



FIRE SPRINKLER UNDERGROUND INSPECTION PROCEDURES

Fire Sprinkler Underground Hydrostatic Test

1. All new fire service mains shall be tested hydrostatically at not less than 200 psi pressure for a minimum of two hours, or at 50 psi pressure in excess of the maximum static pressure when the maximum required static pressure exceeds 150 psi.
2. Any pressure loss or leaks will result in a failed inspection.
3. All piping must be exposed, with all joints and thrust blocks exposed, and labeling of the pipe must be visible and turned upward.
4. Hydrostatic test shall be made by the installing contractor in the presence of a representative of the Keller Fire Marshal's Office.
5. Hydrostatic test of the fire sprinkler underground lines shall be required at the same time the visual inspection is performed. **NO EXCEPTIONS.** The piping will be allowed to be center loaded to prevent pipe movement.
6. Hydrostatic test shall be conducted prior to the cover of the underground pipe. If a hydrostatic test is completed after the piping system is covered and fails, the piping will be required to be uncovered, regardless of cover.

Fire Sprinkler Underground Flush

7. All underground piping shall be thoroughly flushed **PRIOR TO** connecting to the system risers or other aboveground piping system(s). If the underground piping is connected to the system riser, "stacked", both the overhead and underground piping will be required to be flush in accordance with the requirements of NFPA 13 and NFPA 24.
8. The flush of the underground piping shall be completed prior to any overhead fire sprinkler inspections.
9. The minimum flow rate shall not be less than the water demand of the rate of the system, or not less than that necessary to provide a velocity of 10 ft/s, whichever is greater. *See Table 1.*
10. Flush shall be made by the installing contractor in the presence of a representative of the Keller Fire Marshal's Office.
11. Proper methods and equipment to perform the flush must be used. All piping used to flush must be properly secured or restrained. Hoses may not be used. Field Inspector must approve of flushing method and equipment.

Table 1

Flow Required to Produce a Velocity of 10 ft/s in Pipes	
Nominal Pipe Size	Flow Rate
(in.)	(gpm)
4	390
6	880
8	1560
10	2440
12	3520

Fire Sprinkler Underground Visual

12. Visual inspection of the installation shall be performed **PRIOR TO** cover. If the piping and joints are covered prior to installation, you will be required to uncover the piping for inspection, regardless of cover. **NO EXCEPTIONS.**
13. All underground piping and joints must be uncovered and exposed, with labeling of the pipe legible from grade.
14. All thrust blocks will be visually inspected and must be uncovered and exposed to grade.
15. Depth of bury of the pipe shall be measured and verified.
16. All ductile iron, retaining rods, and other non-plastic components shall be externally coated for corrosion and poly-wrapped.