



## CITY OF HELENA FIRE DEPARTMENT



# "BITS"

Miscellaneous "BITS" of information that may be of interest to  
City of Helena Contractors and Design Professionals  
January 2016

### FIRE SPRINKLER SYSTEM UNDERGROUND PIPING, RISER ROOM CLEARANCES and SIGNAGE

In accordance with 2012 International Fire Code (IFC) and NFPA 13



#### UNDERGROUND PIPING FOR FIRE SPRINKLER SYSTEMS

The length of piping that is run under the building slab needs to be limited. This applies to any fire system supply line or fire department connection (FDC). Designs with long runs can displace soil and aggregate beneath the structure in the event of a pipe leak or fitting rupture. We have experienced several underground supply failures in Helena and have seen the massive undertaking it takes to replace and repair the damage. Current code, Section 10.6 of NFPA 13 – 2010, is clear on this and provides for special precautions if the design does have pipe running under the building. These precautions include arching the foundation walls over the pipe, running pipe in covered trenches, and providing valves to isolate sections of pipe under the building. Interpretations range in how far the piping can run under a building before these precautions need to be taken. Prudent design and cost considerations should place the fire riser close as close to an exterior wall as possible. Running fire sprinkler system piping under a slab more than 10 feet will be unacceptable and will require relocation. Hopefully this section of the code will be clarified in the next edition of NFPA 13 or 24.



#### Sprinkler Riser Space

New IFC, Section 901.4.6 establishes requirements to ensure rooms housing fire protection system risers or fire pumps and their components have adequate space to facilitate their maintenance. Please design clear access and working space around the front and sides of a fire sprinkler riser and controls without any obstructions. A rule of thumb is to provide a minimum 3 feet clearance around systems.



#### Signage for Fire Equipment and Utility Rooms

In accordance with IFC Section 509.1 and as amended by City Code 3-9-8, *"Any area containing fire protection, fire detection, utilities, or other equipment used during emergency operations shall be clearly identified. Signage shall be of a durable material, permanently installed, and have a red background with white 1 1/2" lettering. Under certain condition, exceptions may be granted subject to approval by the AHJ."*

**FIRE SPRINKLER  
RISER ROOM**

All required signage shall be located and detailed on construction plans during the plan review phase to ensure compliance during the final inspection phase.