



Building Information

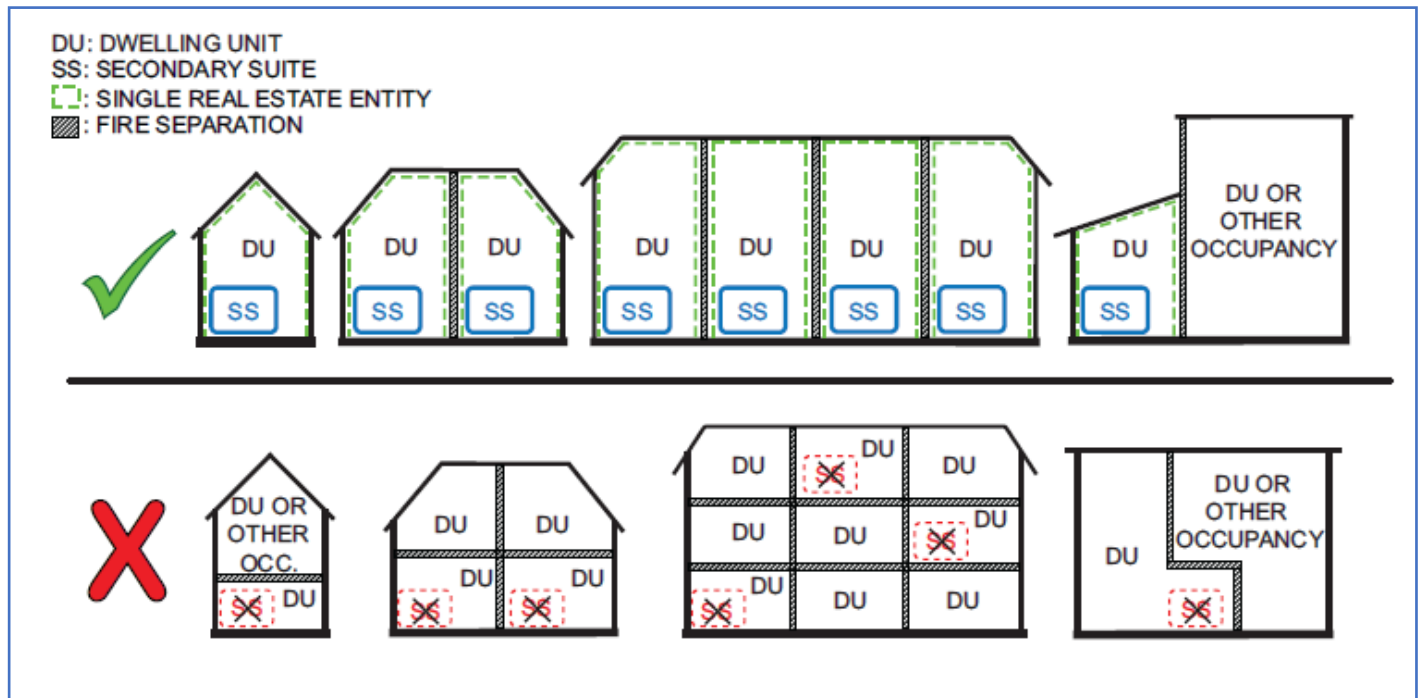
SCRD Building Department

SECONDARY SUITES

Building Code

Overview: The following information is a summary of the BC Building Code regulating the construction of Secondary Suites: On 2019-DEC-12, an amendment to the 2018 BC Building Code (BCBC) was adopted. The changes to the BCBC modify and incorporate secondary suite requirements into the applicable sections of Part 9 and add an Alternative Compliance Method for use in existing dwellings. The Alternative Compliance Method may only be used where the existing construction acts as a barrier to compliance with the requirements for suites in Part 9 of the BC Building Code.

The BCBC applies to the construction of a secondary suite, whether this construction be a renovation, an addition to an existing building, or a new building that incorporates a secondary suite. This summary is not an exhaustive list of the requirements, but rather an overview of the regulations.



Building Types where Secondary Suites are Permitted

Fire Protection

Fire Separations

Revisions to the 2018 Building Code (BCBC) associate the smoke alarms type, location, and interconnection with the requirements for type of fire separation required in exits, suite separation, and public corridors. The code references have been combined below to avoid repetition.

Fire Separation of Exits 9.9.4.2. – Where an exit is located in a house with a secondary suite, including their common spaces, the exit shall be separated from adjacent floor areas with a fire separation

Fire Separation of Residential Suites 9.10.9.14. – In a house with a secondary suite, dwelling units shall be separated from each other and from ancillary spaces and common spaces with a fire separation

Fire Separation of Public Corridor 9.10.9.15. – A public corridor located in a house with a secondary suite shall be separated from the remainder of the spaces in the house with a fire separation.

The Fire Separations noted above must comply with one of the fire-resistance ratings and applicable smoke alarm installation of A, B, C or D below:

A) having a fire-resistance rating not less than **15 minutes** where all smoke alarms within the house are of photo-electric type and interconnected as described below:

- In a house with a secondary suite, including their common spaces, all smoke alarms shall be of photo-electric type and interconnected so that the actuation of any one smoke alarm causes all smoke alarms within the house with a secondary suite, including their common spaces, to sound (9.10.19.5.(2)(a)).

B) having a fire-resistance rating not less than **30 minutes** where additional smoke alarms of photoelectric type are installed and interconnected as described below:

- In a house with a secondary suite, including their common spaces, an additional smoke alarm of photo-electric 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, or common spaces to sound (9.10.19.5.(2)(b)).

Note: *This option is similar to the 2018 BCBC requirements prior to the December 2019 revision. The December revision to the BCBC now includes smoke alarms in common areas. 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.*

C) having a fire-resistance rating not less than **45 minutes** when smoke alarms are not installed and interconnected as described in Clauses (A) or (B):

- Additional photo-electric smoke alarms and interconnection of smoke alarms between dwelling units and common spaces in a house with a secondary suite is not required (9.10.19.5.(3)(a)). Note: Smoke Alarms are required as described under 9.10.19.

D) that is not required to have a fire-resistance rating if the building is **sprinklered**:

- Additional photo-electric smoke alarms and interconnection of smoke alarms between dwelling units and common spaces in a house with a secondary suite is not required (9.10.19.5.(3)(b)).

Note: *Smoke Alarms are required as described under 9.10.19 (see 9.10.19.8. for fire alarm systems).*

Smoke Alarms 9.10.19. & 9.32.4.2.

The BCBC requires smoke alarms (ionization or photo-electric) in each dwelling as specified in 9.10.19.3. (below) and also requires additional smoke alarms in common areas and between suites in dwellings with secondary suites. Installation of photo-electric smoke alarms and the type of interconnection affects the fire-resistance rating required between a dwelling and a secondary suite (as detailed under Fire Separation on Pg. 2).

Carbon monoxide alarms will be required if there is a fuel-burning appliance or a solid fuel-burning appliance. Some smoke alarms are combination alarms that include the carbon monoxide alarm. Wireless technology is acceptable for interconnecting smoke alarms in houses with secondary suites; however, each smoke alarm must be installed with a permanent electrical connection.

Location of Smoke Alarms – 9.10.19.3. Within each dwelling unit, sufficient smoke alarms shall be installed:

- so that at least one smoke alarm is installed on each storey, including the basement; and
- on any storey with a sleeping room, a smoke alarm is to be installed in each sleeping room; and
- in a location between the sleeping rooms and the remainder of the storey; and
- if the sleeping rooms are served by a hallway, the smoke alarm shall be located in the hallway.
- Smoke alarms shall be installed on or near the ceiling.

Required Smoke Alarms - 9.10.19.1.(1)(c) Smoke alarms shall be installed in ancillary spaces and common spaces not in dwelling units in a house with a secondary suite.

Interconnection of Smoke Alarms – 9.10.19.5.(1) Where more than one smoke alarm is required in a dwelling unit, the smoke alarms shall be interconnected so the actuation of one alarm will cause all alarms within the dwelling unit to sound.

Note: *Using wireless technology for interconnecting smoke alarms is now permitted.*

Power Supply – 9.10.19.4. Smoke alarms are to be installed with permanent electrical connections, and with a battery alternative power source.

Carbon Monoxide (CO) Alarm – 9.32.4.2.

- Are required where a residential occupancy is served by a fuel-burning appliance or contains a storage garage.
- Are required for each suite sharing a wall, floor or ceiling assembly with a storage garage or is adjacent to an attic or crawl space.
 - The CO alarms required above are to be located in each bedroom or within 5m of each bedroom door.
- Where a fuel-burning appliance serves a residential occupancy and is installed in a service room that is not in a suite (i.e., in a common area), the CO alarms are to be located in the service room and each bedroom or within 5m of each bedroom door.
- CO alarms are required in rooms with a solid fuel-burning appliance.
- In a dwelling unit with a secondary suite and common areas, the CO alarms are to be interconnected so that actuation of any one CO alarm causes all CO alarms to sound. The interconnection of CO alarms can be accomplished using wireless technology.

Note: *Some Smoke Alarms are combination alarms which include the carbon monoxide alarm.*

Fire-Resistance and Fire-Protection Ratings 9.10.3.1.

Required fire-resistance rating shall be determined in conformance with:

- the test methods described in Part 3 of the BCBC,
- the calculation method presented in Appendix D (BCBC), or
- the construction specifications presented in Tables 9.10.3.1.-A and 9.10.3.1.-B. (BCBC). The construction specifications described below are also permitted for a 15-minute and 30-minute fire-resistance rating.
- In a house with a secondary suite, including their common spaces, where a minimum fire-resistance rating of 15 minutes is permitted, the construction described in 9.11.1.1(2)(a) is permitted.
Note: *Sound Transmission Assembly (see Pg. 5) meets the 15-minute fire-resistance rating.*
- In a house with a secondary suite, including their common spaces, where a minimum fire-resistance rating of 30 minutes is permitted, it is permitted to use construction having
 - walls and floor/ceiling assemblies framed with wood studs and joists;
 - joist spaces filled with
 - preformed insulation of rock or slag fibres conforming to CAN/ULC-S702, “Mineral Fibre Thermal Insulation for Buildings”, having a mass per unit area of not less than 1.22 kg/m² of floor surface, or
 - wet-blown cellulose fibres conforming to CAN/ULC-S703, “Cellulose Fibre Insulation for Buildings”, having a density of not less than 50 kg/m³ to a minimum depth of 90mm on the underside of the subfloor and the sides of the structural members;
- stud spaces of
 - non-loadbearing assemblies filled with preformed insulation of glass fibres conforming to CAN/ULC-S702, “Mineral Fibre Thermal Insulation for Buildings”, having a mass per unit area of not less than 0.6 kg/m² of wall surface, and
 - loadbearing assemblies filled with preformed insulation of rock or slag fibres conforming to CAN/ULC-S702, “Mineral Fibre Thermal Insulation for Buildings”, having a mass per unit area of not less than 1.22 kg/m² of wall surface, or filled with insulation of cellulose fibres conforming to CAN/ULC-S703, “Cellulose Fibre Insulation for Buildings,” having a density of not less than 50 kg/m³,
- resilient channel on one side of the fire separation spaced 400mm or 600mm (16” or 24”) o.c., and not less than 12.7mm (1/2”) thick gypsum board on ceilings and on both sides of walls.

Fire-Resistance Ratings for Walls, Columns, and Arches 9.10.8.3.

All load-bearing walls, columns, and arches in the storey immediately below a floor or roof assembly shall have a fire-resistance rating of not less than that required for the supporting floor or roof assembly.

Floors of Exterior Passageways 9.10.8.8.

Except as provided below, the floor assembly of every exterior passageway used as part of a means of egress shall have a fire-resistance rating of 45 minutes or be non-combustible.

- No fire-resistance rating is required for exterior passageways serving a single dwelling unit where no suite is located above or below another dwelling unit.

Sound Transmission Assembly and 15-minute Fire Resistance Rating 9.11.1.1.

For occupants' health and well-being, a required Sound Transmission Class (STC rating) of 43 has been added to the secondary suite requirements. This can be accomplished with the assembly listed below, or other construction assemblies found in Tables 9.10.3.1.-A and 9.10.3.1.-B. or Apparent Sound Transmission Class (ASTC rating) not less than 40. Details of how to achieve an ASTC rating can be found in the Notes to Part 9 of the 2018 BCBC.

Where a house contains a secondary suite, each dwelling unit shall be separated from every other space in the house in which noise may be transmitted by

- construction having:
 - joist spaces filled with sound-absorbing material of not less than 150mm (5 7/8") nominal thickness,
 - stud spaces filled with sound-absorbing material,
 - resilient channel on one side of the separation spaced 400mm or 600mm o.c., and
 - not less than 12.7mm (1/2") thick gypsum board on ceilings and on both sides of walls, or
- construction providing an STC rating of not less than 43, or
- a separating assembly and adjoining constructions, which together provide an ASTC rating of not less than 40.

Note: *Common spaces must also have a sound separation from the dwelling units.*

Door Openings to be Protected with Closures 9.10.9.3. & 9.10.13.3.

Doors in a fire separation with a required fire-resistance rating of 45 minutes or less need not have a fire-protection rating (FPR; i.e., no CAN/ULC rating required) provided they are

- at least 45mm (1-3/4") thick solid core wood doors
- have a self-closing device, and
- hung in a wood door frame 38mm (1-1/2") thick

Note: *A 45mm door is deemed to provide a 20-minute fire-protection rating (FPR) and is not required to be marked with a CAN/ULC rating.*

Exit Protection
Openings Near Unenclosed Exterior Exit Stairs and Ramps 9.9.4.4.
<p>Unprotected openings in exterior walls of the building shall be protected with wired glass in fixed steel frames or glass block conforming to Articles 9.10.13.5. and 9.10.13.7., where</p> <ul style="list-style-type: none">• an unenclosed exterior exit stair or ramp provides the only means of egress from a suite and is exposed to fire from unprotected openings in the exterior walls of<ul style="list-style-type: none">▪ another fire compartment; or▪ another dwelling unit, ancillary, or common space in a house with a secondary suite; and• unprotected openings in the exterior walls of the building are within 3m (9' 10-1/8") horizontally and less than 10m (32' 9-11/16") below or less than 5m (16' 4-7/8") above the exit stair or ramp.
Openings Near Exit Doors 9.9.4.6.
<p>Where an exterior exit door in one fire compartment is within 3m (9' 10-1/8") horizontally of an unprotected opening in another fire compartment and the exterior walls of these fire compartments intersect at an exterior angle of less than 135°, the opening shall be protected with</p> <ul style="list-style-type: none">• wired glass in fixed steel frames conforming to Article 9.10.13.5., or• glass block conforming to Article 9.10.13.7.
Ancillary Rooms 9.9.5.9.
<p>Ancillary rooms such as storage rooms, washrooms, toilet room, laundry rooms, and service rooms shall not open directly into an exit.</p> <p>Note: <i>In a dwelling unit with a secondary suite, this may be an issue where both the secondary suite and the dwelling unit exit through one common space within the building.</i></p>

Safety
Two Separate Exits 9.9.9.2.
<p>For dwelling units in a house with a secondary suite, it need not be possible to go in more than one direction to an exit from the location where the egress door opens onto a public corridor or exterior passageway if the building is sprinklered or if each dwelling unit has separate and direct access from each storey to</p> <ul style="list-style-type: none">• a balcony, or• an openable window<ul style="list-style-type: none">▪ not less than 1m (3' 3-3/8") in height and 0.55m (21-5/8") in width, and▪ located so the sill is not more than 1m (3' 3-3/8") above the floor and 7m (23') above adjacent ground level.
Shared Egress Facilities 9.9.9.3.
<p>Where a dwelling unit is located above another dwelling unit or common space in a house with a secondary suite, the upper dwelling unit shall be provided with a second and separate means of egress where an egress door from that dwelling unit opens onto an exterior passageway that</p> <ul style="list-style-type: none">• has a floor assembly with a fire-resistance rating less than 45 minutes,• is served by a single exit stairway or ramp, and• is located more than 1.5m (4' 11-1/16") above adjacent ground level. <p>For dwelling units in a house with a secondary suite where an egress door from either dwelling unit opens onto a shared egress facility served by a single exit stairway or ramp, other than as described above, a second and separate means of egress need not be provided if the building is sprinklered or if the dwelling units have separate and direct access from each storey to</p> <ul style="list-style-type: none">• a balcony, or• an openable window• not less than 1m (3' 3-3/8") in height and 0.55m (21-5/8") in width and located so the sill is not more than 1m (3' 3-3/8") above the floor and 7m (23') above adjacent ground level.
Egress from Bedrooms 9.9.10.
<p>Each bedroom shall have a window with an unobstructed opening of not less than 0.35m² (3.77 sq ft) in area with no dimension less than 380mm (15"). Where a window requires a window well, a clearance of not less than 760mm (2' 6") shall be provided in front of the window.</p>

Ventilation and Heating
Required Ventilation 9.32.1.2.
<p>Ventilation for Smoke Control – The control of smoke transfer between dwelling units in a house with a secondary suite, or between the dwelling units and other spaces in the house, is a critical safety issue. Providing a second ventilation system to serve the two dwelling units is an ideal solution for achieving a minimum acceptable level of fire safety. Other solutions to providing separate ventilation systems for the dwelling units must address smoke control.</p> <p>Ventilation for Air Exchange – The provision of a ventilation system for the purpose of maintaining acceptable indoor air quality is a critical health issue. However, Sentence 9.32.1.2.(3)&(4) allows exits, public corridors, and common areas in houses with a secondary suite to be unventilated. Lack of active ventilation of these spaces is considered acceptable because occupants do not spend long periods of time there and because exits are somewhat naturally ventilated when doors are opened.</p> <p>A self-contained heating-season ventilation system serving a single dwelling unit or a house with a secondary suite, including their common spaces, shall comply with Subsection 9.32.3.</p> <ul style="list-style-type: none">• In houses that contain a secondary suite including their common spaces, heating-season ventilation need not be provided for<ul style="list-style-type: none">▪ exits,▪ public corridors, and▪ ancillary spaces that are not within a dwelling unit, except as provided below: <p>Were ancillary spaces described above contain exhaust devices, these spaces shall be provided with make-up air in accordance with Subsection 9.32.4.</p>
Design and Installation 9.32.3.2.
<p><i>Heating and ventilation systems between suites must be separate or be designed and inspected by a Mechanical Engineer.</i></p> <p>In a house with a secondary suite, including their common spaces, where a heating or ventilation system serves more than a single dwelling unit, the system shall be designed and installed to prevent the circulation of smoke upon a signal from a duct-type smoke detector.</p> <p>Except as provided in Sentence 9.10.9.6.(14), ducts penetrating fire separations shall be equipped with fire dampers in conformance with Article 3.1.8.10.</p> <p>Note: See Sentence 9.10.9.6.(14) next section.</p>
Duct Penetration of Fire Separations 9.10.9.6.(14)
<p>In a house with a secondary suite, including their common spaces, ducts penetrating fire separations need not be equipped with fire dampers in conformance with Article 3.1.8.10. provided they are noncombustible with all openings in the duct system serving only one fire compartment.</p> <p>Note: Common areas require fire separations from the dwelling unit and the secondary suite. Consideration is required in the design of the heating system of the common areas to ensure the fire separation remains intact.</p>

Secondary Suites – Building Code

Heating System Controls 9.33.4.3.(1)

Where a single heating system serves two dwelling units and common spaces in a house with a secondary suite, it must be possible for the occupants to control the temperature in their own suites.

Note: This Sentence, which applies only to electric, fuel-fired, or unitary heaters and hydronic heating systems, specifies that separate temperature controls must be provided in each dwelling unit in a house with a secondary suite; however, the controls for shared spaces may be located in those spaces or in one of the suites.

Plumbing

Combustible Drain, Waste, and Vent Piping 9.10.9.7.

Note: The December 2019 revision to the BCBC removed the Article permitting a penetration of combustible piping in a vertical assembly protected with 12.7mm (1/2") gypsum board for a dwelling unit with a secondary suite. The Article 9.10.9.7. now applies, which includes the use of combustible pipe, fire stopped with the appropriate F-rating at the fire separations.

Combustible drain, waste, and vent piping not located in a vertical shaft is permitted to penetrate a fire separation required to have a fire-resistance rating, provided the piping is sealed at the penetration by a fire-stop that has an F rating not less than the fire-resistance rating required for the fire separation.

Note: Many types of fire-stop systems are permitted if tested to the CAN/ULC-115-M standard. Fire-stop systems are designed for specific wall or ceiling construction, types of penetration, and specific fire-resistance rating. Only the appropriate type of listed fire-stop systems should be used. Typical systems used with combustible pipe are Intumescent Sealants and Fire-Stop Collars or Sleeves.

Room / Egress Dimensions 9.5.3.1., 9.9.3.3. & 9.9.3.4.

Height of Rooms and Spaces Table 9.5.3.1.

The minimum height of rooms or spaces in a secondary suite shall be not less than 2.1m (6' 10-11/16") in height over the lesser of area of the space, or as identified below for each type of room.

Room or Space	Minimum Area over which Ceiling Height Required	Room or Space	Minimum Area over which Ceiling Height Required
Living room	10 m ² (107.6' ²)	Bathroom	2.2m ² (23.7' ²)
Dining room	5.2 m ² (56' ²)	Laundry area above grade	2.2m ² (23.7' ²)
Kitchen	3.2 m ² (34.5' ²)	Passage, hall, main entrance	All area
Master bedroom	4.9 m ² (52.7' ²)	Habitable rooms not identified	2.2m ² (23.7' ²)
Other bedroom	3.5 m ² (37.7' ²)	Unfinished basement & laundry within	2m ² (6' 6-3/4") high at beams

Secondary Suites – Building Code

Width and Height of Corridors 9.9.3.3. & 9.9.3.4.

The clear width and height of a public corridor and exit corridor that serve only a house with a secondary suite, including common spaces, shall be not less than 860mm (2' 9-7/8") and 2m (6' 6-3/4") respectively.

Door Sizes 9.5.5.1.

Swing-type doors in an entrance, vestibule and utility doors, in a dwelling unit or house with a secondary suite, including common spaces, must be 810mm (2' 7-7/8") wide by 1.98m (6' 6") high.

Doors in a Means of Egress 9.9.6.

Where doors in an exit or access to exit serve more than a single dwelling they shall comply with the following Articles in 9.9.6.:

- The exit width shall not be decreased by more than 100mm (4") in exit corridors and 50mm (2") for other exit facilities.
- The swing of doors shall not reduce the width of the path of travel to less than the required width in exit corridors and passageways, and 750mm (2' 5-1/2") on exit stairs or landings.
- The clear opening height of doors providing exit or access to exit shall be not less than 1.98m (6'6") high.
- The clear opening width of doorways in an exit or access to exit from a suite shall be not less than 800mm (2' 7-1/2") wide. **Note:** Minimum door size will be 864mm (2' 10") to meet this requirement.
- The distance between a stair riser and leading edge of a door during its swing shall be not less than 360mm (14-3/16").
- An exit door may open onto not more than one step provided the riser of the step does not exceed 150mm (5-7/8").

The exit doors serving a house with a secondary suite are permitted to swing inward.

Stairs 9.8.2. & 9.8.4.

Exit stairs within or serving a building that contains a secondary suite, shall:

- have a minimum width, measured between wall faces or guards of not less than 860mm (2' 9-7/8"),
- height over the stairs of 1.95m (6' 4-3/4"), and
- conform with Private stair requirements:
minimum rise: 125mm (5") | maximum rise: 200mm (7-7/8")
minimum run: 255mm (10-1/16") | maximum run: 355mm (14")
minimum tread width: 280mm (11") | maximum tread width: 380mm (15")

Prevention of Fire Spread at Exterior Walls

Exterior Walls Meeting at an Angle 9.10.12.3.

Where exterior walls of a building meet at an external angle of 135° or less, the horizontal distance from an unprotected opening in one exterior wall to an unprotected opening in the other exterior wall shall be not less than 1.2m where the opening are in different fire compartments or in different dwelling units, ancillary spaces or common spaces in a house with a secondary suite.

Exterior walls of each fire compartment within the distance as described above needs a fire-resistance rating not less than the ones required between the fire compartments.

Spatial Separations 9.10.15

The exposing building face requires a fire-resistance rating of not less than 45 minutes where the limiting distance is less than 2.4m and must be clad with noncombustible material.

Window openings in the exposing building face referred to above shall not be permitted if the limiting distance is less than 2.4m and shall be limited in conformance with the requirements for unprotected openings in Article 9.10.15.4. where the limiting distance is 2.4m or greater (i.e.: typically 7% openings permitted at 2.4m).