Safety Codes Council

PART 3
CODE UPDATE INFORMATION

NBC 2019 AE Div B

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Safety Codes Council
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~~Red strikethrough~~ = deleted text

Blue underline = New text

Review this document in conjunction with the National Building Code-2019 Alberta Edition.

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3.1.3.2. Prohibition of Occupancy Combinations 4) A *building* conforming to Article 3.2.2.50. is permitted to contain a *storage garage* below the fourth *storey*. (See Appendix A-3.1.3.2.(3) and (5).) (See also Sentence 4.4.2.1.(1).)	**3.1.3.2. Prohibition of Occupancy Combinations** ~~**4)** A *building* conforming to Article 3.2.2.50. is permitted to contain a *storage garage* below the fourth *storey*.~~ ~~(See Appendix A-3.1.3.2.(3) and (5).)~~ ~~(See also Sentence 4.4.2.1.(1).)~~ **4)** ~~**5)**~~ *** existing sentences renumbered ***	Deleted Sentence (4).
3.1.4.2. Protection of Foamed Plastics 1) Foamed plastics that form part of a wall or ceiling assembly in a building of combustible construction shall be protected from adjacent spaces in the building, other than adjacent concealed spaces within attic or roof spaces, crawl spaces, and wall assemblies, ….. a),b),c)…..etc.	**3.1.4.2. Protection of Foamed Plastics** (See Note A-3.1.4.2.) **1)** ~~*Foamed*~~ Except as permitted in Sentence (2), foamed plastics that form part of a wall or ceiling assembly in ~~*a building of*~~ *combustible construction* shall be protected from adjacent spaces in the *building*, other than adjacent concealed spaces within *attic or roof spaces*, crawl spaces, and wall and ceiling assemblies, a) by one of the interior finishes described in Subsections 9.29.4. to 9.29.9., b) provided the *building* does not contain a Group A, Group B or Group C *major occupancy*, by sheet metal i) mechanically fastened to the supporting assembly independent of the insulation, ii) not less than 0.38 mm thick, and iii) with a melting point not below 650°C, or c) by any thermal barrier that meets the requirements of Sentence ~~3.1.5.12.~~ 3.1.5.15.(2) (see ~~Appendix A~~ Note A-3.1.4.2.(1)(c)). (See Note A-3.1.4.2.(1).) **2)** A walk-in cooler or freezer consisting of factory-assembled wall, floor or ceiling panels containing foamed plastics is permitted in a *building* required to be of *combustible construction*, provided the panels a) are protected on both sides by sheet metal not less than 0.38 mm thick having a melting point not less than 650°C, b) do not contain an air space, and c) when a sample panel with an assembled joint typical of field installation is subjected to the applicable test described in Subsection 3.1.12., have a *flame-spread rating* not more than that permitted for the space in which they are located or the space that they bound, as applicable. (See Note A-3.1.4.2.(2) and 3.1.5.7.(3).) **3)** The *flame-spread rating* of doors containing foamed plastics shall comply with Sentences 3.1.13.2.(1) to (3).	Inserted new Sentences (2) and (3).

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3.1.4.3. Wires and Cables 2) Except as permitted in Sentence (3), optical fibre cables and electrical wires and cables with *combustible* insulation, jackets or sheathes that are used for the transmission of voice, sound or data and are installed in a *plenum* in a *building* permitted to be of in conformance with the Vertical Flame Test - Cables in Cable Trays in Clause 4.11.4 of CSA C22.2 No. 0.3, "Test Methods for Electrical Wires and Cables," (FT4 rating). 3) Cables or wires within *plenum* spaces that are used for the transmission of signals in fire alarm, security, radio, and television broadcasting, closed circuit television or community television systems need not comply with the requirements of Sentence (2).	**3.1.4.3. Wires and Cables** **2)** Except as permitted in ~~Sentence~~ Sentences (3) and (4), optical fibre cables and electrical wires and cables with *combustible* insulation, jackets or sheathes that are used for the transmission of voice, sound or data and are installed in a *plenum* in a *building* permitted to be of *combustible construction* shall exhibit the following characteristics a) a horizontal flame distance of not more than 1.5 m, b) an average optical smoke density of not more than 0.15, and c) a peak optical smoke density of not more than 0.5. **3)** Except as permitted in Sentence (4), where totally enclosed *noncombustible* raceways are used in a *plenum*, exposed components of wiring systems with *combustible* insulation, jackets or sheathes, including optical fibre cables and electrical wires and cables that are used for the transmission of voice, sound or data, that are installed in the *plenum* or that extend not more than 9 m from the *plenum*, including drop down to the floor level, are permitted, provided they exhibit a vertical char of not more than 1.5 m when tested in conformance with the Vertical Flame Test ~~–~~ Cables in Cable Trays (FT4 rating) in ~~Clause 4.11.4 of~~ CSA C22.2 No. 0.3, "Test Methods for Electrical Wires and Cables~~," (FT4 rating)~~." **4)** ~~**3)**~~Cables or wires within ~~*plenum* spaces~~ *plenums* that are used for the transmission of signals in fire alarm~~, security, radio, and television broadcasting, closed circuit television or community television~~ systems need not comply with the requirements of Sentence (2).	Inserted new Sentence (3).
3.1.4.7. Heavy Timber Construction 6) Roofs in *heavy timber construction* shall be of tongued and grooved phenolic-bonded plywood not less than 28 mm thick, or glued-laminated or solid sawn plank that is a) not less than 38 mm thick, splined or tongued and grooved, or b) not less than 38 mm wide and 64 mm deep set on edge and laid so that no continuous line of end joints will occur except at the points of support	**3.1.4.7. Heavy Timber Construction** **6)** Roofs in *heavy timber construction* shall be of tongued and grooved phenolic-bonded plywood, strandboard or waferboard not less than 28 mm thick, or glued-laminated or solid sawn plank that is a) not less than 38 mm thick, splined or tongued and grooved, or b) not less than 38 mm wide and 64 mm deep set on edge and laid so that no continuous line of end joints will occur except at the points of support.	
3.1.4.8. Exterior Cladding 1) Not less than 90% of the exterior cladding on each exterior wall of *buildings* conforming to Article 3.2.2.50. or 3.2.2.58. shall consist of a) *noncombustible* cladding, or b) a wall assembly that satisfies the criteria of Sentences 3.1.5.5.(3) and (4) when tested in accordance with CAN/ULC-S134, "Fire Test of Exterior Wall Assemblies." (See Appendix A.) (See also A-3.1.5.5.(3) and A-3.1.5.5.(4) in Appendix A.)	**3.1.4.8. Exterior Cladding** **1)** Not less than 90% of the exterior cladding on each exterior wall of *buildings* conforming to Article 3.2.2.50. or 3.2.2.58. shall consist of a) *noncombustible* cladding, or b) a wall assembly that satisfies the criteria of ~~Sentences~~ Clause 3.1.5.5.(~~3~~1) ~~and (4) when tested in accordance with CAN/ULC-S134, "Fire Test of Exterior Wall Assemblies."~~b). (See ~~Appendix~~ Note A-3.1.4.8.(1).) (See also Notes A-3.1.5.5.(~~3~~1)(b)(I) and A-3.1.5.5.(~~4) in Appendix A1~~)(b)(ii).)	See article 3.1.5.5.
3.1.5.2. Minor Combustible Components	**3.1.5.2. Minor Combustible Components**	

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1) The following minor *combustible* components are permitted in a *building* required to be of *noncombustible construction*: a) paint (see also Sentence 3.1.5.10.(1)), b) mastics and caulking materials, including *foamed plastic* air sealants, applied to provide a seal between the major components of exterior wall construction, (see also Article 3.6.4.3. for limits on the use of *combustible* materials in *plenum* spaces),	**1)** The following minor *combustible* components are permitted in a *building* required to be of *noncombustible construction*: a) paint (see also ~~Sentence 3.1.5.10.(1~~ Clause 3.1.13.1.(2)(b)), b) self-adhesive tapes, mastics and caulking materials, including foamed plastic air sealants, applied to provide a seal between the major components	
3.1.5.5. Combustible Components for Exterior Walls 1) Except as required in Sentence (2), an exterior non-*loadbearing* wall assembly that includes *combustible* components is permitted to be used in a *building* required to be of *noncombustible construction* provided a) the *building* is i) not more than 3 *storeys* in *building height*, or ii) *sprinklered* throughout, b) the interior surfaces of the wall assembly are protected by a *thermal barrier* conforming to Sentence 3.1.5.12.(3), and c) the wall assembly satisfies the criteria of Sentences (3) and (4) when subjected to testing in conformance with CAN/ULC-S134, "Fire Test of Exterior Wall Assemblies." (See Appendix A.) 2) Except as permitted by Articles 3.2.3.10. and 3.2.3.11., where the *limiting distance* in Tables 3.2.3.1.B. to 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. 3) Flaming on or in the wall assembly shall not spread more than 5 m above the opening during or following the test procedure referenced in Sentence (1). (See Appendix A.) 4) The heat flux during the flame exposure on a wall assembly shall be not more than 35 kW/m 2 measured 3.5 m above the opening during the test procedure referenced in Sentence (1). (See Appendix A.) 5) A wall assembly permitted by Sentence (1) that includes *combustible* cladding of *fire-retardant-treated wood* shall be tested for fire exposure after the cladding has been subjected to an accelerated weathering test as specified in ASTM D 2898, "Accelerated Weathering of Fire-Retardant-Treated Wood for Fire Testing."	**3.1.5.5. Combustible ~~Components for~~ Cladding on Exterior Walls** **1)** Except as ~~required~~ provided in ~~Sentence~~ Sentences (2) ~~and (3),~~ ~~an exterior non-*loadbearing* wall assembly that includes *combustible* components~~ cladding is permitted to be used on an exterior wall assembly in a *building* required to be of *noncombustible construction*, provided a) the *building* is i) not more than 3 *storeys* in *building height*, or ii) *sprinklered* throughout, ~~b)the interior surfaces of the wall assembly are protected by a *thermal barrier* conforming to Sentence 3.1.5.12.(3),~~ and b) ~~c)the wall assembly satisfies the criteria of Sentences (3) and (4) when subjected to testing in conformance~~ when tested in accordance with CAN/ULC-S134, "Fire Test of Exterior Wall Assemblies~~."~~," the wall assembly satisfies the following criteria for testing and conditions of acceptance (see Note A-3.1.5.5.(1)(b)): i) flaming on or in the wall assembly does not spread more than 5 m above the opening (see Note A-3.1.5.5.(1)(b)(i)), and ii) ~~(See Appendix A.)~~the heat flux during the flame exposure on the wall assembly is not more than 35 kW/m 2 measured at 3.5 m above the opening (see Note A-3.1.5.5.(1)(b)(ii)). **2)** Except as permitted by Articles 3.2.3.10. and 3.2.3.11., where the *limiting distance* in Tables 3.2.3.1.-B. to 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. ~~3)Flaming on or in the wall assembly shall not spread more than 5 m above the opening during or following the test procedure referenced in Sentence (1). (See Appendix A.)~~ ~~4)The heat flux during the flame exposure on a wall assembly shall be not more than 35 kW/m 2 measured 3.5 m above the opening during the test procedure referenced in Sentence (1). (See Appendix A.)~~ **3)** ~~5)~~ A wall assembly permitted by Sentence (1) that includes *combustible* cladding of *fire-retardant-treated wood* shall be tested for fire exposure after the cladding has been subjected to an accelerated weathering test as specified in ASTM D 2898, "Accelerated Weathering of Fire-Retardant-Treated Wood for Fire Testing."	Deleted Sentence (3) and (4). See 3.1.5.6.

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	3.1.5.6. Combustible Components in Exterior Walls	Inserted new article.
	3.1.5.7. Factory-Assembled Panels	Inserted new article.
3.1.5.6. Nailing Elements	**3.1.5.8.** ~~3.1.5.6.~~**Nailing Elements**	Renumbered Article 3.1.5.6. To 3.1.5.12.
3.1.5.7. Combustible Millwork	**3.1.5.9.** ~~3.1.5.7.~~**Combustible Millwork**	
3.1.5.8. Combustible Flooring Elements	**3.1.5.10.** ~~3.1.5.8.~~ **Combustible Flooring Elements**	
3.1.5.9. Combustible Stairs in Dwelling Units	**3.1.5.11.** ~~3.1.5.9.~~**Combustible Stairs in Dwelling Units**	
3.1.5.10. Combustible Interior Finishes 1) *Combustible* interior finishes, including paint, wallpaper, and other interior finishes not more than 1mm thick, are permitted in a *building* required to be of *noncombustible construction*. 2) *Combustible* interior wall finishes, other than *foamed plastics*, are permitted in a *building* required to be of *noncombustible construction* provided they a) are not more than 25 mm thick, and b) 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) *Combustible* interior ceiling finishes, other than *foamed plastics*, are permitted in a *building* required to be of *noncombustible construction* provided they a) are not more than 25 mm thick, except for exposed *fire-retardant-treated wood* battens, and b) have a *flame-spread rating* not more than 25 on any exposed surface, or on any surface that would be exposed by cutting through the material in any direction, or are of *fire-retardant-treated wood*, 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.	**3.1.5.12.** ~~3.1.5.10.~~ **Combustible Interior Finishes** **1)** ~~*Combustible* interior finishes, including paint, wallpaper, and other~~ Except as permitted in Sentences (2) and (3), *combustible* interior wall and ceiling finishes referred to in Clause 3.1.13.1.(2)(b) that are not more than 1 mm thick, are permitted in a *building* required to be of *noncombustible construction*. **2)** *Combustible* interior wall finishes, other than foamed plastics, that are not more than 25 mm thick are permitted in a *building* required to be of *noncombustible construction*, provided they ~~a) are not more than 25 mm thick, and b)~~ 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)** ~~*Combustible*~~ Except as provided in Sentence (4), *combustible* interior ceiling finishes, other than foamed plastics, that are not more than 25 mm thick are permitted in a *building* required to be of *noncombustible construction*, provided they ~~a) are not more than 25 mm thick, except for exposed *fire-retardant-treated wood* battens, and b)~~ have a *flame-spread rating* not more than 25 on any exposed surface, or on any surface that would be exposed by cutting through the material in any direction, ~~or~~ ~~are of *fire-retardant-treated wood*~~, 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. **4)** *Combustible* interior ceiling finishes made of fire-retardant-treated wood are permitted in a *building* required to be of *noncombustible construction*, provided they are not more than 25 mm thick or are exposed *fire-retardant-treated wood* battens.	
3.1.5.11.Gypsum Board	**3.1.5.13.** ~~3.1.5.11.~~**Gypsum Board**	Renumbered Article.
3.1.5.12. Combustible Insulation and its Protection 1) *Combustible* insulation, other than *foamed plastics*, is permitted in a *building* required to be of *noncombustible construction* provided that it has 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, where the insulation is not protected as described in Sentences (3) and (4).	**3.1.5.14.** ~~***3.1.5.12.***~~**Combustible Insulation** ~~**and its Protection**~~ (See Notes A-3.1.4.2. and A-3.1.4.2.(1).) **1)** Foamed plastic insulation shall conform to Article 3.1.5.15. **2)** ~~1)~~ *Combustible* insulation~~, other than *foamed plastics*, is permitted in a *building* required to be of *noncombustible construction* provided that it has~~ with 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, ~~where the insulation is not protected as described in Sentences (3) and (4).2)*Foamed*~~ is permitted in a building required to be of non-combustible construction. **3)** *Combustible* insulation is permitted to be installed above roof decks, outside of	

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	foundation walls below ground level, and beneath concrete slabs-on-ground of *buildings* required to be of *noncombustible construction*. **4)** Except as provided in Sentences (5) and (6), *combustible* insulation with a *flame-spread rating* more than 25 but not more than 500 on any exposed surface, or any surface that would be exposed by cutting through the material in any direction, is permitted in a *building* required to be of *noncombustible construction*, provided the insulation is protected from adjacent space in the *building*, other than adjacent concealed spaces within wall assemblies, by a thermal barrier consisting of a) not less than 12.7 mm thick gypsum board mechanically fastened to a supporting assembly independent of the insulation, b) lath and plaster, mechanically fastened to a supporting assembly independent of the insulation, c) masonry, or d) concrete. **5)** *Combustible* insulation with a *flame-spread rating* more than 25 but not more than 500 on any exposed surface, or any surface that would be exposed by cutting through the material in any direction, is permitted in the exterior walls of a *building* required to be of *noncombustible construction* that is not *sprinklered* and is more than 18 m high, measured from *grade* to the underside of the roof, provided the insulation is protected from adjacent space in the *building*, other than adjacent concealed spaces within wall assemblies, by a thermal barrier consisting of a) gypsum board not less than 12.7 mm thick, mechanically fastened to a supporting assembly independent of the insulation and with all joints either backed or taped and filled, b) lath and plaster, mechanically fastened to a supporting assembly independent of the insulation, c) masonry or concrete not less than 25 mm thick, or d) any thermal barrier that, when tested in conformance with CAN/ULC-S101, "Fire Endurance Tests of Building Construction and Materials," will not develop an average temperature rise more than 140°C or a maximum temperature rise more than 180°C at any point on its unexposed face within 10 min (see Note A-3.1.5.14.(5)(d)) (see also Article 3.2.3.7.). **6)** *Combustible* insulation with a *flame-spread rating* more than 25 but not more than 500 on any exposed surface, or any surface that would be exposed by cutting through the material in any direction, is permitted in the interior walls, within ceilings and within roof assemblies of a *building* required to be of *noncombustible construction* that is not *sprinklered* and is more than 18 m high, measured from *grade* to the underside of the roof, provided the insulation is protected from adjacent space in the *building*, other than adjacent concealed spaces within wall assemblies, by a thermal barrier consisting of a) Type X gypsum board not less than 15.9 mm thick, mechanically fastened to a supporting assembly independent of the insulation and with all joints either	

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	backed or taped and filled, conforming to i) ASTM C 1177/C 1177M, "Glass Mat Gypsum Substrate for Use as Sheathing," ii) ASTM C 1178/C 1178M, "Coated Glass Mat Water-Resistant Gypsum Backing Panel," iii) ASTM C 1396/C 1396M, "Gypsum Board," iv) ASTM C 1658/C 1658M, "Glass Mat Gypsum Panels," or v) CAN/CSA-A82.27-M, "Gypsum Board," b) non-*loadbearing* masonry or concrete not less than 50 mm thick, c) *loadbearing* masonry or concrete not less than 75 mm thick, or d) any thermal barrier that, when tested in conformance with CAN/ULC-S101, "Fire Endurance Tests of Building Construction and Materials," i) does not develop an average temperature rise more than 140°C or a maximum temperature rise more than 180°C at any point on its unexposed face within 20 min, and ii) remains in place for not less than 40 min.	
3.1.5.12. Combustible Insulation and its Protection 2) *Foamed plastic* insulation having 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, is permitted in a *building* required to be of *noncombustible construction* provided the insulation is protected from adjacent space in the *building*, other than adjacent concealed spaces within wall assemblies, by a *thermal barrier* consisting of a) not less than 12.7 mm thick gypsum board mechanically fastened to a supporting assembly independent of the insulation, b) lath and plaster, mechanically fastened to a supporting assembly independent of the insulation, c) masonry, d) concrete, or e) any *thermal barrier* that meets the requirements of classification B when tested in conformance with CAN/ULC-S124, "Test for the Evaluation of Protective Coverings for Foamed Plastic" (see Appendix A). 3) *Combustible* insulation having a *flame-spread rating* more than 25 but not more than 500 on an exposed surface, or any surface that would be exposed by cutting through the material in any direction, is permitted in the exterior walls of a *building* required to be of *noncombustible construction*, provided the insulation is protected from adjacent space in the *building*, other than adjacent concealed spaces within wall assemblies, by a *thermal barrier* as described in Sentence (2), except that in a *building* that is not *sprinklered* throughout and is more than 18 m high, measured between *grade* and the floor level of the top *storey*, the insulation shall be protected by a *thermal barrier* consisting of a) gypsum board not less than 12.7 mm thick, mechanically fastened to a	**3.1.5.15. Foamed Plastic Insulation** (See Notes A-3.1.4.2. and A-3.1.4.2.(1).) **1)** Foamed plastic insulation is permitted to be installed above roof decks, outside of *foundation* walls below ground level, and beneath concrete slabs-on-ground of a *building* required to be of *noncombustible construction*. **2)** Except as provided in Sentences (3) and (4), foamed plastic insulation ~~Having~~ with a *flame-spread rating* not more than ~~25~~ 500 on any exposed surface, or any surface that would be exposed by cutting through the material in any direction, is permitted in a *building* required to be of *noncombustible construction*, provided the insulation is protected from adjacent space in the *building*, other than adjacent concealed spaces within wall assemblies, by a thermal barrier consisting of a) not less than 12.7 mm thick gypsum board mechanically fastened to a supporting assembly independent of the insulation, b) lath and plaster, mechanically fastened to a supporting assembly independent of the insulation, c) masonry, d) concrete, or e) any thermal barrier that meets the requirements of classification B when tested in conformance with CAN/ULC-S124, "Test for the Evaluation of Protective Coverings for Foamed Plastic~~" (see Appendix A)~~." **3)** ~~*Combustible*~~ Foamed plastic insulation ~~having~~ with a *flame-spread rating* more than 25 but not more than 500 on ~~an~~ any exposed surface, or any surface that would be exposed by cutting through the material in any direction, is permitted in the exterior walls of a *building* required to be of *noncombustible construction*~~, provided the insulation is protected from adjacent space in the *building*, other than adjacent concealed spaces~~	Combustible insulation and Foam plastic are in separate Articles. "Foamed plastic" is no longer a defined term. See 3.1.5.6. and 3.1.5.7

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supporting assembly independent of the insulation and with all joints either backed or taped and filled, b) lath and plaster, mechanically fastened to a supporting assembly independent of the insulation, c) masonry or concrete not less than 25 mm thick, or d) any *thermal barrier* that, when tested in conformance with CAN/ULC-S101, "Fire Endurance Tests of Building Construction and Materials," will not develop an average temperature rise more than 140°C or a maximum temperature rise more than 180°C at any point on its unexposed face within 10 min (see also Article 3.2.3.7.).	~~within wall assemblies, by a *thermal barrier* as described in Sentence (2), except that in a *building*~~ that is not *sprinklered* ~~throughout~~ and is more than 18 m high, measured ~~between~~ from *grade* ~~and~~ to the ~~floor level~~ underside of the ~~top *storey,*~~ roof, provided the insulation ~~shall be~~ is protected from adjacent space in the building, other than adjacent concealed spaces within wall assemblies, by a thermal barrier consisting of a) gypsum board not less than 12.7 mm thick, mechanically fastened to a supporting assembly independent of the insulation and with all joints either backed or taped and filled, b) lath and plaster, mechanically fastened to a supporting assembly independent of the insulation, c) masonry or concrete not less than 25 mm thick, or d) any thermal barrier that, when tested in conformance with CAN/ULC-S101, "Fire Endurance Tests of Building Construction and Materials," ~~will~~ does not develop an average temperature rise more than 140°C or a maximum temperature rise more than 180°C at any point on its unexposed face within 10 min (see Note A-3.1.5.14.(5)(d)) (see also Article 3.2.3.7.).	
3.1.5.12. Combustible Insulation and its Protection 4) *Combustible* insulation having a *flame-spread rating* more than 25 but not more than 500 on any exposed surface, or any surface that would be exposed by cutting through the material in any direction, is permitted in the interior walls, within ceilings and within roof assemblies of a *building* required to be of *noncombustible construction*, provided the insulation is protected from adjacent space in the *building*, other than adjacent concealed spaces within wall assemblies, by a *thermal barrier* as described in Sentence (2), except that in a *building* that is not *sprinklered* throughout and is more than 18 m high, measured between *grade* and the floor level of the top *storey*, the insulation shall be protected by a *thermal barrier* consisting of a) Type X gypsum board not less than 15.9 mm thick, mechanically fastened to a supporting assembly independent of the insulation and with all joints either backed or taped and filled, conforming to i) ASTM C 1396/C 1396M, "Gypsum Board," or ii) CAN/CSA-A82.27-M, "Gypsum Board," b) non-*loadbearing* masonry or concrete not less than 50 mm thick, c) *loadbearing* masonry or concrete not less than 75 mm thick, or d) any *thermal barrier* that, when tested in conformance with CAN/ULC-S101, "Fire Endurance Tests of Building Construction and Materials," i) will not develop an average temperature rise more than 140°C or a maximum temperature rise more than 180°C at any point on its unexposed face within 20 min, and ii) will remain in place for not less than 40min. 5) *Combustible* insulation, including *foamed plastics*, installed above roof decks,	**3.1.5.15. Foamed Plastic Insulation** **4)** ~~*Combustible*~~ Foamed plastic insulation ~~having~~ with a *flame-spread rating* more than 25 but not more than 500 on any exposed surface, or any surface that would be exposed by cutting through the material in any direction, is permitted in the interior walls, within ceilings and within roof assemblies of a *building* required to be of *non-combustible construction*~~, provided the insulation is protected from adjacent space in the *building*, other than adjacent concealed spaces within wall assemblies, by a *thermal barrier* as described in Sentence (2), except that in a *building*~~ that is not *sprinklered* ~~throughout~~ and is more than 18 m high, measured ~~between~~ from *grade* ~~and~~ to the ~~floor level~~ underside of the ~~top *storey,*~~ roof, provided the insulation ~~shall be~~ is protected from adjacent space in the building, other than adjacent concealed spaces within wall assemblies, by a thermal barrier consisting of a) Type X gypsum board not less than 15.9 mm thick, mechanically fastened to a supporting assembly independent of the insulation and with all joints either backed or taped and filled, conforming to i) ASTM C 1177/C 1177M, "Glass Mat Gypsum Substrate for Use as Sheathing," ii) ASTM C 1178/C 1178M, "Coated Glass Mat Water-Resistant Gypsum Backing Panel," iii) ~~i)~~ ASTM C 1396/C 1396M, "Gypsum Board," or iv) ~~ii)~~ CAN/CSA-A82.27-M, "Gypsum Board," b) non-*loadbearing* masonry or concrete not less than 50 mm thick, c) *loadbearing* masonry or concrete not less than 75 mm thick, or d) any thermal barrier that, when tested in conformance with CAN/ULC-S101, "Fire Endurance Tests of Building Construction and Materials,"	"Foamed plastic" is no longer a defined term. Combustible insulation and Foam plastic are in separate Articles. See 3.1.5.6. and 3.1.5.7

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outside of *foundation* walls below ground level and beneath concrete slabs-on-ground is permitted to be used in a *building* required to be of *noncombustible construction*. 6) Thermosetting *foamed plastic* insulation having a *flame-spread rating* not more than 500 that forms part of a factory-assembled exterior wall panel that does not incorporate an air space is permitted to be used in a *building* required to be of *noncombustible construction* provided a) the *foamed plastic* is protected on both sides by sheet steel not less than 0.38 mm thick that will remain in place for not less than 10 min when the wall panel is tested in conformance with CAN/ULC-S101, "Fire Endurance Tests of Building Construction and Materials," b) the *flame-spread rating* of the wall panel, determined by subjecting a sample including an assembled joint to the appropriate test described in Subsection 3.1.12., is not more than the *flame-spread rating* permitted for the room or space that it bounds, c) the *building* does not contain a Group B or Group C *major occupancy*, and d) the *building* is not more than 18 m high, measured between *grade* and the floor level of the top *storey*. 7) A factory-assembled non-*loadbearing* interior or exterior wall or ceiling panel containing *foamed plastic* insulation having a *flame-spread rating* of not more than 500 is permitted to be used in a *building* required to be of *noncombustible construction* provided a) the *building* is *sprinklered*, b) the *building* is not more than 18 m high, measured between *grade* and the floor level of the uppermost *storey*, c) the *building* does not contain a Group A, Group B, or Group C *major occupancy*, d) the panel does not contain an air space, e) the panel, when tested in conformance with CAN/ULC-S138, "Test for Fire Growth of Insulated Building Panels in a Full-Scale Room Configuration," meets the criteria defined in the document, and f) the *flame-spread rating* of the panel, determined by subjecting a sample that includes an assembled joint typical of field installation to the appropriate test described in Subsection 3.1.12., is not more than the *flame-spread rating* permitted for the room or space that it bounds.	i) ~~will~~ does not develop an average temperature rise more than 140°C or a maximum temperature rise more than 180°C at any point on its unexposed face within 20 min, and ii) ~~will remain~~ remains in place for not less than 40 min. ~~5) *Combustible* insulation, including *foamed plastics*, installed above roof decks, outside of *foundation* walls below ground level and beneath concrete slabs-on-ground is permitted to be used in a *building* required to be of *noncombustible construction*.~~ ~~6)Thermosetting *foamed plastic* insulation having a *flame-spread rating* not more than 500 that forms part of a factory-assembled exterior wall panel that does not incorporate an air space is permitted to be used in a *building* required to be of *noncombustible construction* provided~~ ~~a)the *foamed plastic* is protected on both sides by sheet steel not less than 0.38 mm thick that will remain in place for not less than 10 min when the wall panel is tested in conformance with CAN/ULC-S101, "Fire Endurance Tests of Building Construction and Materials,"~~ ~~b)the *flame-spread rating* of the wall panel, determined by subjecting a sample including an assembled joint to the appropriate test described in Subsection 3.1.12., is not more than the *flame-spread rating* permitted for the room or space that it bounds,~~ ~~c)the *building* does not contain a Group B or Group C *major occupancy*, and~~ ~~d)the *building* is not more than 18 m high, measured between *grade* and the floor level of the top *storey*.~~ ~~7)A factory-assembled non-*loadbearing* interior or exterior wall or ceiling panel containing *foamed plastic* insulation having a *flame-spread rating* of not more than 500 is permitted to be used in a *building* required to be of *noncombustible construction* provided~~ ~~a)the *building* is *sprinklered*,~~ ~~b)the *building* is not more than 18 m high, measured between *grade* and the floor level of the uppermost *storey*,~~ ~~c)the *building* does not contain a Group A, Group B, or Group C *major occupancy*,~~ ~~d)the panel does not contain an air space,~~ ~~a)the panel, when tested in conformance with CAN/ULC-S138, "Test for Fire Growth of Insulated Building Panels in a Full-Scale Room Configuration," meets the criteria defined in the document, andb)the *flame-spread rating* of the panel, determined by subjecting a sample that includes an assembled joint typical of field installation to the appropriate test described in Subsection 3.1.12., is not more than the *flame-spread rating* permitted for the room or space that it bounds.~~	
3.1.8.4. Determination of Ratings	**3.1.8.4. Determination of Ratings and Classifications** **1)** Except as permitted by Sentences (2) and ~~3.1.8.14.~~ 3.1.8.16.(1), the *fire-protection rating* of a *closure* shall be determined ~~based on the results of tests conducted in~~	Inserted new Sentence (3) and (4)

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1) Except as permitted by Sentences (2) and 3.1.8.14.(1), the *fire-protection rating* of a *closure* shall be determined based on the results of tests conducted in conformance with the appropriate provisions in a) CAN/ULC-S104, "Fire Tests of Door Assemblies," b) CAN4-S106-M, "Fire Tests of Window and Glass Block Assemblies," or c) CAN/ULC-S112, "Fire Test of Fire Damper Assemblies." (See Articles 3.1.8.15. to 3.1.8.17. for additional requirements for *closures*.) **2)** Except as permitted by Sentence 3.1.8.10.(1), the *fire-protection rating* of a *closure* shall conform to Table 3.1.8.4. for the required *fire-resistance rating* of the *fire separation*.	~~conformance with the appropriate provisions in~~ in accordance with a) CAN/ULC-S104, "Fire Tests of Door Assemblies," b) CAN~~4~~/ULC-S~~106-M,~~106, "Fire Tests of Window and Glass Block Assemblies," or c) CAN/ULC-S112, "Fire Test of Fire Damper Assemblies." (See Articles ~~3.1.8.15. to~~ 3.1.8.17. to 3.1.8.19. for additional requirements for *closures*.) **2)** Except as permitted by Sentence ~~3.1.8.10.~~ 3.1.8.12.(1), the *fire-protection rating* of a *closure* shall conform to Table 3.1.8.4. for the required *fire-resistance rating* of the *fire separation*. **3)** The leakage rate of smoke dampers and combination smoke/*fire dampers* shall a) be determined in accordance with the applicable provisions in CAN/ULC-S112.1, "Leakage Rated Dampers for Use in Smoke Control Systems," and b) conform to Class I, II or III of that standard. **4)** The leakage rate of a door assembly shall be determined in accordance with ANSI/UL-1784, "Air Leakage Tests of Door Assemblies and Other Opening Protectives." ***** No Change for Table 3.1.8.4.*****	
3.1.5.13. Combustible Elements in Partitions	**3.1.5.16. ~~3.1.5.13.~~Combustible Elements in Partitions**	Renumbered Article 3.1.5.13 to 3.1.5.21
3.1.5.14. Storage Lockers in Residential Buildings	**3.1.5.17. ~~3.1.5.14.~~Storage Lockers in Residential Buildings**	
3.1.5.15. Combustible Ducts	**3.1.5.18. ~~3.1.5.15.~~Combustible Ducts**	
3.1.5.16. Combustible Piping Materials	**3.1.5.19. ~~3.1.5.16.~~Combustible Piping Materials**	
3.1.5.17. Combustible Plumbing Fixtures	**3.1.5.20. ~~3.1.5.17.~~Combustible Plumbing Fixtures**	
3.1.5.18. Wires and Cables	**3.1.5.21. ~~3.1.5.18.~~Wires and Cables**	
3.1.5.19. Combustible Travelling Cables for Elevators	**3.1.5.22. ~~3.1.5.19.~~Combustible Travelling Cables for Elevators**	
3.1.5.20. Non-metallic Raceways	**3.1.5.23. ~~3.1.5.20.~~Non-metallic Raceways**	
3.1.5.21. Decorative Wood Cladding	**3.1.5.24. ~~3.1.5.21.~~Decorative Wood Cladding**	
3.1.8.5. Installation of Closures **1)** Except where *fire dampers*, window assemblies and glass block are used as *closures*, *closures* of the same *fire-protection rating* installed on opposite sides of the same opening are deemed to have a *fire-protection rating* equal to the sum of the *fire-protection ratings* of the *closures*. (See A-3.1.8.1.(2) in Appendix A.) **2)** Except as otherwise specified in this Part, every door, window assembly or glass block used as a *closure* in a required *fire separation* shall be installed in conformance with NFPA 80, "Fire Doors and Other Opening Protectives." (See A-3.1.8.1.(2) in Appendix A.) **3)** If a door is installed such that it could damage the integrity of a *fire separation* if its swing is unrestricted, door stops shall be installed to prevent the damage. **4)** Protective guarding devices shall be a) provided where necessary to prevent damage to the mechanical components of doors in *fire separations*, and b) installed so as not to interfere with the proper operation of the doors.	**3.1.8.5. Installation of Closures** **1)** Except where *fire dampers*, window assemblies and glass block are used as *closures*, *closures* of the same *fire-protection rating* installed on opposite sides of the same opening are deemed to have a *fire-protection rating* equal to the sum of the *fire-protection ratings* of the *closures*. (See Note A-3.1.8.1.(2) in Appendix A.) **2)** Except as otherwise specified in this Part, every door, *fire damper,* window assembly or glass block used as a *closure* in a required *fire separation* shall be installed in conformance with NFPA 80, "Fire Doors and Other Opening Protectives." (See Note A-3.1.8.1.(2) ~~in Appendix A.~~.) **3)** Except as otherwise specified in this Part, every smoke damper or combination smoke/*fire damper* used as a *closure* in a required *fire separation* shall be installed in conformance with NFPA 105, "Smoke Door Assemblies and Other Opening Protectives." **4)** ~~**3)**~~ If a door is installed such that it could damage the integrity of a *fire separation* if its swing is unrestricted, door stops shall be installed to prevent the	Inserted new Sentence (3), (6), and (7)

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	damage. **5)** ~~**4)**~~ Protective guarding devices shall be a) provided where necessary to prevent damage to the mechanical components of doors in *fire separations*, and b) installed so as not to interfere with the proper operation of the doors. **6)** A leakage-rated door assembly complying with Sentence 3.1.8.4.(4) shall be installed in a) *fire separations* in protected *floor areas* referred to in Clause 3.3.1.7.(1)(b), b) *fire separations* in *care* or *treatment occupancies* referred to in Sentence 3.3.3.5.(4), and c) *firewalls* that are a *horizontal exit* referred to in Sentence 3.3.3.5.(3). **7)** Leakage-rated door assemblies required by Sentence (6) shall be installed in accordance with NFPA 105, "Smoke Door Assemblies and Other Opening Protectives."	
3.1.8.7. Fire Dampers 1) Except as permitted by Article 3.1.8.8., a duct that penetrates an assembly required to be a *fire separation* shall be equipped with a *fire damper*. 2) A *fire damper* required by Sentence (1) shall have a *fire-protection rating* conforming to Sentence 3.1.8.4.(2).	**3.1.8.7. Location of Fire Dampers and Smoke Dampers** **1)** Except as ~~permitted by~~ provided in Article 3.1.8.8., a ~~duct that penetrates an assembly required to be a *fire separation* shall be equipped with a~~ *fire damper*~~.~~ ~~**2)**A *fire damper* required by Sentence (1) shall have~~ having a *fire-protection rating* conforming to Sentence 3.1.8.4.(2) shall be installed in conformance with Article 3.1.8.10. in ducts or air-transfer openings that penetrate an assembly required to be a fire separation. **2)** Except as provided in Article 3.1.8.9., a smoke damper or a combination smoke/*fire damper* shall be installed in conformance with Article 3.1.8.11. in ducts or air-transfer openings that penetrate an assembly required to be a *fire separation*, where the *fire separation* a) separates a *public corridor*, b) contains an egress door referred to in Sentence 3.4.2.4.(2), c) serves an *assembly*, *care*, *treatment*, *detention* or *residential occupancy*, or d) is installed to meet the requirements of Clause 3.3.1.7.(1)(b) or Sentence 3.3.3.5.(4).	Inserted new Sentence (2)
3.1.8.8. Fire Dampers Waived 1) *Fire dampers* need not be provided in *noncombustible* branch ducts that have a melting point above 760°C and that penetrate a required *fire separation* provided the ducts a) serve only air-conditioning units or combined air-conditioning and heating units discharging air not more than 1.2 m above the floor and have a cross-sectional area not more than 0.013 m_2, or b) are connected to *exhaust duct* risers that are under negative pressure and in which the airflow is upward as required by Article 3.6.3.4. and the branch ducts are carried up inside the riser not less than 500 mm. 2) A duct penetrating a vertical *fire separation* not required to have a *fire-resistance rating* need not be equipped with a *fire damper* at the *fire separation*. 3) A *noncombustible* duct that penetrates a horizontal *fire separation* not required to	**3.1.8.8. Fire Dampers Waived** **1)** ~~*Fire dampers* need not be provided in *noncombustible* branch ducts that have a melting point above 760°C and that penetrate a required *fire separation* provided the ducts~~ Except as provided in Sentence (2), the requirement for *fire dampers* stated in Sentence 3.1.8.7.(1) is permitted to be waived for a) ducts that serve commercial cooking equipment (see also Article 6.3.1.7.), b) continuous noncombustible ducts having a melting point above 760°C that penetrate a vertical fire separation required by Sentence 3.3.1.1.(1) between suites of assembly, mercantile, low-hazard industrial, medium-hazard industrial or high-hazard industrial occupancy, c) ducts or air-transfer openings that penetrate a vertical *fire separation* not required to have a *fire-resistance rating*, or d) *noncombustible* ducts or air-transfer openings that penetrate a horizontal *fire*	Sentence (6) moved to a new article, see 3.1.8.9.

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have a *fire-resistance rating* need not be equipped with a *fire damper* at the *fire separation*. 4) A *noncombustible* duct that penetrates a *fire separation* that separates a *vertical service space* from the remainder of the *building* need not be equipped with a *fire damper* at the *fire separation* provided a) the duct has a melting point above 760°C, and b) each individual duct exhausts directly to the outside at the top of the *vertical service space*. 5) A continuous *noncombustible* duct having a melting point above 760°C that penetrates a vertical *fire separation* as required by Sentence 3.3.1.1.(1) between *suites* of other than *residential*, *care*, *treatment* or *detention occupancy* need not be equipped with a *fire damper* at the *fire separation*, provided the duct is tightly sealed at the penetration on all sides and extends for at least 1 m on both sides of the *fire separation* without any openings. 6) A duct that serves commercial cooking equipment and penetrates a required *fire separation* need not be equipped with a *fire damper* at the *fire separation*. (See also Article 6.2.2.7.)	*separation* not required to have a *fire-resistance rating.* **2)** The requirement for *fire dampers* stated in Sentence 3.1.8.7.(1) is permitted to be waived for *noncombustible* branch ducts having a melting point above 760°C that penetrate a *fire separation,* a) provided the ducts i) ~~a)~~ have a cross-sectional area not more than 0.013 m2 and serve only air-conditioning units or combined air-conditioning and heating units discharging air not more than 1.2 m above the floor ~~and have a cross-sectional area not more than 0.013 m2,~~, or ii) ~~b) are connected to~~ extend not less than 500 mm inside *exhaust duct* risers that are under negative pressure and in which the airflow is upward as required by Article ~~3.6.3.4. and the branch ducts are carried up inside the riser not less than 500 mm.~~3.6.3.4., or ~~**2)**A duct penetrating a vertical *fire separation* not required to have a *fire-resistance rating* need not be equipped with a *fire damper* at the *fire separation*.~~ ~~**3)**A *noncombustible* duct that penetrates a horizontal *fire separation* not required to have a *fire-resistance rating* need not be equipped with a *fire damper* at the *fire separation*.~~ b) ~~**4)**A *noncombustible* duct that penetrates a~~ where the *fire separation* ~~that~~ separates a *vertical service space* from the remainder of the ~~*building* need not be equipped with a *fire damper* at the *fire separation*~~, provided ~~a)the duct has a melting point above 760°C, andb)~~ each individual duct exhausts directly to the ~~outside~~ outdoors at the top of the *vertical service space*. ~~**5)**A continuous *noncombustible* duct having a melting point above 760°C that penetrates a vertical *fire separation* as required by Sentence 3.3.1.1.(1) between *suites* of other than *residential*, *care*, *treatment* or *detention occupancy* need not be equipped with a *fire damper* at the *fire separation*, provided the duct is tightly sealed at the penetration on all sides and extends for at least 1 m on both sides of the *fire separation* without any openings.~~ ~~**6)** A duct that serves commercial cooking equipment and penetrates a required *fire separation* need not be equipped with a *fire damper* at the *fire separation*. (See alsoArticle 6.2.2.7.)~~	
	3.1.8.9. Smoke Dampers Waived	Inserted new article
3.1.8.9. Installation of Fire Dampers	**3.1.8.10. ~~3.1.8.9.~~Installation of Fire Dampers**	Renumbered Article
	3.1.8.11. Installation of Smoke Dampers	Inserted new article
3.1.8.10. Twenty-Minute Closures	**3.1.8.12. ~~3.1.8.10.~~Twenty-Minute Closures**	Renumbered Article
3.1.8.11. Self-closing Devices	**3.1.8.13. ~~3.1.8.11.~~Self-closing Devices**	Renumbered Article

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3.1.8.12. Hold-Open Devices **1)** A hold-open device is permitted on a door in a required *fire separation*, other than an *exit* stair door in a *building* more than 3 *storeys* in *building height*, and on a door for a vestibule required by Article 3.3.5.7., provided the device is designed to release the door in conformance with Sentences (2), (3) and (4). **2)** Except as required by Sentence (3), a hold-open device permitted by Sentence (1) shall be designed to release by a signal from a) an automatic sprinkler system, b) a heat-actuated device, or c) a *smoke detector* located as described in CAN/ULC-S524, "Installation of Fire Alarm Systems." **3)** A hold-open device permitted by Sentence (1) shall be designed to release upon a signal from a *smoke detector* located as described in CAN/ULC-S524, "Installation of Fire Alarm Systems," if used on a) an *exit* door, b) a door opening into a *public corridor*, c) an egress door referred to in Sentence 3.4.2.4.(2), d) a door serving i) an *assembly occupancy*, ii) a *care occupancy*, iii) a *treatment occupancy*, iv) a *detention occupancy*, or v) a *residential occupancy*, or e) a door required to function as part of a smoke control system. **4)** A hold-open device permitted by Sentence (1) shall be designed to release upon a signal from the *building* fire alarm system if a fire alarm system is provided, except that this requirement does not apply to a) a hold-open device on a door located between a corridor used by the public and an adjacent sleeping room in a *treatment occupancy*, or b) a hold-open device that is designed to release by a heat-actuated device in conformance with Sentence (2).	**3.1.8.14. ~~3.1.8.12.~~ Hold-Open Devices** **1)** ~~A~~ Except as provided in Sentences 3.1.8.10.(2) and 3.1.8.11.(3), a hold-open device is permitted to be used on a door *closure* in a required *fire separation*, other than on an *exit* stair door in a *building* more than 3 *storeys* in *building height*, and on a door for a vestibule required by Article 3.3.5.7., provided the device is designed to release the ~~door~~ *closure* in conformance with ~~Sentences (2), (3) and (4)~~ this Article. **2)** Except as ~~required by Sentence (3)~~provided in Sentences (5) and (6), where the *building* is provided with a fire alarm system, a hold-open device permitted by Sentence (1) shall ~~be designed to~~ release ~~by a signal from~~ a) ~~an automatic sprinkler system,~~in a single-stage system, upon any signal from the fire alarm system, and b) in a 2-stage system, i) ~~b)a heat-actuated device, or~~ upon any *alert signal* from the fire alarm system, or ii) upon actuation of any adjacent *smoke detectors*. **3)** ~~c) a *smoke detector*~~ Where the *building* is provided with a fire alarm system, a hold-open device permitted by Sentence (1) shall release upon a signal from a *smoke detector* connected to the fire alarm system and located as described in CAN/ULC-S524, "Installation of Fire Alarm Systems." ~~A hold-open device permitted by Sentence (1) shall be designed to release upon a signal from a *smoke detector* located as described in CAN/ULC-S524, "Installation of Fire Alarm Systems," if,~~"where the hold-open device is used on a) an *exit* door, b) a door opening into a *public corridor*, c) an egress door referred to in Sentence 3.4.2.4.(2), d) a ~~door~~ *closure* serving ~~i)~~ an *assembly* ~~*occupancy*,ii)a~~ *care* ~~*occupancy*,iii)a~~ *treatment* ~~*occupancy*,iv)a~~ *detention* ~~*occupancy*~~, or ~~v)a~~ *residential occupancy*, e) a door in a *fire separation* referred to in Clause 3.3.1.7.(1)(b) or Sentence 3.3.3.5.(4), or f) ~~e)~~ a door required to function as part of a smoke control system. **4)** ~~A~~ Where the *building* is not provided with a fire alarm system, a hold-open device permitted by Sentence (1) shall ~~be designed to~~ release upon a signal from ~~the *building* fire alarm system if a fire alarm system is provided, except that this requirement does not apply toa)a hold-open device~~ a *smoke alarm* located on each side of the *fire separation* at ceiling level within 1.5 m horizontally of the *closure* opening in the *fire separation*, where the hold-open device is used on *closures* described in Clauses (3)(a) to (e). **5)** Where a hold-open device is used on *closures* other than those described in Sentences (3) and (4), it is permitted to be released upon actuation of a heat-actuated device. **6)** A hold-open device used on a door located between a corridor used by the public and an adjacent sleeping room in a *treatment occupancy*~~, orb)a hold-open device that is designed to release by a heat-actuated device in conformance with~~ need not release automatically as stated in Sentence (2).	Inserted new Sentence (5)
3.1.8.13. Door Latches	**3.1.8.15. ~~3.1.8.13.~~Door Latches**	Renumbered Article 3.1.8.13 to 3.1.8.17.

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3.1.8.14. Wired Glass and Glass Block	**3.1.8.16. ~~3.1.8.14.~~Wired Glass and Glass Block**	
3.1.8.15. Temperature Rise Limit for Doors	**3.1.8.17. ~~3.1.8.15.~~Temperature Rise Limit for Doors**	
3.1.8.16. Area Limits for Wired Glass and Glass Block	**3.1.8.18. ~~3.1.8.16.~~Area Limits for Wired Glass and Glass Block**	
3.1.8.17. Temperature Rise and Area Limits Waived	**3.1.8.19. ~~3.1.8.17.~~Temperature Rise and Area Limits Waived**	
3.1.9.3. Penetration by Wires, Cables and Outlet Boxes 6) Outlet boxes that penetrate opposite sides of a wall assembly shall be offset where necessary to maintain the integrity of the *fire separation*.	**3.1.9.3. Penetration by Wires, Cables and Outlet Boxes** ~~6) Outlet boxes that penetrate opposite sides of a wall assembly shall be offset where necessary to maintain the integrity of the *fire separation*.~~	Removed 3.1.9.3.(6), See new article 3.1.9.4
3.1.9.3. Penetration by Wires, Cables and Outlet Boxes 6) Outlet boxes that penetrate opposite sides of a wall assembly shall be offset where necessary to maintain the integrity of the *fire separation*.	**3.1.9.4. Penetration by Outlet Boxes** (See Note A-3.1.9.4.) **1)** Except as provided in Sentence (2), outlet boxes are permitted to penetrate the membrane of an assembly required to have a *fire-resistance rating*, provided they are sealed at the penetration by a *fire stop* that has an FT rating not less than the *fire-resistance rating* of the *fire separation* when subjected to the fire test method in CAN/ULC-S115, "Fire Tests of Firestop Systems." **2)** Except as provided in Sentences 3.1.9.1.(2) and (3), *noncombustible* outlet boxes that penetrate a vertical *fire separation* or a membrane forming part of an assembly required to have a *fire-resistance rating* need not conform to Sentence (1), provided a) they do not exceed i) 0.016 m2 in area, and ii) an aggregate area of 0.065 m2 in any 9.3 m2 of surface area, and b) the annular space between the membrane and the *noncombustible* electrical outlet boxes does not exceed 3 mm. **3)** In addition to the requirements of Sentence (2), outlet boxes on opposite sides of a vertical *fire separation* having a *fire-resistance rating* shall be separated by a) a horizontal distance of not less than 600 mm, or b) a *fire block* conforming to Article 3.1.11.7.	Inserted new article.
3.1.9.4. Combustible Piping Penetrations	**3.1.9.5. ~~3.1.9.4.~~ Combustible Piping Penetrations**	Renumbered Article
3.1.9.5. Openings through a Membrane Ceiling	**3.1.9.6. ~~3.1.9.5.~~ Openings through a Membrane Ceiling**	Renumbered Article
3.1.9.6. Plenums	**3.1.9.7. ~~3.1.9.6.~~ Plenums**	Renumbered Article
3.1.10.3. Continuity of Firewalls 3) In a *building* of *noncombustible construction*, a *firewall*may be offset at any intermediate floor construction, provided a) the *fire separation* for the complete *firewall* assembly is continuous, b) the offset floor construction and all supporting elements have a *fire-resistance rating* not less than that required for the *firewall*, and c) the materials conform to Sentence 3.1.10.2.(3).	**3.1.10.3. Continuity of Firewalls** ~~3)In a *building of noncombustible construction*, a *firewall* may be offset at any intermediate floor construction, provided~~ ~~a)the *fire separation* for the complete *firewall* assembly is continuous,~~ ~~b)the offset floor construction and all supporting elements have a *fire-resistance rating* not less than that required for the *firewall*, and~~ ~~c)the materials conform to Sentence 3.1.10.2.(3).~~	Removed Alberta specific sentence 3.1.10.3(3).
3.1.11.7. Fire Block Materials **1)** Except as permitted by Sentences (2) to (4) and (7), materials used to separate concealed spaces into compartments shall remain in place and prevent the passage of flames for not less than 15 min when subjected to the standard fire exposure in CAN/ULC-S101, "Fire Endurance Tests of Building Construction and Materials."	**3.1.11.7. Fire Block Materials** **1)** Except as permitted by Sentences (2) to (4) and (7), ~~materials used to separate concealed spaces into compartments~~ *fire blocks* shall remain in place and prevent the passage of flames for not less than 15 min when subjected to the standard fire exposure in CAN/ULC-S101, "Fire Endurance Tests of Building	

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2) Gypsum board not less than 12.7 mm thick and sheet steel not less than 0.38 mm thick need not be tested in conformance with Sentence (1), provided all joints have continuous support. **3)** In a *building* required to be of *noncombustible construction*, wood nailing elements described in Article 3.1.5.6. need not be tested in conformance with Sentence (1). **4)** In a *building* permitted to be of *combustible construction*, in a *combustible* roof system permitted by Sentence 3.1.5.3.(2), and in a raised platform permitted by Sentence 3.1.5.8.(2), materials used to separate concealed spaces into compartments are permitted to be a) solid lumber not less than 38 mm thick, b) phenolic bonded plywood, waferboard, or strandboard not less than 12.5 mm thick with joints supported, or c) two thicknesses of lumber, each not less than 19 mm thick with joints staggered, where the width or height of the concealed space requires more than one piece of lumber not less than 38 mm thick to block off the space. ……(5), (6), (7)	Construction and Materials." **2)** Gypsum board not less than 12.7 mm thick and sheet steel not less than 0.38 mm thick need not be tested in conformance with Sentence (1), provided all joints have continuous support. **3)** In a *building* required to be of *noncombustible construction*, wood nailing elements described in Article ~~3.1.5.6.~~ 3.1.5.8. need not be tested in conformance with Sentence (1). **4)** In a *building* permitted to be of *combustible construction*, in a *combustible* roof system permitted by Sentence 3.1.5.3.(2), and in a raised platform permitted by Sentence ~~3.1.5.8.(2), materials used to separate concealed spaces into compartments~~3.1.5.10.(2), *fire blocks* are permitted to be a) solid lumber or a structural composite lumber product conforming to ASTM D 5456, "Evaluation of Structural Composite Lumber Products," not less than 38 mm thick, b) phenolic bonded plywood, waferboard, or oriented strandboard not less than 12.5 mm thick with joints supported, or c) two thicknesses of lumber or a structural composite lumber product conforming to ASTM D 5456, "Evaluation of Structural Composite Lumber Products," each not less than 19 mm thick with joints staggered, where the width or height of the concealed space requires more than one piece of lumber or structural composite lumber product not less than 38 mm thick to block off the space. ……(5), (6), (7)	
3.1.13.6. Corridors **1)** Except as permitted by Sentences (2) and (3), the *flame-spread rating* shall be not more than 75 for the interior wall finish of a) a *public corridor*, b) a corridor used by the public in an *assembly occupancy*, or c) a corridor serving classrooms. **2)** The *flame-spread rating* limit specified in Sentence (1) does not apply to corridors referred to in Sentence (1) provided the *flame-spread rating* is not more than a) 25 on the upper half of the wall, and b) 150 on the lower half of the wall. **3)** The *flame-spread rating* limits specified in Sentences (1) and (2) for corridors referred to in Sentence (1) does not apply to a corridor in which the *flame-spread rating* is not more than 150 provided the *building* is *sprinklered* throughout. **4)** The *flame-spread rating* limits specified in Sentences (1), (2) and (3) apply to *occupancies* in the corridor as well as to the corridor itself. **5)** Except in a *building* that is *sprinklered* throughout, the interior ceiling finish of corridors and *occupancies* referred to in Sentences (1) and (4) shall have a *flame-spread rating* not more than 25.	**3.1.13.6. Corridors** **1)** Except as permitted by Sentences (2) and (3), the *flame-spread rating* shall be not more than 75 for the interior wall finish of a) a *public corridor*, b) a corridor used by the public in an *assembly occupancy*, or c) a corridor serving classrooms. **2)** The *flame-spread rating* ~~limit~~ for corridors specified in Sentence (1) ~~does not apply to corridors referred to in Sentence (1)~~ is permitted to be waived, provided the *flame-spread rating* is not more than a) 25 on the upper half of the wall, and b) 150 on the lower half of the wall. **3)** ~~The~~ Where the *floor area* is *sprinklered* throughout, the *flame-spread* ~~*rating* Limits~~ *ratings* for corridors specified in Sentences (1) and (2) ~~for corridors referred to in Sentence (1) does not apply to a corridor in which the *flame-spread rating* is not more than 150 provided the *building* is *sprinklered* throughout.~~ shall be not more than 150. **4)** The *flame-spread* ~~*rating* limits~~ *ratings* specified in Sentences (1), (2) and (3) apply to *occupancies* in the corridor as well as to the corridor itself.	Inserted new sentence (6).

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	5) Except ~~in a *building* that is *sprinklered* throughout~~ as provided in Sentence (6), the interior ceiling finish of corridors and *occupancies* referred to in Sentences (1) and (4) shall have a *flame-spread rating* not more than 25. **6)** Where the *floor area* is *sprinklered* throughout, the *flame-spread rating* of the interior ceiling finish of corridors and *occupancies* referred to in Sentences (1) and (4) shall be not more than 150.	
3.1.15.2. Roof Coverings **2)** A roof covering is not required to have a Class A, B or C classification for a) a tent, b) an *air-supported structure*, or c) a *building* of Group A, Division 2 *occupancy* not more than 2 *storeys* in *building height* and not more than 1 000 m2 in *building area* provided the roof covering is underlaid with *noncombustible* material.	**3.1.15.2. Roof Coverings** **2)** A roof covering is not required to have a Class A, B or C classification for a) a tent, b) an *air-supported structure*, ~~or~~ c) a *building* of Group A, Division 2 *occupancy* not more than 2 *storeys* in *building height* and not more than 1 000 m2 in *building area* provided the roof covering is underlaid with *noncombustible* material, or d) a steel *building* system referred to in Article 4.3.4.3., provided the roof covering consists of brick, masonry, concrete, metal sheets or metal shingles.	Inserted new Clause (2)(d).
3.2.1.7. Automatic Fire Suppression Systems 3) In addition to the requirements for sprinklers under Subsection 3.2.2., all *floor areas* or parts of *floor areas* of *residential occupancy* shall be *sprinklered*.	**3.2.1.7. Automatic Fire Suppression Systems** ~~3) In addition to the requirements for sprinklers under Subsection 3.2.2., all *floor areas* or parts of *floor areas* of *residential occupancy* shall be *sprinklered*.~~	All residential buildings are sprinklered in Alberta
3.2.2.7. Superimposed Major Occupancies **3)** A *building* that is wholly constructed in accordance with the *building area* and construction requirements of Article 3.2.2.50. is permitted to contain a) Group A, Division 2 and Group E *major occupancies* below the second *storey*, or b) a *storage garage* above the third *storey* (see also Sentence 4.4.2.1.(1).). **4)** A *building* that is wholly constructed in accordance with the *building area* and construction requirements of Article 3.2.2.58. shall not contain a) Group A, Division 2, Group E, and Group F, Division 2 or 3 *major occupancies* above the second *storey*, or b) a *storage garage* above the third *storey* (see also Sentence 4.4.2.1.(1).).	**3.2.2.7. Superimposed Major Occupancies** **3)** A *building* that is wholly constructed in accordance with the *building area* and construction requirements of Article 3.2.2.50. ~~is permitted to~~ shall not contain a) Group A, Division 2 and Group E *major occupancies* ~~below~~ above the ~~third~~ second *storey*, ~~and~~ or b) a *storage garage* ~~below~~ above the ~~fourth~~ third *storey* (see also Sentence 4.4.2.1.(1)~~.~~). **4)** A *building* that is wholly constructed in accordance with the *building area* and construction requirements of Article 3.2.2.58. ~~is permitted to~~ shall not contain a) Group A, Division 2, Group E, and Group F, Division 2 or 3 *major occupancies* ~~below~~ above the ~~third~~ second *storey*, ~~and~~ or b) a *storage garage* ~~below~~ above the ~~fourth~~ third *storey* (see also Sentence 4.4.2.1.(1)~~.~~).	
3.2.2.25. Group A, Division 2, up to 3 Storeys (See also Article 3.2.1.7.) **1)** A *building* classified as Group A, Division 2 is permitted to conform to Sentence (2) provided a) it is not more than 3 *storeys* in *building height*, and b) it has a *building area* not more than the value in Table 3.2.2.25.	**3.2.2.25. Group A, Division 2, up to ~~3~~2 Storeys** (See also Article 3.2.1.7.) **1)** A *building* classified as Group A, Division 2 is permitted to conform to Sentence (2) provided a) it is not more than ~~3~~2 *storeys* in *building height*, and b) it has a *building area* not more than the value in Table 3.2.2.25.	

<table>
<tr><th>ABC 2014</th><th>NBC(AE) 2019</th><th>Comments</th></tr>
<tr>
<td>
Table 3.2.2.25.
Maximum Building Area, Group A, Division 2, up to 3 Storeys
Forming Part of Sentence 3.2.2.25.(1)
<table>
<tr><td rowspan="2">No. of Storeys</td><td colspan="3">Maximum Area, m2</td></tr>
<tr><td>Facing 1 Street</td><td>Facing 2 Streets</td><td>Facing 3 Streets</td></tr>
<tr><td>1</td><td>1 600</td><td>2 000</td><td>2 400</td></tr>
<tr><td>2</td><td>800</td><td>1 000</td><td>1 200</td></tr>
<tr><td>3</td><td>400</td><td>500</td><td>600</td></tr>
</table>
</td>
<td>
Table 3.2.2.25.
Maximum Building Area, Group A, Division 2, up to ~~3~~2 Storeys
Forming Part of Sentence 3.2.2.25.(1)
<table>
<tr><td rowspan="2">No. of Storeys</td><td colspan="3">Maximum Area, m2</td></tr>
<tr><td>Facing 1 Street</td><td>Facing 2 Streets</td><td>Facing 3 Streets</td></tr>
<tr><td>1</td><td>1 600</td><td>2 000</td><td>2 400</td></tr>
<tr><td>2</td><td>800</td><td>1 000</td><td>1 200</td></tr>
<tr><td>~~3~~</td><td>~~400~~</td><td>~~500~~</td><td>~~600~~</td></tr>
</table>
</td>
<td></td>
</tr>
<tr>
<td>3.2.2.26. Group A, Division 2, up to 3 Storeys, Increased Area, Sprinklered
1) A building classified as Group A, Division 2 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 throughout,
b) it is not more than 3 storeys in building height, and
c) it has a building area not more than
i) 4 800 m2 if 1 storey in building height,
ii) 2 400 m2 if 2 storeys in building height, or
iii) 1 200 m2 if 3 storeys in building height.</td>
<td>3.2.2.26. Group A, Division 2, up to ~~3~~2 Storeys, Increased Area, Sprinklered
1) A building classified as Group A, Division 2 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 throughout,
b) it is not more than ~~3~~2 storeys in building height, and
c) it has a building area not more than
i) 4 800 m2 if 1 storey in building height, or
ii) 2 400 m2 if 2 storeys in building height~~, or~~
~~iii) 1 200 m2 if 3 storeys in building height~~.</td>
<td></td>
</tr>
<tr>
<td>3.2.2.56. Reserved</td>
<td>
3.2.2.56 Group D, up to 6 Storeys
1) A building classified as Group D is permitted to conform to Sentence (2) provided
a) it is not more than 6 storeys in building height, and
b) it has a building area not more than the value in Table 3.2.2.56.

Table 3.2.2.56.
Maximum Building Area, Group D, up to 6 Storeys
Forming Part of Sentence 3.2.2.56.(1)
<table>
<tr><td rowspan="2">No. of Storeys</td><td colspan="3">Maximum Area, m^2</td></tr>
<tr><td>Facing 1 Street</td><td>Facing 2 Streets</td><td>Facing 3 Streets</td></tr>
</table>
</td>
<td>Article harmonized with NBC</td>
</tr>
</table>

<table>
<tr><th>ABC 2014</th><th>NBC(AE) 2019</th><th>Comments</th></tr>
<tr><td></td><td>
<table>
<tr><td>1</td><td>not limited</td><td>not limited</td><td>not limited</td></tr>
<tr><td>2</td><td>7 200</td><td>not limited</td><td>not limited</td></tr>
<tr><td>3</td><td>4 800</td><td>6 000</td><td>7 200</td></tr>
<tr><td>4</td><td>3 600</td><td>4 500</td><td>5 400</td></tr>
<tr><td>5</td><td>2 880</td><td>3 600</td><td>4 320</td></tr>
<tr><td>6</td><td>2 400</td><td>3000</td><td>3 600</td></tr>
</table>
2) The building referred to in Sentence (1) shall be of noncombustible construction, and
a) floor assemblies shall be fire separations with a fire-resistance rating not less than 1 h,
b) mezzanines shall have a fire-resistance rating not less than 1 h,
c) roof assemblies shall have a fire-resistance rating not less than 1 h, except that in a building not more than 1 storey in building height this requirement is waived, and
d) loadbearing walls, columns and arches shall have a fire-resistance rating not less than that required for the supported assembly.
</td><td></td></tr>
<tr><td>
3.2.3.1. Limiting Distance and Area of Unprotected Openings
5) Except for buildings that are sprinklered, where the limiting distance is 2 m or less, individual unprotected openings in an exposing building face shall be no greater than
a) the area stated in Table 3.2.3.1.A., or
b) where the limiting distance is equal to or greater than 1.2 m, the area calculated by

Area = 0.24 (2 x LD – 1.2)^2
where
Area = area of the unprotected opening, and
LD = limiting distance.

Table 3.2.3.1.A.
Maximum Concentrated Area of Unprotected Openings
Forming Part of Sentence 3.2.3.1.(5)
<table>
<tr><th>Limiting Distance, m</th><th>Maximum Area of Individual Unprotected Openings, m^2</th></tr>
<tr><td>Less than 1.2</td><td>0</td></tr>
<tr><td>1.2</td><td>0.35</td></tr>
<tr><td>1.5</td><td>0.78</td></tr>
<tr><td>2.0</td><td>1.88</td></tr>
</table>
</td><td>
3.2.3.1. Limiting Distance and Area of Unprotected Openings
5) Except for buildings that are sprinklered, where the limiting distance is 2 m or less, individual unprotected openings in an exposing building face shall be no greater than
a) the area stated in Table 3.2.3.1.A., or
b) where the limiting distance is equal to or greater than 1.2 m, the area calculated by

Area = 0.24 (2 x LD – 1.2)^2
where
Area = area of the unprotected opening, and
LD = limiting distance.

Table 3.2.3.1.A.
Maximum Concentrated Area of Unprotected Openings
Forming Part of Sentence 3.2.3.1.(5)
<table>
<tr><th>Limiting Distance, m</th><th>Maximum Area of Individual Unprotected Openings, m^2</th></tr>
<tr><td>~~Less than 1.2~~</td><td>~~0~~</td></tr>
<tr><td>1.2</td><td>0.35</td></tr>
<tr><td>1.5</td><td>0.78</td></tr>
<tr><td>2.0</td><td>1.88</td></tr>
</table>
</td><td>Article harmonized with NBC</td></tr>
</table>

<table>
<tr><th>ABC 2014</th><th>NBC(AE) 2019</th><th>Comments</th></tr>
<tr><td>

7) For the purpose of Sentence (6),
a) “single room or space” shall mean
i) two or more adjacent spaces having a full-height separating wall extending less than 1.5 m from the interior face of the exterior wall, or
ii) two or more stacked spaces that are on the same *storey*, and
b) two adjacent rooms or spaces are permitted to be considered as separate spaces where there is a full-height wall extending not less than 1.5 m from the interior face of the exterior wall, finished in accordance with Subsections 9.29.4. or 9.29.5.

</td><td>

7) For the purpose of Sentence (6), ~~a)~~ “single room or space” shall mean
a) ~~i)~~ two or more adjacent spaces having a full-height separating wall extending less than 1.5 m from the interior face of the exterior wall, or
b) ~~ii)~~ two or more stacked spaces that are on the same *storey*~~, and~~.
~~b) two adjacent rooms or spaces are permitted to be considered as separate spaces where there is a full-height wall extending not less than 1.5 m from the interior face of the exterior wall, finished in accordance with Subsections 9.29.4. or 9.29.5.~~

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Table 3.2.3.1.B.
Unprotected Opening Limits for a Building or Fire Compartment that is not Sprinklered Throughout
Forming Part of Article 3.2.3.1

<table>
<tr><td colspan="2">*Exposing Building Face*</td><td>Area of *Unprotected Opening* for Groups A, D, and F, Division 3 *Occupancies*, %</td></tr>
<tr><td>Max. Area, m^2</td><td>Ratio (L/H or H/L)[1]</td><td>*Limiting Distance*, m</td></tr>
</table>

Notes to Table 3.2.3.1.B:
(1) Apply whichever ratio is greater.
L = Length of *exposing building face*
H = Height of *exposing building face*

</td><td>

Table 3.2.3.1.-B.
Unprotected Opening Limits for a Building or Fire Compartment that is not Sprinklered Throughout
Forming Part of Article 3.2.3.1

<table>
<tr><td colspan="2">*Exposing Building Face*</td><td>Area of *Unprotected Opening* for Groups A, C,[1] D, and F, Division 3 *Occupancies*, %</td></tr>
<tr><td>Max. Area, m^2</td><td>Ratio (L/H or H/L)~~[1]~~[2]</td><td>*Limiting Distance*, m</td></tr>
</table>

Notes to Table 3.2.3.1.-B:
(1) The inclusion of Group C *occupancy* in this Table applies to Part 9 residential buildings and not to Part 3 buildings, which are all sprinklered.
(2) Apply whichever ratio is greater.
L = Length of *exposing building face*
H = Height of *exposing building face*

</td><td></td></tr>
<tr><td>

3.2.3.6. Combustible Projections
2) Where the *exposing building face* has a *limiting distance* of not more than 0.45 m, projecting roof soffits shall not be constructed above the *exposing building face*. (See Appendix A.)
3) Where the *exposing building face* has a *limiting distance* of more than 0.45 m, the face of roof soffits above the *exposing building face* shall not project to less than 0.45 m from the property line. (See A-3.2.3.6.(2) in Appendix A.)

4) Where roof soffits project to less than 1.2 m from the property line, the centre line of a lane or public thoroughfare, or from an imaginary line between two *buildings* or *fire compartments* on the same property, they shall

</td><td>

3.2.3.6. Combustible Projections
2) Except as provided in Sentence (4), where the *exposing building face* has a *limiting distance* of not more than 0.45 m, projecting roof soffits shall not be constructed above the *exposing building face*. (See Note A-3.2.3.6.(2).)
3) Except as provided in Sentence (4), where the *exposing building face* has a *limiting distance* of more than 0.45 m, the face of roof soffits ~~above the *exposing building face*~~ shall not project to less than 0.45 m from the property line. (See Note A-3.2.3.6.(2).)
4) The face of a roof soffit is permitted to project to the property line, where it faces a *street*, lane or public thoroughfare. (See Note A-9.10.14.5.(11) and 9.10.15.5.(10).)

~~4~~**5)** Where roof soffits project to less than 1.2 m ~~from the property line,~~ the centre line of a lane or public thoroughfare, or from an imaginary line between two *buildings* or *fire compartments* on the same property, they shall

</td><td></td></tr>
</table>

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a) have no openings, and b) be protected by i) not less than 0.38 mm thick sheet steel, ii) unvented aluminum conforming to CAN/CGSB-93.2-M, “Prefinished Aluminum Siding, Soffits, and Fascia, for Residential Use,” iii) not less than 12.7 mm thick gypsum soffit board or gypsum ceiling board installed according to CSA A82.31-M, “Gypsum Board Application,” iv) not less than 11 mm thick plywood, v) not less than 12.5 mm thick OSB or waferboard, or vi) not less than 11 mm thick lumber. **5)** For *buildings* of *combustible construction*, materials installed to provide the required protection of soffits may be covered with a *combustible* or *noncombustible* finish material.	a) have no openings, and b) be protected by i) not less than 0.38 mm thick sheet steel, ii) unvented aluminum conforming to CAN/CGSB-93.2-M, “Prefinished Aluminum Siding, Soffits, and Fascia, for Residential Use,” iii) not less than 12.7 mm thick gypsum soffit board or gypsum ceiling board installed according to CSA A82.31-M, “Gypsum Board Application,” iv) not less than 11 mm thick plywood, v) not less than 12.5 mm thick OSB or waferboard, or vi) not less than 11 mm thick lumber. ~~5~~**6)** For *buildings* of *combustible construction*, materials installed to provide the required protection of soffits may be covered with a *combustible* or *noncombustible* finish material.	
3.2.3.7. Construction of Exposing Building Face **3)** Except as provided in Sentence (4) and Article 3.1.4.8., cladding for *buildings* or *fire compartments* where the maximum permitted area of *unprotected openings* is more than 10% of the *exposing building face* need not be *noncombustible* where the wall assembly complies with the requirements of Sentences 3.1.5.5.(1), (3) and (4) when tested in conformance with CAN/ULC-S134, “Fire Test of Exterior Wall Assemblies.” **4)** Except as provided in Article 3.1.4.8., cladding for *buildings* or *fire compartments* where the maximum permitted area of *unprotected openings* is more than 25% but not more than 50% of the *exposing building face* need not be *noncombustible* where a) the *limiting distance* is greater than 5 m, b) the *building* or *fire compartment* and all *combustible* attic and roof spaces are *sprinklered* throughout, c) the cladding i) conforms to Subsections 9.27.6. , 9.27.7. , 9.27.8. , 9.27.9. or 9.27.10., ii) is installed without furring members, or on furring not more than 25 mm thick, over gypsum sheathing at least 12.7 mm thick or over masonry, and iii) after conditioning in conformance with ASTM D 2898, “Accelerated Weathering of Fire-Retardant-Treated Wood for Fire Testing,” has a *flame-spread rating* not greater than 25 on the exterior face when tested in accordance with Sentence 3.1.12.1.(1), or d) the cladding i) conforms to Subsection 9.27.12., ii) is installed with or without furring members over gypsum sheathing at least 12.7 mm thick or over masonry,	**3.2.3.7. Construction of Exposing Building Face** **3)** Except as provided in ~~Sentence (4) and~~ Article 3.1.4.8., the requirement in Table 3.2.3.7. for *noncombustible* cladding for *buildings* or *fire compartments* where the maximum permitted area of *unprotected openings* is more than 10% of the *exposing building face* ~~need not be *noncombustible* where the wall assembly complies with the requirements of Sentences 3.1.5.5.(1), (3) and (4) when tested in conformance with CAN/ULC-S134, “Fire Test of Exterior Wall Assemblies.”~~ is permitted to be waived for exterior wall assemblies that comply with Article 3.1.5.5. **4)** Except as provided in Article 3.1.4.8., the requirement in Table 3.2.3.7. for *noncombustible* cladding for *buildings* or *fire compartments* where the maximum permitted area of *unprotected openings* is more than 25% but not more than 50% of the *exposing building face* ~~need not be *noncombustible*~~ is permitted to be waived where a) the *limiting distance* is greater than 5 m, b) the *building* or *fire compartment* and all *combustible* attic and roof spaces are *sprinklered* throughout, c) the cladding i) conforms to Subsections 9.27.6. , 9.27.7. , 9.27.8. , 9.27.9. or 9.27.10., ii) is installed without furring members, or on furring not more than 25 mm thick, over gypsum sheathing at least 12.7 mm thick or over masonry, and iii) after conditioning in conformance with ASTM D 2898, “Accelerated Weathering of Fire-Retardant-Treated Wood for Fire Testing,” has a *flame-spread rating* not greater than 25 on the exterior face when tested in accordance with Sentence 3.1.12.1.(1), ~~or~~ d) the cladding i) conforms to Subsection 9.27.12., ii) is installed with or without furring members over gypsum sheathing at least 12.7 mm thick or over masonry,	

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iii) has a *flame-spread rating* not greater than 25 when tested in accordance with Sentence 3.1.12.1.(2), and iv) does not exceed 2 mm in thickness exclusive of fasteners, joints and local reinforcements. **5)** Where Table 3.2.3.7. permits an area of *unprotected openings* of more than 10% but not more than 25% of the *exposing building face*, the requirements for *noncombustible* cladding shall be waived for wall assemblies that comply with Article 3.1.5.5. (See Appendix A.) **6)** The construction requirements for the *exposing building face* stated in Sentences (1) and (2) shall be satisfied before increasing the *unprotected opening* area as permitted by Sentence 3.2.3.12.(1).	iii) has a *flame-spread rating* not greater than 25 when tested in accordance with Sentence 3.1.12.1.(2), and iv) does not exceed 2 mm in thickness exclusive of fasteners, joints and local reinforcements~~.~~, or e) the exterior wall assembly complies with Article 3.1.5.5. ~~**5)** Where Table 3.2.3.7. permits an area of *unprotected openings* of more than 10% but not more than 25% of the *exposing building face*, the requirements for *noncombustible* cladding shall be waived for wall assemblies that comply with Article 3.1.5.5. (See Appendix A.)~~ ~~6~~**5)** The construction requirements for the *exposing building face* stated in Sentences (1) and (2) shall be satisfied before increasing the *unprotected opening* area as permitted by Sentence 3.2.3.12.(1).	
3.2.3.8. **Protection of Exterior Building Face** **1)** Except as permitted by Sentence (3) and in addition to the requirements of Sentences 3.2.3.7.(1) and (2) and where the maximum permitted area of *unprotected openings* is greater than 10% of the *exposing building face*, *foamed plastic* insulation used in an exterior wall of a *building* more than 3 *storeys* in *building height* shall be protected on its exterior surface by	***3.2.3.8.*** **Protection of Exterior Building Face** **1)** Except as permitted by Sentence (3) and in addition to the requirements of Sentences 3.2.3.7.(1) and (2) and where the maximum permitted area of *unprotected openings* is greater than 10% of the *exposing building face*, ~~*foamed plastic*~~ foamed plastic insulation used in an exterior wall of a *building* more than 3 *storeys* in *building height* shall be protected on its exterior surface by	
3.2.4.1. Determination of Requirement for a Fire Alarm System **1)** Except as permitted in Sentences (2), (3) and (5) to (7), and Sentence 3.2.4.2.(4), a fire alarm system shall be installed in *buildings* in which an automatic sprinkler system is installed. (See Appendix A.) **2)** *Buildings* in which a sprinkler system is installed in accordance with NFPA 13D, "Installation of Sprinkler Systems in One- and Two-Family Dwellings and Manufactured Homes," need not comply with Sentence (1). **3)** *Buildings* that contain fewer than 9 sprinklers conforming to Sentence 3.2.5.12.(4) need not comply with Sentence (1). **4)** Except as permitted by Sentences (5) to (7) and Sentence 3.2.4.2.(4), a fire alarm system shall be installed in a *building* that is not *sprinklered* throughout and that contains a) a *contained use area*, b) an *impeded egress zone*, c) more than 3 *storeys*, including the *storeys* below the *first storey*, d) a total *occupant load* more than 300, other than in open air seating areas, e) an *occupant load* more than 150 above or below the *first storey*, other than in open air seating areas, f) a school, college, or child care facility, including a daycare facility, with an *occupant load* more than 40, g) a licensed beverage establishment or a *restaurant*, with an *occupant load* more than 150, h) a *medium-hazard industrial occupancy* or a *low-hazard industrial occupancy* with an *occupant load* more than 75 above or below the *first storey*,	**3.2.4.1. Determination of Requirement for a Fire Alarm System** **1)** Except as permitted in Sentences (2), (3) and (5) ~~to (7), and Sentence 3.2.4.2.(4)~~, a fire alarm system shall be installed in *buildings* in which an automatic sprinkler system is installed. ~~(See Appendix A.)~~ **2)** *Buildings* in which a sprinkler system is installed in accordance with NFPA 13D, "Installation of Sprinkler Systems in One- and Two-Family Dwellings and Manufactured Homes," need not comply with Sentence (1). **3)** *Buildings* that contain fewer than 9 sprinklers conforming to Sentence 3.2.5.12.(4) need not comply with Sentence (1). **4)** Except as permitted by ~~Sentences~~ Sentence (5) ~~to (7)~~ and Sentence 3.2.4.2.(4), a fire alarm system shall be installed in a *building* that is not *sprinklered* throughout and that contains a) a *contained use area*, b) an *impeded egress zone*, c) more than 3 *storeys*, including the *storeys* below the *first storey*, d) a total *occupant load* more than 300, other than in open air seating areas, e) an *occupant load* more than 150 above or below the *first storey*, other than in open air seating areas, f) a school, college, or child ~~care~~ *care* facility, including a daycare facility, with an *occupant load* more than 40, g) a licensed beverage establishment or a licensed *restaurant*, with an *occupant load* more than 150, h) a ~~*medium-hazard industrial occupancy* or a~~ *low-hazard industrial occupancy* with an *occupant load* more than 75 above or below the *first storey*,	Care defined (italicized) in error

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i) a *residential occupancy* with sleeping accommodation for more than 10 persons, j) a *high-hazard industrial occupancy* with an *occupant load* more than 25, or k) an *occupant load* more than 300 below an open air seating area. **5)** Where each *dwelling unit* in an apartment *building* has direct access to an exterior *exit* facility leading to ground level, a fire alarm system is not required if a) not more than 4 *dwelling units* share a common *means of egress*, or b) the *building* is not more than 3 *storeys* in *building height*. **6)** A fire alarm system is not required in a hotel or motel 3 *storeys* or less in *building height* provided each *suite* has direct access to an exterior *exit* facility leading to ground level. **7)** A fire alarm system is not required in a *storage garage* conforming to Article 3.2.2.90. provided there are no other *occupancies* in the *building*.	i) a ~~*residential* *medium-hazard industrial*~~ *occupancy* with ~~sleeping accommodation for~~ an *occupant load* more than ~~10 persons~~ 75 above or below the *first storey*, j) a *high-hazard industrial occupancy* with an *occupant load* more than 25, or k) an *occupant load* more than 300 below an open air seating area. ~~5) Where each *dwelling unit* in an apartment *building* has direct access to an exterior *exit* facility leading to ground level, a fire alarm system is not required if~~ ~~a) not more than 4 *dwelling units* share a common *means of egress*, or~~ ~~b) the *building* is not more than 3 *storeys* in *building height*.~~ ~~6) A fire alarm system is not required in a hotel or motel 3 *storeys* or less in *building height* provided each *suite* has direct access to an exterior *exit* facility leading to ground level.~~ **5)** ~~7)~~ A fire alarm system is not required in a *storage garage* conforming to Article 3.2.2.90. that is contained in a *building* that is not *sprinklered* provided there are no other *occupancies* in the *building*.	
3.2.4.6. Commissioning of Life Safety and Fire Protection Systems **1)** Where life safety and fire protection systems are installed to comply with the provisions of this Code or the Alberta Fire Code 2014, the commissioning of these integrated systems must be performed as a whole to ensure the proper operation and inter-relationship between the systems. (See Appendix A.)	~~**3.2.4.6. Commissioning of Life Safety and Fire Protection Systems**~~ ~~1) Where life safety and fire protection systems are installed to comply with the provisions of this Code or the Alberta Fire Code 2014, the commissioning of these integrated systems must be performed as a whole to ensure the proper operation and inter-relationship between the systems. (See Appendix A.)~~	Moved to Subsection 3.2.9.
3.2.4.7. Silencing of Alarm Signals	**3.2.4.6.** ~~**3.2.4.7.**~~ **Silencing of Alarm Signals**	
3.2.4.8. Signals to Fire Department	**3.2.4.7.** ~~**3.2.4.8.**~~ **Signals to Fire Department**	
3.2.4.9. Annunciator and Zone Indication	**3.2.4.8.** ~~**3.2.4.9.**~~ **Annunciator and Zone Indication**	
3.2.4.10. Electrical Supervision	**3.2.4.9.** ~~**3.2.4.10.**~~ **Electrical Supervision**	
3.2.4.11. Fire Detectors	**3.2.4.10.** ~~**3.2.4.11.**~~ **Fire Detectors**	
3.2.4.12. Smoke Detectors	**3.2.4.11.** ~~**3.2.4.12.**~~ **Smoke Detectors**	
3.2.4.13. Prevention of Smoke Circulation	**3.2.4.12.** ~~**3.2.4.13.**~~ **Prevention of Smoke Circulation**	
3.2.4.14. Vacuum Cleaning System Shutdown	**3.2.4.13.** ~~**3.2.4.14.**~~ **Vacuum Cleaning System Shutdown**	
3.2.4.15. Elevator Emergency Return	**3.2.4.14.** ~~**3.2.4.15.**~~ **Elevator Emergency Return**	
3.2.4.16. System Monitoring	**3.2.4.15.** ~~**3.2.4.16.**~~ **System Monitoring**	
3.2.4.17. Manual Stations	**3.2.4.16.** ~~**3.2.4.17.**~~ **Manual Stations**	

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3.2.4.18. Alert and Alarm Signals	**3.2.4.17. ~~3.2.4.18.~~ Alert and Alarm Signals**	
3.2.4.19. Audibility of Alarm Systems	**3.2.4.18. ~~3.2.4.19.~~ Audibility of Alarm Systems**	
3.2.4.20. Visual Signals (See Appendix A.) **1)** Visual signal devices shall be installed in addition to audible signal devices in *buildings* required to have a fire alarm system and shall conform to CAN/ULC-S526, "Visible Signal Devices for Fire Alarm Systems Including Accessories." **2)** Visual signal devices required by Sentence (1) shall be installed so that the signal from at least one device is visible within a *suite* in which they are installed.	**3.2.4.19. ~~3.2.4.20.~~ Visual Signals** ~~(See Appendix A.)~~ **1)** ~~Visual signal devices~~ Where a fire alarm system is installed, visual signals shall be ~~installed~~ provided in addition to ~~audible signal devices in *buildings* required to have a fire alarm system and shall conform to CAN/ULC-S526, "Visible Signal Devices for Fire Alarm Systems Including Accessories."~~*alarm signals* in a) *buildings* or portions thereof intended for use primarily by persons with a hearing impairment, b) *assembly occupancies* in which music and other sounds associated with performances could exceed 100 dBA, c) any *floor area* in which the ambient noise level is more than 87 dBA, d) any *floor area* in which the occupants i) use ear protection devices, ii) are located in an audiometric booth, or iii) are located in sound-insulating enclosures, e) *public corridors*, f) corridors used by the public and in a *floor area* or part thereof where the public may congregate serving a Group A *major occupancy*, g) corridors used by the public or serving patients' or residents' sleeping rooms in a Group B *major occupancy*, h) washrooms, except i) those located within *suites* of *residential occupancy*, ii) those located within *suites* of *care occupancy*, iii) those located within patients' sleeping rooms, and iv) single toilet rooms, i) universal washrooms provided in accordance with Article 3.8.3.12., and j) *suites* of *residential occupancy*, such that at least one device is located within the principal living area. **2)** Visual signal devices required by Sentence (1) shall be installed so that the signal from at least one device is visible ~~within a *suite*~~ throughout the *floor area* or portion thereof in which they are installed. (See Note A-3.2.4.19.(2).)	
3.2.4.21. Smoke Alarms **1)** Except as required by Sentence (4) and permitted by Sentence (7), *smoke alarms* conforming to CAN/ULC-S531, "Smoke-Alarms," shall be installed in each *dwelling*	**3.2.4.20. ~~3.2.4.21.~~ Smoke Alarms** **1)** Except as provided in Article 3.2.4.21., *smoke alarms* shall be installed in accordance with this Article.	

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unit and, except for *care*, *treatment* or *detention occupancies* required to have a fire alarm system, in each sleeping room not within a *dwelling unit* or *suite* of *care occupancy*.	**2)** Except as required by Sentence ~~(4) and permitted by Sentence (7), *smoke alarms*~~ (5) and permitted by Sentence (8), *smoke alarms* conforming to CAN/ULC-S531, "Smoke-Alarms," shall be installed in each *dwelling unit* and, except for *care*, t*reatment* or *detention occupancies* required to have a fire alarm system, in each sleeping room not within a *dwelling unit* or *suite* of *care occupancy*.	
2) At least one *smoke alarm* shall be installed on each *storey* of a *dwelling unit* or *suite* of *care occupancy*.	**3 ~~2~~)** At least one *smoke alarm* shall be installed on each *storey* of a *dwelling unit* or *suite* of *care occupancy*.	
3) On any *storey* of a *dwelling unit* containing sleeping rooms, a *smoke alarm* shall be installed a) in each sleeping room, and b) 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.	**4 ~~3~~)** On any *storey* of a *dwelling unit* containing sleeping rooms, a *smoke alarm* shall be installed a) in each sleeping room, and b) 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.	
4) Where a *care occupancy* has individual *suites* for residents, a *smoke alarm* shall be installed a) in each sleeping room, and b) in a location between the sleeping rooms and the remainder of the *suite*, and if the sleeping rooms are served by a corridor within the *suite*, the *smoke alarm* shall be located in the corridor.	**5 ~~4~~)** Where a *care occupancy* has individual *suites* for residents, a *smoke alarm* shall be installed a) in each sleeping room, and b) in a location between the sleeping rooms and the remainder of the *suite*, and if the sleeping rooms are served by a corridor within the *suite*, the *smoke alarm* shall be located in the corridor.	
5) A *smoke alarm* shall be installed on or near the ceiling.	**6 ~~5~~)** A *smoke alarm* shall be installed on or near the ceiling.	
6) Except as permitted in Sentence (7), *smoke alarms* referred in Sentence (1) shall a) be installed with permanent connections to an electrical circuit (see Appendix A), b) have no disconnect switch between the overcurrent device and the *smoke alarm*, and c) in case the regular power supply to the *smoke alarm* is interrupted, be provided with a battery as an alternative power source that can continue to provide power to the *smoke alarm* for a period of no less than 7 days in the normal condition, followed by 4 minutes of alarm.	**7 ~~6~~)** Except as permitted in Sentence (8~~7~~), *smoke alarms* referred in Sentence (2~~1~~) shall a) be installed with permanent connections to an electrical circuit (see ~~Appendix A~~ Note A-3.2.4.20.(7)(a)), b) have no disconnect switch between the overcurrent device and the *smoke alarm*, and c) in case the regular power supply to the *smoke alarm* is interrupted, be provided with a battery as an alternative power source that can continue to provide power to the *smoke alarm* for a period of no less than 7 days in the normal condition, followed by 4 minutes of alarm.	
7) *Suites* of *residential occupancy* are permitted to be equipped with *smoke detectors* in lieu of *smoke alarms*, provided the *smoke detectors* a) are capable of independently sounding audible signals within the individual *suites*, b) except as permitted in Sentence (8), are installed in conformance with CAN/ULC-S524, "Installation of Fire Alarm Systems," and c) form part of the fire alarm system. (See Appendix A.)	**8 ~~7~~)** *Suites* of *residential occupancy* are permitted to be equipped with *smoke detectors* in lieu of *smoke alarms*, provided the *smoke detectors* a) are capable of independently sounding audible signals within the individual *suites*, b) except as permitted in Sentence (9~~8~~), are installed in conformance with CAN/ULC-S524, "Installation of Fire Alarm Systems," and c) form part of the fire alarm system. (See ~~Appendix A~~ Note A-3.2.4.20.(8).)	
8) *Smoke detectors* permitted to be installed in lieu of *smoke alarms* as stated in Sentence (7) are permitted to sound localized alarms within individual *suites*, and need not sound an alarm throughout the rest of the *building*.	**9 ~~8~~)** *Smoke detectors* permitted to be installed in lieu of *smoke alarms* as stated in Sentence (8~~7~~) are permitted to sound localized alarms within individual *suites*, and need not sound an alarm throughout the rest of the *building*.	

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9) If more than one *smoke alarm* is required in a *dwelling unit*, the *smoke alarms* shall be wired so that the actuation of one *smoke alarm* will cause all *smoke alarms* within the *dwelling unit* to sound. **10)** A *smoke alarm* required by Sentence (1) shall be installed in conformance with CAN/ULC-S553, "Installation of Smoke-Alarms." **11)** Except as permitted in Sentence (12), a manually operated silencing device shall be incorporated within the circuitry of a *smoke alarm* installed in a *dwelling unit* so that it will silence the signal emitted by the *smoke alarm* for a period of not more than 10 min, after which the *smoke alarm* will reset and again sound the alarm if the level of smoke in the vicinity is sufficient to reactuate the *smoke alarm*. **12)** *Suites* of *residential occupancy* equipped with *smoke detectors* installed to CAN/ULC-S524, "Installation of Fire Alarm Systems," as part of the fire alarm system in lieu of *smoke alarms* as permitted by Sentence (7), need not incorporate the manually operated device required in Sentence (11). (See A-3.2.4.21.(7) in Appendix A.) **13)** The sound patterns of *smoke alarms* shall a) meet the temporal patterns of *alarm signals* (see A-3.2.4.19.(2) in Appendix A), or b) be a combination temporal pattern and voice relay	**10 ~~9~~)** If more than one *smoke alarm* is required in a *dwelling unit*, the *smoke alarms* shall be wired so that the actuation of one *smoke alarm* will cause all *smoke alarms* within the *dwelling unit* to sound. **11 ~~10~~)** A *smoke alarm* required by Sentence (2~~1~~) shall be installed in conformance with CAN/ULC-S553, "Installation of Smoke-Alarms." **12 ~~11~~)** Except as permitted in Sentence (13~~12~~), a manually operated silencing device shall be incorporated within the circuitry of a *smoke alarm* installed in a *dwelling unit* so that it will silence the signal emitted by the *smoke alarm* for a period of not more than 10 min, after which the *smoke alarm* will reset and again sound the alarm if the level of smoke in the vicinity is sufficient to reactuate the *smoke alarm*. **13 ~~12~~)** *Suites* of *residential occupancy* equipped with *smoke detectors* installed to CAN/ULC-S524, "Installation of Fire Alarm Systems," as part of the fire alarm system in lieu of *smoke alarms* as permitted by Sentence (8~~7~~), need not incorporate the manually operated device required in Sentence (12~~11~~). (See ~~A-3.2.4.21.(7) in Appendix A~~ Note A-3.2.4.20.(8).) **14 ~~13~~)** The sound patterns of *smoke alarms* shall a) meet the temporal patterns of *alarm signals* (see ~~A-3.2.4.19.~~ Note A-3.2.4.18.(2) ~~in Appendix A~~), or b) be a combination temporal pattern and voice relay	
	3.2.4.21. Residential Fire Warning Systems **1)** Except where a fire alarm system is installed or required in a *building*, *smoke detectors* forming part of a residential fire warning system installed in conformance with CAN/ULC-S540, "Residential Fire and Life Safety Warning Systems: Installation, Inspection, Testing and Maintenance," are permitted to be installed in lieu of all *smoke alarms* required by Article 3.2.4.20., provided the system a) is capable of sounding audible signals in accordance with Articles 9.10.19.2. and 9.10.19.5., b) is powered in accordance with Article 9.10.19.4., and c) is provided with a silencing device in accordance with Article 9.10.19.6.	
3.2.4.22. Voice Communication Systems **1)** A voice communication system required by Subsection 3.2.6. and Sentences (7) to (10) shall consist of a) a two-way means of communication with the central alarm and control facility and to the mechanical control centre from each *floor area*, and b) loudspeakers operated from the central alarm and control facility that are designed and located so that transmitted messages are audible and intelligible as stated in Sentence (2) in all parts of the *building*, except that this requirement does not apply to elevator cars (see Appendix A). **2)** The voice communication system described in Clause (1)(b) shall be capable of broadcasting pre-recorded, synthesized, or live messages with voice intelligibility meeting or exceeding the equivalent of a common intelligibility scale score of 0.70.	**3.2.4.22. Voice Communication Systems for High Buildings** **1)** A voice communication system required by Subsection 3.2.6. ~~and Sentences (7) to (10)~~ shall a) consist of ~~a)~~ a two-way means of communication with the central alarm and control facility and to the mechanical control centre from each *floor area*, and b) ~~loudspeakers operated~~ be capable of broadcasting prerecorded, synthesized, or live messages from the central alarm and control facility that are ~~designed and located so that transmitted messages are~~ audible and intelligible ~~as stated in Sentence (2)~~ in all parts of the *building*, except that this requirement does not apply to elevator cars (see ~~Appendix A).~~ Note A-3.2.4.22.(1)(b)). ~~**2)** The voice communication system described in Clause (1)(b) shall be capable of broadcasting pre-recorded, synthesized, or live messages with voice intelligibility~~	

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(See Appendix A.) **3)** The voice communication system referred to in Sentence (1) shall include a means to silence the *alarm signal* in a single stage fire alarm system while voice instructions are being transmitted, but only after the *alarm signal* has initially sounded for not less than 30 s. **4)** The voice communication system referred to in Sentence (1) shall include a means to silence the *alert signal* and the *alarm signal* in a 2-stage fire alarm system while voice instructions are being transmitted, but only after the *alert signal* has initially sounded for not less than a) 10 s in hospitals that have supervisory personnel on duty for twenty-four hours each day, or b) 30 s for all other *occupancies*. **5)** The voice communication system referred to in Clause (1)(b) shall be designed so that the *alarm signal* in a 2-stage fire alarm system can be selectively transmitted to any zone or zones while maintaining an *alert signal* or selectively transmitting voice instructions to any other zone or zones in the *building*. **6)** The 2-way communication system referred to in Clause (1)(a) shall be installed so that emergency telephones are located in each *floor area* near *exit* stair shafts.	~~meeting or exceeding the equivalent of a common intelligibility scale score of 0.70. (See Appendix A.)~~ **2)** ~~**3)**~~ … ***EXISTING SENTENCES RENUMBERED*** **5)** ~~**6)**~~ The 2-way communication system referred to in Clause (1)(a) shall be installed so that emergency telephones are located in each *floor area* near *exit* stair shafts. **6)** Visual signal devices required by Sentence 3.2.4.19.(1) shall continue to emit a visible signal while voice instructions are being transmitted. **7)** Where the facility is not equipped with staff trained to provide instructions over the loudspeakers, a pre-recorded message shall be provided.	
3.2.4.22. Voice Communication Systems **7)** Except for Group B, Division 1 and Group F, Division 1 *major occupancies*, where a fire alarm system is required under Subsection 3.2.4., a voice communication system shall be installed in *buildings* where a 2-stage fire alarm systemis installed and whose *occupant load* exceeds 1 000. **8)** A voice communication system required by Sentence (7) shall consist of loudspeakers that are a) operated from the central alarm and control facility or, in the absence of such a facility, from a designated area, and b) except in elevator cars, designed and located so that transmitted messages are audible and intelligible in all parts of the *building*. (See A-3.2.4.22.(1)(b) in Appendix A.) **9)** Where the facility is not equipped with staff trained to provide instructions over the loudspeakers, a pre-recorded message shall be provided. **10)** The voice communication system required by Sentence (7) shall meet the silencing and transmission requirements of Sentences (3) to (5).	**3.2.4.23. One-Way Voice Communication Systems** **1)** ~~**7)**~~ Except for Group B, Division 1 and Group F, Division 1 *major occupancies*, where a fire alarm system is required under Subsection 3.2.4., a one-way voice communication system shall be installed in *buildings* where a 2-stage fire alarm system is installed and whose *occupant load* exceeds 1 000. **2)** ~~**8)** A~~ The one-way voice communication system required by Sentence (~~7~~1) shall consist of loudspeakers that are a) operated from the central alarm and control facility or, in the absence of such a facility, from a designated area, and b) except in elevator cars, designed and located so that transmitted messages are audible and intelligible in all parts of the *building*. (See Note A-3.2.4.22.(1)(b) ~~in Appendix A.~~) **3)** ~~**9)**~~ Where the facility is not equipped with staff trained to provide instructions over the loudspeakers, a pre-recorded message shall be provided. **4)** ~~**10)**~~ The one-way voice communication system required by Sentence (~~7~~1) shall meet the silencing and transmission requirements of Sentences ~~(3)~~ (3.2.4.22.(2) to (~~5~~4) and (6).	

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3.2.5.7. Water Supply **2)** The private water supply referred to in Clause (1)(b) shall be a) capable of being delivered at a rate of not less than i) 2 700 L/min for a *building* required to have a quantity less than 75 000 L, and ii) 3 800 L/min for a *building* requiring a quantity of 75 000 L and greater, and … **4)** Capacity requirements under Sentence (1) do not apply to a *building* that is *sprinklered* in conformance with a) NFPA 13, "Installation of Sprinkler Systems," or b) NFPA 13R, "Installation of Sprinkler Systems in Residential Occupancies up to and Including Four Stories in Height."	**3.2.5.7. Water Supply** **2)** The private water supply referred to in Clause (1)(b) shall be a) capable of being delivered at a rate of not less than i) 2 700 L/min for a *building* required to have a quantity less than 75 000 L, and ii) 3 800 L/min for a *building* ~~requiring~~ required to have a quantity of 75 000 L ~~and~~ or greater, and … **4)** Capacity requirements under Sentence (1) do not apply to a *building* that is *sprinklered* in conformance with a) NFPA 13, "Installation of Sprinkler Systems," ~~or~~ b) NFPA 13R, "Installation of Sprinkler Systems in Low-Rise Residential Occupancies ~~up to and Including Four Stories in Height."~~," or c) NFPA 13D, "Installation of Sprinkler Systems in One- and Two-Family Dwellings and Manufactured Homes."	
3.2.5.16. Portable Fire Extinguishers **3)** Except as permitted by Sentence (2), in *assembly occupancies*, *business and personal services occupancies*, *care*, *treatment* or *detention occupancies*, *mercantile occupancies* and *residential occupancies*, each portable fire extinguisher shall be located in a cabinet that a) is not lockable, b) is not obscured or obstructed from view, and c) has a door that, if the door is not glazed, i) is painted red, and ii) is clearly marked with the words "FIRE EXTINGUISHER" in raised white lettering on the front with letters not less than 100 mm high and with 12 mm strokes.	**3.2.5.16. Portable Fire Extinguishers** ~~**3)** Except as permitted by Sentence (2), in *assembly occupancies, business and personal services occupancies, care, treatment* or *detention occupancies, mercantile occupancies* and *residential occupancies*, each portable fire extinguisher shall be located in a cabinet that~~ ~~a) is not lockable,~~ ~~b) is not obscured or obstructed from view, and~~ ~~c) has a door that, if the door is not glazed,~~ ~~i) is painted red, and~~ ~~ii) is clearly marked with the words "FIRE EXTINGUISHER" in raised white lettering on the front with letters not less than 100 mm high and with 12 mm strokes.~~	
3.2.6.2. Limits to Smoke Movement	**3.2.6.2. Limits to Smoke Movement** **6)** Except as provided in Article 3.2.4.12. or where there is a conflict with other smoke control measures in the *building*, air-handling systems used to provide make-up air to *public corridors* serving *suites* in a Group C *major occupancy* shall not shut down automatically upon activation of the fire alarm so as to maintain corridor pressurization.	
3.2.7.3. Emergency Lighting **1)** Unless it can be shown to be unnecessary, emergency lighting shall be provided to an average level of illumination not less than 10 lx at floor or tread level in a) *exits*, b) principal routes providing *access to exit* in open *floor areas* and in *service rooms*, c) corridors used by the public, d) corridors serving sleeping rooms in a *treatment occupancy*,	**3.2.7.3. Emergency Lighting** **1)** ~~Unless it can be shown to be unnecessary, emergency~~ Emergency lighting shall be provided to an average level of illumination not less than 10 lx at floor or tread level in a) *exits*, b) principal routes providing *access to exit* in open *floor areas* and in *service rooms*, c) corridors used by the public, d) corridors serving sleeping rooms in a *treatment occupancy*,	

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e) corridors serving sleeping rooms in a *care occupancy*, except corridors serving sleeping rooms within individual *suites* of *care occupancy*, f) corridors serving classrooms, g) underground *walkways*, h) *public corridors*, i) *floor areas* or parts thereof where the public may congregate i) in Group A, Division 1 *occupancies*, or ii) in Group A, Division 2 and 3 *occupancies* having an *occupant load* of 60 or more, j) *floor areas* or parts thereof of daycare centres where persons are cared for, and k) food preparation areas in commercial kitchens. 4) In addition to the requirements of Sentences (1) to (3), the installation of battery-operated emergency lighting in buildings or part thereof where *treatment* is provided shall conform to the appropriate requirements of CSA Z32, "Electrical Safety and Essential Electrical Systems in Health Care Facilities." **5)** Lighting required in Sentence (1) shall be designed to be automatically activated when the electric lighting in the affected area is interrupted.	e) corridors serving sleeping rooms in a *care occupancy*, except corridors serving sleeping rooms within individual *suites* of *care occupancy*, f) corridors serving classrooms, g) underground *walkways*, h) *public corridors*, i) *floor areas* or parts thereof where the public may congregate i) in Group A, Division 1 *occupancies*, or ii) in Group A, Division 2 and 3 *occupancies* having an *occupant load* of 60 or more, j) *floor areas* or parts thereof of daycare centres where persons are cared for, ~~and~~ k) food preparation areas in commercial kitchens, and l) public washrooms that are equipped to serve more than one person at a time. 4) In addition to the requirements of Sentences (1) to (3), the installation ofbattery-operated emergency lighting in ~~buildings~~ *buildings* or part thereof where *treatment* is provided shall conform to the appropriate requirements of CSA Z32, "Electrical Safety and Essential Electrical Systems in Health Care Facilities." ~~**5)** Lighting required in Sentence (1) shall be designed to be automatically activated when the electric lighting in the affected area is interrupted.~~	
3.2.7.10. Protection of Electrical Conductors	**3.2.7.10. Protection of Electrical Conductors** **10)** Distribution panels serving emergency lighting units located on other *storeys* shall be installed in a *service room* separated from the *floor area* by a *fire separation* having a *fire-resistance rating* of at least 1 h. **11)** Conductors leading from a distribution panel to emergency lighting units located on other *storeys* shall be protected in accordance with Sentence (2) between the distribution panel and the *floor area* where the emergency lighting units are located.	
3.2.8.2. Exceptions to Special Protection **6)** An *interconnected floor space* need not conform to the requirements of Articles 3.2.8.3. to 3.2.8.9., provided a) the *interconnected floor space* consists of the *first storey* and the *storey* next above or below it, but not both, b) the openings through the floor are used only for stairways, escalators or moving walks or the *interconnected floor space* is *sprinklered* throughout (see Appendix A) c) the *interconnected floor space* contains only Group A, Division 1, 2 or 3, Group D, Group E, or Group F, Division 2 or 3 *major occupancies* (see Appendix A, and d) the *building area* is not more than one half of the area permitted by Subsection 3.2.2.	**3.2.8.2. Exceptions to Special Protection** **6)** An *interconnected floor space* need not conform to the requirements of Articles 3.2.8.3. to ~~3.2.8.9.~~ 3.2.8.8., provided a) ~~the *interconnected floor space*~~ it consists of the *first storey* and the *storey* next above or below it, but not both, b) it is *sprinklered* throughout or, where the *building area* is not more than one half of the area permitted by Subsection 3.2.2., the openings through the floor are used only for stairways, escalators or moving walks ~~or the *interconnected floor space* is *sprinklered* throughout (see Appendix A)~~ (see Note A-3.2.8.2.(6)(b)), and c) ~~the *interconnected floor space*~~ it contains only Group A, Division 1, 2 or 3, Group D, Group E, or Group F, Division 2 or 3 *major occupancies* (see ~~Appendix A)~~ Note A-3.2.8.2.(6)(c)).~~, and~~ ~~d) the *building area* is not more than one half of the area permitted by Subsection 3.2.2.~~	

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3.2.8.3. Construction Requirements 1) A *building* constructed in conformance with Articles 3.2.8.4. to 3.2.8.9. shall be of *noncombustible construction*, except that *heavy timber construction* is permitted if Subsection 3.2.2. permits the *building* to be constructed of *combustible construction*	~~**3.2.8.3. Construction Requirements**~~ ~~1) A *building* constructed in conformance with Articles 3.2.8.4. to 3.2.8.9. shall be of *noncombustible construction*, except that *heavy timber construction* is permitted if Subsection 3.2.2. permits the *building* to be constructed of *combustible construction*~~	
3.2.8.4. Sprinklers	**3.2.8.3.** ~~**3.2.8.4.**~~ **Sprinklers**	
3.2.8.5. Vestibules	**3.2.8.4.** ~~**3.2.8.5.**~~ **Vestibules**	
3.2.8.6. Protected Floor Space	**3.2.8.5.** ~~**3.2.8.6.**~~ **Protected Floor Space**	
3.2.8.7. Draft Stops	**3.2.8.6.** ~~**3.2.8.7.**~~ **Draft Stops**	
3.2.8.8. Mechanical Exhaust System	**3.2.8.7.** ~~**3.2.8.8.**~~ **Mechanical Exhaust System**	
3.2.8.9. Combustible Content Limits	**3.2.8.8.** ~~**3.2.8.9.**~~ **Combustible Content Limits**	
	3.2.9. Integrated Fire Protection and Life Safety Systems **3.2.9.1. Testing** **1)** Where fire protection and life safety systems and systems with fire protection and life safety functions are integrated with each other, they shall be tested as a whole in accordance with CAN/ULC-S1001, "Integrated Systems Testing of Fire Protection and Life Safety Systems," to verify that they have been properly integrated. (See Note A-3.2.9.1.(1).)	
3.3.1.7. Protection on Floor Areas with a Barrier-Free Path of Travel **4)** A door acting as a *closure* in a *fire separation* referred to in Clause (1)(b) shall be weatherstripped or otherwise designed and installed to retard the passage of smoke. (See A-3.3.3.5.(6) in Appendix A.) **5)** A balcony required by Clause (1)(c) shall a) have direct *barrier-free* access from the *suite* or *floor area* b) be not less than 1.5 m deep from the outside face of the exterior wall to the inside edge of the balcony, and c) provide not less than 1.5 m2 of balcony space for each nonambulatory occupant and 0.5 m2 for each ambulatory occupant. **6)** In a *barrier-free* path of travel, a downward change in elevation shall be signalled by the use of a 600 mm wide tactile warning strip placed 250 mm from the edge and for the full width of a stair, escalator, moving *walkway*, ramp or platform, and identified using colour and brightness contrast.	**3.3.1.7. Protection on Floor Areas with a Barrier-Free Path of Travel** ~~**4)** A door acting as a *closure* in a *fire separation* referred to in Clause (1)(b) shall be weatherstripped or otherwise designed and installed to retard the passage of smoke. (See A-3.3.3.5.(6) in Appendix A.)~~ **4)** ~~**5)**~~ A balcony required by Clause (1)(c) shall a) have direct *barrier-free* access from the *suite* or *floor area* b) be not less than 1.5 m deep from the outside face of the exterior wall to the inside edge of the balcony, and c) provide not less than 1.5 m2 of balcony space for each ~~nonambulatory~~ non-ambulatory occupant and 0.5 m2 for each ambulatory occupant. ~~**6)** In a *barrier-free* path of travel, a downward change in elevation shall be signalled by the use of a 600 mm wide tactile warning strip placed 250 mm from the edge and for the full width of a stair, escalator, moving *walkway*, ramp or platform, and identified using colour and brightness contrast.~~	Sentence 6 relocated to 3.8.3.2.(5)
3.3.1.11. Door Swing	**3.3.1.11. Door Swing** **1)** Except as permitted by Sentence (5) and Article 3.3.1.12., a door that opens into a	

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1) Except as permitted by Article 3.3.1.12., a door that opens into a corridor or other facility providing *access to exit* from a *suite* or room not located within a *suite* shall swing on a vertical axis.	corridor or other facility providing *access to exit* from a *suite* or room not located within a *suite* shall swing on a vertical axis. … **5)** Doors that serve storage *suites* not more than 28 m^2 in area in warehousing *buildings* need not conform to Sentence (1).	
3.3.1.13. Doors and Door Hardware **1)** Except as required by Article 3.3.3.4., a door that opens into or is located within a *public corridor* or other facility that provides *access to exit* from a *suite* shall a) provide a clear opening of not less than 800 mm if there is only one door leaf, b) in a doorway with multiple leaves, have the active leaf providing a clear opening of not less than 800 mm, and c) not open onto a step. **2)** A door in an *access to exit* shall be readily openable in travelling to an *exit* without requiring keys, special devices or specialized knowledge of the door -opening mechanism, except that this requirement does not apply to a door serving a *contained use area*, or an *impeded egress zone*, provided the locking devices conform to Sentence (6). … **7)** Local locking devices permitted by Sentence (6) shall be operable by a key from both sides of the door. **8)** Controls for the remote release of door locking devices permitted by Sentence (6) shall be located in an area readily available to security personnel. **9)** Locking devices permitted by Sentence (6) that are electrically operated shall be a) designed to operate on emergency power, and b) capable of manual release by security personnel. **10)** Except as stated in Sentence (6), electromagnetic locks are permitted to be used on egress doors located in an *access to exit*, provided a)the locks and doors are installed in conformance with Sentence 3.4.6.16.(4), and b) if electromagnetic locks are also used on the *exit* doors in the same *means of egress*, then the total time delay for all electromagnetic locks in the *means of egress* is not more than 30 s.	**3.3.1.13. Doors and Door Hardware** **1)** Except as required by Article 3.3.3.4., a door that opens into or is located within a *public corridor* or other facility that provides *access to exit* from a *suite* shall a) provide a clear opening of not less than 800 mm if there is only one door leaf, b) in a doorway with multiple leaves, have the active leaf providing a clear opening of not less than 800 mm, c) not open onto a step, and d) ~~c) not open onto a step.~~ have a threshold not more than 13 mm higher than the surrounding finished floor surface, except where it i) is used to confine the spillage of *flammable liquids* within a *service room* or within a room in an *industrial occupancy*, or ii) provides access to an exterior balcony, unless the balcony is required by Clause 3.3.1.7.(1)(c). **2)** ~~A~~ Except as provided in Sentences (6) and (7), a door in an *access to exit* shall be readily openable in travelling to an *exit* without requiring keys, special devices or specialized knowledge of the door -opening mechanism~~, except that this requirement does not apply to a door serving a *contained use area*, or an *impeded egress zone*, provided the locking devices conform to Sentence (6)~~. … **7)** A door in an *access to exit* is permitted to be equipped with an electromagnetic lock conforming to Sentence 3.4.6.16.(4) or (5). **8)** ~~7)~~ Local locking devices permitted by Sentence (6) shall be operable by a key from both sides of the door. **9)** ~~8)~~ Controls for the remote release of door locking devices permitted by Sentence (6) shall be located in an area readily available to security personnel. **10)** ~~9)~~ Locking devices permitted by Sentence (6) that are electrically operated shall be a) designed to operate on emergency power, and b) capable of manual release by security personnel. ~~**10)** Except as stated in Sentence (6), electromagnetic locks are permitted to be used on egress doors located in an *access to exit*, provided~~ ~~a)the locks and doors are installed in conformance with Sentence 3.4.6.16.(4), and~~ ~~b) if electromagnetic locks are also used on the *exit* doors in the same *means of egress*, then the total time delay for all electromagnetic locks in the *means of egress* is not more than 30 s.~~	
3.3.1.14. Ramps and Stairways	**3.3.1.14. Ramps and Stairways**	

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1) Except as permitted by Sentence (2), Article 3.3.4.7. and Subsection 3.3.2., ramps and stairways that do not serve as *exits* shall conform to the dimensional, *guard*, handrail and slip-resistance requirements for *exit* ramps and stairways stated in Sentence 3.4.3.2.(8) and Articles 3.4.3.4., and 3.4.6.1. to 3.4.6.9. **2)** Ramps and stairways that do not conform to the requirements of Sentence (1) are permitted to serve *service rooms* and *service spaces* and in *industrial occupancies*, provided the ramps and stairways are intended only for occasional use for servicing equipment and machinery.	**1)** Except as permitted by Sentence (2), Article 3.3.4.7. and Subsection 3.3.2., ramps and stairways that do not serve as *exits* shall conform to the ~~dimensional, *guard*, handrail and slip-resistance~~ requirements for *exit* ramps and stairways stated in Sentence 3.4.3.2.(8) and Articles 3.4.3.4., and 3.4.6.1. to 3.4.6.9. **2)** Ramps and stairways that ~~do not conform to the requirements of Sentence (1) are permitted to~~ serve *service rooms* ~~and~~, *service spaces* ~~and in~~ or *industrial occupancies* need not comply with Sentence (1), provided ~~the ramps and stairways~~ a) they are intended only for occasional use for servicing equipment and machinery, and b) they do not serve as *exits*.	
3.3.1.16. Curved or Spiral Stairs 1) A curved or spiral stair is permitted in a stairway not required as an *exit*, provided the stair has a) treads with i) a minimum run not less than 150 mm, and ii) an average run not less than 200 mm, and b) risers in conformance with Sentence 3.4.6.8.(2).	**3.3.1.16. ~~Curved or Spiral Stairs~~ Tapered Treads in a Curved Flight** **1)** *Flights* of stairs shall consist solely of a) straight *flights*, or b) ~~**1)** A curved or spiral stair is permitted in a stairway~~ curved *flights* complying with Sentence (2). **2)** *Tapered treads* in a curved *flight* that is not required as an *exit*~~, provided the stair has~~ shall have ~~a) treads with~~ a) ~~i)~~ a minimum *run* ~~not less than~~ of 150 mm, ~~and~~ b) ~~ii) an average~~ a *run* not less than ~~200 mm~~ 280 mm when measured at a point 300 mm from the centre line of the handrail at the narrow end of the tread, and c) ~~b) risers in conformance with~~ a riser conforming to Sentence 3.4.6.8.(2). **3)** *Tapered treads* shall have a consistent angle and uniform *run* and rise dimensions in accordance with the construction tolerances stipulated in Article 3.4.6.8. when measured at a point 300 mm from the centre line of the handrail at the narrow end of the tread. **4)** All *tapered treads* within a *flight* shall turn in the same direction.	
3.3.1.17. Capacity of Access to Exits	**3.3.1.17. Capacity of Access to Exits** **6)** In a *building* that is not *sprinklered* throughout in accordance with Sentence 3.2.5.12.(1), an *access to exit* that is part of the principal entrance serving a dance hall or a licensed beverage establishment with an *occupant load* more than 250 shall provide at least one half of the required *exit* width.	
3.3.1.18. Guards **1)** Except as provided in Sentence (4) and Article 3.3.2.9., a *guard* not less than 1 070 mm high shall be provided a) around any roof to which access is provided for purposes other than maintenance, b) at openings into smoke shafts referred to in Subsection 3.2.6. that are less than 1 070 mm above the floor, and	**3.3.1.18. Guards** **1)** Except as provided in Sentence (~~4~~5) and Article 3.3.2.9., a *guard* not less than 1 070 mm high shall be provided a) around any roof to which access is provided for purposes other than maintenance, b) at openings into smoke shafts referred to in Subsection 3.2.6. that are less than 1 070 mm above the floor, and	

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c) at each raised floor, *mezzanine*, balcony, gallery, interior or exterior vehicular ramp, and at other locations where the difference in level is more than 600 mm. **2)** Except as permitted by Sentence 3.3.2.9.(4) and unless it can be shown that the size of openings that exceed this limit does not present a hazard, there shall be no opening that permits the passage of a sphere whose diameter is more than 100 mm through a *guard* serving a) an exterior balcony, or b) a room, stairway, or space not within a *suite* of *residential occupancy*. **3)** Unless it can be shown that the location and size of openings do not present a hazard, *guards* shall be designed so that no member, attachment or opening located between 140 mm and 900 mm above the level protected by the *guard* facilitates climbing. **4)** Sentence (1) does not apply to the front edges of *stages* or to loading docks	c) at each raised floor, *mezzanine*, balcony, gallery, interior or exterior vehicular ramp, and at other locations where (see Note A-9.8.8.1.) i) the difference in ~~level~~ elevation is more than 600 mm between the walking surface and the adjacent surface, or ii) the adjacent surface within 1.2 m of the walking surface has a slope of more than 1 in 2. **2)** Except as ~~permitted by Sentence 3.3.2.9.(4) and unless it can be shown that the size of openings that exceed this limit does not present a hazard, there shall be no opening that permits the passage of a sphere~~ provided in Sentences (3) and 3.3.2.9.(4) and Articles 3.3.4.7. and 3.3.5.10., openings through *guards* shall be of a size that prevents the passage of a spherical object whose diameter is more than 100 mm ~~through a *guard* serving~~. **3)** Openings through *guards* other than those required by Sentence (1) that serve *occupancies* other than *industrial occupancies* shall be of a size that a) ~~an exterior balcony, or~~ prevents the passage of a spherical object whose diameter is 100 mm, or b) ~~a room, stairway, or space not within a *suite* of *residential occupancy*.~~ permits the passage of a spherical object whose diameter is 200 mm. (See Note A-9.8.8.5.(3).) **4)** ~~3) Unless it can be shown that the location and size of openings do not present a hazard, *guards*~~ Except for *guards* conforming to Article 3.3.5.10., *guards* that protect a level located more than one *storey* or 4.2 m above the adjacent level shall be designed so that no member, attachment or opening located between 140 mm and 900 mm above the level protected by the *guard* facilitates climbing. (See Note A-9.8.8.6.(1).) **5)** ~~4)~~ Sentence (1) does not apply a) to the front edges of *stages* ~~or~~, b) to loading docks, or c) where access is provided for maintenance purposes only.	
3.3.1.19. Transparent Doors and Panels **1)** Except as permitted by Sentence (4), a glass or transparent door shall be designed and constructed so that the existence and position of the door is readily apparent, by attaching non-transparent hardware, bars or other permanent fixtures to it. **2)** A glass door shall be constructed of a) laminated or tempered safety glass conforming to CAN/CGSB-12.1-M, "Tempered or Laminated Safety Glass," or b) wired glass conforming to CAN/CGSB-12.11-M, "Wired Safety Glass." **3)** Except as permitted by Sentence (4), transparent panels used in an *access to exit* that, because of their physical configuration or design, could be mistaken as a *means of egress* shall be made inaccessible by barriers or railings. **4)** Sliding glass *partitions* that separate a *public corridor* from an adjacent *occupancy*	**3.3.1.19. Transparent Doors and Panels** **1)** Except as permitted by Sentence (~~4~~5), a glass or transparent door shall be designed and constructed so that the existence and position of the door is readily apparent, by attaching ~~non-transparent~~ visually contrasting hardware, bars or other permanent fixtures to it. **2)** The visibility of fully glazed transparent doors, sidelights and panels shall be enhanced through the inclusion of mullions, markings or other elements that a) are visually contrasting, b) are at least 50 mm high, c) extend the full width of the door, sidelight or panel, and d) are located between 1 350 mm and 1 500 mm above the floor. **3)** ~~2)~~ A glass door shall be constructed of	

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and that are open during normal working hours need not conform to Sentences (1) and (3), provided the *partitions* are suitably marked to indicate their existence and position. **5)** Glass in doors and in sidelights that could be mistaken for doors, within or at the entrances to *dwelling units* and in public areas, shall conform to the requirements of Article 9.6.1.4. **6)** A window in a public area that extends to less than 1 000 mm above the floor and is located above the second *storey* in a *building* of *residential occupancy*, shall be protected by a barrier or railing to not less than 1 070 mm above the floor, or the window shall be non-openable and designed to withstand the lateral design loads for balcony *guards* required by Article 4.1.5.14.	a) laminated or tempered safety glass conforming to CAN/CGSB-12.1-M, "Tempered or Laminated Safety Glass," or b) wired glass conforming to CAN/CGSB-12.11-M, "Wired Safety Glass." **4)** ~~3)~~ Except as permitted by Sentence (45), transparent panels used in an *access to exit* that, because of their physical configuration or design, could be mistaken as a *means of egress* shall be made inaccessible by barriers or railings. **5)** ~~4)~~ Sliding glass *partitions* that separate a *public corridor* from an adjacent *occupancy* and that are open during normal working hours need not conform to Sentences (1) and (~~3~~4), provided the *partitions* are suitably marked in conformance with Sentence (2) to indicate their existence and position. **6)** Where vision glass is provided in doors or transparent sidelights, the lowest edge of the glass shall be no higher than 900 mm above floor level. **7)** ~~5)~~ Glass in doors and in sidelights that could be mistaken for doors, within or at the entrances to *dwelling units* and in public areas, shall conform to the requirements of Article 9.6.1.4. **8)** ~~6)~~ A window in a public area that extends to less than 1 000 mm above the floor and is located above the second *storey* in a *building* of *residential occupancy*, shall be protected by a barrier or railing to not less than 1 070 mm above the floor, or the window shall be non-openable and designed to withstand the lateral design loads for balcony *guards* required by Article 4.1.5.14.	
3.3.1.20. Exhaust Ventilation and Explosion Venting **1)** An exhaust ventilation system designed in conformance with the appropriate requirements of Part 6 shall be provided in a *building* or part of a *building* in which dust, fumes, gases, vapour or other impurities or contaminants have the potential to create a fire or explosion hazard. (See also Article 4.2.4.13.) 2) Explosion relief devices, vents or other protective measures conforming to Subsection 6.2.2. shall be provided for a space in which substances or conditions that have the potential to create an explosion hazard.	**3.3.1.20. Exhaust Ventilation and Explosion Venting** **1)** ~~An~~ Except as provided in Sentence (2), an exhaust ventilation system designed in conformance with the appropriate requirements of Part 6 shall be provided in a *building* or part of a *building* in which dust, fumes, gases, vapour or other impurities or contaminants have the potential to create a fire or explosion hazard. (See also Article 4.2.4.13.) **2)** Where a *fire separation* required to have a *fire-resistance rating* is penetrated by a ventilation system required by Sentence (1) for power-ventilated enclosures in laboratories, the ducts shall be a) continuously enclosed from the first penetrated *fire separation* to any subsequent *fire separations* or concealed spaces and all the way through to the outdoors so that the highest *fire-resistance rating* of all the penetrated *fire separations* is maintained, and b) exempted from the requirement to be equipped with a *fire damper*, smoke damper and fire/smoke damper as stated in Article 3.1.8.7. **3)** ~~2)~~ Explosion relief devices, vents or other protective measures conforming to Subsection ~~6.2.2.~~ 6.3.1. and Article 6.9.1.2. shall be provided for a space in which substances or conditions that have the potential to create an explosion hazard.	
3.3.1.25. Welding and Cutting 3) Welding and cutting operations in *buildings* shall be carried out in areas with walls, ceilings and floors lined with *noncombustible* materials.	**3.3.1.25. Welding and Cutting** ~~3) Welding and cutting operations in *buildings* shall be carried out in areas with walls, ceilings and floors lined with *noncombustible* materials.~~	

<table>
<tr><th>ABC 2014</th><th>NBC(AE) 2019</th><th>Comments</th></tr>
<tr><td>3.3.1.26. Storage Rooms
1) A storage room more than 1 m2 in area serving a care, treatment or detention occupancy or an assembly occupancy shall be separated from the remainder of the building by a fire separation having a fire-resistance rating not less than 1 h, except that the fire-resistance rating may be reduced to 45 min if the fire-resistance rating of the floor assembly is permitted to be less than 1 h.
2) A clothes closet not more than 800 mm in depth shall not be considered as a storage room for the purpose of this Article.</td><td><s>3.3.1.26. Storage Rooms
1) A storage room more than 1 m2 in area serving a care, treatment or detention occupancy or an assembly occupancy shall be separated from the remainder of the building by a fire separation having a fire-resistance rating not less than 1 h, except that the fire-resistance rating may be reduced to 45 min if the fire-resistance rating of the floor assembly is permitted to be less than 1 h.
2) A clothes closet not more than 800 mm in depth shall not be considered as a storage room for the purpose of this Article.</s></td><td></td></tr>
<tr><td></td><td>3.3.2.10. Handrails in Aisles with Steps
(See Note A-3.3.2.10.)
1) Handrails shall be provided in aisles with steps in conformance with Table 3.3.2.10.

Table 3.3.2.10.
Types and Location of Handrails in Aisles with Steps
Forming Part of Sentence 3.3.2.10.(1)

<table>
<tr><td rowspan="2">Aisle Width</td><td>Aisle Serving Seating on One Side</td><td>Aisle Serving Seating on Both Sides</td></tr>
<tr><td colspan="2">Handrail Requirements</td></tr>
<tr><td>Less than 1 100 mm</td><td>a continuous handrail located on the side of the aisle opposite the seats that conforms to Sentences 3.4.6.5.(5) to (8), (11), (13) and (14</td><td>a handrail located on one side at the end of each row of seats that conforms to Sentences 3.4.6.5.(5) to (8), (11), (13) and (14</td></tr>
<tr><td>1 100 mm or more</td><td>a centre-line handrail that conforms to Sentence (2)
or
a continuous handrail located on the side of the aisle opposite the seats that conforms to Sentences 3.4.6.5.(5) to (8), (11), (13) and (14), plus a handrail located at the end of each row of seats that conforms to Sentences 3.4.6.5.(5) to (8), (11), (13) and (14)</td><td>a centre line handrail that conforms to Sentence (2)</td></tr>
</table></td><td></td></tr>
</table>

ABC 2014	NBC(AE) 2019	Comments
	2) Handrails installed along aisle centre lines as required by Table 3.3.2.10. shall a) comply with Sentences 3.4.6.5.(5) to (7) and (14), b) have gaps not less than 560 mm and not more than 915 mm wide, measured horizontally, at intervals not exceeding five rows, c) comply with Sentence 3.4.6.5.(11) at terminations and required gaps, and d) have an intermediate rail located 305 mm below the principal handrail.	
	3.3.2.11. ~~3.3.2.10.~~ **Outdoor Places of Assembly**	
	3.3.2.12. ~~3.3.2.11.~~ **Bleachers**	
	3.3.2.13. ~~3.3.2.12.~~ **Libraries**	
	3.3.2.14. ~~3.3.2.13.~~ **Stages for Theatrical Performances**	
	3.3.2.15. ~~3.3.2.14.~~ **Risers for Stairs**	
	3.3.2.16. ~~3.3.2.15.~~ **Storage Rooms**	
3.3.2.16. Daycare Facilities **1)** A daycare facility shall not be located a) above the second *storey* unless the safe evacuation of the daycare facility from higher *storeys* can be assured as provided in Sentence (2), or b) in any *storey* where the elevation of the lowest finished ceiling is lower than *grade*. **2)** The assurance of safe evacuation from higher *storeys* referred to in Clause (1)(a) shall be satisfied by a) limiting the travel distance from any point in the daycare facility to an *exit* door that leads directly to the outdoors or to an *exit* door through a *firewall* with a *fire-resistance rating* not less than 2 h to the following: i) not more than 45 m for a *sprinklered building*, or ii) not more than 30 m for an unsprinklered *building*, or b) performing a time-based egress analysis that demonstrates a required safe egress time, T_{ET}, of not more than 4 min using the following formula: $$T_{ET} = \left[\left(\frac{H_{td}}{H_s}\right) + \left(\frac{V_{td}}{V_s}\right) + \left(\frac{M_{td}}{M_s}\right)\right] \bullet SF$$ where	~~**3.3.2.16. Daycare Facilities**~~ ~~**1)** A daycare facility shall not be located~~ ~~a) above the second *storey* unless the safe evacuation of the daycare facility from higher *storeys* can be assured as provided in Sentence (2), or~~ ~~b) in any *storey* where the elevation of the lowest finished ceiling is lower than *grade*.~~ ~~**2)** The assurance of safe evacuation from higher *storeys* referred to in Clause (1)(a) shall be satisfied by~~ ~~a) limiting the travel distance from any point in the daycare facility to an *exit* door that leads directly to the outdoors or to an *exit* door through a *firewall* with a *fire-resistance rating* not less than 2 h to the following:~~ ~~i) not more than 45 m for a *sprinklered building*, or~~ ~~ii) not more than 30 m for an unsprinklered *building*, or~~ ~~b) performing a time-based egress analysis that demonstrates a required safe egress time, T_{ET}, of not more than 4 min using the following formula:~~ $$T_{ET} = \left[\left(\frac{H_{td}}{H_s}\right) + \left(\frac{V_{td}}{V_s}\right) + \left(\frac{M_{td}}{M_s}\right)\right] \bullet SF$$ ~~where~~	

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T_{ET} = required safe egress time from any point in the daycare facility to an *exit* door that leads directly to the outdoors or to an *exit* door through a *firewall* with a *fire-resistance rating* not less than 2 h, H_{td} = horizontal travel distance from any point in the daycare facility to an enclosed *exit* stairwell or to an *exit* door that leads directly to the outdoors or to an *exit* door through a *firewall* with a *fire-resistance rating* not less than 2 h, in m, H_s = occupant egress speed not more than 0.5 m/s for horizontal egress routes, V_{td} = vertical travel distance within an enclosed *exit* stairwell, in m, measured on the diagonal along the nosing of the stairs, V_s = occupant egress speed not more than 0.3 m/s for vertical egress routes, M_{td} = horizontal travel distance on the main floor, in m, M_s = occupant egress speed not more than 0.5 m/s for horizontal egress routes on the main floor, and SF = safety factor, not less than 2.0. (See Appendix A.)	~~T_{ET} = required safe egress time from any point in the daycare facility to an *exit* door that leads directly to the outdoors or to an *exit* door through a *firewall* with a *fire-resistance rating* not less than 2 h,~~ ~~H_{td} = horizontal travel distance from any point in the daycare facility to an enclosed *exit* stairwell or to an *exit* door that leads directly to the outdoors or to an *exit* door through a *firewall* with a *fire-resistance rating* not less than 2 h, in m,~~ ~~H_s = occupant egress speed not more than 0.5 m/s for horizontal egress routes,~~ ~~V_{td} = vertical travel distance within an enclosed *exit* stairwell, in m, measured on the diagonal along the nosing of the stairs,~~ ~~V_s = occupant egress speed not more than 0.3 m/s for vertical egress routes,~~ ~~M_{td} = horizontal travel distance on the main floor, in m,~~ ~~M_s = occupant egress speed not more than 0.5 m/s for horizontal egress routes on the main floor, and~~ ~~SF = safety factor, not less than 2.0.~~ ~~(See Appendix A.)~~	
3.3.3.3. Corridors **2)** Corridors are permitted to have dead-portions, where a) the area served by the dead-end portion has a second and separate *means of egress*, or b) the corridor serves a *suite* of *care occupancy* and the dead-end portion does not exceed 3 m.	**3.3.3.3. Corridors** **2)** Corridors are permitted to have dead-portions, where a) the area served by the dead-end portion has a second and separate *means of egress*, or b) the corridor serves a *suite* of *care occupancy* and the dead-end portion does not exceed ~~3~~6 m.	Article harmonized with NBC
3.3.3.5. Compartments and Fire Separations **6)** A *closure* in a *fire separation* between *fire compartments* referred to in Sentence (2) shall be weatherstripped or otherwise designed and installed to retard the passage of smoke. (See Appendix A.) **7)** …	**3.3.3.5. Compartments and Fire Separations** ~~**6)** A *closure* in a *fire separation* between *fire compartments* referred to in Sentence (2) shall be weatherstripped or otherwise designed and installed to retard the passage of smoke. (See Appendix A.)~~ 6) ~~**7)** …~~ ***Remaining Sentences renumbered***	
3.3.3.8. Windows **1)** Except in a sleeping room where a person is under legal restraint, a sleeping room in a *care*, *treatment* or *detention occupancy* shall be provided with a window whose unobstructed glass area is not less than 5% of the area served.	~~**3.3.3.8. Windows**~~ ~~**1)** Except in a sleeping room where a person is under legal restraint, a sleeping room in a *care*, *treatment* or *detention occupancy* shall be provided with a window whose unobstructed glass area is not less than 5% of the area served.~~	
3.3.4.6. Sound Transmission **1)** Sound transmission class ratings of *building* assemblies shall conform to Section 5.9.	**3.3.4.6. Sound Transmission** **1)** ~~Sound transmission class ratings of *building* assemblies shall conform to Section 5.9.~~ Occupants of *dwelling units* shall be protected from airborne noise in conformance with Section 5.8.	

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3.3.5.2. Fire Extinguishing Systems **1)** If sprinklers are required and not suitable for the hazard in question, another type of automatic fire extinguishing system shall be installed to provide protection compatible with the nature of the risk. (See Appendix A.) **2)** If an industrial process poses a fire risk, an appropriate fire extinguishing system shall be installed in the process area to provide protection compatible with the nature of the risk. (See Appendix A.)	**3.3.5.2. Fire Extinguishing Systems** **1)** ~~If sprinklers are required and not suitable for the hazard in question, another Type~~ In addition to other requirements in this Code for the installation of automatic fire extinguishing ~~system shall be installed to provide protection compatible with the nature of the risk. (See Appendix A.) **2)** If an industrial process poses a fire risk~~ systems, an appropriate fire extinguishing system shall be installed in ~~the process~~ every *industrial occupancy floor* ~~area~~ *area* to provide protection ~~compatible with the nature of the risk. (See Appendix A.)~~ if required by the NFC(AE).	
3.3.5.4. Repair and Storage Garages	**3.3.5.4. Repair and Storage Garages** **6)** Where garage floors or ramps are 600 mm or more above the adjacent ground or floor level, every opening through such floors and the perimeter of floors and ramps shall be provided with a) ~~6)A~~ a continuous curb not less than ~~150~~140 mm high ~~and~~, a *guard* not less than 1 070 mm high ~~shall be provided at every garage floor opening and around the perimeter of every floor where the exterior walls are omitted.~~, and a vehicle guardrail not less than 500 mm high conforming to Sentence (7), or b) a full-height wall conforming to Sentence (7). **7)** Vehicle guardrails and full-height walls required in Sentence (6) shall be designed and constructed to withstand the loading values stipulated in Sentence 4.1.5.15.(1). **8)** ~~7)~~ Except for *open-air storeys*, every *storey* of a *storage garage* or *repair garage* located below *grade* shall be *sprinklered*.	
3.3.5.7. Vestibules	**3.3.5.7. Vestibules** **4)** If access is provided through a vestibule, as required by Sentences (1), (3) and 3.3.5.4.(1), the vestibule shall a) be not less than 1.8 m long, b) be ~~pressurized and~~ ventilated i) naturally to outside air by a vent that has an unobstructed area of not less than 0.1 m2 for each door that opens into the vestibule but not less than 0.4 m^2, or ii) mechanically at a rate of 14 m3/h for each square metre of vestibule floor surface area, and c) have openings between the vestibule and an adjoining *occupancy* provided with self-closing doors with no hold-open devices.	
3.3.5.9. Multiple-Tenant Self-Storage Warehouses **1)** Unless the *building* is *sprinklered* throughout, each individual tenancy in a multiple-tenant self-storage warehouse classified as an *industrial occupancy* shall be separated from the remainder of the *building* by a *fire separation* having a *fire-resistance rating* not less than 45 min.	**3.3.5.9. Multiple-Tenant Self-Storage Warehouses** **1)** ~~Unless~~ Except as provided in Sentence 3.9.3.1.(5) or unless the *building* is *sprinklered* throughout, each individual tenancy in a multiple-tenant self-storage warehouse classified as an *industrial occupancy* shall be separated from the remainder of the *building* by a *fire separation* having a *fire-resistance rating* not less	

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	than 45 min.	
	3.3.5.10. Guards **1)** Except where they serve *storage garages*, *guards* in *industrial occupancies* are permitted to consist of a) a top railing, and b) one or more intermediate rails spaced such that openings through the *guard* are of a size that prevents the passage of a spherical object whose diameter is 535 mm.	
3.3.6.2. Storage of Dangerous Goods **1)** Solid and liquid Class 5 oxidizing substances shall be separated from the remainder of the *building* by a *fire separation* having a *fire-resistance rating* of not less than 2 h. **2)** Reactive substances shall be separated from the remainder of the *building* by a *fire separation* having a *fire-resistance rating* of not less than 2 h. (See Appendix A.) **3)** The design of *buildings* or parts thereof used for the storage of Class 1 *dangerous goods* shall conform to the Explosives Act and its Regulations, published by Natural Resources Canada.	**3.3.6.2. Storage of Dangerous Goods** **1)** Solid and liquid ~~Class 5 oxidizing substances~~ *dangerous goods* classified as oxidizers or organic peroxides shall be separated from the remainder of the *building* by a *fire separation* having a *fire-resistance rating* of not less than 2 h. **2)** Reactive ~~substances~~ materials shall be separated from the remainder of the *building* by a *fire separation* having a *fire-resistance rating* of not less than 2 h. (See ~~Appendix A~~ Note A-3.3.6.2.(2).) **3)** The design of *buildings* or parts thereof used for the storage of ~~Class 1~~ *dangerous goods* classified as explosives shall conform to the Explosives Act and its Regulations, published by Natural Resources Canada.	
3.3.6.3. Indoor Storage of Compressed Gases **1)** Where required by the Alberta Fire Code 2014, cylinders of Class 2.1 flammable gases stored indoors shall be located in a room a) that is separated from the remainder of the *building* by a gas-tight *fire separation* having a *fire-resistance rating* of at least 2 h, b) that is located on an exterior wall of the *building*, c) that can be entered from the exterior, and d) whose *closures* leading to the interior of the *building* are i) equipped with self-closing devices that keep the *closures* closed when not in use, and ii) constructed so as to prevent the migration of gases from the room into other parts of the *building*. **2)** Where required by the Alberta Fire Code 2014, cylinders of ~~Class 2.3 toxic or corrosive gases or Class 2.2 (5.1)~~ oxidizing gases stored indoors shall be located in a room a) that is separated from the remainder of the *building* by a gas-tight *fire separation* having a *fire-resistance rating* of at least 1 h, b) that is located on an exterior wall of the *building*, c) that can be entered from the exterior, and	**3.3.6.3. Indoor Storage of ~~Compressed~~ Anhydrous Ammonia and Flammable, Toxic and Oxidizing Gases** **1)** Where required by the ~~Alberta Fire Code 2014,~~ NFC(AE), cylinders of ~~Class 2.1~~ *dangerous goods* classified as flammable gases stored indoors shall be located in a room a) that is separated from the remainder of the *building* by a gas-tight *fire separation* having a *fire-resistance rating* of at least 2 h, b) that is located on an exterior wall of the *building*, c) that can be entered from the exterior, and d) whose *closures* leading to the interior of the *building* are i) equipped with self-closing devices that keep the *closures* closed when not in use, and ii) constructed so as to prevent the migration of gases from the room into other parts of the *building*. **2)** Where required by the ~~Alberta Fire Code 2014,~~ NFC(AE), cylinders of ~~Class 2.3 toxic or corrosive gases or Class 2.2 (5.1)~~ anhydrous ammonia or *dangerous goods* classified as toxic or oxidizing gases stored indoors shall be located in a room a) that is separated from the remainder of the *building* by a gas-tight *fire separation* having a *fire-resistance rating* of at least 1 h, b) that is located on an exterior wall of the *building*, c) that can be entered from the exterior, and	

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d) whose *closures* leading to the interior of the *building* are i) equipped with self-closing devices that keep the *closures* closed when not in use, and ii) constructed so as to prevent the migration of gases from the room into other parts of the *building*.	d) whose *closures* leading to the interior of the *building* are i) equipped with self-closing devices that keep the *closures* closed when not in use, and ii) constructed so as to prevent the migration of gases from the room into other parts of the *building*.	
3.3.6.8. Fire Separations in Process Plants **1)** In *process plants*, areas where unstable liquids are handled or where small-scale unit chemical processes occur shall be separated from the remainder of the *building* by a *fire separation* having a *fire-resistance rating* of not less than 2h.	**3.3.6.8. Fire Separations in Process Plants** **1)** In *process plants*, areas where ~~unstable liquids~~ *unstable liquids* are handled or where small-scale unit chemical processes occur shall be separated from the remainder of the *building* by a *fire separation* having a *fire-resistance rating* of not less than 2h.	
3.4.2.3. Distance between Exits 1) Except as provided in Sentence (2), the least distance between 2 *exits* from a *floor area* shall be a) one half the maximum diagonal dimension of the *floor area*, but need not be more than 9 m for a *floor area* having a *public corridor*, or b) one half the maximum diagonal dimension of the *floor area*, but not less than 9 m for all other *floor areas*. (See Appendix A.) 2) *Exits* need not comply with Sentence (1) where a) the *floor area* is divided so that not less than one third of the *floor area* is on each side of a *fire separation*, and b) it is necessary to pass through the *fire separation* to travel from one *exit* to another *exit*. 3) The minimum distance between *exits* referred to in Sentence (1) shall be the shortest distance that smoke would have to travel between the *exits*, assuming that the smoke will not penetrate an intervening *fire separation*.	**3.4.2.3. Distance between Exits** **1)** Except as provided in Sentence (2), the least distance between 2 *exits* from a *floor area* shall be a) one half the maximum diagonal dimension of the *floor area*, but need not be more than 9 m for a *floor area* having a *public corridor*, or b) one half the maximum diagonal dimension of the *floor area*, but not less than 9 m for all other *floor areas*. (See ~~Appendix~~ Note A-3.4.2.3.(1).) **2)** *Exits* need not comply with Sentence (1) where a) the *floor area* is divided so that not less than one third of the *floor area* is on each side of a *fire separation*, and b) it is necessary to pass through the *fire separation* to travel from one *exit* to another *exit*. **3)** The minimum distance between *exits* referred to in Sentence (1) shall be the shortest distance that smoke would have to travel between the *exits*, assuming that the smoke will not penetrate an intervening *fire separation*. **4)** The distance between 2 exterior discharges of *exit* stairs serving the same *floor area* shall be a) not less than 9 m, or b) not less than 6 m, where i) the *building* is *sprinklered* throughout, and ii) the 2 exterior discharges are located within 15 m of a *street*.	Inserted new Sentence (4).
3.4.2.6. Principal Entrances 1) For the purposes of this Section, at least one door at every principal entrance to a *building* providing access from the exterior at ground level shall be designed in accordance with the requirements for *exits*.	**3.4.2.6. Principal Entrances** **1)** For the purposes of this Section, at least one door at every principal entrance to a *building* providing access from the exterior at ground level shall be designed in accordance with the requirements for *exits*. **2)** In a *building* that is not *sprinklered* throughout in accordance with Sentence 3.2.5.12.(1), the principal entrance serving a dance hall or a licensed beverage establishment with an *occupant load* more than 250 shall provide at least one half of the required *exit* width.	Inserted new Sentence (2).
3.4.3.3. Exit Width Reduction	**3.4.3.3. Exit Width Reduction**	

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1) Except as permitted by Sentences (2) and (4), no fixture, turnstile or construction shall project into or be fixed within the required width of an *exit*. 2) Swinging doors in their swing shall not reduce the required width of *exit* stairs or landings to less than 750 mm or reduce the width of an *exit* passageway to less than the minimum required width. 3) Doors shall be installed so that, when open, they do not diminish nor obstruct the required width of the *exit*. 4) Handrails and construction below handrails are permitted to project into the required width of *means of egress* but the projections shall be not more than 100 mm on each side of the required width.	**1)** Except as permitted by Sentences (2) and (4), no fixture, turnstile or construction shall project into or be fixed within the required width of an *exit*. **2)** Swinging doors in their swing shall not reduce the required width of *exit* stairs or landings to less than 750 mm or reduce the width of an *exit* passageway to less than the minimum required width. **3)** Doors shall be installed so that, when open, they do not diminish nor obstruct the required width of the *exit*. **4)** Handrails and construction below handrails ~~are permitted to project~~, including handrail supports and stair stringers, shall not project more than 100 mm into the required width of a *means of egress* ~~but the projections shall be not more than 100 mm on each side of the required width.~~	
3.4.5.1. Exit Signs 1) Every *exit* door shall have an *exit* sign placed over or adjacent to it if the *exit* serves a) a *building* more than 2 *storeys* in *building height*, b) a *building* having an *occupant load* of more than 150, or c) a room or *floor area* that has a fire escape as part of a required *means of egress*. 2) Every *exit* sign shall a) be visible on approach to the *exit*, b) except as permitted in Sentence (3), consist of a green pictogram and a white or lightly tinted graphical symbol meeting the colour specifications referred to in ISO 3864-1, "Graphical symbols – Safety colours and safety signs – Part 1: Design principles for safety signs and safety markings," and c) conform to the dimensions indicated in ISO 7010, "Graphical symbols – Safety colours and safety signs – Safety signs used inworkplaces and public areas," for the following symbols (see Appendix A): i) E001 emergency exit left, ii) E002 emergency exit right, iii) E005 90-degree directional arrow, and iv) E006 45-degree directional arrow. 3) Internally illuminated *exit* signs shall be continuously illuminated and a) where illumination of the sign is powered by an electrical circuit, be constructed in conformance with CSA C22.2 No. 141, "Emergency Lighting Equipment," or b) where illumination of the sign is not powered by an electrical circuit, be constructed in conformance with CAN/ULC-S572, "Photoluminescent and Self-Luminous Signs and Path Marking Systems." 4) Externally illuminated *exit* signs shall be continuously illuminated and be constructed in conformance with CAN/ULC-S572, "Photoluminescent and Self-Luminous Signs and Path Marking Systems." (See Appendix A.) 5), 6), 7)	**3.4.5.1. Exit Signs** 1) Every *exit* door shall have an *exit* sign placed over or adjacent to it if the *exit* serves a) a *building* more than 2 *storeys* in *building height*, b) a *building* having an *occupant load* of more than 150, or c) a room or *floor area* that has a fire escape as part of a required *means of egress*. 2) Every *exit* sign shall a) be visible on approach to the *exit*, b) ~~except as permitted in Sentence (3),~~ consist of a green ~~pictogram~~ and ~~a~~ white or lightly tinted graphical symbol meeting the colour specifications referred to in ISO 3864-1, "Graphical symbols – Safety colours and safety signs – Part 1: Design principles for safety signs and safety markings," and c) conform to the dimensions indicated in ISO 7010, "Graphical symbols – Safety colours and safety signs – ~~Safety~~ Registered safety signs ~~used in workplaces and public areas~~," for the following symbols (see ~~Appendix A~~ Note A-3.4.5.1.(2)(c)): i) E001 emergency exit left, ii) E002 emergency exit right, iii) E005 90-degree directional arrow, and iv) E006 45-degree directional arrow. 3) Internally illuminated *exit* signs shall be continuously illuminated and a) where illumination of the sign is powered by an electrical circuit, be constructed in conformance with CSA C22.2 No. 141, "Emergency Lighting Equipment," or b) where illumination of the sign is not powered by an electrical circuit, be constructed in conformance with CAN/ULC-S572, "Photoluminescent and Self-Luminous Exit Signs and Path Marking Systems." 4) Externally illuminated *exit* signs shall be continuously illuminated and be constructed in conformance with CAN/ULC-S572, "Photoluminescent and Self-Luminous Exit Signs and Path Marking Systems." (See ~~Appendix A~~ Note A-3.4.5.1.(4).) 5), 6), 7)	

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3.4.6.4. Dimensions of Landings 1) The length and width of a landing shall be at least the width of the stairway in which it occurs, except that in a straight run, the length of the landing need not be more than 1 100 mm. 2) Where a doorway or stairway empties onto a ramp through a side wall, there shall be a level area extending across the full width of the ramp, and for a distance of 300 mm on either side of the wall opening, except one side if it abuts on an end wall. 3) Where a doorway or stairway empties onto a ramp through an end wall, there shall be a level area extending across the full width of the ramp and along its length for not less than 900 mm.	**3.4.6.4. Dimensions of Landings** (See Note A-3.4.6.4.) 1) ~~The length and width of~~ Except as provided in Sentence (2), a landing shall be at least as wide and as long as the width of the stairway in which it occurs~~, except that in~~. 2) In a straight ~~run~~ stairway and in a stairway that turns less than 90°, the length of the landing need not be more than the lesser of a) the required width of stair, or b) 1 100 mm. 3) The length of a landing shall be measured perpendicular to the nosing of adjacent steps, at a distance equal to half the length required in Sentence (2), from the narrow edge of the landing. 4) ~~2)~~ Where a doorway or stairway empties onto a ramp through a side wall, there shall be a level area extending across the full width of the ramp, and for a distance of 300 mm on either side of the wall opening, except one side if it abuts on an end wall. 5) ~~3)~~ Where a doorway or stairway empties onto a ramp through an end wall, there shall be a level area extending across the full width of the ramp and along its length for not less than 900 mm.	Inserted new Sentence (3).
3.4.6.5. Handrails 1) A stairway shall have a handrail on at least one side, but if it is 1 100 mm or more wide, it shall have handrails on both sides. 2) If the required width of a ramp or flight of stairs is more than 2 200mm, one or more intermediate handrails continuous between landings shall be provided, and located so that there will be not more than 1 650 mm between handrails. 3) Handrails shall be continuously graspable along their entire length and shall have a) a circular cross-section with an outside diameter not less than 30 mm and not more than 43 mm, or b) a non-circular cross-section with a graspable portion that has a perimeter not less than 100 mm and not more than 125 mm and whose largest cross-sectional dimension is not more than 45 mm. 4) The height of handrails on stairs and ramps shall be measured vertically from the top of the handrail to a) a straight line drawn tangent to the tread nosings of the stair served by the handrail (see A-9.8.7.4. in Appendix A), or b) the surface of the ramp, floor or landing served by the handrail. 5) Except as provided in Sentences (6) and (7), the height of handrails on stairs and ramps shall be a) not less than 865 mm, and b) not more than 965 mm. 6) Handrails installed in addition to required handrails need not comply with Sentence (5). 7) Where *guards* are required, handrails on landings shall be not more than	**3.4.6.5. Handrails** 1) ~~A stairway shall have a handrail on at least one side, but if it is~~ One handrail shall be provided on stairs that are less than 1 100 mm in width. 2) One handrail shall be provided on each side of a) stairs that are 1 100 mm or more ~~wide, it shall have handrails on both sides~~ in width, b) curved *flights* of any width, and c) ramps. 3) ~~2)If the required width of a ramp or flight of stairs is more than 2 200 mm, one or more intermediate handrails continuous between landings shall be provided, and located so that there will be not more than 1 650 mm between handrails.~~ In addition to Sentence (2), intermediate handrails shall be provided so that a) a handrail is reachable within 750 mm of all portions of the required *exit* width, b) at least one portion of the stair or ramp between two handrails is the minimum width required for stairways or ramps (see Sentences 3.4.3.2.(8) and 3.4.3.3.(4)), and c) all other portions of the stair or ramp between two handrails have a clear width of 510 mm or more. 4) Where a stair or ramp is wider than its required *exit* width, handrails shall be located along the most direct path of travel. (See Note A-3.4.6.5.(4).) 5) *3)*Handrails shall be continuously graspable along their entire length, be free of any sharp or abrasive elements, and ~~shall~~ have a) a circular cross-section with an outside diameter not less than 30 mm and not more than 43 mm, or b) a non-circular cross-section with ~~a graspable portion that has~~ a perimeter not	Inserted new sentences.

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1 070 mm in height. 8) Except where interrupted by doorways or newels at changes in direction, at least one handrail shall be continuous throughout the length of a stairway or ramp, including landings. (See Appendix A.) 9) Handrails shall be terminated in a manner which will not obstruct pedestrian travel or create a hazard. (See A-3.4.6.5.(8) in Appendix A.) 10) At least one handrail at the side of a stairway or ramp shall extend horizontally not less than 300 mm beyond the top and bottom of the stairway or ramp. (See A-3.4.6.5.(8) in Appendix A.) 11) The clearance between a handrail and any surface behind it shall be not less than a) 50 mm, or b) 60 mm if the surface behind the handrail is rough or abrasive. 12) Handrails and their supports shall be designed and constructed to withstand the loading values obtained from the non-concurrent application of a) a concentrated load not less than 0.9 kN applied at any point and in any direction for all handrails, and b) a uniform load not less than 0.7 kN/m applied in any direction to handrails not located within *dwelling units*. 13) A ramp shall have handrails on both sides.	less than 100 mm and not more than 125 mm and whose largest cross-sectional dimension is not more than 45 mm. 6) ~~4)~~The height of handrails on stairs, on aisles with steps and on ramps shall be measured vertically from the top of the handrail to a) a straight line drawn tangent to the tread nosings of the stair or aisle step served by the handrail (see Note A-9.8.7.4. ~~in Appendix A~~), or b) the surface of the ramp, floor or landing served by the handrail. 7) ~~5)~~Except as provided in ~~Sentences~~ Sentence (~~6~~8) and ~~(7~~ Clause 3.8.3.5.(1)(e), the height of handrails on stairs, on aisles with steps and on ramps shall be a) not less than 865 mm, and b) not more than ~~965~~1 070 mm. 8) ~~6)~~ Handrails installed in addition to required handrails need not comply with Sentence (~~5~~7). 9) ~~7)Where *guards* are required, handrails on landings shall be not more than 1 070 mm in height.~~ Required handrails shall be continuously graspable throughout the length of a) a ramp, and b) a *flight* of stairs, from the bottom riser to the top riser. (See Note A-9.8.7.2.) 10) ~~8)~~ Except where interrupted by doorways ~~or newels at changes in direction~~, at least one handrail shall be continuous throughout the length of a stairway or ramp, including at landings. (See ~~Appendix A~~ Note A-3.4.6.5.(10).) 11) ~~9)~~ Handrails shall be terminated in a manner ~~which~~ that will not obstruct pedestrian travel or create a hazard. (See Note A-3.4.6.5.(~~8) in Appendix A~~ 10).) 12) ~~10)~~ At least one handrail at the side of a stairway or ramp shall extend horizontally not less than 300 mm beyond the top and bottom of the stairway or ramp. (See Note A-3.4.6.5.(~~8) in Appendix A~~ 10).) 13) ~~11)~~The clearance between a handrail and any surface behind it shall be not less than a) 50 mm, or b) 60 mm if the surface behind the handrail is rough or abrasive. 14) ~~12)~~Handrails and their supports shall be designed and constructed to withstand the loading values ~~obtained from the non-concurrent application of a)a concentrated load not less than 0.9 kN applied at any point and in any direction for all handrails, andb)a uniform load not less than 0.7 kN/m applied in any direction to handrails not located within *dwelling units*.~~specified in Sentence 4.1.5.14.(7). 15) ~~13)~~A ramp shall have handrails on both sides.	
3.4.6.5. Handrails 1) A stairway shall have a handrail on at least one side, but if it is 1 100 mm or more wide, it shall have handrails on both sides.	**3.4.6.5. Handrails** 1) ~~A stairway shall have a handrail on at least one side, but if it~~ is One handrail shall be provided on stairs that are less than 1 100 mm in width.	Inserted new sentences.

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2) If the required width of a ramp or flight of stairs is more than 2 200mm, one or more intermediate handrails continuous between landings shall be provided, and located so that there will be not more than 1 650 mm between handrails. 3) Handrails shall be continuously graspable along their entire length and shall have a) a circular cross-section with an outside diameter not less than 30 mm and not more than 43 mm, or b) a non-circular cross-section with a graspable portion that has a perimeter not less than 100 mm and not more than 125 mm and whose largest cross-sectional dimension is not more than 45 mm. 4) The height of handrails on stairs and ramps shall be measured vertically from the top of the handrail to a) a straight line drawn tangent to the tread nosings of the stair served by the handrail (see A-9.8.7.4. in Appendix A), or b) the surface of the ramp, floor or landing served by the handrail. 5) Except as provided in Sentences (6) and (7), the height of handrails on stairs and ramps shall be a) not less than 865 mm, and b) not more than 965 mm. 6) Handrails installed in addition to required handrails need not comply with Sentence (5). 7) Where *guards* are required, handrails on landings shall be not more than 1 070 mm in height. 8) Except where interrupted by doorways or newels at changes in direction, at least one handrail shall be continuous throughout the length of a stairway or ramp, including landings. (See Appendix A.) 9) Handrails shall be terminated in a manner which will not obstruct pedestrian travel or create a hazard. (See A-3.4.6.5.(8) in Appendix A.) 10) At least one handrail at the side of a stairway or ramp shall extend horizontally not less than 300 mm beyond the top and bottom of the stairway or ramp. (See A-3.4.6.5.(8) in Appendix A.) 11) The clearance between a handrail and any surface behind it shall be not less than a) 50 mm, or b) 60 mm if the surface behind the handrail is rough or abrasive. 12) Handrails and their supports shall be designed and constructed to withstand the loading values obtained from the non-concurrent application of a) a concentrated load not less than 0.9 kN applied at any point and in any direction for all handrails, and b) a uniform load not less than 0.7 kN/m applied in any direction to handrails not located within *dwelling units*. 13) A ramp shall have handrails on both sides.	2) One handrail shall be provided on each side of a) stairs that are 1 100 mm or more ~~wide, it shall have handrails on both sides~~ in width, b) curved *flights* of any width, and c) ramps. 3) ~~2)If the required width of a ramp or flight of stairs is more than 2 200 mm, one or more intermediate handrails continuous between landings shall be provided, and located so that there will be not more than 1 650 mm between handrails.~~ In addition to Sentence (2), intermediate handrails shall be provided so that a) a handrail is reachable within 750 mm of all portions of the required *exit* width, b) at least one portion of the stair or ramp between two handrails is the minimum width required for stairways or ramps (see Sentences 3.4.3.2.(8) and 3.4.3.3.(4)), and c) all other portions of the stair or ramp between two handrails have a clear width of 510 mm or more. 4) Where a stair or ramp is wider than its required *exit* width, handrails shall be located along the most direct path of travel. (See Note A-3.4.6.5.(4).) 5) ~~*3)*~~Handrails shall be continuously graspable along their entire length, be free of any sharp or abrasive elements, and ~~shall~~ have a) a circular cross-section with an outside diameter not less than 30 mm and not more than 43 mm, or b) a non-circular cross-section with ~~a graspable portion that has~~ a perimeter not less than 100 mm and not more than 125 mm and whose largest cross-sectional dimension is not more than 45 mm. 6) ~~4)~~The height of handrails on stairs, on aisles with steps and on ramps shall be measured vertically from the top of the handrail to a) a straight line drawn tangent to the tread nosings of the stair or aisle step served by the handrail (see Note A-9.8.7.4. ~~in Appendix A~~), or b) the surface of the ramp, floor or landing served by the handrail. 7) ~~5)~~ Except as provided in ~~Sentences~~ Sentence (~~6~~8) and ~~(7~~ Clause 3.8.3.5.(1)(e), the height of handrails on stairs, on aisles with steps and on ramps shall be a) not less than 865 mm, and b) not more than ~~965~~1 070 mm. 8) ~~6)~~ Handrails installed in addition to required handrails need not comply with Sentence (~~5~~ 7). 9) ~~7)Where *guards* are required, handrails on landings shall be not more than 1 070 mm in height.~~Required handrails shall be continuously graspable throughout the length of a) a ramp, and b) a *flight* of stairs, from the bottom riser to the top riser. (See Note A-9.8.7.2.) 10) ~~8)~~Except where interrupted by doorways ~~or newels at changes in direction~~, at	

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	least one handrail shall be continuous throughout the length of a stairway or ramp, including at landings. (See ~~Appendix A~~Note A-3.4.6.5.(10).) 11) ~~9)~~Handrails shall be terminated in a manner ~~which~~ that will not obstruct pedestrian travel or create a hazard. (See Note A-3.4.6.5.(~~8) in Appendix A~~10).) 12) ~~10)~~At least one handrail at the side of a stairway or ramp shall extend horizontally not less than 300 mm beyond the top and bottom of the stairway or ramp. (See Note A-3.4.6.5.(~~8) in Appendix A~~10).) 13) 11)The clearance between a handrail and any surface behind it shall be not less than a) 50 mm, or b) 60 mm if the surface behind the handrail is rough or abrasive. 14) 12)Handrails and their supports shall be designed and constructed to withstand the loading values ~~obtained from the non-concurrent application of a)a concentrated load not less than 0.9 kN applied at any point and in any direction for all handrails, andb)a uniform load not less than 0.7 kN/m applied in any direction to handrails not located within *dwelling units*.~~specified in Sentence 4.1.5.14.(7). 15) ~~13)~~A ramp shall have handrails on both sides.	
3.4.6.6. Guards 1) Every *exit* shall have a wall or a well-secured *guard* on each side. 2) Except as required by Sentence (4), the height of *guards* for *exit* stairs shall be not less than 920 mm measured vertically to the top of the *guard* from a line drawn through the outside edges of the stair nosings and 1 070 mm around landings. 3) The height of *guards* for *exit* ramps and their landings shall be not less than 1 070 mm measured vertically to the top of the *guard* from the ramp surface. 4) The height of *guards* for exterior stairs and landings more than 10 m above adjacent ground level shall be not less than 1 500 mm measured vertically to the top of the *guard* from the surface of the landing or from a line drawn through the outside edges of the stair nosings. 5) Unless it can be shown that the size of openings that exceed this limit does not	**3.4.6.6. Guards** 1) Every *exit* shall have a wall or a well-secured *guard* on each side., where a) there is a difference in elevation of more than 600 mm between the walking surface and the adjacent surface, or b) the adjacent surface within 1.2 m of the walking surface has a slope of more than 1 in 2. (See Note A-9.8.8.1.) 2) Except as required by Sentence (4), the height of *guards* for *exit* stairs and *exit* ramps as well as their landings shall be not less than ~~920 mm measured vertically to the top of the *guard* from a line drawn through the outside edges of the stair nosings and 1 070 mm around landings~~1 070 mm. 3) The height of *guards* for *exit* ramps and their landings shall be not less than 1 070 mm measured vertically to the top of the *guard* from a) a line drawn through the outside edges of the stair nosings, or b) the surface of the ramp ~~surface~~ or landing. 4) The height of *guards* for exterior stairs and landings more than 10 m above adjacent ground level shall be not less than 1 500 mm measured vertically to the top of the *guard* from the surface of the landing or from a line drawn through the outside edges of the stair nosings. 5) ~~Unless it can be shown that the size of openings that exceed this limit does not present a hazard, there shall be no opening that permits~~Except as provided in Sentence 3.3.1.18.(3) and Articles 3.3.4.7. and 3.3.5.10., *guards* in *exits* shall not have any openings that permit the passage of a ~~sphere~~ spherical object whose diameter is more than 100 mm ~~through a *guard* for an *exit*~~. 6) In a stairway, a window for which the distance measured vertically between the	

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present a hazard, there shall be no opening that permits the passage of a sphere whose diameter is more than 100 mm through a *guard* for an *exit*. 6) In a stairway, a window for which the distance measured vertically between the bottom of the window and a line drawn through the outside edges of the stair nosings is less than 900 mm, or a window that extends to less than 1 070 mm above the landing, shall a) be protected by a *guard* that is i) located approximately 900 mm above a line drawn through the outside edges of the stair nosings, or ii) not less than 1 070 mm high measured to the top of the *guard* from the surface of the landing, or b) be fixed in position and designed to resist the lateral design loads specified for *guards* and walls in Articles 4.1.5.14. and 4.1.5.16. 7) Unless it can be shown that the location and size of openings do not present a hazard, *guards* shall be designed so that no member, attachment or opening located between 140 mm and 900 mm above the level being protected by the *guard* facilitates climbing.	bottom of the window and a line drawn through the outside edges of the stair nosings is less than 900 mm, or a window that extends to less than 1 070 mm above the landing, shall a) be protected by a *guard* that is i) located approximately 900 mm above a line drawn through the outside edges of the stair nosings, or ii) not less than 1 070 mm high measured to the top of the *guard* from the surface of the landing, or b) be fixed in position and designed to resist the lateral design loads specified for *guards* and walls in Articles 4.1.5.14. and 4.1.5.16. 7) ~~Unless it can be shown that the location and size of openings do not present a hazard, *guards*~~Except for *guards* conforming to Article 3.3.5.10., *guards* that protect a level located more than one *storey* or 4.2 m above the adjacent level shall be designed so that no member, attachment or opening located between 140 mm and 900 mm above the level being protected by the *guard* facilitates climbing. (See Note A-9.8.8.6.(1).)	
3.4.6.7. Ramp Slope (See also Article 3.8.3.4.) 1) Except as required for aisles by Article 3.3.2.5., the maximum slope of a ramp shall be a) 1 in 10 in any *assembly*, *care*, *treatment*, *detention* or *residential occupancy*, b) 1 in 6 in rooms or *floor areas* classified as a *mercantile* or *industrial occupancy*, c) 1 in 8 in any other *floor area*, and d) 1 in 10 for an exterior ramp.	**3.4.6.7. Ramp Slope** (See also Article ~~3.8.3.4.~~3.8.3.5.) 1) Except as required for aisles by Article 3.3.2.5., the maximum slope of a ramp shall be a) 1 in 10 in any *assembly*, *care*, *treatment*, *detention* or *residential occupancy*, b) 1 in 6 in ~~rooms or *floor areas* classified as a *mercantile* or~~ an *industrial occupancy*, c) 1 in 8 in ~~any~~ all other ~~*floor area*~~ *occupancies*, and d) 1 in 10 for an exterior ramp.	
3.4.6.8. Treads and Risers (See A-9.8.4. in Appendix A.)	**3.4.6.8. Treads and Risers** (See Note A-9.8.4. ~~in Appendix A.~~)	*"Flight and run"* are a defined term now

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1) Except as permitted for *dwelling units* and by Sentence 3.4.7.5.(1) for fire escapes, steps for stairs shall have a run of not less than 280 mm between successive steps. 2) Steps for stairs referred to in Sentence (1) shall have a rise between successive treads not less than 125 mm and not more than 180 mm. 3) Except in fire escape stairs and where an exterior stair adjoins a *walkway* as permitted in Sentence 3.4.6.3.(3), risers, measured as the vertical nosing-to-nosing distance, shall be of uniform height in any one flight, with a maximum tolerance of a) 5 mm between adjacent treads or landings, and b) 10 mm between the tallest and shortest risers in a flight. 4) Except in fire escape stairs, treads, measured as the horizontal nosing-to-nosing distance, shall have a uniform run with a maximum tolerance of a) 5 mm between adjacent treads, and b) 10 mm between the deepest and shallowest treads in a flight. 5) Treads and risers shall not differ significantly in run and rise in successive flights in any stair system. 6) Where angled treads are incorporated into a stair, the treads in all sets of angled treads within a flight shall turn in the same direction. 7) The slope of treads or landings shall not exceed 1 in 50. 8) Except as permitted by Sentence (10), the top of the nosing of stair treads shall have a rounded or bevelled edge extending not less than 6 mm and not more than 13 mm measured horizontally from the front of the nosing. 9) The front edge of stair treads in *exits* and public *access to exits* shall be at right angles to the direction of *exit* travel. 10) If resilient material is used to cover the nosing of a stair tread, the minimum rounded or bevelled edge required by Sentence (8) is permitted to be reduced to 3 mm.	1) Except as permitted for *dwelling units* and by Sentence 3.4.7.5.(1) for fire escapes, steps for stairs shall have a *run* of not less than 280 mm between successive steps. 2) Steps for stairs referred to in Sentence (1) shall have a rise between successive treads not less than 125 mm and not more than 180 mm. 3) Except as provided in Article 3.3.4.7. and except for fire escape stairs, stairs that are principally used for maintenance and service, and stairs that serve *industrial occupancies* other than *storage garages*, steps for stairs shall have no open risers. 4) ~~3)~~Except in fire escape stairs and where an exterior stair adjoins a *walkway* as permitted in Sentence 3.4.6.3.(3), risers, measured as the vertical nosing-to-nosing distance, shall be of uniform height in any one *flight*, with a maximum tolerance of a) 5 mm between adjacent treads or landings, and b) 10 mm between the tallest and shortest risers in a *flight*. 5) ~~4)~~Except in fire escape stairs, treads~~, measured as the horizontal nosing-to-nosing distance,~~ shall have a uniform *run* with a maximum tolerance of a) 5 mm between adjacent treads, and b) 10 mm between the deepest and shallowest treads in a *flight*. 6) 5)Treads and risers shall not differ significantly in *run* and rise in successive *flights* in any stair system. ~~6)Where angled treads are incorporated into a stair, the treads in all sets of angled treads within a flight shall turn in the same direction.~~ 7) The slope of treads or landings shall not exceed 1 in 50. 8) Except as permitted by Sentence (10), the top of the nosing of stair treads shall have a rounded or ~~bevelled~~ beveled edge extending not less than 6 mm and not more than 13 mm measured horizontally from the front of the nosing. 9) The front edge of stair treads in *exits* and public *access to exits* shall be at right angles to the direction of *exit* travel. 10) If resilient material is used to cover the nosing of a stair tread, the minimum rounded or ~~bevelled~~ beveled edge required by Sentence (8) is permitted to be reduced to 3 mm.	*Flight* means a series of steps between landings. (See Note A-1.4.1.2.(1).) *Run* means the horizontal distance between two adjacent tread nosings on a stair. (See Figure A-9.8.4.-B in Note A-9.8.4. of Division B.) Inserted new Sentence (3). Deleted sentence (6).
3.4.6.9. Curved Stairs 1) Except as permitted by Sentence (2), tapered treads shall not be used in an *exit*. 2) A curved stair used as an *exit* shall have a) a handrail on each side, b) treads with a minimum run of 240 mm exclusive of nosings, c) treads that conform to Article 3.4.6.8. where they are measured 230 mm away from the handrail at the narrow end of the tread, and d) an inside radius that is not less than twice the stair width.	**3.4.6.9. Curved ~~Stairs~~ Flights in Exits** 1) *Exit* stair *flights* shall consist solely of a) straight *flights*, or b) ~~1)Except as permitted by Sentence (2), tapered treads shall not be used in an *exit*.~~curved *flights* complying with Sentence (2). 2) A curved ~~stair~~ *flight* used as an *exit* shall have a) a handrail on each side, b) ~~treads with~~ a minimum *run* of 240 mm ~~exclusive of nosings~~, c) ~~treads~~ a *run* that ~~conform~~ conforms to Article 3.4.6.8. ~~where they are~~ when measured ~~230~~ at a point 300 mm ~~away~~ from the centre line of the handrail at the narrow end of the tread, and d) an inside radius that is not less than twice the stair width.	Inserted new Sentence (3).

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	3) *Tapered treads* shall have a consistent angle and uniform *run* and rise dimensions in accordance with the construction tolerances stipulated in Article 3.4.6.8. when measured at a point 300 mm from the centre line of the handrail at the narrow end of the tread. 4) All *tapered treads* within a *flight* shall turn in the same direction.	
3.4.6.11. Doors 1) The distance between a stair riser and the leading edge of a door during its swing shall be not less than 300 mm. 2) No *exit* door shall open directly onto a step except that, if there is danger of blockage from ice or snow, an *exit* door is permitted to open onto not more than one step which shall be not more than 150 mm high. 3) *Exit* doors shall be clearly identifiable. (See Appendix A.) 4) No door leaf in an *exit* doorway with more than one leaf shall be less than 610 mm wide.	**3.4.6.11. Doors** 1) The distance between a stair riser and the leading edge of a door during its swing shall be not less than 300 mm. 2) ~~No~~ Except as provided in Sentence (3) and where doorways are used to confine the spillage of *flammable liquids* within a *service room* or within a room in an *industrial occupancy*, a threshold for a doorway in an *exit* ~~door shall open directly onto a step except that, if there is danger of blockage from ice or snow~~ shall be not more than 13 mm higher than the surrounding finished floor surface. 3) Except for doors providing access to ground level as required by Clause 3.3.1.7.(1)(d) and (e), an *exit* door is permitted to open onto not more than one step which shall be not more than 150 mm high where there is a risk of blockage by ice or snow. 4) ~~3)~~*Exit* doors shall be clearly identifiable. (See ~~Appendix A~~ Note A-3.4.6.11.(4).) 5) ~~4)~~No door leaf in an *exit* doorway with more than one leaf shall be less than 610 mm wide. 6) Where an *exit* door leading directly to the outside is subject to being obstructed by parked vehicles or storage because of its location, a visible sign or a physical barrier prohibiting such obstructions shall be installed on the exterior side of the door.	Inserted new Sentences.
3.4.6.12. Direction of Door Swing 1) Except for doors serving a single *dwelling unit* and except as permitted by Article 3.4.6.14., every *exit* door shall a) open in the direction of *exit* travel, and b) swing on its vertical axis.	**3.4.6.12. Direction of Door Swing** 1) Except for doors serving a single *dwelling unit* and except as permitted by Sentence (2) and Article 3.4.6.14., every *exit* door shall a) open in the direction of *exit* travel, and b) swing on its vertical axis. 2) *Exit* doors need not conform to Sentence (1), where a) they serve *storage garages* serving not more than one *dwelling unit*, b) they serve accessory *buildings* serving not more than one *dwelling unit*, c) they i) serve storage *suites* not more than 28 m2 in area that are on the *first storey* in warehousing *buildings*, and ii) open directly outdoors at ground level, or d) they serve individual self-service storage units referred to in Section 3.9.	Inserted new Sentence (2).
3.4.6.16. Door Release Hardware 1) Except for devices on doors serving a *contained use area* or an *impeded egress zone*	**3.4.6.16. Door Release Hardware** 1) Except for devices on doors serving a *contained use area* or an *impeded egress zone* designed to be remotely released in conformance with Article 3.3.1.13., and except as	Inserted new Sentence (5). Inserted new Clause and subclause for sentence (4).

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designed to be remotely released in conformance with Article 3.3.1.13., and except as permitted by Sentence (4) and Article 3.4.6.17., locking, latching and other fastening devices on a principal entrance door to a *building* as well as on every *exit* door shall permit the door to be readily opened from the inside with not more than one releasing operation and without requiring keys, special devices or specialized knowledge of the door opening mechanism. (See Appendix A.) 2) If a door is equipped with a latching mechanism, a device that will release the latch and allow the door to swing wide open when a force of not more than 90 N is applied to the device in the direction of travel to the *exit* shall be installed on a) every *exit* door from a *floor area* containing an *assembly occupancy* having an *occupant load* more than 100, b) every door leading to an *exit* lobby from an *exit* stair shaft, and every exterior door leading from an *exit* stair shaft in a *building* having an *occupant load* more than 100, and c) every *exit* door from a *floor area* containing a *high-hazard industrial occupancy*. 3) Except as required by Sentence 3.8.3.3.(7), every *exit* door shall be designed and installed so that, when the latch is released, the door will open under a force of not more than 90 N, applied at the knob or other latch releasing device. 4) Electromagnetic locks that do not incorporate latches, pins or other similar devices to keep the door in the closed position are permitted to be installed on *exit* doors other than doors leading directly from a *high-hazard industrial occupancy*, provided a) the *building* is equipped with a fire alarm system, b) the locking device, and all similar devices in the *access to exit* leading to the *exit* door, release upon actuation of the fire *alarm signal*, c) the locking device releases immediately upon loss of power controlling the electromagnetic locking mechanism and its associated auxiliary controls, d) the locking device releases immediately upon actuation of a manually operated switch readily accessible only to authorized personnel, e) a force of not more than 90 N applied to the door opening hardware initiates an irreversible process that will release the locking device within 15 s and not relock until the door has been opened, f) upon release, the locking device must be reset manually by the actuation of the switch referred to in Clause (d), and g) a legible sign is permanently mounted on the *exit* door to indicate that the locking device will release within 15 s of applying pressure to the door-opening hardware. (See Appendix A.) 5) Door hardware for the operation of the doors referred to in this Section shall be installed at a height not more than 1 200 mm above the finished floor.	permitted by ~~Sentence~~ Sentences (4) and (5) and Article 3.4.6.17., locking, latching and other fastening devices on a principal entrance door to a *building* as well as those on every *exit* door shall include release hardware complying with Clause 3.8.3.8.(1)(b) to permit the door to be readily opened from the inside with not more than one releasing operation and without requiring keys, special devices or specialized knowledge of the door -opening mechanism. (See ~~Appendix A~~ Note A-3.4.6.16.(1).) 2) If a door is equipped with a latching mechanism, a device that will release the latch and allow the door to swing wide open when a force of not more than 90 N is applied to the device in the direction of travel to the *exit* shall be installed on a) every *exit* door from a *floor area* containing an *assembly occupancy* having an *occupant load* more than 100, b) every door leading to an *exit* lobby from an *exit* stair shaft, and every exterior door leading from an *exit* stair shaft in a *building* having an *occupant load* more than 100, and c) every *exit* door from a *floor area* containing a *high-hazard industrial occupancy*. 3) Except as required by Sentence ~~3.8.3.3.(7)~~ 3.8.3.6.(8), every *exit* door shall be designed and installed so that, when the latch is released, the door will open under a force of not more than 90 N, applied at the knob or other latch releasing device. 4) Electromagnetic locks that do not incorporate latches, pins or other similar devices to keep the door in the closed position are permitted to be installed on ~~*exit*~~ doors, other than ~~doors~~ those leading directly from a *high-hazard industrial occupancy*, provided a) the *building* is equipped with a fire alarm system, b) the locking device~~, and all similar devices in the *access to exit* leading to the *exit* door, release~~ releases upon actuation of the *alarm signal* from the *building*'s fire alarm ~~*signal*~~ system, c) the locking device releases immediately upon loss of power controlling the electromagnetic locking mechanism and its associated auxiliary controls, d) except for locking devices installed in conformance with Sentence (5), the locking device releases immediately upon actuation of a manually operated switch readily accessible only to authorized personnel, e) except as provided in Clause (k), a force of not more than 90 N applied to the door opening hardware initiates an irreversible process that will release the locking device within 15 s and not ~~relock~~ re-lock until the door has been opened, f) upon release, the locking device must be reset manually by the actuation of the switch referred to in Clause (d), ~~and~~ g) a legible sign is permanently mounted on the ~~*exit*~~ door to indicate that the locking device will release within 15 s of applying pressure to the door-opening hardware.,	

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	h) the total time delay for all electromagnetic locks in any path of egress to release is not more than 15 s, i) where a bypass switch is installed to allow testing of the fire alarm system, actuation of the switch i) can prevent the release of the locking device by the fire alarm system, as stated in Clause (b), during the test, and ii) causes an audible and visual signal to be indicated at the fire alarm annunciator panel required by Article 3.2.4.9. and at the monitoring station specified in Sentence 3.2.4.8.(4), j) emergency lighting is provided at each door, and k) where they are installed on doors providing emergency crossover access to *floor areas* from *exit* stairs in accordance with Article 3.4.6.18., i) the locking device releases immediately upon the operation of a manual station for the fire alarm system located on the wall on the *exit* stair side not more than 600 mm from the door, and ii) a legible sign with the words “re-entry door unlocked by fire alarm” written in letters at least 25 mm high with a stroke of at least 5 mm is permanently mounted on the door on the *exit* stair side. (See Note A-3.4.6.16.(4).) 5) Electromagnetic locks that do not incorporate latches, pins or other similar devices to keep the door in the closed position are permitted to be installed on doors in Group B, Division 2 and Division 3 *occupancies*, provided a) the *building* is i) equipped with a fire alarm system, and ii) *sprinklered*, b) the electromagnetic lock releases upon i) actuation of the *alarm signal* from the *building*’s fire alarm system, ii) loss of its power supply and of power to its auxiliary controls, iii) actuation of a manually operated switch that is readily accessible at a constantly attended location within the locked space, and iv) actuation of the manual station installed within 0.5 m of each door and equipped with an auxiliary contact, which directly releases the electromagnetic lock, c) upon release, the electromagnetic lock requires manual resetting by actuation of the switch referred to in Subclause (b)(iii), d) a legible sign with the words “EMERGENCY EXIT UNLOCKED BY FIRE ALARM” written in letters at least 25 mm high with a stroke at least 5 mm	

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	wide is permanently mounted on the door, e) the operation of any by-pass switch, where provided for testing of the fire alarm system, sets off an audible signal and a visual signal at the fire alarm annunciator panel and at the monitoring station referred to in Sentence 3.2.4.7.(4), and f) ~~(See Appendix A.)~~emergency lighting is provided at the doors. (See Note A-3.4.6.16.(5).) 6) ~~5)~~Door hardware for the operation of the doors referred to in this Section shall be installed at a height not more than 1 200 mm above the finished floor.	
3.4.6.18. Emergency Access to Floor Areas 1) In a *building* more than 6 *storeys* in *building height*, a) doors providing access to *floor areas* from *exit* stairs shall not have locking devices to prevent entry into any *floor area* from which the travel distance up or down to an unlocked door is more than 2 *storeys*, b) doors referred to in Clause (a) that provide access into the *floor area* shall be identified by a sign on the stairway side to indicate that they are openable from that side, and c) a master key to fit all door locking devices that are intended to prevent entry into a *floor area* from an *exit* stair shall be provided in a designated location accessible to firefighters, or the door shall be provided with a wired glass panel not less than 0.0645 m2 in area and located not more than 300 mm from the door opening hardware. 2) If access to *floor areas* through unlocked doors is required by Clause (1)(a), it shall be possible for a person entering the *floor area* to have access through unlocked doors within the *floor area* to at least one other *exit*.	**3.4.6.18. Emergency Crossover Access to Floor Areas** 1) ~~In a *building* more than 6 *storeys* in *building height*~~ Except as permitted in Sentence (2),~~a)~~ doors providing access to *floor areas* from *exit* stairs shall not have locking devices to prevent entry into any *floor area* from which the travel distance up or down to an unlocked door is more than 2 *storeys*,~~.~~ 2) Doors referred to in Sentence (1) are permitted to be equipped with electromagnetic locks, provided they comply with Sentences 3.4.6.16.(4) and (5). 3) ~~b)doors~~ Doors referred to in ~~Clause~~ Sentence ~~(a) that provide access into the *floor area*~~ (1) shall be identified by a sign on the stairway side to indicate that they are openable from that side~~, and~~. 4) ~~c)a master key to fit all door locking devices that are~~ Locked doors intended to prevent entry into a *floor area* from an *exit* stair shall ~~be provided~~ a) be identified by a sign on the stairway side to indicate the location of the nearest unlocked door in each direction of travel, and b) be openable with a master key that fits all locking devices and is kept in a designated location accessible to firefighters~~,~~ or ~~the door shall~~ be provided with a wired glass panel not less than 0.0645 m2 in area and located not more than 300 mm from the door opening hardware. 5) ~~2)If~~ Where access to *floor areas* through unlocked doors is required by ~~Clause~~ Sentence (1) ~~(a)~~, it shall be possible for a person entering the *floor area* to have access through unlocked doors within the *floor area* to at least one other *exit*.	Inserted new Sentences.
3.4.6.19. Floor Numbering 1) Arabic numerals indicating the assigned floor number shall a) be mounted permanently on the stair side of the wall at the latch side of doors to *exit* stair shafts, b) be not less than 60 mm high, raised approximately 0.7 mm above the surface, c) be located 1 350 mm from the finished floor and beginning not more than 150 mm from the door, and d) be contrasting in colour with the surface to which they are applied (see Appendix A).	**3.4.6.19. Floor Numbering** 1) Arabic numerals indicating the assigned floor number shall a) be mounted permanently on the stair side of the wall at the latch side of doors to *exit* stair shafts, b) be not less than 60 mm high, raised approximately 0.7 mm above the surface, c) be located 1 ~~350~~ 500 mm from the finished floor and ~~beginning~~ not more than ~~150~~ 300 mm from the door, and d) be contrasting in colour with the surface to which they are applied (see ~~Appendix A~~ Note A-3.4.6.19.(1)(d)).	
3.5.2.1. Elevators, Escalators and Dumbwaiters 1) The design, construction, installation and *alteration* of every elevator, escalator, passenger-elevating device, moving walk, freight platform lift and dumbwaiter shall	**3.5.2.1. Elevators, Escalators and Dumbwaiters** 1) The design, construction, installation and *alteration* of every elevator, escalator, passenger-elevating device, ~~moving walk,~~ freight platform lift and	

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conform to the elevating devices regulations made pursuant to the Safety Codes Act. (See Appendix A.) 2) Before being placed in service, every elevator, escalator, passenger-elevating device, moving walk, freight platform lift or dumbwaiter installation, including safety and control devices, shall be inspected and tested in accordance with the elevating devices regulations made pursuant to the Safety Codes Act. 3) Passenger elevators shall conform to Appendix E of ASME A17.1/CSA B44, "Safety Code for Elevators and Escalators."	dumbwaiter shall conform to the ~~elevating devices regulations~~ Elevating Devices Codes Regulation made pursuant to the Safety Codes Act. (See ~~Appendix A~~ Note A-3.5.2.1.(1).) 2) Before being placed in service, every elevator, escalator, passenger-elevating device, ~~moving walk,~~ freight platform lift or dumbwaiter installation, including safety and control devices, shall be inspected and tested in accordance with the ~~elevating devices regulations~~ Elevating Devices Codes Regulation made pursuant to the Safety Codes Act. 3) Passenger elevators shall conform to Appendix E of ASME A17.1/CSA B44, "Safety Code for Elevators and Escalators."	
	3.6.1.3. Lightning Protection Systems 1) A lightning protection system, when provided, shall conform to the requirements of CAN/CSA-B72-M, "Installation Code for Lightning Protection Systems."	Inserted new article.
3.6.1.3. Storage Use Prohibition 1) *Service rooms* and *service spaces* shall not be designed to facilitate subsequent use as storage space.	**3.6.1.4. ~~3.6.1.3.~~Storage Use Prohibition** 1) *Service ~~rooms and service~~ spaces* shall not be designed to facilitate subsequent use as storage space.	Renumbered Article
3.6.1.4. Appliances Installed outside a Building	**3.6.1.5. ~~3.6.1.4.~~Appliances Installed outside a Building**	Renumbered Article
3.6.3.1. Fire Separations for Vertical Service Spaces 1) Except as required by Section 3.5., a *vertical service space* shall be separated from all other portions of each adjacent *storey* by a *fire separation* having a *fire-resistance rating* conforming to Table 3.6.3.1. for the *fire-resistance rating* required by Subsection 3.2.2. for a) the floor assembly above the *storey*, or b) the floor assembly below the *storey*, if there is no floor assembly above. (See Appendix A.) 2),3),4),5)	**3.6.3.1. Fire Separations for Vertical Service Spaces** 1) Except as ~~required by~~ provided in Articles 3.6.3.3. and 3.6.3.5. and Section 3.5., a *vertical service space* shall be separated from all other portions of each adjacent *storey* by a *fire separation* having a *fire-resistance rating* conforming to Table 3.6.3.1. for the *fire-resistance rating* required by Subsection 3.2.2. for a) the floor assembly above the *storey*, or b) the floor assembly below the *storey*, if there is no floor assembly above. (See ~~Appendix~~ Note A-3.6.3.1.(1).) 2),3),4),5)	
	3.6.3.2. Foamed Plastic Protection 1) Foamed plastic insulation in a *vertical service space* shall be protected in conformance with Article ~~3.1.5.12.~~ 3.1.5.14.	"Foamed plastic" is no longer a defined term.
	3.6.3.5. Grease Duct Enclosures (See Note A-3.6.3.5.) **1)** Except as provided in Sentence (2), *fire separations* enclosing grease ducts for commercial cooking operations shall conform to NFPA 96, "Ventilation Control and Fire Protection of Commercial Cooking Operations." **2)** The *fire-resistance rating* of field-applied and factory-built grease duct enclosure assemblies shall be determined in conformance with CAN/ULC-S144, "Fire Resistance Test – Grease Duct Assemblies."	Inserted new article.

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3.6.4.2. Fire Separations for Horizontal Service Spaces 1) A *horizontal service space* that penetrates a required vertical *fire separation* shall be separated from the remainder of the *building* it serves in conformance with Sentence (2). 2) If a *horizontal service space* or other concealed space is located above a required vertical *fire separation* other than a vertical shaft, this space need not be divided at the *fire separation* as required by Article 3.1.8.3. provided the construction between this space and the space below is a *fire separation* with a *fire-resistance rating* equivalent to that required for the vertical *fire separation*, except that the *fire-resistance rating* is permitted to be not less than 30 min if the vertical *fire separation* is not required to have a *fire-resistance rating* more than 45 min. (See Appendix A.)	**3.6.4.2. Fire Separations for Horizontal Service Spaces** 1) ~~A~~ Except as provided in Article 3.6.3.5., a *horizontal service space* that penetrates a required vertical *fire separation* shall be separated from the remainder of the *building* it serves in conformance with Sentence (2). 2) If a *horizontal service space* or other concealed space is located above a required vertical *fire separation* other than a vertical shaft, this space need not be divided at the *fire separation* as required by Article 3.1.8.3. provided the construction between this space and the space below is a *fire separation* with a *fire-resistance rating* equivalent to that required for the vertical *fire separation*, except that the *fire-resistance rating* is permitted to be not less than 30 min if the vertical *fire separation* is not required to have a *fire-resistance rating* more than 45 min. (See ~~Appendix~~ Note A-3.6.4.2.(2).)	
3.6.4.3. Plenum Requirements 1) A concealed space used as a *plenum* within a floor assembly or within a roof assembly need not conform to Sentence 3.1.5.15.(1) and Article 3.6.5.1., provided a) all materials within the concealed space have a *flame-spread rating* not more than 25 and a smoke developed classification not more than 50, except for i) tubing for pneumatic controls, ii) optical fibre cables and electrical wires and cables with *combustible* insulation, jackets or sheathes that are used for the transmission of voice, sound or data and conform to Sentences 3.1.4.3.(2) and 3.1.5.18.(2), iii) totally enclosed non-metallic raceways with an FT6 rating, when tested in accordance with Clause 3.1.5.20.(1)(a), in *buildings* required to be of *noncombustible construction*, and iv) totally enclosed non-metallic raceways with an FT4 rating, when tested in accordance with Clause 3.1.5.20.(1)(a), in *buildings* permitted to be of *combustible construction*, and b) the supports for the ceiling membrane are of *noncombustible* material having a melting point not below 760°C. 2) If a concealed space referred to in Sentence (1) is used as a return-air *plenum* and incorporates a ceiling membrane that forms part of the required *fire-resistance rating* of the assembly, every opening through the membrane shall be protected by a *fire stop flap* that a) stops the flow of air into the concealed space in the event of a fire, b) is supported in a manner that will maintain the integrity of the ceiling membrane for the duration of time required to provide the required *fire-resistance rating*, and c) conforms to the appropriate requirements of Appendix D.	**3.6.4.3. Plenum Requirements** 1) A concealed space used as a *plenum* within a floor assembly or within a roof assembly need not conform to Sentence ~~3.1.5.15.~~ 3.1.5.18.(1) and Article 3.6.5.1., provided a) all materials within the concealed space have a *flame-spread rating* not more than 25 and a smoke developed classification not more than 50, except for i) tubing for pneumatic controls, ii) optical fibre cables and electrical wires and cables with *combustible* insulation, jackets or sheathes that are used for the transmission of voice, sound or data and conform to Sentences 3.1.4.3.(2) and ~~3.1.5.18.~~ 3.1.5.21.(2), iii) totally enclosed non-metallic raceways with an FT6 rating, when tested in accordance with Clause ~~3.1.5.20.~~ 3.1.5.23.(1)(a), in *buildings* required to be of *noncombustible construction*, and iv) totally enclosed non-metallic raceways with an FT4 rating, when tested in accordance with Clause ~~3.1.5.20.~~ 3.1.5.23.(1)(a), in *buildings* permitted to be of *combustible construction*, and b) the supports for the ceiling membrane are of *noncombustible* material having a melting point not below 760°C. 2) If a concealed space referred to in Sentence (1) is used as a return-air *plenum* and incorporates a ceiling membrane that forms part of the required *fire-resistance rating* of the assembly, every opening through the membrane shall be protected by a *fire stop flap* that a) stops the flow of air into the concealed space in the event of a fire, b) is supported in a manner that will maintain the integrity of the ceiling membrane for the duration of time required to provide the required *fire-resistance rating*, ~~and~~ c) ~~conforms to the appropriate requirements of Appendix D.~~conforms to CAN/ULC-S112.2, "Fire Test of Ceiling Firestop Flap Assemblies," and d) activates at a temperature approximately 30°C above the normal maximum temperature that occurs in the return-air *plenum*, whether the air duct system is	Inserted new clause 3.6.4.3.(2)(d)

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	operating or shut down.	
3.6.4.4. Attic or Roof Space Access 1) An *attic or roof space* more than 900 mm high shall be provided with access from the floor immediately below by a hatchway not less than 550 mm by 900 mm or by a stairway.	**3.6.4.4. Attic or Roof Space Access** 1) An *attic or roof space* more than ~~900~~ 600 mm high shall be provided with access from the floor immediately below by a hatchway not less than 550 mm by 900 mm or by a stairway.	
3.6.4.7. Roof Access 1) A *building* shall be provided with direct access to the roof by an interior stairway if a) heating, ventilating or air-conditioning equipment is installed on the roof, and b) the roof elevation is more than 4 m above *grade*. 2) Access shall be provided to roof areas in which tie back and anchor systems are provided for window-cleaning suspended power platforms and if access is through a) the roof, it shall be by means of an interior staircase, or b) a wall, the panels shall be openable from the outside without the use of keys or any specialized device or knowledge. (See Appendix A.) 3) Fixed access shall be provided to rooftop heating, ventilating or air-conditioning equipment that is installed on a sloped roof.	**3.6.4.7. ~~Roof~~ Access to Roof-Mounted HVAC Equipment** 1) A *building* shall be provided with direct access to the roof by an interior stairway if a) heating, ventilating or air-conditioning equipment is installed on the roof, and b) the roof elevation is more than 4 m above *grade*. ~~2)Access shall be provided to roof areas in which tie back and anchor systems are provided for window-cleaning suspended power platforms and if access is through~~ ~~a)the roof, it shall be by means of an interior staircase, or~~ ~~b)a wall, the panels shall be openable from the outside without the use of keys or any specialized device or knowledge. (See Appendix A.)~~ 2) ~~3)~~Fixed access shall be provided to rooftop heating, ventilating or air-conditioning equipment that is installed on a sloped roof.	Removed sentence (2)
3.6.5.1. Duct Materials 1) Except as permitted by Sentences (2) to (5) and Article 3.6.4.3., all ducts, duct connectors, associated fittings and *plenums* used in air duct systems shall be constructed of steel, aluminum alloy, copper, clay, asbestos-cement or other *noncombustible* material. 2) Except as permitted by Sentence (3), ducts, associated fittings and *plenums* are permitted to contain *combustible* material provided they a) conform to the appropriate requirements for Class 1 duct materials in CAN/ULC-S110, “Test for Air Ducts,” b) conform to Article 3.1.5.15. in a *building* required to be of *noncombustible construction*, c) conform to Subsection 3.1.9., d) are used only in horizontal runs in a *building* required to be of *noncombustible construction*, e) are not used in vertical runs serving more than 2 *storeys* in a *building* permitted to be of *combustible construction*, and f) are not used in air duct systems in which the air temperature could be more than 120°C. 3), 4), 5)	**3.6.5.1. Duct Materials** **1)** Except as permitted by Sentences (2) to (5) and Article 3.6.4.3., all ducts, duct connectors, associated fittings and *plenums* used in air duct systems shall be constructed of steel, aluminum alloy, copper, clay~~, asbestos-cement~~ or other *noncombustible* material. **2)** Except as permitted by Sentence (3), ducts, associated fittings and *plenums* are permitted to contain *combustible* material provided they a) conform to the appropriate requirements for Class 1 duct materials in CAN/ULC-S110, “Test for Air Ducts,” b) conform to Article ~~3.1.5.15.~~ 3.1.5.18. in a *building* required to be of *noncombustible construction*, c) conform to Subsection 3.1.9., d) are used only in horizontal runs in a *building* required to be of *noncombustible construction*, e) are not used in vertical runs serving more than 2 *storeys* in a *building* permitted to be of *combustible construction*, and f) are not used in air duct systems in which the air temperature could be more than 120°C. 3), 4), 5)	

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3.7.2.2. Water Closets **1) ……** **2)** If a single universal toilet room is provided in accordance with the requirements of Section 3.8., the total number of persons in the *building* used to determine the number of water closets to be provided, is permitted to be reduced by 10 before applying Sentences (6), (7), (8), (12), (13) or (14). **3)** Except as permitted by Sentence (2), if only one universal toilet room is provided in accordance with Section 3.8., the water closet in this room shall not be taken into consideration in determining the number of water closets required by this Article, unless a single water closet is permitted in accordance with Sentence (4). **4), 5), 6), ……14), 15), 16)** **17)** If a room contains a) not more than 1 water closet, the doorway to the room shall be provided with a full-height door that is capable of being locked from the inside, or b) no fewer than 2 water closets or at least 1 water closet and 1 urinal, the room shall be designed so that water closets, urinals and lavatories are not visible from the entrance to the room. **18)** Except for facilities provided in accordance with Section 3.8., every cubicle containing a water closet shall be not less than 1 400 mm deep and 800 mm wide. **19)** Water closet cubicles shall be constructed of smooth, easily cleanable material. **20)…..**	**3.7.2.2. Water Closets** **1) ……** **2)** If a single universal ~~toilet room~~ washroom is provided in accordance with the requirements of Section 3.8., the total number of persons in the *building* used to determine the number of water closets to be provided, is permitted to be reduced by 10 before applying ~~Sentences~~ Sentence (6), (7), (8), (12), (13) or (14). **3)** Except as permitted by Sentence (2), if only one universal ~~toilet room~~ washroom is provided in accordance with Section 3.8., the water closet in this room shall not be taken into consideration in determining the number of water closets required by this Article, unless a single water closet is permitted in accordance with Sentence (4).b **4), 5), 6), ……14), 15), 16)** **17)** If a room contains a) not more than 1 water closet, the doorway to the room shall be provided with a full-height door that is capable of being locked from the inside, or b) no fewer than 2 water closets or at least 1 water closet and 1 urinal, the room shall be designed so that water closets, and urinals ~~and lavatories~~ are not visible from the entrance to the room. **18)** Except for facilities provided in accordance with Section 3.8., every ~~Cubicle~~ stall containing a water closet shall be not less than 1 400 mm deep and 800 mm wide. **19)** Water closet ~~cubicles~~ stalls shall be constructed of smooth, easily cleanable material. **20)…..**	
3.7.2.3. Lavatories **4)** Lavatories required by Sentence (1) shall be equipped with faucets that a) operate automatically, or b) have lever-type handles that do not close under spring action. **5)** Daycare facilities shall have at least one sink suitable for the washing of toys.	***3.7.2.3.*** **Lavatories** **4)** ~~Lavatories~~ Except as provided by the Plumbing Code Regulation made pursuant to the Safety Codes Act, lavatories required by Sentence (1) shall be equipped with faucets that a) operate automatically, or b) ~~have lever-type handles that do not close under spring action.~~ have a manual control that i) complies with Clause 3.8.3.8.(1)(b), ii) does not require the application of continuous force to maintain water flow, and iii) where metered, provides at least 10 s of water flow. (See Note A-3.7.2.3.(4).) **5)** Daycare facilities shall have at least one sink suitable for the washing of toys that is not located in a washroom.	Inserted new Subclause (b) (i),(ii),(iii).
3.7.2.4. Service Buildings for Manufactured Home Parks and Campgrounds **1)** A service *building* shall be provided for public use for a) *manufactured homes* that do not have individual sanitary facilities connected to a central water supply and drainage system, and b) a *campground*.	**3.7.2.4. Service Buildings for ~~Manufactured Home~~ Parks and Campgrounds** **1)** A service *building* shall be provided for public use ~~for a)*manufactured homes*~~ in a) parks or other developments that provide sites for parking or installation of recreational vehicles, camper trailers or similar structures or vehicles that do not have individual sanitary facilities connected to a central water supply	

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2) Except as permitted by Sentence (4), the service *building* required by Sentence (1) shall contain a) at least one water closet for each sex if the service *building* facilities serve not more than 10 *manufactured homes* or camping sites, and b) an additional water closet for each sex for each additional 10 *manufactured homes* or camping sites.	and drainage system, and b) a *campground*. **2)** Except as permitted by Sentence (4), the service *building* required by Sentence (1) shall contain a) at least one water closet for each sex if the service *building* facilities serve not more than 10 ~~*manufactured homes* or camping~~ unserviced sites, and b) an additional water closet for each sex for each additional 10 ~~*manufactured homes* or camping~~ unserviced sites.	
3.7.2.8. Grab Bar Installation **1)** Grab bars that are installed shall resist a load not less than 1.3 kN applied vertically or horizontally.	**3.7.2.8. Grab ~~Bar Installation~~ Bars** **1)** Grab bars shall a) be slip-resistant and free of any sharp or abrasive elements, b) be mounted on surfaces that are ~~installed shall~~ free of any sharp or abrasive elements, c) be able to resist a load of not less than 1.3 kN applied vertically or horizontally, d) be 30 mm to 40 mm in diameter, and e) where mounted on a wall, have a clearance of 35 mm to 45 mm from the wall.	Inserted new Clauses (a),(b),(c),(d),(e).
3.7.2.9. Bathtubs **1)** Where a bathtub is installed in a hotel or a motel, it shall a) notwithstanding the presence of a water closet or a lavatory, have a clear floor space at least 900 mm wide along its length, b) have faucets that conform to Clause 3.7.2.3.(4)(b), c) have grab bars that i) conform to Sentence 3.7.2.8.(1), ii) are 1 200 mm long located vertically at the end of the bathtub that is adjacent to the clear floor space, with the lower end between 180 mm and 280 mm above the bathtub rim, and iii) are 1 200 mm long located horizontally along the length of the bathtub at 180 mm to 280 mm above the bathtub rim, and d) be open along its length with no tracks mounted on the bathtub rim.	**3.7.2.9. Bathtubs** **1)** Where a bathtub is installed in a hotel or a motel, it shall a~~) notwithstanding the presence of a water closet or a lavatory,~~ have a clear floor space at least 900 mm wide along its length, except that a water closet or a lavatory is permitted to encroach this space, b) have faucets and other controls that conform to Clause ~~3.7.2.3.(4~~ 3.8.3.8.(1)(b), c) have a slip-resistant bottom surface, d) ~~c)~~ have grab bars that i) conform to Sentence 3.7.2.8.(1), ii) are not less than 1 200 mm long located vertically at the end of the bathtub that is adjacent to the clear floor space, with the lower end between 180 mm and 280 mm above the bathtub rim, and iii) are not less than 1 200 mm long located horizontally along the length of the bathtub at 180 mm to 280 mm above the bathtub rim, and e) ~~d)be open~~ be capable of being accessed along its full length with no tracks mounted on the bathtub rim.	
3.7.3. Reserved	**3.7.3. ~~Reserved~~ Medical Gas Piping Systems**	Relocated Medical Gas Piping Systems from Part 7 to 3.7.3.

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Section 3.8. Barrier-Free Design	**Section 3.8. ~~Barrier-Free Design~~ Accessibility**	
N/A	**3.8.1. Scope** **3.8.1.1. Scope** 1) This Section is concerned with the *barrier-free* design of *buildings*. 2) *Buildings* and facilities required to be *barrier-free* in accordance with Subsection 3.8.2. shall be designed in accordance with Subsection 3.8.3. 3) Residential *projects* of 10 or more *dwelling units* funded in whole or in part by the Government of Alberta are required to provide adaptable *dwelling units* which could be made to meet *barrier-free* design principles and shall be provided as follows: a) 1 per 10 *dwelling units*, based on the total number of *dwelling units* in a *project*, and b) adaptable *dwelling units* shall be designed in accordance with Subsection 3.8.4. 4) In addition to the requirements of Sentence (2), physician clinics and offices shall conform to Subsection 3.8.5.	New Subsection. Sentence (3) previously located under Article 3.8.4.1. in ABC 2014. Sentence (4) cross-reference to new Alberta-specific Subsection 3.8.5.
3.8.1.1. Application	**3.8.2. ~~3.8.1.1.~~Application**	
3.8.1.1. Application 2) *Buildings* required to be *barrier-free* must comply with all requirements designed to assist persons with physical, sensory and developmental disabilities.	**3.8.2.1. Exceptions** ~~2) *Buildings* required to be *barrier-free* must comply with all requirements designed to assist persons with physical, sensory and developmental disabilities.~~	Sentence (2) deleted
3.8.1.2. Entrances 1) In addition to the *barrier-free* entrances required by Sentence (2), not less than 50% of the pedestrian entrances, including the primary entrance, of a *building* referred to in Sentence 3.8.1.1.(1), including *walkways* leading to the entrances from a public thoroughfare and from on-site parking areas, shall be *barrier-free*. … 6) If an entrance is equipped with a security system, both visual and audible signals shall be used to indicate when the door lock is released.	**3.8.2.2. ~~3.8.1.2.~~Entrances** 1) In addition to the *barrier-free* entrances required by Sentence (2), not less than 50% of the pedestrian entrances, including the primary entrance, of a *building* referred to in Sentence ~~3.8.1.1.~~3.8.2.1.(1), including ~~*walkways*~~ exterior walks leading to the entrances from a public thoroughfare and from on-site parking areas, shall be *barrier-free*. … ~~6) If an entrance is equipped with a security system, both visual and audible signals shall be used to indicate when the door lock is released.~~	Sentence (1) – defined term “walkway” revised to appropriate term. Sentence (6) removed and relocated to Sentence 3.8.3.6.(15).
3.8.1.3. Barrier-Free Path of Travel 1) Except as required elsewhere in this Part or as permitted by Article 3.8.3.3. pertaining to doorways, the unobstructed width of a *barrier-free* path of travel shall be not less than 920 mm. 2) Interior and exterior walking surfaces that are within a *barrier-free* path of travel shall a) have no opening that will permit the passage of a sphere more than 13 mm diam, b) have any elongated openings oriented approximately perpendicular to the direction of travel, c) be stable, firm and slip-resistant,	**3.8.3.2. ~~3.8.1.3.~~Barrier-Free Path of Travel** .. 2) Interior and exterior walking surfaces that are within a *barrier-free* path of travel shall a) have no opening that will permit the passage of a sphere more than 13 mm in ~~diam~~diameter, b) have any elongated openings oriented approximately perpendicular to the direction of travel, c) be stable, firm and slip-resistant, d) have a cross slope no steeper than 1 in 50, ~~d~~e) be ~~bevelled~~beveled at a maximum slope of 1 in 2 at changes in level ~~not more than~~ between 6 mm and 13 mm, and	Sentence (2) – new clause (d) and technical change to clause (d) Sentence (5) – relocated requirement that was Sentence 3.3.1.7.(6) in ABC 2014. “Moving *walkway*” also changed to “moving walk.”

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d) be bevelled at a maximum slope of 1 in 2 at changes in level not more than 13 mm, and e) be provided with sloped floors or ramps at changes in level more than 13 mm. 3) A *barrier-free* path of travel is permitted to include ramps, passenger elevators or other platform-equipped passenger-elevating devices to overcome a difference in level. 4) The width of a *barrier-free* path of travel that is more than 30 m long shall be increased to not less than 1 500 mm for a length of 1 500 mm at intervals not exceeding 30 m.	~~e~~f) be provided with sloped floors or ramps at changes in level more than 13 mm. (See Note A-3.8.3.2.(2).) … 5) In a *barrier-free* path of travel, a downward change in elevation shall be signalled by the use of a 600 mm wide tactile warning strip placed 250 mm from the edge and for the full width of a stair, escalator, moving walk, ramp or platform, and identified using colour and brightness contrast.	
3.8.1.4. Access to Storeys Served by Escalators and Moving Walks	**~~3.8.1.4.~~ 3.8.2.4. Access to Storeys Served by Escalators and Moving Walks**	
3.8.1.5. Controls 1) Except as required by Sentence 3.5.2.1.(3) and Article 3.8.3.5. for elevators and platform-equipped passenger-elevating devices, controls for the operation of *building* services or safety devices, including electrical switches, thermostats and intercom switches, that are intended to be operated by the occupant and are located in or adjacent to a *barrier-free* path of travel shall be accessible to a person in a wheelchair, operable with one hand, and mounted between 400 mm and 1 200 mm above the floor.	**~~3.8.1.5.~~ 3.8.2.6. Controls** 1) Except as ~~required~~ provided in Sentence 3.5.2.1.(3) and Article ~~3.8.3.5.~~ 3.8.3.7. for elevators and platform-equipped passenger-elevating devices, controls for the operation of *building* services or safety devices, including electrical switches, thermostats, faucets, door hardware and intercom switches, that are intended to be operated by the occupant and are located in or adjacent to a *barrier-free* path of travel shall ~~be accessible to a person in a wheelchair, operable with one hand, and mounted between 400 mm and 1 200 mm above the floor~~ comply with Subsection 3.8.3. (See Note A-3.8.2.6.(1).)	
3.8.2. Occupancy Requirements	**~~3.8.2. Occupancy Requirements~~**	
3.8.2.1. Areas Requiring a Barrier-Free Path of Travel 4) Except as provided in Sentence (5), Sentence (1) does not apply to any *storey*, not more than 600 m2 in area, above or below the *first storey* of a *building* that does not exceed two *storeys* in *building height*.	**3.8.2.3. ~~3.8.2.1.~~Areas Requiring a Barrier-Free Path of Travel** 4) Except as provided in Sentence (5) and except for a *storey* containing a physician clinic or office within the scope of Subsection 3.8.5., Sentence (1) does not apply to any *storey*, not more than 600 m2 in area, above or below the *first storey* of a *building* that does not exceed two *storeys* in *building height*.	Exemption due to new Subsection 3.8.5.
3.8.2.2. Access to Parking Areas and Stall Design **(See Appendix A.)**	**3.8.2.5. ~~3.8.2.2.~~Access to Parking Areas, Exterior Passenger-Loading Zones and Stall Design** (See ~~Appendix~~Note A.-3.8.2.5.) 3) Exterior passenger-loading zones shall comply with Subsection 3.8.3.	New Sentence (3). Design requirements relocated to Subsection 3.8.3.
3.8.2.2. Access to Parking Areas and Stall Design **(See Appendix A.)** 3) If an exterior passenger loading zone is provided, it shall have	**3.8.3.4. Exterior Passenger-Loading Zones** ~~3)~~1) If an exterior passenger-loading zone is provided, it shall have a) an access aisle not less than 1 500 mm wide and 6 000 mm long adjacent and parallel to the vehicle pull-up space,	Sentence 3.8.2.2.(3) under ABC 2014 relocated to new Article 3.8.3.4.

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a) an access aisle not less than 1 500 mm wide and 6 000 mm long adjacent and parallel to the vehicle pull-up space, b) a curb ramp, where there are curbs between the access aisle and the vehicle pull-up space, and c) a clear height of not less than 2 750 mm at the pull-up space and along the vehicle access and egress routes.	b) a curb ramp, where there are curbs between the access aisle and the vehicle pull-up space, and c) a clear height of not less than 2 750 mm at the pull-up space and along the vehicle access and egress routes.	
3.8.2.2. Access to Parking Areas and Stall Design **(See Appendix A.)** 4) A parking stall intended for use by persons using a wheelchair or other mobility aid shall a) be designed as a 2.4 m wide parking stall adjacent to a 2.4 m wide access aisle where the access aisle is demarcated to indicate no parking, b) have a firm, slip-resistant and level surface, c) be clearly marked and identified by i) a vertically mounted sign, located near the centre line of each designated stall, with the centre of the sign between 1 600 to 2 500 mm from the finished surface, and ii) the International Symbol of Access painted on the pavement, d) be located near to or adjoining a *barrier-free* path of travel leading to the nearest *barrier-free* entrance, and e) be designed so that parked vehicles shall not obstruct access onto an elevated and level surface. (See Appendix A.)	**3.8.3.22. Parking Stalls** 1~~4~~) A parking stall intended for use by persons using a wheelchair or other mobility aid shall a) be designed as a 2.4 m wide parking stall adjacent to a 2.4 m wide access aisle where the access aisle is demarcated to indicate no parking, b) have a firm, slip-resistant and level surface, c) be clearly marked and identified by i) a vertically mounted sign, located near the centre line of each designated stall, with the centre of the sign between 1 600 to 2 500 mm from the finished surface, and ii) the International Symbol of Access painted on the pavement, d) be located near to or adjoining a *barrier-free* path of travel leading to the nearest *barrier-free* entrance, and e) be designed so that parked vehicles shall not obstruct access onto an elevated and level surface. (See Appendix A.)	Sentence 3.8.2.2.(4) under ABC 2014 relocated to new Article 3.8.3.22.
3.8.2.2. Access to Parking Areas and Stall Design **(See Appendix A.)** 5) If adaptable and/or *barrier-free dwelling units* are provided, one parking stall per unit shall be provided meeting the requirements of Sentence (4).	**3.8.2.5. ~~3.8.2.2.~~Access to Parking Areas, Exterior Passenger-Loading Zones and Stall Design** (See ~~Appendix~~Note A.-3.8.2.5.) 4~~5~~) If adaptable ~~and/or~~ *dwelling units* or *barrier-free dwelling units* are provided, one parking stall per ~~unit~~ *dwelling unit* shall be provided ~~meeting the requirements of Sentence (4)~~ for use by persons with physical disabilities. 5) Parking stalls for use by persons with disabilities required by Sentence (2) or (4) shall be designed in accordance with Article 3.8.3.22.	New Sentence (5) cross-reference
3.8.2.3. Washrooms Required to be Barrier-Free **(See Appendix A.)** 1) Except as permitted by Sentence (2), all washrooms in a *barrier-free* path of travel shall be *barrier-free* in accordance with the appropriate requirements in Articles 3.8.3.8. to 3.8.3.12.	**3.8.2.8. Plumbing Facilities~~3.8.2.3. Washrooms Required to be Barrier-Free~~** ~~(See Appendix A.)~~ 1) Except as permitted by Sentence (2), all washrooms in a *barrier-free* path of travel	Sentence (6) under ABC 2014 deleted and incorporated into new Sentence (5).

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2) A washroom need not conform to the requirements of Sentence (1) provided it is located a) within a *suite* of *residential occupancy* or a *suite* of *care occupancy* that has not been designated by Sentence 3.8.4.1.(1) to be accessible, or b) in an individual *suite* having an area less than 500 m2 and there are *barrier-free* washrooms on the same *floor area* within 45 m. 3) In a *building* in which water closets are required in accordance with Subsection 3.7.2., at least one *barrier-free* water closet shall be provided in the entrance *storey*, unless a) a *barrier-free* path of travel is provided to *barrier-free* water closets elsewhere in the *building*, or b) the water closets required by Subsection 3.7.2. are for *dwelling units* only. 4) If *alterations* are made to an existing *building*, universal toilet rooms conforming to Article 3.8.3.12. are permitted to be provided in lieu of facilities for persons with physical disabilities in washrooms used by the general public. 5) In addition to the requirements of Sentence (1), at least one universal toilet room conforming to Article 3.8.3.12. shall be provided in a regional transportation terminal. 6) If more than one water closet is provided in a washroom, a *barrier-free* stall shall be provided for every 10 stalls or part thereof. 7) For temporary uses, such as outdoor fairs and festivals, a *barrier-free* stall shall be provided for every 10 stalls or part thereof.	shall be *barrier-free* in accordance with ~~the appropriate requirements in Articles 3.8.3.8. to 3.8.3.12.~~Subsection 3.8.3. (See Note A-3.8.2.8.(1) to (4).) 2) A washroom need not conform to the requirements of Sentence (1) provided it is located a) within a *suite* of *residential occupancy* or a *suite* of *care occupancy* that has not been designated by Sentence ~~3.8.4.1.(1~~3.8.1.1.(3) to be accessible, or b) in an individual *suite* having an area less than 500 m2 and there are *barrier-free* washrooms on the same *floor area* within 45 m. (See Note A-3.8.2.8.(1) to (4).) 3) In a *building* in which water closets are required in accordance with Subsection 3.7.2., at least one *barrier-free* water closet shall be provided in the entrance *storey*, unless a) a *barrier-free* path of travel is provided to *barrier-free* water closets elsewhere in the *building*, or b) the water closets required by Subsection 3.7.2. are for *dwelling units* only. (See Note A-3.8.2.8.(1) to (4).) 4) ~~If~~Where *alterations* are made to an existing *building*, universal ~~toilet rooms conforming to Article 3.8.3.12.~~washrooms complying with Subsection 3.8.3. are permitted to be provided in lieu of facilities for persons with physical disabilities in washrooms used by the general public. (See Note A-3.8.2.8.(1) to (4).) 5) If more than one water closet is provided in a washroom required to be *barrier-free*, a *barrier-free* stall complying with Subsection 3.8.3. shall be provided for every 10 stalls or part thereof. 6) Where urinals are provided in a *barrier-free* washroom, at least one urinal shall comply with Subsection 3.8.3. 7) A *barrier-free* washroom shall be provided with a lavatory that complies with Subsection 3.8.3. 8) Where mirrors are provided in a *barrier-free* washroom, at least one mirror shall comply with Subsection 3.8.3. 9) Where drinking fountains are provided, at least one shall comply with Subsection 3.8.3. 10) Where showers are provided in a *building*, at least one shower stall shall comply with Subsection 3.8.3., except where showers are provided within	

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	a) a *suite* of *care occupancy*, b) a *suite* of *residential occupancy*, c) an *industrial occupancy*, d) a *business and personal services occupancy* where the showers are not required for provision of hygienic services related to the business, or e) a *mercantile occupancy*. 11) Where a bathtub is installed in a *suite* of *residential occupancy* required to be *barrier-free*, it shall comply with Subsection 3.8.3. 12) ~~5)~~In addition to the requirements of Sentence (1), at least one universal ~~toilet room~~ washroom conforming to Article 3.8.3.12. shall be provided in a regional transportation terminal. ~~6)If more than one water closet is provided in a washroom, a *barrier-free* stall shall be provided for every 10 stalls or part thereof.~~ 13) ~~7)~~For temporary uses, such as outdoor fairs and festivals, a *barrier-free* stall shall be provided for every 10 stalls or part thereof.	
3.8.3. Design Standards **3.8.3.1. Accessibility Signs** 1) Signs incorporating the international symbol of accessibility for persons with physical disabilities shall be installed to indicate the location of a *barrier-free* entrance. (See Appendix A.) 2) A washroom, shower, elevator or parking space designed to be *barrier-free* shall be identified by a sign consisting of the international symbol of accessibility for persons with physical disabilities and by appropriate graphic or written directions to indicate clearly the type of facility available. (See Appendix A.) 3) Facilities and services for persons with a specific disability shall be identified using nationally recognized symbols. (See Appendix A.) 4) Accessibility signs for universal toilet rooms shall be installed in accordance with Clause (5)(b). 5) Where tactile signage is installed, it shall a) be not less than 60 mmhigh, raised approximately 0.7 mm above the surface, b) be located not more than 1 200 mm above the finished floor, c) begin not more than 150 mm from the door or entrance, d) be contrasting in colour with the surface on which it is applied, and e) include Braille identification by use of Braille dots not less than 1 mm in relief, located directly below the tactile signage.	~~**3.8.3. Design Standards**~~ **3.8.2.10.~~3.8.3.1. Accessibility~~ Signs and Indicators** 1) Signs ~~incorporating the international symbol of accessibility for persons with physical disabilities~~ complying with Subsection 3.8.3. shall be installed to indicate the location ~~of a *barrier-free* entrance. (See Appendix A.)~~ of a) *barrier-free* entrances, b) *barrier-free* washrooms, c) *barrier-free* showers, d) *barrier-free* elevators, e) *barrier-free* parking spaces, and f) facilities for persons with hearing disabilities. 2) Where a washroom is not designed to accommodate persons with physical disabilities in a *storey* to which a *barrier-free* path of travel is required, signs shall be provided to indicate the location of *barrier-free* facilities. ~~2) A washroom, shower, elevator or parking space designed to be *barrier-free* shall be identified by a sign consisting of the international symbol of accessibility for persons with physical disabilities and by appropriate graphic or written directions to indicate clearly the type of facility available. (See Appendix A.)~~ ~~3) Facilities and services for persons with a specific disability shall be identified using nationally recognized symbols. (See Appendix A.)~~	Article 3.8.3.1. under ABC 2014 now covered under Articles 3.8.2.10. and 3.8.3.9. Sentence 3.8.3.1.(5) under ABC 2014 relocated to Sentence 3.8.3.9.(2).

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	~~4) Accessibility signs for universal toilet rooms shall be installed in accordance with Clause (5)(b).~~ **3.8.3.9. Accessibility Signs** 1) Signs required by Article 3.8.2.10. shall incorporate the International Symbol of Access or the International Symbol of Access for Hearing Loss and appropriate graphical or textual information that clearly indicates the type of facilities available. (See Note A-3.8.3.9.(1).) 2~~5~~) Where tactile signage is installed, it shall a) be not less than 60 mm high, raised approximately 0.7 mm above the surface, b) be located not more than 1 200 mm above the finished floor, c) begin not more than 150 mm from the door or entrance, d) be contrasting in colour with the surface on which it is applied, and e) include Braille identification by use of Braille dots not less than 1 mm in relief, located directly below the tactile signage.	
3.8.3.2. Exterior Walks 1) Exterior walks that form part of a *barrier-free* path of travel shall a) have a cross slope not more than 1:50, b) be not less than 1 100 mm wide, c) have a level area conforming to Clause 3.8.3.4.(1)(c) adjacent to an entrance doorway, d) have a curb not less than 75 mm high wherever there is a vertical drop more than 75 mm from the walk surface and there is no wall, railing, or other barrier to provide protection, e) have a surface not less than 1 100 mm wide of a different texture and contrasting in colour to that surrounding it, if the path of travel is level and even with adjacent surfaces, f) be free of obstructions for the full width of the walk to not less than 1 980 mm high, except that handrails are permitted to project not more than 100 mm from either or both sides into the clear area, and g) be designed as a ramp where the slope of the walk is more than 1 in 20.	**3.8.3.3. ~~3.8.3.2.~~Exterior Walks** 1) Exterior walks that form part of a *barrier-free* path of travel shall a) ~~have a cross slope not more than 1:50,~~have a slip-resistant, continuous and even surface, b) be not less than 1 100 mm wide, c) have a level area conforming to Clause ~~3.8.3.4.~~3.8.3.5.(1)(c) adjacent to an entrance doorway, d) have a curb not less than 75 mm high wherever there is a vertical drop more than 75 mm from the walk surface and there is no wall, railing, or other barrier to provide protection, e) have a surface not less than 1 100 mm wide of a different texture and contrasting in colour to that surrounding it, if the path of travel is level and even with adjacent surfaces, f) be free of obstructions for the full width of the walk to not less than 1 980 mm high, except that handrails are permitted to project not more than 100 mm from either or both sides into the clear area, and g) be designed as a ramp where the slope of the walk is more than 1 in 20.	
3.8.3.3. Doorways and Doors 1) Every doorway that is located in a *barrier-free* path of travel shall have a clear width not less than 850 mm when the door is in the open position. (See Appendix A.) 2) Every doorway into rooms within a *suite* of *residential occupancy* shall have a clear width not less than 850 mm when the door is in the open position. (See Appendix A.) 3) Door operating devices shall be of a design which does not require tight	**3.8.3.6. ~~3.8.3.3.~~Doorways and Doors** 1) Except where stated otherwise, this Article applies to swinging and sliding doors. 2) ~~1)Every~~Except as required in Article 3.8.5.2., every doorway that is located in a *barrier-free* path of travel shall have a clear width not less than 850 mm when the door is in the open position. (See ~~Appendix A~~Note A-3.8.3.6.(2).) 3) ~~2)Every doorway into rooms~~Doorways in a path of travel to at least one bathroom within a *suite* of *residential occupancy* shall have a clear width not less than 850 mm when	ABC 2014 Sentences (5) and (6) deleted/relocated to new Article 3.8.2.7., “Power Door Operators.” ABC 2014 Sentence 3.8.1.2.(6) now Sentence (15) under this Article (Doorways and Doors).

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grasping and twisting of the wrist as the only means of operation. (See Appendix A.) 4) A threshold for a doorway referred to in Sentences (1) or (2) shall be not more than 13 mm higher than the finished floor surface and shall be bevelled to facilitate the passage of wheelchairs. 5) Except as provided in Sentences (6) and (12), every door that provides a *barrier-free* path of travel through an entrance referred to in Article 3.8.1.2., including the interior doors of a vestibule where provided, shall be equipped with a power door operator that allows persons to activate the opening of the door from either side if the entrance serves a) a hotel, b) a *building* of Group B, Division 2 *major occupancy*, or c) a *building* of Group A, Group B, Division 3, Group D or E *major occupancy* more than 500 m2 in *building area*. (See Appendix A.) 6) The requirements of Sentence (5) do not apply to an individual *suite* having an area less than 500 m2 in a *building* having only *suites* of *assembly*, *care*, *business and personal services* or *mercantile occupancy* if the *suite* is completely separated from the remainder of the *building* so that there is no access to the remainder of the *building*. 7) Except as permitted by Sentence (8) and except for a door with a power door operator, a closer for a door in a *barrier-free* path of travel shall be designed to permit the door to open when the force applied to the handle, push plate or latch-releasing device is not more than a) 38 N in the case of an exterior door, or b) 22 N in the case of an interior door. 8) Sentence (7) does not apply to a door at the entrance to a *dwelling unit*, or where greater forces are required in order to close and latch the door against the prevailing difference in air pressure on opposite sides of the door. (See Appendix A.) 9) Except for a door at the entrance to a *dwelling unit*, a closer for an interior door in a *barrier-free* path of travel shall have a closing period of not less than 3 s measured from when the door is in an open position of 70° to the doorway, to when the door	the ~~door is~~doors are in the open position. (See ~~Appendix A~~Note A-3.8.3.6.(3).) 4) ~~3)~~Door-operating devices shall ~~be of a design which does not require tight grasping and twisting of the wrist as the only means of operation. (See Appendix A.)~~ a) comply with Clause 3.8.3.8.(1)(b), and b) be operable at a height between 900 mm and 1 100 mm above the floor. (See Note A-3.8.3.6.(4).) 5) ~~4)~~A threshold for a doorway referred to in Sentences (~~1~~2) ~~or~~and (~~2~~3) shall be not more than 13 mm higher than the finished floor surface and shall be ~~bevelled~~beveled to facilitate the passage of wheelchairs. 6) Power door operators required by Sentences 3.8.2.7.(1) and 3.8.5.2.(2) shall a) activate automatically or through the use of controls that i) are located in a *barrier-free* path of travel, ii) are marked with the International Symbol of Access, iii) are located clear of the door swing and no more than 1 500 mm from that door swing, iv) comply with Subclause 3.8.3.8.(1)(a)(ii), v) are operable from a height between 150 mm and 300 mm as well as between 900 mm and 1 100 mm above the floor, and vi) are operable by touching or approaching any part of their surface with a fist, arm or foot, and b) unless equipped with safety sensors, i) fully open the door in not less than 3 s, and ii) require a force not more than 65 N to stop movement of the door. (See Note A-3.8.3.6.(6) and (7).) 7) A cane-detectable *guard* shall be installed on the hinged side of power-assisted doors that swing open into the path of travel. (See Note A-3.8.3.6.(6) and (7).) ~~5) Except as provided in Sentences (6) and (12), every door that provides a *barrier-free* path of travel through an entrance referred to in Article 3.8.1.2., including the interior doors of a vestibule where provided, shall be equipped with a power door operator that allows persons to activate the opening of the door from either side if the entrance serves~~ ~~a) a hotel,~~ ~~b) a *building* of Group B, Division 2 *major occupancy*, or~~ ~~c) a *building* of Group A, Group B, Division 3, Group D or E *major occupancy* more than 500 m2 in *building area*.~~ ~~(See Appendix A.)~~ ~~6) The requirements of Sentence (5) do not apply to an individual *suite* having~~	

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reaches a point 75 mm from the closed position, measured from the leading edge of the latch side of the door. (See Appendix A.) 10) Unless equipped with a power door operator or within a *suite*, a door in a *barrier-free* path of travel shall have a clear space on the latch side extending the height of the doorway and not less than a) 600 mm beyond the edge of the door opening if the door swings toward the approach side, and b) 300 mm beyond the edge of the door opening if the door swings away from the approach side. (See Appendix A.) 11) A vestibule located in a *barrier-free* path of travel shall be arranged to allow the movement of wheelchairs between doors and shall provide a distance between 2 doors in series of not less than 1 200 mm plus the width of any door that swings into the space in the path of travel from one door to another. 12) Only the active leaf in a multiple leaf door in a *barrier-free* path of travel need conform to the requirements of this Article. 13) Except as provided in Clause 3.8.3.4.(1)(c), the floor surface on each side of a door in a *barrier-free* path of travel shall be level within a rectangular area a) as wide as the door plus the clearance required on the latch side by Sentence 3.8.3.3.(10), and b) whose dimension perpendicular to the closed door is not less than the width of the *barrier-free* path of travel but need not exceed 1 500 mm.	~~an area less than 500 m2 in a *building* having only *suites* of *assembly, care, business and personal services* or *mercantile occupancy* if the *suite* is completely separated from the remainder of the *building* so that there is no access to the remainder of the *building*.~~ 8~~7~~) Except as ~~permitted by~~provided in Sentence (~~8~~9) and except for a door with a power door operator complying with Sentence (6), when unlatched, ~~a closer for~~ a door in a *barrier-free* path of travel shall ~~be designed to permit the door to~~ open when the force applied to the handle, push plate or latch-releasing device is not more than a) 38 N in the case of an exterior swinging door, ~~or~~ b) 22 N in the case of an interior swinging door, or c) 22 N in the case of a sliding door. 9) ~~8)~~Sentence (~~7~~8) does not apply to a door at the entrance to a *dwelling unit*, or where greater forces are required in order to close and latch the door against the prevailing difference in air pressure on opposite sides of the door. (See ~~Appendix A~~Note A-3.8.3.6.(9).) 10) ~~9)~~Except for a door at the entrance to a *dwelling unit*, a closer for an interior door in a *barrier-free* path of travel shall have a closing period of not less than 3 s measured from when the door is in an open position of 70° to the doorway, to when the door reaches a point 75 mm from the closed position, measured from the leading edge of the latch side of the door. (See ~~Appendix A~~ Note A-3.8.3.6.(10).) 11) ~~10)~~ Unless equipped with a power door operator ~~or within a *suite*,~~ a complying with Sentence (6), a swinging door in a *barrier-free* path of travel shall have a clear space on the latch side extending the height of the doorway and not less than a) 600 mm beyond the edge of the door opening if the door swings toward the approach side, and b) 300 mm beyond the edge of the door opening if the door swings away from the approach side. (See ~~Appendix~~Note A-3.8.3.6.(11).) 12) ~~11)~~A vestibule located in a *barrier-free* path of travel shall be arranged to allow the movement of wheelchairs between doors and shall provide a distance between 2 doors in series of not less than 1 200 mm plus the width of any door that swings into the space in the path of travel from one door to another. 13) ~~12)~~Only the active leaf in a multiple -leaf door in a *barrier-free* path of travel need conform to the requirements of this Article.	

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	14) ~~13)~~Except as provided in Clause ~~3.8.3.4.~~3.8.3.5.(1)(c), the floor surface on each side of a door in a *barrier-free* path of travel shall be level within a rectangular area a) as wide as the door plus the clearance required on the latch side by Sentence ~~3.8.3.3.(10~~(11), and b) whose dimension perpendicular to the closed door is not less than the width of the *barrier-free* path of travel but need not exceed 1 500 mm. 15) If an entrance is equipped with a security system, both visual and audible signals shall be used to indicate when the door lock is released.	
3.8.3.3. Doorways and Doors 5) Except as provided in Sentences (6) and (12), every door that provides a *barrier-free* path of travel through an entrance referred to in Article 3.8.1.2., including the interior doors of a vestibule where provided, shall be equipped with a power door operator that allows persons to activate the opening of the door from either side if the entrance serves a) a hotel, b) a *building* of Group B, Division 2 *major occupancy*, or c) a *building* of Group A, Group B, Division 3, Group D or E *major occupancy* more than 500 m2 in *building area*. (See Appendix A.) 6) The requirements of Sentence (5) do not apply to an individual *suite* having an area less than 500 m2 in a *building* having only *suites* of *assembly*, *care*, *business and personal services* or *mercantile occupancy* if the *suite* is completely separated from the remainder of the *building* so that there is no access to the remainder of the *building*. .. 12) Only the active leaf in a multiple leaf door in a *barrier-free* path of travel need conform to the requirements of this Article.	**3.8.2.7. Power Door Operators** ~~5)~~ 1) Except as provided in Sentences ~~(6) and (12)~~(2) and (3), every door that provides a *barrier-free* path of travel through an entrance referred to in Article ~~3.8.1.2.~~3.8.2.2., including the interior doors of a vestibule where provided, shall be equipped with a power door operator that complies with Subsection 3.8.3. and allows persons to activate the opening of the door ~~from either side if~~ in the intended direction of travel, where the entrance serves a) a hotel, b) a *building* of Group B, Division 2 *major occupancy*, or c) a *building* of Group A, Group B, Division 3, Group D or E *major occupancy* more than 500 m2 in *building area*. ~~(See Appendix A.)~~ ~~6)~~2) The requirements of Sentence (~~5~~1) do not apply to an individual *suite* having an area less than 500 m2 in a *building* having only *suites* of *assembly*, *care*, *business and personal services* or *mercantile occupancy* if the *suite* is completely separated from the remainder of the *building* so that there is no access to the remainder of the *building*. ~~12)~~ 3) Only the active leaf in a multiple leaf door in a *barrier-free* path of travel need conform to the requirements of this Article.	New Article 3.8.2.7. formed from Sentences (5), (6) and (12) of Article 3.8.3.3.
3.8.3.4. Ramps 1) A ramp located in a *barrier-free* path of travel shall a) have a clear width not less than 870 mm (see A-3.4.3.4. in Appendix A), b) have a slope not more than 1 in 12 (see Appendix A), c) have a level area not less than 1 500 by 1 500 mm at the top and bottom and at intermediate levels of a ramp leading to a door, so that on the latch side the level area extends not less than i) 600 mm beyond the edge of the door opening where the door opens toward the ramp, or	**3.8.3.5.** ~~3.8.3.4.~~**Ramps** 1) A ramp located in a *barrier-free* path of travel shall a) have a clear width not less than 870 mm (see Note A-3.4.3.4. ~~in Appendix A~~), b) have a slope not more than 1 in 12 (see Note A-3.8.3.5.(1)(b)~~Appendix A~~), c) have a level area not less than 1 500 by 1 500 mm at the top and bottom and at intermediate levels of a ramp leading to a door, so that on the latch side the level area extends not less than i) 600 mm beyond the edge of the door opening where the door opens towards the ramp, or	

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ii) 300 mm beyond the edge of the door opening where the door opens away from the ramp (see Appendix A), d) have a level area not less than 1 200 mm long and at least the same width as the ramp at intervals not more than 9 m along its length, e) except as permitted by Sentence (2), be equipped with handrails and *guards* conforming to Articles 3.4.6.5. and 3.4.6.6., f) have a level area not less than 1 200 by 1 200 mm where a ramp makes a 90° turn, and g) have a level area not less than 1 500 by 1 500 mm where a ramp makes a 180° turn. 2) The requirement for handrails in Clause (1)(e) need not apply to a ramp serving as an aisle for fixed seating. 3) Floors or walks in a *barrier-free* path of travel having a slope steeper than 1 in 20 shall be designed as ramps.	ii) 300 mm beyond the edge of the door opening where the door opens away from the ramp (see Note A-3.8.3.5.(1)(c) ~~Appendix A~~), d) have a level area not less than 1 200 mm long and at least the same width as the ramp at intervals not more than 9 m along its length, e) except as ~~permitted by~~provided in Sentence~~s~~ (2) and (3), be equipped with handrails ~~and *guards*~~ conforming to Article~~s~~ 3.4.6.5.~~ and 3.4.6.6.~~, except that they shall be not less than 865 mm and not more than 965 mm high, f) be equipped with *guards* conforming to Article 3.4.6.6., g~~f~~) have a level area not less than 1 200 by 1 200 mm where a ramp makes a 90° turn, and h~~g~~) have a level area not less than 1 500 mm ~~by 1 500 mm~~ wide that extends to not less than the outer edge of each ramp section, where a ramp makes a 180° turn. 2) Handrails installed in addition to required handrails need not comply with the height requirements stated in Clause (1)(e). 3~~2~~) The requirement for handrails in Clause (1)(e) need not apply to a ramp serving as an aisle for fixed seating. 4) The surfaces of ramps and landings shall a) be hard or resilient where the ramp is steeper than 1 in 15 (see Note A-3.8.3.5.(4)(a)), b) have a cross slope no steeper than 1 in 50, and c) where exposed to water, be designed to drain. 5) Ramps and landings not at *grade* or adjacent to a wall shall have edge protection consisting of a) a curb not less than 75 mm high, or b) a raised barrier or rail located not more than 100 mm from the ramp or landing surface. 6~~3~~) Floors or walks in a *barrier-free* path of travel having a slope steeper than 1 in 20 shall be designed as ramps.	
3.8.3.5. Passenger-elevating devices 1) Where passenger elevators are used in a *barrier-free* path of travel, features described in Appendix E of ASME A17.1/CSA B44, “Safety Code for Elevators and Escalators,” shall be included in their design and construction. 2) A platform-equipped passenger-elevating device used in a *barrier-free* path of travel shall conform to the elevating devices regulations made pursuant to the Safety Codes Act.	**3.8.3.7. ~~3.8.3.5.~~Passenger-~~elevating devices~~Elevating Devices** 1) Where passenger elevators are used in a *barrier-free* path of travel, features described in Appendix E of ASME A17.1/CSA B44, “Safety Code for Elevators and Escalators,” shall be included in their design and construction. 2) A platform-equipped passenger-elevating device used in a *barrier-free* path of travel shall conform to the ~~elevating devices regulations~~Elevating Devices Codes Regulation made pursuant to the Safety Codes Act.	

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3.8.3.6. Spaces in Seating Area 1) Spaces designated for use by persons using wheelchairs referred to in Sentence 3.8.2.1.(3) shall be a) clear and level, or level with easily removable seating, b) not less than 900 mm wide and 1 525 mm long to allow a person using a wheelchair to enter from a side approach and 1 220 mm long where the person using a wheelchair enters from the front or rear of the space, c) arranged so that at least 2 designated spaces are side by side, d) located adjoining a *barrier-free* path of travel without infringing on egress from any row of seating or any aisle requirements, and e) situated, as part of the designated seating plan, to provide a choice of viewing locations and a clear view of the event taking place.	**3.8.3.21. ~~3.8.3.6.~~ Spaces in Seating Area** 1) Spaces designated for use by persons using wheelchairs referred to in Sentence 3.8.2.3~~1~~.(3) shall be a) clear and level, or level with ~~easily~~ removable ~~seating~~ seats, b) not less than 900 mm wide and 1 525 mm long to allow a person using a wheelchair to enter from a side approach and 1 220 mm long where the person using a wheelchair enters from the front or rear of the space, c) arranged so that at least 2 designated spaces are side by side, d) located adjoining a *barrier-free* path of travel without infringing on egress from any row of seating or any aisle requirements, and e) situated, as part of the designated seating plan, to provide a choice of viewing location~~s~~ and a clear view of the event taking place.	
3.8.3.7. Assistive Listening Devices **(See Appendix A.)** 1) Except as permitted by Sentence (2), in a *building* of *assembly occupancy*, all assembly areas with an area of more than 100 m^2 shall be equipped with an assistive listening system encompassing the entire seating area. 2) If the assistive listening system required by Sentence (1) is an induction loop system, only half the seating area in the room need be encompassed.	3.8.3.18. ~~3.8.3.7.~~ **Assistive Listening Devices** (See Note A-3.8.3.18.~~Appendix A.~~) 1) Except as ~~permitted by~~ provided in Sentence (2), ~~all assembly areas with an area of more than 100 m^2 shall be equipped with an assistive listening system encompassing~~ assistive listening systems required by Article 3.8.2.9. shall encompass the entire seating area. 2) If ~~the~~an assistive listening system ~~required by Sentence (1)~~ referred to in Article 3.8.2.9. is an induction loop system, only half the seating area in the room need be encompassed. **3.8.2.9. Assistive Listening Devices** 1) In a *building* of *assembly occupancy*, all classrooms, auditoria, meeting rooms and *theatres* with an area of more than 100 m^2 shall be equipped with an assistive listening system complying with Subsection 3.8.3.	Article 3.8.3.7. under ABC 2014 now covered under Articles 3.8.3.18. and 3.8.2.9.
3.8.3.8. Water Closet Stalls 1) A water closet stall or enclosure in a washroom required by Article 3.8.2.3. to be *barrier-free* shall a) be designed to allow a person using a wheelchair to turn in an open space that has a diameter of not less than 1 500 mm, b) be equipped with a door that i) can be latched from the inside with a closed fist, ii) provides a clear opening of not less than 800 mm wide with the door in the open position, iii) swings outward, unless sufficient room is provided within the stall or enclosure to allow the door to be closed without interfering with the person using a wheelchair (see Appendix A), iv) is provided with a door pull on the inside not less than 140 mm long located so that its midpoint is not less than	**3.8.3.11. ~~3.8.3.8.~~Water Closet Stalls** **1)** ~~A water~~ Water closet ~~stall or enclosure in a washroom~~ stalls and enclosures required by ~~Article 3.8.2.3. to be *barrier-free*~~ Sentence 3.8.2.8.(5) shall a) be designed to allow a person using a wheelchair to turn in an open space that has a diameter of not less than 1 500 mm, b) have a clear floor space of 1 500 mm by 1 500 mm in front of the accessible stall, c) ~~b)~~be equipped with a door that i) can be latched from the inside with a ~~closed fist~~ mechanism conforming to Clause 3.8.3.8.(1)(b), • ii) is aligned with either the transfer space adjacent to the water closet or with a clear floor space not less than 1 500 mm by 1 500 mm within the stall, iii) ~~ii)~~provides a clear opening ~~of~~ not less than ~~800~~850 mm wide ~~with the door in the open position~~ when it is open,	Note Sentence 3.8.3.8.(2) under ABC 2014 deleted and integrated into requirements of Sentence (1)

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200 mm and not more than 300 mm from the hinged side of the door and not less than 900 mm and not more than 1 000 mm from the floor (see Appendix A), and v) is provided with a door pull on the outside, near the latch side of the door, c) have a water closet located so that its centre line is not less than 460 mm and not more than 480 mm from an adjacent side wall on one side, d) be equipped with knurled finished grab bars as described in Sentence (2), e) be equipped with a coat hook mounted not more than 1 200 mm above the floor on a side wall and projecting not more than 50 mm from the wall, and f) have a clearance of not less than 1 700 mm between the outside of the stall face and the face of an in-swinging washroom door and 1 400 mm between the outside of the stall face and any wall-mounted fixture. 2) A grab bar required by Sentence (1) shall a) be mounted i) horizontally on the wall beside the water closet, and be not less than 1 200 mm in length, located with its centre line between 300 mm and 330 mm above the height of the water closet seat and with its midpoint located in line with the front edge of the water closet, or ii) on the wall beside the water closet and have a horizontal portion 600 mm in length with a 600 mm extension extending upwards to the front and away from the horizontal portion at an angle of 60° to the horizontal, with the centre line of the horizontal portion between 300 mm and 330 mm above the height of the water closet seat, and the intersection of the horizontal and sloping portions located in line with the front edge of the water closet, b) be mounted horizontally on the wall behind the water closet, if the water closet does not have an attached water tank, centred on the toilet bowl, and be not less than 600 mm in length, c) be installed to resist a load not less than 1.3 kN applied vertically or horizontally, d) be not less than 30 mm and not more than 40 mm in diameter, and e) have a clearance not less than 35 mm and not more than 45 mm from the wall. (See Appendix A.)	iv) is self-closing so that, when at rest, the door is ajar by not more than 50 mm beyond the jamb, v) ~~iii)~~swings outward, unless there is sufficient ~~room is provided~~floor space within the stall~~ or enclosure to allow the door to be closed without interfering with the person using a wheelchair (see Appendix A~~ for the door to swing inward in addition to a clear floor space of at least 800 mm by 1 350 mm (see Note A-3.8.3.11.(1)(c)(v)), vi) ~~iv)~~where the door swings outward, is provided with a horizontal, D-shaped, visually contrasting door pull ~~on the inside~~ not less than 140 mm long located ~~so~~on the inside such that its midpoint is ~~not less than~~ 200 mm ~~and not more than~~to 300 mm from the hinged side of the door and ~~not less than 900~~800 mm ~~and not more than~~to 1 000 mm ~~from~~above the floor (see ~~Appendix A~~Note A-3.8.3.11.(1)(c)(vi)), and vii) ~~v)~~is provided with a horizontal, D-shaped, visually contrasting door pull not less than 140 mm long located on the outside~~, near~~ such that its midpoint is 120 mm to 220 mm from the latch side ~~of~~and 800 mm to 1 000 mm above the ~~door~~floor, d) ~~c)~~have a water closet located so that ~~its~~the distance between the centre line of the fixture and the wall on one side is ~~not less than~~ 460 mm ~~and not more than 480 mm from an adjacent side wall on one side~~to 480 mm, e) be equipped with an L-shaped grab bar that i) is mounted on the side wall closest to the water closet, ii) has horizontal and vertical components not less than 760 mm long mounted with the horizontal component 750 mm to 850 mm above the floor and the vertical component 150 mm in front of the water closet (see Note A-3.8.3.11.(1)(e)(ii)), and iii) complies with Article 3.7.2.8., f) ~~d)be equipped with knurled finished grab bars as described in Sentence (2),~~be equipped with either one grab bar at least 600 mm long and centred over the water closet, or two grab bars at least 300 mm long and located either side of the flush valve, that i) conform to Article 3.7.2.8., ii) are mounted on the rear wall, and iii) are mounted at the same height as the grab bar on the side wall or 100 mm above the top of the attached water tank, if applicable, g) ~~e)~~be equipped with a coat hook mounted not more than 1 200 mm above the floor on a side wall and projecting not more than 50 mm from the wall, and	

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	h) ~~f)have a clearance of not less than 1 700 mm between the outside of the stall face and the face of an in-swinging washroom door and 1 400 mm between the outside of the stall face and any wall-mounted fixture.~~be equipped with a toilet paper dispenser mounted on the side wall closest to the water closet such that i) the bottom of the dispenser is 600 mm to 800 mm above the floor, and ii) the closest edge of the dispenser is 300 mm from the front of the water closet. ~~2) A grab bar required by Sentence (1) shall~~ ~~a) be mounted~~ ~~i) horizontally on the wall beside the water closet, and be not less than 1 200 mm in length, located with its centre line between 300 mm and 330 mm above the height of the water closet seat and with its midpoint located in line with the front edge of the water closet, or~~ ~~ii) on the wall beside the water closet and have a horizontal portion 600 mm in length with a 600 mm extension extending upwards to the front and away from the horizontal portion at an angle of 60° to the horizontal, with the centre line of the horizontal portion between 300 mm and 330 mm above the height of the water closet seat, and the intersection of the horizontal and sloping portions located in line with the front edge of the water closet,~~ ~~b) be mounted horizontally on the wall behind the water closet, if the water closet does not have an attached water tank, centred on the toilet bowl, and be not less than 600 mm in length,~~ ~~c) be installed to resist a load not less than 1.3 kN applied vertically or horizontally,~~ ~~d) be not less than 30 mm and not more than 40 mm in diameter, and~~ ~~e) have a clearance not less than 35 mm and not more than 45 mm from the wall.~~ ~~(See Appendix A.)~~	
N/A	**3.8.3.8. Controls** 1) Controls described in this Section shall a) where located in or adjacent to a *barrier-free* path of travel, and unless otherwise stated, i) be mounted 400 mm to 1 200 mm above the floor, ii) be adjacent to and centered on either the length or the width of a clear floor space of 1 350 mm by 800 mm, and b) be operable	New Article

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	i) with one hand in a closed fist position, without requiring tight grasping, pinching with fingers, or twisting of the wrist, and ii) unless otherwise stated, with a force not more than 22 N.	
3.8.3.9. Water Closets 1) A water closet for a person with physical disabilities shall a) be equipped with a seat located at not less than 400 mm and not more than 460 mm above the floor, b) be equipped with hand-operated flushing controls that are easily accessible to a wheelchair user or be automatically operable, c) be equipped with a seat lid or other back support, and d) not have a spring-actuated seat. (See Appendix A.)	**3.8.3.13. ~~3.8.3.9.~~Water Closets** 1) A water closet for a person with physical disabilities shall a) be equipped with a seat located ~~at not less than 400 mm and not more than~~430 mm to 460 mm above the floor, b) flush automatically or be equipped with ~~hand-operated~~a flushing ~~controls that are easily accessible to a wheelchair user or be automatically operable,~~control that i) is located 500 mm to 900 mm above the floor, ii) is located no more than 350 mm from the transfer side, and iii) complies with Clause 3.8.3.8.(1)(b), c) be equipped with a seat lid or other back support, and d) ~~not~~where it has a tank, have a ~~spring-actuated seat.~~ securely attached tank top. (See ~~Appendix A~~ Note A-3.8.3.13.(1).)	
3.8.3.10. Urinals 1) If urinals are provided in a *barrier-free* washroom, at least one urinal shall be a) wall mounted, with the rim located between 488 mm and 512 mm above the floor, or b) floor mounted, with the rim level with the finished floor. 2) The urinal described in Sentence (1) shall have a) a clear width of approach of 800 mm centred on the urinal, b) no step in front, and c) installed on each side a vertically mounted grab bar that is not less than 300 mm long, with its centre line 1 000 mm above the floor, and located not more than 380 mm from the centre line of the urinal. (See Appendix A.)	**3.8.3.14. ~~3.8.3.10.~~Urinals** 1) Urinals described in Sentence 3.8.2.8.(6) shall a) ~~If urinals are provided in a *barrier-free* washroom, at least one urinal shall~~ be~~a)~~ wall-mounted, with the ~~rim~~opening of the basin located ~~between 488 mm and 512~~not more than 430 mm above the floor, ~~or~~ b) ~~floor mounted, with the rim level with the finished floor.~~be adjacent to an accessible route, c) ~~2)The urinal described in Sentence (1) shall~~ have~~a)~~ a clear width of approach of 800 mm centred on the urinal and unobstructed by privacy screens, d) ~~b)~~have no step in front of it, ~~and~~ e) have a flush control that i) is automatic, or ii) complies with Clause 3.8.3.8.(1)(b) and is located 900 mm to 1 100 mm above the floor, and f) ~~c)installed on each side~~have a vertically mounted grab bar installed on each side that i) complies with Article 3.7.2.8., ii) is not less than ~~300~~600 mm long, with its ~~centreline~~centre line 1 000 mm above the floor, and iii) is located not more than 380 mm from the ~~centreline~~centre line of the urinal. ~~(See Appendix A.)~~	
3.8.3.11. Lavatories 1) A *barrier-free* washroom shall be provided with a lavatory that	**3.8.3.15. ~~3.8.3.11.~~Lavatories and Mirrors** 1) ~~A *barrier-free* washroom shall be provided with a lavatory that~~Lavatories required by Sentence 3.8.2.8.(7) shall	

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a) is located so that the distance between the centre line of the lavatory and the side wall is not less than 460 mm, b) has a rim height not more than 865 mm above the floor, c) has a clearance beneath the lavatory not less than i) 760 mm wide, ii) 735 mm high at the front edge, iii) 685 mm high at a point 205 mm back from the front edge, and iv) 230 mm high over the distance from a point 280 mm to a point 430 mm back from the front edge (see Appendix A), d) has insulated pipes where they would otherwise present a burn hazard (see Appendix A), e) has a soap dispenser located close to the lavatory, not more than 1 200 mm above the floor and accessible to persons in wheelchairs, and f) has a towel dispenser or other hand-drying equipment located close to the lavatory, not more than 1 200 mm above the floor in an area that is accessible to persons in wheelchairs. 2) If mirrors are provided in a *barrier-free* washroom, at least one mirror shall be a) mounted with its bottom edge not more than 1 000 mm above the floor, or b) be inclined to the vertical to be usable by a person in a wheelchair.	a) be equipped with faucets complying with Sentence 3.7.2.3.(4), b) ~~a)is~~be located so that the distance between the centre line of the lavatory and ~~the~~any side wall is not less than 460 mm, c) ~~b)has~~have a rim height not more than 865 mm above the floor, d) ~~c)has~~have a clearance beneath the lavatory not less than i) 760 mm wide, ii) 735 mm high at the front edge, iii) 685 mm high at a point ~~205~~200 mm back from the front edge, and iv) 230 mm high over the distance from a point 280 mm to a point 430 mm back from the front edge, (see ~~Appendix A),~~Note A-3.8.3.15.(1)(d)) e) ~~d)has~~have insulated water supply and drain pipes where ~~they would otherwise present a burn hazard (see Appendix A~~these pipes are exposed (see Note A-3.8.3.15.(1)(e)), f) ~~e)has~~have a soap dispenser that i) is automatic, or ii) complies with Clause 3.8.3.8.(1)(b) and is located~~ close to the lavatory,~~ not more than 1~~-200~~100 mm above the floor ~~and accessible to persons in wheelchairs~~, within 500 mm from the front of the lavatory (see Note A-3.8.3.15.(1)(f)), and g) ~~f)has~~have a towel dispenser or other hand-drying equipment located close to the lavatory, not more than 1 200 mm above the floor in an area that is accessible to persons in wheelchairs. 2) ~~If mirrors are provided in a *barrier-free* washroom, at least one mirror~~ Mirrors required by Sentence 3.8.2.8.(8) shall be a) mounted with ~~its~~their bottom edge not more than 1 000 mm above the floor, or b) ~~be~~fixed in an inclined ~~to the vertical~~position so as to be usable by a person in a wheelchair.	
3.8.3.12. Universal Toilet Rooms (See Appendix A.) 1) A universal toilet room shall a) be served by a *barrier-free* path of travel, b) have a door capable of being locked from the inside and released from the outside in case of emergency and having i) a latch-operating mechanism that is operable with a closed fist, located not less than 900 mm and not more than 1 000 mm above the floor, ii) if it is an outward swinging door, a door pull not less than 140 mm long located on the inside so that its midpoint is not less than 200 mm and not more than 300 mm from the hinged side of the door and not less than 900 mm and not more than 1 000 mm above the floor (see A-3.8.3.8.(1)(b)(iv) in Appendix A), and	**3.8.3.12. Universal ~~Toilet Rooms~~ Washrooms** (See ~~Appendix A.~~ Note A-3.8.3.12.) 1) A universal ~~toilet room~~washroom shall a) be served by a *barrier-free* path of travel, b) have a door ~~capable of being locked from the inside and released from the outside in case of emergency and having~~ complying with Article 3.8.3.6. that i) has a latch-operating mechanism ~~that is operable with a closed fist,~~ located ~~not less than~~ 900 mm ~~and not more than~~ to 1 000 mm above the floor that complies with Clause 3.8.3.8.(1)(b) and is capable of being locked from the inside, and released from the outside in case of emergency, and ii) if it is an outward swinging door that is not self-closing, has a door pull not less than 140 mm long located on the inside so that its midpoint is not less than 200 mm and not more than 300 mm from the hinged side of the door and not less than 900 mm and not more than 1 000 mm above the floor (see Note A-3.8.3.11.(1)(c)(vi)~~A-3.8.3.8.(1)(b)(iv) in Appendix A~~), ~~and~~	

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iii) if it is an outward swinging door, a door closer, spring hinges or gravity hinges, so that the door closes automatically, c) have one lavatory conforming to Article 3.8.3.11., d) have one water closet conforming to the requirements of Article 3.8.3.9. that has a clearance to the walls of i) not less than 285 mm and not more than 305 mm on one side, and ii) not less than 875 mm on the other side, e) have grab bars conforming to Clause 3.8.3.8.(1)(d), f) have no internal dimension between the walls that is less than 1 700 mm, g) have a coat hook conforming to Clause 3.8.3.8.(1)(e) and a shelf located not more than 1 200 mm above the floor, h) be designed to permit a wheelchair to back in alongside the water closet in the space referred to in Subclause (d)(ii), and i) be designed to permit a wheelchair to turn in an open space not less than 1 500 mm in diameter.	~~iii) if it is an outward swinging door, a door closer, spring hinges or gravity hinges, so that the door closes automatically,~~ c) have one lavatory conforming to Article ~~3.8.3.11.~~3.8.3.15., d) have one water closet conforming to ~~the requirements of~~ Article ~~3.8.3.9.~~3.8.3.13. and Clause 3.8.3.11.(1)(d), with a clear floor space at least 900 mm wide that is parallel and adjacent to the open side of the water closet ~~that has a clearance to the walls of~~ ~~i) not less than 285 mm and not more than 305 mm on one side, and~~ ~~ii) not less than 875 mm on the other side~~, e) have grab bars conforming to Clauses ~~3.8.3.8.(1)(d)~~ 3.8.3.11.(1)(e) and (f), ~~f) have no internal dimension between the walls that is less than 1 700 mm,~~ f~~g~~) have a coat hook conforming to Clause 3.8.3.11.(1)(g)~~3.8.3.8.(1)(e) and a shelf located not more than 1 200 mm above the floor~~, g) have a toilet paper dispenser conforming to Clause 3.8.3.11.(1)(h), h) ~~be designed to permit a wheelchair to back in alongside the water closet in the space referred to in Subclause (d)(ii),~~ unless a counter is provided, have a shelf located not more than 1 200 mm above the floor, and i) be designed to permit a wheelchair to turn in an open space not less than 1 500 mm in diameter.	
3.8.3.13. Showers 1) Except as provided in Sentence (2), if showers are provided in a *barrier-free* path of travel, at least one shower stall shall be *barrier-free* and shall a) be not less than 1 500 mm wide and 900 mm deep, b) have a clear floor space at the entrance to the shower, not less than 900 mm deep and the same width as the shower, except that fixtures are permitted to project into that space provided they do not restrict access to the shower (see Appendix A), c) have a slip-resistant floor surface, d) have a bevelled threshold not more than 13 mm higher than the finished floor, e) have a hinged seat that is not spring-loaded or a fixed seat that is i) not less than 450 mm wide and 400 mm deep, ii) mounted approximately 450 mm above the floor, and iii) designed to carry a minimum load of 1.3 kN, f) have a horizontal or L-shaped grab bar with a knurled finish conforming to Clauses 3.8.3.8.(2)(c), (d) and (e) that is i) not less than 900 mm long located on the wall 100 mm from the back of the seat, ii) mounted between 750 mm and 850 mm above the floor, and iii) located on the wall opposite the entrance to the shower so that not less than 300 mm of its length is at one side of the seat, (see Appendix A,)	**3.8.3.16.** ~~**3.8.3.13.**~~**Showers** 1) ~~Except as provided in Sentence (2), if showers are provided in a *barrier-free* path of travel, at least one shower stall shall be *barrier-free* and shall~~Showers required by Sentence 3.8.2.8.(10) shall a) be not less than 1 500 mm wide and 900 mm deep, b) have a clear floor space at the entrance to the shower~~,~~ that is not less than 900 mm deep and the same width as the shower, except that fixtures are permitted to project into that space provided they do not restrict access to the shower (see ~~Appendix A)~~Note A-3.8.3.16.(1)(b)), c) have no doors or curtains that obstruct the controls or the clear floor space at the entrance to the shower, d) ~~c)~~have a slip-resistant floor surface, e) ~~d)~~have a ~~bevelled~~ threshold not more than 13 mm higher than the finished floor, and where it is higher than 6 mm, beveled to a slope no steeper than 1 in 2 (50%), f) have 2 grab bars that i) conform to Sentence 3.7.2.8.(1), ii) one of which is not less than 1 000 mm long and located vertically on the side wall 50 mm to 80 mm from the adjacent clear floor space, with its lower end 600 mm to 650 mm above the floor, and, iii) one of which is L-shaped and located on the wall opposite the entrance to the shower, with a horizontal member not less than 1 000 mm long mounted 750 mm to 870 mm above the	

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g) have a pressure-equalizing or thermostatic-mixing valve controlled by a lever or other device operable with a closed fist from the seated position, located on the side wall between 200 mm and 300 mm in front of the seat, h) have a hand-held shower head with not less than 1 800 mm of flexible hose, located so that it can be reached from the seated position and equipped with a support so that it can operate as a fixed shower head, and i) have fully recessed soap holders that can be reached from the seated position and located on the side wall between 100 mm and 200 mm in front of the seat. 2) Sentence (1) does not apply to showers located within a) a *suite* of *care occupancy*, b) a *suite* of *residential occupancy*, c) an *industrial occupancy*, d) a *business and personal services occupancy* where the showers are not required for provision of hygienic services related to the business, or e) a *mercantile occupancy*.	floor and a vertical member not less than 750 mm long mounted 400 mm to 500 mm from the side wall on which the other vertical grab bar is mounted, (see Note A-3.8.3.16.(1)(f)), g) ~~e)~~have a hinged seat that is not spring-loaded or a fixed seat ~~that is~~with a smooth, slip-resistant surface and no rough edges, the seat being i) not less than 450 mm wide and 400 mm deep, ii) mounted ~~approximately 450~~on the same side wall as the vertical grab bar, at 460 mm to 480 mm above the floor, and iii) designed to carry a minimum load of 1.3 kN, ~~f)have a horizontal or L-shaped grab bar with a knurled finish conforming to Clauses 3.8.3.8.(2)(c), (d) and (e) that is~~ ~~i)not less than 900 mm long located on the wall 100 mm from the back of the seat,~~ ~~ii)mounted between 750 mm and 850 mm above the floor, and~~ ~~iii)located on the wall opposite the entrance to the shower so that not less than 300 mm of its length is at one side of the seat,~~ ~~(see Appendix A,)~~ h) ~~g)~~have a pressure-equalizing or thermostatic-mixing valve ~~controlled by a lever or other device operable with a closed fist from the seated position, located on the side wall between 200 mm and 300 mm in front~~ and other controls that i) comply with Clause 3.8.3.8.(1)(b), ii) are mounted on the wall opposite the entrance to the shower at not more than 1 200 mm above the floor and within reach of the seat, i) ~~h)~~have a hand-held shower head with not less than 1 800 mm of flexible hose, located so that it i) can be reached from ~~the~~a seated position ~~and equipped with a support so that it can operate as~~, ii) can be used in a fixed ~~shower head, and~~position at a height of 1 200 mm and 2 030 mm, and iii) does not obstruct the use of the grab bars, and j) ~~i)~~have ~~fully~~ recessed soap holders that can be reached from the seated position and located on the side wall between 100 mm and 200 mm in front of the seat.	
3.8.3.14. Counters 1) Every counter more than 2 m long, at which the public is served, shall have at least one *barrier-free* section not less than 760 mm long centred over a knee space conforming to Sentence (3). (See Appendix A.) (See also A-3.8.2.1. in Appendix A.) 2) A *barrier-free* counter surface shall be not more than 865 mm above the floor.	**3.8.3.19.** ~~3.8.3.14.~~**Counters** 1) ~~Every counter more than 2 m long, at which the public is served,~~ Counters required by Sentence 3.8.2.11.(1) shall have a) at least one *barrier-free* section not less than 760 mm long centred over a knee space conforming to Clause (c),~~Sentence (3). (See Appendix A.) (See also A-3.8.2.1. in Appendix A.)~~	

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3) Except as permitted in Sentence (4), the knee space beneath a *barrier-free* counter intended to be used as a work surface shall be not less than a) 760 mm wide, b) 685 mm high, and c) 485 mm deep. 4) A counter that is used in a cafeteria, or one that performs a similar function whereat movement takes place parallel to the counter, need not provide a knee space underneath it.	b) ~~2) A *barrier-free* counter~~ a surface ~~shall be~~ not more than 865 mm above the floor, and c) ~~3) Except~~ except as ~~permitted~~provided in Sentence (~~4~~2), ~~the knee space beneath a *barrier-free*~~ and where the counter is intended to be used as a work surface ~~shall be~~, a knee space underneath it that is i) not less than~~a)~~ 760 mm wide, ii) ~~b)~~not less than 685 mm high, and iii) ~~c)~~not less than 485 mm deep. 2) ~~4)~~A counter that is used in a cafeteria, or one that performs a similar function whereat movement takes place parallel to the counter, need not provide a knee space underneath it.	
3.8.3.15. Shelves or Counters for Telephones **(See Appendix A.)** 1) If built-in shelves or counters are provided for public telephones, they shall be level and shall a) be not less than 265 mm deep, and b) have, for each telephone provided, a clear space adjacent to the phone, not less than 265 mm wide, having no obstruction within 265 mm above the surface. 2) The top surface of a section of the shelf or counter described in Sentence (1) serving at least one telephone shall be not more than 865 mm above the floor. 3) If a wall-hung telephone is provided above a shelf or counter section described in Sentence (2), it shall be located so that the receiver and coin slot are not more than 1 370 mm above the floor. 4) At least one telephone with a built-in telecommunication device for the deaf (TTY/TDD) shall be provided where public telephones are installed.	**3.8.3.20. ~~3.8.3.15.~~Shelves or Counters for Telephones** (See ~~Appendix~~Note A.-3.8.3.20.) 1) ~~If built-in shelves~~Shelves or counters ~~are provided for public telephones, they shall~~ required by Sentence 3.8.2.11.(2) shall a) be level ~~and shall~~, b) ~~a)~~be not less than 265 mm deep, ~~and~~ c) ~~b)~~have, for each telephone provided, a clear space ~~adjacent to the phone,~~ not less than 265 mm wide, having no obstruction within 265 mm above the surface~~.2)The top surface of a section of the shelf or counter described in Sentence (1) serving at least one telephone shall be~~, and d) have a section with a surface not more than 865 mm above the floor serving at least one telephone. 2) ~~3)If~~Where a wall-hung telephone is provided above ~~a~~the shelf or counter section described in ~~Sentence~~Clause (~~2~~1)(d), it shall be located so that the receiver and coin slot are not more than 1 ~~370~~200 mm above the floor. 3) ~~4)~~At least one telephone with a built-in ~~telecommunication~~communication device for the deaf ~~(TTY/TDD)~~ shall be provided where public telephones are installed. **3.8.2.11. Counters and Counters for Telephones** 1) Every counter more than 2 m long at which the public is served shall comply with Subsection 3.8.3. (See Note A-3.8.2.11.(1).) (See also Note A-3.8.2.3.) 2) Built-in shelves and counters provided for public telephones shall comply with Subsection 3.8.3.	Technical revisions to this Article plus introduction of new Article 3.8.2.11.
3.8.3.16. Drinking Fountains 1) If drinking fountains are provided, at least one shall be *barrier-free* and shall a) have a spout located near the front of the unit not more than 915 mm above the floor, and	**3.8.3.10. ~~3.8.3.16.~~Drinking Fountains** 1) ~~If drinking fountains are provided, at least one shall be *barrier-free* and shall~~	

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b) be equipped with controls that are easily operable from a wheelchair using one hand with a force of not more than 22 N or be automatically operable.	~~a) have a spout located near the front of the unit not more than 915 mm above the floor, and~~ ~~b) be equipped with controls that are easily operable from a wheelchair using one hand with a force of notmore than 22 N or be automatically operable.~~ Drinking fountains required by Sentence 3.8.2.8.(9) shall a) be located along a *barrier-free* path of travel, b) have a minimum clear floor space of 800 mm by 1 350 mm in front of it, c) where it has frontal access, provide a knee clearance in accordance with Clause 3.8.3.15.(1)(d), d) have a spout that i) is located near the front of the unit, at a height between 750 mm and 915 mm above the floor, and ii) directs water flow in a trajectory that is nearly parallel to the front of the unit, at a height not less than 100 mm, and e) be equipped with controls that i) activate automatically, or ii) are located either on the front or on both sides of it and comply with Clause 3.8.3.8.(1)(b).	
3.8.3.17. Bathtubs 1) If a bathtub is installed in a *suite* of *residential occupancy* required to be *barrier-free*, it shall a) be located in a room complying with the dimensions stated in Sentence 3.8.3.12.(1), b) conform to Article 3.7.2.9., and c) be equipped with a hand-held shower head mounted on a vertical slide bar not less than 760 mm long and with the bottom of the slide bar at a height not less than 1 200 mm above the floor, and controls and flexible hose conforming to Article 3.8.3.13.	**3.8.3.17. Bathtubs** **1)** ~~If a bathtub is installed in a *suite* of *residential occupancy* required to be *barrier-free*, it shall~~ Bathtubs required by Sentence 3.8.2.8.(11) shall a) be located in a room ~~complying with the dimensions stated in Sentence 3.8.3.12.(1),~~ with a clear floor space not less than 1 500 mm in diameter, b) be not less than 1 500 mm long, c) have a clear floor space not less than 900 mm wide adjacent to its entire length, d) be capable of being accessed along its full length with no tracks mounted on its rim, e) have faucets and other controls that i) conform to Clause 3.8.3.8.(1)(b), and ii) are located on the centre line or between the centre line of the bathtub and the exterior edge of the bathtub rim, at a maximum height of 450 mm above the rim, f) have three grab bars i) that conform to Sentence 3.7.2.8.(1), ii) that are not less than 1 200 mm long, iii) two of which are located vertically at each end of the bathtub, set 80 mm to 120 mm in from the outside edge of the bathtub, with their lower end 180 mm to 280 mm above the bathtub rim, and iv) one of which is located horizontally along the length of the bathtub at 180 mm to 280 mm above the bathtub rim, g) have a slip-resistant bottom surface, and ~~b) conform to Article 3.7.2.9., and~~	

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	h) ~~c)~~ be equipped with a hand-held shower head ~~mounted on a vertical slide bar not less than 760 mm long and with the bottom of the slide bar at a height not less than 1 200 mm above the floor, and controls and flexible hose conforming to Article 3.8.3.13.~~ with not less than 1 800 mm of flexible hose that can be used in a fixed position at a height of 1 200 mm and 2 030 mm.	
3.8.4.1. Application 1) Residential *projects* of 10 or more units funded in whole or in part by the Government of Alberta are required to provide adaptable *dwelling units* which could be made to meet *barrier-free* design principles and shall be provided as follows: a) 1 per 10 *dwelling units*, based on the total number of units in a *project*, and b) adaptable *dwelling units* shall conform to the requirements of this Subsection.	**3.8.4.1. Application** 1) ~~Residential *projects* of 10 or more units funded in whole or in part by the Government of Alberta are required to provide adaptable *dwelling units* which could be made to meet *barrier-free* design principles and shall be provided as follows:~~ ~~a) 1 per 10 *dwelling units*, based on the total number of units in a *project*, and~~ ~~b) adaptable *dwelling units* shall conform to the requirements of this Subsection~~ Where *dwelling units* are required to be adaptable in accordance with Sentence 3.8.1.1.(3), they shall be designed in accordance with this Subsection.	Sentence 3.8.4.1.(1) under ABC 2014 deleted and relocated to Sentence 3.8.1.1.(3).
3.8.4.2. General Accessibility 1) At least one entrance serving an adaptable *dwelling unit*, including *walkways* leading to the entrance from a public thoroughfare and from on-site parking areas, shall be *barrier-free*. (See also Article 3.8.3.12. for common entrances to *buildings* and Article 3.8.2.2. for parking stalls.	**3.8.4.2. General Accessibility** 1) At least one entrance serving an adaptable *dwelling unit*, including ~~*walkways*~~ exterior walks leading to the entrance from a public thoroughfare and from on-site parking areas, shall be *barrier-free*. (See also Article 3.8.3.12. for common entrances to *buildings* and Article 3.8.2.2. for parking stalls.)	Defined term “walkway” revised to appropriate term.
N/A	**3.8.5. Access to Physician Clinics and Offices** **3.8.5.1. Application** 1) This Subsection applies to physician clinics and offices that provide professional health care services. (See Note A-3.8.5.1.(1).) **3.8.5.2. Physician Clinics and Offices** 1) Every doorway that is located in a *barrier-free* path of travel to a physician clinic or office shall have a clear width not less than 915 mm when the door is in the open position. 2) Every door that is located in a *barrier-free* path of travel to a physician clinic or office shall be equipped with a power door operator that complies with Subsection 3.8.3. and allows persons to activate the opening of the door in the intended direction of travel. 3) The main waiting area shall be designed to allow a person using a wheelchair to turn in an open space not less than 1 500 mm in diameter. 4) An assistive listening device shall be provided at the main reception area and in at least one physical examination or treatment room. (See Note A-3.8.3.18.) **3.8.5.3. Accessible Examination and Treatment Rooms (See Note A-3.8.5.3.)**	New Alberta-specific Subsection

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	1) One in every five examination rooms or part thereof shall a) have a doorway with a clear width not less than 915 mm when the door is in the open position, b) be designed to allow a person using a wheelchair to turn in an open space not less than 1 500 mm in diameter, and c) have one lavatory conforming to Article 3.8.3.15. 2) One in every five treatment rooms or part thereof shall a) have a doorway with a clear width not less than 915 mm when the door is in the open position, b) be designed to allow a person using a wheelchair to turn in an open space not less than 1 500 mm in diameter, and c) have one lavatory conforming to Article 3.8.3.15.	

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Section 3.9. Objectives and Functional Statements	**Section 3.9. ~~Objectives and Functional Statements~~ Self-service Storage Buildings**	Inserted new Section for Self service Storage Buildings.
3.9.1. Objectives and Functional Statements	**3.9.1. ~~Objectives and Functional Statements~~ General**	
3.9.1.1. 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 3.9.1.1. (See A-1.1.2.1.(1) in Appendix A.)	**3.9.1.1. ~~Attributions to Acceptable Solutions~~ Definition** **1)** For the purpose of ~~compliance with this Code as required in~~ this Section, the term "self-service storage *building*" shall mean a *building* that is open to the public for the sole purpose of providing individual self-service storage units.	
	3.9.1.2. Application **1)** This Section applies to self-service storage *buildings* that a) are not more than one *storey* in *building height*, b) do not contain a *basement* or *mezzanine*, c) consist of individual self-service storage units with external access only, d) are used for no purpose other than storage, and e) except as provided in Sentences 3.9.3.1.(2) and (4), contain no other *major occupancy*. **2)** Where there is a conflict between the requirements of this Section and other requirements in Part 3, this Section shall govern. **3)** The requirements in Part 3 regarding *occupant load* shall not apply to self-service storage *buildings*.	
	3.9.1.3. Occupancy Classification **1)** Self-service storage *buildings* shall be classified as Group F, Division 2 *major occupancies*.	
	3.9.2. Building Fire Safety **3.9.2.1. Building Area** **1)** For the purpose of applying the requirements of Subsections 3.2.1. and 3.2.2. to self-service storage *buildings*, *building area* shall mean	

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	a) the *building area* of each *building*, or b) the total of the *building areas* of all *buildings* as a group. (See Note A-3.9.2.1.(1).)	
	3.9.2.2. Spatial Separation (See Note A-3.9.2.2.) **1)** Except as provided in Sentence (3), the spatial separation requirements in Subsection 3.2.3. shall apply to self-service storage *buildings*. **2)** The distance between each group of self-service storage *buildings* shall be not less than 9 m. **3)** Subsection 3.2.3. need not apply between *buildings* within a group of self-service storage *buildings*, where the distance between these *buildings* is at least 6 m.	
3.9.1.1. 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 3.9.1.1. (See A-1.1.2.1.(1) in Appendix A.) Table 3.9.1.1. Table 3.9.1.1. is located in Volume 1, Attribution Tables.	**3.9.2.3. Access Route** **1)** ~~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 3.9.1.1. (See A-1.1.2.1.(1) in Appendix A.)~~Where Clause 3.9.2.1.(1)(b) is applied to a group of *buildings*, Article 3.2.5.4. and Sentence 3.2.5.5.(1) shall apply to that group of *buildings* as if they were a single *building*. ~~Table 3.9.1.1.~~ ~~Table 3.9.1.1. is located in Volume 1, Attribution Tables.~~ **1)** Except as provided in Sentence 3.7.2.1.(1), two public washrooms, each containing a water closet and a lavatory, shall be provided within one of the self-service storage *buildings* on the property. (See Note A-3.9.3.2.(1).)	