PROVINCE OF BRITISH COLUMBIA

ORDER OF THE MINISTER OF HOUSING

Fire Services Act

Ministerial Order No. FSA 2024 01

I, Ravi Kahlon, Minister of Housing, order that the British Columbia Fire Code established by Ministerial Order No. FSA 2023 1 dated November 24, 2023, is amended as set out in the attached Schedule.

April 5, 2024
Date

Minister of Housing

(This part is for administrative purposes only and is not part of the Order.)

Authority under which Order is made:

Act and section: *Fire Services Act*, R.S.B.C. 1996, c. 144, s. 47

Other:

SCHEDULE

1 The British Columbia Fire Code established by the British Columbia Fire Code Order, Ministerial Order No. FSA 2023 1, is amended as set out in this Schedule.

Division 1 – Changes to Division B

2 Subsection 5.6.3. title is amended to read:

5.6.3. Additional Requirements for the Construction of Residential, Business and Personal Services Occupancies, and Encapsulated Mass Timber Buildings

3 Sentence 5.6.3.1.(1) is repealed and the following substituted:

1) This Subsection applies only to *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. of Division B of the British Columbia Building Code.

4 Sentence 5.6.3.7.(3) is repealed and the following substituted:

3) For *buildings* or parts thereof conforming to Article 3.2.2.48., 3.2.2.57., or 3.2.2.93. of Division B of the British Columbia Building Code, during construction, in addition to the requirements of Sentences 5.6.1.4.(2) and (3), at least two stairways complying with Sentences (1), (2) and (4) shall be provided. (See Note A-5.6.3.7.(3) to (5).)

5 Sentence 5.6.4.1.(1) is repealed and the following substituted:

1) Except as provided in Sentence 5.6.4.3.(1), this Subsection applies to *buildings* or parts thereof conforming to Article 3.2.2.48., 3.2.2.57. or 3.2.2.93. of Division B of the British Columbia Building Code that are under construction.

6 Article 5.6.4.3. is repealed and the following substituted:

5.6.4.3. Protective Encapsulation and Fire Protection During Construction

1) This Article applies to a *building* or part of a *building* conforming to Article 3.2.2.48., 3.2.2.57. or 3.2.2.93. of Division B of the British Columbia Building Code that is intended to be more than 6 *storeys* in *building height*.

2) Except as provided in Sentences (3), (4) and (8), to address safety during construction, a protective encapsulation material or an assembly of materials providing an *encapsulation rating* of not less than 25 min, as determined in accordance with Sentence 3.1.6.5.(1) of Division B of the British Columbia Building Code, shall be installed

a) such that not more than 20% of the area of the underside of each mass timber floor assembly on each *storey* is exposed during construction,

b) on the interior side of stairways required by Sentence 5.6.3.7.(3) and of *vertical service spaces* where the enclosures are constructed of mass timber elements,

c) on each face of solid lumber or mass timber *partitions* not less than 38 mm thick and on each face of *partitions* containing wood framing as permitted by Article 3.1.6.15. of Division B of the British Columbia Building Code, and

d) such that the exposed surface area of structural mass timber walls within the *storey* does not exceed

i) the aggregate exposed surface areas of the *suites* stated in Sentence 3.1.6.4.(5) of Division B of the British Columbia Building Code, or

ii) 35% of the total wall area of the perimeter of the *storey* (see Note A-5.6.4.3.(2)(d).)

(See Note A-5.6.4.3.(2).)

3) Except as required by Sentence (5) and provided in Sentence (7), in a *building* or part of a *building* permitted by Article 3.2.2.93. of Division B of the British Columbia Building Code to have a 0 min *encapsulation rating*, a protective encapsulation material or assembly of materials need not be installed as described in Clauses (2)(a) and (d), provided

a) penetrations or openings through the floor assembly on any *storey* are

i) protected with a *firestop* conforming to Sentence 3.1.9.1.(1) of Division B of the British Columbia Building Code,

ii) filled with *noncombustible* insulation that is supported in place, or

iii) protected, from the top of the floor assembly, with a single layer of not less than 12.7 mm thick Type X gypsum board conforming to ASTM C 1396M-17, mechanically fastened to not less than 12.7 mm thick plywood or OSB with the gypsum board facing the penetration (see Note A-5.6.4.3.(3)(a) and (4)(a)),

b) a standpipe system is installed in accordance with Articles 5.6.1.6. and 5.6.4.2., and is provided with hose stations that are equipped with a hose line having

i) a diameter of either 25 mm or 38 mm, and

ii) a length sufficient to cover all parts of the *storey* with a hose stream of not less than 5 m (see Note A-5.6.4.3.(3)(b) and (4)(b)), and

c) a fire watch is conducted on all *storeys*

i) at intervals of not more than 1 h when workers are present in the *building*, and

ii) ending not less than 1 h after daily work is complete (see Note A-5.6.4.3.(3)(c) and (4)(c)).

4) Except as required by Sentence (5) and provided in Sentence (7), in a *building* or part of a *building* constructed in accordance with Article 3.2.2.48. or 3.2.2.57. or permitted by Article 3.2.2.93. of Division B of the British Columbia Building Code to have a minimum 50 min *encapsulation rating*, a protective encapsulation material or assembly of materials need not be installed as described in Clause (2)(a), provided

a) penetrations or openings through the floor assembly on any *storey* are

i) protected with a *firestop* conforming to Sentence 3.1.9.1.(1) of Division B of the British Columbia Building Code,

ii) filled with *noncombustible* insulation that is supported in place, or

iii) protected, from the top of the floor assembly, with a single layer of not less than 12.7 mm thick Type X gypsum board conforming to ASTM C 1396M-17, mechanically fastened to not less than 12.7 mm thick plywood or OSB with the gypsum board facing the penetration (see Note A-5.6.4.3.(3)(a) and (4)(a)),

b) a standpipe system is installed in accordance with Articles 5.6.1.6. and 5.6.4.2., and is provided with hose stations that are equipped with a hose line having

i) a diameter of either 25 mm or 38 mm, and

ii) a length sufficient to cover all parts of the *storey* with a hose stream of not less than 5 m (see Note A-5.6.4.3.(3)(b) and (4)(b)), and

c) a fire watch is conducted on all *storeys*

i) at intervals of not more than 1 h when workers are present in the *building*, and

ii) ending not less than 1 h after daily work is complete (see Note A-5.6.4.3.(3)(c) and (4)(c)).

5) Except as provided in Sentence (6), in a *building* or part of a *building* described in Sentences (3) and (4), exterior walls shall be installed and any joints located in the horizontal plane between the floor and the exterior wall on any *storey* shall be

a) protected at the joint with a *firestop* conforming to Sentence 3.1.8.3.(4) of Division B of the British Columbia Building Code, or

b) filled with *noncombustible* insulation that is supported in place.

(see Note A-5.6.4.3.(5))

6) The four uppermost *storeys* during construction need not conform to the requirements of Sentence (2) or (5).

7) The first four *storeys* need not conform to the conditions of Sentence (3) or (4) during construction, until the ceiling assembly of the fifth *storey* is installed. (see Note A-5.6.4.3.(7))

8) The encapsulation material or assembly of materials used to meet the requirements of Sentence (2) is permitted to consist of a single layer of Type X gypsum board conforming to ASTM C 1396M-17, not less than 12.7 mm thick conforming to Clauses 3.1.6.6.(6)(a) and (c) of Division B of the British Columbia Building Code, except that their joints need not be taped and finished.

Division 2 – Changes to Notes to Part 5 of Division B

7 Note A-5.6.4.3.(1) is repealed.

8 The following Note is added:

A-5.6.4.3.(2) The extent to which the structure under construction may need to be protected in accordance with Sentence 5.6.4.3.(2) may vary based on the fire safety plan. The protective encapsulation material or assembly of materials is intended to limit the potential for fire spread within the storey as well as to limit the potential for fire spread to upper storeys, thereby also limiting the potential exposure of adjacent structures to fire.

9 The following Note is added:

A-5.6.4.3.(2)(d) The intent of Clause 5.6.4.3.(2)(d) is that the maximum area of mass timber walls that is permitted to be exposed in the finished building also be permitted to be exposed during construction. If there are multiple suites within a storey, the aggregate exposed surface areas of the suites permitted in the finished building is determined per Sentence 3.1.6.4.(5) of Division B of the British Columbia Building Code, not considering the exposed surface area of mass timber beams, columns and arches. If the storey is a single suite, then a maximum of 35% of the total wall area of the perimeter of such storey is permitted

to be exposed. In the calculation of the total wall area of the perimeter of a suite or storey, the area of any wall openings, such as doors or windows, are included.

10 The following Note is added:

Note A-5.6.4.3.(3)(a) and (4)(a) Until permanent protection is provided, the fire protection of the penetrations or openings through the floor assembly can be temporary. Beyond those described in Clause 5.6.4.3.(3)(a) and (4)(a), other forms of protection should have a noncombustible or other protective layer that will resist fire for a minimum of 30 min. Furthermore, any such protective layer should be structurally adequate over the penetrations or openings for the safety of occupants.
The fire protection of large penetrations or openings through floor assemblies, such as openings associated with convenience stairs, elevators or interconnected floor spaces, should address additional fire protection considerations, including structural support.

11 The following Note is added:

Note A-5.6.4.3.(3)(b) and (4)(b) The length of hose should be sufficient to allow for adequate nozzle pressure and will depend on the chosen hose diameter. Typically, 38 mm diameter hose should have a length of not more than 30.5 m.
If construction reaches a height at which the public waterworks system can no longer provide the required flow and pressure, a temporary or permanent fire pump must be installed to adequately protect the uppermost storey of the building, unless the fire safety plan specifies an alternative approach that is permitted by the authority having jurisdiction.

12 The following Note is added:

Note A-5.6.4.3.(3)(c) and (4)(c) The person conducting the fire watch should be familiar with all fire safety features of the building, including the fire safety plan, as provided in conformance with Section 2.8.

13 The following Note is added:

Note A-5.6.4.3.(5) Exterior walls must include a material or assembly of materials installed for the purpose of providing protection from the weather, insulation or for aesthetics. This could include, but not be limited to, veneers, siding, exterior insulation, etc.

14 The following Note is added:

Note A-5.6.4.3.(7) It is intended that all storeys meet the conditions of Sentence 5.6.4.3.(3) or (4) once the ceiling assembly of the fifth storey has been installed.