



DEKALB COUNTY FIRE RESCUE DEPARTMENT

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**2013 NFPA 13 MODIFICATION OF EXISTING SPRINKLER SYSTEM  
REVIEW REQUIREMENTS**

**Approved/Comply with Comments**

**Disapproved/Resubmit**

Project Name:  
Physical Address:  
Project No.:  
Date Received:  
Date Reviewed:

Sprinkler Contractor Information:

**2013 NFPA 13 MODIFICATION OF EXISTING SPRINKLER SYSTEM  
REVIEW REQUIREMENTS**

**All modifications of existing sprinkler systems require submittal of shop drawings, and placement of sprinkler contractor's new hydraulic data nameplate at the riser or sectional valve along with the existing hydraulic data nameplate.**

**4.4** In existing sprinkler systems, heads may be relocated from original installation locations. All alterations or modifications to existing branch lines shall be submitted with hydraulic calculations if work is outside of scope of subsections 4.4.1 through 4.4.4. New hydraulic data nameplate shall be placed on any modified system at the riser or sectional valve along with the existing hydraulic data nameplate.

**The following modifications of existing sprinkler systems do not require submittal of hydraulic calculations:**

**4.4.1** One additional sprinkler may be added to an original installation location if the additional sprinkler is in a remotely located or non-communicating compartment from the existing or relocated sprinkler.

**4.4.2** Two sprinklers may be added to an existing branch line if the additional sprinklers are in remotely located or non-communicating compartments from the existing or relocated sprinkler.

**4.4.3** New branch lines added to existing cross mains shall be sized the same as the existing branch lines.

**4.4.4** No more than two heads shall be supplied from 1-inch (25.4 mm) pipe unless the existing system was calculated to supply more than two heads. In such case, the calculated maximum for 1-inch (25.4 mm) pipe shall take precedence.

**14.1.4** The working plan submittal shall include manufacturer's installations for any specially listed equipment, including descriptions, applications, and limitations for any sprinklers, devices, piping or fittings.

### **14.3 Hydraulic Calculation Forms.**

**14.3.1 General.** Hydraulic calculations shall be prepared on form sheets that include a summary sheet, detailed work sheets, and a graph sheet. (See copies of typical forms in Figures A.14.3.2 (a), A.14.3.3, and A.14.3.4.)

### **14.2 Water Supply Information.**

**14.2.1 Water Supply Capacity Information.** The following information shall be included:

- (1) Location and elevation of static and residual test gauge with relation to the riser reference point
- (2) Flow location
- (3) Static pressure, psi (bars)
- (4) Residual pressure, psi (bars)
- (5) Flow gpm (L/min)
- (6) Date
- (7) Time
- (8) Test conducted by or information supplied by
- (9) Other sources of water supply, with pressure or elevation

### **8.1 Basic Requirements.**

**8.1.1** The requirements for spacing, location and position of sprinklers are based on the following principles:

- (1) Sprinklers installed throughout the premises.
- (2) Sprinklers located so as not to exceed maximum protection area per sprinkler.
- (3) Sprinklers positioned and located so as to provide satisfactory performance with respect to activation time and distribution.
- (4) Sprinklers shall be permitted to be omitted from areas specifically allowed by this standard.

- (5) When sprinklers are specifically tested and test results demonstrate that deviations from clearance requirements to structural members do not impair the ability of the sprinkler to control or suppress a fire, their positioning and locating in accordance with the test results shall be permitted.
- (6) Clearance between sprinklers and ceilings exceeding the maximums specified in this standard shall be permitted provided that tests or calculations demonstrate comparable sensitivity and performance of the sprinklers to those installed in conformance with these sections.

## 8.5 Position, Location, Spacing and Use of Sprinklers

**8.5.2.2 Maximum Protection Area of Coverage.** The maximum allowable protection area of coverage for a sprinkler ( $A_s$ ) shall be in accordance with the value indicated in the Table in the applicable section for each type or style of sprinkler. In any case, the maximum area of coverage of a sprinkler shall not exceed 400 ft<sup>2</sup>.

**8.5.3.1 Maximum Distance Between Sprinklers.** The maximum distance permitted between sprinklers shall be based on the centerline distance between sprinklers on the branch line or on adjacent branch lines. The maximum distance shall be measured along the slope of the ceiling. The maximum distance permitted between sprinklers shall comply with the value indicated in the applicable section for each type or style of sprinkler.

**8.5.3.2 Maximum Distance from Walls.** The distance from sprinklers to walls shall not exceed one-half of the allowable maximum distance between sprinklers. The distance from the wall to the sprinkler shall be measured perpendicular to the wall.

**8.5.3.3 Minimum Distance From Walls.** The minimum distance permitted between a sprinkler and the wall measured perpendicular to the wall shall comply with the value indicated in the applicable section for each type or style of sprinkler. The distance from the wall to the sprinkler shall be no less than 4".

**8.5.3.4 Minimum Distance Between Sprinklers.** The minimum distance permitted between sprinklers shall comply with the value indicated in the applicable section for each type or style of sprinkler, and shall be maintained between sprinklers to prevent operating sprinklers from wetting adjacent sprinklers and to prevent skipping of sprinklers. Sprinklers shall be spaced not less than 6ft on center.

ADDITIONAL COMMENTS:

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