

BC BUILDING CODE INTERPRETATION COMMITTEE
AIBC, APEGBC, BOABC, POABC

File No: 98-0152

INTERPRETATION

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Interpretation Date: September 19, 2006

Building Code Edition: BC Building Code 1998

Subject: Exterior walls meeting at an angle

Keywords: Exterior walls, spatial separation, exposure protection, 135° angle

Building Code Reference(s): 9.10.12.4.(1) and (2)

Question:

Sentence 9.10.12.4.(1) requires a minimum 1.2m distance between openings in the exterior walls of 2 different fire compartments, if the exterior angle between the planes of the 2 respective fire compartment exterior walls containing the openings, is 135° or less.

Sentence 9.10.12.4.(2) requires the exterior walls within the 1.2m distance required by Sentence 9.10.12.4.(1), to have a fire resistance rating not less than that of the interior vertical fire separation between each fire compartment and the remainder of the building.

1. Do the requirements of Sentences 9.10.12.4.(1) and (2) apply if there are no openings in the exterior walls of the 2 fire compartments?
2. Do the requirements of Sentences 9.10.12.4.(1) and (2) apply if there is an opening in the exterior wall of only one of the 2 fire compartments?

Interpretation:

1. No.

Sentences 9.10.12.4.(1) and (2) are intended to reduce the possibility of fire being transmitted from one opening through another adjacent opening, thereby possibly spreading fire from one fire compartment into another. Openings are deemed to be incapable of containing an interior fire for a sufficient duration, as compared to a typical exterior fire rated or unrated wall containing no openings. Therefore 2 specific fire protection measures are prescribed by the Building Code where adjacent windows are placed within the prescribed condition requiring additional protection, as follows:

- The respective openings must be spaced apart minimum 1.2m. This creates an acceptable spatial separation distance between the exposing openings.
- The minimum 1.2m space between the openings must have a fire resistance rating. This acts as a vertical spandrel between the adjacent openings.

The foregoing measures provide protection between openings and are deemed equivalent to continuous exterior walls containing no openings (rated or unrated). Note the use of the word 'opening' as opposed to the phrase 'unprotected opening' used in the equivalent Part 3 Article.


R. J. Light, Committee Chair

The views expressed are the consensus of the joint committee of 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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A similar concept of protection is contained in Article 9.10.1.1 for Group E and Group F, Division 2 occupancies, where 1m deep fire rated spandrels, canopies or balconies are required between vertically arranged window openings at stacked storeys. However such intervening exterior spandrels, canopies or balconies are not required if there are no window openings at all. The exterior walls (rated or unrated) without openings would be deemed to be adequate protection to delay vertical fire spread on the exterior face of the building.

2. No.

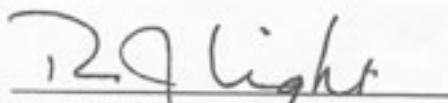
Sentences 9.10.12.4.(1) and (2) are intended to reduce the possibility of fire being transmitted from one opening through another adjacent opening, thereby possibly spreading fire from one fire compartment into another. Openings are deemed to be incapable of containing an internal fire for a sufficient duration, as compared to a typical exterior fire rated or unrated wall containing no openings. Therefore, 2 specific fire protection measures are prescribed by the Building Code where adjacent windows are placed within the prescribed condition requiring additional protection, as follows:

- The respective openings must be spaced apart minimum 1.2m. This creates a mitigating spatial separation distance between the exposing openings.
- The minimum 1.2m space between the openings must have a fire resistance rating. This acts as a vertical spandrel between the adjacent openings.

The foregoing measures provide protection between openings and are deemed equivalent to continuous exterior walls containing no openings (rated or unrated).

If one fire compartment has an exterior wall opening, but not the other, Sentence 9.10.12.4.(1) is met as there is adequate distance separation provided. Sentence 9.10.12.4.(2) is met as there is no other opening of another fire compartment, exposed to the single exterior wall opening.

A similar concept of protection is contained in Article 9.10.12.1 for Group E and Group F, Division 2 occupancies, where 1m deep fire rated spandrels, canopies or balconies are required between vertically arranged window openings at stacked storeys. However such intervening exterior spandrels, canopies or balconies are not required if there are openings only on one of the storeys. The exterior walls (rated or unrated) without openings, or with openings only on one storey, would be deemed to be adequate protection to delay vertical fire spread on the exterior face of the building.



R. J. Light, Committee Chair