



City of Port St. Lucie Utility Systems Department PRESSURE TEST POLICY/PROCEDURE

Background Information

Once all of the pressure main construction for the project or a specific portion of the project is complete and as-builts/record drawings, easements, asset list, and densities are submitted, the pressure test can be scheduled. Record Drawings or As-Builts of the pipe work completed to date should be complete, but typically the final drawings are not ready since final grades may not be set. Density testing of the compaction work to date must be complete. At this point, it should be possible to determine the final pipe lengths, number of valves, manholes, etc. that are required to complete the Potable Water and/or Sewer Asset List portion of the Bill of Sale. The same footages should be used for the test reports and the Florida Department of Environmental Protection (FDEP) or the City of Port St. Lucie Utility Systems Department (PSLUSD) construction permit certifications. Pre-testing is highly recommended to ensure a passing test.

Prerequisites

Flushing and pigging inspection is required to be completed on potable water mains and considered passing by the Engineer of Record (EOR) and PSLUSD.

Connection to the existing sewer main, pipe, manholes, valves, fittings, service connections and sample points must be complete. Backfilling to top of base course in paved areas or less than 12" from final grade for unpaved areas including the associated density testing.

Request Process (what needs to be included)

Submit a Leak Test Package via e-mail to utileng@cityofpsl.com including the following items:

- Utility Testing Checklist
- Density tests and logbook with letter
- As-Built Survey/Record drawings of piping and appurtenances (submitted as a single PDF file)
- Easement(s) in draft form, includes everything except owner's signature, execution date and notarization, to ensure that all constructed pipe is centered in the proposed easement
- Bill of Sale Asset List with actual or estimated final installed cost of all items listed

The test/inspection will typically be scheduled 7 calendar days from the date of receipt. Any failing paperwork means the test is considered failing. Upon scheduling inspection, EOR shall provide a map clouding or highlighting the limits of the test along with size and quantities of facilities being tested.

Test Procedures

Prior to test, ensure all valves are open within the limits of the test.

Ensure test gauge is in maximum 2 lb. increments and a maximum of 250 psi.

A 2-hour passing test has 150 psi for water mains, force mains, and IQ mains and 100 psi for low-pressure mains.

To begin the test, note the exact time and reading on the gauge.

After 1 hour, take a reading on the gauge to see if there has been a change in pressure. If there is a drop in pressure exceeding 5 psi, the test has failed.

If there has been no drop in pressure exceeding 5 psi, the test will continue.

After 2 hours, note the exact time and pressure from the gauge to see if there has been a change in pressure. If there is a drop in pressure exceeding 5 psi, the test has failed, a reinspection fee shall apply for any failure, and must be retested.

Take photos of the gauge reading at the beginning of the test, at the 1-hour mark, and at the final reading.

Note the pressure gauge readings on the Pressure Test Report.

Calculate the allowable leaking using the Allowable Leak Formula located on the Pressure Test Report.

Zero out the pressure gauge by following the bleed-off procedures below:

- The EOR's representative and contractor goes to the end of the main lines within the limits of the test and the PSLUSD inspector stays at the gauge
- Using a communication device, the EOR's representative observes the contractor opening the valve and the PSLUSD inspector confirms that the gauge slightly moves
- For water mains, utilizing the same procedure, the EOR's representative and contractor goes to each fire hydrant and observes the contractor slightly opening the hydrant and the PSLUSD inspector confirms that the gauge slightly moves
- For water mains, utilizing the same procedure, the EOR's representative and contractor goes to each above-ground service 2" and larger and observes the contractor opening the valve and the PSLUSD inspector confirms that the gauge slightly moves
- If there is still pressure remaining on the gauge, continue using one of the methods above until the gauge reads zero.

The Pressure Test Form can be completed by either the PSLUSD inspector or EOR's representative. The PSLUSD inspector shall sign the form and have the EOR or their representative print their name and sign the form. The form gets e-mailed to the Supervisor, Project Coordinator, utilinsp@cityofpsl.com, and the EOR.

References

ANSI/AWWA C600, C605, C651, C900, and C905