

NEBRASKA

Good Life. Great Safety.

STATE FIRE MARSHAL AGENCY



Pete Ricketts, Governor



GUIDANCE DOCUMENT 19-07 Underground Fire Service Mains

This guidance document is advisory in nature but is binding on an agency until amended by such agency. A guidance document does not include internal procedural documents that only affect the internal operations of the agency and does not impose additional requirements or penalties on regulated parties or include confidential information or rules and regulations made in accordance with the Administrative Procedure Act. If you believe that this guidance document imposes additional requirements or penalties on regulated parties, you may request a review of the document.

7/29/2019

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The following guidelines have been created to regulate the practice of using an existing domestic water line, smaller than 6 inches, simultaneously as a fire sprinkler main. Prior written approval by the authority having jurisdiction (AHJ) is required. Use and acceptance of this guidance document shall not be based exclusively on cost savings.

This guidance document does not pertain to one and two-family dwellings (13D), manufactured homes (13D), or residential occupancies up to and including four stories in height (13R).

Valves

Where post indicator valves cannot be located 40 feet or more from buildings, they shall be permitted to be located closer where approved by the AHJ, or wall post indicator valves shall be used, provided they are set in locations near blank walls where the possibility of injury by falling walls is unlikely and from which people are not likely to be driven by smoke or heat. NFPA 24, 6.3.3.2

Existing Underground Piping

The AHJ shall be permitted to waive the material and joint restraint requirements for existing underground piping under the following conditions.

- It's deemed impractical by the AHJ to determine the existing piping material and joint restraint methods but the AHJ has come to a reasonable conclusion to believe they are adequate.
- All piping and attached appurtenances, from the public water service main to the system riser, shall be hydrostatically tested at 200 psi (13.8 bar) or 50 psi (3.5 bar) in excess of the system working pressure, whichever is greater, and shall maintain that pressure without loss for 2 hours. NFPA 24, 10.10.2.2
- Underground piping, from the public water service main to the system riser, shall be completely flushed before the connection is made to downstream fire protection system piping. NFPA 24, 10.10.2.1

Water Supply

All of the following conditions shall be met to ensure that an adequate water supply exists:

- The volume and pressure of a public water supply shall be determined from waterflow test data, and if requested, witnessed by the AHJ. NFPA 24, 5.1.2
- Documentation showing itemized calculations for all connections to the domestic service shall be provide unless provisions have been made to isolate the domestic demand.
- The domestic demand shall be added to the hydraulic calculations for the fire system at the point of connection unless provisions have been made to isolate the domestic demand.
- Hydraulic calculations show that the main is able to supply the total demand at the appropriate pressure. NFPA 24, 5.2.2(2)

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