

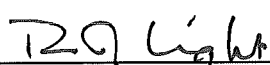
# BC BUILDING CODE INTERPRETATION COMMITTEE

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

File No: 12-0097

INTERPRETATION

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Interpretation Date:	June 20, 2017
Building Code Edition:	BC Building Code 2012
Subject:	Area of Exposing Building Face in a Building With Multiple Fire Compartments
Keywords:	Fire Compartment, Exposing Building Face, Unprotected Openings
Building Code Reference(s):	3.2.3.2, 3.2.3.1.(5), 3.2.3.1.(6), 9.10.14.2.(1), 9.10.15.2.(1)
<b>Question:</b>	<p>In a building containing fire compartments separated by fire separations that have at least 45 min. fire-resistance ratings, is it permitted to determine allowable unprotected openings based on the exposing building face area of the entire building facing in one direction, and locate all of the unprotected openings in the exposing building face of one fire compartment?</p>
<b>Interpretation:</b>	<p>Yes.</p> <p>Sentence 3.2.3.2.(1) states that, except as permitted in Sentences (2) and (3), the area of an exposing building face (EBF) shall be calculated as the total area of an exterior wall facing in one direction on any side of a building measured from finished ground level to the uppermost ceiling. In Sentence 3.2.3.2.(2), the EBF area is permitted (not required) to be determined for each fire compartment, where the fire compartments are separated by fire separations with a fire-resistance rating of at least 45 min. Sentence (2) does not state a requirement. It allows an alternate method that can be used in determining the EBF area, at the designer's discretion.</p> <p>Sentences 9.10.14.2.(1) and 9.10.15.2.(1) contain similar wording. The EBF area is required to be the exterior wall area facing in one direction. This is calculated as either the total area from finished ground level to the uppermost ceiling, or calculated as the exterior wall area for each fire compartment where a building is divided into fire compartments by fire separations with fire-resistance ratings of at least 45 min. (Sentence 9.10.15.2.(1) also contains another option for houses, which is not relevant to the question.) These Part 9 requirements do not clearly state that either option can be used to</p> <p> R. J. Light, Committee Chair</p>
<p>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.</p>	

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determine the EBF area in a building with multiple fire compartments. However, based on the similar Part 3 requirements, it is interpreted that, in a building with multiple fire compartments, the designer can choose whether to determine the EBF area using an entire face of the building, or the face of each fire compartment.

Sprinklering of a building does not affect application of these provisions to determine the EBF area. The requirements are the same for sprinklered and unsprinklered buildings.

Using an entire face of the building as the EBF will in most cases permit a smaller percentage of unprotected openings than if the EBF of each fire compartment is considered. The designer could choose to concentrate these allowable openings in only one area or one fire compartment of the building face, subject to the requirements of Sentences 3.2.3.1.(5) and (6) for size and proximity of individual openings which are applicable if the limiting distance is 2 m or less and the building is unsprinklered. Part 9 has similar limitations on opening sizes and proximity, in Sentences 9.10.14.4.(3) and (4) and (for houses) in Articles 9.10.15.2 and 9.10.15.4.

If this approach is followed, with all of the allowable openings for an EBF concentrated at one fire compartment, the exterior walls of other fire compartments facing in that direction would not be permitted any unprotected openings.

If the floor areas at an EBF have fire compartments with different occupancy classifications, and an entire building face is used as the EBF, the most restrictive occupancy classification must be used to determine the allowable unprotected openings. For example, in a two storey building where the first storey contains a Group E occupancy and the second storey contains a Group A, B, C, D or F3 occupancy, if an entire building face is used as the EBF the allowable openings must be determined on the basis of a Group E occupancy.

  
R. J. Light, Committee Chair

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