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1 For areas where ceiling elevation changes, see NFPA 13 Section 2002-2016 8.6.4.1.3 or 2019 Section 9.5.4.1 for spacing allowances.
Unobstructed Construction

Sprinkler Deflector to Ceiling: 6" to 8" [02-16 8.11.4.1.1, '19 13.2.7.1.1]

Obstructed Construction

Distance from Ceiling

Sprinkler Deflector: 6" to 12" below ceiling [02-16 8.11.4.1.2(1), '19 13.2.7.1.2(1)]

One of the following:

Composite Wood Joists

Sprinkler Deflector: 1" to 6" below wood joists or composite wood joist, to a maximum of 22" below ceiling/roof deck [02-16 8.11.4.1.2(2), '19 13.2.7.1.2(2)]

Concrete Tee Construction

Stems Less than 7-1/2 ft and greater than 3-ft on center

Observe Beam Rule of Table 2002-2016 8.11.5.1.2, 2019 13.2.8.1.2

Composite Wood Joists

Sprinkler Deflector: At or Above 1" below bottom of concrete stem [02-16 8.11.4.1.2(3), '19 13.2.7.1.2(3)]

Stems Less than 7-1/2 ft and greater than 3-ft on center

Observe Beam Rule of Table 2002-2016 8.11.5.1.2, 2019 13.2.8.1.2

ESFR

Obstructed Construction

Yes

Branch Lines permitted across beams, but sprinklers shall be located in bays and not under beams. [NFPA 13 8.12.4.1.6]

No

Pendent K-14

Sprinkler Deflector: 6" to 14" below ceiling [02-16 8.12.4.1.1, 8.12.4.1.2, '19 14.2.10.1.1, 14.2.10.1.2]

Pendent K-16.8

Sprinkler Deflector: 6" to 18" below ceiling [02-16 8.12.4.1.3, '19 14.2.10.1.3]

Pendent K-22.4

Sprinkler Deflector: 6" to 18" below ceiling [02-16 8.12.4.1.3, '19 14.2.10.1.3]

Pendent K-25.2

Sprinkler Deflector: 6" to 18" below ceiling [02-16 8.12.4.1.3, '19 14.2.10.1.3]

Upright K14

Sprinkler Deflector: 3" to 12" below ceiling [02-16 8.12.4.1.4, '19 14.2.10.1.4, '19 14.2.10.1.5]

Upright K16.8