

Division B

Section 1.3. Referenced Documents and Organizations

1.3.1. Referenced Documents

1.3.1.2. Applicable Editions

1) Where documents are referenced in this Code, they shall be the editions designated in Table 1.3.1.2.

Only modified portions of Table 1.3.1.2. are reproduced below

Table 1.3.1.2
Documents Referenced in Book I (General) of the British Columbia Building Code ⁽¹⁾⁽²⁾
 Forming Part of Sentence 1.3.1.2.(1)

Issuing Agency	Document Number ⁽³⁾	Title of Document	Code Reference
ASTM	C840-18b	Standard Specification for Application and Finishing of Gypsum Board	3.1.6.6.(2) 3.1.6.6.(6)(c) Table 5.9.1.1. 9.29.5.1.(3) A-9.29.5.1.(3)
ASTM	C1396/C1396M-17	Standard Specification for Gypsum Board	3.1.5.14.(6) 3.1.5.15.(4) 3.1.6.6.(2) 3.1.6.6.(3) 3.1.6.6.(4) 3.1.6.6.(5) 3.1.6.15.(1) Table 5.9.1.1. Table 9.23.17.2.-A 9.29.5.2.(1) Table 9.29.5.3.
ASTM	D2898-10	Standard Practice for Accelerated Weathering of Fire-Retardant-Treated Wood for Fire Testing	3.1.4.8.(3) 3.1.5.5.(3) 3.1.5.24.(1) 3.1.6.6.(5)(b) 3.1.6.9.(6) 3.2.3.7.(4) 9.10.14.5.(3) 9.10.15.5.(3)
CSA	CAN/CSA A82.27-M	Gypsum Board	3.1.5.14.(6)

			<p>3.1.5.15.(4)</p> <p>3.1.6.6.(2)</p> <p>3.1.6.6.(3)</p> <p>3.1.6.6.(4)</p> <p>3.1.6.6.(5)</p> <p>3.1.6.15.(1)</p>
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Section 3.1. General

3.1.3. Multiple Occupancy Requirements

3.1.3.1. Separation of Major Occupancies

1) Except as permitted by Sentences (2) and (3), *major occupancies* shall be separated from adjoining *major occupancies* by *fire separations* having *fire-resistance* ratings conforming to Table 3.1.3.1.

Table 3.1.3.1.
Major Occupancy Fire Separations⁽¹⁾
 Forming Part of Sentence 3.1.3.1.(1)

Major Occupancy	Minimum Fire-Resistance Rating of Fire Separation, h												
	Adjoining Major Occupancy												
	A-1	A-2	A-3	A-4	B-1	B-2	B-3	C	D	E	F-1	F-2	F-3
A-1	-	1	1	1	2	2	2	1	1	2	⁽²⁾	2	1
A-2	1	-	1	1	2	2	2	1 ⁽³⁾	1 ⁽⁴⁾	2	⁽²⁾	2	1
A-3	1	1	-	1	2	2	2	1	1	2	⁽²⁾	2	1
A-4	1	1	1	-	2	2	2	1	1	2	⁽²⁾	2	1
B-1	2	2	2	2	-	2	2	2	2	2	⁽²⁾	2	2
B-2	2	2	2	2	2	-	1	2	2	2	⁽²⁾	2	2
B-3	2	2	2	2	2	1	-	1	2	2	⁽²⁾	2	2
C	1	1 ⁽³⁾	1	1	2	2	1	-	1	2 ⁽⁵⁾	⁽²⁾	2 ⁽⁶⁾	<u>1</u>
D	1	1 ⁽⁴⁾	1	1	2	2	2	1	-	-	3	-	-
E	2	2	2	2	2	2	2	2 ⁽⁵⁾	-	-	3	-	-
F-1	⁽²⁾	⁽²⁾	⁽²⁾	⁽²⁾	⁽²⁾	⁽²⁾	⁽²⁾	⁽²⁾	3	3	-	2	2
F-2	2	2	2	2	2	2	2	2 ⁽⁶⁾	-	-	2	-	-
F-3	1	1	1	1	2	2	2	<u>1</u>	-	-	2	-	-

Notes to Table 3.1.3.1.:

(1) Section 3.3. contains requirements for the separation of *occupancies* and *tenancies* that are in addition to the requirements for the separation of *major occupancies*.

(2) See Sentence 3.1.3.2.(1).

(3) Where the *building* or part thereof is constructed in accordance with Article 3.2.2.51., a *fire separation* with a 2 h *fire-resistance rating* is required between the Group C and Group A, Division 2 *major occupancies*.

(4) Where the *building* or part thereof is constructed in accordance with Article 3.2.2.60., a *fire separation* with a 2 h *fire-resistance rating* is required between the Group D and Group A, Division 2 *major occupancies*.

(5) See Sentence 3.1.3.1.(2).

(6) See Sentence 3.1.3.2.(2).

3.1.6. Encapsulated Mass Timber Construction

3.1.6.4. Encapsulation of Mass Timber Elements

(See also Note A-3.1.6.3.)

1) Except as provided in Sentences (3) to (9), 3.1.6.3.(4), 3.1.6.16.(2) and 3.1.6.17.(2), and Articles 3.1.6.7. and 3.1.6.12., the exposed surfaces of structural mass timber elements conforming to Article 3.1.6.3. shall be protected from adjacent spaces in the *building*, including adjacent concealed spaces within wall, floor and roof assemblies, by a material or assembly of materials conforming to Sentence (2) that provides an *encapsulation rating* that

a) is not less than 50 minutes in a *building* or part of a *building* constructed in conformance with Article 3.2.2.48. or 3.2.2.57., or

b) conforms to the minimum values stated in Table 3.2.2.93. for the applicable *major occupancy and building height*.

(See Note A-3.1.6.4.(1).)

2) Except as provided in Sentence 3.1.6.11.(1), the material or assembly of materials referred to in Sentence (1) shall consist of

a) gypsum board,

b) gypsum concrete,

c) *noncombustible* materials,

d) materials that conform to Sentences 3.1.5.1.(2) to (4), or

e) any combination of the materials listed in Clauses (a) to (d).

3) Except as provided in Sentences (5) and (7), the exposed surfaces of mass timber beams, columns and arches within a *suite* or *fire compartment* in a *building* or part of a

building constructed in conformance with Article 3.2.2.48. or 3.2.2.57. or permitted by Article 3.2.2.93. to have a 50 min encapsulation rating need not be protected in accordance with Sentence (1), provided

- a) their aggregate exposed surface area does not exceed 35% of the total wall area of the perimeter of the *suite* or *fire compartment* in which they are located, and
- b) the flame-spread rating on any exposed surface is not more than 150.

(See Note A-3.1.6.4.(3) to (8).)

4) Except as provided in Sentences (5) to (7), the exposed surfaces of mass timber walls within a *suite* in a building or part of a building constructed in conformance with Article 3.2.2.48. or 3.2.2.57. or permitted by Article 3.2.2.93. to have a 50 min encapsulation rating need not be protected in accordance with Sentence (1), provided

- a) all portions of the exposed surfaces
 - i) face the same direction, or
 - ii) are separated by a horizontal distance of not less than 4.5 m, and
- b) the flame-spread rating on any exposed surface is not more than 150.

(See Notes A-3.1.6.4.(4) and A-3.1.6.4.(3) to (8).)

5) Except as provided in Sentence (7), the aggregate exposed surface area of mass timber elements within a *suite* permitted in Sentences (3) and (4) shall not exceed 35% of the total wall area of the perimeter of the *suite*. (See Note A-3.1.6.4.(3) to (8).)

6) Except as provided by Sentence (7), the exposed surfaces of mass timber ceilings within a *suite* or *fire compartment*, other than an *exit* or *public corridor*, in a *building* or part of a *building* constructed in conformance with Article 3.2.2.48. or 3.2.2.57. or required by Article 3.2.2.93. to have a 50 min encapsulation rating need not be protected in accordance with Sentence (1), provided their aggregate surface area does not exceed

- a) 10% of the total ceiling area of the *suite* or *fire compartment*, where the flame-spread rating on any exposed surface is not more than 150, or
- b) 25% of the total ceiling area of the *suite* or *fire compartment*, where the flame-spread rating on any exposed surface of a mass timber wall or ceiling is not more than 75.

(See Note A-3.1.6.4.(3) to (8).)

7) The exposed surfaces of mass timber ceilings within a suite in a building or part of a building constructed in conformance with Article 3.2.2.48. or 3.2.2.57. or required by Article

3.2.2.93. to have a 50 min *encapsulation rating* need not be protected in accordance with Sentence (1) or (6), provided

a) the aggregate surface area of any exposed mass timber beams, columns and arches does not exceed 20% of the total wall area of the perimeter of the *suite* in which they are located,

b) all surfaces of mass timber walls are

i) protected in accordance with Sentence (1), or

ii) mass timber walls that are not otherwise permitted to be exposed in accordance with Sentence (5) are protected by a material or assembly of materials conforming to Sentence (2) that provides an *encapsulation rating* of not less than 80 min, and

c) the *flame spread rating* on any exposed mass timber wall or ceiling is not more than 75.

(See Note A-3.1.6.4.(3) to (8).)

8) Structural mass timber elements in a *building* or part of a *building* permitted by Article 3.2.2.93. to have an *encapsulation rating* of 0 min need not be protected in accordance with Sentence (1), provided

a) mass timber walls and ceilings within *vertical service spaces, public corridors, and exits* are protected from adjacent spaces with a material or assembly of materials conforming to Sentence (2) that provides an *encapsulation rating* of not less than 25 min, and

b) concealed spaces are protected in conformance with Sentence 3.1.6.3.(4).

(See Note A-3.1.6.4.(3) to (8).)

9) In a *building* or part of a *building* required by Clause 3.1.6.4.(1)(b) to have a minimum *encapsulation rating* of 70 min, the upper side of a mass timber floor or roof assembly is permitted to be encapsulated by a material or assembly of materials conforming to Sentence 3.1.6.4.(2) that provides an *encapsulation rating* of 50 min.

3.1.6.6. Encapsulation Materials

1) Gypsum-concrete topping and concrete not less than 38 mm thick are deemed to have an *encapsulation rating* of 50 min when installed on the upper side of a mass timber floor or roof assembly.

2) One layer of Type X gypsum board conforming to ASTM C 1396/C 1396M, "Standard Specification for Gypsum Board," or CAN/CSA-A82.27-M, "Gypsum Board," not less than

12.7 mm thick, is deemed to have an *encapsulation rating* of 25 min when installed on a mass timber element in accordance with Sentence (6).

3) Two layers of Type X gypsum board conforming to ASTM C 1396/C 1396M, "Standard Specification for Gypsum Board," or CAN/CSA-A82.27-M, "Gypsum Board," each not less than 12.7 mm thick, are deemed to have an *encapsulation rating* of 50 min when installed on a mass timber element in accordance with Sentence (6).

4) Two layers of Type X gypsum board conforming to ASTM C 1396/C 1396M, "Standard Specification for Gypsum Board," or CAN/CSA-A82.27-M, "Gypsum Board," each not less than 15.9 mm thick, are deemed to have an *encapsulation rating* of 70 min when installed on a mass timber element in accordance with Sentence (6).

5) Three layers of Type X gypsum board conforming to ASTM C 1396/C 1396M, "Standard Specification for Gypsum Board," or CAN/CSA-A82.27-M, "Gypsum Board," each not less than 12.7 mm thick, are deemed to have an *encapsulation rating* of 80 min when installed on a mass timber element in accordance with Sentence (6).

6) Installation of the gypsum board described in Sentences (2) to (5) shall be

a) fastened with a minimum of two rows of screws in each layer

i) directly to the mass timber element with screws of sufficient length to penetrate not less than 20 mm into the mass timber element that are spaced not more than 400 mm o.c. and 20 mm to 38 mm from the boards' edges, or

ii) to wood furring or resilient metal or steel furring channels not more than 25 mm thick spaced not more than 400 mm o.c. on the mass timber element.

b) for multiple layer systems, installed with the joints in each layer staggered from those in the adjacent layer, and

c) installed in conformance with ASTM C840, "Standard Specification for Application and Finishing of Gypsum Board," except that, for multiple layer systems, their joints need not be taped and finished.

(See Note A-3.1.6.6.(6).)

3.1.6.9. Exterior Cladding

1) Except as provided in Sentences (2), (3), (4), (6) and (9), cladding on an exterior wall assembly of a *building* or part of a *building* permitted to be of *encapsulated mass timber construction* shall be

- a) *noncombustible*,
- b) a material or combination of materials that satisfy the criteria of Sentence 3.1.5.1.(2),
- c) except as provided in Sentence (7), a wall assembly that satisfies the criteria of Clause 3.1.5.5.(1)(b), or
- d) a combination of the cladding described in Clauses (a) to (c).

(See Note A-3.1.6.9.(1), (2), (4) and (6).)

2) Except as provided in Sentences (3), (4), (6) and (8), cladding on an exterior wall assembly of a *building* or part of a *building* permitted to be of *encapsulated mass timber construction* that is not more than 12 storeys in building height is permitted to consist of

a) *combustible* cladding that

- i) is not contiguous over more than 4 *storeys*,
- ii) represents not more than 10% of the cladding on each exterior wall of each *storey*,
- iii) is not more than 1.2 m in width,
- iv) has a *flame-spread rating* not more than 75 on any exposed surface, or any surface that would be exposed by cutting through the material in any direction,
- v) is separated from other portions of *combustible* cladding on adjacent *storeys* by a horizontal distance of not less than 2.4 m, and
- vi) is separated from other portions of *combustible* cladding by a horizontal distance of not less than 1.2 m,

b) *combustible* cladding that

- i) is not contiguous across adjacent *storeys*,
- ii) represents not more than 10% of the cladding on each exterior wall of each *storey*,
- iii) has a *flame-spread rating* not more than 75 on any exposed surface, or any surface that would be exposed by cutting through the material in any direction, and
- iv) is separated from other portions of *combustible* cladding on adjacent *storeys* by a horizontal distance of not less than 2.4 m,

c) *combustible* cladding representing up to 100% of the cladding on exterior walls of the *first storey*, provided all portions of the cladding can be directly accessed and are located not more than 15 m from a *street* or access route conforming to Article 3.2.5.6., measured horizontally from the face of the *building*, or

d) a combination of cladding described in [Sentence \(1\)](#) and the cladding described in Clauses (a) to [\(c\)](#).

(See Note [A-3.1.6.9.\(1\), \(2\), \(4\) and \(6\)](#).)

3) The permitted area of *combustible* cladding in Clause (2)(a) or (b) shall not exceed 5% of the cladding on each exterior wall of each *storey* where the time from receipt of notification of a fire by the fire department until the arrival of the first fire department vehicle at the *building* exceeds 10 min in 10% or more of all fire department calls to the building. (See Note A-3.2.3.1.(8).)

4) Except as provided in Sentences (6) and (8), cladding on an exterior wall assembly of a building or part of a building permitted to be of encapsulated mass timber construction that is not more than 6 storeys in building height is permitted to consist of

a) *combustible* cladding that

i) represents not more than 10% of the cladding on each exterior wall of each storey, and

ii) has a flame-spread rating not more than 75 on any exposed surface, or any surface that would be exposed by cutting through the material in any direction, or

b) a combination of the cladding described in Clause (a) and the cladding described in Sentence (1) and Clause (2)(c).

(See Note [A-3.1.6.9.\(1\), \(2\), \(4\) and \(6\)](#).)

5) Where *combustible* cladding conforming to Clause (2)(a), [\(b\) or \(4\)\(a\)](#) on an exterior wall of a *fire compartment* is exposed to *combustible* cladding conforming to Clause (2)(a), [\(b\) or \(4\)\(a\)](#) on an exterior wall of the same *fire compartment* or of another *fire compartment*, and the planes of the two walls are parallel or at an angle less than 135° measured from the exterior of the *building*, the different portions of *combustible* cladding shall

a) be separated by a horizontal distance of not less than 3 m, and

b) not be contiguous over more than 2 *storeys*.

6) Except as provided in Sentence (8), cladding on an exterior wall assembly of a building or part of a building permitted to be of encapsulated mass timber construction and not more

than 4 storeys in building height is permitted to consist of combustible material with a flame-spread rating not more than 75 on any exposed surface, or any surface that would be exposed by cutting through the material in any direction. (See Note A-3.1.6.9.(1), (2), (4) and (6).)

7) An exterior wall assembly constructed in conformance with Section D-6 of Appendix D is deemed to satisfy the criteria of Clause (1)(c).

8) Except as provided in Article 3.2.3.10., where the *limiting distance* in Table 3.2.3.1.-D or 3.2.3.1.-E permits an area of *unprotected openings* of not more than 10% of the *exposing building face*, the construction requirements of Table 3.2.3.7. shall be met.

9) A wall assembly conforming to Clause (1)(c) that includes *combustible* cladding made of *fire-retardant-treated wood* shall be tested for fire exposure after the cladding has been subjected to the accelerated weathering test specified in ASTM D2898, "Standard Practice for Accelerated Weathering of Fire-Retardant-Treated Wood for Fire Testing."

3.1.6.14. Combustible Interior Finishes

2) Except as provided in Sentences 3.1.6.4.(3), (4), (7) and (8), *combustible* interior wall finishes, other than foamed plastics, that are not more than 25 mm thick are permitted in a *building* or part of a *building* permitted to be of *encapsulated mass timber construction*, provided they have a *flame-spread rating* not more than 150 on any exposed surface, or any surface that would be exposed by cutting through the material in any direction.

3) Except as provided in Sentences (4) and 3.1.6.4.(3), (6), (7) and (8), *combustible* interior ceiling finishes, other than foamed plastics, that are not more than 25 mm thick are permitted in a *building* or part of a *building* permitted to be of *encapsulated mass timber construction*, provided they have a *flame-spread rating* not more than 25 on any exposed surface, or any surface that would be exposed by cutting through the material in any direction, except that not more than 10% of the ceiling area within each *fire compartment* is permitted to have a *flame-spread rating* not more than 150. (See Note A-3.1.11.3.(3).)

3.1.7. Fire-Resistance Rating

3.1.7.5. Rating of Supporting Construction

1) Except as permitted by Sentence (2) and by Articles 3.2.2.20. to 3.2.2.93. for mixed types of construction, all *loadbearing* walls, columns and arches in the *storey* immediately below a floor or roof assembly required to have a *fire-resistance rating* shall have a *fire-resistance rating* not less than that required for the supported floor or roof assembly.

3.1.11. Fire Blocks in Concealed Spaces

3.1.11.5. Fire Blocks in Horizontal Concealed Spaces

4) Except for crawl spaces conforming to Sentence 3.1.11.6.(1) and except as provided in Sentence (5), in *buildings* or parts thereof conforming to Article [3.2.2.48.](#), [3.2.2.57.](#) or [3.2.2.93.](#), horizontal concealed spaces within a floor assembly or roof assembly of *encapsulated mass timber construction* shall be separated by construction conforming to Article 3.1.11.7. into compartments that are

a) not more than 600 m² in area with no dimension more than 60 m, if the exposed construction materials within the space have a *flame-spread rating* not more than 25, and

b) not more than 300 m² in area with no dimension more than 20 m, if the exposed construction materials within the space have a *flame-spread rating* more than 25.

(See Note A-3.1.11.5.(3) and (4).)

3.1.15. Roof Covering

3.1.15.2. Roof Coverings

5) Where *buildings* or parts thereof conforming to Article [3.2.2.48.](#), [3.2.2.51.](#), [3.2.2.57.](#), [3.2.2.60.](#) or [3.2.2.93.](#) include non-contiguous roof assemblies at different elevations, the roof coverings referred to in Sentences (3) and (4) are permitted to be evaluated separately to determine the roof covering classification required.

Section 3.2. Building Fire Safety

3.2.1. General

3.2.1.4. Floor Assembly over Basement

1) Except as permitted by Sentence 3.2.2.47.(3), 3.2.2.48.(3), 3.2.2.49.(3), 3.2.2.50.(3), 3.2.2.51.(3), 3.2.2.52.(3), 3.2.2.53.(3), 3.2.2.54.(3), 3.2.2.55.(3) or [3.2.2.93.\(3\)](#), a floor assembly immediately above a *basement* shall be constructed as a *fire separation* having a *fire-resistance rating* conforming to the requirements of Articles 3.2.2.20. to [3.2.2.93.](#) for a floor assembly, but not less than 45 min.

3.2.1.6. Mezzanines

1) The floor assembly of a *mezzanine* that is required to be considered as a *storey* in calculating the *building height* shall be constructed in conformance with the *fire separation* requirements for floor assemblies stated in Articles 3.2.2.20. to [3.2.2.93.](#)

3.2.2. Building Size and Construction Relative to Occupancy

3.2.2.2. Special and Unusual Structures

1) A structure that cannot be identified with the characteristics of a *building* in Articles 3.2.2.20. to [3.2.2.93.](#) shall be protected against fire spread and collapse in conformance with good fire protection engineering practice. (See Note A-3.2.2.2.(1).) (See also Notes A-3. and A-3.2.5.12.(1).)

3.2.2.6. Multiple Major Occupancies

1) Except as permitted by Articles 3.2.2.7. and 3.2.2.8., and Sentences 3.2.2.48.(4), 3.2.2.51.(5), 3.2.2.57.(3), 3.2.2.60.(4) [and 3.2.2.93.\(5\) to \(7\)](#), in a *building* containing more than one *major occupancy*, the requirements of this Subsection for the most restricted *major occupancy* contained shall apply to the whole *building*.

[2\) In a *building* or part of a *building* constructed in conformance with Article 3.2.2.48., 3.2.2.57. or 3.2.2.93. containing more than one *major occupancy*, the most restrictive encapsulation requirements of Article 3.1.6.4. and Table 3.2.2.93. for any *major occupancy* contained within a *storey* shall apply to the encapsulation required on the interior of a *public corridor* or *exit* within that *storey*.](#)

3.2.2.7. Superimposed Major Occupancies

1) Except as provided in Article 3.2.2.8. and Sentences 3.2.2.18.(2), 3.2.2.48.(4), 3.2.2.51.(5), 3.2.2.57.(3), 3.2.2.60.(4) [and 3.2.2.93.\(5\) to \(7\)](#), in a *building* in which one *major occupancy* is located entirely above another *major occupancy*, the requirements in this Subsection for each portion of the *building* containing a *major occupancy* shall apply to that portion as if the entire *building* were of that *major occupancy*.

2) If one *major occupancy* is located above another *major occupancy*, the *fire-resistance rating* of the floor assembly between the *major occupancies* shall be determined on the basis of the requirements of this Subsection for the lower *major occupancy*. (See also Article 3.1.3.1.)

[3\) In a *building* or part of a *building* constructed in conformance with Article 3.2.2.48., 3.2.2.57. or 3.2.2.93., if one *major occupancy* is located above another *major occupancy*,](#)

[a\) the most restrictive encapsulation requirements of Article 3.1.6.4. and Table 3.2.2.93. for any *major occupancy* contained within the *building* shall apply to the encapsulation required on the interior of *vertical service spaces* and *exit stairs*, and](#)

[b\) the encapsulation requirements of Article 3.1.6.4. and Table 3.2.2.93. for a mass timber floor assembly between the *major occupancies* shall be determined on the basis of the requirements for](#)

[i\) the upper *major occupancy* for the encapsulation of the upper surface of the mass timber floor assembly, and](#)

ii) the lower *major occupancy* for the encapsulation of the underside of the mass timber floor assembly.

3.2.2.11. Exterior Balconies

- 1) Except as provided in Sentence (2), an exterior balcony shall be constructed in accordance with the type of construction required by Articles 3.2.2.20. to [3.2.2.93.](#), as applicable to the *occupancy* classification of the *building*.
- 2) The floor assembly of an exterior balcony in a *building* or part of a *building* conforming to Article [3.2.2.48.](#), [3.2.2.57.](#) or [3.2.2.93.](#) shall
 - a) be of *noncombustible construction*, or
 - b) be constructed in accordance with Article 3.1.6.3., but need not comply with Sentence 3.1.6.4.(1).

3.2.2.12. Exterior Passageways

- 1) An elevated exterior passageway used as part of a *means of egress* shall conform to the requirements of Articles 3.2.2.20. to [3.2.2.93.](#) for *mezzanines*.

3.2.2.13. Occupancy on Roof

- 1) A portion of a roof that supports an *occupancy* shall be constructed in conformance with the *fire separation* requirements of Articles 3.2.2.20. to [3.2.2.93.](#) for floor assemblies, and not the *fire-resistance rating* for roof assemblies.

3.2.2.14. Rooftop Enclosures

- 1) A rooftop enclosure for elevator machinery , an elevator lobby or for a *service room* shall be constructed in accordance with the type of construction required by Articles 3.2.2.20. to [3.2.2.93.](#)
- 3) A rooftop enclosure for a stairway shall be constructed in accordance with the type of construction required by Articles 3.2.2.20. to [3.2.2.93.](#)

3.2.2.16. Heavy Timber Roof Permitted

- 1) Unless otherwise permitted by Articles 3.2.2.20. to [3.2.2.93.](#), a roof assembly in a *building* up to 2 *storeys* in *building height* is permitted to be of *heavy timber construction* regardless of *building area* or type of construction required, provided the *building* is *sprinklered* throughout.

3.2.2.18. Automatic Sprinkler System

- 1) Except as permitted by Sentence (2), an automatic sprinkler system conforming to the requirements of Articles 3.2.4.7., 3.2.4.8., 3.2.4.9. and 3.2.5.12. shall be installed

throughout a *building* regulated by one or more of Articles 3.2.2.20., 3.2.2.21., 3.2.2.22., 3.2.2.23., 3.2.2.24., 3.2.2.26., 3.2.2.27., 3.2.2.29., 3.2.2.31., 3.2.2.33., 3.2.2.36., 3.2.2.37., 3.2.2.38., 3.2.2.39., 3.2.2.40., 3.2.2.41., 3.2.2.42., 3.2.2.43., 3.2.2.44., 3.2.2.45., 3.2.2.46., 3.2.2.47., 3.2.2.48., 3.2.2.49., 3.2.2.51., 3.2.2.52., 3.2.2.55., 3.2.2.56., 3.2.2.57., 3.2.2.59., 3.2.2.60., 3.2.2.61., 3.2.2.63., 3.2.2.65., 3.2.2.66., 3.2.2.67., 3.2.2.69., 3.2.2.71., 3.2.2.72., 3.2.2.73., 3.2.2.74., 3.2.2.76., 3.2.2.77., 3.2.2.79., 3.2.2.81., 3.2.2.82., 3.2.2.84., 3.2.2.86., 3.2.2.88., 3.2.2.90. [and 3.2.2.93.](#)

2) If a *storey* in a *building* or a *floor area* is required to have an automatic sprinkler system installed throughout in accordance with one or more of Articles 3.2.2.20. to [3.2.2.93.](#) or Section 3.3., the automatic sprinkler system shall also be installed throughout all lower *storeys* in the *building* notwithstanding permission in Articles 3.2.2.20. to [3.2.2.93.](#) to construct one or more of those *storeys* without installing automatic sprinkler protection. (See Note A-3.2.2.18.(2).)

3.2.2.19. Buildings Containing Impeded Egress Zones

1) A *building* containing an *impeded egress zone* and conforming to the appropriate requirements of Articles 3.2.2.20. to [3.2.2.93.](#) is not required to conform to the requirements of Articles 3.2.2.36. and 3.2.2.37. for a Group B, Division 1 *major occupancy* provided

- a) the *building* is *sprinklered* throughout,
- b) it is not more than 1 *storey* in *building height*,
- c) it does not include
 - i) a *contained use area*,
 - ii) sleeping accommodation,
 - iii) a *high-hazard industrial occupancy*, or
 - iv) a *mercantile occupancy*,
- d) the *building area* is not more than 6 400 m² if the *building* includes a *medium-hazard industrial occupancy*,
- e) the *impeded egress zone* does not extend beyond the boundaries of the *fire compartment* in which it is located, and
- f) the *occupant load* of the *impeded egress zone* is not more than 100.

3.2.2.23. Group A, Division 2, Any Height, Any Area, Sprinklered

1) Except as permitted by Articles 3.2.2.24. to 3.2.2.28. [and 3.2.2.93.](#), a *building* classified as Group A, Division 2 shall conform to Sentence (2).

3.2.2.42. Group B, Division 3, Any Height, Any Area, Sprinklered

1) Except as permitted by Articles 3.2.2.43. to 3.2.2.46. [and 3.2.2.93.](#), a *building* classified as Group B, Division 3 shall conform to Sentence (2).

3.2.2.47. Group C, Any Height, Any Area, Sprinklered

1) Except as permitted by Articles 3.2.2.48. to 3.2.2.55. [and 3.2.2.93.](#), a *building* classified as Group C shall conform to Sentence (2).

3.2.2.48. Group C, up to 12 Storeys, Sprinklered

4) Group A, Division 2 *major occupancies*, Group E *major occupancies* and *storage garages* located in a *building* or part of a *building* within the scope of this Article are permitted to be constructed in accordance with this Article, provided

- a) the Group A, Division 2 *major occupancy* is located below the fourth *storey*,
- b) the Group E *major occupancy* is located below the third *storey*, and
- c) the *storage garage* is located below the fifth *storey* (see also Article 4.4.2.1.).

[\(See Note A-3.2.2.48.\(4\), 3.2.2.57.\(3\) and 3.2.2.93.\(5\) to \(7\).\)](#)

3.2.2.56. Group D, Any Height, Any Area, Sprinklered

1) Except as permitted by Articles 3.2.2.57. to 3.2.2.65. [and 3.2.2.93.](#), a *building* classified as Group D shall conform to Sentence (2).

3.2.2.57. Group D, up to 12 storeys, Sprinklered

3) Group A, Division 2 *major occupancies*, Group E *major occupancies*, Group F, Division 2 and 3 *major occupancies*, and *storage garages* located in a *building* or part of a *building* within the scope of this Article are permitted to be constructed in accordance with this Article, provided

- a) the Group A, Division 2 *major occupancy* is located below the fourth *storey*,
- b) the Group E *major occupancy* and Group F, Division 2 or 3 *major occupancy* are located below the third *storey*, and
- c) the *storage garage* is located below the fifth *storey* (see also Article 4.4.2.1.).

[\(See Note A-3.2.2.48.\(4\), 3.2.2.57.\(3\) and 3.2.2.93.\(5\) to \(7\).\)](#)

3.2.2.66. Group E, Any Height, Any Area, Sprinklered

1) Except as permitted by Articles 3.2.2.67. to 3.2.2.71. and 3.2.2.93., a *building* classified as Group E shall conform to Sentence (2).

3.2.2.76. Group F, Division 2, Any Height, Any Area, Sprinklered

1) Except as permitted by Articles 3.2.2.77. to 3.2.2.81. and 3.2.2.93., a *building* classified as Group F, Division 2 shall conform to Sentence (2).

3.2.2.82. Group F, Division 3, Any Height, Any Area, Sprinklered

1) Except as permitted by Articles 3.2.2.83. to 3.2.2.93., a *building* classified as Group F, Division 3 shall conform to Sentence (2).

3.2.2.93. Encapsulated Mass Timber Construction, Various Occupancies, Heights and Areas, Sprinklered

1) A *building* that is classified as Group A, Division 2, Group B, Division 3, Group C, Group D, Group E, or Group F, Division 2 or 3, is permitted to conform to Sentence (2) provided

a) except as permitted by Sentences 3.2.2.7.(1) and 3.2.2.18.(2), the *building* is *sprinklered*,

b) the *building* has a *building height* not exceeding the number of *storeys* shown in Table 3.2.2.93. for the applicable *major occupancy* and minimum *encapsulation rating*,

c) the *building* has a maximum height that conforms to the value shown in Table 3.2.2.93. for the applicable *major occupancy* and minimum *encapsulation rating* that is measured between the floor of the *first storey* and the uppermost floor level that does not serve a rooftop enclosure for elevator machinery, a stairway or a *service room* used only for service to the *building*,

d) the *building* has a maximum *building area* that conforms to the value shown in Table 3.2.2.93. for the applicable *major occupancy*, and

e) except as provided in Sentences 3.1.6.3.(4) and 3.1.6.7.(1) and Article 3.1.6.4., the *encapsulation rating* conforms to the value shown in Table 3.2.2.93. for the applicable *major occupancy* and maximum *building height*.

(See Note A-3.2.2.93.(1) and Table 3.2.2.93. See also Articles 3.2.2.48. and 3.2.2.57.)

TABLE 3.2.2.93.
Encapsulated Mass Timber Construction Requirements^{(1) (2)}

Forming part of Sentence 3.2.2.93.(1)

<u>MAJOR OCCUPANCY</u>	<u>MAX. BUILDING HEIGHT, STOREYS</u>	<u>MAX. HEIGHT, m</u>	<u>MAX. BUILDING AREA, m²</u>	<u>MINIMUM ENCAPSULATION RATING, min</u>
<u>A-2</u>	<u>18</u>	<u>76</u>	<u>7200</u>	<u>70</u>
	<u>12</u>	<u>51</u>		<u>50</u>
	<u>6</u>	<u>26</u>		<u>0</u>
<u>B-3</u>	<u>10</u>	<u>42</u>	<u>8000</u>	<u>70</u>
	<u>6</u>	<u>26</u>		<u>50</u>
	<u>4</u>	<u>17</u>		<u>0</u>
<u>C</u>	<u>18</u>	<u>76</u>	<u>6000</u>	<u>70</u>
	<u>8</u>	<u>34</u>		<u>0</u>
<u>D</u>	<u>18</u>	<u>76</u>	<u>7200</u>	<u>70</u>
	<u>9</u>	<u>38</u>		<u>0</u>
<u>E</u>	<u>12</u>	<u>51</u>	<u>6000</u>	<u>70</u>
	<u>8</u>	<u>34</u>		<u>50</u>
	<u>6</u>	<u>26</u>		<u>0</u>
<u>F-2</u>	<u>10</u>	<u>42</u>	<u>4500</u>	<u>70</u>
	<u>7</u>	<u>30</u>		<u>50</u>
	<u>5</u>	<u>21</u>		<u>0</u>
<u>F-3</u>	<u>12</u>	<u>51</u>	<u>7200</u>	<u>70</u>
	<u>8</u>	<u>34</u>		<u>50</u>
	<u>5</u>	<u>21</u>		<u>0</u>

Notes to Table 3.2.2.93:

- (1) See Sentences (5) to (7) and Articles 3.2.2.4. to 3.2.2.8. for information pertaining to multiple major occupancies.
- (2) Linear interpolation is not permitted in using Table 3.2.2.93.

2) Except as provided in Article 3.2.2.16., the building referred to in Sentence (1) is permitted to be of encapsulated mass timber construction or noncombustible construction, used singly or in combination, and

a) except as provided in Sentence (3), floor assemblies shall be fire separations with a fire-resistance rating not less than 2 hours,

b) mezzanines shall have a fire-resistance rating not less than 1 hour, and

c) loadbearing walls, columns and arches shall have a fire-resistance rating not less than that required for the supported assembly.

3) In a building classified as a Group C major occupancy that contains dwelling units that have more than one storey, subject to the requirements of Sentence 3.3.4.2.(3), the floor assemblies, including floors over basements, that are entirely contained within these dwelling units shall have a fire-resistance rating not less than 1 h, but need not be constructed as fire separations.

4) In buildings referred to in Sentence (1) where the roof assembly of an exit stairway or vertical service space used as an elevator hoistway has a height greater than 55 m measured from grade to the highest point of the roof assembly, the enclosure for the stairway or hoistway shall be of encapsulated mass timber construction or constructed of concrete.

5) Group E major occupancies and storage garages located in a building or part of a building classified as a Group A, Division 2, Group C, or Group D major occupancy within the scope of this Article are permitted to be constructed in accordance with this Article and the corresponding Group A, Division 2, Group C, or Group D major occupancy requirements contained in Table 3.2.2.93., provided

a) the Group E major occupancy is located below the third storey, and

b) the storage garage is located below the fifth storey (see also Article 4.4.2.1.).

(See Note A-3.2.2.48.(4), 3.2.2.57.(3) and 3.2.2.95.(5) to (7).)

6) Group A, Division 2 major occupancies located in a building or part of a building classified as a Group C or Group D major occupancy within the scope of this Article are permitted to be constructed in accordance with this Article and the corresponding Group C or Group D major occupancy requirements contained in Table 3.2.2.93., provided they are located below the fourth storey. (See Note A-3.2.2.48.(4), 3.2.2.57.(3) and 3.2.2.93.(5) to (7).)

7) Group F, Division 2 and 3 major occupancies located in a building or part of a building classified as a Group D major occupancy within the scope of this Article are permitted to be constructed in accordance with this Article and the corresponding Group D major occupancy requirements contained in Table 3.2.2.93., provided they are located below the third storey. (See Note A-3.2.2.48.(4), 3.2.2.57.(3) and 3.2.2.93.(5) to (7).)

3.2.3. Spatial Separation and Exposure Protection

3.2.3.7. Construction of Exposing Building Face

1) Except as provided in Sentences (3) and (4), and Articles 3.2.3.10. and 3.2.3.11., the fire-resistance rating, construction and cladding for exposing building faces of buildings or fire

compartments of Group A, B, C, D or Group F, Division 3 *occupancy* classification shall comply with Table 3.2.3.7.

2) Except as provided in Sentences (3) and (4) and Article 3.2.3.10., the *fire-resistance rating*, construction and cladding for *exposing building faces of buildings or fire compartments* of Group E or Group F, Division 1 or 2 *occupancy* classification shall comply with Table 3.2.3.7.

Table 3.2.3.7.
Minimum Construction Requirements for Exposing Building Faces
Forming Part of Sentences 3.1.6.9.(5) and 3.2.3.7.(1) to (4)

<i>Occupancy Classification of Building or Fire Compartment</i>	<i>Maximum Area of Unprotected Openings Permitted, % of Exposing Building Face Area</i>	<i>Minimum Required Fire-Resistance Rating</i>	<i>Type of Construction Required</i>	<i>Type of Cladding Required</i>
Group A, B, C, D, or Group F, Division 3	0 to 10	1 h	Noncombustible	<i>Noncombustible</i>
	>10 to 25	1 h	<i>Combustible, Encapsulated mass timber, or Noncombustible</i>	<i>Noncombustible</i>
	>25 to 50	45 min	<i>Combustible, Encapsulated mass timber, or Noncombustible</i>	<i>Noncombustible</i>
	>50 to <100	45 min	<i>Combustible, Encapsulated mass timber, or Noncombustible</i>	<i>Combustible or Noncombustible⁽¹⁾⁽²⁾</i>
Group E, or Group F, Division 1 or 2	0 to 10	2 h	<i>Noncombustible</i>	<i>Noncombustible</i>
	>10 to 25	2 h	<i>Combustible, Encapsulated mass timber, or Noncombustible</i>	<i>Noncombustible</i>
	>25 to 50	1 h	<i>Combustible, Encapsulated mass timber, or Noncombustible</i>	<i>Noncombustible</i>
	>50 to <100	1 h	<i>Combustible, Encapsulated mass timber, or Noncombustible</i>	<i>Combustible or Noncombustible⁽²⁾⁽³⁾</i>

Notes to Table 3.2.3.7.:

⁽¹⁾ The cladding on Group C *buildings* conforming to Article 3.2.2.51. and on Group D *buildings* conforming to Article 3.2.2.60. shall be *noncombustible* or consist of a wall that satisfies the requirements of Article 3.1.4.8.

(2) The cladding on buildings or parts thereof conforming to Articles 3.2.2.48., 3.2.2.57. or 3.2.2.93. shall conform to Article 3.1.6.9. or be noncombustible.

(3) See also Article 3.1.4.8. for additional requirements for exterior cladding on *buildings* or parts thereof conforming to Articles 3.2.2.51. and 3.2.2.60.

3.2.3.9. Protection of Structural Members

1) Structural members, including beams, columns and arches, that are placed wholly or partly outside the exterior face of a *building* and are less than 3 m from the property line or the centre line of a public thoroughfare shall be protected from exterior fire exposure by fire protection having a *fire-resistance rating* not less than that required for their protection from interior fire exposure, as stated in Articles 3.2.2.20. to 3.2.2.93., but not less than 1 h.

3.2.5. Provisions for Firefighting

3.2.5.7. Water Supply

2) Except for buildings constructed of encapsulated mass timber construction in conformance with Article 3.2.2.48., 3.2.2.57. or 3.2.2.93., buildings that are sprinklered throughout with a sprinkler system conforming to Article 3.2.5.12. or have a standpipe system conforming to Article 3.2.5.8. to 3.2.5.10. are deemed to comply with Sentence 1.

3.2.5.12. Automatic Sprinkler Systems

7) Notwithstanding the requirements of the standards referenced in Sentences (1) and (2) regarding the installation of automatic sprinkler systems, in *buildings* conforming to Article 3.2.2.48., 3.2.2.51., 3.2.2.57., 3.2.2.60. or 3.2.2.93., sprinklers shall be provided for balconies and decks exceeding 610 mm in depth measured perpendicular to the exterior wall. (See Note A-3.2.5.12.(7).)

3.2.6. Additional Requirements for High Buildings

3.2.6.1. Application

2) Except as required by Clause 3.2.6.1.(1)(c), this Subsection applies to a *building* or part of a *building* constructed in conformance with Article 3.2.2.57. or 3.2.2.93. in which the floor level of the highest *storey* is more than 18 m above *grade*.

Section 3.3. Safety within Floor Areas

3.3.3. Care, Treatment or Detention Occupancies

3.3.3.7. Contained Use Areas

4) A *contained use area*, in a *building* for which Articles 3.2.2.20. to [3.2.2.93.](#) do not require the installation of an automatic sprinkler system, is not required to be *sprinklered* as required by Sentence (3) provided

a) the *building* is designed so that during a period of 2 h after the start of a fire in the *contained use area* other *fire compartments* will not contain more than 1% by volume of contaminated air from the *contained use area*,

b) the *building* is designed so that during a period of 2 h after the start of a fire in another part of the *building* the *contained use area* will not contain more than 1% by volume of contaminated air from the other part of the *building*,

c) all doors are designed to be remotely released in conformance with Sentence 3.3.1.13.(6), and

d) the *contained use area* does not contain any rooms lined with *combustible* padding.

Section 3.10. Objectives and Functional Statements

3.10.1. Objectives and Functional Statements

3.10.1.1. Attributions to Acceptable Solutions

1) For the purpose of compliance with this Code as required in Clause 1.2.1.1.(1)(b) of Division A, the objectives and functional statements attributed to the acceptable solutions in this Part shall be the objectives and functional statements listed in Table 3.10.1.1. (See Note A-1.1.2.1.(1).)

Only newly added portions of Table 3.10.1.1. are reproduced below

3.2.2.93. Encapsulated Mass Timber Construction, Various Heights and Occupancies, Sprinklered	
(2)	(b),(c) [F04 – OS1.3]
	(b),(c) [F04 – OP1.3]
	(a),(c) [F03 – OS1.2][F04 – OS1.2, OS1.3]
	(a),(c) [F03 – OP1.2][F04 – OP1.2, OP1.3]

Notes to Part 3

Fire Protection, Occupant Safety and Accessibility

This convenience copy reflecting Revision 1 changes to the British Columbia Building Code 2024 does not include a full reproduction of the Notes to Part 3. Only the modified content is reproduced in this convenience copy. Notes that are not modified as shown in this convenience copy should be considered as they were prior to Revision 1.

A-3.1.6.4.(1) Encapsulation of Mass Timber Elements. The general intent of Sentence 3.1.6.4.(1), [which generally applies for any building where a 50- or 70-minute encapsulation rating is otherwise required](#), is that all exposed surfaces of the mass timber elements be encapsulated, including the upper surface of a mass timber floor assembly. [However, for some buildings, depending on the building height and occupancy, portions of mass timber elements are permitted to be exposed to varying degrees in accordance with the permissions stated in Sentences 3.1.6.4.\(3\) to \(8\).](#) Also, the exposed surfaces in certain concealed spaces formed by or contained within mass timber elements are exempted from complying with this Sentence (see Sentences 3.1.6.3.(4), 3.1.6.16.(2) and 3.1.6.17.(2), and Articles 3.1.6.7. and 3.1.6.12.). Moreover, the upper surface of a mass timber roof assembly need not be encapsulated where there is no concealed space above it. As well, the exterior side of a mass timber exterior wall assembly need not be encapsulated; however, the provisions of Article 3.1.6.9. and Subsection 3.2.3. for exterior walls still need to be considered.

A-3.1.6.4.(3) to (8) Fire-Resistance Rating of Mass Timber with Exposed Surfaces. Portions of mass timber elements required to have a fire-resistance rating are permitted to be exposed in accordance with the permissions stated in Sentences [3.1.6.4.\(3\) to \(8\)](#); however, it is important to note that applying those permissions does not waive the requirement for these elements to have a fire-resistance rating.

[In the calculation of the total wall area of the perimeter of a suite or fire compartment in Sentences 3.1.6.4.\(3\), \(5\) and \(7\), the area of any wall openings, such as doors or windows, is included.](#)

A-3.1.6.4.(4) Exposed Surfaces of Mass Timber Walls. The primary objective of encapsulating mass timber elements is to limit the probability that these elements will significantly contribute to fire spread and fire duration in the event of a fire. Since thick wood members require a source of imposed heat flux to burn, [Clause 3.1.6.4.\(4\)\(a\) stipulates that any portions of the exposed surfaces of different mass timber walls within a suite either face the same direction or have a minimum horizontal distance between one another. If the sprinkler system fails to operate or to control the fire, this directional orientation or minimum distance is intended to avoid or reduce the potential for re-](#)

radiation between portions of burning mass timber surfaces on different walls, and particularly those that either face or are in close proximity to one another, which could sustain flaming combustion into the decay phase of a fire. Additionally, if the sprinkler system fails to operate or to control the fire, the maximum percentages of exposed surface areas and maximum flame-spread ratings stated in Article 3.1.6.4. are intended to be insufficient to sustain a ventilation-controlled fire that might provide the radiation required to sustain flaming combustion into the decay phase of a fire.

A-3.1.6.6. Encapsulation Materials. Research has been conducted on different types of encapsulation materials, such as gypsum board, gypsum concrete and cement board. The results of tests using an intermediate-scale furnace and of cone calorimeter tests indicate that a combustible timber element protected with a 38 mm thick layer of gypsum-concrete topping or with one (25 min), two (50 min) or three (80 min) layers of 12.7 mm Type X gypsum board or two layers (70 min) of 15.9 mm Type X gypsum board will not ignite or contribute significant heat to a fire until the time at which average temperatures of 325°C to 380°C are attained at the interface between the encapsulation material or assembly of materials and the combustible substrate. These temperatures are consistent with the ignition temperatures of wood-based materials.

A-3.1.6.6.(6) Protection of Gypsum Board from Foot Traffic. Where gypsum board is used as the encapsulation material on the top of a mass timber floor assembly, it should be protected from physical impact arising from normal pedestrian traffic that could damage it and possibly compromise its encapsulation rating.

Note A-3.1.6.9.(1), (2), (4) and (6) Exterior Cladding. The requirements in Sentences 3.1.6.9.(1), (2), (4) and (6) are intended to reduce the potential for fire spread on the exterior cladding of buildings of encapsulated mass timber construction through the use of noncombustible finishes on the exterior of the wall assembly or the use of a cladding/wall assembly that has been proven to resist flame propagation as a function of increasing building height, including provisions to allow 100% combustible cladding where the height does not exceed 4 storeys. These cladding/wall assembly combinations can be used as infill or panel-type walls between structural elements, or attached directly to a loadbearing structural system. Note that the requirements in Article 3.1.6.9. do not supersede the provisions in Subsection 3.2.3. regarding spatial separation and exposure protection.

A-3.1.11.5.(3) and (4) Fire Blocks in Concealed Spaces. To reduce the risk of fire spread in combustible concealed spaces within the types of buildings referred to in Sentences 3.1.11.5.(3) and (4), fire blocking is required regardless of whether the horizontal concealed space is protected by sprinklers or not, unless the space is filled with noncombustible insulation so that any air gap at the top of the insulation is very small. (See also Note A-3.1.11.5.(1) for roof venting.)

A 5- or 6-storey building constructed in accordance with Article 3.2.2.51. and buildings constructed in accordance with Article 3.2.2.48., 3.2.2.57., 3.2.2.60. or 3.2.2.93. are required to be sprinklered in accordance with NFPA 13, "Standard for the Installation of Sprinkler Systems" (see Article 3.2.5.12.). NFPA 13 generally requires sprinklering of any concealed spaces of combustible construction or where large amounts of combustibles are present. However, NFPA 13 allows combustible concealed spaces not to be sprinklered in certain cases, including where concealed spaces are filled almost entirely with noncombustible insulation, where spaces contain only materials with a low flame-spread rating, and where limited access or the size of the space makes it impractical to install sprinklers. For certain types of construction in combustible concealed spaces that are not sprinklered, NFPA 13 mandates fire blocking beyond the minimum specified in Sentence 3.1.11.5.(3).

Note A-3.2.2.48.(4), 3.2.2.57.(3) and 3.2.2.93.(5) to (7) Occupancy Combinations in Buildings of Mixed Construction. Buildings conforming to the building height and area limits and the other fire protection requirements of Article 3.2.2.48., 3.2.2.57. or 3.2.2.93. may be entirely constructed of encapsulated mass timber construction and incorporate the occupancies specifically permitted by Sentence 3.2.2.48.(4), 3.2.2.57.(3) or 3.2.2.93.(5) to (7): e.g., Group A, Division 2 major occupancies on the first to third storeys, Group E major occupancies on the first and second storeys, and a parking garage on the first to fourth storeys.

Alternatively, the requirements of Articles 3.2.2.4. to 3.2.2.8. for superimposed major occupancies can be applied, resulting in buildings of mixed construction conforming to the building height and area limits for encapsulated mass timber construction and in which the lower storeys are of noncombustible construction and the upper storeys are of encapsulated mass timber construction. For example, a Group A, Division 2 or Group B, Division 3 major occupancy could be located on the first 4 storeys of a 12-storey Group C building constructed in accordance with Article 3.2.2.48., as long as these first 4 storeys were constructed of noncombustible construction in accordance with Article 3.2.2.23. or 3.2.2.42., as applicable. (See also Articles 3.2.2.6. and 3.2.2.7.)

A-3.2.2.93.(1) and Table 3.2.2.93. Occupancy Combinations in Buildings of Mixed Encapsulation Ratings. Buildings conforming to the building height and minimum encapsulation rating requirements and the other fire protection requirements of Article 3.2.2.93. may be entirely constructed of encapsulated mass timber construction and incorporate the multiple major occupancies otherwise permitted by Articles 3.2.2.4. to 3.2.2.6. This would also include permitting mixing of major occupancies that require different levels of encapsulation for structural mass timber elements in accordance with Table 3.2.2.93.