Standpipes Requirements for Design, Inspection & Testing Requirements

In this meeting we will cover standpipes from the triggering requirements in the IFC to the design, installation, inspection, and testing requirements in NFPA 14.

Next Coffee Break

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<td>Date/Time:</td>
<td>Thursday February 7th 2019</td>
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Administrative Reminders

Permit applications are required for all submittals. The applications need to be filled out completely and signed. For resubmittals the resubmittal box should be checked.

Permits for less than 21 head sprinkler additions or modifications only cover jobs that where 20 or less sprinklers are modified regardless of whether you are adding less than 21 heads. For example, if you are adding ten heads and modifying 15 heads a less than 21 head permit does not apply.

Scheduling tests should be done with Captain Ramquist at 515-283-1367 or by email grramquist@dmgov.org.

Prior to scheduling any tests all the required pre-testing and inspections per NFPA 13 & 72 should be completed.

Per DMFD policy NFPA 72 record of completions should be submitted 48 hours prior to the test. Finally, the primary power to the fire alarm should be shut off 24 hours in advance of the start of fire alarm tests.

Standpipes

IFC Standpipe Requirements

The IFC requires buildings with an occupied floor level greater than 30’ above the lowest level of fire department access to provide standpipes. These standpipes are allowed to be manual wet standpipes.

When a building is greater than 75’, relative to the lowest level of fire department access, the building is defined as a high-rise. The IFC requires that high-rises provide automatic standpipes. This de-facto requires a standpipe.

Open parking garages regardless of height are only required to provide manual dry standpipes, with few exceptions.

Standpipes are required in all stairwells required for egress. The hose connections are required to be located on the intermediate landings.

NFPA 14 Design requirements

Standpipes are required to be designed to provide 500 gpm at 100 psi from the hydraulically most remote standpipe connection and 250 gpm at 100 psi at the top of every other required standpipe. Hydraulic calculations are required for any permit involving a standpipe. The calculations should begin at the fire pump or FDC depending on type. Manual standpipes are allowed to use a fire department apparatus pump curve as the supply at the FDC.

Inspection and Testing Requirements

Standpipes, like sprinkler systems, are required to be hydrostatically tested. The hydrostatic test is required to include the fire department connections.

Standpipe testing is required, but has not been uniformly enforced, flow testing. The city of Des Moines policy on standpipe flow testing should be followed for testing of all standpipes. It includes guidance for designing for the initial acceptance and required 5 year full flow testing.

Every 5 years standpipes are required to be full flowed during the annual inspection and testing.