RESIDENTIAL FIRE SPRINKLER HEAD POSITION WITH REGARD TO SLOPED OR BEAM CEILING CONFIGURATIONS

DATE: January 26, 2010
INFORMATION BULLETIN: C-09-002
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NFPA 13D and 13R

Effective immediately, the Fire Prevention, Plan Check Section will apply the following criteria when reviewing plans of residential fire sprinkler systems:

NFPA 13D and 13R require that only listed residential fire sprinkler heads be utilized in residential fire sprinkler systems. The installation of these fire sprinkler heads must be in accordance with their product listing criteria. In addition, NFPA 13D/13R requires that pendant and upright fire sprinkler head be installed within one to four inches from the ceiling. Sidewall fire sprinkler heads must be installed within four to six inches from the ceiling. The standard further specifies that fire sprinklers be positioned so that response times are not unduly affected by obstructions such as ceiling slope, beams or light fixtures.

When a design is encountered that does not demonstrate compliance with the fire sprinkler head listing or with NFPA standards as indicated above, the designer will be required to either alter the design so that the system fully conforms to the standard or to obtain the services of a qualified registered professional engineer to review and approve the design.

The engineer must include the following criteria in the evaluation:

A. The engineer must evaluate the design and determine that it affords and equivalent level of protection to that otherwise provided through he NFPA standard and the product listing;

B. The engineer must consider design features such as providing larger flow, design of three or more sprinkler heads to operate within the compartment or both. Other features may also be evaluated;

C. The engineer must provide a wet stamped written statement that will be incorporated as a permanent part of the construction drawings. The statement must include the following language: "I am a registered professional engineer in the State of California. I am knowledgeable in both fire sprinkler system design and operation. I have reviewed the proposed fire sprinkler system design against the adopted NFPA standard and the product listing. I have determined that the proposed design affords an equivalent or greater level of protection when evaluated against these criteria."

Any questions regarding specific applications should be addressed through the Fire Prevention, Plan Check Section.

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