FIRE-MEDICAL DEPT
Memorandum

Date: March 15, 2018

To: Tim Gourley – Residential Field Inspection Supervisor

From: Michael Brune – Fire Prevention Inspector Supervisor

Subject: NFPA 13D System – Obstructions in Closets

I recently received a written complaint from a fire sprinkler contractor regarding some inspections on a residential fire sprinkler system installation. The complaint centered around the obstruction issue in a closet. I am hoping that you can share this information with your inspectors so that we are consistent with interpretations. As always, I am available to assist with any interpretations or field issues you may find.

The first item that needs to be clarified is the Code/Standard under which these systems are permitted and inspected. The requirement to install the residential fire sprinkler system only comes from the City of Peoria *International Fire Code* Amendments and therefor, per section 903.3.1.3, is to be administered under NFPA 13D (2010). Any references to non-compliant situations during inspections are to be taken from NFPA 13D in order to be consistent and enforceable. Section P2904 of the *International Residential Code* does not address all of the references that are covered under NFPA 13D.

The issue at hand regards an obstruction within a closet that has a fire sprinkler head. Per section 8.2.5.1, when a closet is **400 cubic feet or smaller** and the fire sprinkler head is installed at the highest point (i.e.: closet under a stair), obstructions within the closet are not an issue. The reasoning behind this, per the NFPA 13D commentary, is that fire control can be achieved through the water flowing from the single sprinkler head and through the conversion to steam. Additionally, the obstruction will not unduly delay the activation of the fire sprinkler head since the heat will remain trapped in the space. This will require the inspector to determine whether the closet is less than 400 cubic feet by multiplying the length, times the width, times the height (L x W x H) to determine the cubic footage.

In this picture, that was provided by the fire sprinkler contractor, the fire sprinkler head installed inside this closet is not an obstruction issue and is acceptable. The assumptions in the picture are that the closet is 400 cubic feet or less in size and meets the definition of the compartment.

Please take the time to use the correct standard for inspections and verify all necessary exceptions and rules. Requirements, plan reviews and interpretations made by the Fire Department regarding these systems only come from the NFPA Standards and the *International Fire Code*.