

# BC BUILDING CODE INTERPRETATION COMMITTEE

A joint committee with members representing  
AIBC, APEGBC, BOABC, POABC

File No: 12-0069

INTERPRETATION

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Interpretation Date: November 17, 2015

Building Code Edition: BC Building Code 2012

Subject: Draft Stops and Closed Spaced Sprinklers

Keywords: draft stops, sprinklers, *interconnected floor space*

Building Code Reference(s): 3.2.8.2.(6), 3.2.8.7., Div. A 1.5.1.2.,  
NFPA 13-2013 – 8.15.4.1.

## Question:

In a building that is sprinklered throughout, and which contains an *interconnected floor space* as permitted by Sentence 3.2.8.2.(6), are draft stops and close spaced sprinklers required around the openings through the floor?

## Interpretation:

No

Sentence 3.2.8.2.(6) permits an interconnected floor space without having to meet the requirements of Articles 3.2.8.3. to 3.2.8.9. Sentence 3.2.8.2.(6) permits openings through the floor for stairs, escalators and moving walkways in unsprinklered buildings, and any other floor opening in sprinklered buildings.

Sentence 3.2.8.2.(6) is a unique type of *interconnected floor space* that only applies to limited number of projects that meet the following criteria:

- a) the *interconnected floor space* consists of the *first storey* and the *storey* next above or below it, but not both,
- b) the openings through the floor are used only for stairways, escalators or moving walks or the *interconnected floor space* is *sprinklered* throughout (see *Appendix A*),
- c) the *interconnected floor space* contains only Group A, Division 1, 2 or 3, Group D, Group E, or Group F, Division 2 or 3 *major occupancies* (see *Appendix A*), and
- d) the *building area* is not more than one half of the area permitted by *Subsection 3.2.2.*

Article 3.2.8.7. requires draft stops around openings through a floor in an *interconnected floor space*, but this Article is waived for *interconnected floor spaces* that meet the requirements of Sentence 3.2.8.2.(6).



R. J. Light, Committee Chair

The views expressed are the consensus of the joint committee with members representing AIBC, APEGBC, BOABC, and POABC, which form the BC Building Code Interpretation Committee. The purpose of the committee is to encourage uniform province wide interpretation of the BC Building Code. These views should not be considered as the official interpretation of legislated requirements based on the BC Building Code, as final responsibility for an interpretation rests with the local *Authority Having Jurisdiction*. The views of the joint committee should not be construed as legal advice.

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Article 8.15.4.1. of NFPA 13-2013 states that closely spaced sprinklers and draft stops are only required around floor openings when the "sprinkler protection is serving as the alternative to enclosure of the vertical opening" (see Attachment #1).

The commentary to Article 8.15.4.1. of NFPA 13-2013 in the Automatic Sprinkler System Handbook states (see Attachment #1):

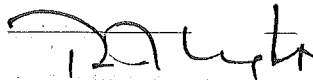
"Closely spaced sprinklers and draft stops are required around a vertical opening only when it would otherwise be required to be protected by a barrier by the building code or NFPA 101."

"Smaller vertical openings may be referred to in the local building code or NFPA 101 as communicating spaces or convenience openings. These spaces are not required to have a barrier around the opening perimeter. (See Section 8.6, Vertical Openings, in NFPA 101 for more details). An example of a communicating space is shown in Exhibit 8.41."

Since Sentence 3.2.8.2.(6) waives the requirements for drafts stops in Article 3.2.8.7., the vertical openings through the floor are permitted by the BC Building Code without any protection barrier around the vertical opening (i.e. no fire separation walls around the vertical opening).

Note that Article 1.5.1.2. in Division A states "In case of conflict between the provisions of this Code and those of a referenced document, the provisions of this Code shall govern".

Therefore draft stops and close spaced sprinklers are not required around the vertical openings through a floor in a building that contains an *interconnected floor space* that meets the requirements of Sentence 3.2.8.2.(6).



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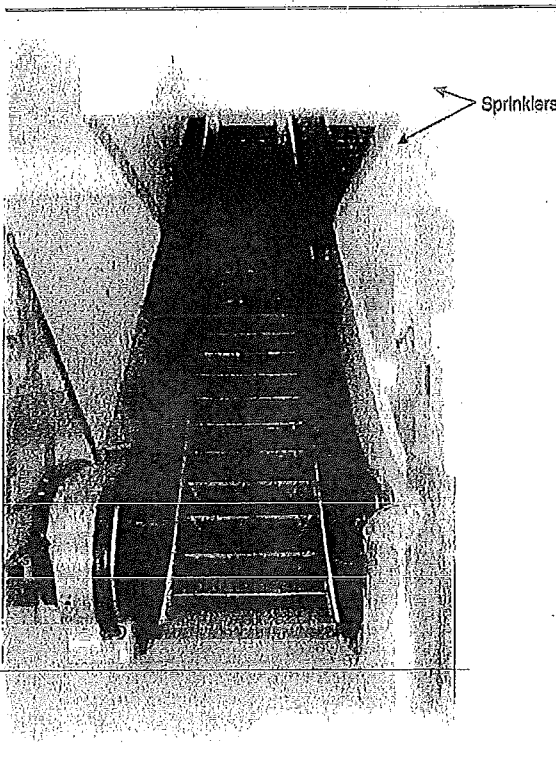
This characteristic of the space, there is no additional benefit to install draft stops and closely spaced sprinklers in these spaces.

Smaller vertical openings may be referred to in the local building code or NFPA 101 as communicating spaces or convenience openings. These spaces are not required to have a barrier around the opening perimeter. (See Section 8.6, Vertical Openings, in NFPA 101 for more details.) An example of a communicating space is shown in Exhibit 8.41. Because this space is permitted to be unenclosed by NFPA 5000, Building Construction and Safety Code®, or NFPA 101, 8.15.4.1 does not require draft stops and closely spaced sprinklers.

Escalator openings in department stores (see Exhibit 8.42) are examples of vertical openings that would not be considered a convenience opening or a communicating space, and as a result, they would be required by NFPA 5000 or NFPA 101 to be enclosed to protect against vertical fire spread. However, enclosed escalators would not be very convenient for the occupants of the department store, so an alternative to the enclosure is necessary. That alternative is established in 8.15.4.2 and 8.15.4.3 by means of draft stops and closely spaced sprinklers as shown in Exhibit 8.42.

**8.15.4.2 Draft Stops.** Draft stops shall meet all of the following criteria:

- (1) The draft stops shall be located immediately adjacent to the opening.
- (2) The draft stops shall be at least 18 in. (457 mm) deep.
- (3) The draft stops shall be of noncombustible or limited-combustible material that will stay in place before and during sprinkler operation.



**EXHIBIT 8.41** Communicating Space Not Requiring Draft Stops and Closely Spaced Sprinklers

**EXHIBIT 8.42** Example of Closely Spaced Sprinklers and Draft Stops

NFPA 13

2013

Sprinklers are required at each floor landing where a noncombustible stair shaft serves two fire-separated buildings or two fire sections of one building, as shown in Figure A.8.15.3.3(a) or where the stair landing serves as a horizontal exit. If the stair serves only one fire section, sprinklers are required only at the roof and under the lowest landing. [See Figure A.8.15.3.3(a) and Figure A.8.15.3.3(b).]

#### 8.15.4\* Vertical Openings.

A.8.15.4 Where sprinklers in the normal ceiling pattern are closer than 6 ft (1.86 m) from the water curtain, it might be preferable to locate the water curtain sprinklers in recessed baffle pockets. (See Figure A.8.15.4.)

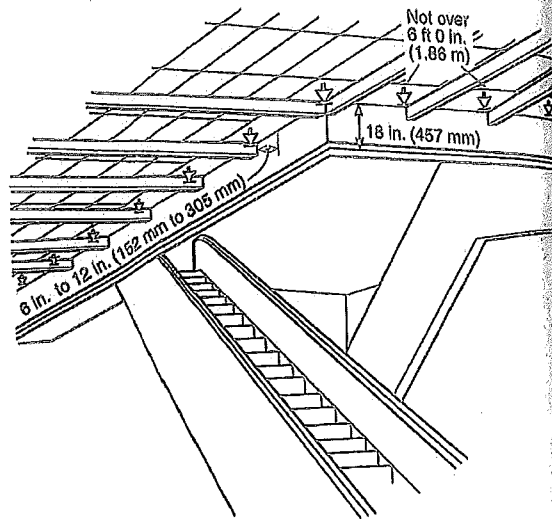


FIGURE A.8.15.4 Sprinklers Around Escalators.

8.15.4.1\* General. Unless the requirements of 8.15.4.4 are met, where moving stairways, staircases, or similar floor openings are unenclosed and where sprinkler protection is serving as the alternative to enclosure of the vertical opening, the floor openings involved shall be protected by closely spaced sprinklers in combination with draft stops in accordance with 8.15.4.2 and 8.15.4.3.

A.8.15.4.1 It is the intent of this section to require closely spaced sprinklers and draft stops on openings where protection or enclosure is required by building and life safety codes.

#### FAQ

Where are closely spaced sprinklers and draft stops required?

Closely spaced sprinklers and draft stops are required around a vertical opening only when it would otherwise be required to be protected by a barrier by the building code or NFPA 701. As a general rule, vertical openings in buildings are required to be separated from the rest of the building by rated barriers in order to protect against the vertical spread of the products of combustion. However, not all vertical openings require such protection. Large open spaces such as atriums as described in 8.15.4.4, are intended to be unpartitioned and not separated from the rest of the building for aesthetic purposes. The sheer volume of these types of spaces creates a level of safety from the accumulation of the products of combustion. Because