

Public Review

BC Building Code 2023

Proposed change to harmonize with National Building Code 2020

Topic: Penetrations in Fire Separations and Fire-Rated Assemblies

Code change number: BCBC2023-PR-02-CP

Code reference: BC Building Code 2018 – Part 3 of Division B, Subsection 3.1.9.

Description of the proposed change

The proposed change would eliminate British Columbia's variation to allow unspecified penetrations of fire separations and fire rated assemblies to be tightly fitted. The model National Building Code (NBC) 2020 includes changes in Subsection 3.1.9. of Division B with regards to penetrations in fire separations and fire-rated assemblies, such as for service equipment penetrations and for penetrations that incorporate transitions between combustible and noncombustible drain, waste and vent piping. These NBC 2020 changes are not reproduced in this document but are proposed for adoption into the BC Building Code 2023. They are identified in the NBC 2020 with a vertical bar in the margin.

Justification

The term "tightly fitted" in the BC Building Code is undefined and subject to interpretation, which may lead to compromised fire safety in penetrations of fire separations and fire rated assemblies. The model NBC 2020 no longer allows penetrations of fire separations and fire rated assemblies to be tightly fitted, except where specifically permitted for outlet boxes. The NBC 2020 no longer used the term "tightly fitted", but now defines the maximum space permitted around a non-combustible outlet box without the use of firestopping. These changes to the NBC were previously subject to public review through the national codes development process which included impact analysis.

Proposed National Code content for adoption

Legend

Black Text – 2018 BC Building Code content

Green Text – Proposed 2020 National Building Code content

Red Text – 2018 BC Building Code content removed

3.1.9.1. Fire Stops

1) Except as provided in Sentences (2) to (~~5~~7) and Article 3.1.9.~~4~~3., penetrations of a *fire separation* or a membrane forming part of an assembly required to have a *fire-resistance rating* shall be

a) sealed by a *fire stop* that, when subjected to the fire test method in CAN/ULC-S115, "Standard Method of Fire Tests of Firestop Systems," has an F rating not less than the required ~~fire-protection~~ *fire-resistance rating* ~~required for closures in~~ of the *fire separation* ~~in conformance with Table 3.1.8.4., or~~

b) cast in place, where the item penetrating the fire separation is steel, ferrous, copper, concrete or masonry (see Note A-3.1.9.1.(1)(b)).~~, or~~

c) ~~tightly fitted (see Note A-3.1.9.1.(1)(c)).~~

(See also Article 3.1.9.~~5~~4. for requirements regarding penetrations by *combustible* drain, waste, and vent piping.)