

CRR POLICY 1310: UNDERGROUND FIRE LINE INSPECTION AND TESTING

Created: July 10, 2017 Revised: January 29, 2019 Effective Date: Immediate
Community Risk Reduction Division – 928-204-8926



This policy is promulgated in accordance with Section 104.1 of the 2012 International Fire Code (IFC) and is an official interpretation of NFPA 24 & Section 901.5 of the 2012 edition of the IFC.

The following shall apply to underground fire line acceptance testing and flushing:

- 1) Installation of underground fire line shall not commence until Sedona Fire district has reviewed and released plans for construction.
- 2) Contractor shall have approved plans onsite.
- 3) Contractor shall have a "Competent Person" onsite.
- 4) Prior to beginning the hydrostatic and flush testing the contractor shall provide an Underground Contractor's Material and Test Certificate. Immediately after the conclusion of the hydrostatic test and flushing of the pipe, the contractor shall complete the Underground Contractor's Material and Test Certificate satisfactorily and provide it to the inspector. Failure to have this form onsite at the beginning of the inspection or to provide the completed form to the inspector at the conclusion of the inspection shall be grounds for failure of the inspection.

NOTE - The Underground Contractor's Material and Test Certificate is found in NFPA 24.

- 5) Installation of the piping shall be compared against the approved plans to ensure the following;
 - a. Size of piping.
 - b. Type of piping.
 - c. Depth of piping.
 - d. Proper pipe configuration of:
 - i. Thrust blocks.
 - ii. Protective wrap (poly wrap) of piping, including fire riser flange spigot. (Applies to ductile piping only).
 - iii. Direction changes.
 - iv. Location of:
 1. Double Backflow Assembly.
 - a. Correct direction.
 - b. Monitored tamper switches installed on control valves on double backflow assembly.
 2. Remote Fire Department Connection (FDC).
 - a. Remote Fire Department Connection shall be located within one hundred and fifty (150) feet of and on same side of road as a fire hydrant.
 - b. Remote Fire Department Connection shall be located outside of the collapse zone of the structure (a minimum one and one half times the height of the structure)
 - c. If remote Fire Department connection services only one building, then paint supply piping red and stencil the address with four inch white characters.
 - d. If Fire Department Connection serves more than one building, then provide a 12-inch by 18-inch RED background sign with the addresses the Fire Department Connection serves in three inch reflective WHITE characters.
 - e. Verify three foot diameter clearance around Fire Department Connection.
 - f. Fire Department Connection shall be installed between 18 and 48 inches above finish grade and the 2.5 inch ports shall face fire lane.
 - g. Verify that Knoxbox™ locking 2.5 inch caps or plugs are installed.
 - h. Verify that swing check valve is installed as close to Fire Department Connection as possible and is installed in correct direction.

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3. Fire Hydrants
 - a. The large (4.5 inch) port shall be facing directly towards the Fire Lane.
 - b. The bottom of the 4.5 inch port shall be installed between 18 inches and 24 inches above finish grade.
 - c. Verify three (3) foot diameter clearance around fire hydrants.
- 6) Verify that all valves within the system are in the open position, including fire hydrant sectional valves.
- 7) Observe hydrostatic test of all piping at 200 psi for 2 hours or 50 psi in excess of system working pressure, whichever is greater.
- 8) Relieve pressure after hydrostatic test and confirm the test gauge returns to zero. (A gauge that does not return to zero could be an indication that the gauge is broken or pegged).
- 9) Observe flush of all piping with city water until clear and free of all debris.

NOTE: Fire lines shall be visible during hydrostatic testing. Center loading of the pipe is acceptable; however, all joints, valves, thrust blocks, and fittings shall be visible. The fire department inspection of fire line consists of the fire line supply piping from the inside / outside of the building(s) to the point of connection to the supply water main at street or to water main loop. If a remote FDC is installed, the fire line supply piping from the building to the remote FDC is required.

Any comments or questions regarding the above information may be submitted to:

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