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3.2.6. REQUIREMENTS FOR HIGH BUILDINGS

3.2.6.1. APPLICATION

1 This Subsection applies to a building
- a) of Group A, D, E or F major occupancy classification that is more than
  - i) 36 m high, measured between grade and the floor level of the top storey, or
  - ii) 18 m high, measured between grade and the floor level of the top storey, and in which the cumulative or total occupant load on or above any storey above grade, other than the first storey, divided by 1.8 times the width in metres of all exit stairs at that storey, exceeds 300,
- b) containing a Group B major occupancy in which the floor level of the highest storey of that major occupancy is more than 18 m above grade,
- c) containing a floor area or part of a floor area located above the third storey designed or intended as a Group B, Division 2 or 3 occupancy, or
- d) containing a Group C major occupancy whose floor level is more than 18 m above grade.

3.2.7.3. EMERGENCY LIGHTING

1 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,
- 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 centreswhere persons are cared for, and
- k) food preparation areas in commercial kitchens.

2 Emergency lighting to provide an average level of illumination of not less than 10 lx at floor or catwalk level shall be included in a service space referred to in Sentence 3.2.1.1.(8).

3 The minimum value of the illumination required by Sentences (1) and (2) shall be not less than 1 lx.

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".

3.2.7.4. EMERGENCY POWER FOR LIGHTING

1 An emergency power supply shall be
- a) provided to maintain the emergency lighting required by this Subsection from a power source such as batteries or generators that will continue to supply power in the event that the regular power supply to the building is interrupted, and
- b) so designed and installed that upon failure of the regular power it will assume the electrical load automatically for a period of
  - i) 2 h for a building within the scope of Subsection 3.2.6.,
  - ii) 1 h for a building of Group B major occupancy classification that is not within the scope of Subsection 3.2.6., and
  - iii) 30 min for a building of any other occupancy. (See Appendix A.)

2 If self-contained emergency lighting units are used, they shall conform to CSA C22.2 No. 141, "Emergency Lighting Equipment."

3.2.7.5. EMERGENCY POWER SUPPLY INSTALLATION

1 Except as required by Articles 3.2.7.6. and 3.2.7.7., an emergency electrical power supply system shall be installed in conformance with CAN/CSA-C282, "Emergency Electrical Power Supply for Buildings." (See Sentence 3.2.7.8.(1) for emergency electrical power supply for voice communication systems).

3.4.5. EXIT SIGNS

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) 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 ISO 7010, "Graphical symbols – Safety colours and safety signs – Registered safety signs" for the following symbols (see 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 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 Note A-3.4.5.1(4).)

5) The circuitry serving lighting for externally and internally illuminated exit signs shall
- a) serve no equipment other than emergency equipment, and
- b) be connected to an emergency power supply as described in Article 3.2.7.4.

6) Where no exit is visible from a public corridor, from a corridor used by the public in a Group A or B major occupancy, or from principal routes serving an open floor area having an occupant load of more than 150, an exit sign conforming to Clauses (2)(b) and (c) with an arrow or pointer indicating the direction of egress shall be provided.

7) Except for egress doorways described in Sentence 3.3.2.4.(4), an exit sign conforming to Sentences (2) to (5) shall be placed over or adjacent to every egress doorway from rooms with an occupant load of more than 60 in Group A, Division 1 occupancies, dance halls, licensed beverage establishments, and other similar occupancies that, when occupied, have lighting levels below that which would provide easy identification of the egress doorway.

3.4.5.2. SIGNS FOR STAIRS AND RAMPS AT EXIT LEVEL

1 In a building more than 2 storeys in building height, any part of an exit ramp or stairway that continues up or down past the lowest exit level shall have a posted sign clearly indicating that it does not lead to an exit.

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9.9.11. SIGNS

9.9.11.1. APPLICATION

1 This Subsection applies to all exits except those serving not more than one dwelling unit or a house with a secondary suite.

9.9.11.2. VISIBILITY OF EXITS

1 Exits shall be located so as to be clearly visible or their locations shall be clearly indicated.

2 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 obstruction shall be installed or the exterior side of the door.

9.9.11.3. EXIT SIGNS

1 Every exit door shall have an exit sign placed over it or adjacent to it if the exit serves
a) a building that is 3 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) 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 in workplaces and public areas," and
c) conform to the dimensions indicated in ISO 7010, "Graphical symbols – Safety colours and safety signs – for the following symbols (see 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 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 A-3.4.5.1.(4)

5 The circuitry serving lighting for externally and internally illuminated exit signs shall
a) serve no equipment other than emergency equipment, and
b) be connected to an emergency power supply as described in Sentences 9.9.12.3.(2), (3) and (7).

6 Where no exit is visible from a public corridor, from a corridor used by the public, or from principal routes serving an open floor area having an occupant load of more than 150, an exit sign conforming to Clauses (2)(b) and (c) with an arrow or pointer indicating the direction of egress shall be provided

9.9.11.4. SIGNS FOR STAIRS AND RAMPS AT EXIT LEVEL

1 In buildings that are 3 storeys in building height, any part of an exit ramp or stairway that continues up or down past the lowest exit level shall be clearly marked to indicate that it does not lead to an exit, if the portion beyond the exit level may be mistaken as the direction of exit travel.

9.9.12. LIGHTING

9.9.11.4. SIGNS FOR STAIRS AND RAMPS AT EXIT LEVEL

1 This Subsection applies to the lighting of all means of egress except those within dwelling units or a house with a secondary suite.

9.9.12.2. REQUIRED LIGHTING IN EGRESS FACILITIES

1 Every exit, public corridor or corridor providing access to exit for the public shall be equipped to provide illumination to an average level of not less than 50 lx at floor or tread level and at all points such as angles and intersections at changes of level where there are stairs or ramps.

2 The minimum value of the illumination required by Sentence (1) shall be not less than 10 lx

9.9.12.3. EMERGENCY LIGHTING

1 Emergency lighting shall be provided in
a) exits,
b) principal routes providing access to exit in an open floor area,
c) corridors used by the public,
d) underground walkways, and
e) public corridors.

2 Emergency lighting required in Sentence (1) shall be provided from a source of energy separate from the electrical supply for the building.

3 Lighting required in Sentence (1) shall be designed to be automatically actuated for a period of at least 30 min when the electric lighting in the affected area is interrupted.

4 Illumination from lighting required in Sentence (1) shall be provided to average levels of not less than 10 lx at floor or tread level.

5 The minimum value of the illumination required by Sentence (4) shall be not less than 1 lx.

6 Where incandescent lighting is provided, lighting equal to 1 W/m2 of floor area shall be considered to meet the requirement in Sentence (4).

7 Where self-contained emergency lighting units are used, they shall conform to CSA C22.2 No. 141, "Emergency Lighting Equipment."

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APPENDIX A

EXPLONATORY MATERIAL

A-3.1.2. Use Classification
The purpose of classification is to determine which requirements apply.
This Code requires classification in accordance with every major occupancy for which the building is used or intended to be used. Where necessary, an application clause has been inserted in this Part to explain how to choose between the alternative requirements which multiple occupancy classification may present.

A-3.1.2.1.(1) Major Occupancy Classification.
The following are examples of the major occupancy classifications described in Table 3.1.2.1.:

EXAMPLES		GROUP	DIVISION
Motion picture theatres Opera houses Television studios admitting a viewing audience Theatres, including experimental theatres		A	1
Art galleries Auditoria Bowling alleys Churches and similar places of worship Clubs, nonresidential Community halls Courtrooms Dance halls Exhibition halls (other than classified in Group E) Gymnasia	Lecture halls Libraries Licensed beverage establishments Museums Passenger stations and depots Recreational piers Restaurants Schools and colleges, nonresidential Undertaking premises	A	2
Arenas Indoor swimming pools, with or without spectator seating Rinks		A	3
Amusement park structures (not elsewhere classified) Bleachers Grandstands	Reviewing stands Stadiums	A	4
Jails Penitentiaries Police stations with detention quarters	Prisons Psychiatric hospitals with detention quarters Reformatories with detention quarters	B	1
Care facilities with treatment Convalescent /recovery/rehabilitation centres with treatment Hospices with treatment Hospitals	Infirmaries Nursing homes with treatment Psychiatric hospitals without detention quarters Respite centres with treatment	B	2
Assisted/supportive living facilities Care facilities without treatment Children's custodial homes Convalescent/recovery/rehabilitation centres without treatment	Group homes Hospices without treatment Nursing homes without treatment Reformatories without detention quarters Respite centres without treatment	B	3
Apartments Boarding houses Clubs, residential Colleges, residential Convents Dormitories	Hotels Houses Lodging houses Monasteries Motels Schools, residential	C	

EXAMPLES		GROUP	DIVISION
Banks Barber and hairdressing shops Beauty parlours Dental offices Dry cleaning establishments, self-service, not using flammable or explosive solvents or cleaners Laundries, self-service	Medical offices Offices Police stations without detention quarters Radio stations Small tool and appliance rental and service establishments	D	
Department stores Exhibition halls Markets	Shops Stores Supermarkets	E	
Bulk plants for flammable liquids Bulk storage warehouses for hazardous substances Cereal mills Chemical manufacturing or processing plants Distilleries Dry cleaning plants Feed mills	Flour mills Grain elevators Lacquer factories Mattress factories Paint, varnish and pyroxylin product factories Rubber processing plants Spray painting operations Waste paper processing plants	F	1
Aircraft hangars Box factories Candy plants Cold storage plants Dry cleaning establishments not using flammable or explosive solvents or cleaners Electrical substations Factories Freight depots Helicopter landing areas on roofs Laboratories Laundries, except self-service Mattress factories Planing mills	Printing plants Repair garages Salesrooms Service stations Storage rooms Television studios not admitting a viewing audience Warehouses Wholesale rooms Woodworking factories Workshops	F	2
Creameries Factories Laboratories Light-aircraft hangars (storage only) Power plants Salesrooms	Sample display rooms Storage garages, including open air parking garages Storage rooms Warehouses Workshops	F	3

A-3.4.5.1.(2)(C) GRAPHICAL SYMBOLS FOR EXIT SIGNS

ISO 7010, "Graphical" symbols – Safety colours and safety signs – Registered safety signs" identifies the following internationally recognized symbols for use at required exits

"EMERGENCY EXIT RIGHT" (E001) SYMBOL FROM ISO 7010

Figure A-3.4.5.1.(2)(c)-B
90-degree directional arrow (E005) from ISO 7010

A-3.4.5.1.(4) Externally Illuminated Signs

An external lighting source is required to properly charge photoluminescent signs. These types of signs must be lit in conformance with the charging requirements stated in CAN/ULC-S572.

A-3.4.6. Application to Means of Egress

The requirements in Subsection 3.4.6. apply to interior and exterior exits, as well as to ramps, stairways and passageways used by the public as access to exit. The treads, risers, landings, handrails and guards for the latter access to exit facilities must thus be provided in conformance with the appropriate requirements for exit facilities.