AGENDA

NFPA Technical Committee on Residential Sprinkler Systems (AUT-RSS)
NFPA 13D/R First Draft Meeting (A2024)

July 6-7, 2022
8:00 a.m. – 5:00 p.m. (MT)

Denver, Colorado
To join the meeting, please contact: eliolin@nfpa.org

1. **Call to order.** Chairman Ken Isman.
2. **Introductions.** See committee roster attached.
3. **Chair report.** Ken Isman.
4. **Staff liaison report.** Chad Duffy/Tom Goss.
5. **Previous meeting minutes.** June 2020, Remote/Virtual. See attached.
6. **NFPA 13D/R First Draft.**
   a. **Public Inputs.** See attached.
7. **Other Business.**
8. **Future meetings.**
9. **Adjournment.**

Address List No Phone

06/15/2022
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Automatic Sprinkler Systems

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Residential Sprinkler Systems

Automatic Sprinkler Systems

Chad Duffy 7/17/2017

Staff Liaison **AUT-RSS**
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MINUTES of the
NFPA 13R & 13D (AUT-RSS) – 2nd Draft meeting
Remote/Virtual – June 22-24, 2020

Monday; June 22

1. Chairman Ken Isman called the meeting to order at 2:00 PM.
2. Attendance was taken.
3. Chairman Isman reviewed the meeting agenda.
4. Staff Liaison Chad Duffy reviewed the process motions for a second draft meeting and key dates in the current revision cycle.
5. Staff Liaison Chad Duffy provided the second draft meeting presentation.
6. Chairman Isman provided standard meeting instructions and outlined how he saw the meeting progressing.
7. Chairman Isman called for a motion to accept the minutes of August 12-13, 2019; Indianapolis, IN. Motion passed unanimously.
8. Technical Committee reviewed and acted on public comments as assigned.
9. Recessed at 5:00 PM.

Tuesday; June 23

1. Chairman Isman called the meeting to order at 2:00 PM.
2. Attendance was taken.
3. Technical Committee reviewed and acted on public comments as assigned.
4. Recessed at 5:00 PM.

Wednesday; June 24

1. Chairman Isman called the meeting to order at 2:00 PM.
2. Attendance was taken.
3. Technical Committee reviewed and acted on public comments as assigned.
4. Chairman Isman dismissed the AUT-RSS task group and thanked them for their hard work.
5. Chairman Isman asked if there was any unfinished business. No unfinished business was brought forward.
6. Chairman Isman announced that the next meeting date and location will be announced at a later time.

7. Adjourned at 3:25 PM.

Respectfully submitted; Chad Duffy, NFPA

Attendees

Isman, Kenneth	Chair	University of Maryland
Asp, Roland	Principal	National Fire Sprinkler Association
Bell, Kerry	Principal	UL LLC
Benn, Fred	Principal	Advanced Automatic Sprinkler, Inc.
Bittenbender, Jonathan	Principal	REHAU Incorporated
Browning, Chase	Principal	Medford Fire Department
Cronin, Bradford	Principal	Newport Fire Department
Denhardt, John	Principal	American Fire Sprinkler Association
Feid, Jeffrey	Principal	State Farm Insurance Company
Lujan, Cesar	Principal	National Association of Home Builders
O'Brian, Michael	Principal	International Association of Fire Chiefs
Palazini, Wade	Principal	JENSEN HUGHES
Palmieri, Darren	Principal	The Viking Corporation
Pilette, Maurice	Principal	Mechanical Designs Ltd.
Puchovsky, Milosh	Principal	Worcester Polytechnic Institute
Ryckman, Jason	Principal	Canadian Automatic Sprinkler Association
Schwab, Peter	Principal	Wayne Automatic Fire Sprinklers, Inc.
Skare, Eric	Principal	Uponor, Inc.
Stanley, George	Principal	Wiginton Fire Protection Engineering, Inc.
Townley, Donald	Principal	Lubrizol
Trim, Martin	Principal	American Society of Plumbing Engineers
Van Rhyn, Jeffrey	Principal	United Assn. of Journeymen & Apprentices
Van Walraven, Ed	Principal	Basalt And Rural Fire Protection District
Victor, Terry	Principal	Johnson Controls
Viola, John	Principal	American Fire Sprinkler Association
Webb, Ronald	Principal	National Fire Sprinkler Association
Wolin, Steven	Principal	National Fire Sprinkler Association

Yu, Hong-Zeng	Principal	FM Global
Ackley, Jon	Alternate	National Fire Sprinkler Association
Dannaway, Samuel	Alternate	American Society of Plumbing Engineers
Desrosier, John	Alternate	National Fire Sprinkler Association
Ehrlich, Gary	Alternate	National Association of Home Builders
Fessenden, Mark	Alternate	Johnson Controls
Gopala, Yogish	Alternate	FM Global
Hampton, Forest	Alternate	Lubrizol Advanced Materials, Inc.
Hebenstreit, Jeff	Alternate	UL LLC
Kotula, Brent	Alternate	Uponor
Lowrey, David	Alternate	City of Boulder Fire Rescue
Roberts, William	Alternate	National Fire Sprinkler Association
Rodriguez, Erne	Alternate	Wiginton Fire Protection Engineering, Inc.
Young, Ralph	Alternate	United Assn. of Journeymen & Apprentices
Duffy, Chad	Staff Liaison	National Fire Protection Association

Guests

Kevin Kelly, NFSA
Karl Wiegand, NFSA
John Denhardt
Kevin Hall
Gary Ehrlich, NAHB
Jeff Sargent, NFPA Staff
Elena Carroll, NFPA Staff

Public Input No. 25-NFPA 13D-2022 [Section No. 3.3.1]

3.3.1 Back-to-Back Townhouse.

See 3.3.~~16.1.~~ 14

Statement of Problem and Substantiation for Public Input

3.3.16 is not the correct section....this should point to 3.3.14, which is the Townhouse definition.

Submitter Information Verification

Submitter Full Name: Chase Browning
Organization: Chase A Browning Consulting
Street Address:
City:
State:
Zip:
Submittal Date: Sat May 14 12:01:36 EDT 2022
Committee: AUT-RSS

Public Input No. 29-NFPA 13D-2022 [Section No. 3.3.1]

~~**3.3.1** – Back-to-Back Townhouse.~~

~~See 3.3.16.1.~~

Statement of Problem and Substantiation for Public Input

I believe this should have been deleted. If it does remain, the reference section needs to be corrected.

Submitter Information Verification

Submitter Full Name: Peter Schwab
Organization: Wayne Automatic Fire Sprinkler
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City:
State:
Zip:
Submittal Date: Sun May 29 12:43:21 EDT 2022
Committee: AUT-RSS

Public Input No. 5-NFPA 13D-2021 [Section No. 5.1.2.1]

5.1.2.1

The following devices and components shall not be required to be listed:

(1) Water supply pipe and fittings
(2) Tanks
(3) Expansion tanks and chambers
(4) Connections up to 5 ft (1.5 m) long between a tank and a pump
(5) Pumps
(6) Valves
(7) Gauges
(8) Waterflow detection and notification devices
(9) Hangers
(10) Backflow prevention devices approved by the water authority
(11) Water meters

Statement of Problem and Substantiation for Public Input

Expansion tanks are identified as a component that does not have to be listed; however, the standard does not refer to it anywhere else as a “expansion tank” but changes the description the an “Expansion Chamber.” Unless it is the committee's intent to require expansion chambers to be listed but not expansion tanks, this terminology should be consistent with the rest of the document.

Submitter Information Verification

Submitter Full Name: Kevin Hall
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City:
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Submittal Date: Thu Aug 26 12:27:14 EDT 2021
Committee: AUT-RSS

Public Input No. 1-NFPA 13D-2021 [Section No. 6.5.2]

6.5.2

In common water supply connections serving more than one dwelling unit, 5 gpm (20 L/min) per connection shall be added to the sprinkler system demand at the point of connection and each connection upstream to determine the size of common piping and the size of the total water supply requirements where no provision is made to prevent flow into the domestic water system upon operation of a sprinkler.

Statement of Problem and Substantiation for Public Input

When this requirement was added back in the 1999 revision cycle, the standard only considered one- and two- family dwellings and not multiple townhouses fed from a common supply. The current language implies that only 5 gpm should be added for a common supply, but for multiple dwellings on the same line, 5 gpm should be added for each connection point downstream. This was the intent of the committee per the 1999 ROP.

1313- 7- (2-3(a)): Accept
SUBMITTER: Technical Committee on Automatic Sprinklers
RECOMMENDATION: Revise 2-3.2(a) to read:
"...5 gpm (19 L/min) is added to at each point of connection to the sprinkler system demand..."
SUBSTANTIATION: If NFPA 13D is used in a multi-family
environment (see FI 80-1 FOR NFPA 13D-I), then the 5 gpm flow should be added in at each additional point of connection.
COMMITTEE ACTION: Accept.
NUMBER OF COMMITTEE MEMBERS ELIGIBLE TO VOTE: 29
VOTE ON COMMITTEE ACTION:
AFFIRMATIVE: 29

Submitter Information Verification

Submitter Full Name: Kevin Hall
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Affiliation: American Fire Sprinkler Association
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Zip:
Submittal Date: Wed Jul 14 13:00:44 EDT 2021
Committee: AUT-RSS

Public Input No. 32-NFPA 13D-2022 [New Section after 7.2.2]

7.2.2.1

The drain piping shall be permitted to terminate at the drain valve.

A.7.2.2.1

It is preferable to pipe the drain piping to an exterior location. In some instances this is not practical. With the size of the systems being relatively small, the use of a temporary hose attached to the drain connection valve is an acceptable method of draining the system.

Statement of Problem and Substantiation for Public Input

Often the connection for the NFPA 13D system is in a water heater closet inside of the dwelling unit. The practicality of piping the drain connection to the exterior of the unit can be difficult.

Submitter Information Verification

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Submittal Date: Mon May 30 17:26:01 EDT 2022
Committee: AUT-RSS

Public Input No. 2-NFPA 13D-2021 [Section No. 7.3.3]

7.3.3

Where ~~a pressure-reducing or pressure-regulating valve~~ a pressure-regulating device is installed on a stand-alone system, a pressure gauge shall be installed downstream of the device.

Statement of Problem and Substantiation for Public Input

A pressure-regulating valve is not a defined term in the NFPA Glossary. A pressure-regulating device is the umbrella definition which includes pressure reducing valves and pressure restricting devices. Pressure-regulating device is a broader and more appropriate term.

Submitter Information Verification

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Submittal Date: Wed Jul 14 13:07:25 EDT 2021
Committee: AUT-RSS

Public Input No. 3-NFPA 13D-2021 [Section No. 7.5.3]

7.5.3

~~Listed residential or quick-response standard spray dry pendent or dry sidewall~~ The following listed sprinklers shall be permitted to be extended into unheated areas not intended for living purposes~~.~~ :

(1) Residential dry pendent

(2) Residential dry sidewall

(3) Quick-response standard spray dry pendent

(4) Quick-response standard spray dry sidewall

Statement of Problem and Substantiation for Public Input

The current wording with two "or" gates is confusing and leads to multiple intrepretations of the section. A list is provided for clarity.

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Public Input No. 40-NFPA 13D-2022 [Section No. 7.5.6.3]

7.5.6.3*

The following practices shall be observed when installing residential sprinklers unless higher expected ambient temperatures require a higher temperature rating:

(1) Sprinklers under glass or plastic skylights exposed to direct rays of the sun shall be of intermediate temperature classification.

(2) Sprinklers in an unventilated concealed space under an uninsulated roof or in an unventilated attic shall be of intermediate temperature classification.

(3) * Sprinklers installed near specific heat sources that are identified in Table 7.5.6.3 shall be of the temperature rating indicated in Table 7.5.6.3 unless sprinklers are listed for positioning closer to the heat source.

(4) Sprinklers installed in saunas and steam rooms where the maximum ambient ceiling temperatures are between 151°F and 225°F (66°C to 107°C) shall be high temperature–rated spray sprinklers.

(5) Sprinklers in closets containing ventless clothes dryers shall be of the intermediate temperature classification or higher.

Table 7.5.6.3 Minimum Distances for Ordinary and Intermediate Temperature Residential Sprinklers

	From Edge of Source to Ordinary Temperature Sprinkler		From Edge of Source to Intermediate Temperature Sprinkler	
Heat Source	in.	mm	in.	mm
Side of open or recessed fireplace	36	900	12	300
Front of recessed fireplace	60	1500	36	900
Coal- or wood-burning stove	42	1050	12	300
Kitchen range	18	450	9	225
Wall oven	18	450	9	225
Hot air flues	18	450	9	225
Uninsulated heat ducts	18	450	9	225
Uninsulated hot water pipes	12	300	6	150
Side of ceiling- or wall-mounted hot air diffusers	24	600	12	300
Front of wall-mounted hot air diffusers	36	900	18	450
Hot water heater or furnace	6	150	3	75
Light ~~fixture~~	-	-	-	fixture (Incandescent & Halogen):
0 W–250 W	6	150	3	75
250 W–499 W	12	300	6	150

Statement of Problem and Substantiation for Public Input

An LED light fixture will use around 1/10th the wattage of an incandescent bulb and does not produce significant heat. Current rules require 6 in clearance for 0-250 W (3 in. for intermediate head) for all

light fixtures. This proposal will limit the current clearance requirements to heat producing light fixtures only (incandescent & halogen)

Similar proposal have been submitted to NFPA 13.

Submitter Information Verification

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Submittal Date: Wed Jun 01 15:27:16 EDT 2022
Committee: AUT-RSS

Public Input No. 4-NFPA 13D-2021 [Section No. 7.5.7]

7.5.7* Painting and Ornamental Finishes.

7.5.7.1 Sprinklers shall not be painted or enameled unless applied by the manufacturer and the sprinkler has been listed with such finishes.

7.5.7.2 Where sprinklers have had paint applied by other than the sprinkler manufacturer, they shall be replaced with new listed sprinklers of the same characteristics, including K-factor, thermal response, and water distribution.

7.5.7.3 Where cover plates on concealed sprinklers have been painted by other than the sprinkler manufacturer, the cover plate shall be replaced.

Statement of Problem and Substantiation for Public Input

The topic of cover plates was previously not discussed. Additionally, there was no direction that the sprinklers need to be replaced if they are painted.

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Public Input No. 26-NFPA 13D-2022 [New Section after 8.1.1.3]

TITLE OF NEW CONTENT

8.1.1.4 Residential sidewall sprinklers, where installed under a sloped ceiling with a slope exceeding 2 in 12, shall be located either at the high point of the slope and positioned to discharge downward along the slope, or located under the slope with deflector installed parallel to the slope and positioned to discharge across the slope.

8.1.1.5 Residential sidewall sprinklers specifically listed for other ceiling configurations shall be permitted to be installed in accordance with the listing requirements.

Statement of Problem and Substantiation for Public Input

About a decade ago, the concept of residential sprinklers being listed for use under sloped ceilings went away. NFPA 13, 13D, and 13R relied on sprinkler listings in a manufacturer's technical documentation for correct application of residential sidewall sprinklers. Those listings would allow for a residential sidewall to be either installed at the high point of the slope and positioned to discharge down the slope or located along the slope and positioned to discharge across the slope. Today, the common installation practices for residential sidewall sprinklers under sloped ceilings greater than 2 in 12, is only documented in residential design guides published by manufacturers. These design guides are not part of the listing and the information contained is meant to convey the best way to use the products within the constraints of published NFPA standards. The addition of language on deflector orientation for residential sidewall sprinklers seeks to standardize the practice of how residential sidewalls are currently being installed without having to fallback solely on design documents from a manufacturer.

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Submittal Date: Tue May 24 13:19:24 EDT 2022
Committee: AUT-RSS

Public Input No. 7-NFPA 13D-2021 [New Section after 8.2.5.8]

TITLE OF NEW CONTENT

8.2.5.9 Positioning of sprinklers to address different ceiling heights: Where the vertical change in ceiling elevation within a compartment is greater than 36 inches, the vertical plane at the elevation change shall be considered a wall for purposes of sprinkler head spacing.

Statement of Problem and Substantiation for Public Input

The concept is to limit the difference in ceiling heights whereby sprinkler spacing is based on floor coverage only. The concept is to mirror the guidance provided in NFPA 13 Section 10.2.6.1.1.3. It is noted that the ceiling pocket criteria in NFPA 13D are substantially more restrictive than in NFPA 13, which would seem to indicate even less of a ceiling height difference may be desirable in this section, however the justification for any other elevation difference is difficult. There were thoughts to propose 20 inches as a means of correlation to the limits of Table 8.2.5.3.2, although the clear strategy for complying with the obstruction criteria is to move the head at the upper elevation further and further from the vertical plane at the ceiling elevation change, and this proposal is intended to cap how far the head can be moved from this vertical plane. Thus the concept of using the 36-inch criteria already developed in the NFPA 13 standard is proposed.

At issue is how to space sprinkler heads where there is significant ceiling height difference that could inhibit activation of heads that, while adjacent to each other in terms of floor coverage, are at such different ceiling elevations that adequate coverage may be compromised. Imagine for a moment a ground floor kitchen area with ceiling height at 11 feet, opening into a two-story high dining room/living room space, with ceiling height at 23 feet. The code does not appear to limit how close a head at the 11 ft ceiling can be to the vertical plane of the elevation change, nor does it limit how much floor coverage can be assigned to that head, even if in this case a large portion of that floor coverage occurs under the 23 ft ceiling. Look at NFPA 13 Figure 10.2.6.1.1.3(B), imagine no limit of the X so the 12 ft difference indicated in the example is permitted, imagine a 20x20 spacing for sprinkler heads, where the head at the lower ceiling is 1 ft from the vertical plane while the head at the upper ceiling is 19 feet from the vertical plane. There is issue with the concept of activation of the head at the 11 ft ceiling, especially if the fire occurs in an area under the 23 ft ceiling. Further, there is issue with the concept of the sprinkler at the 23 ft elevation being able to provide coverage approximately 19 ft horizontally from the fire sprinkler.

Note that this issue is addressed in NFPA 13 Section 10.2.6.1.1.3. The purpose of this proposal is to use the same criteria in NFPA 13D.

Submitter Information Verification

Submitter Full Name: Stephen Digiovanni
Organization: Clark County Fire Dept
Street Address:
City:
State:
Zip:
Submittal Date: Tue Nov 30 15:36:56 EST 2021
Committee: AUT-RSS

Public Input No. 14-NFPA 13D-2022 [New Section after 8.3.2]

Jack and Jill Bathrooms

In a Jack and Jill bathroom where the sink is separate from the tub/shower, toilet ,and linen closet area there needs to be a consideration and instruction for this in the code. In our new house both of these areas (1. tub/shower, toilet, linen and 2. separate sink area) are counted as separate 'bathroom' spaces and sq ft is considered separately; individually these spaces are less than 55 sq ft each (and therefore under 13D do not require a sprinkler). However, together they are 92 sq ft and now I have 92 sq ft of a significant area of egress in my home that is uncovered/unprotected by sprinklers. In my opinion, this is a loophole or gray area. If a 'Jack and Jill' are going to fall under 'bathroom' code then the entire space should be looked at collectively and when over 55 sq ft in total, it should require a sprinkler regardless of separating walls or doors. So the code could be enhanced to say something like for Jack and Jill bathrooms that have delineation of space by walls/doors, the entire square footage of the area should be considered and if over 55 sq ft the space requires sprinkler coverage.

Additional Proposed Changes

File Name	Description	Approved
JackAndJill.png	Jack and Jill Bathroom	

Statement of Problem and Substantiation for Public Input

In our new house both areas of a Jack and Jill bathroom are counted (sq ft) as separate bathroom areas (1. tub/shower, toilet, linen and 2. separate sink area); individually these spaces are less than 55 sq ft each (and therefore under 13D do not require a sprinkler). However, together they are 92 sq ft and now I have 92 sq ft of significant area of egress in my home that is uncovered/unprotected by sprinklers. In my opinion, this is a loophole or gray area that requires clarification in the code. See attachment and note the area labeled 'Study Nook' is covered by one sprinkler.

Submitter Information Verification

Submitter Full Name: Jason Scarlatta
Organization: None
Affiliation: None
Street Address:
City:
State:
Zip:
Submittal Date: Mon Jan 03 14:05:24 EST 2022
Committee: AUT-RSS

3'-8 1/4"
6'-5 1/2"
8'-11 3/4"
2-2x12 OVER
DH3060
DH3060
W/TR.
6068 SLG DOOR
12-10"
6'
7'-4 3/4"
PRE-ENG. ROOF TRUSSES ABOVE @ 24" O.C. MANUFACTURER TO PROVIDE SHOP DRAWINGS
BEDROOM #3
2668
11'-6"
W.I.C.
6'-6"
5'-8 1/2"
2868
2868
GAS F.P.
DH2040
8'
8'
STUDY NOOK
2868
2868
7'-4 3/4"
3'
2'-5"
6'-6 1/2"
6'
3068 POCKET DR.
9'
2868
2668
W.I.C.
6'-6"
5'-8 1/2"
PRE-ENG. ROOF TRUSSES ABOVE @ 24" O.C. MANUFACTURER TO PROVIDE SHOP DRAWINGS
11'-6"
BEDROOM #2
11'-3 1/2"
FOYER
DH2040
3'-6"
2'-6"
12-10"
3068
9'
DH3060
DH3060
3'-8 1/4"
6'-5 1/2"
7'-11 3/4"
2-2x12 OVER
FRONT PORCH
2-2x12 OVER
2-2x12 OVER
2-2x12 OVER
2-2x12 OVER

Public Input No. 36-NFPA 13D-2022 [New Section after 8.3.4]

8.3.4.1 Where garages contain battery storage for energy systems or electric vehicle charging stations, sprinklers shall be required.

Statement of Problem and Substantiation for Public Input

With the increase in electric vehicle charging stations and battery storage systems, occupants risk from a fire is increased and sprinkler systems will reduce the risk.

Submitter Information Verification

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Organization: Johnson Controls
Street Address:
City:
State:
Zip:
Submittal Date: Tue May 31 13:26:27 EDT 2022
Committee: AUT-RSS

Public Input No. 37-NFPA 13D-2022 [Section No. 8.3.4]

8.3.4*

~~Sprinklers shall not be required in~~ Where garages, open attached porches and balconies, carports, and similar structures do not have an occupiable dwelling unit above, sprinklers shall not be required .

Statement of Problem and Substantiation for Public Input

Adds clarity that if an occupiable room is above the space, sprinklers are required.

Submitter Information Verification

Submitter Full Name: Mark Fessenden
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Street Address:
City:
State:
Zip:
Submittal Date: Tue May 31 13:36:30 EDT 2022
Committee: AUT-RSS

Public Input No. 8-NFPA 13D-2021 [Section No. 8.3.5.1.1]

8.3.5.1.1

Where fuel-fired equipment is located ~~other than beneath~~ above or adjacent to an occupied area of the dwelling unit, sprinkler protection shall not be required based on the presence of the fuel-fired equipment.

Statement of Problem and Substantiation for Public Input

Changes clarify the areas where sprinkler protection may be omitted based on the presence of fuel-fired equipment.

Submitter Information Verification

Submitter Full Name: Mark Fessenden
Organization: Johnson Controls
Street Address:
City:
State:
Zip:
Submittal Date: Wed Dec 15 13:05:44 EST 2021
Committee: AUT-RSS

Public Input No. 10-NFPA 13D-2021 [New Section after 8.3.5.1.2]

8.3.5.1.3 Where the installation of a quick-response or residential intermediate temperature sprinkler is required by 8.3.5.1.2, the fuel-fired equipment shall be positioned within the calculated coverage area of the sprinkler.

Statement of Problem and Substantiation for Public Input

Adds location criteria for the installed sprinkler.

Submitter Information Verification

Submitter Full Name: Mark Fessenden
Organization: Johnson Controls
Street Address:
City:
State:
Zip:
Submittal Date: Wed Dec 15 13:12:24 EST 2021
Committee: AUT-RSS

Public Input No. 11-NFPA 13D-2021 [New Section after 8.3.5.1.2]

8.3.5.1.4 Where fuel-fired equipment is installed within a concealed space and a portion of the fuel-fired equipment is exposed to the dwelling unit, sprinkler protection shall not be required within the concealed space.

Statement of Problem and Substantiation for Public Input

Adds clarification on how to address fuel-fired equipment installed within a concealed space that has an exposed face in the dwelling unit.

Submitter Information Verification

Submitter Full Name: Mark Fessenden
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Street Address:
City:
State:
Zip:
Submittal Date: Wed Dec 15 13:14:34 EST 2021
Committee: AUT-RSS

Public Input No. 12-NFPA 13D-2021 [New Section after 8.3.5.1.2]

8.3.5.1.5 Where a chimney or flue from fuel-fired equipment passes through a concealed space, sprinkler protection shall not be required within the concealed space.

Statement of Problem and Substantiation for Public Input

Moves annex material to the body of the standard.

Related Public Inputs for This Document

Related Input	Relationship
Public Input No. 13-NFPA 13D-2021 [Section No. A.8.3.5.1.2]	

Submitter Information Verification

Submitter Full Name: Mark Fessenden
Organization: Johnson Controls
Street Address:
City:
State:
Zip:
Submittal Date: Wed Dec 15 13:17:12 EST 2021
Committee: AUT-RSS

Public Input No. 9-NFPA 13D-2021 [Section No. 8.3.5.1.2]

8.3.5.1.2*

Where fuel-fired equipment is located within or beneath an occupied area of the dwelling unit, at least one quick-response or residential intermediate temperature sprinkler shall be installed above the equipment.

Statement of Problem and Substantiation for Public Input

Adds the additional option to provide a listed intermediate temperature residential sprinkler.

Submitter Information Verification

Submitter Full Name: Mark Fessenden
Organization: Johnson Controls
Street Address:
City:
State:
Zip:
Submittal Date: Wed Dec 15 13:09:54 EST 2021
Committee: AUT-RSS

Public Input No. 19-NFPA 13D-2022 [Section No. 8.3.7]

8.3.7

Sprinklers shall not be required for ceiling pockets that meet

~~the following conditions:~~

8.3.7.1 or the conditions of 8.3.7.2.

8.3.7.1

Compartments and designs in accordance with 10.2.1(2) or 10.2.1(4).

8.3.7.2

(1) The total volume of all unprotected ceiling pockets in a compartment does not exceed 100 ft^3 (2.8 m^3).

(2) The entire floor under the unprotected ceiling pocket is protected by sidewall or pendent sprinklers at the lower ceiling elevation.

(3) * The interior finish of the unprotected ceiling pocket excluding decorative treatments is noncombustible or limited-combustible material.

(4) Skylights not exceeding 32 ft^2 (3 m^2) shall be permitted to have a plastic cover.

Statement of Problem and Substantiation for Public Input

This code change proposal intends to address a potential code conflict and correlate allowances for unprotected ceiling pockets created by the design allowances of 10.2.1(2) & 10.2.1(4). Sections 10.2.1(2) & 10.2.1(4) prescribe circumstances where it's acceptable to position pendent sprinklers on the bottom of beams without limitation to the volume of ceiling pockets created by the beams. This proposal presumes that the intent of 10.2.1(2) & 10.2.1(4) is to leave the pockets created by the beams unprotected, due to the following:

(1) The 2012 Annual Revision Cycle Report on Proposals 13D-67 Log #CP9 proposed to add section 10.2.1(4) (among others) where the substantiation included findings from the 2010 FPRF report on the Analysis of the Performance of Residential Sprinkler Systems with Sloped or Sloped and Beamed Ceilings dated July 2010 and "other fire tests conducted at other times". It's presumed that Tyco's technical analysis of Residential Sprinkler Fire Tests with Steeply Pitched Beamed Ceilings was one of these other tests due to the similarities between the code and the Tyco analysis such as 14" beams, protection under the beams (and notably not in the pockets in the Tyco analysis), compartment under 600sqft, and no communicating openings above sprinklers. It is noteworthy that the pocketed volume for the channel beam test configurations was about 750 cubic feet which exceeds the 100 cubic feet limitation of 8.3.7.

(2) The 2012 Annual Revision Cycle Report on Comments 13D-45 Log #10 proposed to add section 10.2.1(2) and was accepted in principle. The example used for justification contemplated 24 pocketed volumes receiving sprinklers in a 600sqft compartment and questioned the effectiveness of such a design. In this example placing sprinklers under the beams and not in the pockets would create an unprotected pocketed volume of about 600 cubic feet, and again significantly higher than the 100 cubic feet limitation of 8.3.7.

Considering the justification for these proposals and the corresponding approval of these code sections, it's reasonable to conclude the intent of these two sections (10.2.1(2) & 10.2.1(4)) is to require sprinklers only on the underside of the beams, and thus the ceiling pockets created within the beams are intended to be unprotected. For the sake of completeness and avoiding confusion between the application of these two sections of the code (8.3.7 & 10.2.1), this allowance should be correlated with the ceiling pocket section of 8.3.7.

Submitter Information Verification

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City:
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Submittal Date: Thu Feb 10 15:17:39 EST 2022
Committee: AUT-RSS

Public Input No. 39-NFPA 13D-2022 [Section No. 8.3.9]

8.3.9*

Sprinklers shall be installed in any closet used for heating and/or air-conditioning equipment, washers and/or dryers, or water heaters except as allowed by 8.3.8.

A.8.3.9

Noncombustible and limited-combustible spaces with non-fuel-fired equipment and access panels should be considered a concealed space and should not require sprinkler protection.

Statement of Problem and Substantiation for Public Input

Interpretations have been made that non-combustible and limited-combustible spaces that contain non-fuel-fired equipment and include access panels only (no door) are similar to closets and that the provisions of 8.3.9 apply. This is incorrect and this added annex not will clarify.
Note that this annex note is the same as A.9.2.1.2.2 in NFPA 13

Submitter Information Verification

Submitter Full Name: Roland Asp
Organization: National Fire Sprinkler Association
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Submittal Date: Wed Jun 01 13:27:27 EDT 2022
Committee: AUT-RSS

Public Input No. 24-NFPA 13D-2022 [New Section after 10.4.9]

Add annex figure as A.10.4.9

Additional Proposed Changes

File Name	Description	Approved
NFPA_13D_Prescriptive_Calculation_Worksheet.pdf	Sample/suggested figure (similar to one used in commentary in 2016 residential handbook)	

Statement of Problem and Substantiation for Public Input

The prescriptive method for pipe sizing (10.4.9) has been in the standard for several cycles, and an annex figure indicating the calculation steps is appropriate. There is already one in the standard for the General pipe sizing method (A.10.4.4). There was a sample worksheet provided in the residential handbooks in 2013 and 2016 for the prescriptive method - the attachment provided here is based on that. Providing this will help installers complete the documentation and pipe sizing requirements.

Submitter Information Verification

Submitter Full Name: Chase Browning
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City:
State:
Zip:
Submittal Date: Mon Apr 25 13:56:57 EDT 2022
Committee: AUT-RSS

NFPA 13D Calculation Worksheet (for 10.4.9.2)

Preliminary Information

Sprinkler Model (SIN #): _____

Listed area: _____ Listed flow: _____ Listed Pressure: _____

Total demand flow: _____

Calculation

Step 1 - Water pressure in street or from pump at demand flow: _____

Step 2 - Pressure loss in water service pipe [Table 10.4.9.2 (a)]: _____

Step 3 - Pressure loss from meter [Table 10.4.4 (a)]: _____

Step 4 – Pressure loss from pressure reducing valves, backflow preventers, water softeners/filters (obtain from manufacturer): _____

Step 5 - Pressure loss due to elevation [use elevation change in feet between the place where pressure in Step 1 was measured and the highest sprinkler in the home with Table 10.4.9.2 (b): _____

Step 6 – Required pressure at remote sprinkler (see preliminary data): _____

Step 7 – Calculate available pressure by subtracting the pressure in Steps 2, 3, 4, 5 and 6 from the pressure in Step 1: _____

Step 8 – Check which table you are using for the pipe in the system:

- ☐ Table 10.4.9.2(c) for ¾ - in. Type M copper tube
- ☐ Table 10.4.9.2(d) for 1 - in. Type M copper tube
- ☐ Table 10.4.9.2(e) for ¾ - in. CPVC pipe
- ☐ Table 10.4.9.2(f) for 1 - in. CPVC pipe
- ☐ Table 10.4.9.2(g) for ¾ - in. PEX tube
- ☐ Table 10.4.9.2(h) for 1 - in. PEX tube

Using table checked above and pressure from Step 7, Maximum pipe length: _____

Summary

Are all sprinklers within length of Step 8? ____Yes ____No

Public Input No. 28-NFPA 13D-2022 [Section No. A.1.1]

A.1.1

This standard is appropriate for protection against fire hazards only in one- and two-family dwellings and manufactured homes. A one- and/or two-family dwelling that is used as a rental property would still be appropriate to be protected with a system installed in accordance with NFPA 13D. Residential portions of any other type of building occupancy or within mixed occupancies should be protected with sprinklers in accordance with NFPA 13 or NFPA 13R. Nonresidential portions of such buildings should be protected in accordance with NFPA 13 or NFPA 13R as appropriate for areas outside the dwelling unit.

The criteria in this standard are based on full-scale fire tests of rooms containing typical furnishings found in residential living rooms, kitchens, and bedrooms. The furnishings were arranged as typically found in dwelling units in a manner similar to that shown in Figure A.1.1(a), Figure A.1.1(b), and Figure A.1.1(c). Sixty full-scale fire tests were conducted in a two-story dwelling in Los Angeles, California, and 16 tests were conducted in a 14 ft (4.2 m) wide mobile home in Charlotte, North Carolina.

Sprinkler systems designed and installed according to this standard are expected to prevent flashover within the compartment of origin where sprinklers are installed in the compartment. A sprinkler system designed and installed according to this standard cannot, however, be expected to completely control a fire involving fuel loads that are significantly higher than average for dwelling units [10 lb/ft^2 (49 kg/m^2)] and where the interior finish exhibits either a high flame spread index (greater than 200, corresponding to a Class C) when tested in accordance with ASTM E84, *Standard Test Method for Surface Burning Characteristics of Building Materials*, or UL 723, *Test for Surface Burning Characteristics of Building Materials*, or a high heat release (such as a heat release rate exceeding 800 kW) when tested in accordance with NFPA 286.

(For protection of multifamily dwellings, see NFPA 13 or NFPA 13R.)

Figure A.1.1(a) Bedroom.

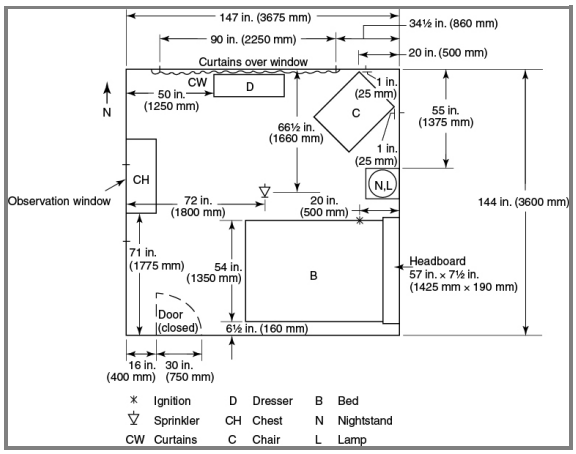


Figure A.1.1(b) Manufactured Home Bedroom.

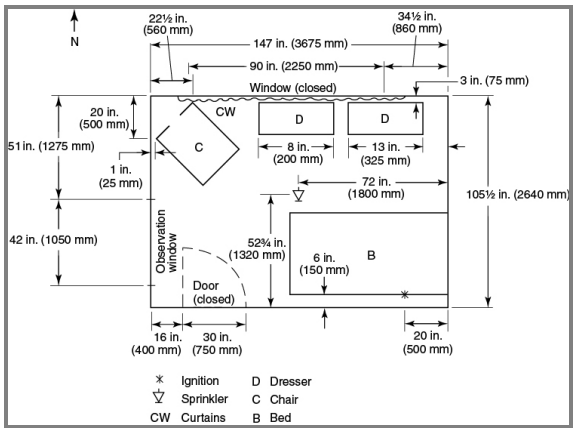
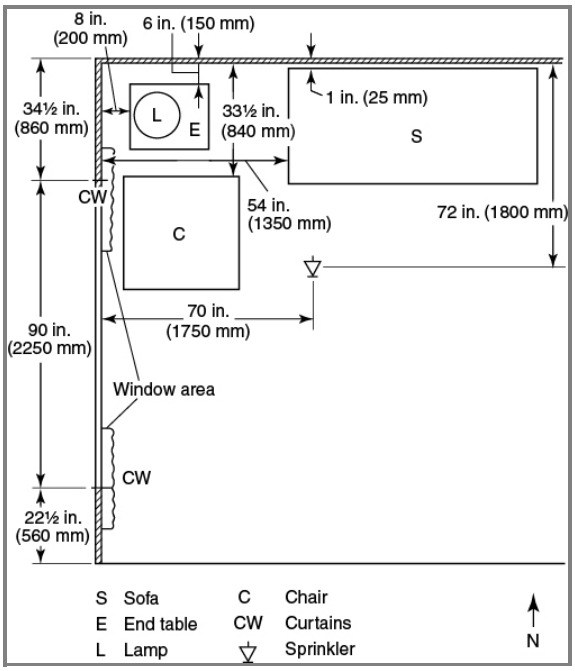


Figure A.1.1(c) Living Room.



Statement of Problem and Substantiation for Public Input

There has been a trend to build one- and two-family dwelling buildings for rent. Since these can be considered an occupancy of R-2, some AHJ's have been requiring NFPA 13R systems.
The addition of this language simply reaffirms that NFPA 13D is an acceptable system for a one- and two-family dwelling regardless of how the occupants pay to live there.

Submitter Information Verification

Submitter Full Name: Peter Schwab
Organization: Wayne Automatic Fire Sprinkler
Street Address:
City:
State:
Zip:
Submittal Date: Sun May 29 12:33:08 EDT 2022
Committee: AUT-RSS

Public Input No. 34-NFPA 13D-2022 [Section No. A.6.2]

A.6.2

The connection to city mains for fire protection is often subject to local regulation of metering and backflow prevention requirements. Preferred and acceptable water supply arrangements are shown in Figure A.6.2(a) through Figure A.6.2(e). Where it is necessary to use a meter between the city water main and the sprinkler system supply, an acceptable arrangement as shown in Figure A.6.2(c) and Figure A.6.2(d) can be used. Under these circumstances, the flow characteristics of the meter are to be included in the hydraulic calculation of the system *[see Table 10.4.4(a)]*. Where a tank is used for both domestic and fire protection purposes, a low water alarm that actuates when the water level falls below 110 percent of the minimum quantity specified in 6.1.2 should be provided.

The effect of pressure-reducing valves on the system should be considered in the hydraulic calculation procedures.

Figure A.6.2(a) ~~,~~ or ~~_~~ Figure A.6.2(c)~~, or Figure A.6.2(d) are~~ are acceptable methods for getting the water supply into the unit for a stand-alone sprinkler system (one that does not also provide direct connections to the cold water fixtures) because the common supply pipe for the domestic system and the sprinkler system between the water supply and the dwelling unit has a single control valve that shuts the sprinkler system, which helps to ensure that people who have running water to their domestic fixtures also have fire protection. This serves as a form of supervision for the control valve and can be used to make sure that the valve stays open in place of other, more expensive options such as tamper switches with a monitoring service.

Some water utilities choose to install separate taps and supply pipes from the water supply to the dwelling unit for fire sprinkler systems as shown in Figure A.6.2(d), due to the preference to not shut off water to piping that includes fire supply as well as domestic water supply. While these types of arrangements are acceptable, they might not be cost efficient and should be evaluated due to the extra cost burden this places on the building owner.

Single services should be acceptable as this standard is a life safety standard. This means that the purpose of the standard is to protect human life and not to necessarily protect property. In the event that the domestic water supply is shut off, plumbing code dictates that the home is uninhabitable and thus should be vacated. If there are no occupants within the home then there are no life safety concerns.

Additionally, having a single service connection provides some assurance that the water supply to the sprinkler system is operational.

Figure A.6.2(a) Minimum Requirements for a Stand-Alone System.

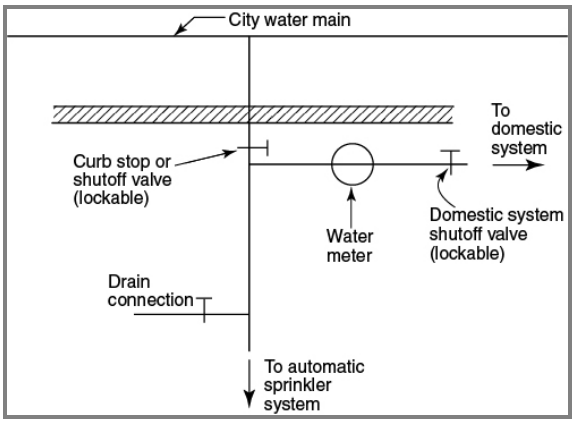


Figure A.6.2(b) Acceptable Arrangement for Stand-Alone Piping Systems — Option 1.

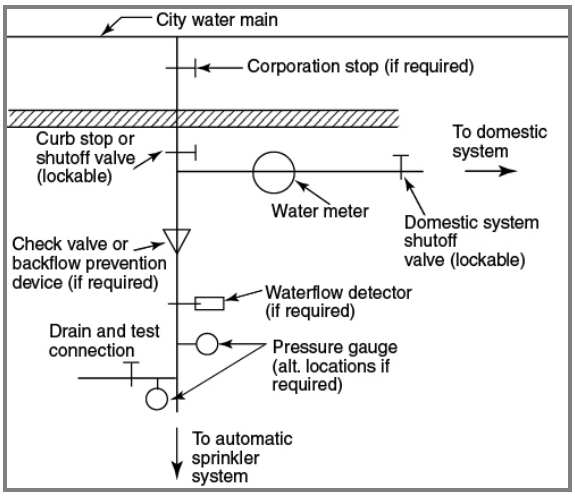


Figure A.6.2(c) Acceptable Arrangement for Stand-Alone Piping System — Option 2.

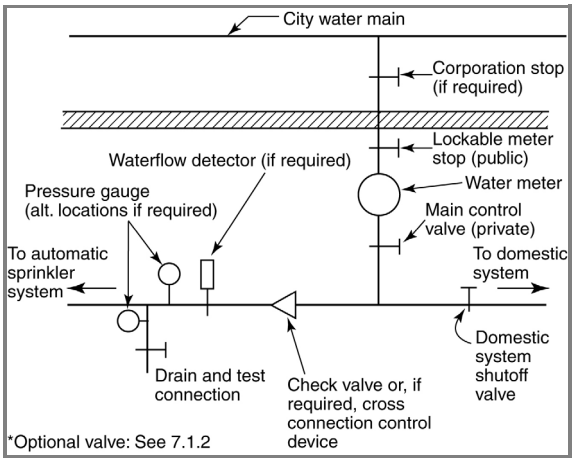


Figure A.6.2(d) Acceptable Arrangement for Stand-Alone Piping Systems — Option 3.

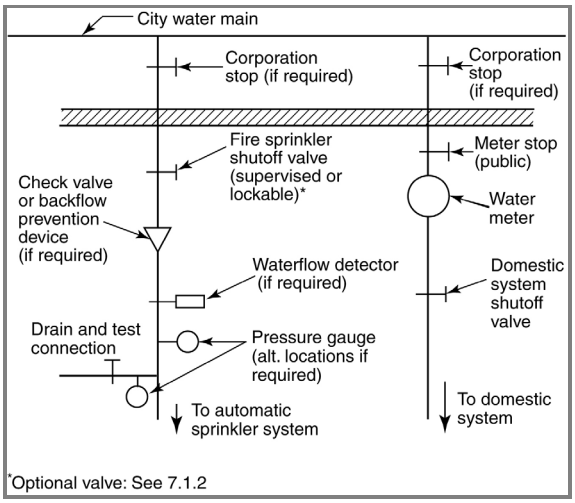
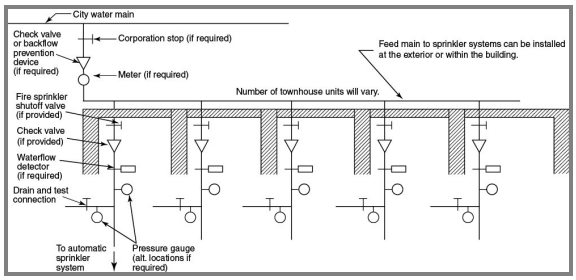


Figure A.6.2(e) Acceptable Arrangement for Townhouse Stand-Alone Piping Systems.



Statement of Problem and Substantiation for Public Input

Figure A.6.2(d) should be removed from this sentence. This paragraph describes "...the common supply pipe for the domestic system and the sprinkler system between the water supply and the dwelling unit has a single control valve that shuts the sprinkler system..." and Figure A.6.2(d) illustrates two separate taps, which is described in the next paragraph of this Annex text A.6.2.

Submitter Information Verification

Submitter Full Name: Chase Browning
Organization: Chase A Browning Consulting
Street Address:
City:
State:
Zip:
Submittal Date: Mon May 30 23:55:29 EDT 2022
Committee: AUT-RSS

Public Input No. 13-NFPA 13D-2021 [Section No. A.8.3.5.1.2]

~~**A.8.3.5.1.2** —~~

~~Where a chimney or flue from fuel-fired equipment passes through a concealed space, it is not required to locate a sprinkler in this concealed space.~~

Statement of Problem and Substantiation for Public Input

Moves annex to the body of the standard.

Related Public Inputs for This Document

Related Input	Relationship
Public Input No. 12-NFPA 13D-2021 [New Section after 8.3.5.1.2]	

Submitter Information Verification

Submitter Full Name: Mark Fessenden
Organization: Johnson Controls
Street Address:
City:
State:
Zip:
Submittal Date: Wed Dec 15 13:18:49 EST 2021
Committee: AUT-RSS

Public Input No. 35-NFPA 13D-2022 [Section No. A.9.1.2.2]

A.9.1.2.2

The internal temperature and duration of exposure that water filled piping could be subjected to, under freezing conditions, in an unconditioned space should be carefully considered and approved by the AHJ.

Dependable sources of information on historic temperatures include the following:

(1) National Oceanic and Atmospheric Administration — National Climatic Data Center

(2) National Weather Service

(3) Plant Hardiness Zone Maps (See https://planthardiness.ars.usda.gov). See Figure A.9.1.2.2.

(4) American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE)

(5) Other approved sources

Figure A.9.1.2.2.

Additional Proposed Changes

File Name	Description	Approved
Figure_A.9.1.2.2.jpg		

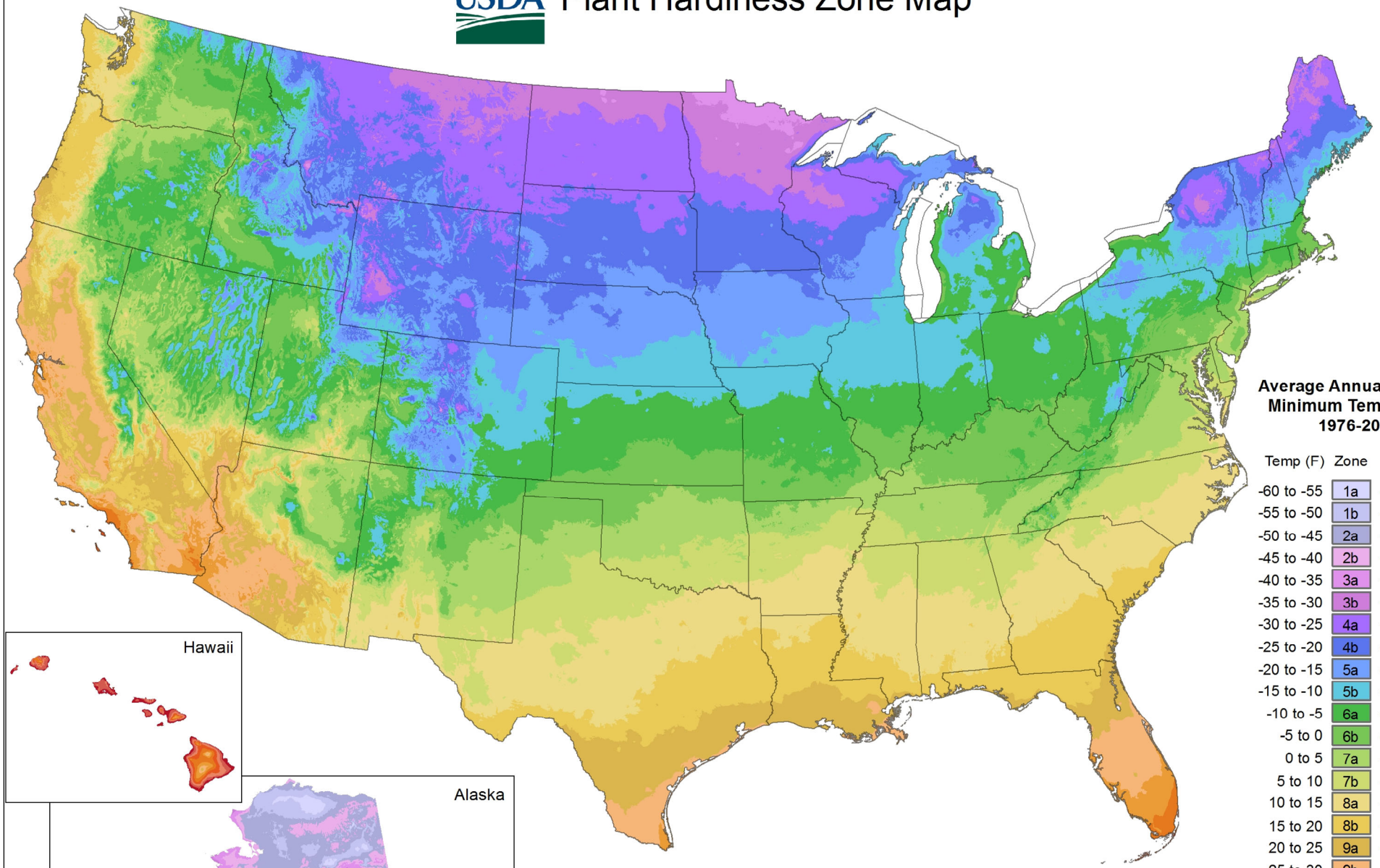
Statement of Problem and Substantiation for Public Input

Add a map to aid the the user of the document.

Submitter Information Verification

Submitter Full Name: Mark Fessenden
Organization: Johnson Controls
Street Address:
City:
State:
Zip:
Submittal Date: Tue May 31 13:07:42 EDT 2022
Committee: AUT-RSS

USDA Plant Hardiness Zone Map



Average Annual Extreme Minimum Temperature 1976-2005

Temp (F)	Zone	Temp (C)
-60 to -55	1a	-51.1 to -48.3
-55 to -50	1b	-48.3 to -45.6
-50 to -45	2a	-45.6 to -42.8
-45 to -40	2b	-42.8 to -40
-40 to -35	3a	-40 to -37.2
-35 to -30	3b	-37.2 to -34.4
-30 to -25	4a	-34.4 to -31.7
-25 to -20	4b	-31.7 to -28.9
-20 to -15	5a	-28.9 to -26.1
-15 to -10	5b	-26.1 to -23.3
-10 to -5	6a	-23.3 to -20.6
-5 to 0	6b	-20.6 to -17.8
0 to 5	7a	-17.8 to -15
5 to 10	7b	-15 to -12.2
10 to 15	8a	-12.2 to -9.4
15 to 20	8b	-9.4 to -6.7
20 to 25	9a	-6.7 to -3.9
25 to 30	9b	-3.9 to -1.1
30 to 35	10a	-1.1 to 1.7
35 to 40	10b	1.7 to 4.4
40 to 45	11a	4.4 to 7.2
45 to 50	11b	7.2 to 10
50 to 55	12a	10 to 12.8
55 to 60	12b	12.8 to 15.6
60 to 65	13a	15.6 to 18.3
65 to 70	13b	18.3 to 21.1

Hawaii

Alaska

Puerto Rico

Agricultural Research Service

Oregon State University

Mapping by the PRISM Climate Group, Oregon State University, http://prism.oregonstate.edu, 2012

Public Input No. 33-NFPA 13D-2022 [Section No. A.10.4.4(6)]

A.10.4.4(6)

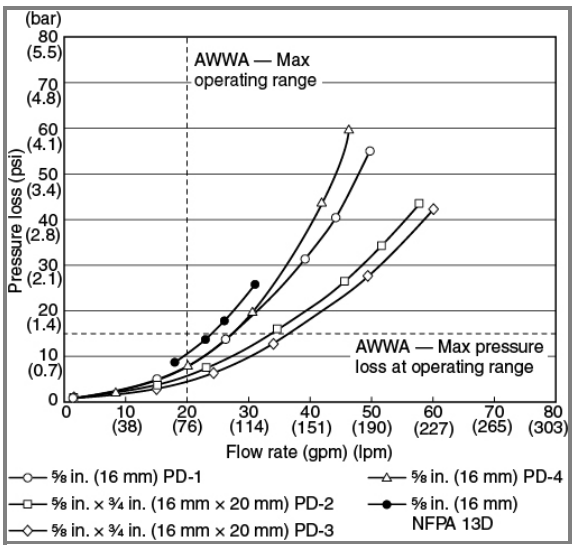
The flow through water meters is not limited by Table 10.4.4(a). The friction losses in this table are not given for high flows because they are not standardized by all manufacturers. Every size meter has a rated flow (up to which friction losses are generally published by manufacturers). But for flows greater than rated flow, many manufacturers do not publish friction loss data. This does not prohibit the use of such meters. It just means that the friction loss must be obtained before deciding to use any specific meter.

The purpose of the rated flow of a meter has to do with the daily and continuous use of the meter. Higher flows are permitted for meters over short durations. An NFPA 13D sprinkler system is only expected to deliver water for 10 minutes. Flows significantly higher than rated flows can go through water meters for 10 minutes, with no adverse effects on the meter.

To prove that higher flows for short durations are not a problem, the Fire Protection Research Foundation (FPRF) sponsored testing of many different models of many different flow meters at greater than rated flows for 20 minutes. During the tests, friction losses through the meters were obtained. The report showed that regular water meters had no problem with significantly higher flows than rated flow for the 20-minute duration. An example of the data from the experiments is shown in Figure A.10.4.4(6), which shows the results from testing four different ⅝ in. positive displacement meters. The dark curve on the graph represents the friction loss information from Table 10.4.4(a) of this standard. The full report of the FPRF can be downloaded from the NFPA website at http://www.nfpa.org/research/fire-protection-research-foundation/reports-and-proceedings/suppression.

Section B.3.3 in Annex B of this document, *Incentives for Residential Fire Sprinkler Use — Advantages for Builders, Developers, and Communities,* includes additional information regarding residential water meters, including best practices and design options for utilizing new solid-state water meters, lower-flowing sprinklers, and other suggestions to assist with the use of residential water meters

Figure A.10.4.4(6) ⅝ in. Water Meter Data from FPRF Tests.



Statement of Problem and Substantiation for Public Input

This added annex A text is intended to point the reader to additional water meter information contained in the new Annex B, Incentives for Residential Fire Sprinkler Use — Advantages for Builders, Developers, and Communities. The use of lower-flowing sprinklers and new solid state meters can potentially result in a better experience with sprinklers for the home-builder / homebuyer, and increased collaboration with water purveyors.

Submitter Information Verification

Submitter Full Name: Chase Browning
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Submittal Date: Mon May 30 23:28:35 EDT 2022
Committee: AUT-RSS

Public Input No. 27-NFPA 13D-2022 [Section No. C.1.2.1]

C.1.2.1 ASTM Publications.

ASTM International, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428-2959.

ASTM A135/A135M, *Standard Specification for Electric-Resistance-Welded Steel Pipe*, 2019.

ASTM E84, *Standard Test Method for Surface Burning Characteristics of Building Materials*, ~~2020~~ 2021a .

ASTM F437, *Standard Specification for Threaded Chlorinated Poly(Vinyl Chloride) (CPVC) Plastic Pipe Fittings, Schedule 80*, 2015.

ASTM F438, *Standard Specification for Socket-Type Chlorinated Poly(Vinyl Chloride) (CPVC) Plastic Pipe Fittings, Schedule 40*, 2017.

ASTM F439, *Standard Specification for Chlorinated Poly(Vinyl Chloride) (CPVC) Plastic Pipe Fittings, Schedule 80*, 2013.

ASTM F442/F442M, *Standard Specification for Chlorinated Poly(Vinyl Chloride) (CPVC) Plastic Pipe (SDR–PR)*, 2019.

ASTM F876, *Standard Specification for Crosslinked Polyethylene (PEX) Tubing*, 2019a.

ASTM SI10, *IEEE/ASTM SI 10 American National Standard for Metric Practice*, 2016.

Statement of Problem and Substantiation for Public Input

update ASTM E84 date

Submitter Information Verification

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Committee: AUT-RSS

Public Input No. 38-NFPA 13D-2022 [Section No. C.1.2.6]

C.1.2.6 UL Publications.

Underwriters Laboratories Inc., 333 Pfingsten Road, Northbrook, IL 60062-2096.

CAN/UL/ULC 199, Automatic Sprinklers for Fire-Protection Service, 2022.

UL 723, *Test for Surface Burning Characteristics of Building Materials*, 2018.

~~UL 1626, *Residential Sprinklers for Fire-Protection Service* , 2008, revised 2018.~~

Statement of Problem and Substantiation for Public Input

UL 1626 has been withdrawn by UL and replaced by CAN/UL/ULC 199 which is a Bi- National standard.

Make changes within the text of the annex.

Submitter Information Verification

Submitter Full Name: Kelly Nicolello
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Submittal Date: Wed Jun 01 10:27:28 EDT 2022
Committee: AUT-RSS

Public Input No. 32-NFPA 13R-2022 [Section No. 1.1 [Excluding any Sub-Sections]]

This standard shall cover the design and installation of automatic sprinkler systems for protection against fire hazards in residential occupancies up to and including four stories in height that:

a) are located in transient occupancy residential buildings not exceeding ~~60 ft~~ 30 ft (~~18 m~~ 9 m) in height above grade plane

b) are located in long term occupancy residential buildings not exceeding 45 ft (13 .7 m) in height from the lowest level of fire department vehicle access to the roof assembly height.

Statement of Problem and Substantiation for Public Input

As the IBC has changed in regard to where NFPA 13R can be used, this document needs to move in that direction.

Related Public Inputs for This Document

Related Input	Relationship
Public Input No. 33-NFPA 13R-2022 [New Section after 3.3.10]	

Submitter Information Verification

Submitter Full Name: Peter Schwab
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Street Address:
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Submittal Date: Mon May 30 15:24:59 EDT 2022
Committee: AUT-RSS

Public Input No. 5-NFPA 13R-2022 [New Section after 3.3]

3.3.X Closet.

Within a dwelling unit, any compartment dedicated to the temporary storage of clothes, linens, or pantry items.

Statement of Problem and Substantiation for Public Input

There have been decisions made by AHJs that required the addition of sprinklers in closets that did not have doors. Sprinklers can be omitted from these spaces because the fire risk is low due to the transient nature of the occupancy in hotels and motels. The sprinkler is not omitted because a closet is a small confined space and will contain a fire.

Submitter Information Verification

Submitter Full Name: Kevin Hall
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Affiliation: American Fire Sprinkler Association
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Submittal Date: Wed Feb 23 12:53:22 EST 2022
Committee: AUT-RSS

Public Input No. 9-NFPA 13R-2022 [Section No. 3.3]

3.3 General Definitions.

3.3.1* Bathroom.

Within a dwelling unit, any room or compartment containing a lavatory dedicated to personal hygiene, or a water closet, or bathing capability such as a shower or tub, or any combination of facilities thereof.

3.3.2 Carport.

A freestanding or attached covered structure open on at least two sides that provides shelter for motor vehicles.

3.3.3 Compartment.

A space completely enclosed by walls and a ceiling. Each wall in the compartment is permitted to have openings to an adjoining space if the openings have a minimum lintel depth of 8 in. (200 mm) from the ceiling and the total width of the openings in a single wall does not exceed 8 ft (2.4 m) in width. A single opening of 36 in. (900 mm) or less in width without a lintel is permitted when there are no other openings to adjoining spaces.

3.3.4 Design Discharge.

The rate of water discharged by an automatic sprinkler, expressed in gpm (mm/min).

3.3.5 Dwelling Unit.

One or more rooms, arranged for the use of one or more individuals living together, as in a single housekeeping unit, that normally have cooking, living, sanitary, and sleeping facilities.

3.3.6 Fuel-Fired Heating Unit.

An appliance that produces heat by burning fuel.

3.3.7 Grade Plane.

A reference plane upon which vertical measurements of a building are based representing the average of the finished ground level adjoining the building at all exterior walls. *[See also 3.3.222, Finished Ground Level (Grade), of NFPA 5000.]* [**5000,** 2021]

3.3.8 Hazard Classifications.

3.3.8.1* Light-Hazard Occupancy.

Occupancies or portions of other occupancies where the quantity and/or combustibility of contents is low and fires with relatively low rates of heat release are expected.

3.3.8.2* Ordinary Hazard (Group 1).

Occupancies or portions of other occupancies where combustibility is low, quantity of combustibles is moderate, stockpiles of combustibles do not exceed 8 ft (2.4 m), and fires with moderate rates of heat release are expected.

3.3.8.3* Ordinary Hazard (Group 2).

Occupancies or portions of other occupancies where the quantity and combustibility of contents are moderate to high, stockpiles of contents with moderate rates of heat release do not exceed 12 ft (3.7 m), and stockpiles of contents with high rates of heat release do not exceed 8 ft (2.4 m).

3.3.9* Raw Water Source.

A water supply taken from the environment that has not been treated and could contain foreign material that could accumulate freely and enter the sprinkler system.

3.3.10* Residential Occupancies.

Occupancies that include the following, as defined in NFPA *101*: (1) apartment buildings, (2) lodging and rooming houses, (3) board and care facilities, and (4) hotels, motels, and dormitories.

3.3.11* Shadow Area.

The dry floor area within the protection area of a sprinkler created by the portion of sprinkler discharge that is blocked by a wall or partition.

3.3.12 Sprinkler.

3.3.12.1 Automatic Sprinkler.

A fire suppression or control device that operates automatically when its heat-actuated element is heated to its thermal rating or above, allowing water to discharge over a specific area.

3.3.12.2 Quick-Response (QR) Sprinkler.

A type of spray sprinkler having a thermal element with an RTI of 50 (meters-second)$^{1/2}$ or less and is listed as a quick-response sprinkler for its intended use.

3.3.12.3 Residential Sprinkler.

A type of fast-response sprinkler having a thermal element with an RTI of 50 (meters-second)$^{1/2}$ or less, that has been specifically investigated for its ability to enhance survivability in the room of fire origin, and that is listed for use in the protection of dwelling units.

3.3.13 Sprinkler System.

A system, commonly activated by heat from a fire and discharges water over the fire area, that consists of an integrated network of piping designed in accordance with fire protection engineering standards that includes a water supply source, a water control valve, a waterflow alarm, and a drain. The portion of the sprinkler system above ground is a network of specifically sized or hydraulically designed piping installed in a building, structure, or area, generally overhead, and to which sprinklers are attached in a systematic pattern. [**13,** 2022]

3.3.13.1 Dry Pipe Sprinkler System.

A sprinkler system employing automatic sprinklers that are attached to a piping system that contains air or nitrogen under pressure, the release of which (as from the opening of a sprinkler) permits the water pressure to open a valve known as a dry pipe valve, and the water then flows into the piping system and out the opened sprinkler.

3.3.13.2 Preaction Sprinkler System.

A sprinkler system employing automatic sprinklers that are attached to a piping system containing air that might or might not be under pressure, with a supplemental detection system installed in the same areas as the sprinklers.

3.3.13.3 Wet Pipe Sprinkler System.

A sprinkler system employing automatic sprinklers attached to a piping system containing water and connected to a water supply so that water discharges immediately from sprinklers opened by heat from a fire.

3.3.14 System Working Pressure.

The maximum anticipated static (i.e., nonflowing) or residual flowing pressure applied to sprinkler system components exclusive of surge pressures and of pressure from the fire department connection.

3.3.15 Valve.

3.3.15.1 Check Valve.

A valve that allows flow in one direction only.

3.3.15.2 Control Valve.

An indicating valve employed to control (shut) a supply of water to a sprinkler system.

3.3.16 Waterflow Alarm Device.

An attachment to the sprinkler system that detects a predetermined water flow and is connected to a fire alarm system to initiate an alarm condition or is used to mechanically or electrically initiate a fire pump or local audible or visual alarm. [**13,** 2022]

3.3.17 Waterflow Detector.

An electric signaling indicator or alarm check valve actuated by water flow in one direction only.

Additional Proposed Changes

File Name	Description	Approved
NFPA_13R_Definitions.docx	Section 3.3 with revisions and extraction tags added	

Statement of Problem and Substantiation for Public Input

When applying the requirements of NFPA 13/13R/13D through other standards like the Fire Code and Building Code, the intent of the standard is interpreted differently when definitions vary slightly in the sprinkler installation standards but have no discernible difference in their meaning or intended use. When the definition is exactly the same, it needs to be extracted for consistency.

Submitter Information Verification

Submitter Full Name: Kevin Hall
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Affiliation: American Fire Sprinkler Association
Street Address:
City:
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Zip:
Submittal Date: Thu Mar 24 09:18:29 EDT 2022
Committee: AUT-RSS

3.3 General Definitions.

3.3.1* Bathroom.
Within a dwelling unit, any room or compartment dedicated to personal hygiene, containing a toilet or sink, or bathing capability such as a shower or tub. [**13**, 2025]

3.3.2 Carport.
A freestanding or attached covered structure open on at least two sides that provides shelter for motor vehicles.

3.3.3 Compartment.
A space completely enclosed by walls and a ceiling. Each wall in the compartment is permitted to have openings to an adjoining space if the openings have a minimum lintel depth of 8 in. (200 mm) from the ceiling and the total width of the openings in a single wall does not exceed 8 ft (2.4 m) in width. A single opening of 36 in. (900 mm) or less in width without a lintel is permitted when there are no other openings to adjoining spaces.[**13**, 2025]

3.3.4 Design Discharge.
The rate of water discharged by an automatic sprinkler, expressed in gpm (mm/min).

3.3.5 Dwelling Unit.
One or more rooms, arranged for the use of one or more individuals living together, as in a single housekeeping unit, that normally have cooking, living, sanitary, and sleeping facilities.

3.3.6 Fuel-Fired Heating Unit.
An appliance that produces heat by burning fuel.[**13**, 2025]

3.3.7 Grade Plane.
A reference plane upon which vertical measurements of a building are based representing the average of the finished ground level adjoining the building at all exterior walls. *[See also 3.3.222, Finished Ground Level (Grade), of NFPA 5000.]* [**5000,** 2021]

3.3.8 Hazard Classifications.

3.3.8.1* Light-Hazard Occupancy.
Occupancies or portions of other occupancies where the quantity and/or combustibility of contents is low and fires with relatively low rates of heat release are expected.

3.3.8.2* Ordinary Hazard (Group 1).
Occupancies or portions of other occupancies where combustibility is low, quantity of combustibles is moderate, stockpiles of combustibles do not exceed 8 ft (2.4 m), and fires with moderate rates of heat release are expected.

3.3.8.3* Ordinary Hazard (Group 2).

Occupancies or portions of other occupancies where the quantity and combustibility of contents are moderate to high, stockpiles of contents with moderate rates of heat release do not exceed 12 ft (3.7 m), and stockpiles of contents with high rates of heat release do not exceed 8 ft (2.4 m).

3.3.9* Raw Water Source.
A water supply taken from the environment that has not been treated and could contain foreign material that could enter the sprinkler system. [**13**, 2025]

3.3.10* Residential Occupancies.
Occupancies that include the following, as defined in NFPA *101*: (1) apartment buildings, (2) lodging and rooming houses, (3) board and care facilities, and (4) hotels, motels, and dormitories.

3.3.11* Shadow Area.
The dry floor area within the protection area of a sprinkler created by the portion of sprinkler discharge that is blocked by a wall, partition, or other obstruction. [**13**, 2025]

3.3.12 Sprinkler.

3.3.12.1 Automatic Sprinkler.
A fire suppression or control device that operates automatically when its heat-actuated element is heated to its thermal rating or above, allowing water to discharge over a specified area. [**13**, 2025]

3.3.12.2 Quick-Response (QR) Sprinkler.
A type of spray sprinkler having a thermal element with an RTI of 50 (meters-second)$^{1/2}$ or less and is listed as a quick-response sprinkler for its intended use. [**13**, 2025]

3.3.12.3 Residential Sprinkler.
A type of fast-response sprinkler having a thermal element with an RTI of 50 (meters-second)$^{1/2}$ or less, that has been specifically investigated for its ability to enhance survivability in the room of fire origin, and that is listed for use in the protection of dwelling units. [**13**, 2025]

3.3.13 Sprinkler System.
A system, commonly activated by heat from a fire and discharges water over the fire area, that consists of an integrated network of piping designed in accordance with fire protection engineering standards that includes a water supply source, a water control valve, a waterflow alarm, and a drain. The portion of the sprinkler system above ground is a network of specifically sized or hydraulically designed piping installed in a building, structure, or area, generally overhead, and to which sprinklers are attached in a systematic pattern. [**13,** 2025]

3.3.13.1 Dry Pipe Sprinkler System.
A sprinkler system employing automatic sprinklers that are attached to a piping system that contains air or nitrogen under pressure, the release of which (as from the opening of a sprinkler) permits the water pressure to open a valve known as a dry pipe valve, and the water then flows into the piping system and out the opened sprinkler. [**13**, 2025]

3.3.13.2 Preaction Sprinkler System.
A sprinkler system employing automatic sprinklers that are attached to a piping system containing air that might or might not be under pressure, with a supplemental detection system installed in the same areas as the sprinklers. [**13**, 2025]

3.3.13.3 Wet Pipe Sprinkler System.
A sprinkler system employing automatic sprinklers attached to a piping system containing water and connected to a water supply so that water discharges immediately from sprinklers opened by heat from a fire. [**13**, 2025]

3.3.14 System Working Pressure.
The maximum anticipated static (nonflowing) or residual (flowing) pressure applied to sprinkler system components exclusive of surge pressures and of pressure from the fire department connection. [**13**, 2025]

3.3.15 Valve.

3.3.15.1 Check Valve.
A valve that allows flow in one direction only. [**24**, 2025]

3.3.15.2 Control Valve.
A valve capable of stopping the flow of water to a water-based fire protection system and devices. [**13,** 2025]

3.3.16 Waterflow Alarm Device.
An attachment to the sprinkler system that detects a predetermined water flow and is connected to a fire alarm system to initiate an alarm condition or is used to mechanically or electrically initiate a fire pump or local audible or visual alarm. [**13,** 2025]

3.3.17 Waterflow Detector.
An electric signaling indicator or alarm check valve actuated by water flow in one direction only.

Public Input No. 14-NFPA 13R-2022 [Section No. 3.3.2]

3.3.2 Carport.

~~A freestanding or attached~~ An attached covered structure open on at least two sides that provides shelter for motor vehicles.

Statement of Problem and Substantiation for Public Input

A freestanding carport adjacent to a building protected by NFPA 13R may or may not require sprinklers based on the local building code. NFPA 13R should provide a definition for a carport that is part of the building being protected.

Submitter Information Verification

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Zip:
Submittal Date: Wed May 25 21:40:33 EDT 2022
Committee: AUT-RSS

Public Input No. 33-NFPA 13R-2022 [New Section after 3.3.10]

3.3.11 Roof Assembly Height

The height of a roof measured to the highest eave of a pitched roof, the intersection of the highest roof to the exterior wall, or to the top of the highest parapet, whichever is greatest.

Statement of Problem and Substantiation for Public Input

This definition is needed if PI No. 32 is accepted.

Related Public Inputs for This Document

Related Input	Relationship
Public Input No. 32-NFPA 13R-2022 [Section No. 1.1 [Excluding any Sub-Sections]]	
Public Input No. 32-NFPA 13R-2022 [Section No. 1.1 [Excluding any Sub-Sections]]	

Submitter Information Verification

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Submittal Date: Mon May 30 15:33:51 EDT 2022
Committee: AUT-RSS

Public Input No. 34-NFPA 13R-2022 [Section No. 4.5]

4.5 System Arrangement.

In ~~townhouse-style buildings protected~~ residential buildings with each unit individually owned that is protected in accordance with this standard, ~~each dwelling unit shall have its own dedicated sprinkler system or~~ the control valve for the sprinkler system in the building shall be ~~located outside~~ accessible from outside of the dwelling units or located in a common area.

Statement of Problem and Substantiation for Public Input

Why would the standard require a system per unit? It is assumed that by townhouse style buildings one is referring to the ownership of each unit?
If a 13R system is to be used in this type of building why would it be made more complicated with individual risers per unit?

Submitter Information Verification

Submitter Full Name: Peter Schwab
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Zip:
Submittal Date: Mon May 30 15:45:42 EDT 2022
Committee: AUT-RSS

Public Input No. 15-NFPA 13R-2022 [Section No. 5.1.1.1 [Excluding any Sub-Sections]]

Only new,_ listed sprinklers shall be installed in sprinkler systems.

Statement of Problem and Substantiation for Public Input

Editorial

Submitter Information Verification

Submitter Full Name: Peter Schwab
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Zip:
Submittal Date: Wed May 25 21:46:38 EDT 2022
Committee: AUT-RSS

Public Input No. 16-NFPA 13R-2022 [Section No. 5.1.1.2]

5.1.1.2* Sprinkler Replacement.

Where replacing residential sprinklers manufactured prior to 2003 and that are no longer available from the manufacturer and are installed using a design density less than 0.05 gpm/ft^2 (2.04 mm/min), a residential sprinkler with an equivalent K-factor (± ~~5%~~ 15%) shall be permitted to be used provided the currently listed coverage area for the replacement sprinkler is not exceeded.

Statement of Problem and Substantiation for Public Input

When this was added to the standard, the 5% seemed to be arbitrary. There are some existing K Factor sprinklers that a replacement cannot be procured. With smaller K factors (IE: a 3.5) a 5% allowance does not provide many options.

Submitter Information Verification

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Submittal Date: Wed May 25 21:47:53 EDT 2022
Committee: AUT-RSS

Public Input No. 7-NFPA 13R-2022 [Section No. 5.1.1.6.1]

5.1.1.6.1

Automatic sprinklers shall have their frame arms, deflector, coating material, or liquid bulb colored in accordance with the requirements of Table 5.1.1.6.1(a) and 5.1.1.6.1(b) or the requirements of 5.1.1.6.2, 5.1.1.6.3, 5.1.1.6.4, or 5.1.1.6.5.

Table 5.1.1.6.1 Sprinkler Temperature Ratings, Classifications, and Color Codings

Change tables to reflect Tables 7.2.4.1(a) and 7.2.4.1(b) in NFPA 13 2022 Edition pg. 1350.

Maximum Ceiling Temperature			Temperature Rating				
°F	°C	-	°F	°C	Temperature Classification	Color Code	Glass Bulb Colors
100	38	-	135–170	57–77	Ordinary	Uncolored or black	Orange or red
150	66	-	175–225	79–107	Intermediate	White	Yellow or green
225	107	-	250–300	121–149	High	Blue	Blue
300	149	-	325–375	163–191	Extra high	Red	Purple
375	191	-	400–475	204–246	Very extra high	Green	Black
475	246	-	500–575	260–302	Ultra high	Orange	Black
625	329	-	650	343	Ultra high	Orange	Black

Statement of Problem and Substantiation for Public Input

Section 6.2.3 references maximum ceiling temperature relating to sprinkler temperature rating. The only place this information exists in the standard is in this table, and changing to match the new tables in NFPA 13 (Table 7.2.4.1(a) and 7.2.4.1(b) removes the discrepancy between the two standards. Some additional wording may also need to be changed when referencing this table change?

Submitter Information Verification

Submitter Full Name: David Baron
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Zip:
Submittal Date: Wed Mar 16 11:13:55 EDT 2022
Committee: AUT-RSS

Public Input No. 35-NFPA 13R-2022 [Sections 5.3, 5.4]

Sections 5.3, 5.4

5.3 Underground Pipe.

5.3.1

Any type of pipe or tube acceptable under the adopted plumbing code for underground supply pipe smaller than 4 in. (100 mm) nominal dimension shall be acceptable as underground supply for the system when installed between the point of connection and the system riser.

5.3.2

Underground pipe and tube for underground supply pipe 4 in. (100 mm) and larger nominal dimension shall be in accordance with NFPA 24 when installed between the point of connection and the system riser.

5.4 System Types.

5.4.1

A wet pipe system shall be used where piping is installed in areas that can be maintained reliably above 40°F (4°C).

5.4.2* Systems in Areas Subject to Freezing.

Where any portion of a system is subject to freezing and the temperature cannot be maintained reliably at or above 40°F (4°C), the pipe shall be protected by use of one of the following methods:

(1)* Antifreeze system using a listed antifreeze solution in accordance with NFPA 13

(2) Dry pipe system

(3) Preaction system

(4) Listed dry pendent, dry upright, or dry sidewall sprinklers extended from pipe in heated areas

(5) Heat tracing in accordance with 6.7.2.2

5.4.3

Where antifreeze systems, dry pipe systems, and preaction systems are installed, they shall be installed in accordance with NFPA 13.

5.4.4*

Water-filled piping shall be permitted to be installed in areas subject to freezing when heat loss calculations performed by a professional engineer verify that the system will not freeze.

Statement of Problem and Substantiation for Public Input

I did not make any technical changes but question the location of these 2 sections in the system components chapter.

Submitter Information Verification

Submitter Full Name: Peter Schwab
Organization: Wayne Automatic Fire Sprinkler
Street Address:

City:	
State:	
Zip:	
Submittal Date:	Mon May 30 15:55:09 EDT 2022
Committee:	AUT-RSS

Public Input No. 2-NFPA 13R-2021 [New Section after 5.3.1]

5.3.1.1*

Installation of underground piping shall be in accordance with the adopted plumbing code.

A.5.3.1.1

The installation of piping prior to the system riser should follow the local or adopted plumbing code requirements for piping type, connection methods, bury depth, etc. The system riser should consist of at minimum a control valve and a check valve or backflow device.

Statement of Problem and Substantiation for Public Input

The standard indicates that below 4" piping, the adopted plumbing code is allowed to be used. However, the current language essentially only references the type of pipe.
If the standard is not going to require NFPA 24 for piping less than 4", then there needs to be a pointer for the user to find installation requirements.

Related Public Inputs for This Document

Related Input	Relationship
Public Input No. 3-NFPA 13R-2021 [Section No. 5.3.2]	

Submitter Information Verification

Submitter Full Name: Peter Schwab
Organization: Wayne Automatic Fire Sprinkler
Street Address:
City:
State:
Zip:
Submittal Date: Mon Nov 15 12:24:04 EST 2021
Committee: AUT-RSS

Public Input No. 17-NFPA 13R-2022 [New Section after 5.3.2]

5.3.3
Underground piping used to connect portions of buildings shall be permitted.

Statement of Problem and Substantiation for Public Input

A common practice in the industry is to run piping under the unheated corridor or breezeway slab to connect portions of the building. The standard should provide some guidance and/or rules for this practice.

Submitter Information Verification

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City:
State:
Zip:
Submittal Date: Wed May 25 21:56:02 EDT 2022
Committee: AUT-RSS

Public Input No. 3-NFPA 13R-2021 [Section No. 5.3.2]

5.3.2

Underground ~~pipe and tube for underground~~ supply pipe 4 in. (100 mm) and larger nominal dimension shall be designed and installed in accordance with NFPA 24 when installed between the point of connection and the system riser.

Statement of Problem and Substantiation for Public Input

This change clarifies that the design and installation of the underground piping system for 4" and larger water supplies shall be in accordance with NFPA 24.

Related Public Inputs for This Document

Related Input	Relationship
Public Input No. 2-NFPA 13R-2021 [New Section after 5.3.1]	

Submitter Information Verification

Submitter Full Name: Peter Schwab
Organization: Wayne Automatic Fire Sprinkler
Street Address:
City:
State:
Zip:
Submittal Date: Mon Nov 15 12:31:39 EST 2021
Committee: AUT-RSS

Public Input No. 18-NFPA 13R-2022 [Section No. 6.2.1.3]

~~**6.2.1.3** –~~

~~Listed quick-response sprinklers shall be permitted to be installed in dwelling units meeting the definition of a compartment, as defined in Section 3.3 , where no more than four sprinklers are located in the dwelling unit.~~

~~**6.2.1.3.1** –~~

~~Where quick-response sprinklers, including extended coverage quick-response sprinklers, are used, the density/area requirement shall be a minimum of 0.1 gpm/ft ^{2} (4.1 mm/min) over the entire dwelling unit.~~

~~**6.2.1.3.2** –~~

~~Where extended coverage quick-response sprinklers are used, the flow shall be sufficient to meet the listing of the sprinklers at the spacing for which they are being used.~~

Statement of Problem and Substantiation for Public Input

Residential sprinklers are a proven technology which includes high wall wetting. There was a time when there were not residential sprinklers with throws available in QR sprinklers.
With the currently available sprinklers, this section should be retired.

Submitter Information Verification

Submitter Full Name: Peter Schwab
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Street Address:
City:
State:
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Submittal Date: Wed May 25 22:03:41 EDT 2022
Committee: AUT-RSS

Public Input No. 19-NFPA 13R-2022 [Section No. 6.2.3.1]

6.2.3.1*

~~Sprinklers installed where~~ Where maximum ambient ceiling temperatures do not exceed 100°F (38°C) sprinklers shall be permitted to be ordinary temperature–rated sprinklers or intermediate temperature–rated unless modified by 6.2.3.3.

Statement of Problem and Substantiation for Public Input

There is no technical change. This is a rewording to make it clear that it is an option to use either or.

Related Public Inputs for This Document

Related Input	Relationship
Public Input No. 20-NFPA 13R-2022 [Section No. 6.2.3.2]	

Submitter Information Verification

Submitter Full Name: Peter Schwab
Organization: Wayne Automatic Fire Sprinkler
Street Address:
City:
State:
Zip:
Submittal Date: Wed May 25 22:09:36 EDT 2022
Committee: AUT-RSS

Public Input No. 21-NFPA 13R-2022 [New Section after 6.2.3.2]

6.2.3.3
Where maximum ambient ceiling temperatures exceed 150°F (66°C) sprinklers shall be high temperature–rated sprinklers unless modified by 6.2.3.4 .

Statement of Problem and Substantiation for Public Input

The standard should address temperatures greater than 150 degrees.

Submitter Information Verification

Submitter Full Name: Peter Schwab
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Street Address:
City:
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Submittal Date: Wed May 25 22:15:14 EDT 2022
Committee: AUT-RSS

Public Input No. 20-NFPA 13R-2022 [Section No. 6.2.3.2]

6.2.3.2*

~~Sprinklers installed where~~ Where maximum ambient ceiling temperatures are between 101°F and 150°F (39°C and 66°C) sprinklers shall ~~be intermediate~~ be intermediate temperature–rated sprinklers unless modified by 6.2.3.3.

Statement of Problem and Substantiation for Public Input

Matches language proposed in PI No. 19

Related Public Inputs for This Document

Related Input	Relationship
Public Input No. 19-NFPA 13R-2022 [Section No. 6.2.3.1]	

Submitter Information Verification

Submitter Full Name: Peter Schwab
Organization: Wayne Automatic Fire Sprinkler
Street Address:
City:
State:
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Submittal Date: Wed May 25 22:13:08 EDT 2022
Committee: AUT-RSS

Public Input No. 22-NFPA 13R-2022 [Section No. 6.2.3.3.3 [Excluding any Sub-Sections]]

Sprinklers installed near specific heat sources that are identified in Table 6.2.3.3.3 shall be of the temperature rating indicated in Table 6.2.3.3.3 unless sprinklers are listed for positioning closer to the heat source.

Table 6.2.3.3.3 Minimum Distances for Ordinary and Intermediate Temperature Residential Sprinklers

	From Edge of Source to Ordinary Temperature Sprinkler		From Edge of Source to Intermediate Temperature Sprinkler	
Heat Source	in.	mm	in.	mm
Side of open or recessed fireplace	36	900	12	300
Front of recessed fireplace	60	1500	36	900
Coal- or wood- burning stove	42	1050	12	300
Kitchen range	18	450	9	225
Wall oven	18	450	9	225
Hot air flues	18	450	9	225
Uninsulated heat ducts	18	450	9	225
Uninsulated hot water pipes	12	300	6	150
Side of ceiling- or wall-mounted hot air diffusers	24	600	12	300
Front of wall-mounted hot air diffusers	36	900	18	450
Hot water heater or furnace	6	150	3	75
Light fixture:	-	-	-	-
LED and 0 W–250 W	6	150	3	75
250 W–499 W	12	300	6	150

Statement of Problem and Substantiation for Public Input

LED lights are very common now.

Submitter Information Verification

Submitter Full Name: Peter Schwab
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City:

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Zip:	
Submittal Date:	Wed May 25 22:19:01 EDT 2022
Committee:	AUT-RSS

Public Input No. 39-NFPA 13R-2022 [Section No. 6.2.3.3.3 [Excluding any Sub-Sections]]

Sprinklers installed near specific heat sources that are identified in Table 6.2.3.3.3 shall be of the temperature rating indicated in Table 6.2.3.3.3 unless sprinklers are listed for positioning closer to the heat source.

Table 6.2.3.3.3 Minimum Distances for Ordinary and Intermediate Temperature Residential Sprinklers

Heat Source	From Edge of Source to Ordinary Temperature Sprinkler		From Edge of Source to Intermediate Temperature Sprinkler	
	in.	mm	in.	mm
Side of open or recessed fireplace	36	900	12	300
Front of recessed fireplace	60	1500	36	900
Coal- or wood- burning stove	42	1050	12	300
Kitchen range	18	450	9	225
Wall oven	18	450	9	225
Hot air flues	18	450	9	225
Uninsulated heat ducts	18	450	9	225
Uninsulated hot water pipes	12	300	6	150
Side of ceiling- or wall-mounted hot air diffusers	24	600	12	300
Front of wall-mounted hot air diffusers	36	900	18	450
Hot water heater or furnace	6	150	3	75
Light fixture(Incandescent & Halogen) :				
-	-	-	0 W–250 W	6 150 - 375
250 W–499 W	12	300	6	150

Statement of Problem and Substantiation for Public Input

An LED light fixture will use around 1/10th the wattage of an incandescent bulb and does not produce significant heat. Current rules require 6 in clearance for 0-250 W (3 in. for intermediate head) for all light fixtures. This proposal will limit the current clearance requirements to heat producing light fixtures only (incandescent & halogen)

Similar proposal have been submitted to NFPA 13 and NFPA 13R.

Submitter Information Verification

Submitter Full Name: Roland Asp
Organization: National Fire Sprinkler Association
Affiliation: NFSA Engineering and Standards Committee
Street Address:
City:
State:
Zip:
Submittal Date: Wed Jun 01 15:30:49 EDT 2022
Committee: AUT-RSS

Public Input No. 13-NFPA 13R-2022 [New Section after 6.4.2.3]

6.4.2.4

Residential sidewall sprinklers, where installed under a sloped ceiling with a slope exceeding 2 in 12, shall be located either at the high point of the slope and positioned to discharge downward along the slope, or located under the slope with deflector installed parallel to the slope and positioned to discharge across the slope.

Statement of Problem and Substantiation for Public Input

About a decade ago, the concept of residential sprinklers being listed for use under sloped ceilings went away. NFPA 13, 13D, and 13R relied on sprinkler listings in a manufacturer's technical documentation for correct application of residential sidewall sprinklers. Those listings would allow for a residential sidewall to be either installed at the high point of the slope and positioned to discharge down the slope or located along the slope and positioned to discharge across the slope. Today, the common installation practices for residential sidewall sprinklers under sloped ceilings greater than 2 in 12, is only documented in residential design guides published by manufacturers. These design guides are not part of the listing and the information contained is meant to convey the best way to use the products within the constraints of published NFPA standards. The addition of language on deflector orientation for residential sidewall sprinklers seeks to standardize the practice of how residential sidewalls are currently being installed without having to fallback solely on design documents from a manufacturer.

Submitter Information Verification

Submitter Full Name: Brandon Telford
Organization: Reliable Automatic Sprinkler
Street Address:
City:
State:
Zip:
Submittal Date: Tue May 24 15:12:18 EDT 2022
Committee: AUT-RSS

Public Input No. 23-NFPA 13R-2022 [Section No. 6.4.6.3.3.1]

6.4.6.3.3.1*

Shadow areas shall be permitted in the protection area of a sprinkler if the cumulative dry areas do not exceed 15 ft^2 (1.4 m^2) per sprinkler.

~~**(A)**~~ 6.4.6.3.3.1.1

Shadow areas shall be permitted to exceed 15 ft^2 (1.4 m^2) in closets and compartments 400 ft^3 (11 m^3) or less in accordance with 6.4.6.3.2.

Statement of Problem and Substantiation for Public Input

Editorial. Not sure why it was section A

Submitter Information Verification

Submitter Full Name: Peter Schwab
Organization: Wayne Automatic Fire Sprinkler
Street Address:
City:
State:
Zip:
Submittal Date: Wed May 25 22:24:33 EDT 2022
Committee: AUT-RSS

Public Input No. 24-NFPA 13R-2022 [Section No. 6.4.6.3.5.4]

~~6.4.6.3.5.4~~ –

~~Where the area of the fan blades encompasses more than 50 percent of the area of the plan view, the sprinkler shall be installed in accordance with~~ 6.4.6.3.6 .

Statement of Problem and Substantiation for Public Input

Do the fan blades really present a problem for sidewall spray sprinklers?

Submitter Information Verification

Submitter Full Name: Peter Schwab
Organization: Wayne Automatic Fire Sprinkler
Street Address:
City:
State:
Zip:
Submittal Date: Wed May 25 22:27:59 EDT 2022
Committee: AUT-RSS

Public Input No. 4-NFPA 13R-2021 [New Section after 6.4.6.3.8.3]

TITLE OF NEW CONTENT

6.4.7 Positioning of sprinklers to address different ceiling heights: Where the vertical change in ceiling elevation within a compartment is greater than 36 inches, the vertical plane at the elevation change shall be considered a wall for purposes of sprinkler head spacing.

Statement of Problem and Substantiation for Public Input

This is intended to be identical to a proposal to NFPA 13D. The concept is to limit the difference in ceiling heights whereby sprinkler spacing is based on floor coverage only. The concept is to mirror guidance provided in NFPA 13 Section 10.2.6.1.1.3. It is noted that the ceiling pocket criteria in NFPA 13R are substantially more restrictive than n NFPA 13, which would seem to indicate even less of a ceiling height difference may be desirable in this section, however the justification for any other elevation difference is difficult. There were thoughts to propose 20 inches as a means of correlation to the limits of Table 6.4.6.3.6.2, although the clear strategy for complying with the obstruction criteria is to move the head at the upper elevation further and further from the vertical plane at the ceiling elevation change, and this proposal is intended to cap how far the head can be moved from this vertical plane. Thus the concept of using the 36-inch criteria already developed in the NFPA 13 standard is proposed.

At issue is how to space sprinkler heads where there is significant ceiling height difference that could inhibit activation of heads that, while adjacent to each other in terms of floor coverage, are at such different ceiling elevations that adequate coverage may be compromised. Imagine for a moment a ground floor kitchen area with ceiling height of 11 feet, opening into a two-story high dining room/living room space, with ceiling height at 23 feet. The code does not appear to limit how close a head at the 11 ft ceiling can be to the vertical plane of the elevation change, nor does it limit how much floor coverage can be assigned to that head, even if in this case a large portion of that floor coverage occurs under the 23 ft ceiling. Look at NFPA 13 Figure 10.2.6.1.1.3(b). Imagine no limit of X so the 12 ft difference indicated in the example is permitted, imagine a 20x20 spacing for sprinkler heads, where the head at the lower ceiling is 1 ft from the vertical plane while the head at the upper ceiling is 19 feet from the vertical plane. There is issue with the concept of activation of the head at the 11 ft ceiling, especially if the fire occurs in an area under the 23 ft ceiling. Further, there is issue with the concept of the sprinkler at the 23 ft elevation being able to provide coverage approximately 19 ft horizontally from the fire sprinkler.

Note that this issue is addressed in NFPA 13 Section 10.2.6.1.1.3. The purpose of this proposal is to use the same criteria in NFPA 13R.

Submitter Information Verification

Submitter Full Name: Stephen Digiovanni
Organization: Clark County Fire Dept
Street Address:
City:
State:
Zip:
Submittal Date: Tue Nov 30 18:57:10 EST 2021
Committee: AUT-RSS

Public Input No. 25-NFPA 13R-2022 [Section No. 6.5.2]

~~**6.5.2** – Dry Pipe Underground.~~

~~**6.5.2.1** –~~

~~Where necessary to place pipe that is under air pressure underground, the pipe shall be protected against corrosion.~~

~~**6.5.2.2** –~~

~~Unprotected cast-iron or ductile-iron pipe shall be permitted where joined with a gasketed joint listed for air service underground.~~

Statement of Problem and Substantiation for Public Input

I am not sure where dry underground piping is used in an NFPA 13R system but if it is, this language should be in the underground section (Chapter 5).

Submitter Information Verification

Submitter Full Name: Peter Schwab
Organization: Wayne Automatic Fire Sprinkler
Street Address:
City:
State:
Zip:
Submittal Date: Wed May 25 22:30:47 EDT 2022
Committee: AUT-RSS

Public Input No. 28-NFPA 13R-2022 [Section No. 6.6]

6.6 Location of Sprinklers.

6.6.1

Sprinklers shall be installed in all areas except where omission is permitted by 6.6.2 through 6.6.7.

6.6.2*

Sprinklers shall not be required in bathrooms in dwelling units where the bathroom area does not exceed 55 ft^2 (5.1 m^2).

6.6.3

Except where specified in 6.6.4, sprinklers shall not be required in clothes closets, linen closets, and pantries within dwelling units that meet all of the following conditions:

(1) The area of the space does not exceed 24 ft^2 (2.2 m^2).

(2) The walls and ceilings are surfaced with noncombustible or limited-combustible materials as defined by NFPA 220.

6.6.4*

Sprinklers shall be installed in any closet used for heating or air-conditioning equipment, washers, dryers, or water heaters except as permitted by 6.6.7.

6.6.5*

Except as provided for in 6.6.5.1 and 6.6.5.2, sprinklers shall not be required in any of the following features that are open and attached:

(1) Porches, balconies, lanais, verandas, awnings, or similar areas

(2) Trellis overhangs

(3) Carports

(4) Porte cocheres

(5) Stairs

(6) Corridors that are not part of a means of egress

(7) Other similar features

6.6.5.1*

Where a roof, deck, or balcony greater than 4 ft (1.2 m) wide is provided above, sprinklers shall be installed to protect attached exterior balconies, attached exterior decks, and ground floor patios directly serving dwelling units in buildings of Type V construction.

6.6.5.1.1

Where sprinklers are installed beneath roofs, overhangs, decks, or balconies, sprinklers shall be permitted to be installed with deflectors positioned in accordance with 6.6.5.1.1.1, 6.6.5.1.1.2, or 6.6.5.1.1.3.

6.6.5.1.1.1

Sidewall sprinklers shall not be less than 4 in. (100 mm) or more than 6 in. (150 mm) below a smooth ceiling and not less than 1 in. (25 mm) or more than 6 in. (150 mm) below exposed structural members, provided that the deflector is not more than 14 in. (350 mm) below the underside surface of the deck above the exposed structural members.

6.6.5.1.1.2

Upright and pendent residential sprinklers shall be installed in accordance with 6.4.6.1.

6.6.5.1.1.3

Upright and pendent quick-response sprinklers shall be installed in accordance with the spacing and location requirements of NFPA 13.

6.6.5.2

Sprinkler protection shall be provided for corridors and balconies that are part of a means of egress.

6.6.6*

Sprinklers shall not be required in attics, penthouse equipment rooms, elevator machine rooms, concealed spaces dedicated exclusively to and containing only dwelling unit ventilation equipment, crawl spaces, floor/ceiling spaces, vertical chases, elevator shafts where the elevator installation complies with ASME A17.1/CSA B44, *Safety Code for Elevators and Escalators,* and other concealed spaces that are not intended for living purposes or storage and do not contain fuel-fired equipment.

6.6.6.1

When fuel-fired equipment is present, at least one quick-response intermediate temperature sprinkler shall be installed above the equipment.

6.6.6.2

Spaces that contain fuel-fired equipment shall also comply with 6.6.6.3 or 6.6.6.4.

6.6.6.3

Where the fuel-fired equipment is above all occupied areas, sprinkler protection shall not be required in the concealed space.

6.6.6.4

Where fuel-fired equipment is below or on the same level as occupied areas, at least one quick-response intermediate-temperature sprinkler shall be installed above the equipment or at the wall separating the space with the fuel-fired equipment from the occupied space.

6.6.7

Sprinklers shall not be required in closets (regardless of size) on exterior balconies if all of the following conditions are met:

(1) The closet does not have doors leading directly into the dwelling unit.

(2) The closet does not have unprotected penetrations directly into the dwelling unit.

(3) The balcony is not used as a means of egress.

6.6.8

All situations regarding sprinkler location and position that are not directly discussed in NFPA 13R shall be in accordance with NFPA 13.

6.6.9 Interior Stairwells.

6.6.9.1

Except as allowed by 6.6.9.2, 6.6.9.3, and 6.6.9.4, sprinklers shall be installed throughout all interior, enclosed stairwells.

6.6.9.2*

Sprinklers shall not be required underneath stair risers in dwelling units where the walls and ceilings are surfaced with noncombustible or limited-combustible finishes.

6.6.9.3

Closets located underneath stairs shall be protected in accordance with 6.4.6.3.2, 6.6.3, 6.6.4, and 6.6.7.

6.6.9.4

Interior stairwells located outside the dwelling unit shall be protected in accordance with NFPA 13.

Statement of Problem and Substantiation for Public Input

I did not make any changes with this PI but I am suggesting a rewrite/ reorganization of this section. 6.6.1 states all areas except omissions in 6.6.2-6.6.7. Then there are requirements scattered throughout those sections.
I believe these requirements and omissions could be presented in a better organized fashion.

Submitter Information Verification

Submitter Full Name: Peter Schwab
Organization: Wayne Automatic Fire Sprinkler
Street Address:
City:
State:
Zip:
Submittal Date: Wed May 25 23:09:24 EDT 2022
Committee: AUT-RSS

Public Input No. 8-NFPA 13R-2022 [Section No. 6.6.3]

6.6.3

Except where specified in 6.6.4, sprinklers shall not be required in clothes closets, linen closets, and pantries with or without doors within dwelling units that meet all of the following conditions:

(1) The area of the space does not exceed 24 ft^2 (2.2 m^2).

(2) The walls and ceilings are surfaced with noncombustible or limited-combustible materials as defined by NFPA 220.

(3) Closets without doors meet the definition of compartment (See 3.3.3)

Statement of Problem and Substantiation for Public Input

There have been decisions made by AHJs that required the addition of sprinklers in closets that did not have doors. Sprinklers can be omitted from these spaces because the fire risk is low due to the transient nature of the occupancy in hotels and motels. The sprinkler is not omitted because a closet is a small confined space and will contain a fire.

Submitter Information Verification

Submitter Full Name: Kevin Hall
Organization: American Fire Sprinkler Association
Affiliation: American Fire Sprinkler Association
Street Address:
City:
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Zip:
Submittal Date: Wed Mar 23 10:10:45 EDT 2022
Committee: AUT-RSS

Public Input No. 10-NFPA 13R-2022 [Section No. 6.6.5 [Excluding any Sub-Sections]]

Except as provided for in 6.6.5.1 and 6.6.5.2, sprinklers shall not be required in any of the following features that are open and attached:

(1) Porches, balconies, lanais, verandas, awnings, or similar areas

(2) Trellis overhangs

(3) Carports

(4) Porte cocheres

(5) Stairs

(6) Corridors that are not ~~part of a means of egress~~ separated from the interior of the building by 1-hour fire resistive construction

(7) Other similar features

Statement of Problem and Substantiation for Public Input

All corridors are part of a means of egress. Therefore, if the true intent is to sprinkler all corridors, then we should just eliminate this section completely. If the intent is to try and align NFPA 13R with the IBC, then we need to get back to using the language similar to the IBC. Section 1027.6 of the IBC allows sprinklers to be omitted from exterior corridors as long as there is 1-hour fire resistive separation between the exterior corridor and the interior of the building. If the separation is removed, sprinklers are required in the exterior corridor. i believe that this is what NFPA 13R was trying to do in both the 2019 and 2022 editions.

Submitter Information Verification

Submitter Full Name: Kenneth Isman
Organization: University of Maryland
Street Address:
City:
State:
Zip:
Submittal Date: Mon Apr 11 16:55:09 EDT 2022
Committee: AUT-RSS

Public Input No. 11-NFPA 13R-2022 [Section No. 6.6.5.1 [Excluding any Sub-Sections]]

Where a roof, deck, or balcony greater than 4 ft (1.2 m) wide is provided above, sprinklers shall be installed to protect attached exterior balconies, attached exterior decks, and ground floor patios directly serving dwelling units in buildings of Type V construction.

Where ventilation openings in attic eave or soffits is provided above, sprinklers shall be installed to protect extension into the attic in buildings of Type V construction.

Statement of Problem and Substantiation for Public Input

Exterior fires on balconies have extended to the attic space of type V construction resulting in the displacement of a significant number of occupants that the community has difficult absorbing. This type of fire is extremely difficult to control and extinguish with limited access to these attics. And results in a significant impact to the economy due to lost property, ability for occupants to return to work, and the costs of the municipalities to respond to such events.

Submitter Information Verification

Submitter Full Name: William Sullivan
Organization: City of Madison Fire Department
Street Address:
City:
State:
Zip:
Submittal Date: Fri Apr 22 09:12:51 EDT 2022
Committee: AUT-RSS

Public Input No. 29-NFPA 13R-2022 [Section No. 6.7.2.3.4]

~~6.7.2.3.4~~ –

~~Where steel pipe is used underground, the pipe shall be protected against corrosion.~~

Statement of Problem and Substantiation for Public Input

Can steel pipe be used underground? Would this requirement apply to piping less than 4"? Should this be in the standard if it already references NFPA 24? If the committee wishes to retain this language it should be in chapter 5.

Submitter Information Verification

Submitter Full Name: Peter Schwab
Organization: Wayne Automatic Fire Sprinkler
Street Address:
City:
State:
Zip:
Submittal Date: Wed May 25 23:20:34 EDT 2022
Committee: AUT-RSS

Public Input No. 30-NFPA 13R-2022 [Section No. 6.7.2.4]

~~**6.7.2.4** – Hazardous Areas.~~

~~**6.7.2.4.1** –~~

~~Private service main aboveground piping shall not pass through hazardous areas, except as permitted in 6.7.2.4.2 , and shall be located so that it is protected from mechanical and fire damage.~~

~~**6.7.2.4.2** –~~

~~Private service main aboveground piping shall be permitted to be located in hazardous areas protected by an automatic sprinkler system.~~

Statement of Problem and Substantiation for Public Input

I am trying to understand how this relates to NFPA 13R. This language seems suited for a factory or process facility, not a residential building. Also, if there was such a hazardous area in a residential building, it would have to be incidental or separated and that would be an NFPA 13 system for that occupancy. If the committee wishes to retain this language it should be in chapter 5.

Submitter Information Verification

Submitter Full Name: Peter Schwab
Organization: Wayne Automatic Fire Sprinkler
Street Address:
City:
State:
Zip:
Submittal Date: Wed May 25 23:24:34 EDT 2022
Committee: AUT-RSS

Public Input No. 12-NFPA 13R-2022 [New Section after 6.9.2]

6.9.2.1

For system risers sized 2 1/2 in. or larger, the drain piping and valve shall be sized in accordance with NFPA 13.

Statement of Problem and Substantiation for Public Input

It is not uncommon for a 13R system to protect outside the dwelling hazards such as parking areas etc that use discharge criteria from NFPA 13. This can result in a larger riser size, and sizing the drain accordingly is appropriate. Also, since upsizing the main drain to meet forward flow requirements is allowed in 13, that same option could be utilized in 13R, which also requires a means to forward flow at the demand flowrate.

Submitter Information Verification

Submitter Full Name: Chase Browning
Organization: Chase A Browning Consulting
Street Address:
City:
State:
Zip:
Submittal Date: Sat May 14 12:08:42 EDT 2022
Committee: AUT-RSS

Public Input No. 31-NFPA 13R-2022 [New Section after 8.2.1]

8.2.1.1

Where the sprinkler system is part of a combined sprinkler/standpipe system (Class I or Class III) and the building is sprinklered throughout in accordance with NFPA 13R, no inside hose demand shall be required at any of the hose outlets.

Statement of Problem and Substantiation for Public Input

There is an AHJ who is requiring that we calculated both domestic demand and hose demand. This AHJ states that since NFPA 13R points to NFPA 13 for hydraulic calculation procedures, this would include hose demand as well as domestic demand. There is language in A.7.2 that references hose demand should not be required for calculations outside the dwelling unit. If we refer to NFPA 13 the hose demand can be waived if the building is sprinklered in accordance with NFPA 13.
I believe the way the standard is currently written, the AHJ is correct.
This section provides the same allowance for NFPA 13R.

Submitter Information Verification

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Submittal Date: Wed May 25 23:33:25 EDT 2022
Committee: AUT-RSS

Public Input No. 6-NFPA 13R-2022 [Section No. 10.2.3.1.1]

10.2.3.1.1

The flow test for electronic waterflow detecting devices shall result in an audible alarm on the premises within ~~5 minutes~~ 100 seconds of the start of the flow and until the flow stops.

Statement of Problem and Substantiation for Public Input

NFPA 13 2022 edition recognizes the difference between mechanical and electronic waterflow devices and this change will now correct the discrepancy between this standard and NFPA 13 2022 Edition section 7.7.2*.

Submitter Information Verification

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Submittal Date: Wed Mar 16 10:35:25 EDT 2022
Committee: AUT-RSS

Public Input No. 38-NFPA 13R-2022 [Section No. A.6.2.4.1]

A.6.2.4.1

Dry sprinklers must be of sufficient length to avoid freezing of the water-filled pipes due to conduction along the barrel. The values of exposed barrel length in Table 6.2.4.1 have been developed using an assumption of a properly sealed penetration and an assumed maximum wind velocity on the exposed sprinkler of 30 mph (48 km/h). Where higher wind velocity is expected, longer exposed barrel lengths will help avoid freezing of the wet piping. The total length of the barrel of the dry sprinkler must be longer than the values shown in Table 6.2.4.1 because the length shown in the tables is the minimum length of the barrel that needs to be exposed to the warmer ambient temperature in the heated space. See Figure A.6.2.4.1(a) for examples of where to measure the exposed barrel length for a sidewall sprinkler penetrating an exterior wall and Figure A.6.2.4.1(b) for an example of where to measure the exposed barrel length for a pendent sprinkler penetrating a ceiling or top of an insulated structure. See Figure A.6.2.4.1(c) for an example of where to measure the exposed barrel length for a flexible dry sidewall sprinkler penetrating through a wall. See Figure A.6.2.4.1(d) for an example of where to measure the exposed barrel length for a flexible dry pendent sprinkler penetrating through a ceiling.

Figure A.6.2.4.1(a) Dry Sidewall Sprinkler Through Wall.

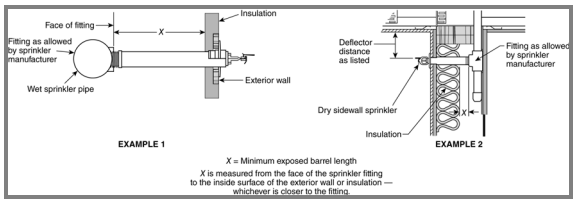
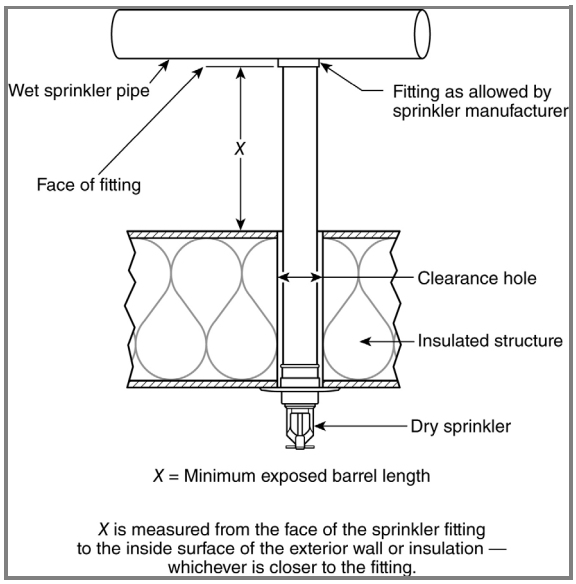


Figure A.6.2.4.1(b) Dry Pendent Sprinkler Through Ceiling or Top of Insulated Structure.



Additional Proposed Changes

File Name	Description	Approved
NFPA_13R_flexible_dry_sprinkler_figures.docx	New Figures A.6.2.4.1(c) and (d)	

Statement of Problem and Substantiation for Public Input

Flexible Dry Sprinklers are now available as an option for areas subject to freezing. Adding two new Figures A.6.2.4.1(c) and (d) will provide guidance for the user on where to measure the barrel length. These Figures are also in NFPA 13.

Submitter Information Verification

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Submittal Date: Wed Jun 01 14:23:47 EDT 2022
Committee: AUT-RSS

Figure A.6.2.4.1(c) Dry Sidewall Sprinkler Through Wall

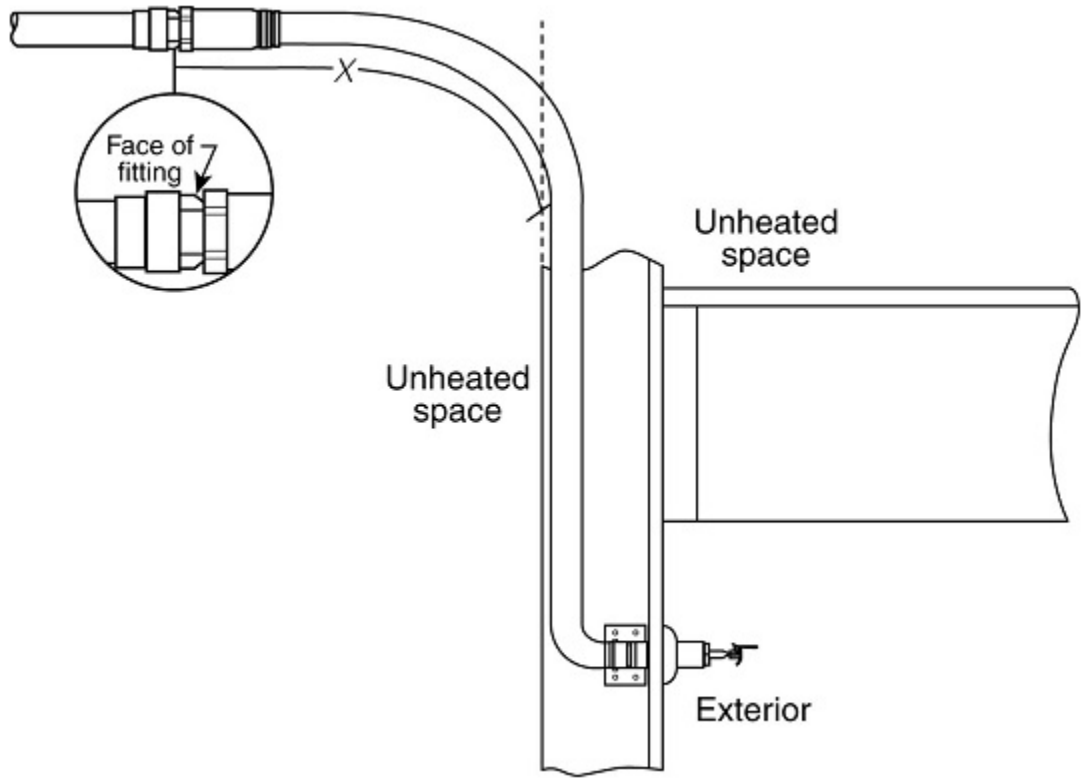
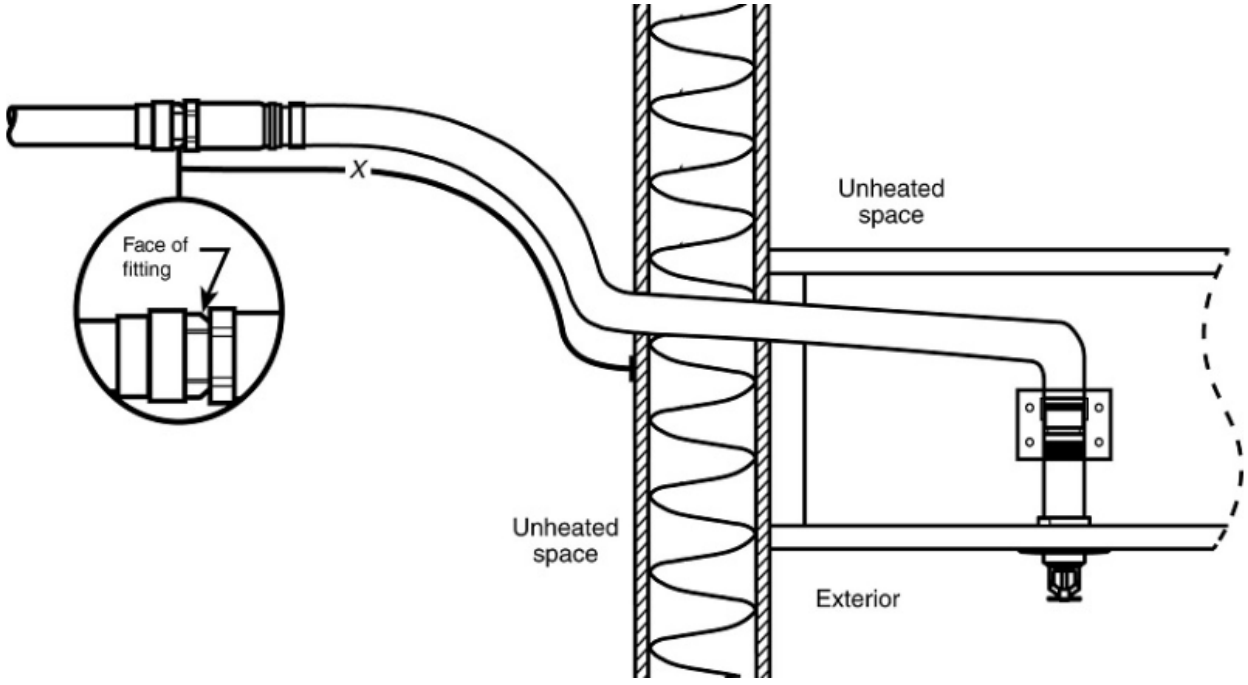


Figure A.6.2.4.1(d) Dry Pendent Sprinkler Through Ceiling



Public Input No. 26-NFPA 13R-2022 [Section No. A.6.6.2]

A.6.6.2

A room is still considered a bathroom if it contains just a toilet. Additionally, ~~two bathrooms that are adjacent to each other are considered separate rooms or compartments.~~ when there are multiple rooms or compartments as part of a "bathroom area" in a dwelling unit, each room or compartment is not counted aggregately towards the 55 ft^2 (5.1 m^2) requirement for sprinklers.

Statement of Problem and Substantiation for Public Input

Previous wording was awkward and did not provide an explanation.

Submitter Information Verification

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Submittal Date: Wed May 25 22:34:26 EDT 2022
Committee: AUT-RSS

Public Input No. 27-NFPA 13R-2022 [Section No. A.6.6.5.1]

A.6.6.5.1

Type V construction is defined as structural elements entirely or partially wood or other similarly combustible material. Some buildings of Type V construction may have balconies constructed with non-combustible materials. However, these balconies still require protection.

Statement of Problem and Substantiation for Public Input

I see this misinterpretation quite often. This annex language helps guide the user.

Submitter Information Verification

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Submittal Date: Wed May 25 22:40:06 EDT 2022
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Public Input No. 37-NFPA 13R-2022 [Section No. A.6.6.6]

A.6.6.6

Concealed spaces are permitted to have small openings such as grilles for return air when the space is being used as a plenum. Such small openings do not disqualify the space from being considered as a concealed space, and sprinklers are still permitted to be omitted. *(See Section 7.4 for additional information on attic sprinklers.)*

Noncombustible and limited-combustible spaces with non-fuel-fired equipment and access panels should be considered a concealed space and should not require sprinkler protection.

Statement of Problem and Substantiation for Public Input

Interpretations have been made that non-combustible and limited-combustible spaces that contain non-fuel-fired equipment and include access panels only (no door) are similar to closets and that the provisions of 6.6.4 apply. This is incorrect and this added annex not will clarify.
Note that this annex note is the same as A.9.2.1.2.2 in NFPA 13

Submitter Information Verification

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Submittal Date: Wed Jun 01 13:05:01 EDT 2022
Committee: AUT-RSS

Public Input No. 36-NFPA 13R-2022 [Section No. A.6.7.2.1.2]

A.6.7.2.1.2

The internal temperature and duration of exposure that water filled piping could be subjected to under freezing conditions in an unconditioned space should be carefully considered and approved by the AHJ.

Dependable sources of information on historic temperatures include the following:

(1) National Oceanic and Atmospheric Administration — National Climatic Data Center

(2) National Weather Service

(3) Plant Hardiness Zone Maps (See https://planthardiness.ars.usda.gov). See Figure A.6.7.2.1.2.

(4) American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE)

(5) Other approved sources

Figure A.6.7.2.1.2.

Additional Proposed Changes

File Name	Description	Approved
Figure_A.6.7.2.1.2.jpg		

Statement of Problem and Substantiation for Public Input

Adds a temperature map to aid the user of the document.

Submitter Information Verification

Submitter Full Name: Mark Fessenden
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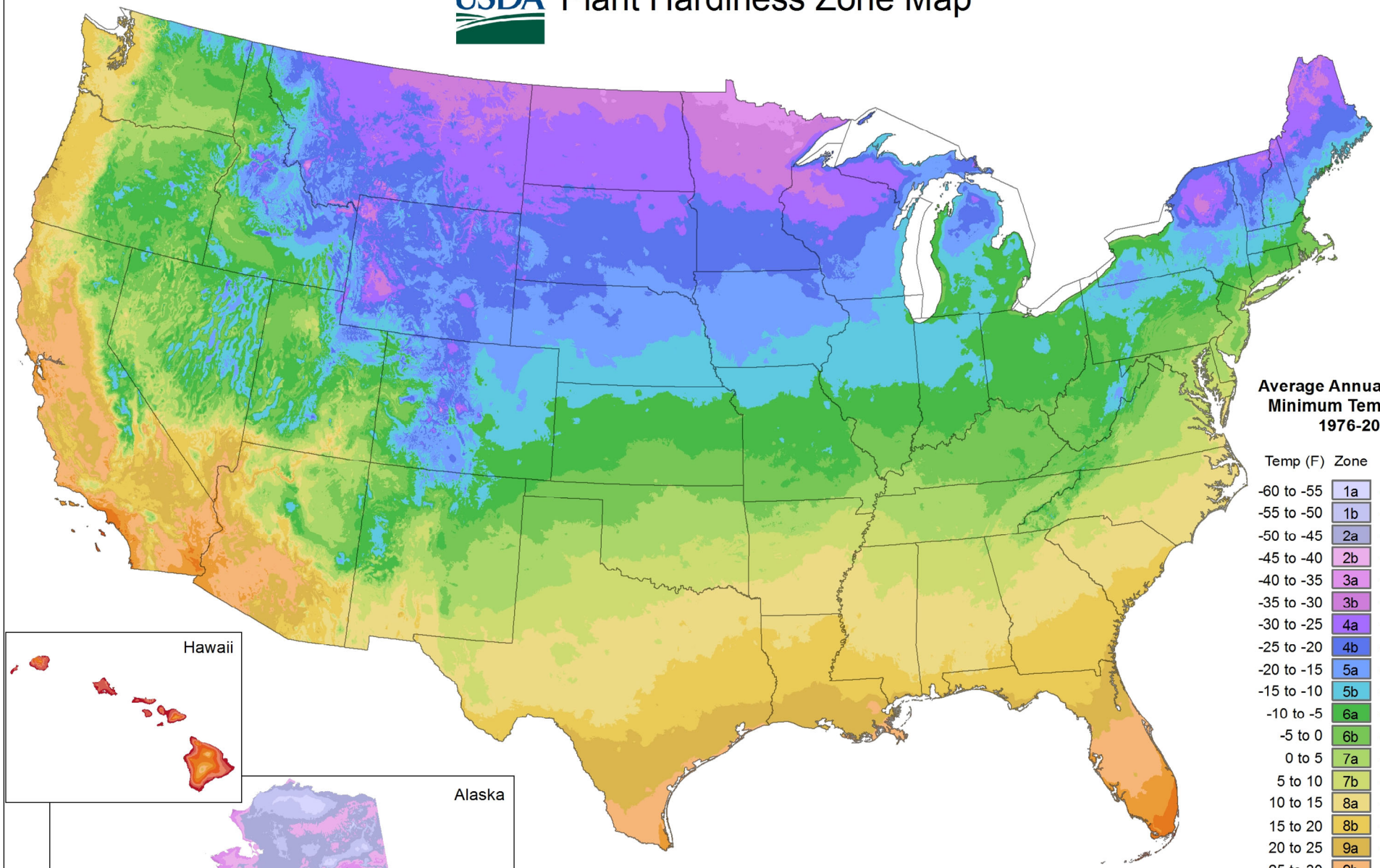
Submittal Date: Tue May 31 12:58:36 EDT 2022
Committee: AUT-RSS

USDA Plant Hardiness Zone Map



Average Annual Extreme Minimum Temperature 1976-2005

Temp (F)	Zone	Temp (C)
-60 to -55	1a	-51.1 to -48.3
-55 to -50	1b	-48.3 to -45.6
-50 to -45	2a	-45.6 to -42.8
-45 to -40	2b	-42.8 to -40
-40 to -35	3a	-40 to -37.2
-35 to -30	3b	-37.2 to -34.4
-30 to -25	4a	-34.4 to -31.7
-25 to -20	4b	-31.7 to -28.9
-20 to -15	5a	-28.9 to -26.1
-15 to -10	5b	-26.1 to -23.3
-10 to -5	6a	-23.3 to -20.6
-5 to 0	6b	-20.6 to -17.8
0 to 5	7a	-17.8 to -15
5 to 10	7b	-15 to -12.2
10 to 15	8a	-12.2 to -9.4
15 to 20	8b	-9.4 to -6.7
20 to 25	9a	-6.7 to -3.9
25 to 30	9b	-3.9 to -1.1
30 to 35	10a	-1.1 to 1.7
35 to 40	10b	1.7 to 4.4
40 to 45	11a	4.4 to 7.2
45 to 50	11b	7.2 to 10
50 to 55	12a	10 to 12.8
55 to 60	12b	12.8 to 15.6
60 to 65	13a	15.6 to 18.3
65 to 70	13b	18.3 to 21.1

Hawaii

Alaska

Puerto Rico

Agricultural Research Service

Oregon State University

Mapping by the PRISM Climate Group, Oregon State University, http://prism.oregonstate.edu, 2012