BC BUILDING CODE INTERPRETATION COMMITTEE

A joint committee with members representing

AIBC, APEGBC, BOABC

\Interpretation Date:	May 19, 2015 (***revised March 16, 2021***)
Building Code Edition:	BC Building Code 2012
Subject:	Fire separation requirements for various types of vestibules
Keywords:	Fire separation, vestibules
Building Code Reference(s):	3.2.6.2.(4), Appendix B-3.2.6.2.(4), (3.2.6.3.(1), Appendix B-3.2.6.3.(1), 3.2.8.5.(1)(b), 3.3.5.4.(1), 3.3.5.7., 3.4.4.4.(7),(8)

Question:

The building code requires the installation of vestibules for a number of different reasons, but it is often not clear as to the required fire-resistance rating (FRR) for the perimeter walls of these vestibules. Please clarify the required fire-resistance ratings for fire separation walls for the various types of vestibules.

Interpretation:

Except as noted below, when the building code requires a vestibule, the vestibule walls should be constructed as fire separations with no fire-resistance rating. All doors that open onto the vestibule must have self-closing devices and positive latching.

For all building types:

The wall between a vestibule and an exit stair requires the same FRR as required for the exit stair as per Article 3.4.4.1.

The wall between a vestibule and an elevator hoistway requires that same FRR as required for the elevator hoistway as per Article 3.5.3.1.

The wall between a vestibule and a room that requires a fire separation (e.g., a service room that contains fuel-fired equipment) must have the same FRR that is required for the room.

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

For High Buildings per Subsection 3.2.6.

When vestibules are required between the following components, vestibule perimeter walls must be constructed as fire separations with the following fire-resistance ratings:

When an elevator hoist way penetrates a **floor above** the lowest exit storey (i.e., 2nd Storey floor slab when 1st Storey is the exit storey) as well as the **floor of the storey immediately below** the lowest exit storey (e.g., 1st Storey floor slab when 1st Storey is the exit storey), elevator lobbies that are located below the lowest exit storey will be separated as follows:

To a public corridor	45 min FRR	App B-3.2.6.2,(4)
To any stair or elevator shaft	2 hour FRR	App B-3.2.6.2,(4)
To any floor area other than public corridor	2 hour FRR	App B-3.2.6.2,(4)

High building connected to another building 2 hour FRR 3.2.6.3.(1), App B-3.2.6.3.(1)

The wording of Sentence 3.2.6.2.(4) clearly states that "measures shall be taken **to limit movement of smoke from a fire in a "floor area" below the lowest exit storey** (i.e., Level P1) into upper storeys (i.e., 2nd Storey)".

Appendix B-3.2.6.2.(4) refers to an elevator hoistway that penetrates the "**floor of the storey** immediately below the exit storey".

Note that the definition of "storey" means that portion of the building that is situated between the top of any floor and the top of any floor next above it.

This means that the **1st Storey floor slab is the floor of the storey** immediately below the lowest exit storey when 1st Storey is the lowest exit storey as describe is Appendix B-3.2.6.2.(4).

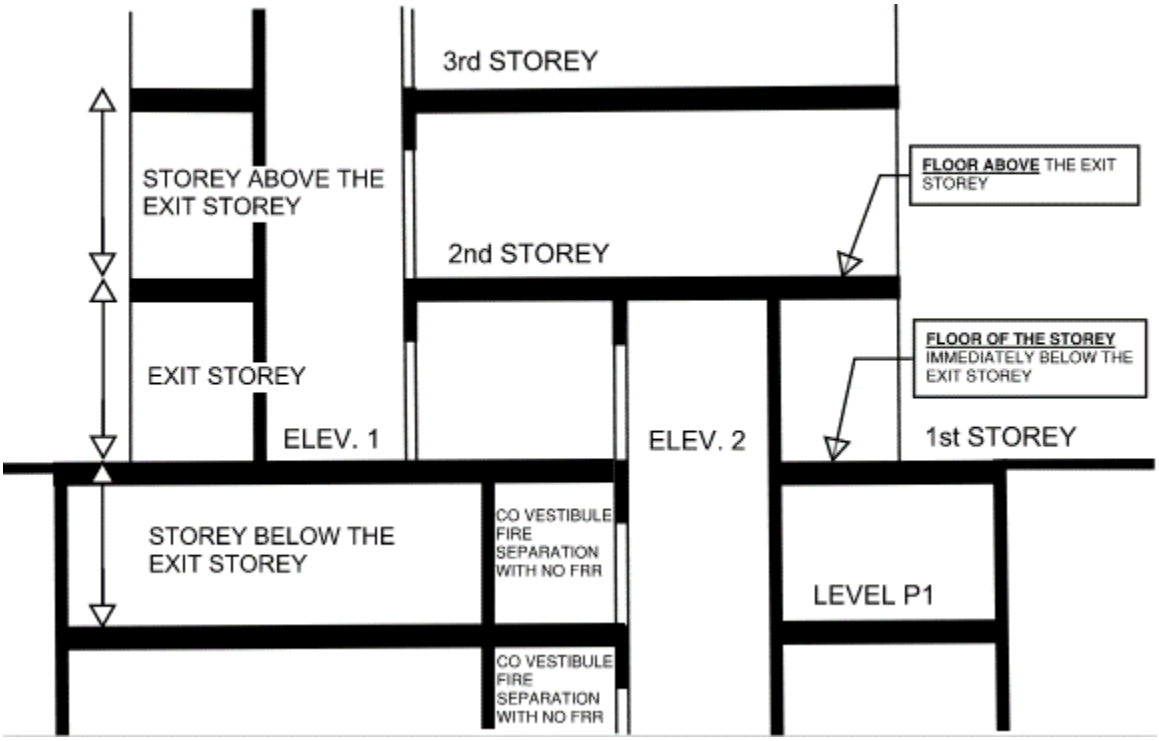
*Appendix B-3.2.6.2.(4) uses different terminology for the floor above the exit storey. It says "An elevator hoistway that passes through the **floor above the lowest exit storey** (rather than the floor of the storey above). **The 2nd Storey floor slab is the floor above the lowest exit storey.***

Refer to the sketches on Pages 3 & 4 for further clarification.

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

Elevator 1 ***does not require any CO vestibule*** because it does not penetrate the 1st Storey floor slab (the **floor of the storey** immediately below the exit level).

Elevator 2 does not require a fire-rated CO vestibule because it does not penetrate the 2nd Storey floor slab (the **floor above** the exit level). ***A CO Vestibule is still required as per 3.3.5.4.(1), but the vestibule walls can be fire separations with no fire-resistance rating because 3.2.6.2.(4) does not apply***.



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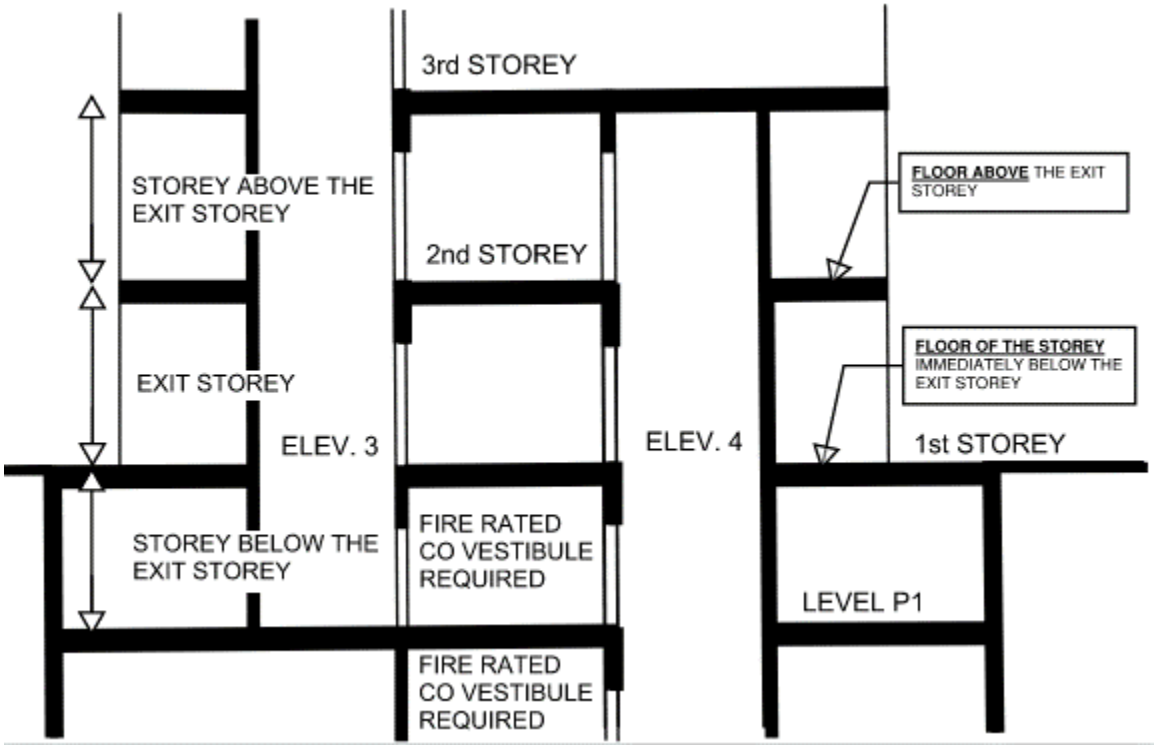
Elevators 3 & 4 require fire rated CO vestibules because they penetrate both the ***1st Storey floor slab (floor of the storey below the lowest exit storey) and the 2nd Storey floor slab (the floors above the exit level). The vestibule walls must be constructed as fire separations with a 2 hour fire-resistance rating.***



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