

Proposed Changes to the British Columbia Building Code 2024

Title: Braced Wall Panels Exemptions for Garages and Accessory Buildings

Subject/description: Clarification of an exemption criteria for braced wall panel requirements for garages (detached and front wall of attached) and accessory buildings serving a single dwelling unit.

Applicable Code references: Sentence 9.23.13.5.(1) of Division B

Problem

Sentence 9.23.13.5.(1) provides an exemption for braced wall panels however contains an incomplete reference which can lead to confusion in its application for accessory building previously exempted in the BCBC 2018. Sentences 9.23.13.10.(2) to (4) are intended to be exemptions from the requirements of Sentence 9.23.13.5.(1), however they are meant to be exemptions only when they are considered within their scope.

Sentence 9.23.13.10.(1) states the scope of application for all Sentences within the Article. It is intended that Sentences 9.23.13.10.(2) to (4) can be exemptions from Sentence 9.23.13.5.(1) provided they are limited as stated in Sentence 9.23.13.10.(1).

Without referencing the limitations stated in Sentence 9.23.13.10.(1) it could be interpreted that the exemption for braces wall panels can be used more broadly than it was intended.

Justification

Through discussions with the National Research Council, it has been confirmed that Sentences 9.23.13.10.(2) to (4) should not be used as exemptions to Sentence 9.23.13.5.(1) when the seismic design parameter (S_{max}) or hourly wind pressure exceed the conditions stated in Sentence 9.23.13.10.(1).

Proposed Change

In this document:

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Division A

9.23.13.5. Braced Wall Panels in Braced Wall Bands

1) Except as provided in Sentences (2) and 9.23.13.10.(1)(2) to (4) and Article 9.23.13.7., *braced wall panels* shall

- a) be located within *braced wall bands*,
- b) be laterally supported at each floor level and the roof,
- c) extend, as applicable, from the top of the supporting footing, slab or subfloor to the underside of the floor, ceiling or roof framing above, and
- d) conform to the spacing and dimensions given in Table 9.23.13.5. and Article 9.23.13.7.

9.23.13.10. Additional System Considerations

1) This Article applies where

- a) the seismic design parameter, S_{max} , is not greater than 1.2, and
- b) the 1-in-50-year hourly wind pressure (HWP) is not greater than 1.2 kPa.

Impact analysis and cost implications

This proposed change clarifies a limitation on the permission for exemptions. Some garages and accessory buildings serving a single dwelling unit (where the seismic design parameter, S_{max} , is equal to or greater than 1.2, and where the 1-in-50-year hourly wind pressure (HWP) is equal to or greater than 1.2 kPa such as Haida Gwaii and the southern Vancouver Island) are not exempted from the requirements of Sentence 9.23.13.5.(1) and must follow the applicable requirements.

Enforcement implications

Can be enforced through the existing enforcement regimes.

Who is affected

Designers and regulators

Objective-based analysis of new or changed provisions

No changes proposed. Attributions for Sentence 9.23.13.5.(1) are:

[F20-OS2.1, OS2.3, OS2.5] [F22-OS2.3, OS2.4, OS2.5]

[F20-OP2.1, OP2.3, OP2.5] [F22-OP2.3, OP2.4, OP2.5]

[F20, F22-OS1.2] Applies to assemblies required to provide fire resistance.

[F22-OS3.1] Applies to walls that support floors.

[F22-OS3.7] Applies to walls that contain doors or windows required for emergency egress.

[F20, F22-OH4] Applies to walls that support floors.

[F20, F22-OH1.1, OH1.2, OH1.3] Applies to elements that support or are part of an environmental separator.

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