

BC BUILDING CODE INTERPRETATION COMMITTEE

A joint committee with members representing
AIBC, EGBC, BOABC

File No: 18-0168

INTERPRETATION

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Interpretation Date:	March 15, 2022
Building Code Edition:	BC Building Code 2018
Subject:	Exposure from a Second Storey Opening to a Ground Floor Exit
Keywords:	Exit, Unprotected Opening, Exposure
Building Code Reference(s):	9.9.4.4, 9.9.4.5, 9.9.4.6

Question:

1. In a Part 9 building, where the only egress from a ground floor unit is an exterior exit door, what restrictions are applicable to the exposure from an unprotected opening in the exterior wall of a second storey unit (a different fire compartment) above the ground floor door?
2. Where there is a restriction on exposure from a second storey unprotected opening to a ground floor exit, can an intervening exterior balcony or roof projection form part of the protection?

Interpretation:

1. The answer depends on the exterior conditions at the exit door.

If the exit door leads to an unenclosed exterior stair or ramp, Sentence 9.9.4.4.(1) requires that unprotected openings within 3 m horizontally and 10 m below or 5 m above the exit must be protected by wired glass in fixed steel frames or glass block conforming to Article 9.10.13.5 and 9.10.13.7. Both the vertical and horizontal dimensions must be applied. The 3 m dimension is measured horizontally on each side of the exit, and within this horizontal distance any windows or other unprotected openings that are less than 5 m above the exit are required to be protected. Although Sentence 9.9.4.4.(1) specifically applies only to unenclosed exterior stairs or ramps, it is advisable to also consider exposure to an exterior exit route that is not a stair or a ramp where there is only one direction of exterior travel and it is exposed to an unprotected opening from another fire compartment.



Patrick Shek, P.Eng., CP, FEC, Committee Chair

The views expressed are the consensus of the joint committee with members representing AIBC, EGBC and BOABC, which form the BC Building Code Interpretation Committee. The Building and Safety Standards Branch, Province of BC and the City of Vancouver participate in the committee's proceedings with respect to interpretations of the BC Building Code. 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 9.9.4.5 deals with openings in the exterior walls of an exit enclosure. This does not directly apply to an exterior exit door where there is no exit enclosure.

Article 9.9.4.6 addresses exposure from an unprotected opening to an exterior exit door in a different fire compartment, where the exterior walls of the two fire compartments intersect at an angle of less than 135°. In that situation, unprotected openings within 3 m horizontally of the exit door are required to be protected with wired glass or glass block as noted above. Article 9.9.4.6 is not applicable where the unprotected opening and the exterior door are located in the same plane.

2. Yes.

Although not directly addressed in the Building Code, it is reasonable that an intervening balcony or roof that provides at least the same degree of fire-resistance as the required wired glass in steel frames or glass block can contribute to the protection of the unprotected opening that exposes an exit. Since radiation emitted by a fire travels in a straight line from the source, the protection distance could be determined by the most conservative projection of the radiation that would “see” the exterior exit. For example, a straight line could be drawn from the top of a second storey window opening, through the outside edge of the intervening balcony or roof and projecting down to the level of the exit, to determine where the exposure to the exterior exit would occur.



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