



# QUICK RESPONSE

Saving life and property through effective licensing, plan review, and inspection of fire protection systems.

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## Sloped Attic Spaces

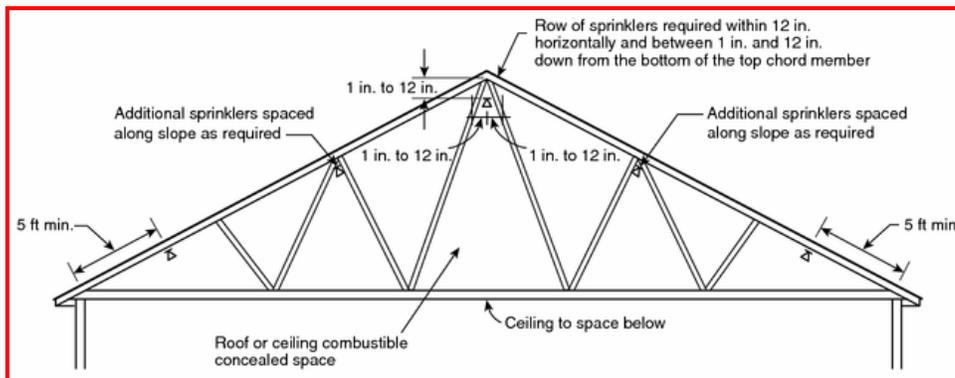
The 2002 edition of **NFPA 13** has revised requirements for the protection of sloped combustible attic spaces with construction members spaced three feet or less on center and a pitch of 4/12 or greater. The maximum protection area and maximum spacing requirements are found in **Table 8.6.2.2.1(a)**. The maximum protection area has been reduced to 120 square feet while the maximum spacing is identified as either 8' x 15' or 10' x 12' depending on the minimum psi utilized in the hydraulic calculations. **Section 11.2.3.1.8(12)** also references the minimum head pressure requirements of **Table 8.6.2.2.1(a)**.

**Table 8.6.2.2.1(a) Protection Areas and Maximum Spacing (Standard Spray Upright/Standard Spray Pendent) for Light Hazard**

Construction Type	System Type	Protection Area		Spacing (maximum)	
		ft <sup>2</sup>	m <sup>2</sup>	ft	m
Noncombustible obstructed and unobstructed and combustible unobstructed with members 3 ft or more on center	Pipe schedule	200	18.6	15	4.6
Noncombustible obstructed and unobstructed and combustible unobstructed with members 3 ft or more on center	Hydraulically calculated	225	20.9	15	4.6
Combustible obstructed with members 3 ft or more on center	All	168	15.6	15	4.6
Combustible obstructed or unobstructed with members less than 3 ft on center	All	130	12.1	15	4.6
Unoccupied attics having combustible wood joist or wood truss construction with members less than 3 ft on center with slopes having a pitch of 4 in 12 or greater	All	120	11.1	8' x 15' (minimum psi) 10' x 12' (minimum 20 psi)	2.4' x 4.6' (minimum 0.48 bar) 3' x 3.7' (minimum 1.34 bar)

\*The smaller dimension shall be measured perpendicular to the slope.

An important footnote at the bottom of the table states, "The smaller dimension shall be measured perpendicular to the slope". One way to explain this is to say that the 8' dimension in the 8' x 15' option and the 10' dimension in the 10' x 12' option are measured between sprinklers parallel with the peak. Another is to say that the smaller dimension is measured perpendicular to the attic trusses.



Along with the changes for protection area, sprinkler spacing and hydraulic calculation considerations; location requirements have also been revised. **Section and Figure 8.6.4.1.4**, as amended by the **Minnesota State Fire Code**, identifies the new requirements. Sprinklers must be installed within 12"

horizontally of the peak arranged with the deflectors 1" to 12" below the peak. Also, as amended by the **Minnesota State Fire Code**, sprinklers located along the eaves must be located not **less** than 5' from the intersection of the truss cords.

One final note, **Section 8.6.4.1.4.1** requires sprinklers in the space to be quick response.