

# Fire/Sound Separation for Dwellings with a Secondary Suite

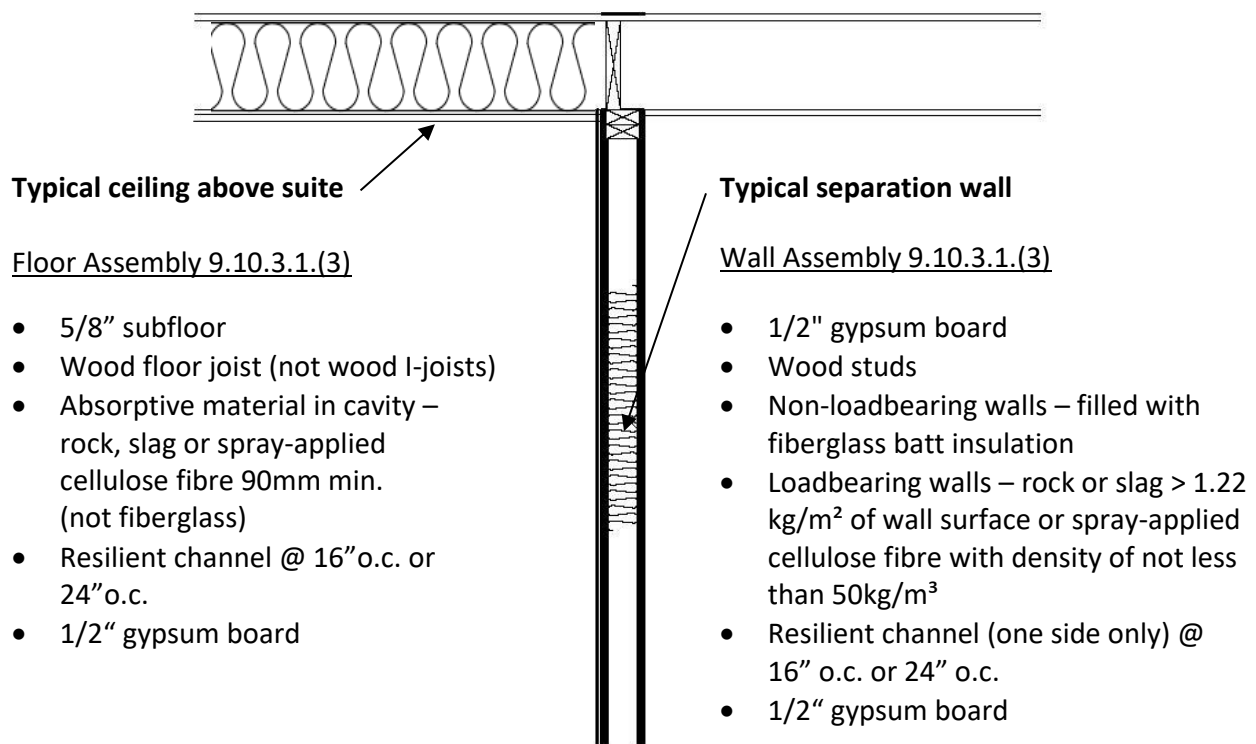
## OVERVIEW

The assemblies in this guide are examples of typical fire and sound separations between secondary suite, main dwelling and common areas. Refer to the British Columbia Building Code (BCBC) for alternative wall and floor assemblies not described in this guide (see Sections 9.10.3.1. and 9.11.1.1.).

The type of fire separation installed, e.g. 15-minute, 30-minute or 45-minute fire-resistance rating (FRR), affects the requirements for smoke alarms type, location, and interconnection. For more details about smoke alarms, see our guide [Secondary Suites Building Code and Zoning Requirements](#), and [Suite/Main Dwelling Alarms Installation Guide](#).

## 30-MINUTE FIRE-RESISTANCE RATING (FRR) ASSEMBLY WITH A SOUND RATING COMPLIANT WITH BCBC 9.11.1.1.(2)(A)

The following wall and floor assemblies are from BCBC 9.10.3.1.(3). If used, this prescriptive method must be constructed as described for the suite separation. For alternative assemblies see BCBC Tables 9.10.3.1.-A and 9.10.3.1.-B. An alternative 30-minute FRR is provided for convenience on page 2.

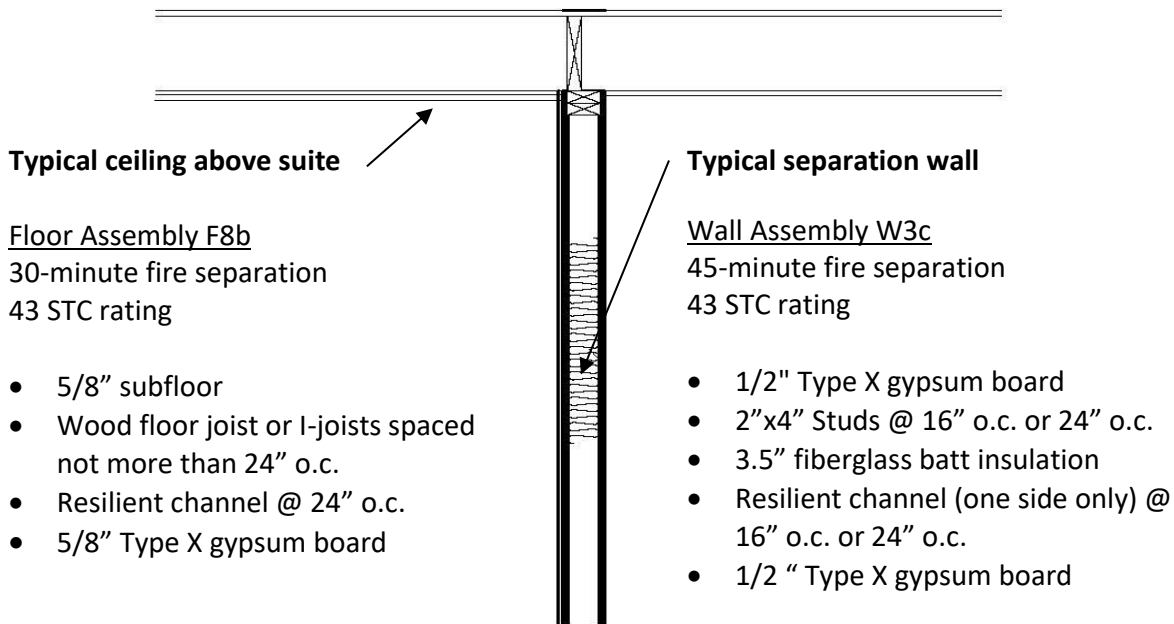


## Fire/Sound Separation for Dwellings with a Secondary Suite

### 30-MINUTE FIRE-RESISTANCE RATING (FRR) ASSEMBLY WITH A 43 STC RATING

Wall and floor assemblies from BCBC Table 9.10.3.1.-A and 9.10.3.1.-B

*Note: gypsum board required to be Type X for the following assembly separations*



*Note: Where fire separation assemblies have different fire-resistance ratings (FRR) for the wall and ceiling, the FRR for the suite separation is considered to be the lesser FRR.*

### SMOKE ALARMS FOR 30-MINUTE FIRE SEPARATIONS

**ALWAYS REQUIRED:** The typical smoke alarms conforming to CAN/ULC-S531, required within each of the dwelling units, are not required to be a specific type (they can be ionized), but they must be interconnected within each unit so that the actuation of any one smoke alarm causes all the smoke alarms within the unit to sound.

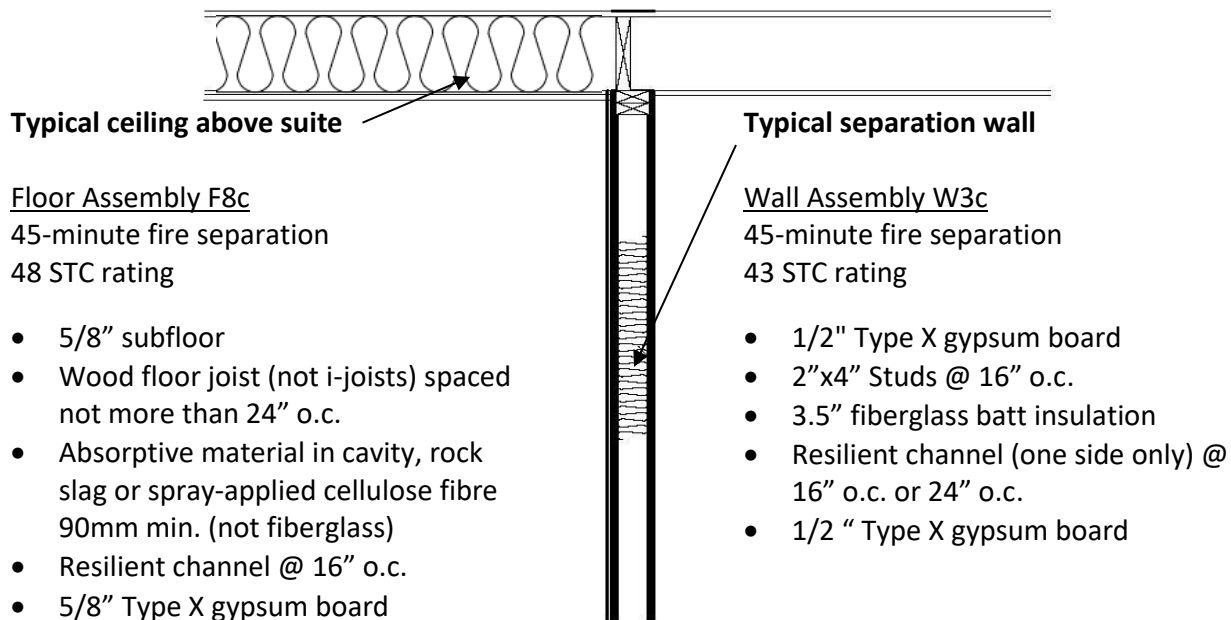
**ADDITIONALLY REQUIRED:** Where a 30-minute FRR is proposed for a house with a secondary suite, including their common spaces, an additional smoke alarm of photoelectric type shall be installed in each dwelling unit and common space and be interconnected so that the actuation of one smoke alarm will cause the additional smoke alarms in the other dwelling unit and common spaces to sound, see BCBC (9.10.19.5.(2)(b)).

Carbon monoxide (CO) alarms will most likely be required if there is a fuel-burning appliance or a storage garage. CO alarms in each dwelling unit in the building must be interconnected so that actuation of any one CO alarm causes all CO alarms in the building to sound. Some smoke alarms are combination alarms that include the carbon monoxide alarm.

*Note: Wireless technology is acceptable for interconnecting smoke alarms and for interconnecting CO alarms in houses with secondary suites. Each smoke alarm must be installed with a permanent electrical connection. CO alarms are not required a permanent electrical connection.*

# Fire/Sound Separation for Dwellings with a Secondary Suite

## 45-MINUTE FIRE-RESISTANCE RATING (FRR) ASSEMBLY WITH A 43 STC RATING



**Floor Assembly F6d** is another option for floor assembly, providing a 60-minute fire separation with a 44 STC rating, 5/8" subfloor, wood floor joist or i-joists spaced not more than 24" o.c., absorptive material in cavity fiberglass ok, resilient channel @ 24" o.c., and 2 layers of 5/8" Type X gypsum board.

*Note: Where fire separation assemblies have different fire-resistance ratings (FRR) for the wall and ceiling, the FRR for the suite separation is considered to be the lesser FRR.*

### SMOKE ALARMS FOR 45-MINUTE FIRE SEPARATIONS

**ALWAYS REQUIRED:** The typical smoke alarms conforming to CAN/ULC-S531, required within each of the dwelling units, are not required to be a specific type (they can be ionized), but they must be interconnected within each unit so that the actuation of any one smoke alarm causes all the smoke alarms within the unit to sound. A smoke alarm is required in common areas but does not need to be interconnected with the dwelling unit smoke alarms. For specifics on location and interconnection, see BCBC 9.10.19.

**ADDITIONALLY REQUIRED:** Where a 45-minute fire-resistance rating is installed, no additional photoelectric smoke alarms and interconnection between dwelling and suite is required (9.10.19.5.(3)(a)). Carbon monoxide alarms typically will be required if there is a fuel-burning appliance or a storage garage. CO alarms in each dwelling unit in the building must be interconnected so that actuation of any one CO alarm causes all CO alarms to sound. Some smoke alarms are combination alarms that include the carbon monoxide alarm.

*Note: Wireless technology is acceptable for interconnecting smoke alarms and for interconnecting CO alarms in houses with secondary suites. Each smoke alarm must be installed with a permanent electrical connection. CO alarms are not required a permanent electrical connection.*

*If you have any questions or require clarification, please contact Building Inspections at 250-755-4429.*

*This guide should not be used as a substitute for existing building codes and other regulations.*

*The building owner is responsible for compliance with all codes, bylaws, and other regulations.*