and apply minimum test pressure of 125 psi. For large diameter water lines, expel air and apply minimum test pressure of 150 psi.
- D. Begin test by 9:00 a.m. unless otherwise approved by City Engineer. Maintain test pressure for 8 hours. When large quantity of water is required to maintain pressure during test, discontinue testing until cause of water loss is identified and corrected.
- E. Keep valves inside pressure reducing stations closed during hydrostatic pressure test.

3.03 ALLOWABLE LEAKAGE FOR WATERLINES

- A. During hydrostatic tests, no leakage will be allowed for sections of water lines consisting of welded joints.
- B. Maximum allowable leakage for water lines with rubber gasketed joints: 3.19 gallons per inch nominal diameter per mile of pipe per 24 hours while testing.
- C. For meter run installation, when Work cannot be isolated and line fails pressure test, visual inspection of Work by City engineer for leakage during pressure test may be used to fulfill requirements of this section.

3.04 CORRECTION FOR FAILED TESTS

- A. Repair joints showing visible leaks on surface regardless of total leakage shown on test. Check valves and fittings to ensure that no leakage occurs that could affect or invalidate test. Remove cracked or defective pipes, fittings, and valves discovered during pressure test and replace with new items.
- B. City Engineer may require failed lines to be disinfected after repair and prior to retesting. Conduct and pay for subsequent disinfection operations in accordance with requirements of Section 02514 - Disinfection of Water Lines. Pay for water required for additional disinfection and retesting.

- C. Repeat test until satisfactory results are obtained.

3.05 COMPLETION

- A. Upon satisfactory completion of testing, remove risers remaining from disinfection and hydrostatic testing, and backfill excavation promptly.

END OF SECTION