20th Annual Industry Workshop

Session 2:
Part 3 Buildings & Part 9 Non-Res

November 28, 2024

Presented By:
The City Of Kitchener Building Division

Welcome

Matt Ruetz

MBO – Technical Specialist

Agenda

Morning		Afternoon	
9:00 am	Welcome / Administration	12:45 pm	Interconnected Floor Spaces
9:15 am	2024 OBC - General & Misc.	1:05 pm	Safety Within Floor Areas
9:40 am	Classification & Construction, and EMTC up to 18 Storeys	1:20 pm	Exit Requirements
		1:35 pm	Barrier Free Design
10:20 am	**Break (10 minutes)**	2:05 pm	Plumbing
10:30 am	Fire Protection Requirements	**2:25 pm**	**Wrap up**
11:10 am	Spatial Separation and Exposure		
11:20 am	Fire Alarm and Detection		
11:35 am	Fire Protection Systems		
12:00 pm	**Lunch (30 – 45 minutes)**		

KITCHENER

Disclaimer

The Building Code portions of this presentation have been based on Ontario's 2024 Building Code (O.Reg 163/24 as amended by O.Reg 203/24, 2020 National Building Code and Ontario Amendment Document (May 15, 2024). Any content should be verified against any subsequent amendments to the Code.

The information provided in this presentation is general in nature, is not intended as legal or technical advice, and should not be relied on as such.

If and when any building permit is applied for a project, all pertinent Code requirements will be reviewed at that time.

Under the Building Code Act, the local municipality is the authority having jurisdiction (AHJ) for enforcing the Act and its Regulations, and permit applicants should contact the appropriate official/AHJ with respect to any specific proposal.

KITCHENER

Permit Fees & Development Charges

2025 Permit Fee's

NO CHANGE;

- Assembly (finished) - **$2.07/sq. ft.** (shell - **$1.82/sq. ft.**)
- Institutional (finished) - **$2.21/sq. ft.** (shell - **$1.94/sq. ft.**)
- Apartment Building - **$1.07/sq. ft.**
- Office Building (finished) - **$1.76/sq. ft.** (shell - **$1.49/sq. ft.**)
- Retail Store (finished) - **$1.23/sq. ft.** (shell - **$0.98/sq. ft.**)
- Industrial (finished) - **$0.70/sq. ft.** (shell - **$0.59/sq. ft.**)
- Interior Finishes - **$0.37/sq. ft.**
- Revisions - **$0.20/sq. ft.** (min. $106.00), will be charged for each revision submitted.

KITCHENER

Development Charge Increase

2025 Development Charge Rates (check website)

- City of Kitchener (4.8% increase from current)*
- Region of Waterloo (4.8% increase from current)*
- School Boards (WRDSB & WCDSB) rates remain unchanged until June 1, 2025 (unless amended)

Complete applications for permits with a 20 business day review period must have been applied for before end of day Oct. 31st, 2024.

The new development charge rates will apply to all permits issued on or after Dec. 1, 2024

Public Portal Changes

Portal Change Improvements

- Starting on January 2, 2025, the portal for building applications will feature updated drop-down menus designed to streamline the application process.
- All application types will be accessible through this updated portal, making it easier for users to find the right category for their projects.
- In Winter 2025, Kitchener will be launching an updated portal that we hope will make the application process even more user-friendly. Stay tuned for more information!

Portal Changes

Here's a step-by-step guide to the new selections:

Step 1 : Select if the property type is residential or non-residential

Step 2 : Under "application type", select the general use of the structure like residential or a pool enclosure

Step 3 : Under "application sub type", select the specific use of the building like stacked townhouse or deck

Step 4 : Under "application work type", select the type of construction activity (e.g. new construction or alterations/improvements to building)

Step 5 : Select the address that the construction will take place

Step 6 : Enter a detailed description of the work that will be taking place

Step 7 : Enter information into each of the requested fields

Step 8 : Add all the required documents and drawings for a completed application

KITCHENER

2024 OBC General & Miscellaneous

2024 Ontario Building Code

Two-volume Binder Set- $195
https://www.publications.gov.on.ca/301540

Digital PDF – FREE

https://www.ontario.ca/form/get-2024-building-code-compendium-non-commercial-use

2024 OBC – Already Amended

MMAH has recently made amendments to the 2024 OBC, which will come into effect on January 1, 2025 and include;

- EMTC up to 18 Storeys
- Continue to allow Temporary Health and Residential Facilities
- Minor housekeeping and editorial changes

Still waiting on an updated Ontario Compendium

This presentation may not reflect all of these recent amendments.

2024 OBC Change Presentation Scope

This presentation focuses on highlights of the 2024 OBC changes and to types of projects common in the City of Kitchener.

Topics NOT included in this presentation include but are not limited to;

- Part 2 - Farm Buildings
- Part 4 - Structural
- Part 5 - Environmental Protection
- Part 6 - HVAC
- Part 8 - Septic Systems

For full details on all applicable changes, Code practitioners shall refer to the full 2024 OBC.

Part 10 & 11

There have been very minimal changes to Part 10 & 11.

Mainly just adding Agricultural occupancies.

Note however that some Compliance Alternatives (CAs) have been added or deleted so the numbering of the CAs you commonly have used may be a different CA number under the 2024 OBC, so be sure to check the Code to ensure you are referencing correctly.

Part 12 & SB-10

Part 12: Resource Conservation and Environmental Integrity

- minimal changes

SB-10: Energy Efficiency Requirements

- **NO CHANGES**
- OBC did not harmonize with the NBC on energy efficiency

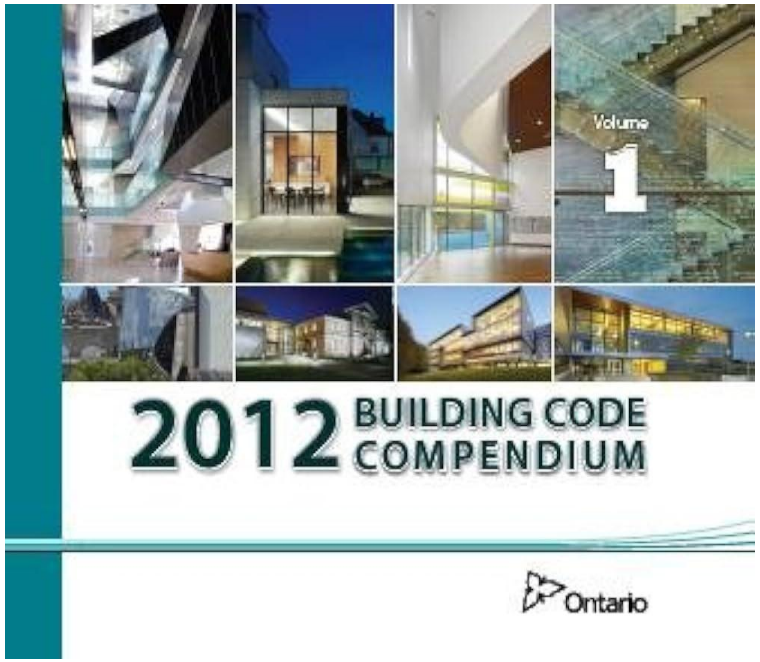
2024 OBC - Transition

Scenario 1: Only 2012 OBC Applies

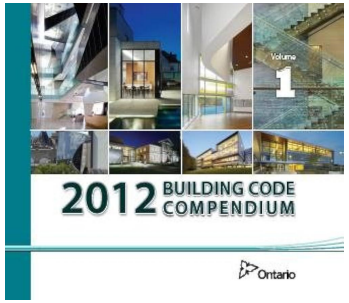
Complete Permit Application is Received **on or BEFORE December 31, 2024**

→ **2012 OBC applies** →

Construction must start **within six months** of permit issuance



2024 OBC - Transition



Scenario 2: Transition - Either 2012 or 2024 OBC may be used

Complete Permit Application is Received **on January 1, 2025, or up to and including March 31, 2025**

→ The online permit portal will have 2 options* for you to choose from;

A → "Design has been completed to the 2024 OBC"

B → "Design has been completed to the 2012 OBC - (Drawings were substantially completed before Dec. 31, 2024)" **

* Smaller projects such as decks, sheds, residential additions, etc. will not have these options and we will assume 2024 OBC unless informed otherwise.

** The City of Kitchener Building Division is not planning to require proof of substantial completion.

→ Construction must start **within six months** of permit issuance

KITCHENER

2024 OBC - Transition

Scenario 3: Only 2024 OBC Applies

Complete Permit Application is Received **on or AFTER April 1, 2025**

→ **2024 OBC applies**

OBC re-organization and re-numbering

Numerous Code provisions have been relocated within the Code to align with locations in the National Building Code

e.g. Standpipe provisions relocated from Subsection 3.2.9. to 3.2.5.

Some Articles have re-arranged the order of the Sentences within the Article to algin with the NBC structure.

OBC re-organization and re-number

Some provisions specific to the OBC have been inserted within the NBC numbering structure and may appear unusual;

9.5.1.0A. Application

(1) Except as otherwise specified in this Part, this Section applies only to *dwelling units* that are intended for use on a continuing year-round basis as the principal residence of the occupant.

9.5.3D.1. Areas of Bedrooms

(1) Except as provided in Articles 9.5.3D.2. and 9.5.3D.3., bedrooms in *dwelling units* shall have an area not less than 7 m,² where built-in cabinets are not provided and not less than 6 m² where built-in cabinets are provided.

Performance Standards

Referenced Edition Changes – Div.B. Table 1.3.1.2.

Performance Standard*	2012 OBC	2024 OBC
NFPA 13 “Installation of Sprinkler Systems”	**2013**	**2019**
NFPA 14 “…Installation of Standpipe and Hose Systems”	**2013**	**NO CHANGE**
CAN/ULC-S524 "Standard for Installation of Fire Alarm Systems"	**2014**	**2019**
CAN/ULC-S537 "Standard for Verification of Fire Alarm Systems"	**2013**	**2019**
NFPA 96 "Ventilation Control and Fire Protection of Commercial Cooking Operations"	**2014**	**NO CHANGE**
~~**ULC/ORD-C263.1** "Sprinkler-Protected Window Systems“~~	**1999**	**Superseded**
CAN/ULC-S136 "Standard Method for Fire Test of Sprinkler Protected Window Systems"	**-**	**2021**

* For complete list of all updated performance standards see Div.B.Table 1.3.1.2.

KITCHENER

Voluntary Installations

Voluntary installations of fire protection features and other building elements such as grab bars or guards are required to comply with the Building Code, relevant standards, and good engineering practice.

This is now explained in a number of places throughout the 2024 OBC;

- Preface to the Code
- A-1.3.3.
- A-3
- A-9.10.1.3.(8) and (9)

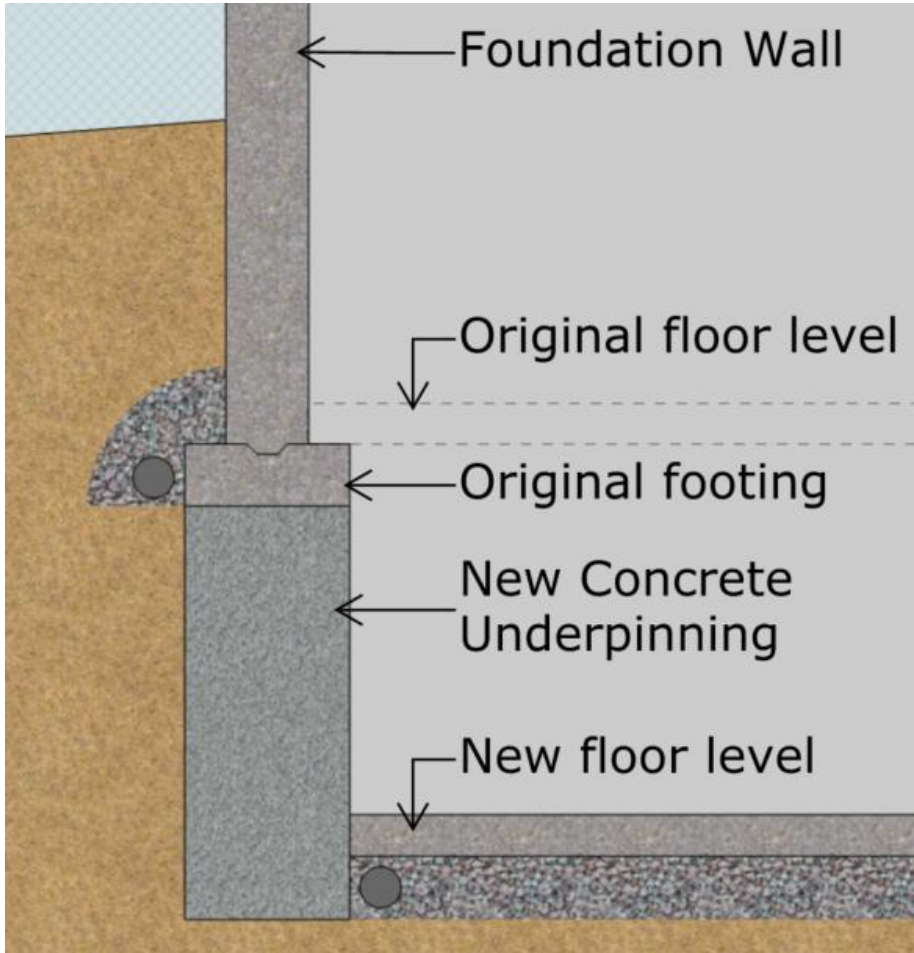
Underpinning

Definition added to the OBC (Div.A 1.4.1.2.);

> ***Underpinning* means** the process of strengthening the *foundation* or lowering the level of a *foundation* of an existing *building*.

Underpinning of a foundation now requires a professional engineer for the;

- **Design** (Div.C 1.2.1.2.(1)(c)), and
- **General Review** (Div.C 1.2.2.1.(4)(b))



Post-Disaster Buildings

Definitions – Div. A, 1.4.1.2.

Post-disaster building **means** a *building* that is necessary for the provision of essential services to the general public in the event of a disaster and includes

- hospitals, emergency treatment facilities and blood banks,
- telephone exchanges,
- power generating stations and electrical substations,
- control centres for natural gas distribution,
- control centres for air, land and marine transportation,
- water treatment facilities,
- water storage facilities,
- water and sewage pumping stations,
- sewage treatment facilities, and
- *buildings* of the following types, unless exempted from this designation by the *principal authority*:
  - emergency response facilities,
  - fire, rescue and police stations and housing for vehicles, aircraft or boa such purposes, and
  - communication facilities, including radio and television stations.

KITCHENER

Post-Disaster Buildings

Definitions – Div. A, 1.4.1.2.

Post-disaster building **means** a *building* that is necessary for the provision of essential services to the general public in the event of a disaster and includes

- hospitals, emergency treatment facilities and blood banks,
- telephone exchanges,
- power generating stations and electrical substations,
- control centres for natural gas distribution
- control centres for air, land and marine transportation,
- water treatment facilities,
- water storage facilities,
- water and sewage pumping stations,
- sewage treatment facilities and
- *buildings* of the following types, unless exempted from this designation by the *principal authority*
  - emergency response facilities,
  - fire, rescue and police stations and housing for vehicles, aircraft or boa such purposes, and
  - communication facilities, including radio and television stations.

KITCHENER

Post-Disaster Buildings

Definitions – Div. A, 1.3.3.2.

1.3.3.2. Application of Parts 3, 4, 5 and 6

(1) Subject to Articles 1.3.3.1A., 1.3.3.B., Parts 3, 4, 5 and 6 of Division B apply to all *buildings* described in Article 1.1.1.1. and

(a) classified as *post-disaster buildings*,

(b) used for *major occupancies* classified as

(i) Group A, *assembly occupancies*,

(ii) Group B, *care, care and treatment or detention occupancies*, or

(iii) Group F, Division 1, *high-hazard industrial occupancies*, or

(c) Exceeding 600 m² in *building area* or exceeding 3 storeys in *building height* used for *major occupancies* classified as

(i) Group C, *residential occupancies*,

(ii) Group D, *business and personal service occupancies*,

(iii) Group E, *mercantile occupancies*, or

(iv) Group F, Divisions 2 and 3, *medium- and low-hazard industrial occupancies*

3.2.6. High Buildings Summary Checklist

3.2.6. High Buildings
Summary Checklist

Kitchener is working with OMCIAC, which consists of Building Departments across the Province, on a 3.2.6. High Buildings Summary Checklist.

Expected roll out early 2025

Stairway Protection Below Lowest Exit Level	☐ **N/A** (no stairways below the lowest exit level)	
OBC 3.2.6.2.(2) SB-4 [3.2.6.2.(2)]	☐	Same design applies to all stairs
	☐	Stair designs differ within building
SB-4 [3.2.6.2.(2)](2)	Shaft Enclosure Separation	
		The stairway is enclosed in a shaft that;
	☐	(a) does not pass through the floor above the lowest exit level and is separate from a shaft that contains a stairway serving upper storeys. This condition is applicable to stair(s): **Click or tap here to enter text.**
	☐	(b) contains a stairway serving upper storeys, but is separated from that stairway at the lowest exit level by a fire separation having a fire resistance rating not less than that required for the shaft enclosure. This condition is applicable to stair(s): **Click or tap here to enter text.**
SB-4 [3.2.6.2.(2)](3)	Pressurization (fan near bottom of the stair shaft)	
	☐	The stairway is provided with equipment capable of maintaining a flow of air introduced at or near the bottom of the stair shaft, at a rate equal to 0.47 m^3/s for each storey served by the stairway.
	☐	Supply air duct system from the point of the fresh air intake to the bottom of the stair shaft is located within a **Choose an item.** fire separated shaft and is specified on the Architectural drawings.
SB-4 [3.2.6.2.(2)](1)	Vent (relief vent near top of the stair shaft)	
	☐	The stairway has a vent or door to the outdoors at or near the top of the stair shaft that has an openable area of not less than 0.1 m^2 for each storey served by the stairway, less 0.01 m^2 for each weather-stripped door and 0.02 m^2 for each door that is not weather-stripped opening into the stairway.

Stair(s)	Size of Required Vent (m^2)	Type of Vent
Enter text	**Enter text**	**Choose an item.**
Enter text	**Enter text**	**Choose an item.**
Enter text	**Enter text**	**Choose an item.**
Enter text	**Enter text**	**Choose an item.**
Enter text	**Enter text**	**Choose an item.**
Enter text	**Enter text**	**Choose an item.**

	☐	Relief vent duct system from the top of the stair shaft to the exterior is located within a **Choose an item.** fire separated shaft and is specified on the Architectural drawings.

Remarks: **Click or tap here to enter text.**

Classification & Construction

Occupancy Classification

Restaurants – 3.1.2.7.

3.1.2.7. Restaurants

(1) A restaurant is permitted to be classified as a Group E major occupancy within the application of Part 3 provided the restaurant is designed to accommodate not more than 30 persons consuming food or drink.

Occupancy Classification

Group B, Division 3 Occupancies – 3.1.2.5.

3.1.2.5. Group B, Division 3 Occupancies

(1) Group B, Division 3 occupancies are permitted to be classified as Group C major occupancies within the application of Part 3 provided

(a) the occupants live as a single housekeeping unit in a suite with sleeping accommodation for not more than 10 persons, and

(b) not more than two occupants require assistance in evacuation in case of an emergency.

Separation of Major Occupancies

Table 3.1.3.1.

2012 OBC

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

Major Occupancy	Minimum *Fire-Resistance Rating* of *Fire Separation*, h[1]												
	Adjoining *Major Occupancy*												
	A-1	A-2	A-3	A-4	B-1	B-2	B-3	C	D	E	F-1	F-2	F-3
A-1	N/A	1	1	1	2	2	2	1	1	2	N/A	2	1
A-2	1	N/A	1	1	2	2	2	1[2]	1[3]	2	N/A	2	1
A-3	1	1	N/A	1	2	2	2	1	1	2	N/A	2	1
A-4	1	1	1	N/A	2	2	2	1	1	2	N/A	2	1
B-1	2	2	2	2	N/A	2	2	2	2	2	N/A	2	2
B-2	2	2	2	2	2	N/A	1	2	2	2	N/A	2	2
B-3	2	2	2	2	2	1	N/A	2	2	2	N/A	2	2
C	1	1[2]	1	1	2	2	2	N/A	1	2[4]	N/A	2	1
D	1	1[3]	1	1	2	2	2	1	N/A	N/A	3	N/A	N/A
E	2	2	2	2	2	2	2	2[4]	N/A	N/A	3	N/A	N/A
F-1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	3	3	N/A	2	2
F-2	2	2	2	2	2	2	2	2	N/A	N/A	2	N/A	N/A
F-3	1	1	1	1	2	2	2	1	N/A	N/A	2	N/A	N/A
Column 1	2	3	4	5	6	7	8	9	10	11	12	13	14

Notes to Table 3.1.3.1.:

(1) Section 3.3. contains requirements for the separation of *occupancies* and tenancies that are in addition to the requirements for the separation of *major occupancies*.
(2) See Sentence 3.1.3.1.(3).
(3) See Sentence 3.1.3.1.(4).
(4) See Sentence 3.1.3.1.(2).

2024 OBC

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

Major Occupancy	Minimum *Fire-Resistance Rating* of *Fire Separation*, h												
	Adjoining *Major Occupancy*												
	A-1	A-2	A-3	A-4	B-1	B-2	B-3	C	D	E	F-1	F-2	F-3
A-1	—	1	1	1	2	2	2	1	1	2	(2)	2	1
A-2	1	—	1	1	2	2	2	1[3]	1[4]	2	(2)	2	1
A-3	1	1	—	1	2	2	2	1	1	2	(2)	2	1
A-4	1	1	1	—	2	2	2	1	1	2	(2)	2	1
B-1	2	2	2	2	—	2	2	2	2	2	(2)	2	2
B-2	2	2	2	2	2	—	1	2	2	2	(2)	2	2
B-3	2	2	2	2	2	1	—	2	2	2	(2)	2	2
C	1	1[3]	1	1	2	2	2	—	1	2[5]	(2)	2[6]	1[7]
D	1	1[4]	1	1	2	2	2	1	—	[8]	3	[8]	[8]
E	2	2	2	2	2	2	2	2[5]	[8]	—	3	—	—
F-1	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	3	3	—	2	2
F-2	2	2	2	2	2	2	2	2[6]	[8]	—	2	—	—
F-3	1	1	1	1	2	2	2	1[7]	[8]	—	2	—	—

Notes to Table 3.1.3.1.:

(1) Section 3.3. contains requirements for the separation of *occupancies* and tenancies that are in addition to the requirements for the separation of *major occupancies*.
(2) See Sentence 3.1.3.2.(1).
(3) Where the *building* or part thereof is constructed in accordance with Article 3.2.2.48. or 3.2.2.51., a *fire separation* with a 2 h *fire-resistance rating* is required between the Group C and Group A, Division 2 *major occupancies*.
(4) Where the *building* or part thereof is constructed in accordance with Article 3.2.2.57. or 3.2.2.60., a *fire separation* with a 2 h *fire-resistance rating* is required between the Group D and Group A, Division 2 *major occupancies*.
(5) See Sentence 3.1.3.1.(2).
(6) See Sentence 3.1.3.2.(2).
(7) Where the *building* or part thereof is constructed in accordance with Article 3.2.2.48., a *fire separation* with a 2 h *fire-resistance rating* is required between the Group C *major occupancy* and a *storage garage*.
(8) Where the *building* or part thereof is constructed in accordance with Article 3.2.2.57., a *fire separation* with a 1 h *fire-resistance rating* is required between the Group D and Group E or Group F, Division 2 or 3 *major occupancies*.

Prohibition of Occupancy Combinations
Article 3.1.3.2.

Prohibitions relating to midrise combustible construction buildings have been removed from this Article.

- The 3.2.2. Articles still contain the permissions to use that Article where Group A2, Group E, and storage garages also exist (with location restrictions remaining).

Any other occupancy the building would need to be evaluated and constructed in accordance with the most restrictive 3.2.2. provisions based on all major occupancies in the building (or use superimposed major occupancy provisions).

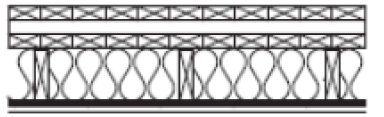
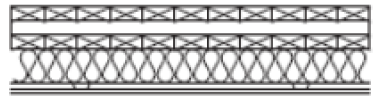
Combustible Construction

Cladding - Midrise Combustible Buildings - 3.1.4.8.

Additional option added for cladding of Midrise Combustible Buildings conforming to 3.2.2.51 & 3.2.2.60.

- Exterior wall Assemblies Constructed in conformance with Section 6 of SB-2

Table D-6.1.1.
Construction Specifications for Exterior Wall Assemblies that are Deemed to Satisfy the Criteria of Clause 3.1.5.5.(1)(b) when Tested in Accordance with CAN/ULC-S134

Wall Number	Structural Members	Absorptive Material	Sheathing	Cladding	Design
EXTW-1	38 mm × 89 mm wood studs spaced at 400 mm o.c.[(1)(2)]	89 mm thick rock or slag fibre in cavities formed by studs[(3)(4)]	—	12.7 mm thick fire-retardant-treated plywood siding[(5)]	
EXTW-2	38 mm × 140 mm wood studs spaced at 400 mm o.c.[(1)(2)]	140 mm thick rock or slag fibre in cavities formed by studs[(3)(4)]	Gypsum sheathing ≥ 12.7 mm thick	Noncombustible exterior cladding	
EXTW-3	38 mm × 140 mm wood studs spaced at 400 mm o.c.[(1)(2)]	140 mm thick rock or slag fibre in cavities formed by studs[(3)(4)]	15.9 mm thick fire-retardant-treated plywood[(6)]	Noncombustible exterior cladding	
EXTW-4	38 mm × 140 mm wood studs spaced at 600 mm o.c.[(1)(7)] attached to cross-laminated timber (CLT) wall panels ≥ 38 mm thick[(8)]	140 mm thick glass, rock or slag fibre in cavities formed by studs[(3)]	Gypsum sheathing ≥ 12.7 mm thick	Noncombustible exterior cladding	
EXTW-5	89 mm horizontal Z-bars spaced at 600 mm o.c. attached to CLT wall panels ≥ 105 mm thick[(8)]	89 mm thick rock or slag fibre in cavities formed by Z-bars[(3)(4)]	—	Noncombustible exterior cladding attached to 19 mm vertical hat channels spaced at 600 mm o.c.	
Col. 1	2	3	4	5	6

Noncombustible Construction

Minor Combustible Components – 3.1.5.2.

(1) The following minor combustible components are permitted in a building required to be of noncombustible construction:

(b) self-adhesive tapes, mastics and caulking materials including foamed plastic air sealants, applied to provide a seal between the major components of exterior wall construction,

(g) wood blocking intended for the attachment of window elements within exterior wall assemblies

Noncombustible Construction

Combustible Glazing – 3.1.5.4.(4)

(4) The flame-spread rating of combustible glazing is permitted to be not more than 150 if the aggregate area of glazing is not more than 25% of the wall area of the storey in which it is located, and

(a) the glazing is installed in a building not more than 1 storey in building height,

(b) the glazing in the first storey is separated from the glazing in the second storey in accordance with the requirements of Article 3.2.3.17. for opening protection, or

(c) the building is sprinklered throughout.

2012 OBC
Only the storey with combustible glazing, and storey above

Noncombustible Construction

Combustible Window Sashes and Frames – 3.1.5.4.(5)

2012 OBC

(5) Combustible window sashes and frames are permitted in a building required to be of noncombustible construction provided,

(a) each window in an exterior wall face is an individual unit separated by a wall of noncombustible construction from every other opening in the exterior wall,

(b) windows in exterior walls in contiguous storeys are separated by not less than 1 000 mm of noncombustible construction, and

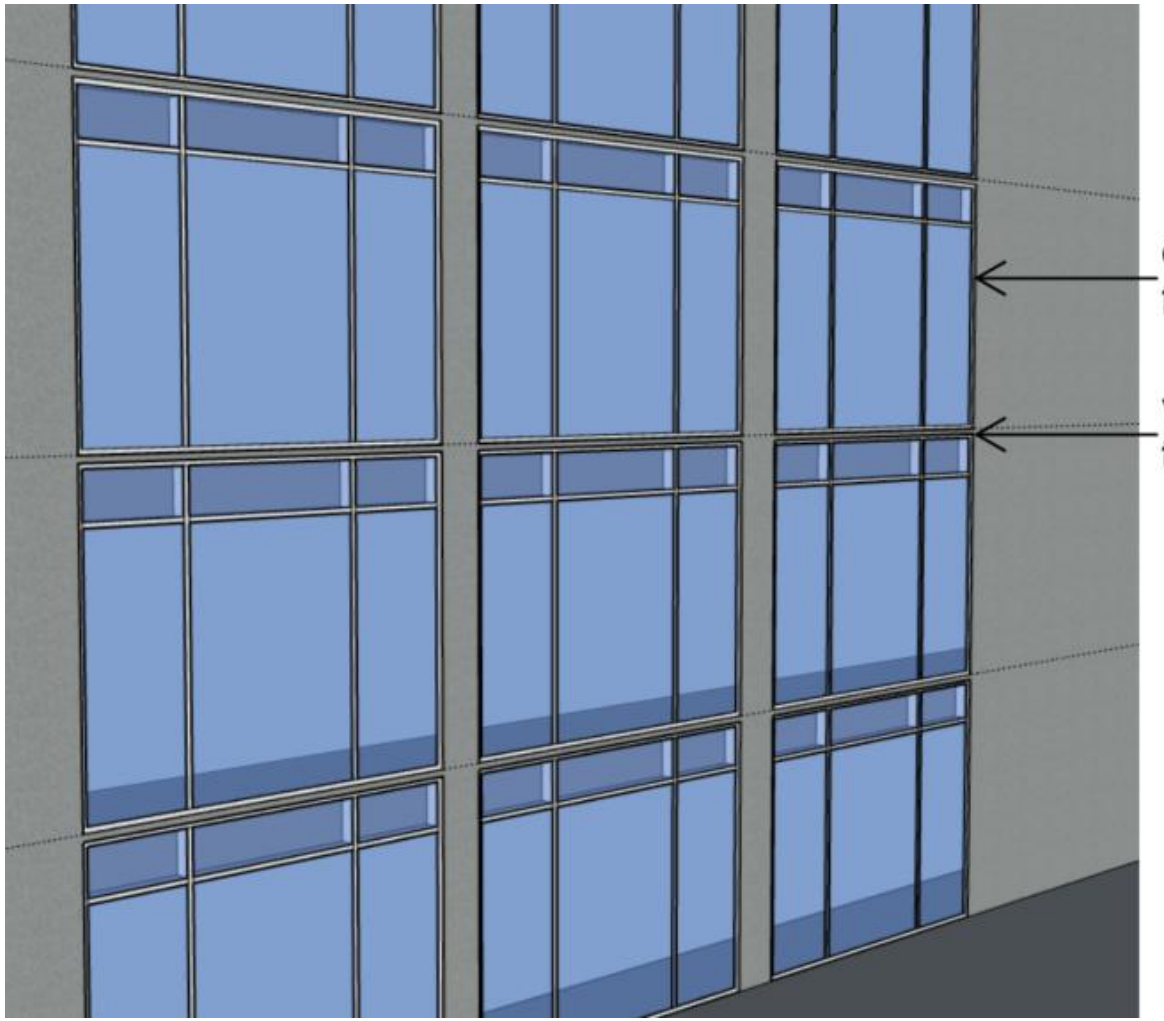
(c) the aggregate area of openings in an exterior wall face of a fire compartment is not more than 40% of the area of the wall face.

2024 OBC

(5) Combustible window sashes and frames are permitted in a building required to be of noncombustible construction, provided they are **vertically non-contiguous between storeys**.

Noncombustible Construction

Combustible Window Sashes and Frames – 3.1.5.4.(5)



Noncombustible Construction

Combustible Cladding on Exterior Walls – 3.1.5.5.

Combustible cladding separated into its own Article from the combustible components in exterior walls Article.

Height restriction removed when tested in accordance with CAN/ULC-S134 “Standard Method of Fire Test of Exterior Wall Assemblies” the wall assembly satisfies the prescribed criteria.

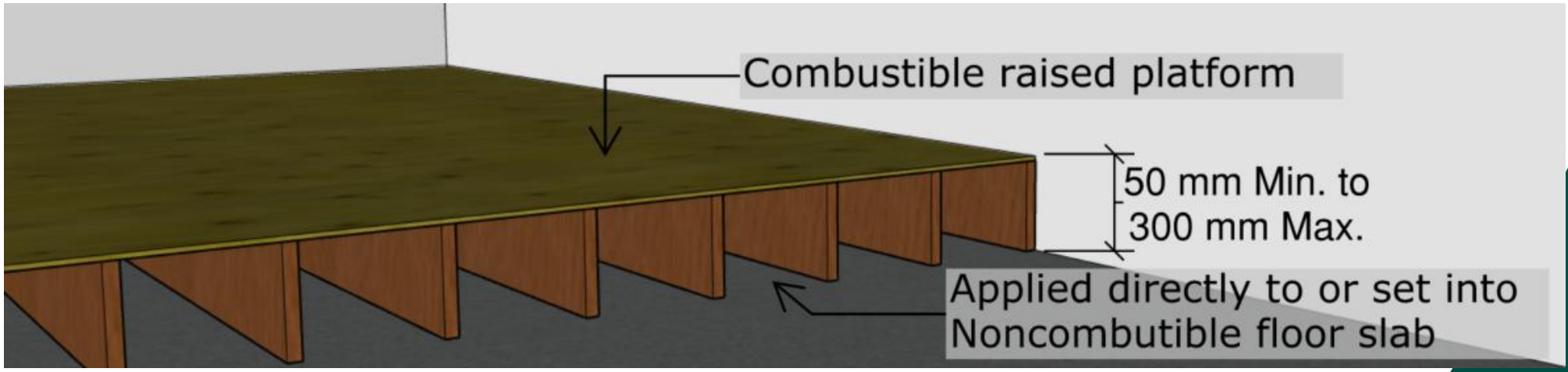
- 2012 OBC limited to 6 storeys

Noncombustible Construction

Combustible Flooring Elements – 3.1.5.10.

375 mm under 2012 OBC

(2) Wood members more than 50 mm but not more than **300 mm high** **applied directly to or set into a noncombustible floor slab** are permitted for the construction of a raised platform in a building required to be of noncombustible construction provided the concealed spaces created are divided into compartments by fire blocks in conformance with Sentence 3.1.11.3.(2).



Occupant Load

Occupant Load Determination – 3.1.17.1.(1)

2012 OBC

(1) The occupant load of a floor area or part of a floor area, or of a building or part of a building not having a floor area, shall be based on,

(c) the number of persons,

(i) for which the area is designed, or

(ii) determined from Table 3.1.17.1. for occupancies other than those described in Clauses (a) and (b).

2024 OBC

(1) The occupant load of a floor area or part of a floor area, shall be based on

(c) the number of persons for which the area is designed, but not less than that determined from Table 3.1.17.1. for occupancies other than those described in Clauses (a) and (b), unless it can be shown that the area will be occupied by fewer persons.

KITCHENER

Occupant Load
Table 3.1.17.1.

Area per person, m² for dining, beverage and cafeteria space changed from 1.10 to 1.20

- results in lower occupant load

"Exhibition halls other than those classified as Group E", removed from Table

Footnotes added to Table

- no real impact as they used to be covered within the Table itself, just reformatting item

Table 3.1.17.1.
Occupant Load
Forming Part of Article 3.1.17.1.

Type of Use of *Floor Area* or Part Thereof	Area per Person, m²
Assembly uses	
space with fixed seats	(1)
space with non-fixed seats	0.75
stages for theatrical performances	0.75
space with non-fixed seats and tables	0.95
standing space	0.40
stadia and grandstands	0.60
bowling alleys, pool and billiard rooms	9.30
classrooms	1.85
school shops and vocational rooms	9.30
reading or writing rooms or lounges	1.85
dining, beverage and cafeteria space	1.20
laboratories in schools	4.60
Care, care and treatment or detention uses	
B-1 : detention quarters	11.60
B-2 : treatment and sleeping areas	10.00
B-3 : sleeping room areas	10.00
(See also Article 3.7.1.3.)	
Residential uses	
dwelling units	(2)
dormitories	4.60
Business and personal services uses	
personal service shops	4.60
offices	9.30
Mercantile uses	
basements and *first storeys*	3.70
second *storeys* having a principal entrance from a pedestrian thoroughfare or a parking area	3.70
other *storeys*	5.60
Industrial uses	
manufacturing or process rooms	4.60
storage garages	46.00
storage spaces (warehouse)	28.00
aircraft hangars	46.00
Other uses	
cleaning and repair goods	4.60
kitchens	9.30
storage	46.00
public corridors intended for *occupancies* in addition to pedestrian travel	3.70(3)

Notes to Table 3.1.17.1.:
(1) See Clause 3.1.17.1.(1)(a).
(2) See Clause 3.1.17.1.(1)(b)
(3) See Note A-3.3.

Occupant Load
3.1.17.1.

Sentences (5) to (7) have been **removed**;

~~(5) Except as provided by Sentence (6) or (7), in dining, alcoholic beverage and cafeteria spaces the occupant load shall be determined from Table 3.1.17.1.~~

~~(6) The occupant load in Sentence (5) is permitted to be the number of persons for which the space is designed.~~

~~(7) The occupant load in Sentence (6) shall be not more than that determined by using an area of 0.6 m² per person.~~

Building Fire Safety

Exceptions in Determining Building Height – 3.2.1.1.(6)

(6) Platforms intended solely for periodic inspection and elevated maintenance catwalks need not be considered as floor assemblies or mezzanines for the purpose of calculating building height, provided

(a) they are not used for storage, and

(b) they are constructed with noncombustible materials unless the building is permitted to be of combustible construction.

Also, removed occupant load restriction ;

Building Fire Safety

Exceptions in Determining Building Height – 3.2.1.1.

Removed provisions which allowed for noncombustible mezzanines, elevated walkways and platforms in Group F2 and F3 occupancies with not more than 4 persons to not be considered a storey.

~~Mezzanines, elevated walkways and platforms that are intended to be occupied in Group F, Division 2 or 3 major occupancies need not be considered as storeys in calculating building height provided,~~

~~(a) the building is of noncombustible construction, and~~

~~(b) the occupant load is not more than four persons.~~

Now default to mezzanine provisions to be considered a storey or not.

Sprinklers in Lieu of Roof Rating

3.2.2.17. Sprinklers in Lieu of Roof Rating

(1) Except as provided by Sentence (2), the requirements in Articles 3.2.2.20. to 3.2.2.83. for roof assemblies to have a fire-resistance rating are permitted to be waived provided,

(a) the building is sprinklered,

(b) the sprinkler system in Clause (a) is electrically supervised in conformance with Sentence 3.2.4.10.(3), and

(c) the operation of the sprinkler system in Clause (a) will cause a signal to be transmitted to the fire department in conformance with Sentence 3.2.4.8.(4).

(2) The fire-resistance rating of roof assemblies required by Clause 3.2.2.43A.(2)(b) or 3.2.2.50A.(2)(b) is not permitted to be waived.

REMOVED

Roof Assemblies and Mezzanines in Gymnasiums, Swimming Pools, Arenas and Rinks

New 3.2.2.17.

(1) The requirements for a **roof assembly** to have a fire-resistance rating stated in Articles 3.2.2.25., 3.2.2.30. and 3.2.2.32. are permitted to be waived for **gymnasiums, swimming pools, arenas, and rinks**, provided

(a) the roof carries no loads other than normal roof loads, including permanent access walks, and ventilating, sound and lighting equipment, and

(b) except as provided in Sentence (3), no part of the roof assembly is less than 6 m above the main floor or balcony.

(See Note A-3.2.2.17.(1))

Roof Assemblies and Mezzanines in Gymnasiums, Swimming Pools, Arenas and Rinks

New 3.2.2.17.

(2) The requirements for a **mezzanine** to have a fire-resistance rating stated in Articles 3.2.2.25., 3.2.2.30. and 3.2.2.32. are permitted to be waived for **gymnasiums, swimming pools, arenas, and rinks**, provided

(a) the mezzanine is not required to be considered as a storey as per Sentences 3.2.1.1.(3) to (5),

(b) the mezzanine is used only for ventilating, sound and lighting equipment, and

(c) except as provided in Sentence (3), no part of the mezzanine is less than 6 m above the main floor or balcony.

KITCHENER

Roof Assemblies and Mezzanines in Gymnasiums, Swimming Pools, Arenas and Rinks

New 3.2.2.17.

(3) The restrictions concerning minimum distance stated in Clauses (1)(b) and (2)(c) shall not apply to

(a) an inclined and stepped floor ascending from the main floor that is used for seating purposes only, or

(b) a balcony used for seating purposes only.

3.2.2. Construction Classifications

This Subsection has expanded and reorganized;

- Group A1, A2, A3, A4 and B1 Article numbers remain the same
- Group B2 – 3.2.2.38. to 3.2.2.41.
- Group B3 – 3.2.2.42. to 3.2.2.46.
- Group C – 3.2.2.47. to 3.2.2.55.
- Group C, Retirement Home – 3.2.2.55A. to 3.2.2.55E.
- Group D – 3.2.2.56. to 3.2.2.65.
- Group E – 3.2.2.67. to 3.2.2.71
- Group F1 – 3.2.2.72 to 3.2.2.75.
- Group F2 – 3.2.2.76. to 3.2.2.81.
- Group F3 – 3.2.2.82. to 3.2.2.90
- Group F3, Low Fire Load Occupancy – 3.2.2.91.
- Group F3, Storage Garage up to 22m High – 3.2.2.92.
- EMTC, various occupancies, heights, and areas – 3.2.2.93.

KITCHENER

3.2.2. Construction Classifications

Other changes include:

- Sprinklers required for all Group A1, and Group A3 Any Height, Any Area
- Some of the new Group B2 and B3 classifications allow for an additional storey with same construction requirements as previous. All are still required to be sprinklered
- Group C and D Articles no longer include Encapsulated Mass Timber Construction (EMTC) in Article titles, and now reference both EMTC and noncombustible as permissible construction types
- Group D and F3 Any Height, Any Area are now required to be sprinklered
- Group F2
    - Up to 6 storeys classification has been removed
    - Up to 4 storeys, increased area - now required to be sprinklered
    - Up to 4 storeys - now required to be sprinklered

KITCHENER

Encapsulated Mass Timber Construction (EMTC) up to 18 Storeys

KITCHENER

Encapsulated Mass Timber Construction

As Part of the recent amendment package to the 2024 OBC the provisions for Encapsulated Mass Timber Construction (EMTC) have been amended to allow;

- Increase up to 18 storeys in building height
- More major occupancy types
- Reduced encapsulation requirements
  - Up to fully exposed for some occupancies and building heights

Encapsulated Mass Timber Construction

Definitions – Div.A 1.4.1.2.

Definitions reminder;

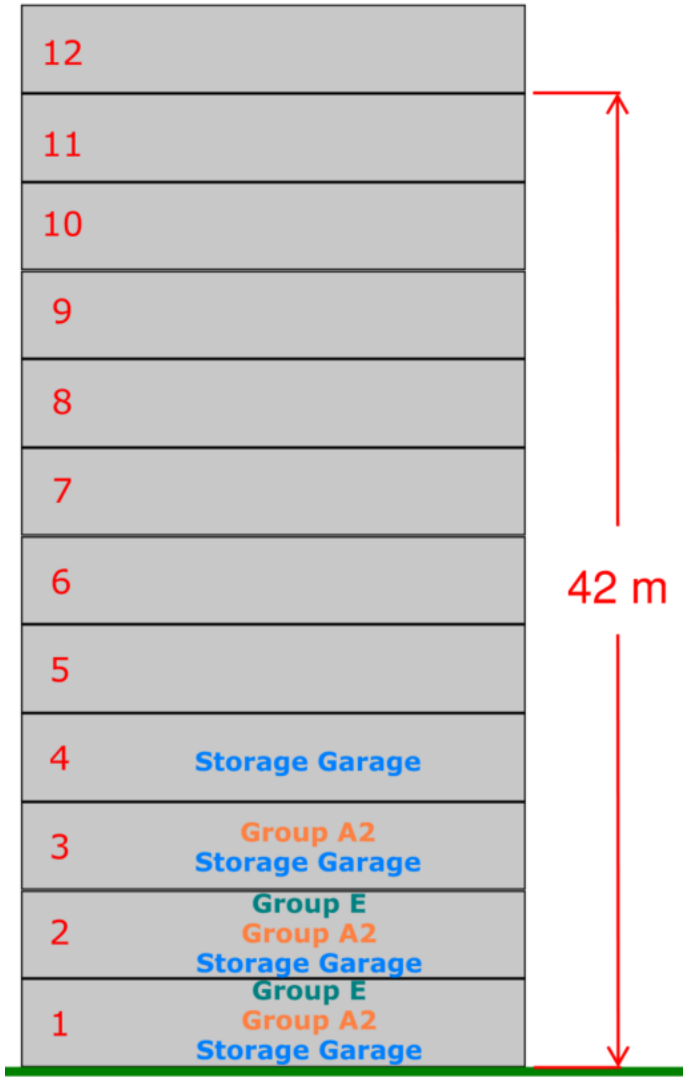
Encapsulated mass timber construction means that type of construction in which a degree of fire safety is attained by the use of encapsulated mass timber elements with an encapsulation rating and minimum dimensions for structural members and other building assemblies.

Encapsulation rating means the time in minutes that a material or assembly of materials will delay the ignition and combustion of encapsulated mass timber elements when it is exposed to fire under specified conditions of test and performance criteria, or as otherwise prescribed by this Code.

KITCHENER

Encapsulated Mass Timber Construction

3.2.2.48. - **Group C**, up to 12 Storeys, Sprinklered **(unchanged)**



Storeys: up to 12

Height: 42 m

Building Area: ≤ 6,000 m²

Encapsulated Mass Timber

Floor FRR: 2 h

Mezzanine FRR: 1 h

UNCHANGED

Other Occupancies Permitted

Group E - below the 3rd storey

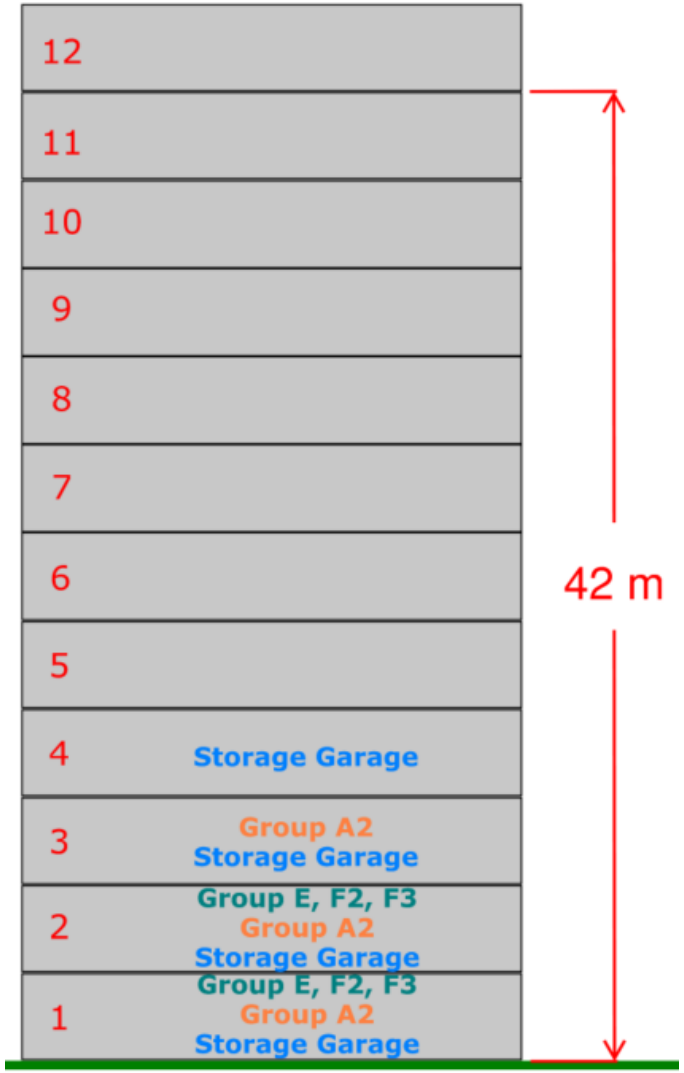
Group A2 – below the 4th storey

Storage Garages – below the 5th storey

KITCHENER

Encapsulated Mass Timber Construction

3.2.2.57. - **Group D**, up to 12 Storeys, Sprinklered **(unchanged)**



Storeys: up to 12

Height: 42 m

Building Area: ≤ 7,200 m²

Encapsulated Mass Timber

Floor FRR: 2 h

Mezzanine FRR: 1 h

UNCHANGED

Other Occupancies Permitted

Group E, F2 & F3 - below the 3rd storey

Group A2 – below the 4th storey

Storage Garages – below the 5th storey

KITCHENER

Encapsulated Mass Timber Construction

3.2.2.93. - Various Occupancies, Heights and Areas, Sprinklered

New construction classification added;

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

Allows more occupancy classifications;

Permitted	NOT Permitted
Group A2	Group A1, A3 & A4
Group B3	Group B1 & B2
Group C (other than retirement home)	Group C Retirement Home
Group D	Group F1
Group E	
Group F2 & F3	

Encapsulated Mass Timber Construction

Encapsulation of Mass Timber Elements – 3.1.6.4.

Encapsulation requirements have been amended and relaxed when a **50 min encapsulation rating** is required.

- increased maximum percent of exposed surfaces

Introduced requirements for **0 minute encapsulation rating** requirements

- Only mass timber walls and ceilings within vertical services spaces, public corridors and exits need to be encapsulated and permits 25 minute encapsulation rating

Introduced requirements for **70 min encapsulation rating** requirements

- Only the upper side of mass timber floor or roof assembly is permitted a reduction down to 50 minutes.
- Otherwise appears exposed mass timber elements are not permitted.

KITCHENER

Encapsulated Mass Timber Construction

3.2.2.93. - Various Occupancies, Heights and Areas, Sprinklered

Table 3.2.2.93.
Encapsulated Mass Timber Construction, Various Occupancies, Heights and Areas, Sprinklered[1][2]
Forming Part of Sentences 3.2.2.93.(1), (5), (6) and (7)

Major Occupancy	Maximum *Building Height*, *Storeys*	Maximum Height, m	Maximum *Building Area*, m^2	Minimum *Encapsulation Rating*, min
Group A, Division 2	18	76	7200	70
	12	51		50
	6	26		0
Group B, Division 3	10	42	8000	70
	6	26		50
	4	17		0
Group C	18	76	6000	70
	8	34		0
Group D	18	76	7200	70
	8	38		0
Group E	12	51	6000	70
	8	34		50
	6	26		0
Group F, Division 2	10	42	4500	70
	7	30		50
	5	21		0
Group F, Division 3	12	51	7200	70
	8	34		50
	5	21		0

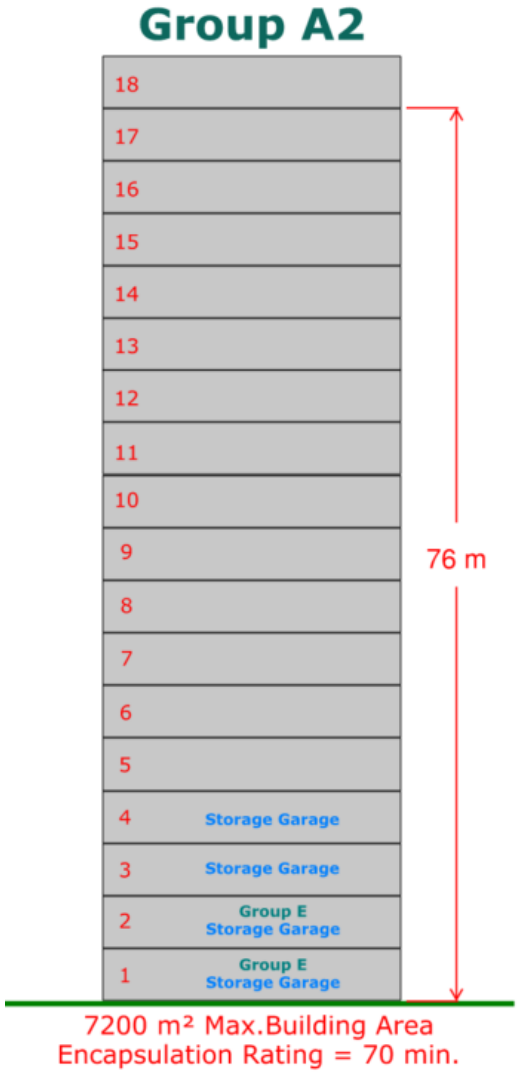
Notes to Table 3.2.2.93.:

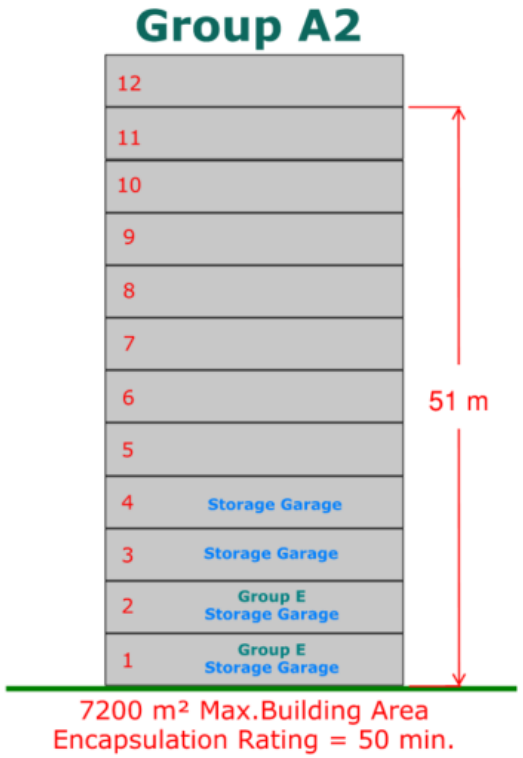
(1) See Sentences (5) to (7) and Articles 3.2.2.4. to 3.2.2.8. for information pertaining to multiple *major occupancies*.

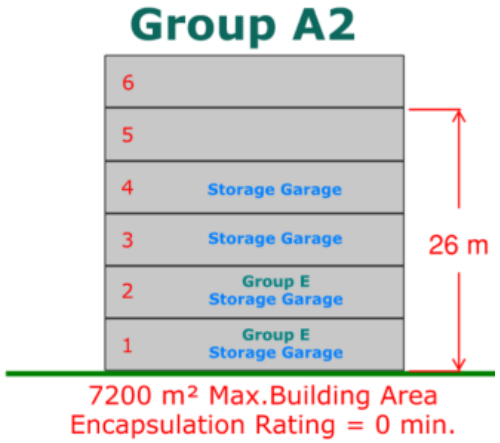
(2) Linear interpolation is not permitted in using Table 3.2.2.93.

Encapsulated Mass Timber Construction

3.2.2.93. – **Group A, Division 2** Major Occupancy, Sprinklered







Major Occupancy	Maximum Building Height, Storeys	Maximum Height, m	Maximum Building Area, m²	Minimum Encapsulation Rating, min
Group A2	18	76	7200	70
	12	51		50
	6	26		0

Floor FRR: 2 h

Mezzanine FRR: 1 h

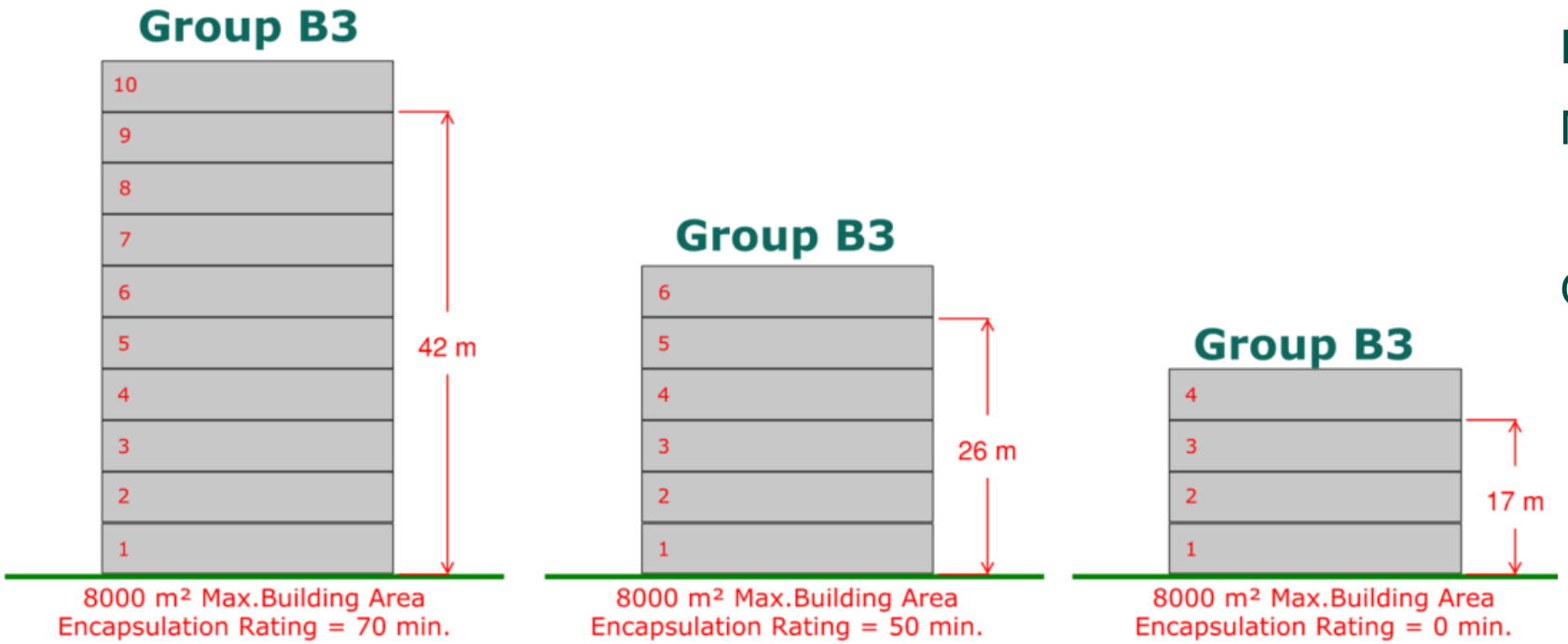
Other Occupancies Permitted:

- Group E;
  - below the 3rd storey
- Storage Garages;
  - below the 5th storey

Encapsulated Mass Timber Construction

3.2.2.93. – **Group B, Division 3** Major Occupancy, Sprinklered

Major Occupancy	Maximum Building Height, Storeys	Maximum Height, m	Maximum Building Area, m²	Minimum Encapsulation Rating, min
Group B3	10	42	8000	70
	6	26		50
	4	17		0



Floor FRR: 2 h

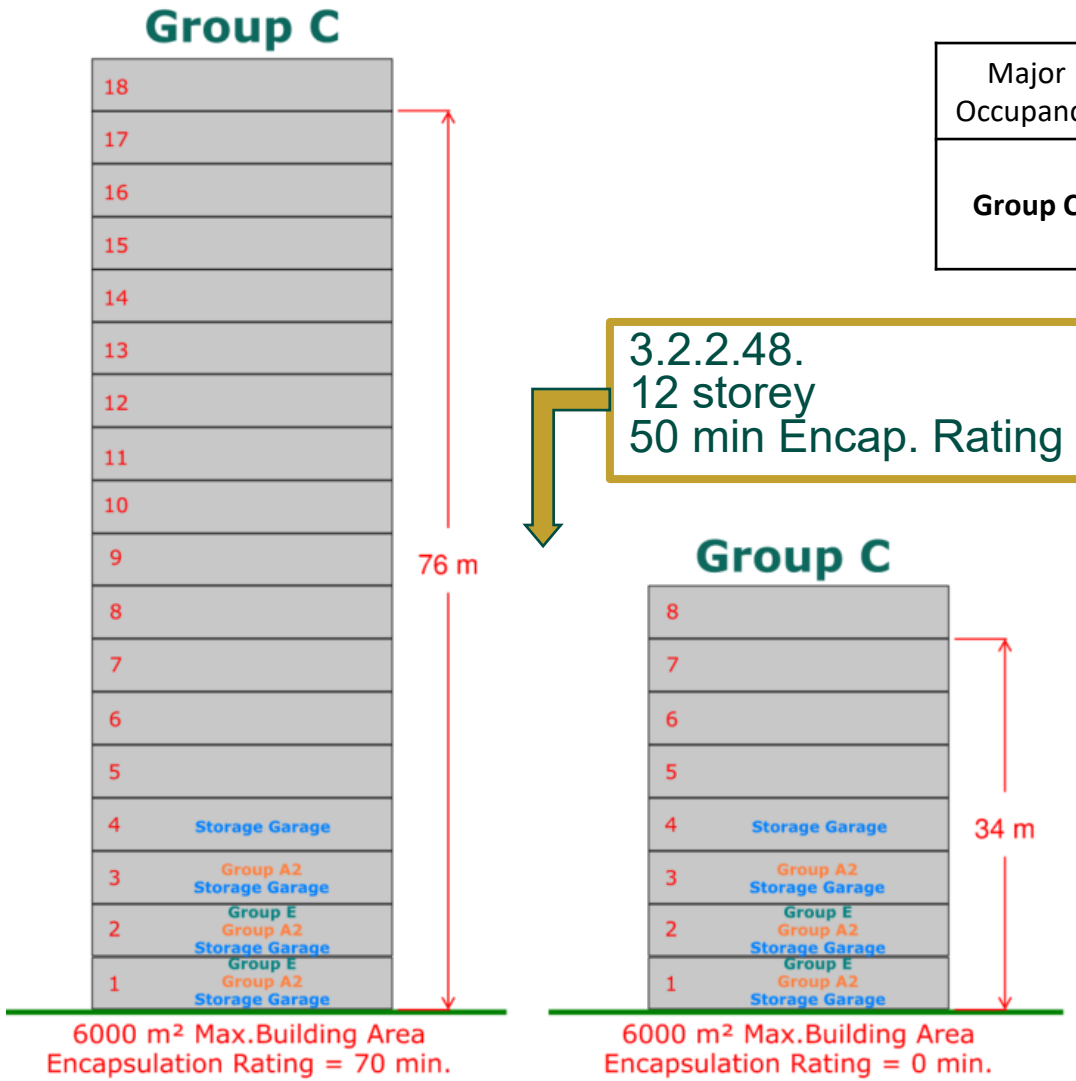
Mezzanine FRR: 1 h

Other Occupancies Permitted:

- None

Encapsulated Mass Timber Construction

3.2.2.93. – **Group C** Major Occupancy, Sprinklered



Major Occupancy	Maximum Building Height, Storeys	Maximum Height, m	Maximum Building Area, m²	Minimum Encapsulation Rating, min
Group C	18	76	6000	70
	8	34		0

Floor FRR: 2 h

Floors contained within dwelling units: 1 h

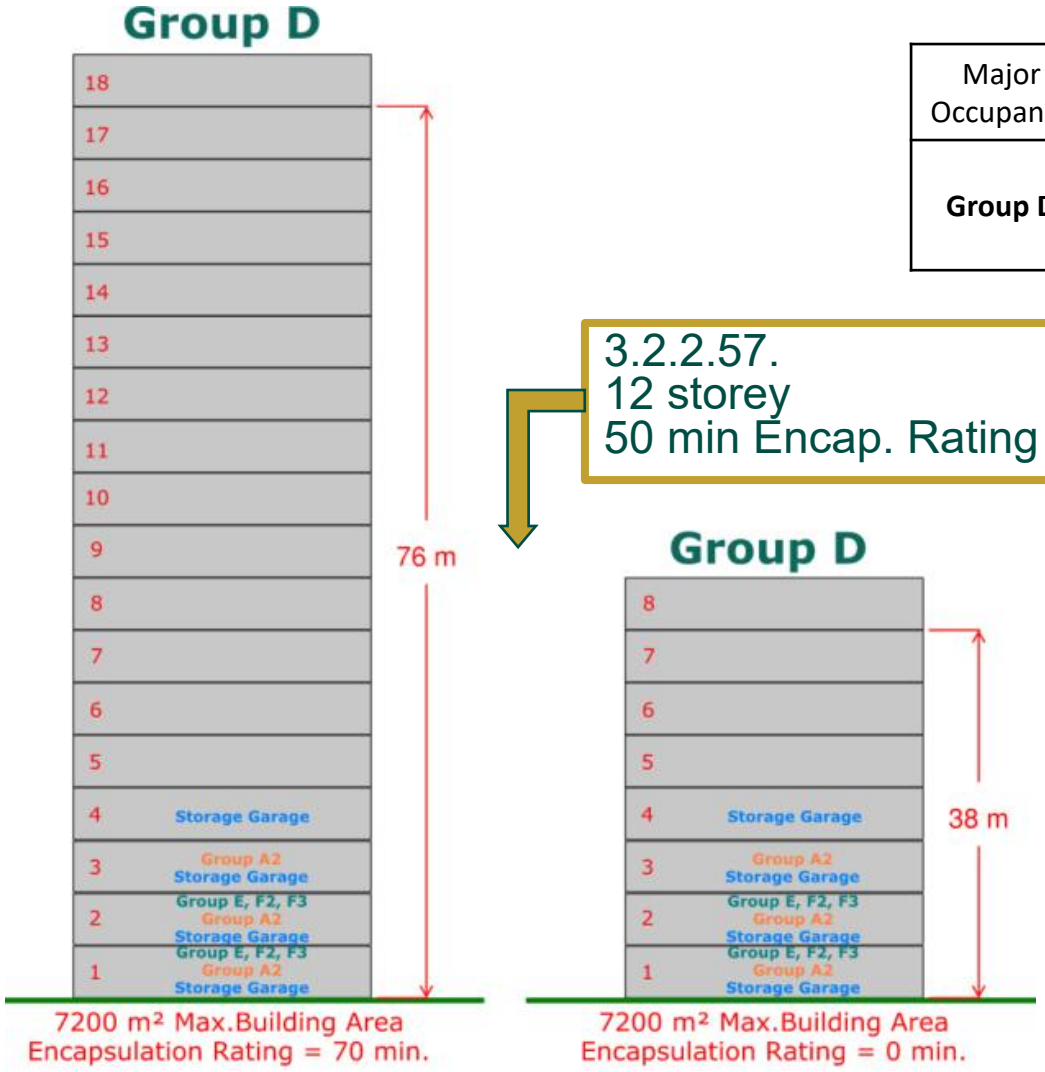
Mezzanine FRR: 1 h

Other Occupancies Permitted:

- Group E;
  - below the 3rd storey
- Group A2
  - Below the 4th storey
- Storage Garages;
  - below the 5th storey

Encapsulated Mass Timber Construction

3.2.2.93. – **Group D** Major Occupancy, Sprinklered



Major Occupancy	Maximum Building Height, Storeys	Maximum Height, m	Maximum Building Area, m²	Minimum Encapsulation Rating, min
Group D	18	76	7200	70
	8	38		0

Floor FRR: 2 h

Floors contained within dwelling units: 1 h

Mezzanine FRR: 1 h

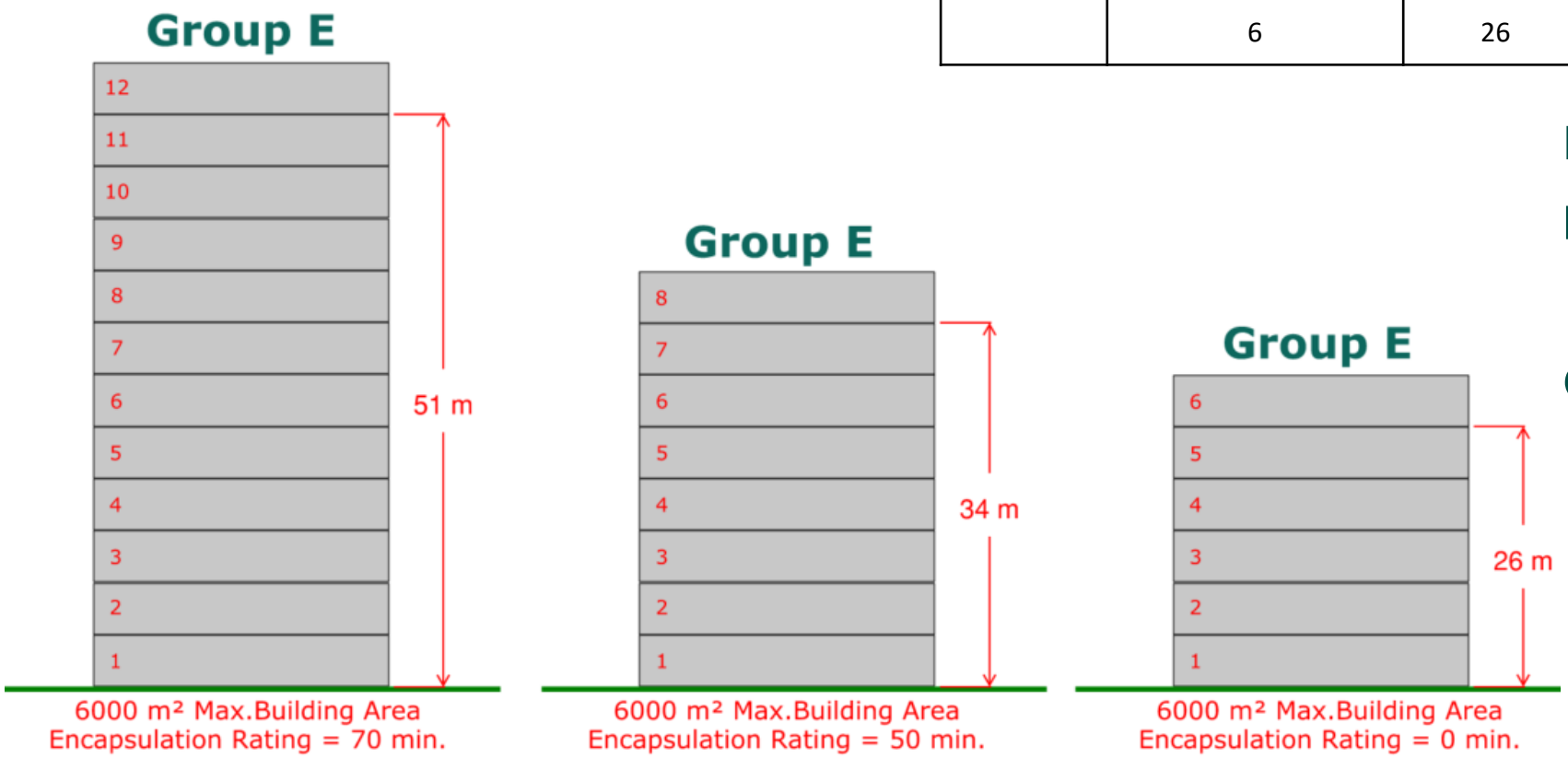
Other Occupancies Permitted:

- Group E, F2 & F3;
  - below the 3rd storey
- Group A2
  - Below the 4th storey
- Storage Garages;
  - below the 5th storey

Encapsulated Mass Timber Construction

3.2.2.93. – **Group E** Major Occupancy, Sprinklered

Major Occupancy	Maximum Building Height, Storeys	Maximum Height, m	Maximum Building Area, m²	Minimum Encapsulation Rating, min
Group E	12	51	6000	70
	8	34		50
	6	26		0



Floor FRR: 2 h

Mezzanine FRR: 1 h

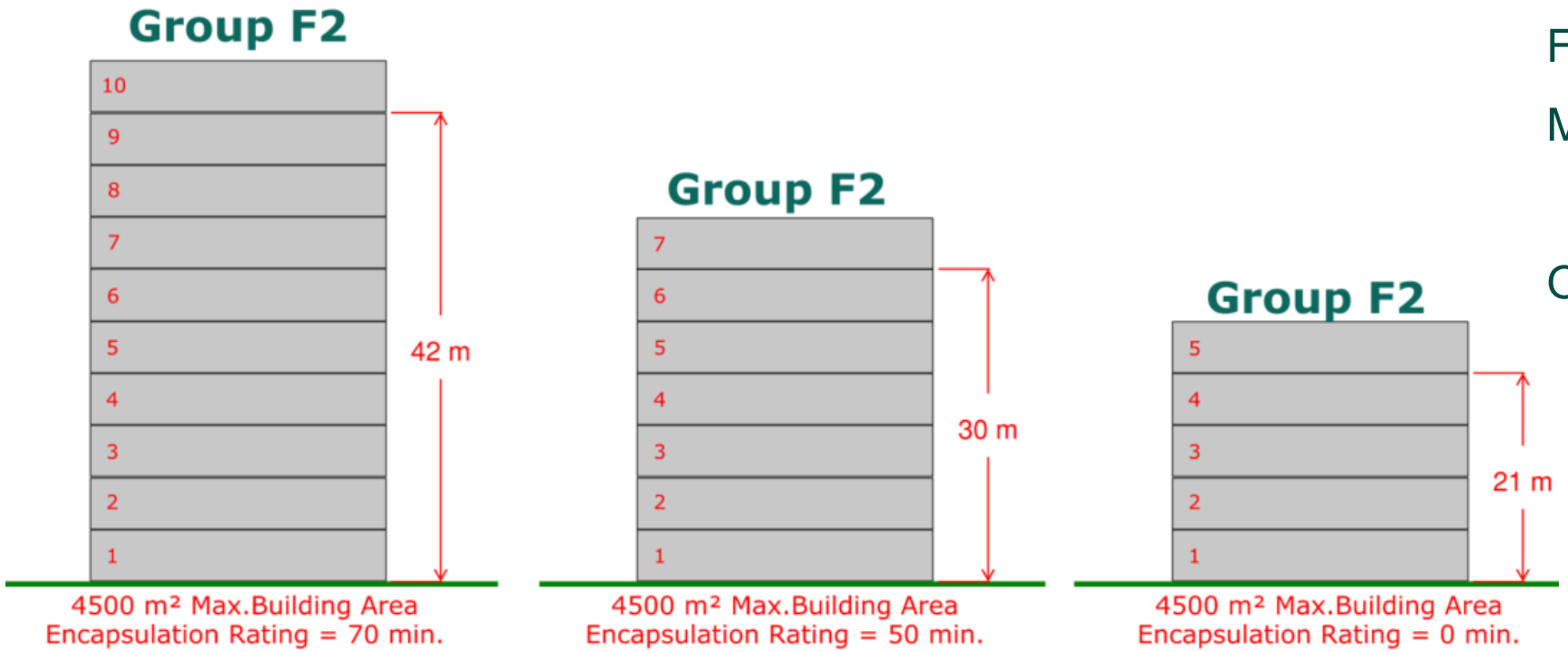
Other Occupancies P

- None

Encapsulated Mass Timber Construction

3.2.2.93. – **Group F, Division 2** Major Occupancy, Sprinklered

Major Occupancy	Maximum Building Height, Storeys	Maximum Height, m	Maximum Building Area, m²	Minimum Encapsulation Rating, min
Group F2	10	42	4500	70
	7	30		50
	5	21		0



Floor FRR: 2 h

Mezzanine FRR: 1 h

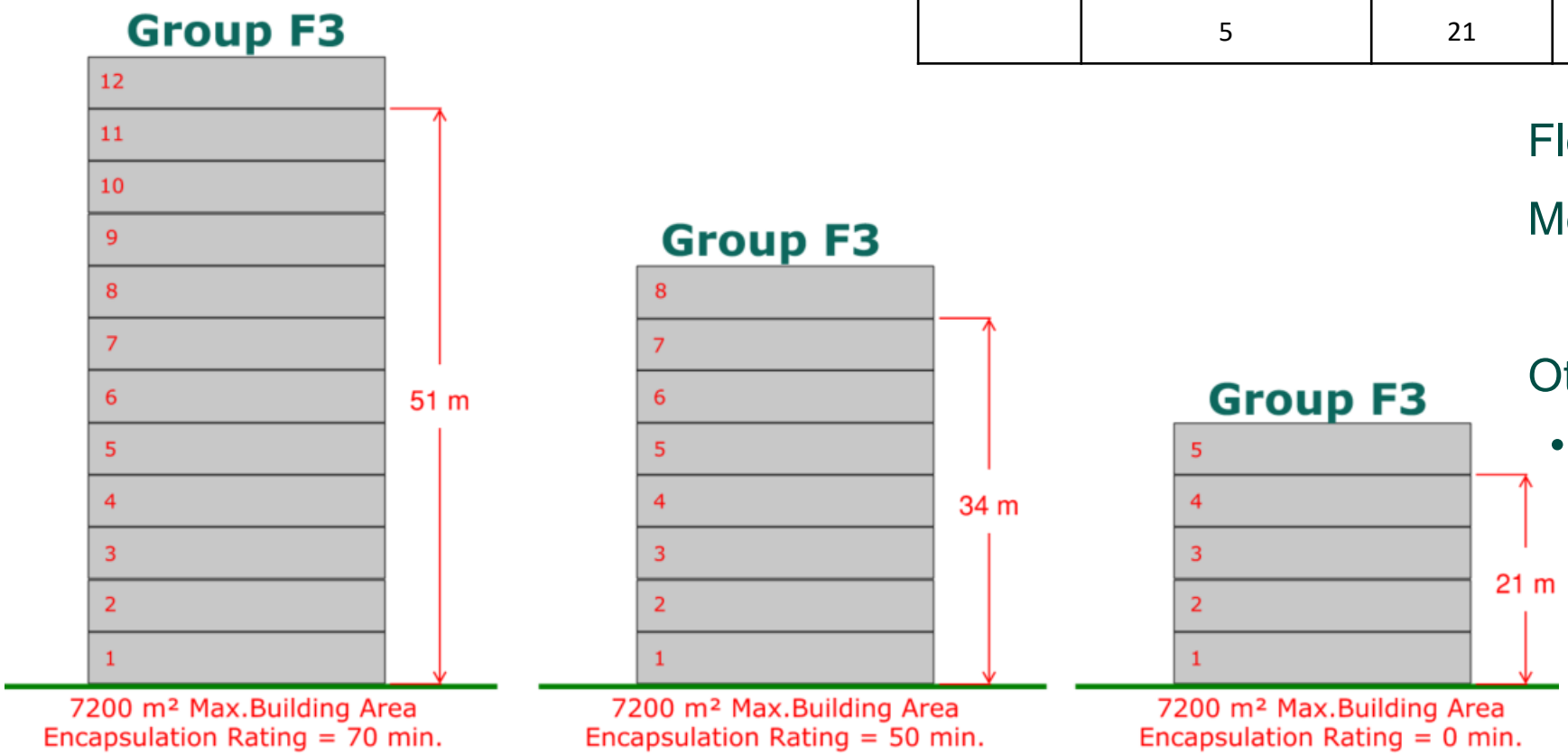
Other Occupancies Permitted:

- None

Encapsulated Mass Timber Construction

3.2.2.93. – **Group F, Division 3** Major Occupancy, Sprinklered

Major Occupancy	Maximum Building Height, Storeys	Maximum Height, m	Maximum Building Area, m²	Minimum Encapsulation Rating, min
Group F3	12	51	7200	70
	8	34		50
	5	21		0



Floor FRR: 2 h

Mezzanine FRR: 1 h

Other Occupancies Permitted:

- None

Encapsulated Mass Timber Construction

Exterior Cladding – 3.1.6.9.

Amended exterior cladding requirements with more options;

- Buildings up to 12 storeys, the requirements appear to remain the same.
- Introduced relaxed requirements for buildings up to 6 storeys and buildings up to 4 storeys.
- Buildings over 12 storeys cladding shall be non-combustible, ULC S135, or CAN/ULC-S134

Pat Meagher

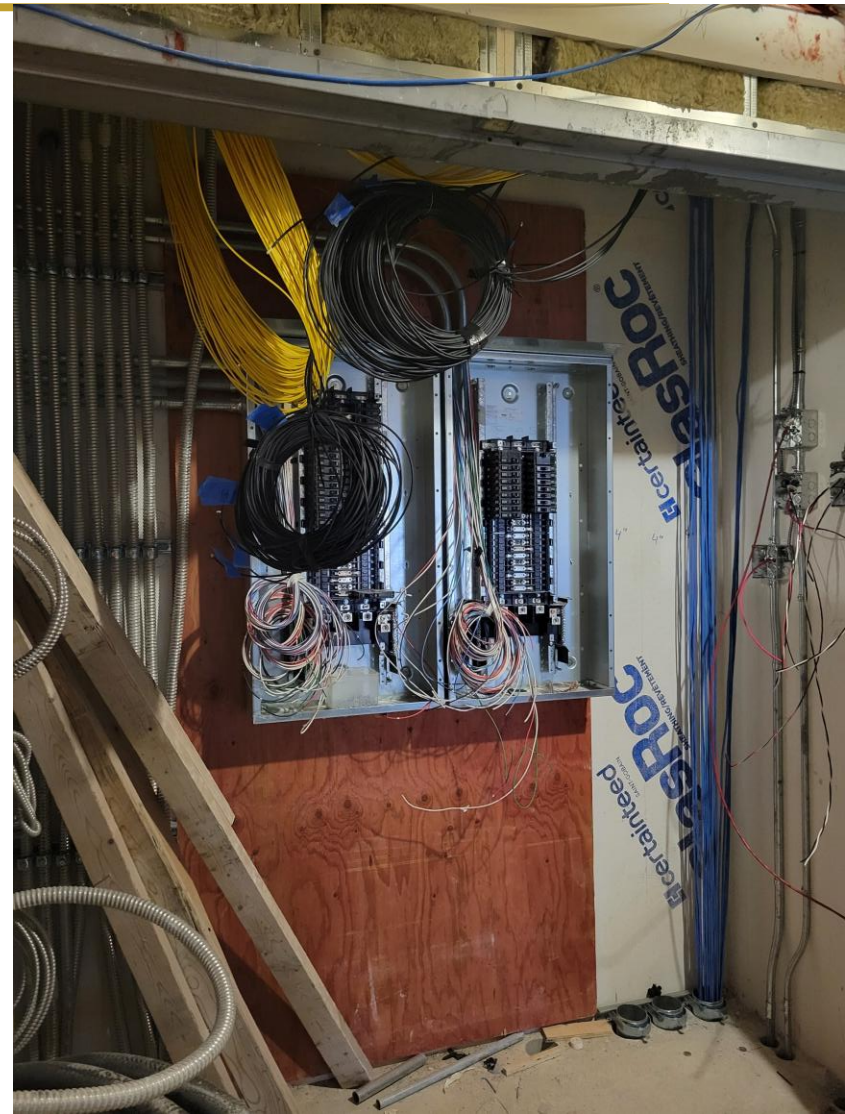
Municipal Building Official III

Fire Protection Requirements

Wires and Cables

Div B. 3.1.4.3. & 3.1.5.21

- Fiber optic cables & electric wires need to be:
  - Rated FT1 for most cases when *combustible construction* permitted. (OBC 3.1.4)
  - Rated FT4 for most cases when *non-combustible construction* required. (OBC 3.1.5.)



Wires and Cables

Div B. 3.1.4.3. & 3.1.5.21

- What's changed? For both cases, clause (1)(b) previously allowed unrated wires if located in concealed spaces in walls. NOW only in masonry walls.

  (i) totally enclosed noncombustible raceways, (See Note A-3.1.4.3.(1)(b)(i))

  (ii) masonry walls, ~~concealed spaces in walls~~

  (iii) concrete slabs,

  (iv) a service room separated from the remainder of the building by a fire separation having a fire-resistance rating not less than 1 h, or

  (v) totally enclosed non-metallic raceways conforming to Clause 3.1.5.23.(1)(b), or (c) the wires and cables are communication cables used at the service entry to a building and are not more than 3 m long.

- New Sentence (4) exempts fire alarm wires and cables in plenums from needing to meet the rating

KITCHENER

Wires and Cables

Data wire showing ‘FT1’ rating stamp

Continuity of Fire Separations

Div B. 3.1.8.3.

- More clarity added to address continuity where separations abut other separations or elements
- Sentence (2) now requires firestop instead of smoke-tight joints

> *(2) Except as provided in Sentence (5), the continuity of a fire separation having a fire-resistance rating that abuts another fire separation, a floor, a ceiling, or a roof shall be maintained by a firestop conforming to Sentence (3).*

Firestopping of joint where fire rated wall abuts unrated roof

Continuity of Fire Separations

Div B. 3.1.8.3.

- Previously, the code only specified the “F” and “FT” rating requirements for firestopping of penetrations in 3.1.9.
- Firestopping testing requirements now specified for joints where one fire separation abuts another fire separation or element
  - Sentences (3) specifies FT rating for these firestops.
  - Sentence (4) specifies requirements for floor to exterior wall to have F rating for firestops.
  - Sentence (5) clarifies drywall to drywall mud and tape joints are ok in lieu of fire stop

Firestopping of joint where floor abuts wall

Part 9 ICI – Continuous Barrier

Div B. 9.10.9.2. – Continuous Barrier

- Sentence (1) now adds the clarification that joints must also be smoke tight

  (1) Except as permitted in Article 9.10.9.3., a wall or floor assembly required to be a fire separation shall be constructed as a continuous barrier against the spread of fire and retard the passage of smoke.

- Sentences (3) to (6) are new. They align similarly to the Part 3 previously reviewed requirements for firestop ratings 3.1.8.3.(3) to (5)

Closures

Div B. 3.1.8.5. Installation of Closures

- Sentence (2): Requirement for rated doors, dampers and windows to note the testing laboratory is removed. However, NFPA 80 requires labelling, and labels commonly indicate the testing laboratory anyways.

Fire protection label on door

Fire protection label on damper

KITCHENER

Temperature Rise Limit for Doors

2024:

Table 3.1.8.17.
Restrictions on Temperature Rise and Glazing for Closures
Forming Part of Articles of 3.1.8.17. and 3.1.8.18.

Location	Minimum Required *Fire-Protection Rating* of Door	Maximum Temperature Rise on Opaque Portion of Unexposed Side of Door, °C	Maximum Aggregate Area of Wired Glass or Safety Glazing in a Door, m^2	Maximum Aggregate Area of Glass Block, Wired Glass or Safety Glazing Panels Not in a Door, m^2
Between a dead-end corridor and an adjacent *occupancy* where the corridor provides the only *access to exit* and is required to have a *fire-resistance rating*	Less than 45 min	No limit	No limit	No limit
	45 min	250 after 30 min	0.0645	0.0645
Between an *exit* enclosure and the remainder of the *floor area* in *buildings* not more than 3 *storeys* in *building height*	All ratings	No limit	0.8	0.8
Between an *exit* enclosure and the remainder of the *floor area* (except as permitted above)	45 min	250 after 30 min	0.0645	0.0645
	1.5 h	250 after 1 h	0.0645	0.0645
	2 h	250 after 1 h	0.0645	0.0645
In a *firewall*	45 min	250 after 30 min	0.0645	0
	1.5 h	250 after 30 min	0.0645	0
	3 h	250 after 1 h	0	0

2012:

Table 3.1.8.15.
Restrictions on Temperature Rise and Glazing for Closures
Forming Part of Articles of 3.1.8.15. and 3.1.8.16.

Location	Minimum Required *Fire-Protection Rating* of Door	Maximum Temperature Rise on Opaque Portion of Unexposed Side of Door, °C	Maximum Area of Wired Glass in Door, m^2	Maximum Aggregate Area of Glass Block and Wired Glass Panels not in Door, m^2
Between a dead-end corridor and an adjacent *occupancy* where the corridor provides the only *access to exit* and is required to have a *fire-resistance rating*	Less than 45 min	No limit	No limit	No limit
	45 min	250 after 30 min	0.0645	0.0645
Between an *exit* enclosure and the remainder of the *floor area* in *buildings* not more than 3 *storeys* in *building height*	All ratings	No limit	0.8	0.8
Between an *exit* enclosure and the remainder of the *floor area* (except as permitted above)	45 min	250 after 30 min	0.0645	0.0645
	1.5 h	250 after 1 h	0.0645	0.0645
	2 h	250 after 1 h	0.0645	0.0645
In a *firewall*	1.5 h	250 after 30 min	0.0645	0
	3 h	250 after 1 h	0	0
Column 1	2	3	4	5

Fire protection label on door indicating Temperature Rise

Firestops

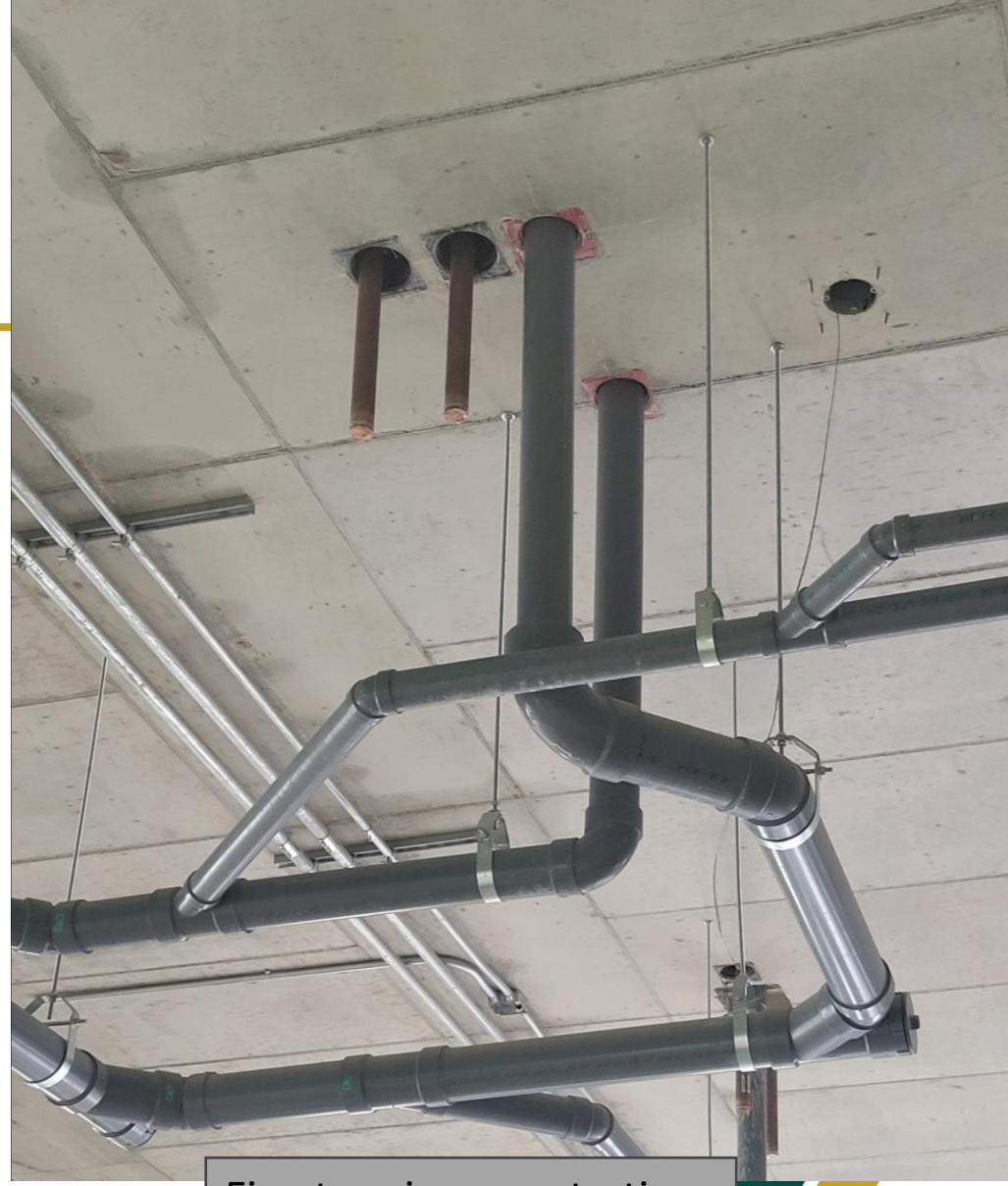
Div B. 3.1.9.1.(1)

- The F rating is now required to match the required *fire resistance rating* of the fire separation rather than the *fire protection rating* required for a closure
- Tightly fitted has been removed as a compliance option

(1) Except as provided in Sentences (2) to (7) and Article 3.1.9.3., penetrations of a fire separation or a membrane forming part of an assembly required to have a fire-resistance rating shall be

(a) sealed by a firestop that, when subjected to the fire test method in CAN/ULC-S115, "Standard Method of Fire Tests of Firestop Systems," has an F rating not less than the required fire-resistance rating of the fire separation ~~fire-protection rating required for closures~~, or

(b) ~~tightly fitted~~ cast-in-place, where the item penetrating the fire separation is steel, ferrous, copper, concrete or masonry.

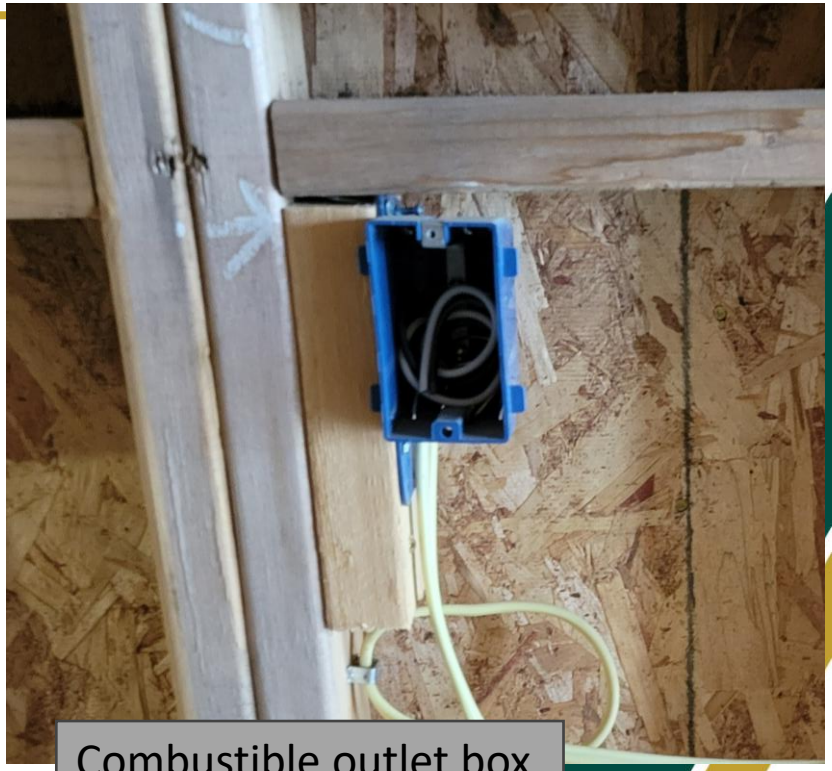


Firestopping penetrations through concrete floor

Penetration of Outlet Boxes

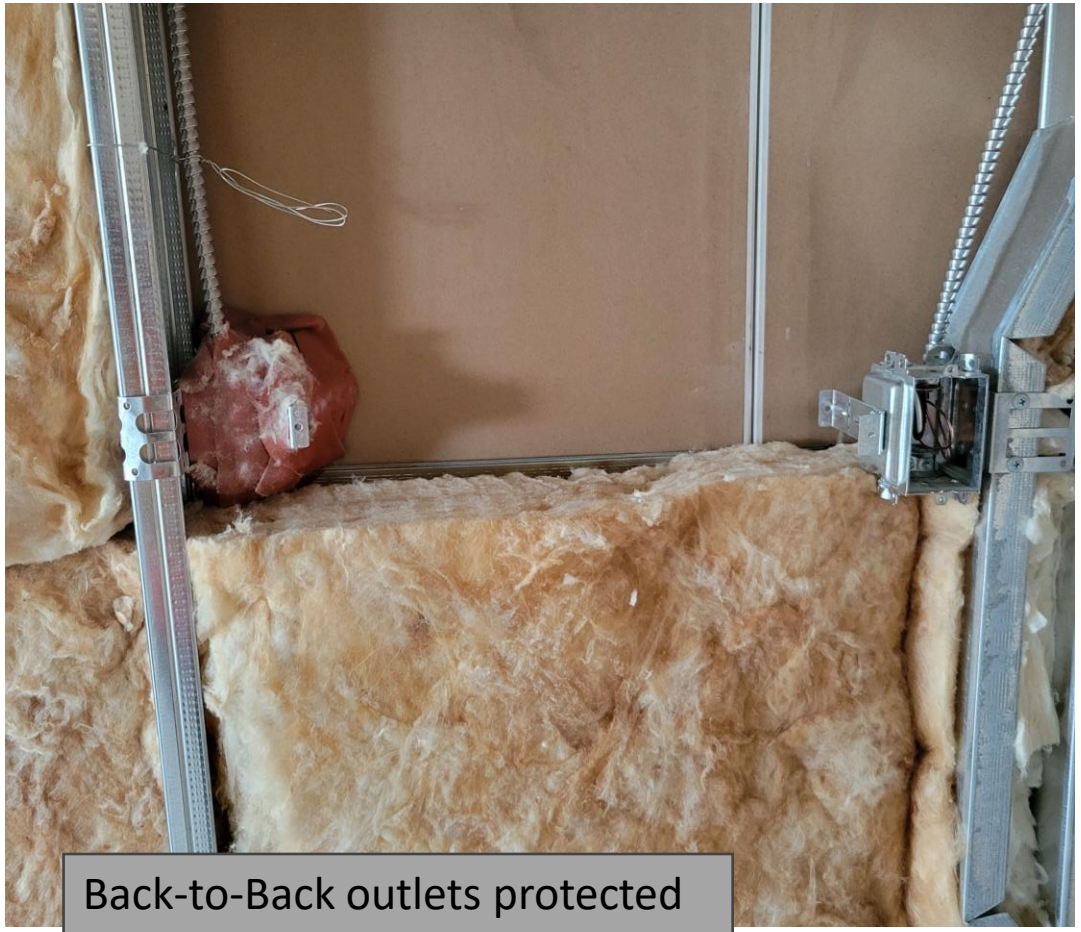
Div B. 3.1.9.3.

- Reorganization, no real changes to current practice
- Previous articles 3.1.9.3. and 3.1.9.3A are combined to avoid confusion as both previously addressed outlet boxes
- (2) Combustible Outlet box requirement simplified and specifies an FT rated firestop. Size limit is removed.
- (3) Important to note, but not a change: Exemption from fire-stopping metal outlet boxes only applies to walls. Therefore, in ceilings even metal outlet boxes need to be firestopped, regardless of size.



Combustible outlet box requires firestop

Penetration of Outlet Boxes



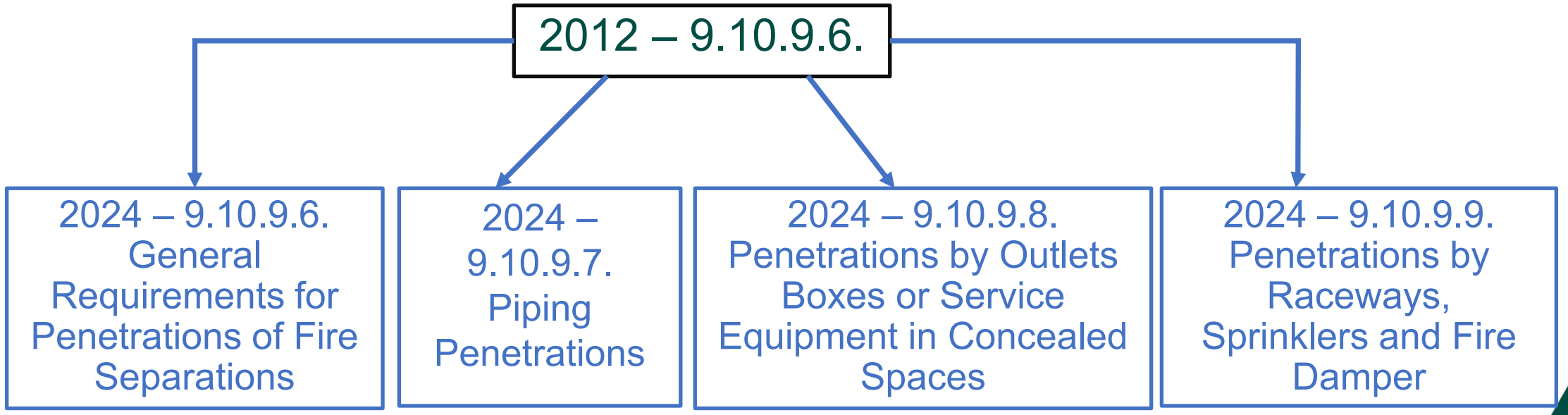
Back-to-Back outlets protected with ‘putty-pack’ firestop

Div B. 3.1.9.3.

- (4)(c) new clarification that back-to-back outlets are OK if protected with an FT rated firestop.

Part 9 ICI - Fire Protection

Penetrations of Fire Separations – 9.10.9.6.

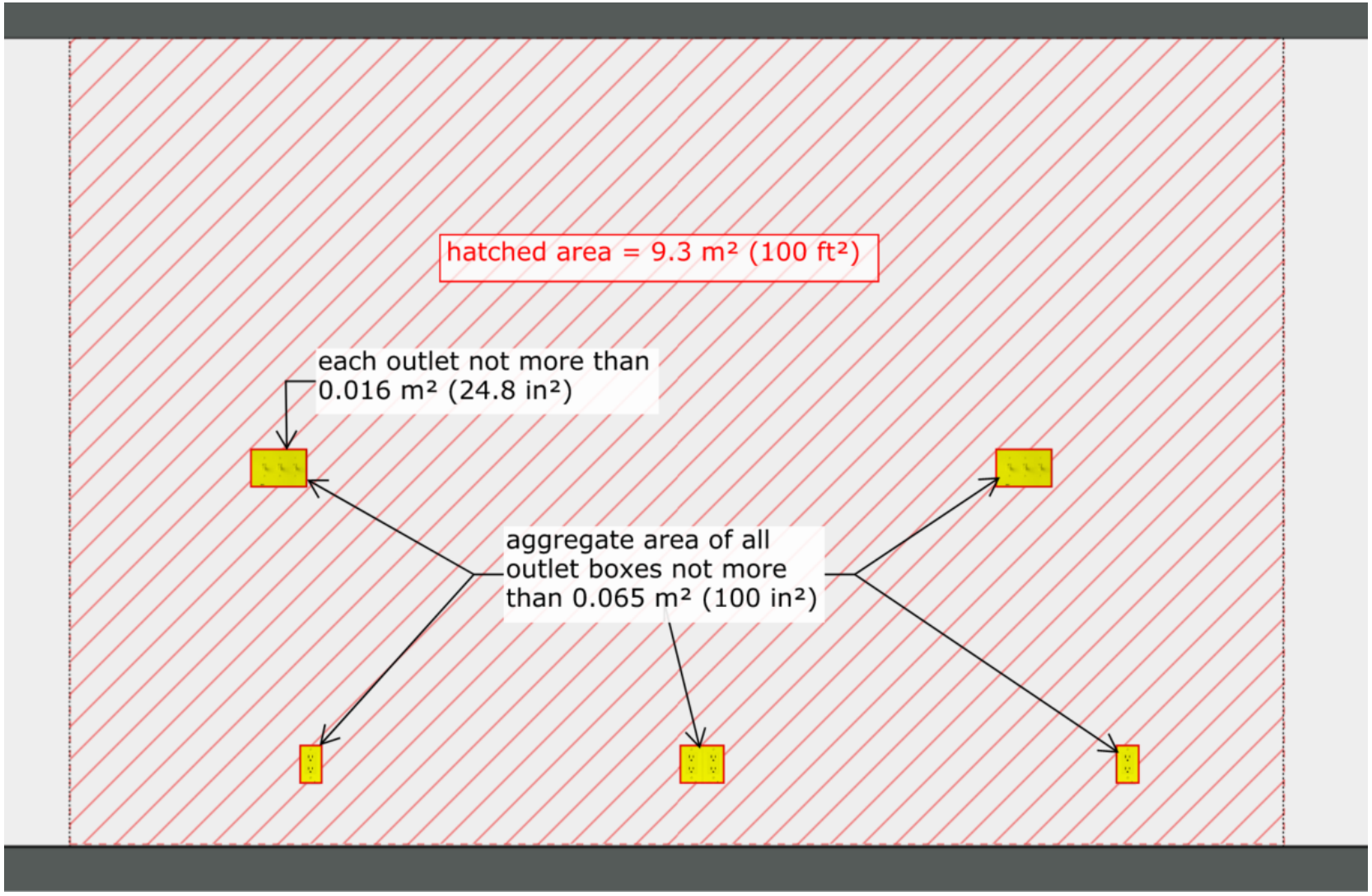


Actual requirements for firestopping (not tightly fitted)

Now aligns more with Part 3 fire-stopping & protection requirements

Fire Protection

Penetrations by metal **Outlet Boxes** – Part 3 and 9 3.1.9.3.(3) & 9.10.9.8.(3)



No change to Part 3.
New to Part 9.

Combustible Piping Penetrations

Div B. 3.1.9.4.

- Entire Article reformatted for clarity
- Two new sentences include:
  - (1) Combustible sprinkler piping: Appears firestopping no longer required.
  - (2) Combustible water lines: Clarification that firestopping is required.

Firestopping of combustible sprinkler pipe

Interior Finishes, Furnishings and Decorative Materials

Div B. 3.1.13.1.

- New sentence (1) that references the Fire Code requirements for interior finishes, furnishings, and decorative materials
- 2020 National Fire Code Section 2.3. Interior Finishing, Furnishing and Decorative Materials:

    - *2.3.1.1. Interior Finish*

        1) The interior finish material that forms part of the interior surface of a floor, wall, partition or ceiling shall conform to the NBC.

Interior Finishes, Furnishings and Decorative Materials

Div B. 3.1.13.1.

- 2020 NFC Section 2.3. Interior Finishing, Furnishing and Decorative Materials (cont'd):

  - *2.3.1.2. Movable Partitions and Screens*

    1) Movable partitions or screens, including acoustical screens, shall have a flame-spread rating not greater than that required for the interior finish of the area in which they are located.

Interior Finishes, Furnishings and Decorative Materials

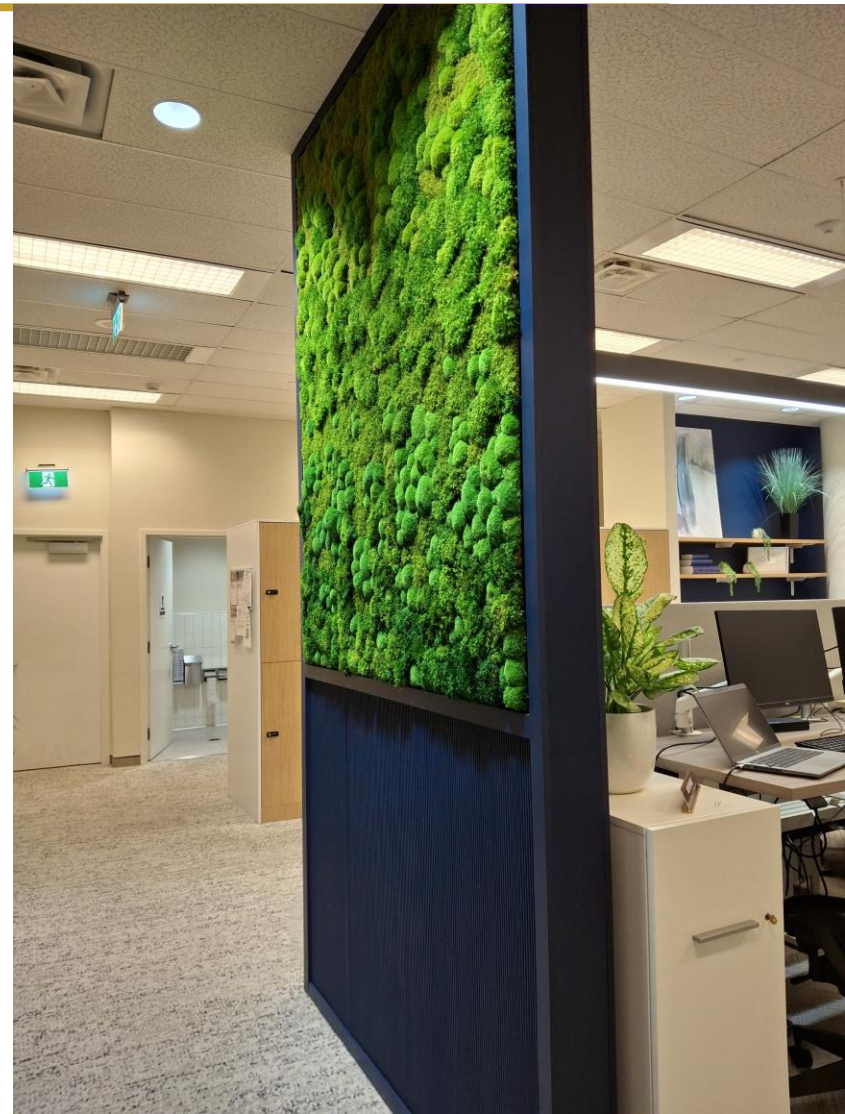
- 2020 NFC Section 2.3. Interior Finishing, Furnishing and Decorative Materials (cont'd):

  - *2.3.1.3. Decorative Materials*

    1) Decorative materials on walls or ceilings shall have a flame-spread rating not greater than that required for the interior finish of the space in which they are located.

  - *2.3.1.4. Interconnected Floor Spaces*

    1) Combustible contents in interconnected floor spaces in which the ceiling is more than 8 m above the floor, shall not exceed the limit specified in Subsection 3.2.8. of Division B of the NBC.



Interior Finishes, Furnishings and Decorative Materials

- 2020 NFC Section 2.3. Interior Finishing, Furnishing and Decorative Materials (cont'd):

  - *2.3.2.1. Drapes, Curtains and Decorative Materials*

    1) Drapes, curtains and other decorative materials, including textiles and films, used in buildings shall conform to CAN/ULC-S109, "Standard Method for Flame Tests of Flame-Resistant Fabrics and Films," when such drapes, curtains and other decorative materials are used in

    a) any assembly occupancy or Group B, Division 1 detention occupancy,

    b) any lobby or exit,or

    c) any open floor areas exceeding 500 m2 in any business and personal services, mercantile or industrial occupancy, except where the floor area is divided into fire compartments not exceeding 500 m2 in area and separated from the remainder of the floor area by fire separations having at least a 1 h fire-resistance rating.

  - *2.3.2.3. Textiles in Group B Occupancies*

KITCHENER

Flame Spread for High Buildings

Div B. 3.1.13.7.

- Sentence (4): Doors now moved to a separate sentence from trim and millwork. Flame Spread Rating increased from 150 to 200.

Additional Requirements for High Buildings

Div B. 3.2.6.2. – Limits to Smoke Movement

- Sentence (6) previously 3.2.6.2.(5.1) OBC 2012 now reads:

  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.

Div B. 3.2.6.5. – Elevator for Use by Firefighters

- Clause (6)(b) in OBC 2012 requires a new standard for electrical conductors to have 1 hour fire protection as per CAN/ULC-S139. Previously testing requirement was to CAN/ULC-S101.

Lighting and Emergency Power Systems

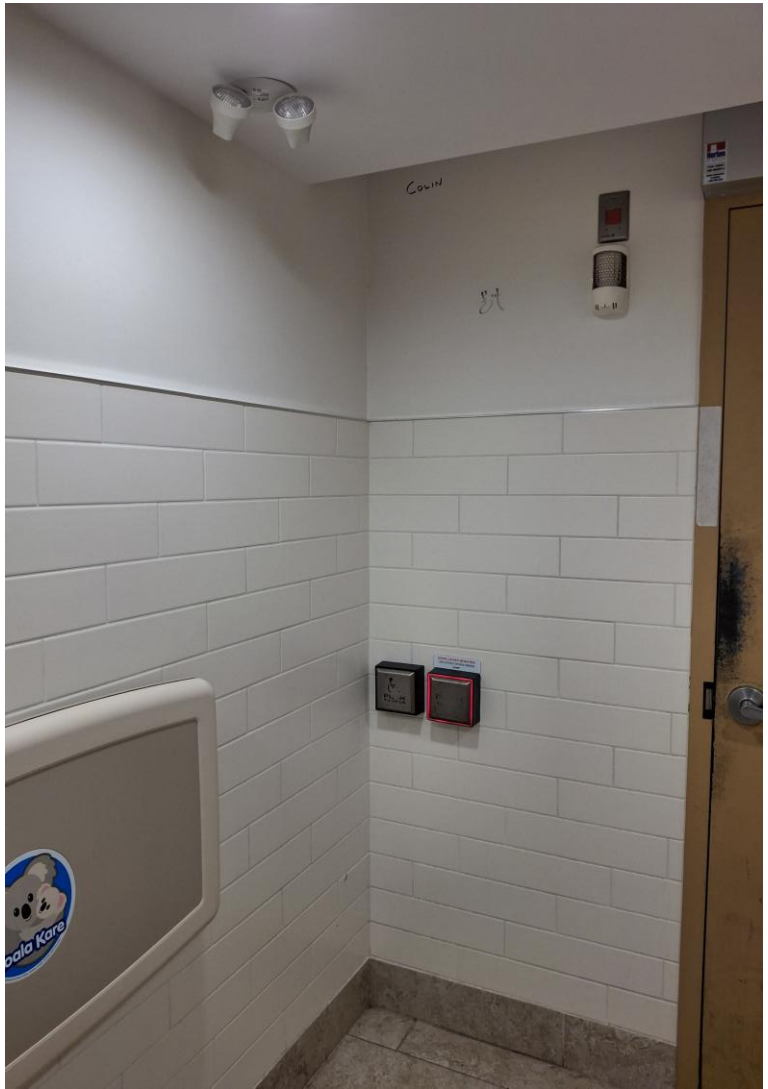
Div B. 3.2.7.1. – Minimum Lighting Requirements

- Sentences (4)(5)(6)(7) are new to the code and provide additional minimum levels of lighting for:
  - escalators (100lx)
  - moving walks (100lx)
  - controls in a barrier path of travel (100lx)
  - visual information signs in a barrier path of travel (100lx)
  - signs at horizontal exits (200lx)
  - signage at Mag Locks (200lx)
  - signage for emergency crossover floors (200lx)
  - Floor numbering and stair shaft designations (200lx), and
  - accessibility signs (200lx)

Lighting and Emergency Power Systems

Div B. 3.2.7.3. – Emergency Lighting

- The article specifying locations requiring emergency lighting level of 10lx was further developed to now include:
  - Locations where doors have Mag Locks
  - Universal Washrooms
  - Universal Shower Rooms



Lighting and Emergency Power Systems

Div B. 3.2.7.9. – Emergency Power for Building Services

Sentence (1) contains new additional items requiring 2hr emergency generator power:

- Fans required for vestibules at exits within interconnected floor space in a 3.2.6. building
- Fans required in an interconnected floor space to provide air changes in a 3.2.6. building
- Any fire pump, sprinkler and standpipe equipment that supplies water for fire suppression if the supply depends solely on electrical power for *"any" building*
  - *Previously the code required if a 3.2.6. building*
  - *Sentence (4) excepts this requirement if the sprinkler falls under NFPA 13D.*

Diesel generator backup for electric fire pump

Vertical Transportation

Div B. 3.5.3.1. – Fire Separations for Elevator Hoistways

- Changed to remove Articles 3.2.8.3 to 3.2.8.11 and Sentences 3.2.8.2.(4) and (6).
- Sentence (2) has slight changes in wording for elevators in interconnected floor spaces not required to be in separated hoistways.
- Sentence (3) was removed. No longer requires elevator vestibule if elevator extends to storeys above or below the interconnected floor space.

Vertical Transportation

Div B. 3.5.4.1. – Elevator Car Dimensions

- Sentence (2) now added to exempt the minimum dimension for LULA elevator to accommodate a stretcher:

> (1) *Except as provided in Sentence (2),* if an elevator is installed to conform to the requirements of Article 3.3.1.7., or if one or more elevators are provided in a building more than three storeys in building height, each storey having elevator service shall be served by at least one elevator that has inside dimensions that will accommodate and provide adequate access for a patient stretcher 2 010 mm long and 610 mm wide in the prone position. (See Note A-3.5.4.1.(1))
>
> (2) *The inside dimensions stipulated in Sentence (1) do not apply to limited-use/limited-application elevators designed and installed in accordance with ASME A17.1 / CSA B44, "Safety Code for Elevators and Escalators."*

KITCHENER

Vertical Transportation

Div B. 3.5.4.1. – Elevator Car Dimensions

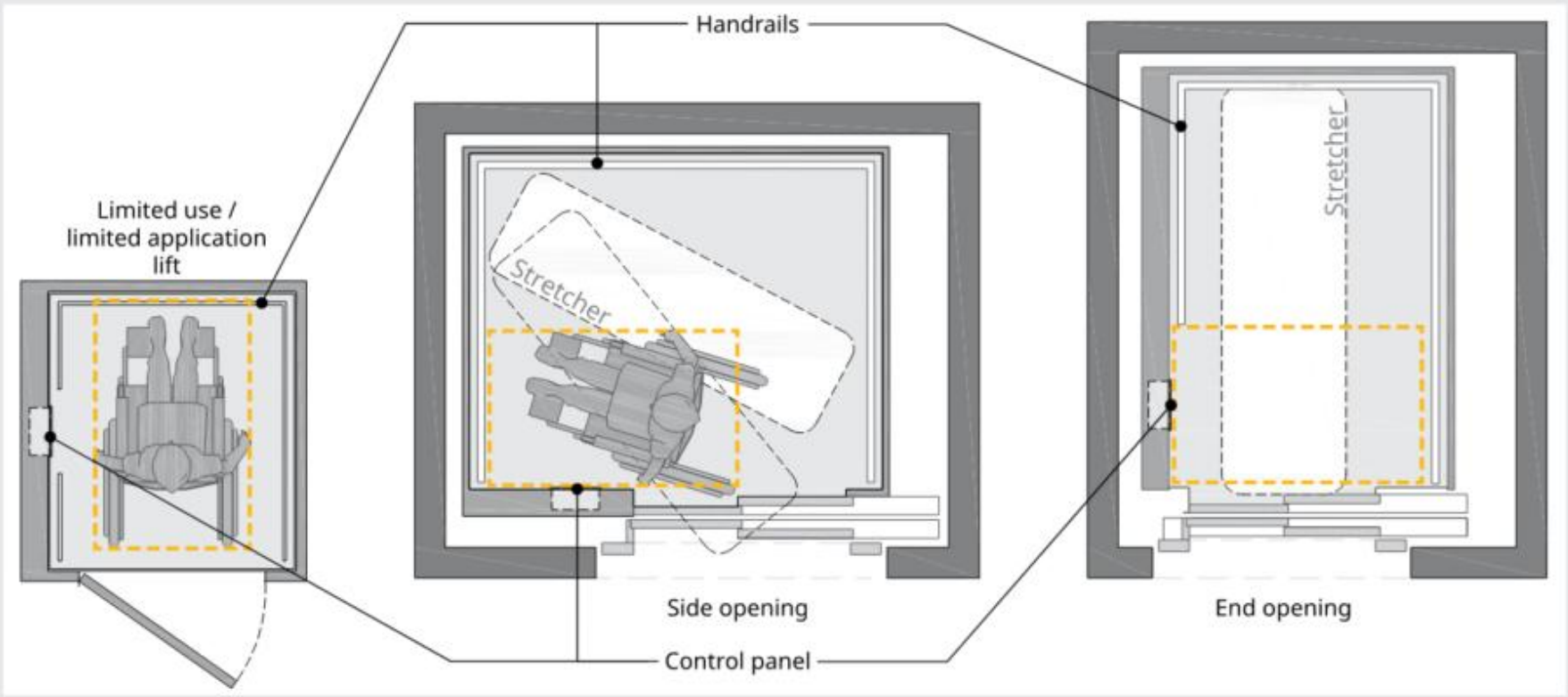


Figure 3.8.3.7.(1)-A
Elevator car size and location of controls

Service Facilities

Div B. 3.6.1.5. – Appliances Installed Outside a Building

- Relocated from 6.2.5.2.
- Clearance/separation requirements now apply to a unit on the roof, not just outside a building

> *(1) A fuel-fired appliance installed on the roof of a building or in another location outside the building shall be installed not less than*
>
> *(a) 1.2 m from a property line, measured horizontally, and*
>
> *(b) 3 m from an adjacent wall of the same building if that wall contains any opening within 3 storeys above and 5 m horizontally from the appliance, unless every opening within these limits is protected by*
>
> *(i) a closure having a fire-protection rating not less than 45 min determined in accordance with Article 3.1.8.4., or*
>
> *(ii) a wired glass assembly permitted for use in a vertical fire separation and described in Article 2.3.15. of MMAH Supplementary Standard SB-2, "Fire Performance Ratings."*

KITCHENER

Service Facilities

Div B. 3.6.1.5. – Appliances Installed Outside a Building

Clearance/separation requirements apply from RTU on low roof to adjacent exterior wall

Service Facilities

Div B. 3.6.2.5. – Storage of Combustible Refuse and Recycling

- Added clarification that this requirement applies to recycling as well:

  (1) Except as required by Sentence 3.6.3.3.(9), a room for the temporary storage of combustible refuse and materials for recycling shall be

- Room can now be 45 min fire separation if permitted for the floors:

  (1)(a) separated from the remainder of the building by a fire separation with a fire-resistance rating not less than 1 h, except that a fire separation with a fire-resistance rating not less than 45 min is permitted where the fire-resistance rating of the floor assembly is not required to exceed 45 min

Garbage Shaft Opening in Garbage Room

Service Facilities

Div B. 3.6.2.8. – Emergency Power Installations

- Sentence (1) clarification added that fire separation requirements for a generator room do not apply to a stand alone generator building:

> *(1) Where a generator intended to supply emergency power for lighting, fire safety and life safety systems is located in a building, except where such building is used solely for the purpose of housing the generator and its ancillary equipment, it shall be located in a room that*
>
> *(a) is separated from the remainder of the building by a fire separation with a fire-resistance rating not less than 2 h, and*
>
> *(b) contains only the generating set and equipment that is related to the emergency power supply system.*

- Clause (1)(a) changed to require 2 hour fire separation for generator rooms in all buildings. Previously, 1 hour was permitted except if a high building under 3.2.6.

Nicole Jutzi

Municipal Building Official III

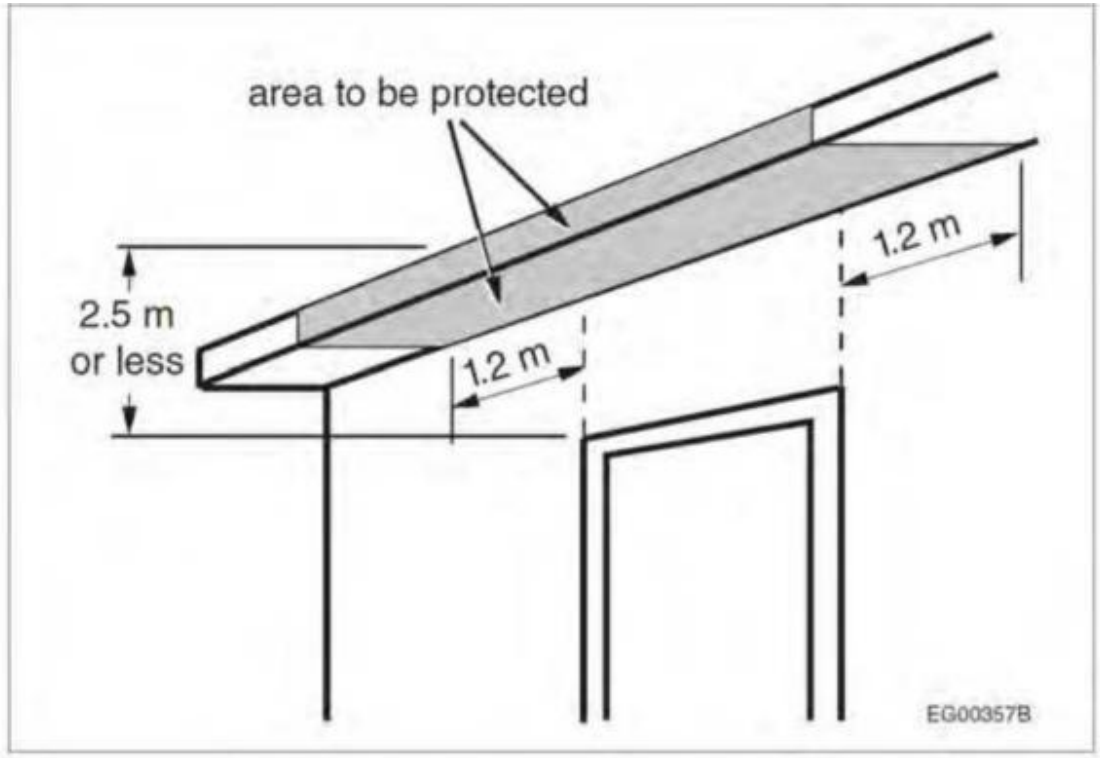
KITCHENER

Spatial Separation and Exposure Protection

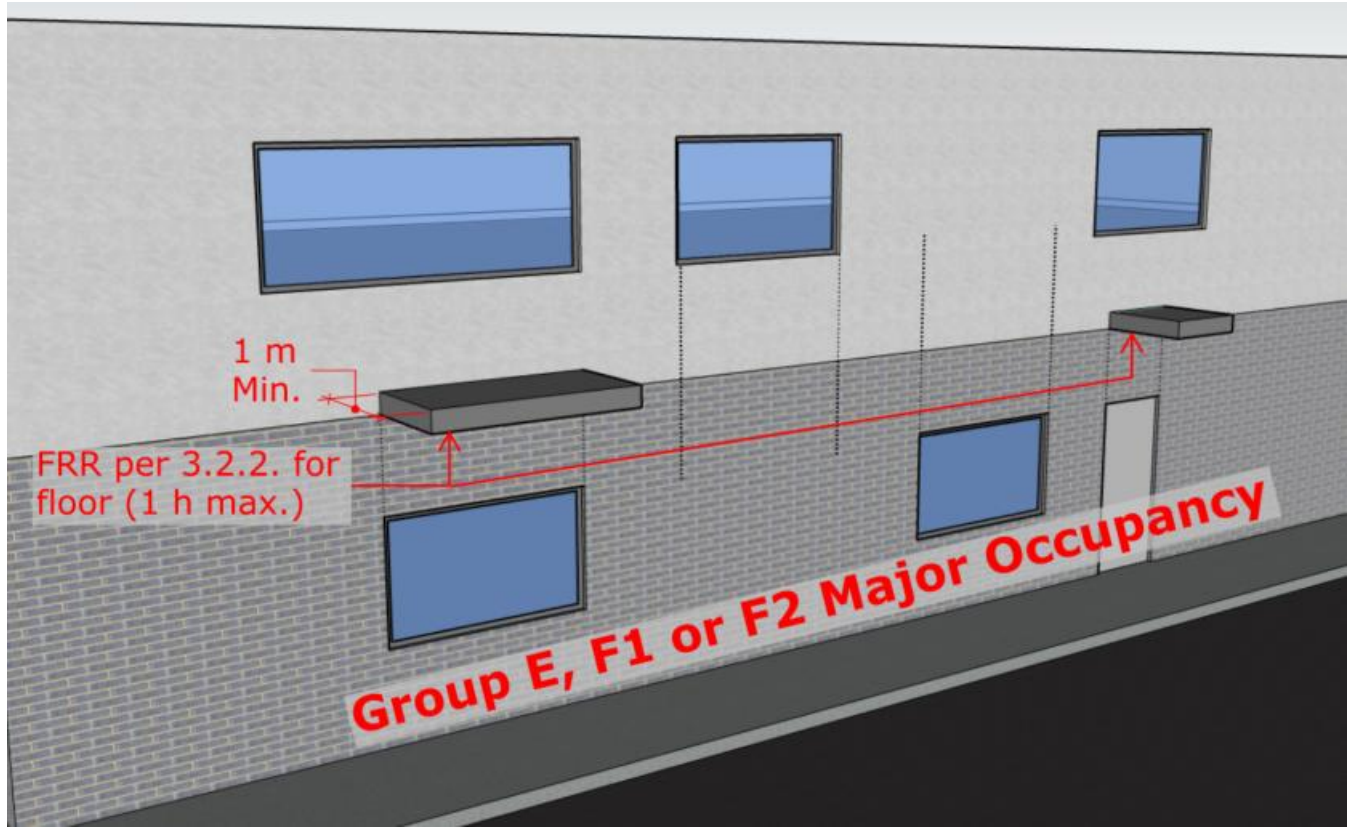
Protection of Soffits

Div B. 3.2.3.16.

- Gypsum board removed from list of materials permitted to protect soffits with common attic or roof spaces above more than two suites of residential occupancy or two patients' sleeping rooms in Group B2 or 3
- Sentence (2) which allowed soffit protection to be waived if fire blocking provided to separate attic or roof spaces into compartments has been removed
- New Sentence (2) added to clarify that soffit protection shall extend the full width of the opening and to not less than 1.2m on either side of it, and shall apply to all openings through the soffit within this limit



Canopy Protection for Vertically Separated Openings



Div B. 3.2.3.17.

- Sentence (3) which previously permitted canopy protection to be waived if sprinklers were installed in the lower storey referred to in Clause (1)(a) and the storey immediately above the lower storey revised to state that canopy protection is waived only when the building is sprinklered throughout

Part 9 ICI

Div B. 9.10.14. – Spatial Separation of Buildings

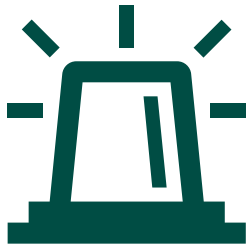
- Added new sentence to clearly indicate that 9.10.14. is not applicable to houses with secondary suites - which 9.10.15. applies
- Table 9.10.14.4. now modified where result was "---" which meant 100% UPO, now specifically says 100%
- New sentence added of 9.10.14.5.(12) for roof soffits that project to less than 1.2 m from the property line, the centre line of a public way, or an imaginary line between two buildings or fire compartments on the same property.

Table 9.10.14.4.
Maximum Aggregate Area of Unprotected Openings in Exterior Walls
Forming Part of Sentence 9.10.14.4.(1)

Occupancy Classification of *Building*	Maximum Total Area of *Exposing Building Face*, m²	Maximum Aggregate Area of *Unprotected Openings*, % of *Exposing Building Face* Area													
		Limiting Distance, m													
		Less than 1.2	1.2	1.5	2	2.5	3	4	6	8	10	12	16	20	25
Residential, business and personal services, and *low-hazard industrial*	10	0	8	12	21	33	55	96	100	100	100	100	100	100	100
	15	0	8	10	17	25	37	67	100	100	100	100	100	100	100
	20	0	8	10	15	21	30	53	100	100	100	100	100	100	100
	25	0	8	9	13	19	26	45	100	100	100	100	100	100	100
	30	0	7	9	12	17	23	39	88	100	100	100	100	100	100
	40	0	7	8	11	15	20	32	69	100	100	100	100	100	100
	50	0	7	8	10	14	18	28	57	100	100	100	100	100	100
	100	0	7	8	9	11	13	18	34	56	84	100	100	100	100
	Over 100	0	7	7	8	9	10	12	19	28	40	55	92	100	100
Mercantile and *medium-hazard industrial*	10	0	4	6	10	17	25	48	100	100	100	100	100	100	100
	15	0	4	5	8	13	18	34	82	100	100	100	100	100	100
	20	0	4	5	7	11	15	27	63	100	100	100	100	100	100
	25	0	4	5	7	9	13	22	51	94	100	100	100	100	100
	30	0	4	4	6	9	12	20	44	80	100	100	100	100	100
	40	0	4	4	6	8	10	16	34	61	97	100	100	100	100
	50	0	4	4	5	7	9	14	29	50	79	100	100	100	100
	100	0	4	4	4	5	6	9	17	28	42	60	100	100	100
	Over 100	0	4	4	4	4	5	6	10	14	20	27	46	70	100

Fire Alarm and Detection Systems

Fire Alarm and Detection Systems



Div B. 3.2.4.1. – Determination of Requirement for a Fire Alarm System

- A fire alarm system is now required in a building in which an automatic sprinkler system is installed except where sprinkler system is installed in accordance with NFPA 13D or where building contains fewer than 9 sprinklers on domestic water system
- Sentence (3), now Sentence (5), was revised to clarify that a fire alarm system is not required in a nonsprinklered residential building where not more than 4 suites share a common means of egress, or where each suite has direct access to an exterior exit facility leading to ground level

Div B. 3.2.4.4. – Description of Fire Alarm Systems

- Sentence (1) and (2) added that an alarm or alert signal shall sound upon the operation of a waterflow detecting device

KITCHENER

Fire Alarm and Detection Systems

Div B. 3.2.4.7. – Signals to Fire Department

(1) A single-stage fire alarm system shall be designed to notify the fire department in conformance with Sentence (4) that an alarm signal has been initiated in

(a) a building of a Group A occupancy having an occupant load more than 300, or

(b) a retirement home.

(4) Notification of the fire department, as required by Sentences (1) to (3), shall be provided in conformance with CAN/ULC-S561, “Standard for Installation and Services for Fire Signal Receiving Centres and Systems.” (See Note A-3.2.4.7.(4))

(6) Helicopter landing areas on roofs shall be provided with telephone extensions or means to notify the fire department.

KITCHENER

Fire Alarm and Detection Systems

Div B. 3.2.4.8. – Annunciator and Zone Indication

- Clause (2)(a) revised to remove the 1 storey limitation for non sprinklered buildings
- Clause (2)(i) removed which previously required separate zone indication in each fire compartment required to be separated by vertical fire separations having an FRR of not less than 2h other than dwelling units described in 3.3.4.
- Sentence (5) revised so that all sprinklered buildings require an annunciator

Div B. 3.2.4.9. – Electrical Supervision

- Sentence (6) revised to state that the indication of supervisory signal in accordance with (3) and (5) shall be transmitted to the fire department (previously this sentence on required the indication of supervisory signal in 3.2.6. building to be transmitted to proprietary control centre or to an independent central station)

KITCHENER

Fire Alarm and Detection Systems

Div B. 3.2.4.10. – Fire Detectors

(1) Fire detectors required by this Code shall be connected to the fire alarm system.

(2) Except as permitted by Sentence (3), if a fire alarm system is required in a building that is not sprinklered, fire detectors shall be installed in the following spaces:

(a) storage rooms not within dwelling units,

(b) service rooms not within dwelling units,

(c) janitors' rooms,

(d) rooms in which hazardous substances are to be used or stored, (See Note A-3.3.1.2.(1)),

(e) elevator hoistways or dumbwaiter shafts,

(f) laundry rooms in buildings of residential occupancy, but not those within dwelling units, and

(g) hazardous classrooms and change rooms in elementary or secondary schools.

Fire Alarm and Detection Systems

Div B. 3.2.4.10. – Fire Detectors

(3) Fire detectors required by Sentence (2) need not be provided within floor areas that are sprinklered.

(4) Fire detectors required by Sentence (2) shall be installed in elevator hoistways and dumbwaiter shafts where a sprinkler system is not installed within the hoistway or shaft.

Fire Alarm and Detection Systems

Div B. 3.2.4.11. – Smoke and Heat Detectors

(1) If a fire alarm system is installed, smoke detectors shall be installed in

(a) each sleeping room and each corridor serving as part of a means of egress from sleeping rooms in portions of a building classified as Group B major occupancy,

(b) each room in a contained use area and corridors serving those rooms,

(c) each corridor in portions of a building classified as Group A, Division 1 major occupancy,

(d) each public corridor in portions of a building classified as Group C major occupancy,

(e) each exit stair shaft, other than those serving only a Group A, Division 4 major occupancy or an open storage garage,

(f) the vicinity of draft stops required by Article 3.2.8.6.,

(g) each elevator machine room, and

(h) each corridor serving classrooms in elementary and secondary schools.

(See Note A-3.2.4.11.(1))

Fire Alarm and Detection Systems

Div B. 3.2.4.11. – Smoke and Heat Detectors

(2) In a floor area containing a hotel, where a fire alarm system is installed and the floor area is not sprinklered, heat detectors shall be installed in every room in a suite and in every room not located in a suite other than washrooms within a suite, saunas, refrigerated areas and swimming pools.

Part 9 ICI

Div B. 9.10.18.4 – Rooms and Spaces Requiring Heat Detectors or Smoke Detectors

- Added clarity that fire detectors are not required in the noted spaces when the building is sprinklered

(2) Except as provided in Sentence (3), if a fire alarm system is required in a building that is not sprinklered, fire detectors shall be installed in the following spaces:

(a) storage rooms not within dwelling units,
(b) service rooms not within dwelling units,
(c) janitors' rooms,
(d) rooms in which hazardous substances are to be used or stored, (See Note A-3.3.1.2.(1))
(e) elevator hoistways, chutes and dumbwaiter shafts, and
(f) laundry rooms in buildings of residential occupancy, except those within dwelling units.

Fire Alarm and Detection Systems

Div B. 3.2.4.15. – System Monitoring

- New Sentence (3) added which required each waterflow detecting device required by Sentence (1) to be indicated separately on the fire alarm system annunciator.

Div B. 3.2.4.16. – Manual Stations

- Now referred to as manual stations instead of manual pull stations
- Manual stations required at every exit where before they were required at every required exit
- New Sentence requiring manually operated fire alarm station on the roof at each exit from a helicopter landing area

Div B. 3.2.4.17. – Alert and Alarm Signals

- Provisions for visual signals in Sentence (4), (5) and (6) moved into 3.2.4.19. Visible Signals

KITCHENER

Fire Alarm and Detection Systems

Div B 3.2.4.18. – Audibility of Alarm Systems

- New sentence added stating audible signal devices in sleeping rooms in a building of residential or care occupancy shall emit a low frequency signal
- Sentence (7) revised to clarify that not less than 65dBA required for audible signal when any intervening doors between the device and the rest of the floor area are closed

Div B. 3.2.4.19. – Visible Signals

- Provisions for visual signals moved here.

Div B. 3.2.4.20. – Smoke Alarms

- Sound pressure level between 75 dBA and 110dBA stipulated for where smoke detectors are provided in lieu of smoke alarms in suites of residential occupancy
- Visual signaling component required if providing smoke detectors in lieu of smoke alarms in suites of residential occupancy

KITCHENER

Part 9 ICI

Div B. 9.10.19.1 – Required Smoke Alarms

Sentence (5) which indicated that smoke alarms are to be installed on or near the ceiling has been deleted However remains under 9.10.19.3. Location of Smoke Alarms

Div B. 9.10.19.4. power supply

9.10.19.4. (3) when substituting smoke detectors in lieu of smoke alarms, 2024 OBC has now prescribed that the smoke detectors are;

“Capable of independently sounding audible signals with a sound pressure level between 75dBA and 110dBA within the individual suites”

- Still needs to be installed as per CAN/ULC-S524
- Still must form a part of the fire alarm system

Matt Ruetz

MBO – Technical Specialist

Fire Protection Systems

Provisions for Firefighting

General – 3.2.5.

Appendix note A-3 has been expanded to further clarify application of Part 3 and Firefighting assumptions.

Wording changes throughout the OBC from “sprinklered” to “sprinklered throughout”

Provisions for Firefighting

Access to Above Grade Stories – 3.2.5.1.

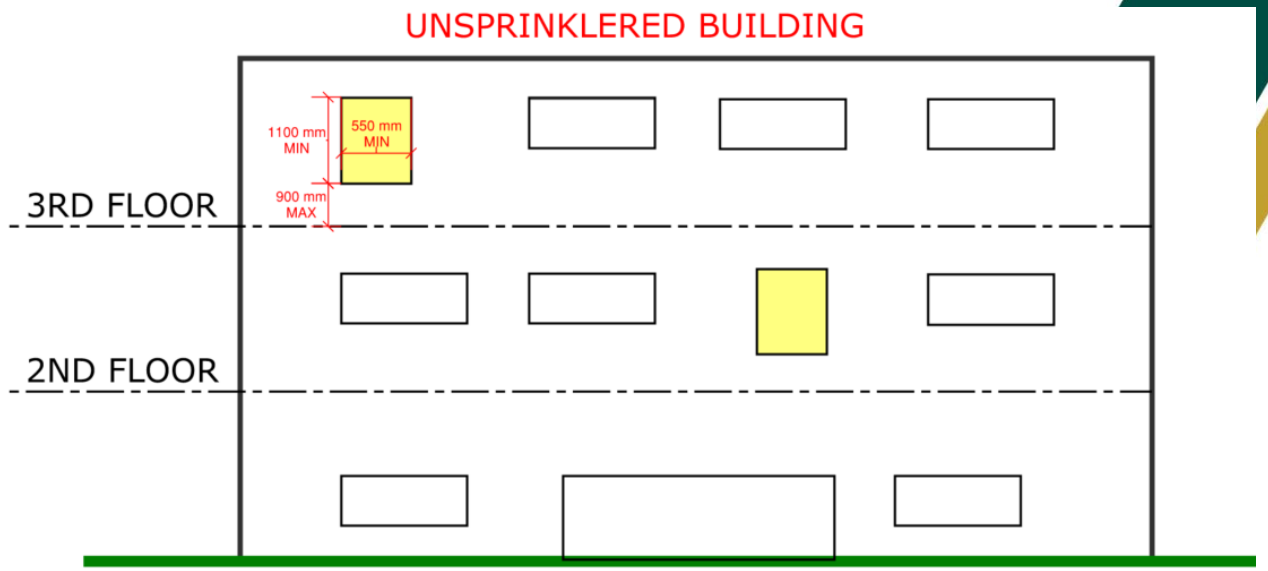
(2) An opening for access required by Sentence (1) shall

(a) have a sill no higher than 900 mm above the inside floor, and

(b) be not less than 1 100 mm high by not less than

(i) 550 mm wide for a building not designed for the storage or use of dangerous goods, or

(ii) 750 mm wide for a building designed for the storage or use of dangerous goods.



Provisions for Firefighting

Water Supply – 3.2.5.7.

3.2.5.7.(2) has been removed from the 2024 OBC

2012 OBC

~~(2) Hydrants shall be located within 90 m horizontally of any portion of a building perimeter that is required to face a street in Subsection 3.2.2.~~

2024 OBC has maintained 3.2.5.5.(2);

(2) Access routes shall be provided to a building so that

(a) for a building provided with a **fire department connection**, a fire department pumper vehicle can be located adjacent to the hydrants referred to in Article 3.2.5.15.,

(b) for a building **not provided with a fire department connection**, a fire department pumper vehicle can be located so that the length of the access route from a hydrant to the vehicle plus the unobstructed path of travel for the firefighter from the vehicle **to the building is not more than 90 m**, and

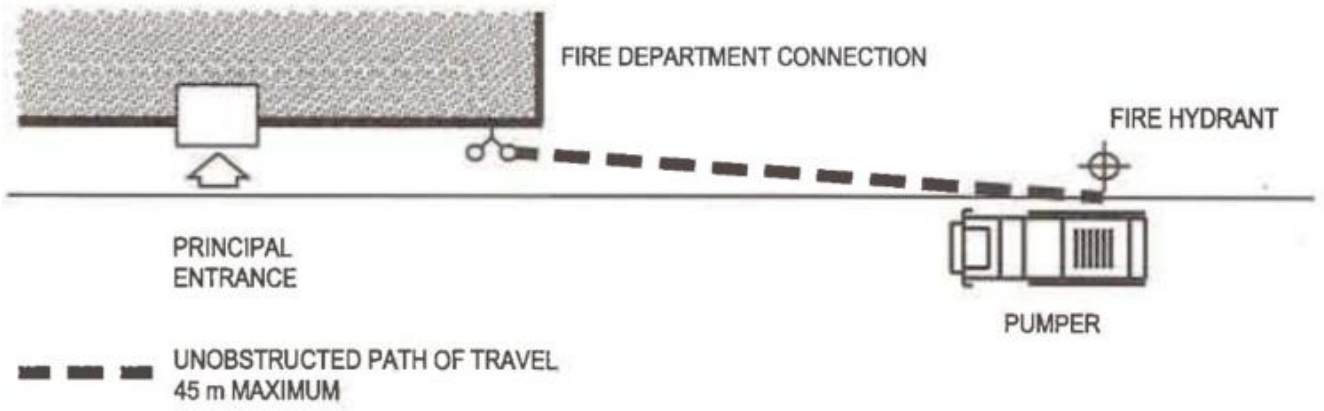
(c) the unobstructed path of travel for the firefighter from the vehicle to the building is not more than 45 m.

KITCHENER

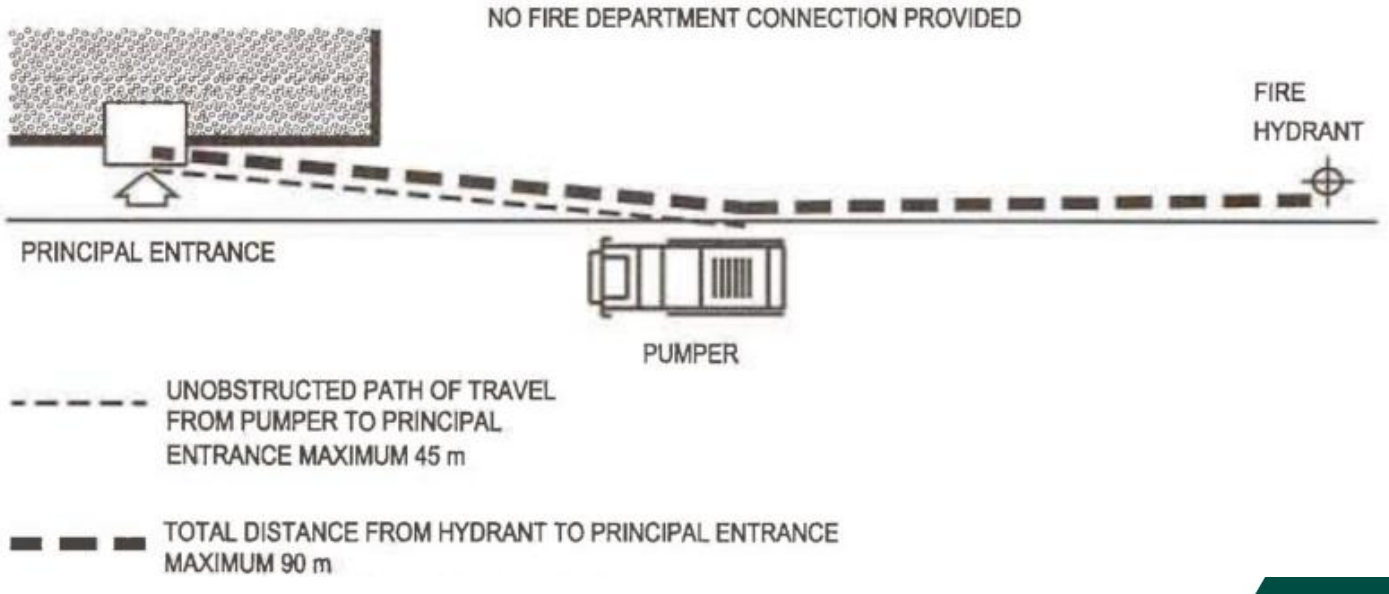
Provisions for Firefighting

Location of Access Routes – 3.2.5.5.(2)

3.2.5.5.(2)(a);



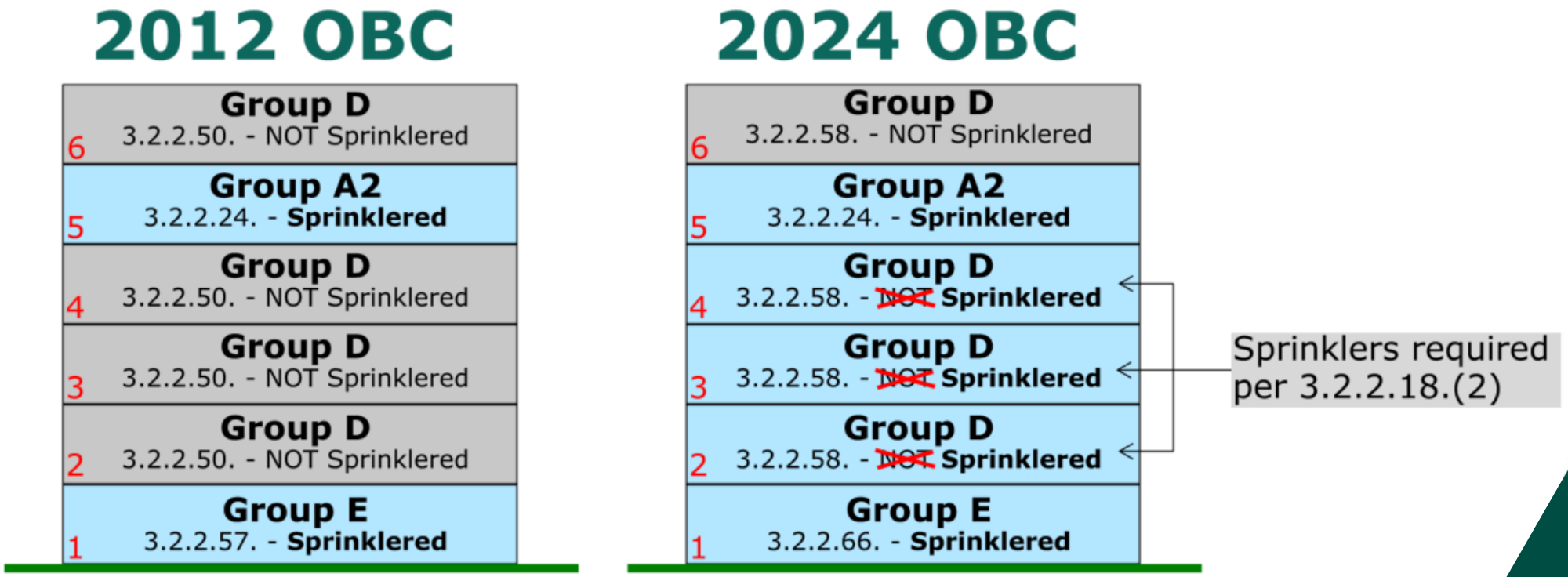
3.2.5.5.(2)(b);



Sprinkler Systems

Automatic Sprinkler System Required – 3.2.2.18.

(2) If a storey in a building or a floor area is required to have an automatic sprinkler system installed throughout in accordance with one or more of Articles 3.2.2.20. to 3.2.2.92. or Section 3.3., the automatic sprinkler system **shall also be installed throughout all lower storeys** in the building notwithstanding permission in Articles 3.2.2.20. to 3.2.2.92. to construct one or more of those storeys without installing automatic sprinkler protection. (See Note A-3.2.2.18.(2))



Standpipe Systems
General

Standpipe provisions relocated form Subsection 3.2.9. to Articles 3.2.5.8. – 3.2.5.11.

Numerous prescriptive requirements have been removed from the OBC, and now default to the performance Standard NFPA 14 “Standard for the Installation of Standpipe and Hose Systems”

Some requirements removed all together;

e.g.: requirement for two sources of water supply for buildings 84 m or more high.

Standpipe Systems

Where Required – 3.2.5.8.

Table 3.2.5.8. Building Limits without Standpipe Systems

- 1 Storey Group F2 area limits reduced from 2000 m² to 1500 m².

Some previous standpipe exemptions have been removed;

- where the lowest storey in a buildings is a service room not more than 50 m²,
- roof top enclosures not more than 50 m².

Standpipe Systems

Standpipe System Design – 3.2.5.9.

(4) The residual water pressure at the design flow rate at the topmost hose connection of a standpipe system that is required to be installed in a *building* is permitted to be less than 690 kPa provided

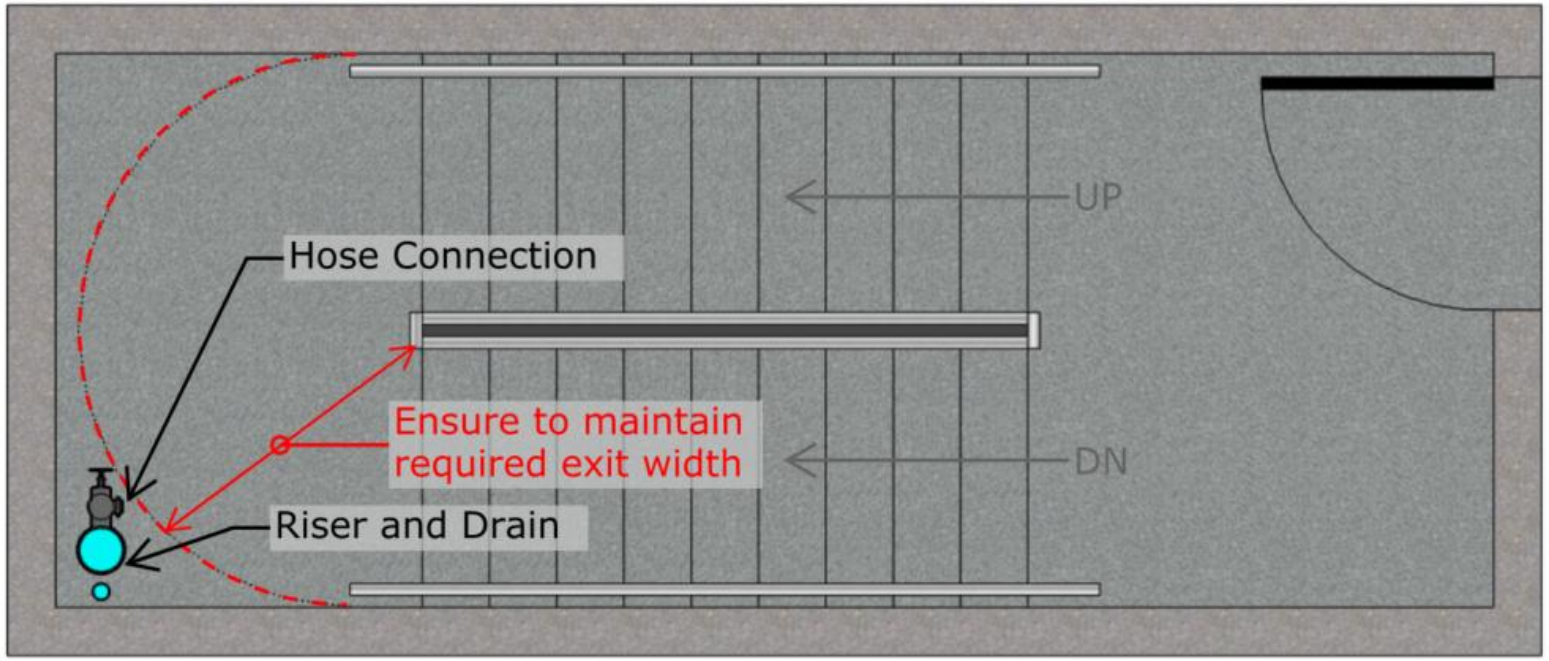
(a) the *building* is *sprinklered* throughout,

(b) the water supply at the base of the sprinkler riser is capable of meeting, without a fire pump, the design flow rate and pressure demand of the sprinkler system, including the inside and outside hose allowance, and

(c) fire protection equipment is available to deliver, by means of the fire department connection, the full demand flow rate at a residual water pressure of 690 kPa at the topmost hose connection of the standpipe system.
(See Note A-3.2.5.9.(4)(c))

Standpipe Systems
Hose Connections – 3.2.5.10.(1)

(1) Hose connections **shall** be located in exits, in accordance with NFPA 14, “Standard for the Installation of Standpipe and Hose Systems.”



Kitchener requires hose connections to be located at the intermediate landings (where applicable)

Ensure to maintain minimum required exit widths

Standpipe Systems

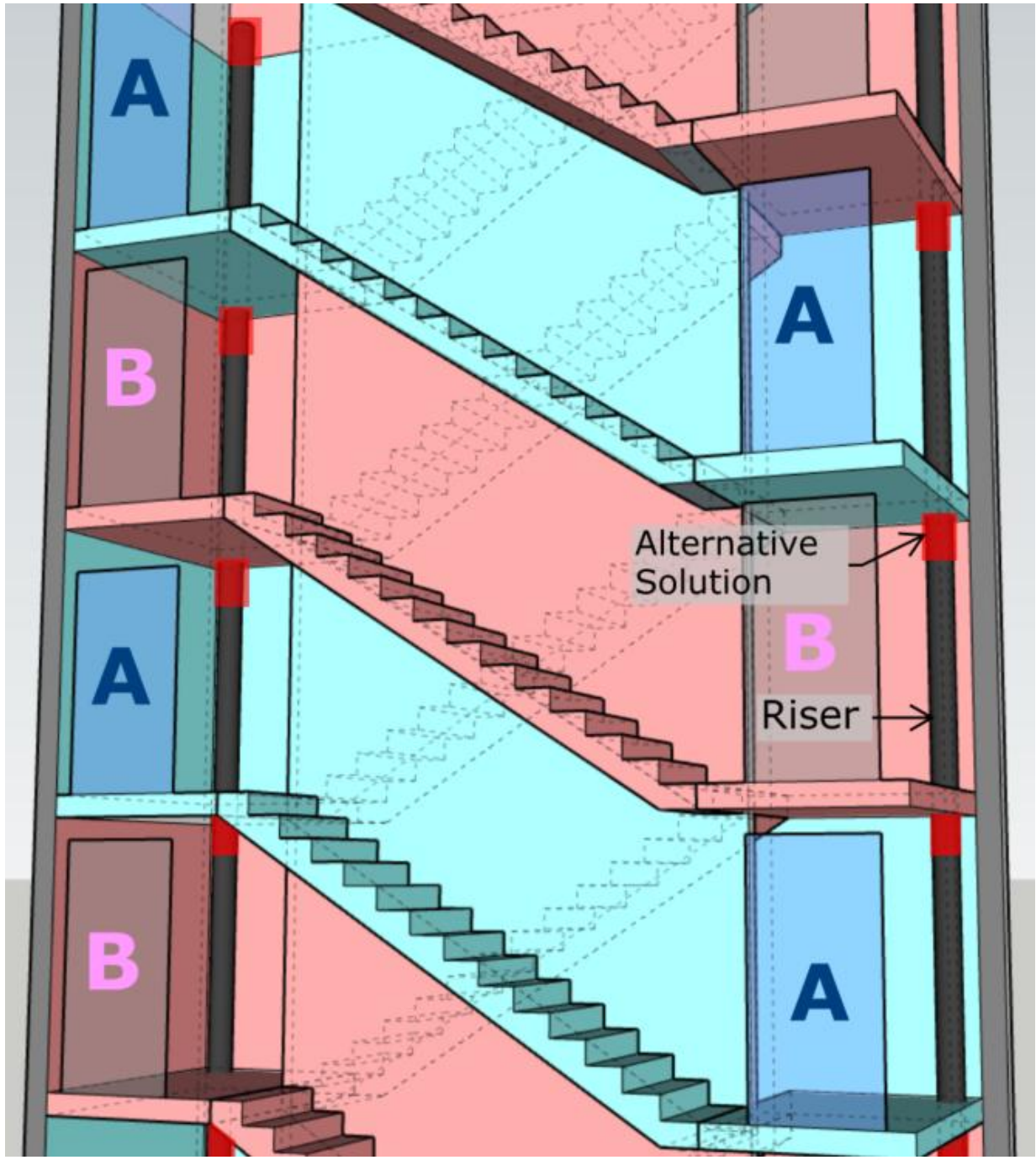
Integrity of Exits – 3.4.4.4.

Note: Where a riser penetrates scissor stairs an Alternative Solution is required due to integrity of exits;

3.4.4.4. Integrity of Exits

(2) Exits within scissors stairs and other contiguous exit stairways shall be separated from each other by a smoke-tight fire separation having a fire-resistance rating not less than that required for the floor assembly through which they pass.

(3) Fire separations separating contiguous stairs described in Sentence (2) shall not be pierced by doorways, ductwork, piping or any other openings that affect the continuity of the separation.



Standpipe Systems

Hose Connections – 3.2.5.10.

(2) Hose connections are not required within a floor area.

(3) Hose connections shall be provided with sufficient clearance to permit the use of a standard fire department hose key.

- Kitchener Fire Crews require minimum 6” in two directions (side & bottom or top)

Standpipe Systems

Hose Connections – 3.2.5.10.

(4) Except as permitted by Sentence (5), 64 mm diam hose connections shall be installed in a standpipe system.

(5) Hose connections for 64 mm diam hose are not required in a building that is not more than 25 m high, measured between grade and the ceiling level of the top storey and in which an automatic sprinkler system is not installed.

Standpipe Systems

Hose Connection Locations – NFPA 14

The 2012 OBC prescribed standpipe reach (30 m + 3 m hose stream) has been removed from the 2024 OBC.

2024 OBC requirements default to NFPA 14 (7.3.2.2.);

- Unsprinklered = 45.7 m (150 ft)
- Sprinklered = 61 m (200 ft)

Additional hose connections to be provided where exceeded

Hose connections are also required at horizontal exits (exceptions listed)

Standpipe Systems

Hose Stations – 3.2.5.11.

(1) Hose stations for 38 mm diam hose shall be installed for a standpipe system in a **building** that is **not sprinklered throughout**.

(2) Hose stations for a 38 mm diam hose shall be installed for a standpipe system within every **floor area** that is **not sprinklered throughout**. (See Note A-3.2.5.11.(2))

Standpipe Systems

Hose Stations – 3.2.5.11.

Hose station location and requirements similar to 2012 OBC

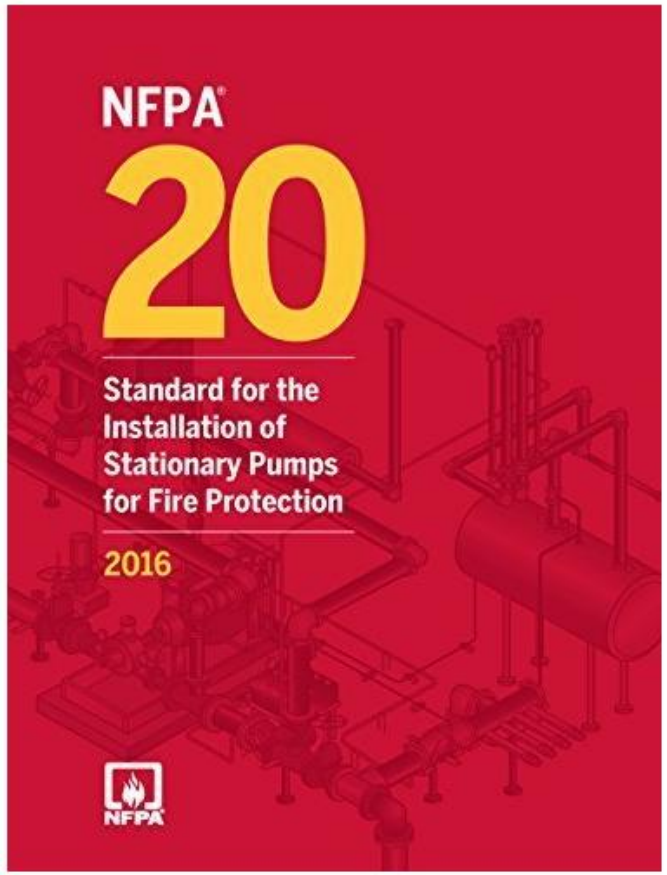
- Within 5 m of an exit (including horizontal exits) and additional locations to provide coverage
- Door shall not obstruct egress

Additional provisions also added for distilleries and grain handling and storage facilities.

Fire Pumps
3.2.5.18.

This article was updated to remove the requirement for a fire pump having a rated net head pressure greater than 280 kPa to be installed in accordance with the requirements of NFPA 20.

Now all fire pumps must be installed in accordance with NFPA 20.



Mezzanines and Openings Through Floor Assemblies

Nicole Jutzi

Municipal Building Official III

Mezzanines and Openings Through Floor Assemblies

Div B. 3.2.8.1. – Application

- Sentence (3) removed reference prohibiting Group B3 occupancies with floor areas containing sleeping rooms from being part of an interconnected floor space.
- Sentence (4) and (5) restricting interconnected floor spaces in elementary or secondary schools have been removed.

Div B. 3.2.8.2. – Exceptions to Special Protection

- Sentence (1) Mezzanines larger than 500 m² are NOT exempt from vertical fire separation or 3.2.8.3. to 3.2.8.8. compliance for Group A, C, D, E or F occupancies regardless of compliance with 3.2.1.1.

KITCHENER

Part 9- Mezzanines

Div B. 9.10.4.1. – Mezzanines Not Considered as Storeys

- Wording changes tweaked to better align with Part 3
    - Under the previous Part 9 wording the 40% mezzanines where a common source of confusion as it said 40% of the area of the room or the storey in which they are located
    - Now it is more clear on the intent and says 40% of the open area of the room in which it is located.
- Also added some new sentences
    - (3) allows for portion of a 40% mezzanine to be enclosed previously was permitted under Part 3, but not mentioned under Part 9
    - (4) Occupant Load of mezzanine shall be added to the floor area of the storey on which they are located. This was previously not mentioned (and is still not mentioned in Part 3) but was always the intent
    - (5) Platforms and catwalk exemption now added to Part 9

Interconnected Floor Spaces

Interconnected Floor Spaces

Div B. 3.2.8.2. – Exceptions to Special Protection

(5) Except as permitted by Sentence (6), openings for escalators and inclined moving walks need not conform to the requirements in Articles 3.2.8.3. to 3.2.8.8. provided

(a) the opening for each escalator or walk does not exceed 10 m 2,

(b) the building is sprinklered throughout,

(c) closely spaced sprinklers and associated draft stops are installed around the openings in conformance with NFPA 13, “Standard for the Installation of Sprinkler Systems,” and

(d) the interconnected floor space contains only Group A, Division 1, 2 or 3, Group D or Group E occupancies. (See Note A-3.2.8.2.(6)(c))

Interconnected Floor Spaces

Div B. 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 3.2.8.8. provided

(a) 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, and (See Note A-3.2.8.2.(6)(b))

(c) it contains only Group A, Division 1, 2 or 3, Group D, Group E, or Group F, Division 2 or 3 major occupancies. (See Note A-3.2.8.2.(6)(c))

Interconnected Floor Spaces

- Removed cylinder vent size requirements, previously titled ‘Configuration’

Div B. 3.2.8.3. – Sprinklers

- Sprinklers relocated from 3.2.8.7. Now a building with an interconnected floor space is required to be sprinklered throughout.

Div B. 3.2.8.4. – Vestibules

- Article 3.2.8.4. was renamed ‘Vestibules’ and the requirements for Exiting have been relocated to 3.4.3.2.

Interconnected Floor Spaces

Div B. 3.2.8.5. – Protected Floor Space

- *Protected floor space means that part of a floor area protected from the effects of fire and used as part of a means of egress from an interconnected floor space.*
- Specified requirements for new term “protected floor space”

(1) A protected floor space used to satisfy the requirements of Clause 3.4.3.2.(6)(b) shall

(a) be separated from the interconnected floor space by a fire separation having a fire-resistance rating not less than that required for the floor assembly of the storey in which it is located,

(b) have all openings in the vertical fire separation between a protected floor space and the adjacent interconnected floor space protected by vestibules conforming to Sentence 3.2.8.4.(1), and

(c) be designed so that it is not necessary to enter the interconnected floor space to reach an exit.

Interconnected Floor Spaces

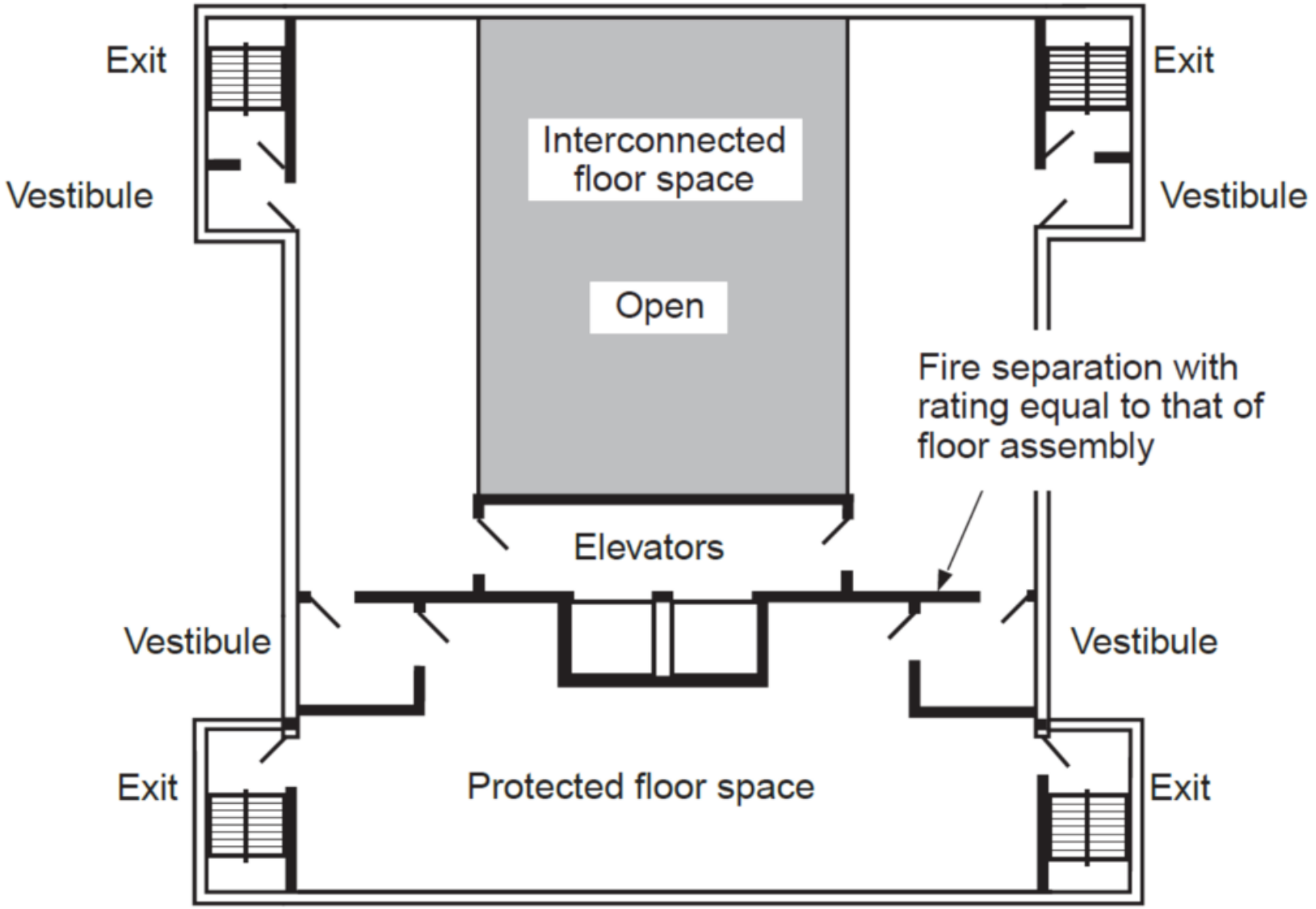


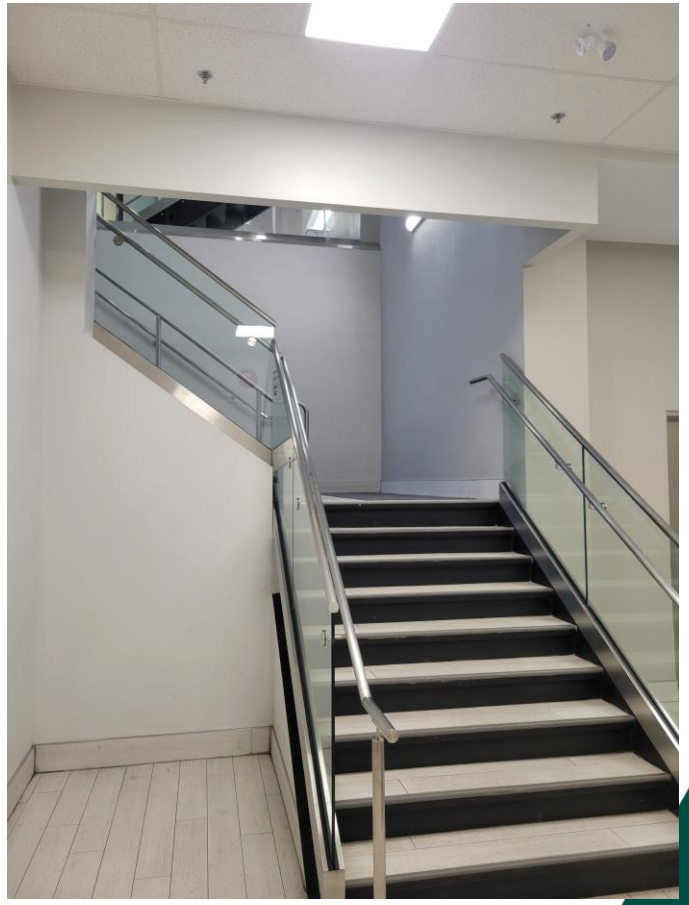
Image Courtesy of NRC

Interconnected Floor Spaces

Div B. 3.2.8.6. – Draft Stops

- New article with provisions for draft stops. This is different from the NFPA 13 2013 8.15.4. requirements for 18” draft stops.

  (1) A draft stop shall be provided at each floor level within an interconnected floor space, immediately adjacent to and surrounding the opening, and shall be not less than 500 mm deep measured from ceiling level down to the underside of the draft stop.



Interconnected Floor Spaces

Div B. 3.2.8.7. – Mechanical Exhaust System

- Modified to 4 air changes per hour instead of the previous 2 options from OBC 2012 Sentence 3.2.8.9.(6).

  (1) A mechanical exhaust system shall be provided to remove air from an interconnected floor space at a rate of *4 air changes per hour*. (See Note A-3.2.8.7.(1))

  (2) The mechanical exhaust system required by Sentence (1) shall be *actuated by a switch* located on the storey containing the entrance for firefighter access referred to in *Articles 3.2.5.4. and 3.2.5.5. near* the annunciator for the fire alarm system.

Interconnected Floor Spaces

Div B. 3.2.8.8. – Combustible Content Limits

- New article.

  (1) An interconnected floor space shall be designed so that the combustible contents, excluding interior finishes, in those parts of a floor area in which the ceiling is more than 8 m above the floor, are limited to not more than 16 g of combustible material for each cubic metre of volume of the interconnected floor space.

Interconnected Floor Spaces

- OBC 2012 – 3.2.8.4. Exits Sentences (1)(2)(4)(5)(6)(7)(8) modified and moved to 3.4.3.2.
- OBC 2012 – 3.2.8.6. for Group B Sleeping rooms revoked
- OBC 2012 – 3.2.8.7. Sprinklers Sentence (2) revoked.
- OBC 2012 – 3.2.8.8. Fire Alarm and Detection System Sentence (1) revoked.

  See 3.2.4.1.(1): …a fire alarm system shall be installed in buildings in which an automatic sprinkler system is installed.
- OBC 2012 – 3.2.8.9. Smoke Control Sentences (1) to (5) revoked.
- OBC 2012 – 3.2.8.10. Emergency Power Supply modified and moved to 3.2.7.9.(1)(e).
- OBC 2012 – 3.2.8.11. Testing revoked.

Exits

Div B. 3.4.3.2. – Exit Width

- Sentence (6) is being relocated from 3.2.8.4.(6) to (8) and revised.

  (6) The required exit width for exit stairs that serve interconnected floor space designed in accordance with Articles 3.2.8.3. to 3.2.8.8. shall be cumulative, unless

  (a) the stairs provide *not less than 0.3 m2 of area of treads and landings for each occupant* of the interconnected floor space, **or** (See Note A-3.4.3.2.(6)(a))

  (b) *protected floor spaces* conforming to Article 3.2.8.5. are provided at each floor level and the protected floor space on a floor level has not less *than 0.5 m2* of space for each occupant of that floor level of the interconnected floorspace. (See Note A-3.4.3.2.(6))

Safety Within Floor Areas

Safety Within Floor Areas

Div B. 3.3.1.5. – Egress Doorways

- Limits for one egress doorway from a room or suite are more restrictive in unsprinklered buildings.

2024:

Table 3.3.1.5.-A
Egress in Floor Area Not Sprinklered Throughout
Forming Part of Sentence 3.3.1.5.(1)

Occupancy of Room or *Suite*	Max Area of Room or *Suite*, m²	Max Distance to Egress Doorway, m
Group A	150	15
Group C	100(1)	15(1)
Group D	200	25
Group E	150	15
Group F, Division 2	150	10
Group F, Division 3	200	15

Notes to Table 3.3.1.5.-A:

(1) See Article 3.3.4.4. for *dwelling units*.

2012:

Table 3.3.1.5.A.
Egress in Floor Area, not Sprinklered
Forming Part of Sentences 3.3.1.5.(1) and (3)

Occupancy of Room or *Suite*	Max Area of Room or *Suite*, m²	Max Distance to Egress Doorway, m
Group A	150	15
Group C	150(1)	25(1)
Group D	200	25
Group E	200	25
Group F, Division 2	200	25
Group F, Division 3	200	25

Safety Within Floor Areas

Div B. 3.3.1.5. – Egress Doorways

(3) Every room containing an assembly occupancy serving a hotel, and located in the building containing the hotel, shall be provided with no fewer than

(a) three separate egress doorways from the room where the occupant load is more than 600 persons, and

(b) four separate egress doorways from the room where the occupant load is more than 1 000 persons

Div B. 3.3.1.13. – Doors and Door Hardware

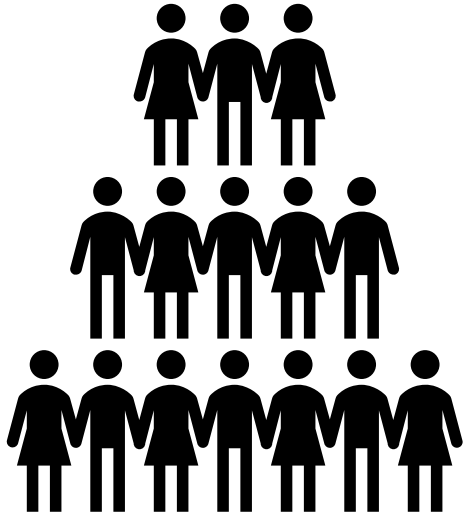
- Clauses (1)(a) and (b) Changed clear opening from 800mm to 850mm
- Sentence (5) Changed from not more than 1200mm above the finished floor to not more than 900mm and 1100 above the finished floor for door release hardware.

This change was also made is 9.9.6.7.

Safety Within Dwelling Units & Part 9 ICI

Div B. 3.1.17.1 and 9.9.1.3. – Occupant Load

- Both 3.1.17.1.(1) and 9.9.1.3.(1) have amended wording removing the wording relating to buildings without floor area.



Part 9 ICI

Div B. 9.10.1.3. – Items Under Part 3 Jurisdiction

(11) Where fuel-fired appliances are installed on a roof, such appliances shall be installed in conformance with Article 3.6.1.5.

- This sentence has been relocated from 9.10.1.4.(2) which used to reference to Part 6. However now it references to the new Part 3 Article 3.6.1.5. which gives specific clearance requirements which where not previously specified in Part 6
- One point of noted difference between Part 3 and Part 9, is it appears Part 9 only regulates this if installed on a roof, where Part 3 regulates if on a roof or another location outside the building.

Safety Within Floor Areas

Div B. 3.3.1.14. – Ramps and Stairways

- Sentence (2) has been reworded and now reads:

  *Ramp*s and stairways that serve *service rooms*, *service spaces* or *industrial occupancies* need not comply with Sentence (1), provided

  (a) they are intended only for occasional use for servicing equipment and machinery, and

  (b) they do not serve as *exits*.

Safety Within Floor Areas

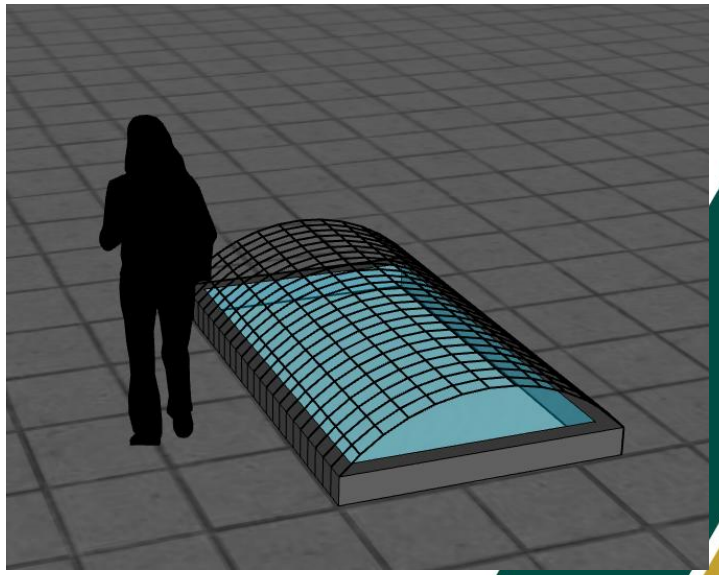
Div B. 3.3.1.18. – Guards

- Sentence (1) lists where guards are required to be provided and Clause (d) has been added to include around skylights. It reads:

  (d) except as provided in Sentence (6), around each skylight located in a portion of a roof that is intended to be occupied.

- New Sentence (6) has been added that reads:

  (6) Clause (1)(d) does not apply to a skylight that
  (a) is designed to support the loads specified in Part 4, or
  (b) is provided with a skylight screen that
  (i) has openings not more than 100 mm wide, and
  (ii) can resist a concentrated load of 1.3 kN applied perpendicular at any point on the screen, without the deflection from this loading resulting in the breakage of the skylight glazing.



Safety Within Floor Areas

New Article!

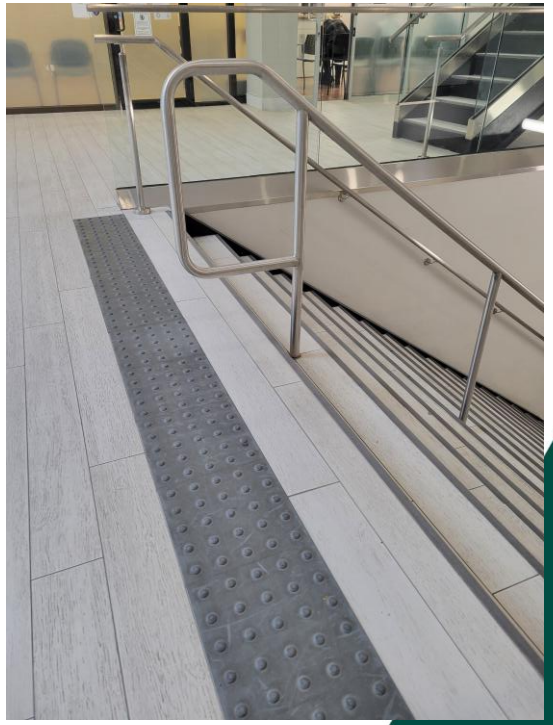
Div B. 3.3.1.19. – Tactile Walking Surface Indicators

(1) Except as provided in Sentence (2), tactile attention indicators conforming to Article 3.8.3.18., shall be installed

(a) at the top of flights of stairs that are unenclosed, and

(b) at drop-off edges with a change in elevation greater than 300 mm that are unprotected by a guard. (See Note A-3.3.1.19.(1))

(2) Sentence (1) does not apply to service spaces, bleachers addressed in Subsection 3.3.2., stages, loading docks, industrial occupancies, within dwelling units, and to stairs and drop-off edges serving not more than two dwelling units.



Safety Within Floor Areas

Div B. 3.3.1.20. – Transparent Doors and Panels

- Sentence (8) for windows in a public area that extend to less than 1000mm above the floor (changed from 1070mm) and is located above the second storey in a building of residential occupancy, shall be protected by a barrier or railing.

Div B. 3.3.2.12. – Bleachers

- Sentence (5) added *shall be provided with intermediate construction* so that there is no opening that would permit the passage of a sphere of more than 100 mm in diameter.

Safety Within Floor Areas

New Article!

Div B. 3.3.2.17. – Safety Glazing

(1) Except as permitted in Sentence (3), glazing in all fixed and operable panels of doors shall conform to Class A of CAN/CGSB-12.1, “Safety Glazing.”

(2) Except as permitted in Sentence (4), glazing in all fixed and operable panels of windows shall conform to Class A of CAN/CGSB-12.1, “Safety Glazing.”

(3) Glazing in individual fixed or operable panels of a door need not comply with Sentence (1), where

(a) the bottom exposed edge of the glazing is located more than 1 525 mm above the walking surface on each side of the door, or

(b) the glazed opening in the door does not permit the passage of a sphere whose diameter is more than 75 mm.

(4) Glazing in individual fixed or operable panels of a window need not comply with Sentence (2), where

(a) the bottom exposed edge of the glazing is located more than 1 525 mm above the walking surface on each side of the window, or

(b) the glazing is located more than 915 mm away from the walking surface on each side of the window measured perpendicular to the plane of the glazing.

Safety Within Floor Areas

Div B. 3.3.4.2. – Fire Separations in Residential Occupancy

- Clause (3)(b) added 1 hour if the building is not sprinklered throughout option and removed 6 storey limit options.

Div B. 3.3.4.8. – Protection of Openable Windows

- Clause (1)(b) added wording to clarify that the mechanism can only be released with the use of tools or special knowledge and that the clear unobstructed opening is not more than100 mm measured either vertically or horizontally.

Part 9 ICI- Stairs

Stairs – General comments

- Some provisions have been reworded to clarify how or where to take measurements

Div B. 9.8.4.8. – Tread Nosings

- New Article!
- A rounded or beveled stair nosing's (6 mm - 14 mm) are now a requirement
- See Notes A-9.8.4.8. and A-9.8.4.

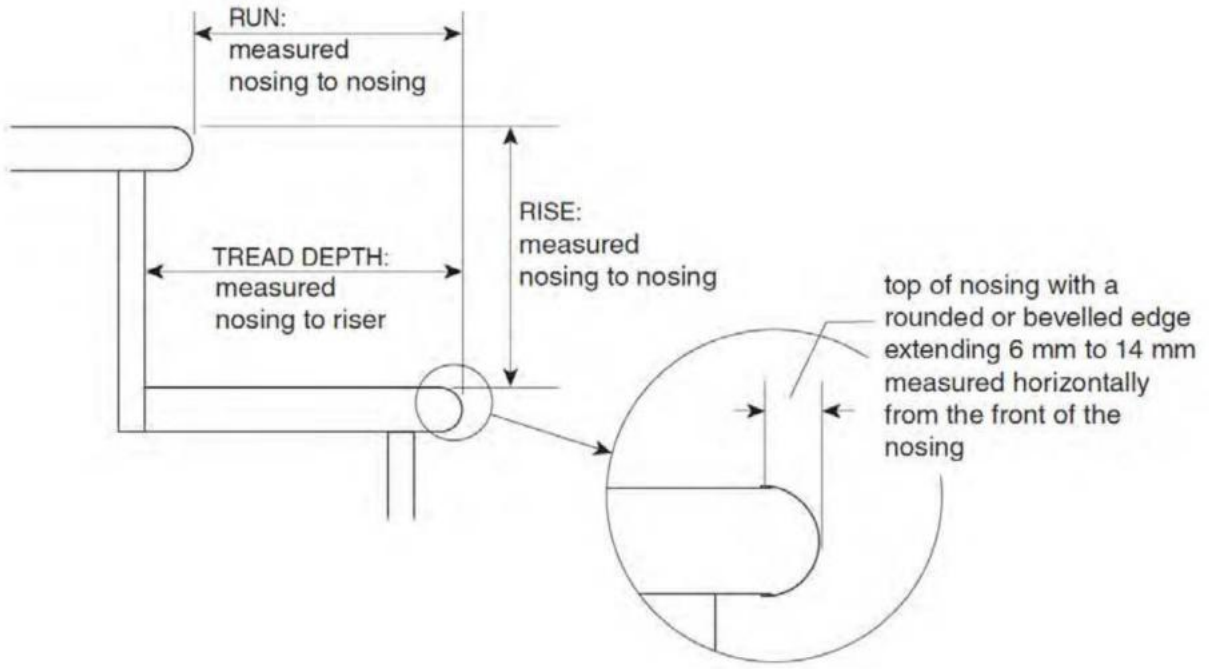


Figure A-9.8.4.-B
Elements of Steps and their Measurement

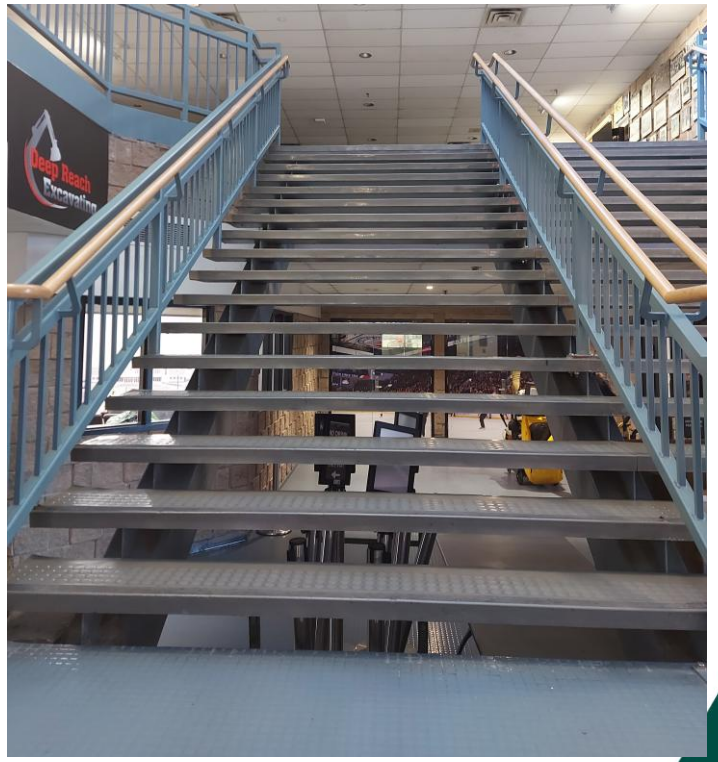
Part 9 ICI - Stairs

Open Risers – 9.8.4.9.

Open risers are **not** permitted.

Below are the exceptions to the rule:

- Interior and exterior stairs that serve a single dwelling unit or a house with a secondary suite
- Fire escape stairs
- Stairs that are mainly used for maintenance
- Stairs that serve service rooms
- Stairs that serve industrial occupancies other than storage garages



Stairs

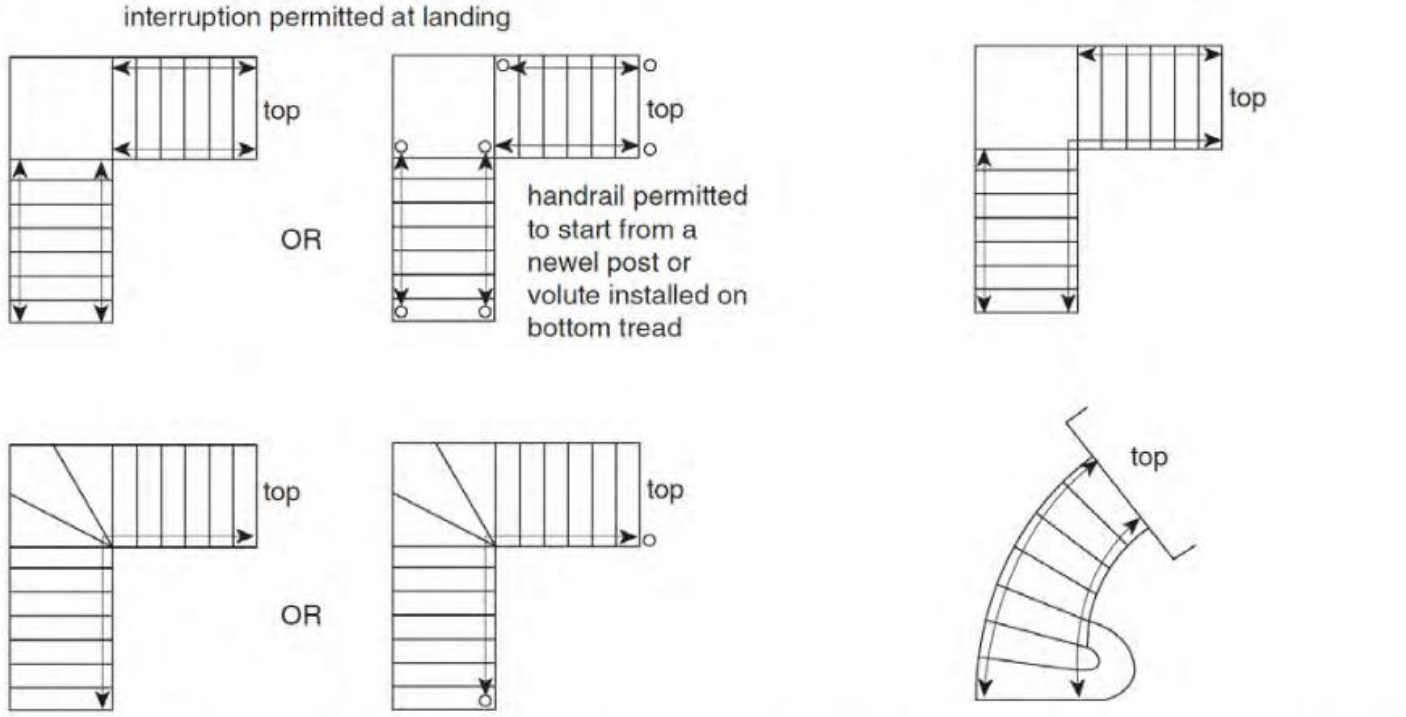
Continuity of handrail – 9.8.7.2.

When 2 or more handrails are required, only one of the handrails needs to be continuous through the length. All required handrails are to be continuously graspable throughout the length of the ramp or stair flight from bottom riser to top riser.

A stair or ramp serving a single dwelling unit or house with secondary suite is permitted to start from a newel post or volute on the bottom tread.

Stairs

Continuity of handrail – 9.8.7.2.



Stairs serving a single dwelling unit or a house with a secondary suite (including their common spaces):

required handrails continuous throughout length of flight from bottom riser to top riser

Stairs not serving a single dwelling unit or a house with a secondary suite (including their common spaces):

at least one required handrail continuous throughout length of stair, including at landings except where interrupted by doorways

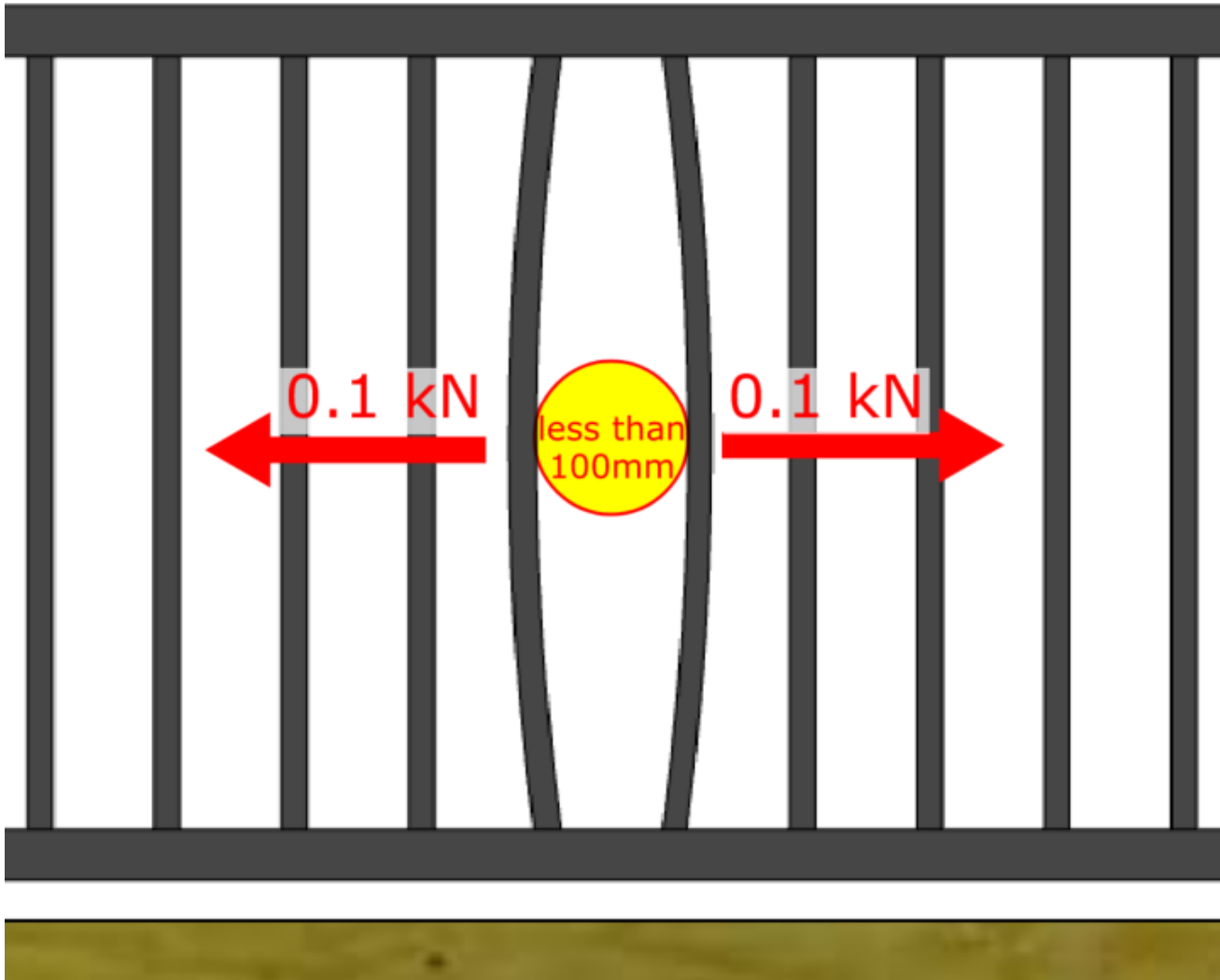
↔ minimum extent of handrail where handrail is required(1)

o newel post

Stairs

Loads on Guards – 9.8.8.2.

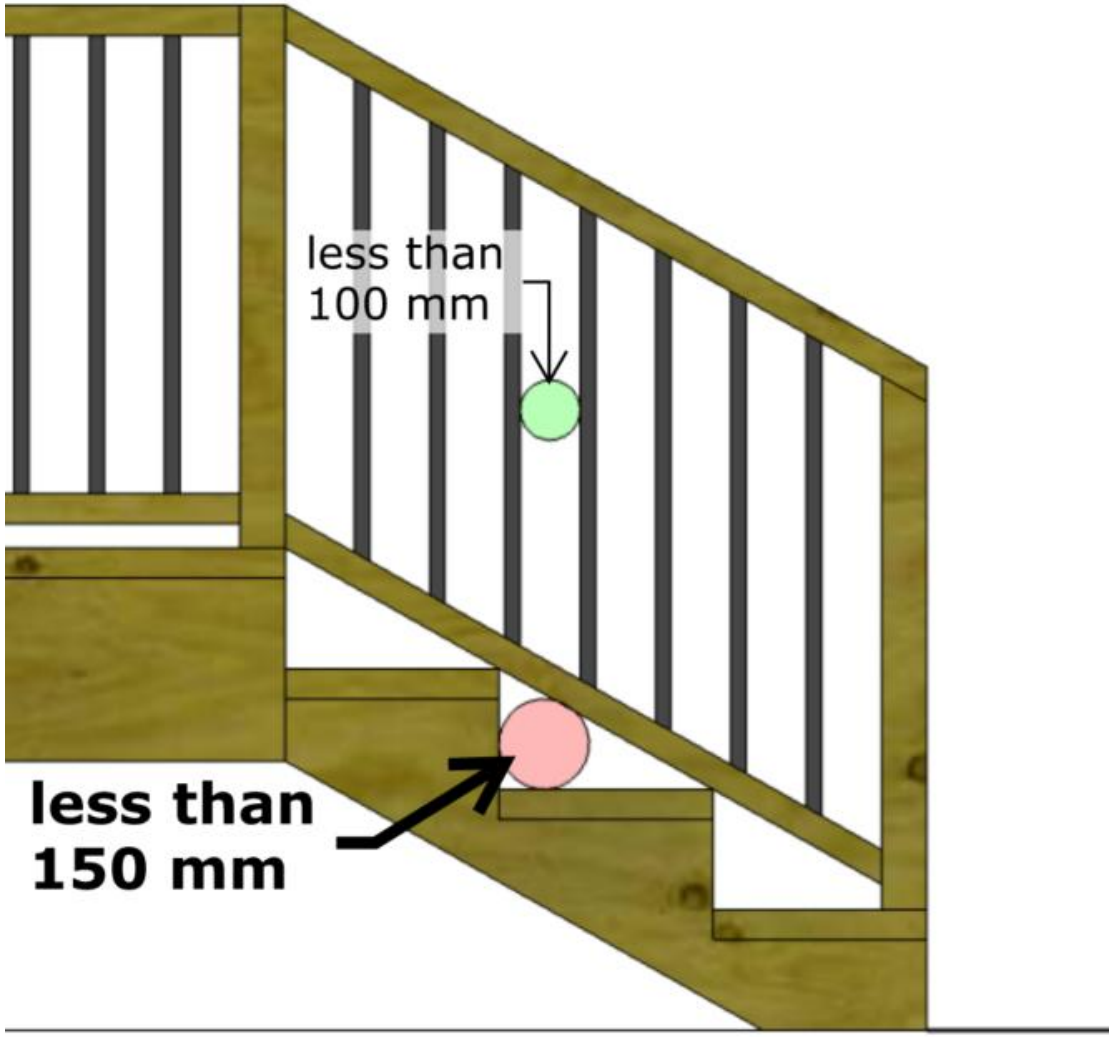
9.8.8.2.(2) The size of the opening between any two adjacent vertical elements within a guard shall not exceed the limits required by Sentence 9.8.8.5.(1) when each of these elements is subject to a specified live load of 0.1 kN (22.48 lbf) applied in opposite directions in the in-plane direction of the guard so as to produce the most critical effect



Stairs

Openings in Guards – 9.8.8.5.

9.8.8.5.(2) Except for guards that serve industrial occupancies, the triangular openings formed by stairs risers, stair treads and the bottom element of a required guard shall be of a size that prevents the passage of a 150 mm diameter sphere.



Matt Ruetz

MBO – Technical Specialist

Exit Requirements

Exit Requirements

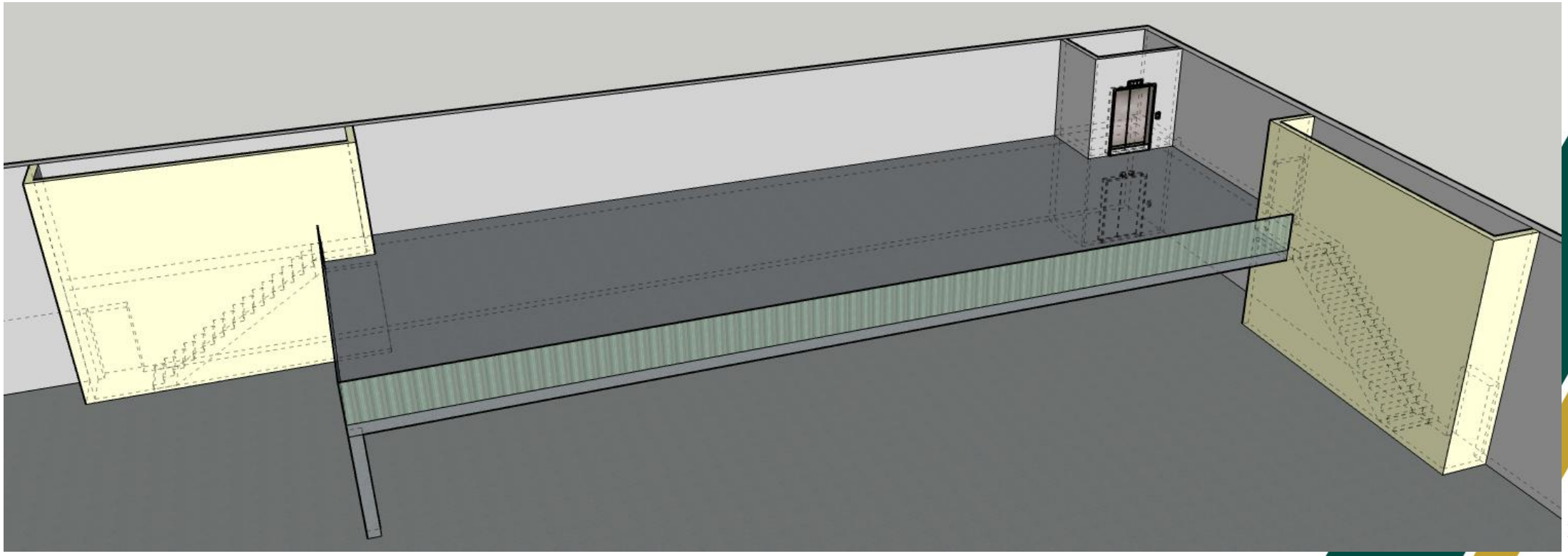
Means of Egress from Mezzanines – 3.4.2.2.(1)

Mezzanine egress provisions removed from Article 3.3.1.5. and now rolled into Article 3.4.2.2. Means of Egress from Mezzanines (Previously was called Mezzanine Exiting) and substantial changes made.

Exit Requirements

Means of Egress from Mezzanines – 3.4.2.2.(1)

(1) Except as permitted by Sentences (2) and (3), the space above a *mezzanine* shall be served by *means of egress* leading to *exits* accessible at the *mezzanine* level on the same basis as *floor areas*.



Exit Requirements

Means of Egress from Mezzanines – 3.4.2.2.(1)

(2) The *means of egress* from a *mezzanine* need not conform to Sentence (1), provided

(a) the *mezzanine* is not required to terminate at a vertical *fire separation*, as permitted in Sentence 3.2.8.2.(1),

(b) the occupant load of the *mezzanine* is not more than 60,

(c) the area of the *mezzanine* does not exceed the area limits stated in Table 3.4.2.2., **and**

(d) the distance limits stated in Table 3.4.2.2. measured along the path of travel are not exceeded from any point on the *mezzanine* to

(i) an egress door serving the space that the *mezzanine* overlooks, if the space is served by a single egress door, or

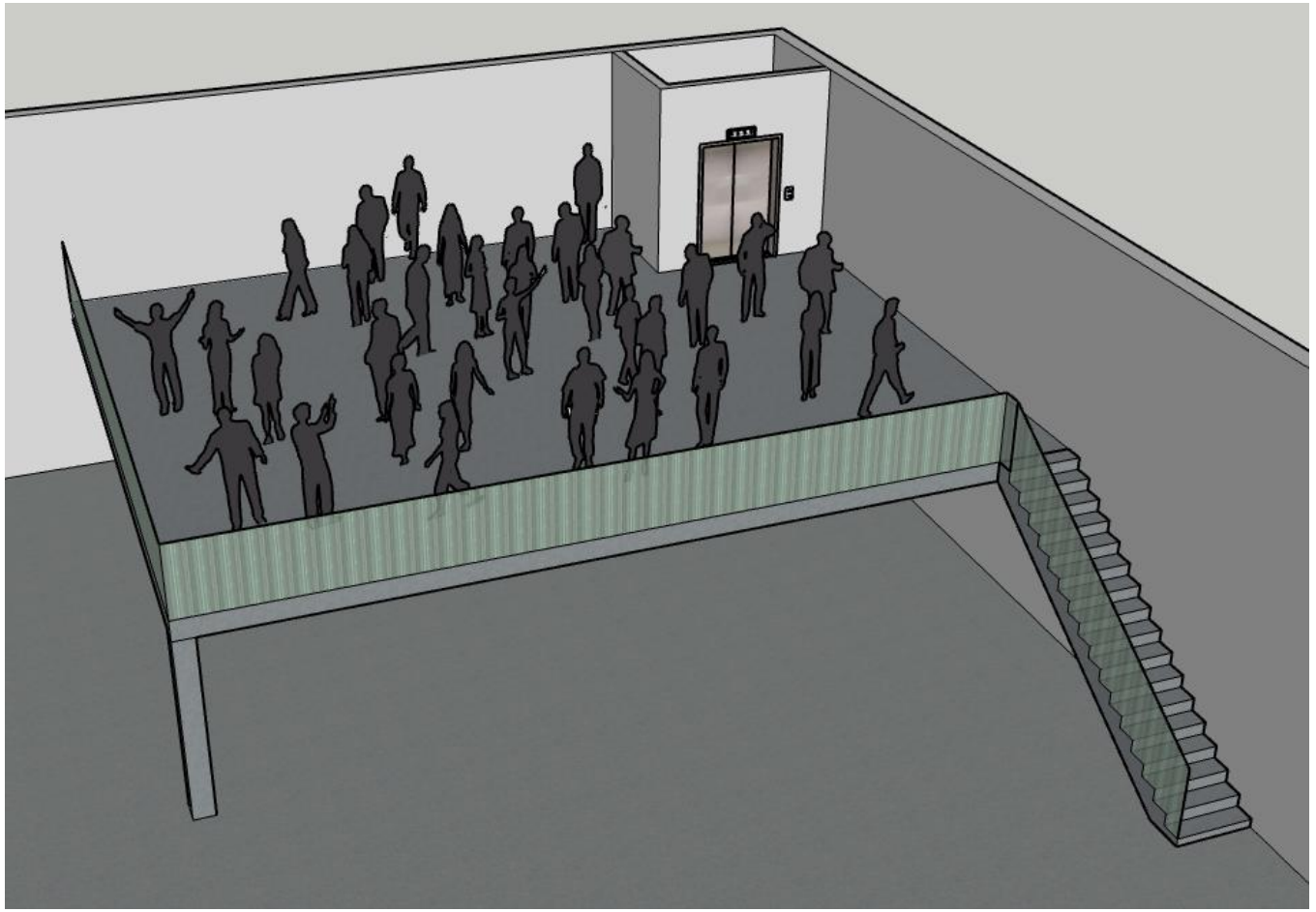
(ii) the egress stairway leading to an *access to exit* in the space below if that space is required to be served by 2 or more egress doorways in conformance with Sentence 3.3.1.5.(1).

KITCHENER

Exit Requirements

Means of Egress from Mezzanines – 3.4.2.2.(1)(b)

(b) the occupant load of the *mezzanine* is not more than 60,



Exit Requirements

Means of Egress from Mezzanines – 3.4.2.2.(1)(c)

(c) the area of the *mezzanine* does not exceed the **area limits** stated in Table 3.4.2.2.,

Table 3.4.2.2.

Criteria for Egress from Mezzanine Space

Forming Part of Sentence 3.4.2.2.(2)

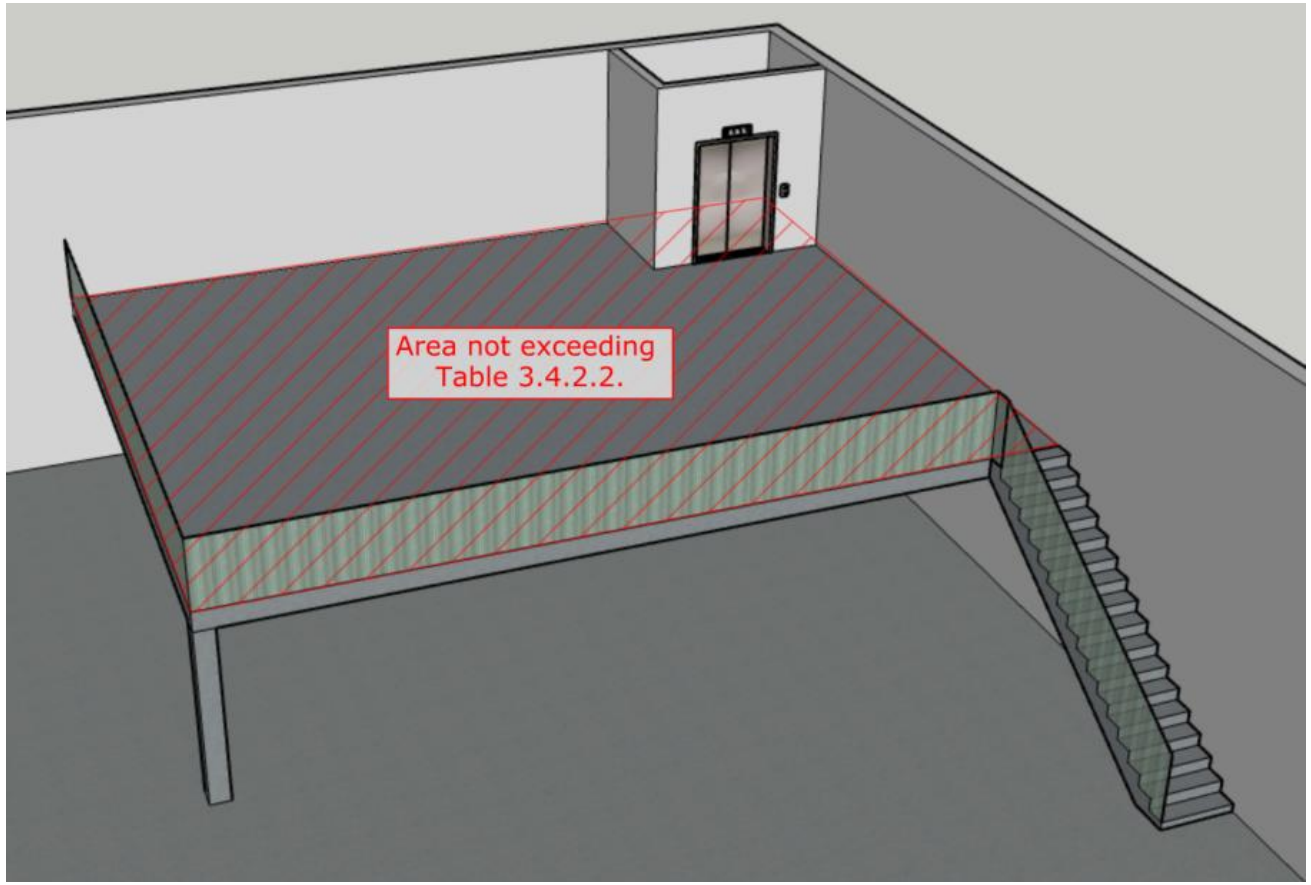
Occupancy of Space	Maximum Area, m^2	Distance Limits, m
Assembly occupancy	150	15
Residential Occupancy	100	15
Business and personal services occupancy	200	25
Mercantile occupancy	150	15
Medium-hazard industrial occupancy	150	10
Low-hazard industrial occupancy	200	15

KITCHENER

Exit Requirements

Means of Egress from Mezzanines – 3.4.2.2.(1)(c)

(c) the area of the *mezzanine* does not exceed the **area limits** stated in Table 3.4.2.2.,



Exit Requirements

Means of Egress from Mezzanines – 3.4.2.2.(1)

(d) the **distance limits** stated in Table 3.4.2.2. measured along the path of travel are not exceeded from any point on the *mezzanine* to…

Table 3.4.2.2.

Criteria for Egress from Mezzanine Space

Forming Part of Sentence 3.4.2.2.(2)

Occupancy of Space	Maximum Area, m²	Distance Limits, m
Assembly occupancy	150	15
Residential Occupancy	100	15
Business and personal services occupancy	200	25
Mercantile occupancy	150	15
Medium-hazard industrial occupancy	150	10
Low-hazard industrial occupancy	200	15

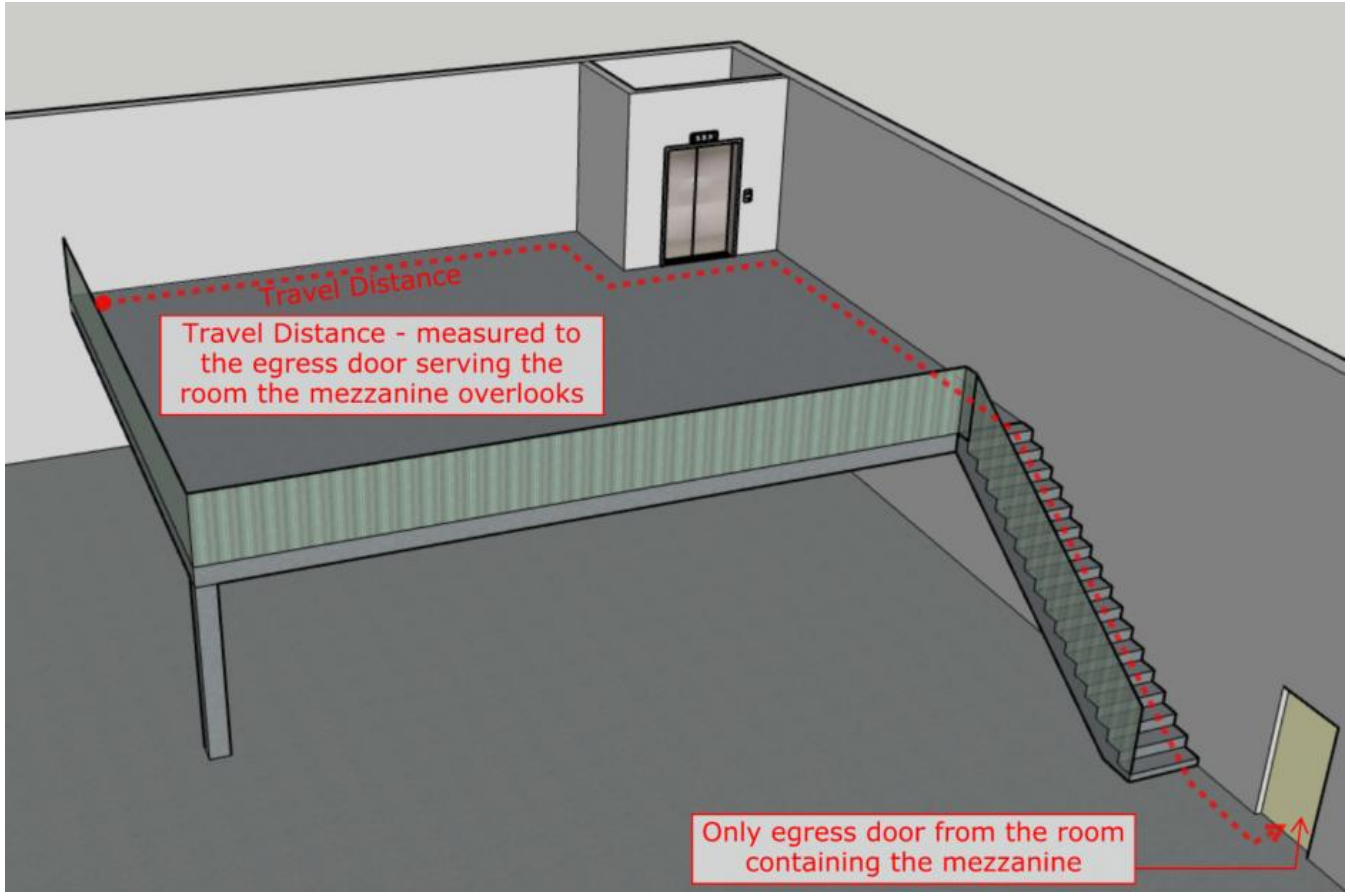
KITCHENER

Exit Requirements

Means of Egress from Mezzanines – 3.4.2.2.(1)(d)(i)

(d) the distance limits stated in Table 3.4.2.2. measured along the path of travel are not exceeded from any point on the *mezzanine* to

(i) an egress door serving the space that the *mezzanine* overlooks, if the space is served by a single egress door, or

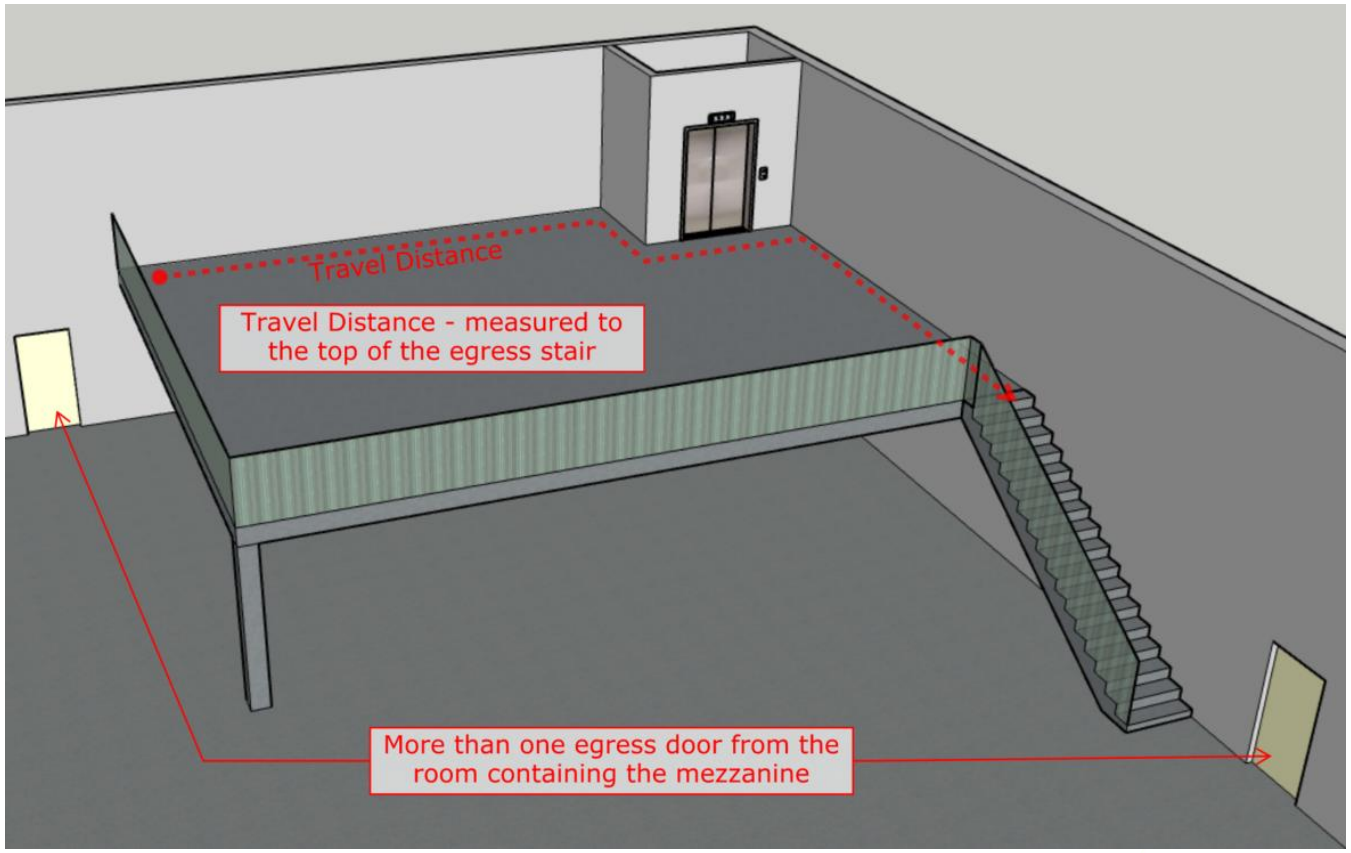


Exit Requirements

Means of Egress from Mezzanines – 3.4.2.2.(1)(d)(ii)

(d) the distance limits stated in Table 3.4.2.2. measured along the path of travel are not exceeded from any point on the *mezzanine* to

(ii) the egress stairway leading to an *access to exit* in the space below if that space is required to be served by 2 or more egress doorways in conformance with Sentence 3.3.1.5.(1).



Exit Requirements

Means of Egress from Mezzanines – 3.4.2.2.(1)(a)

(a) the *mezzanine* is **not required** to **terminate at a vertical *fire separation***, as permitted in Sentence 3.2.8.2.(1),

3.2.8.2.(1)

(a) serves a Group A, Division 1 major occupancy,

(b) serves a Group A, Division 3 major occupancy in a building not more than 2 storeys in building height, **or**

(c) serves a Group A, C, D, E or F major occupancy and

(i) is 500 m² or less in area, **and**

(ii) conforms to Sentence 3.2.1.1.(3) or (4).

40% / 10%

Exit Requirements

Means of Egress from Mezzanines – 3.4.2.2.(1)

(2) The *means of egress* from a *mezzanine* need not conform to Sentence (1), provided

(a) the *mezzanine* is not required to terminate at a vertical *fire separation*, as permitted in Sentence 3.2.8.2.(1),

(b) the occupant load of the *mezzanine* is not more than 60,

(c) the area of the *mezzanine* does not exceed the area limits stated in Table 3.4.2.2., **and**

(d) the distance limits stated in Table 3.4.2.2. measured along the path of travel are not exceeded from any point on the *mezzanine* to

(i) an egress door serving the space that the *mezzanine* overlooks, if the space is served by a single egress door, or

(ii) the egress stairway leading to an *access to exit* in the space below if that space is required to be served by 2 or more egress doorways in conformance with Sentence 3.3.1.5.(1).

KITCHENER

Exit Requirements

Means of Egress from Mezzanines – 3.4.2.2.(3)

(3) At least half of the required means of egress from a mezzanine shall comply with Sentence (1) if the mezzanine is not required to terminate at a fire separation as permitted by Sentence 3.2.8.2.(1).

i.e. if the mezzanine exceeds the;

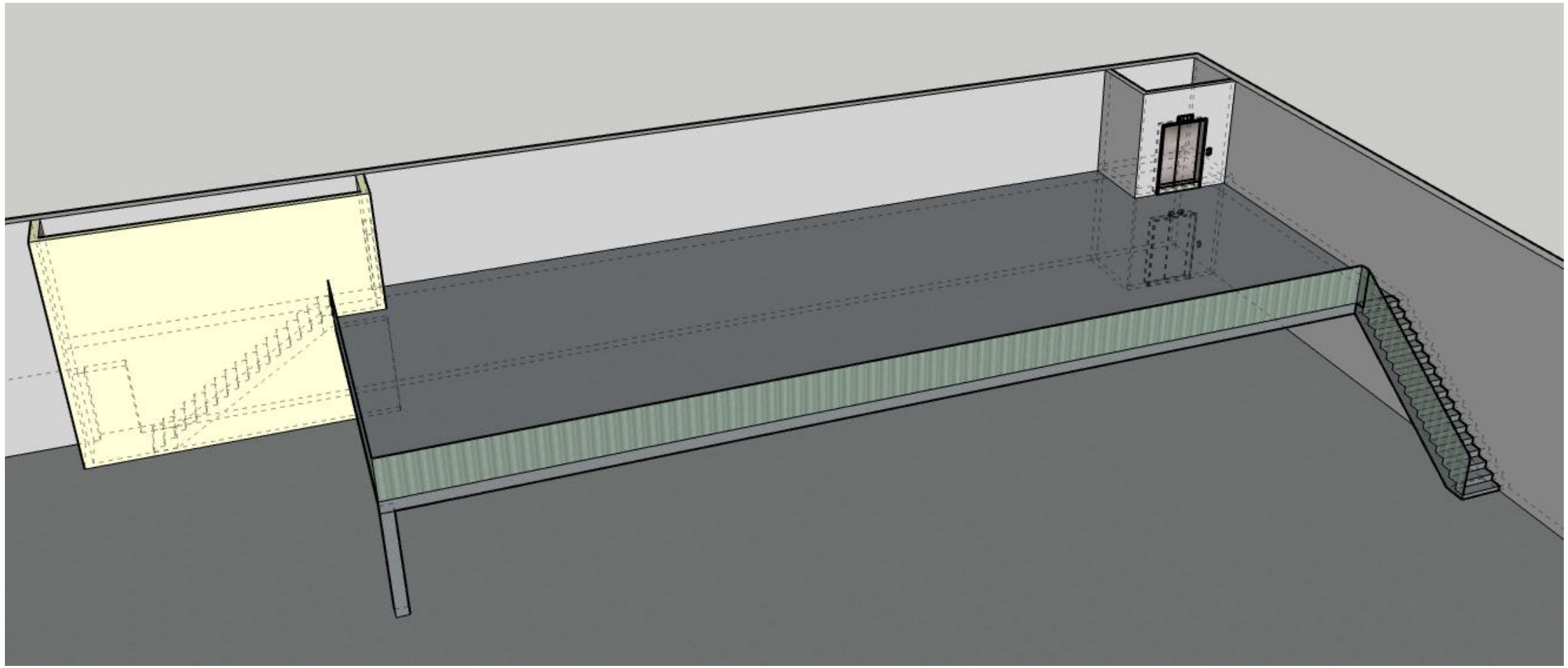
- area limit of Table 3.4.2.2.,
- travel distance limit of Table 3.4.2.2., **or**
- 60 person occupant load,

but the mezzanine meets Sentence 3.2.8.2.(1) then only half the required egress stairs are required to be exits

KITCHENER

Exit Requirements

Means of Egress from Mezzanines – 3.4.2.2.(3)



Exit Requirements

Exit Width – 3.4.3.2.

Minimum Widths of Exit Corridors, Passageways, Ramps, Stairs and Doorways moved to Table format with some changes

Table 3.4.3.2.-A
Minimum Widths of Exit Corridors, Passageways, Ramps, Stairs and Doorways in Group A, Group B, Division 1, and Groups C, D, E and F Occupancies
Forming Part of Sentence 3.4.3.2.(8)

Occupancy Classification	Exit Corridors and Passageways, mm	Ramps, mm	Stairs, mm	Doorways, mm
Group A, Group B, Division 1, Group C, Group D, Group E, Group F	1 100	1 100	900(1) 1 100(2)	850

Notes to Table 3.4.3.2.-A:
(1) Serving not more than 2 storeys above the lowest exit level or not more than 1 storey below the lowest exit level.
(2) Serving more than 2 storeys above the lowest exit level or more than 1 storey below the lowest exit level.

Exit Requirements

Exit Width – 3.4.3.2.

Table 3.4.3.2.-B
Minimum Widths of Exit Corridors, Passageways, Ramps, Stairs and Doorways in Group B, Division 2 and Division 3 Occupancies
Forming Part of Sentence 3.4.3.2.(8)

Occupancy Classification	Exit Corridors and Passageways, mm	Ramps, mm		Stairs, mm		Doorways, mm	
		Not serving patients' or residents' sleeping rooms(1)	Serving patients' or residents' sleeping rooms(1)	Not serving patients' or residents' sleeping rooms(1)	Serving patients' or residents' sleeping rooms(1)	Not serving patients' or residents' sleeping rooms(1)	Serving patients' or residents' sleeping rooms(1)
Group B, Division 2	1 100	1 100	1 650	900(2) 1 100(3)	1 650	850	1 050
Group B, Division 3	1 100	1 100	1 650	900(2) 1 100(3)	1 650	850	1 050

Notes to Table 3.4.3.2.-B:
(1) Minimum widths of ramps, stairs and doorways do not apply within individual suites of care occupancy.
(2) Serving not more than 2 storeys above the lowest exit level or not more than 1 storey below the lowest exit level.
(3) Serving more than 2 storeys above the lowest exit level or more than 1 storey below the lowest exit level.

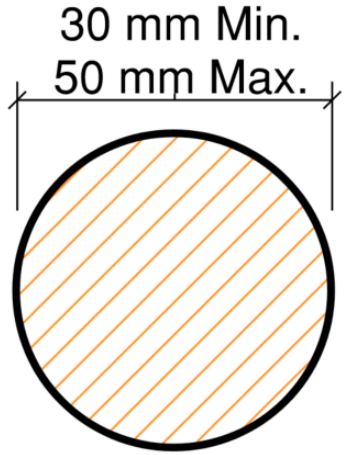
KITCHENER

Exit Requirements

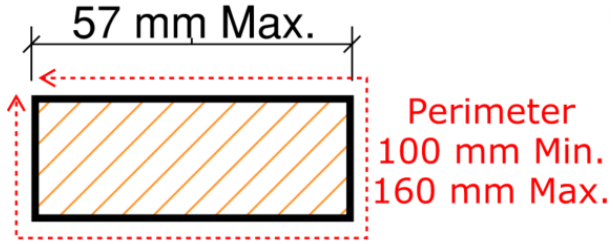
Handrail Dimensions – 3.4.6.5.

(5) Handrails shall be continuously graspable along their entire length, shall 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 50 mm, or



(b) any **non-circular** cross-section with a perimeter not less than 100 mm and not more than 160 mm and whose largest cross-sectional dimension is not more than 57 mm.



Exit Requirements

Ramp Slope – 3.4.6.7.

(1) Except as provided in Sentence (2) and as provided for aisles in Article 3.3.2.5., ***ramps*** **shall have** a uniform slope along their length and a **maximum slope of 1 in 12**.

(2) Except as provided in Section 3.8., *ramps* in ***industrial occupancies*** shall have a uniform slope along their length and a maximum slope of

(a) 1 in 6 for interior *ramps*, and

(b) 1 in 10 for exterior *ramps*.

Exit Requirements

Door Release Hardware (Panic Hardware) – 3.4.6.16.(3)

Panic hardware shall;

(a) extend across not less than one-half of the width of the door,

(b) release the latch, and

(c) allow the door to swing wide open when a force not more than that specified in Sentence 3.8.3.3.(7) is applied to the device in the direction of travel to the exit.

Exterior Door = 38 N
Interior Door = 22 N

Exit Requirements

Door Release Hardware (Panic Hardware) – 3.4.6.16.(7)

Door release hardware (panic hardware) for the operation of the doors referred to in this Section shall be installed between 900 mm and 1 100 mm above the finished floor.

Pat Meagher

Municipal Building Official III

Barrier-Free Design

Barrier-Free Design

Div B. 3.8.1.2. – Entrances

- Changed to require all pedestrian entrances be barrier-free.

  (1) Except as provided in Sentence 3.13.8.1.(2) and except for service entrances, *all pedestrian entrances to a barrier-free storey of a building referred to in Sentence 3.8.1.1.(1) shall be barrier-free and shall connect to a barrier-free exterior path of travel complying with Sentence 3.8.2.2.(1).*

- Removed previous Table 3.8.1.2. which only required certain pedestrian entrances to be accessible.
- Removed previous sentence (2) requiring one of the barrier free entrances to be the principal entrance to the building.

Barrier-Free Design

Div B. 3.8.2.2. – Barrier-Free Paths of Travel to Building Entrances, Exterior Passenger Loading Zones, and Access to Parking Areas

- Article was renamed. Was previously called Access to Parking Areas.

Barrier-Free Design

Div B. 3.8.2.2. – Barrier-Free Paths of Travel to Building Entrances, Exterior Passenger Loading Zones, and Access to Parking Areas

- Additional exterior areas require barrier free path of travel:

  (1) A direct barrier-free path of travel shall be provided between a barrier-free entrance referred to in Article 3.8.1.2. to
  (a) a designated barrier-free parking area, where provided,
  (b) an exterior passenger-loading zone, where provided, and
  (c) a public thoroughfare.

- Previously barrier-free path only required to exterior parking area
- Sentence (2) has a slight change from previous requirement of “at least one”

  (2) The vehicular entrance to and egress from any parking level described in Sentence (1) and all areas intended to be used by wheelchair accessible vehicles to gain access to a parking space on that level shall have a vertical clearance of not less than 2 100 mm.

KITCHENER

Barrier-Free Design

Div B. 3.8.2.2. – Barrier-Free Paths of Travel to Building Entrances, Exterior Passenger Loading Zones, and Access to Parking Areas

- Requirement for barrier-free access to parking garages (storage garages) is slightly revised
- Previous Clause (1)(b) removed, which required barrier-free access to one parking garage level if serviced by an elevator
- Replaced with new sentence (4) requiring barrier-free path to all parking garage levels with barrier free parking

(4) In storage garages, a barrier-free path of travel shall be provided between each parking level with barrier-free parking and all other parts of the building required to be provided with barrier-free access that are served by that storage garage.

Barrier-Free Design

Div B. 3.8.3.1. – Accessibility Signs

- Changed wording and added washrooms, showers, elevators, parking spaces and assistive listening systems.

(1) Signs providing visual information shall be installed to indicate the location of

(a) barrier-free entrances,

(b) ramps located in a required barrier-free path of travel serving that entrance,

(c) an exterior passenger loading zone conforming to Sentence 3.8.2.2.(3), if one is provided,

(d) barrier-free washrooms,

(e) barrier-free showers,

(f) barrier-free elevators,

(g) barrier-free parking spaces, and

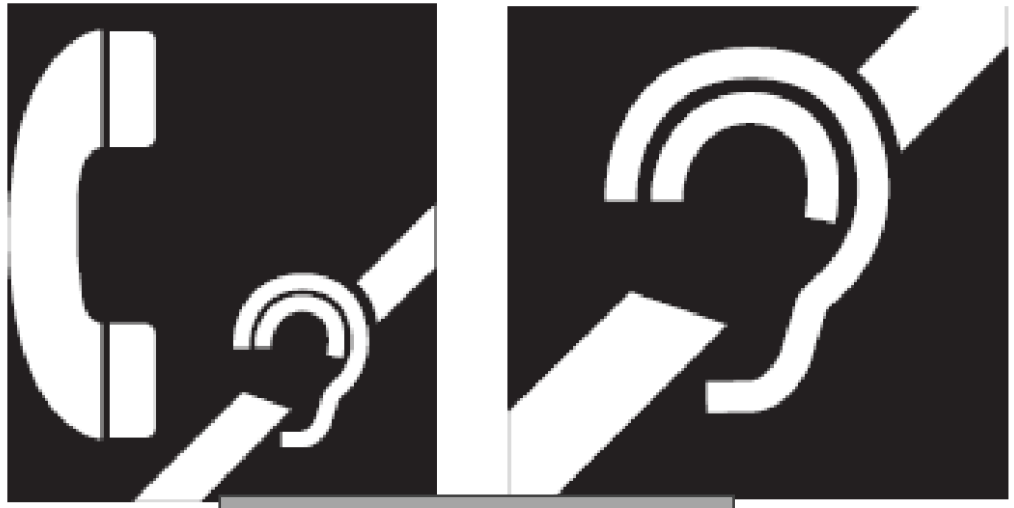
(h) assistive listening systems or adaptive technologies.

Barrier-Free Design

Div B. 3.8.3.1. – Accessibility Signs

- Added option to use the “international symbol of access for hearing loss”.

(2) Where a washroom, elevator, telephone or parking area is required to accommodate persons with disabilities, it shall be identified by a sign consisting of the International Symbol of Access or the International Symbol of Access for Hearing Loss and appropriate graphical or textural information that clearly indicates the type of facilities available.



International Symbol of Access for Hearing Loss

International Symbol of Access

Barrier-Free Design

Div B. 3.8.3.1. – Accessibility Signs

- Some slight rewording and added requirement for tactile information.

  (3) 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 by Article 3.8.2.1., signs providing visual and tactile information shall be installed to indicate the location of barrier-free facilities.

- New Sentences (5) and (6)

  (5) Directional signs shall be provided with visual information.

  (6) Except for doors that serve service spaces or are located within a suite, signs installed at or near doors shall provide the same information in both visual and tactile forms.

Barrier-Free Design

Div B. 3.8.3.1. – Accessibility Signs

- Sentence (7) replaces old Sentence (5) and expanded the requirements.

  (7) Tactile information sign required by Subsections 3.4.5. and 3.4.6. and this Article shall

  (a) have Braille and tactile characters in accordance with Clauses 4.5.6.2. and 4.5.6.3. of CSA B651, "Accessible design for the built environment,"

Barrier-Free Design

Div B. 3.8.3.1. – Accessibility Signs

- Sentence (7) (cont.)

(b) be installed on the wall closest to the latch side of the door or on the nearest wall in the right side of the door, where there is no wall at the latch side, and

(c) be centred 1500 mm above the finished floor with the edge of the sign located not more than 300 mm from the door.

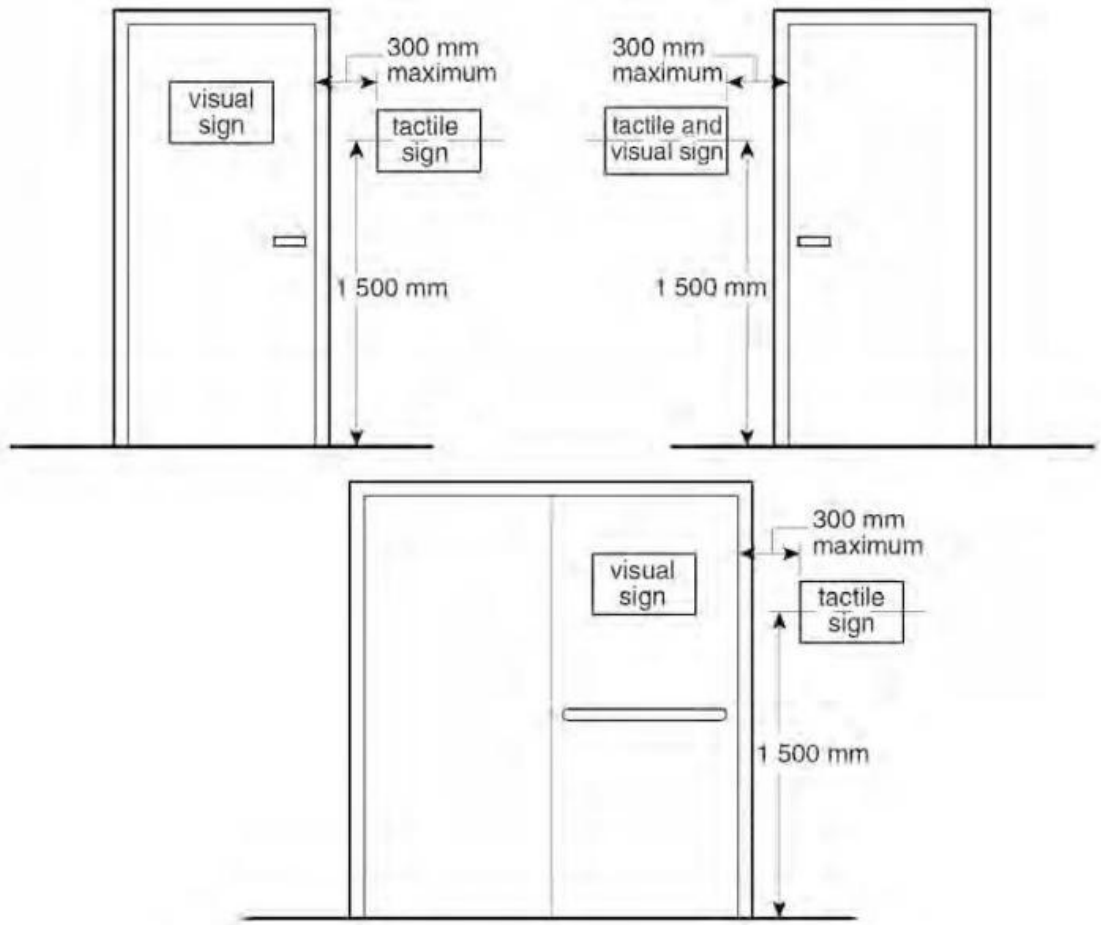


Figure A-3.8.3.1.(7) and (8)
Positioning of Visual and Tactile Information Signs on and Near Doors

Exits – Tactile Signs

Div B. 3.4.5.2. – Exit Signs with Tactile Information

- New requirement for Tactile Exit Signage

  (1) An exit sign displaying the word "EXIT" in tactile form that complies with Article 3.8.3.1. shall be mounted on the approach side of exit doors described in Sentence 3.4.5.1.(1), in the direction of travel to the exit.

Tactile Exit sign

Div B. 3.4.6.18. – Emergency Crossover Access to Floor Areas

- Now requires signage to include 'tactile' form

Div B. 3.4.6.19. – Floor Numbering and Identification of Stair Shafts

- Reworded to specify 'tactile' form. Previous wording about raised characters removed.

Exit – Tactile Signs

Mag Locks – 3.4.6.16.(5)

- New requirement for tactile mag lock signage:

  (h) a tactile information sign complying with Article 3.8.3.1. that displays the words EMERGENCY EXIT UNLOCKED BY FIRE ALARM is permanently mounted near the door,

- New requirement for visual/tactile ‘Re-Entry” sign when mag lock installed on emergency crossover door:

  (l) 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,

  (ii) a visual information sign displaying the words RE-ENTRY DOOR UNLOCKED BY FIRE ALARM that complies with Article 3.8.3.1. is permanently mounted on the door on the exit stair side, and

  (iii) a tactile information sign displaying the words RE-ENTRY DOOR UNLOCKED BY FIRE ALARM that complies with Article 3.8.3.1. is permanently mounted near the door on the exit stair side. (See Note A-3.4.6.16.(5))

Mag Lock signage will also need to be tactile

Barrier-Free Design

Div B. 3.8.3.3. – Doorways and Doors

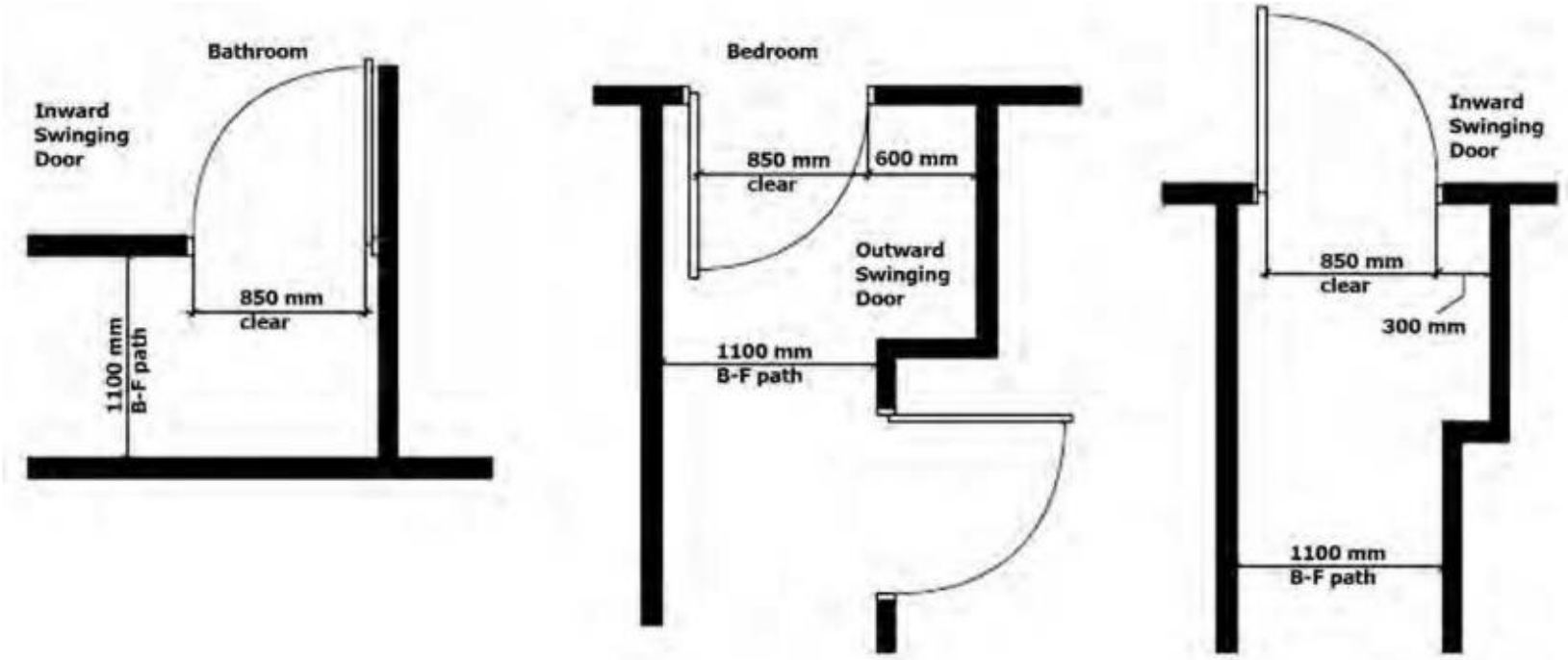
- Clear doorway width here is 852mm. Does this meet code in a Barrier-Free path?

Barrier-Free Design

Div B. 3.8.3.3. – Doorways and Doors

- Clear doorway width reduced back down to 850mm from 860mm.

  (1) Every doorway that is located in a barrier-free path of travel shall have a clear width of not less than 850mm when the door is in the open position.



Barrier-Free Design

Div B. 3.8.3.3. – Doorways and Doors

- Sentence (4) previously specified the occupancy types requiring a power door operator at entry doors (Group B1 and F previously exempt).

- Now specifies all entry doors required by 3.8.1.2. must have PDO's regardless of occupancy type

  (4) Except as permitted by Sentence (12), every door that provides a barrier-free path of travel through a barrier-free entrance referred to in Article 3.8.1.2. shall be equipped with a power door operator.

Barrier-Free Design

Div B. 3.8.3.3. – Doorways and Doors

- New Sentence (4.1) requiring certain doors if equipped with self-closing devices to have power door operators.

  (4.1) Except as permitted by Sentence (12), doors equipped with a self-closing device shall be equipped with power door operators where doors are located in a barrier-free path of travel, between the entrance referred to Article 3.8.1.2., including the interior doors of a vestibule, and the entrance doors to suites or rooms served by a public corridor or a corridor used by the public.

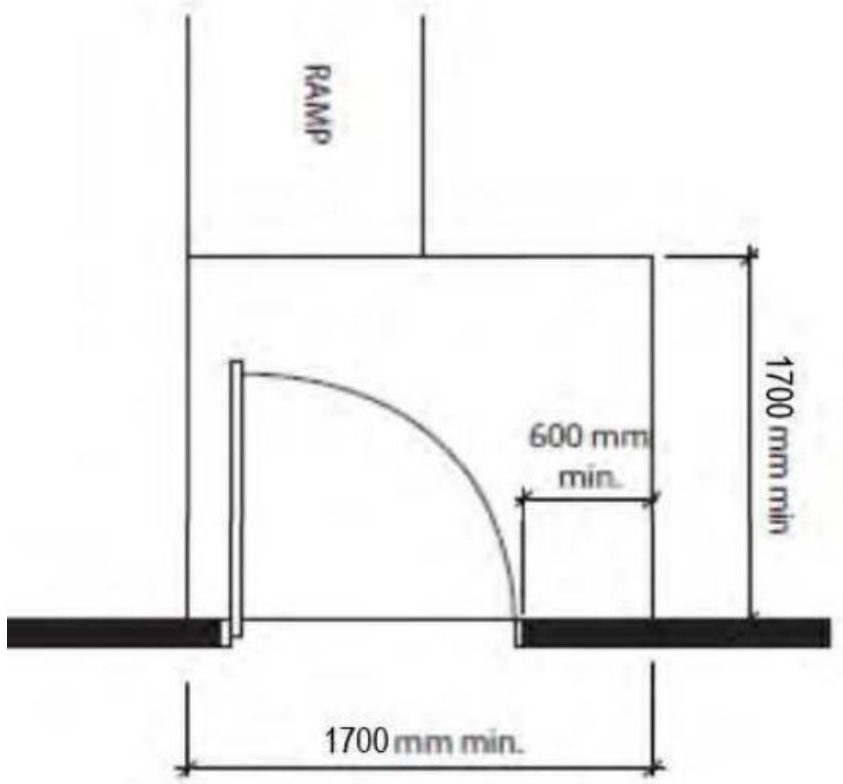
Barrier-Free Design

Div B. 3.8.3.4. – Ramps

- Sentence (1) increased minimum width between handrails from 900mm to 1000mm.

  (a) have a minimum width not less than 1 000 mm between handrails, (See Note A-3.4.3.4.)

- Increased level area at top, bottom, and landings to 1670mm x 1670mm to 1700mm x 1700mm,



Barrier-Free Design

Div B. 3.8.3.5. – Passenger Elevating Devices

- Added new requirements specifying sizing for the elevating devices.

(1) A passenger elevating device referred to in Article 3.8.2.1. located in a barrier-free path of travel shall

(a) conform to CSA B355, "Platform lifts and stair lifts for barrier-free access,"

(b) have a clear floor space not less than 1 500 mm long by 1 000 mm wide, and

(c) have entry doors or gates

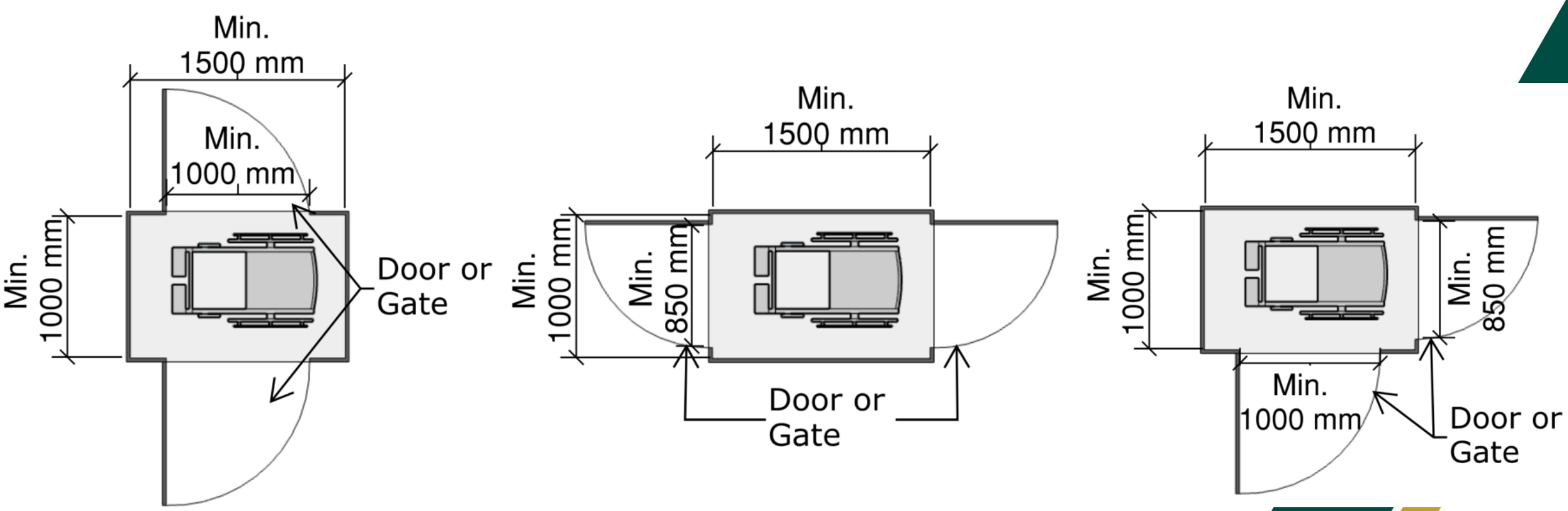
(i) providing a clear width not less than 850 mm in the open position if located on the short side of the passenger elevating device, or

(ii) providing a clear width not less than 1 000 mm in the open position if located at either end of the long side of the passenger-elevating device.

Barrier-Free Design

Div B. 3.8.3.5. – Passenger Elevating Devices

- Diagrams showing dimensions:



Barrier-Free Design

Div B. 3.8.3.7. – Assistive Listening Systems

- Changed from Assistive Listening Devices.
- Removed occupant load requirement for assembly occupancies. Used to state occupant load more than 75.

  (1) In buildings of assembly occupancy, all classrooms, auditoria, meeting rooms and theatres with an area of more than 100 m2 shall be equipped with an assistive listening system encompassing the entire seating area.

- Sentence (2) and (3) are new requirements for service counters in assembly occupancies.

  (2) In each location where information, goods or services are provided to the public at service counters in buildings of assembly occupancy, at least one of the service counters shall be equipped with:

  (a) an assistive listening system or adaptive technology, and

  (b) an amplification system, where there is a barrier to communication, such as a glass screen.

Barrier-Free Design

Div B. 3.8.3.13. – Showers and Bathtubs

- New Sentences (4) and (5) for universal dressing and shower room requirements.

(4) At each location where a showering facility is provided for use by the general public or customers, or as part of a common-use area for employees, at least one universal dressing and shower room shall be provided. (See Note A-3.8.3.13.(4))(5)

(5) A universal dressing and shower room required by Sentence 3.8.3.13.(4) shall

(a) be located in a barrier-free path of travel,

(b) have a door capable of being locked from the inside and released from the outside in the event of an emergency,

(c) have a lavatory and a mirror conforming to Article 3.8.3.11.,

(d) have a shower conforming to Sentence (2),

(e) have a bench that is at least 1 830 mm long by 760 mm wide and 480 mm to 520 mm high,

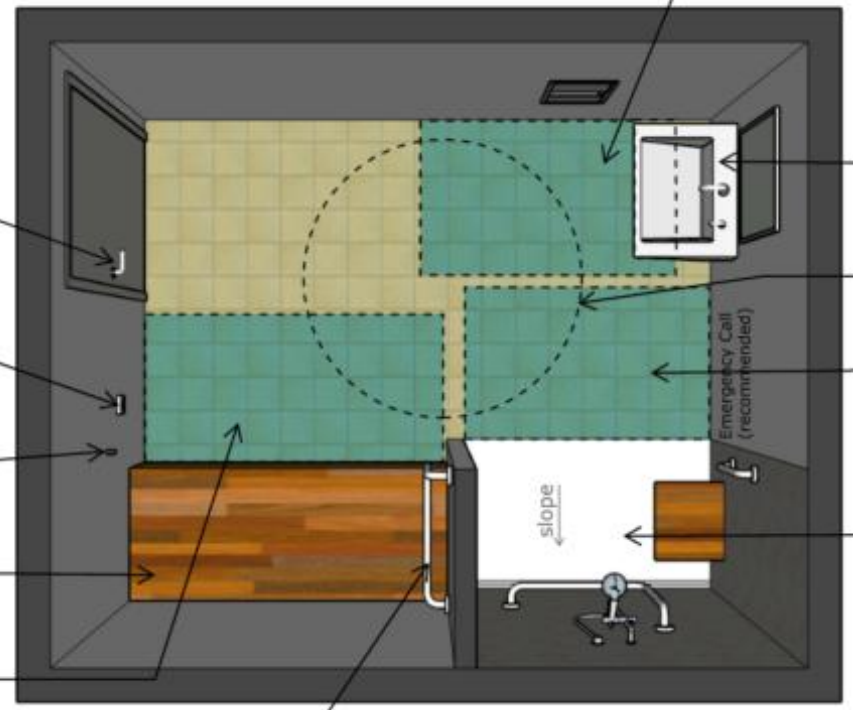
(f) have a clear transfer space adjacent to the long side of the bench that is 900 mm wide and as long as the bench, and

(See Note A-3.8.3.13.(5)(f))

(g) have 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.

KITCHENER

Barrier-Free Design



Lavatory forward approach clearance 1370 mm by 920 mm

Lavatory and a mirror conforming to Article 3.8.3.11. (3.8.3.13.(5)(c))

1700 mm Dia. turning circle (recommended)

Shower clear floor space 900 mm deep by width of shower

Shower conforming to 3.8.3.13.(2) (3.8.3.13.(5)(d))

Door capable of being locked from the inside and released from the outside in the event of an emergency (3.8.3.13.(5)(a))

Power Door Operator (3.8.3.3.(6)(a))

Coat Hook max. 1200 mm AFF (3.8.3.13.(5)(g)) (1100 mm recommended)

Bench at least 1 830 mm long by 760 mm wide and 480 mm to 520 mm high (3.8.3.13.(5)(e))

Clear transfer space adjacent to the long side of the bench that is 900 mm wide and as long as the bench (3.8.3.13.(5)(f))

Grab Bar at Bench. (A-3.8.3.13.(5)(f)) Where a bench in a universal dressing and shower room is located adjacent to a wall, it is recommended that a grab bar be installed to assist users in transferring to the bench.

Barrier-Free Design

Coat Hook max. 1200 mm AFF (3.8.3.13.(5)(g)) (1100 mm recommended)

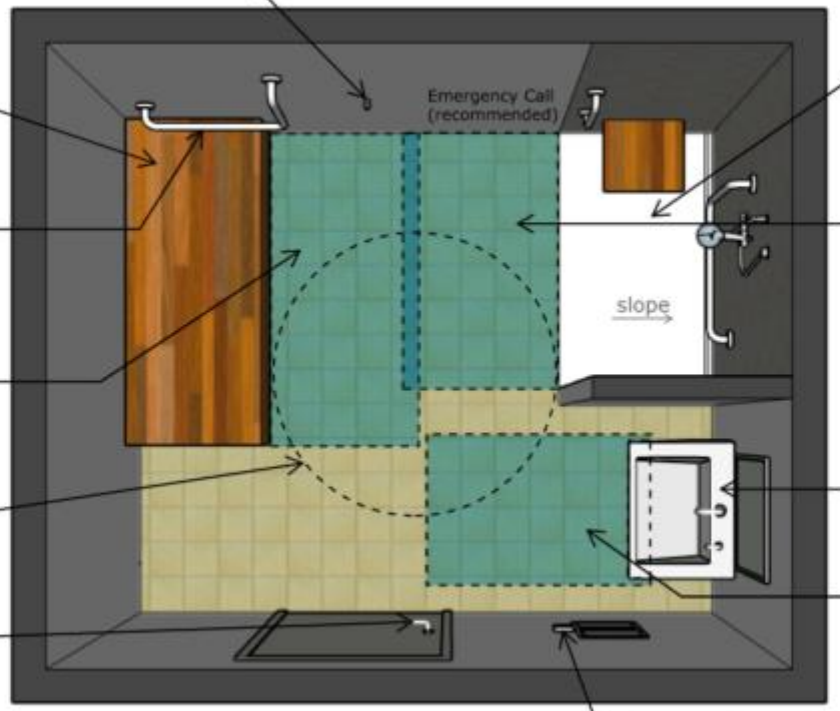
Bench at least 1 830 mm long by 760 mm wide and 480 mm to 520 mm high (3.8.3.13.(5)(e))

Grab Bar at Bench. (A-3.8.3.13.(5)(f)) Where a bench in a universal dressing and shower room is located adjacent to a wall, it is recommended that a grab bar be installed to assist users in transferring to the bench.

Clear transfer space adjacent to the long side of the bench that is 900 mm wide and as long as the bench (3.8.3.13.(5)(f))

1700 mm Dia. turning circle (recommended)

Door capable of being locked from the inside and released from the outside in the event of an emergency (3.8.3.13.(5)(a))



Shower conforming to 3.8.3.13.(2) (3.8.3.13.(5)(d))

Shower clear floor space 900 mm deep by width of shower

Lavatory and a mirror conforming to Article 3.8.3.11. (3.8.3.13.(5)(c))

Lavatory forward approach clearance 1370 mm by 920 mm

Power Door Operator (3.8.3.3.(6)(a))

Barrier-Free Design

Div B. 3.8.3.14. – Service Counters

- New Article.

(1) Where a service counter is provided, at least one section of the service counter shall comply with Sentence (2). (See Note A-3.8.3.14.(1))

(2) A section of a service counter required to be barrier-free shall

(a) be not less than 800 mm long centred over a knee space conforming to Clause (c),

(b) have a surface not more than 865 mm above the floor, and

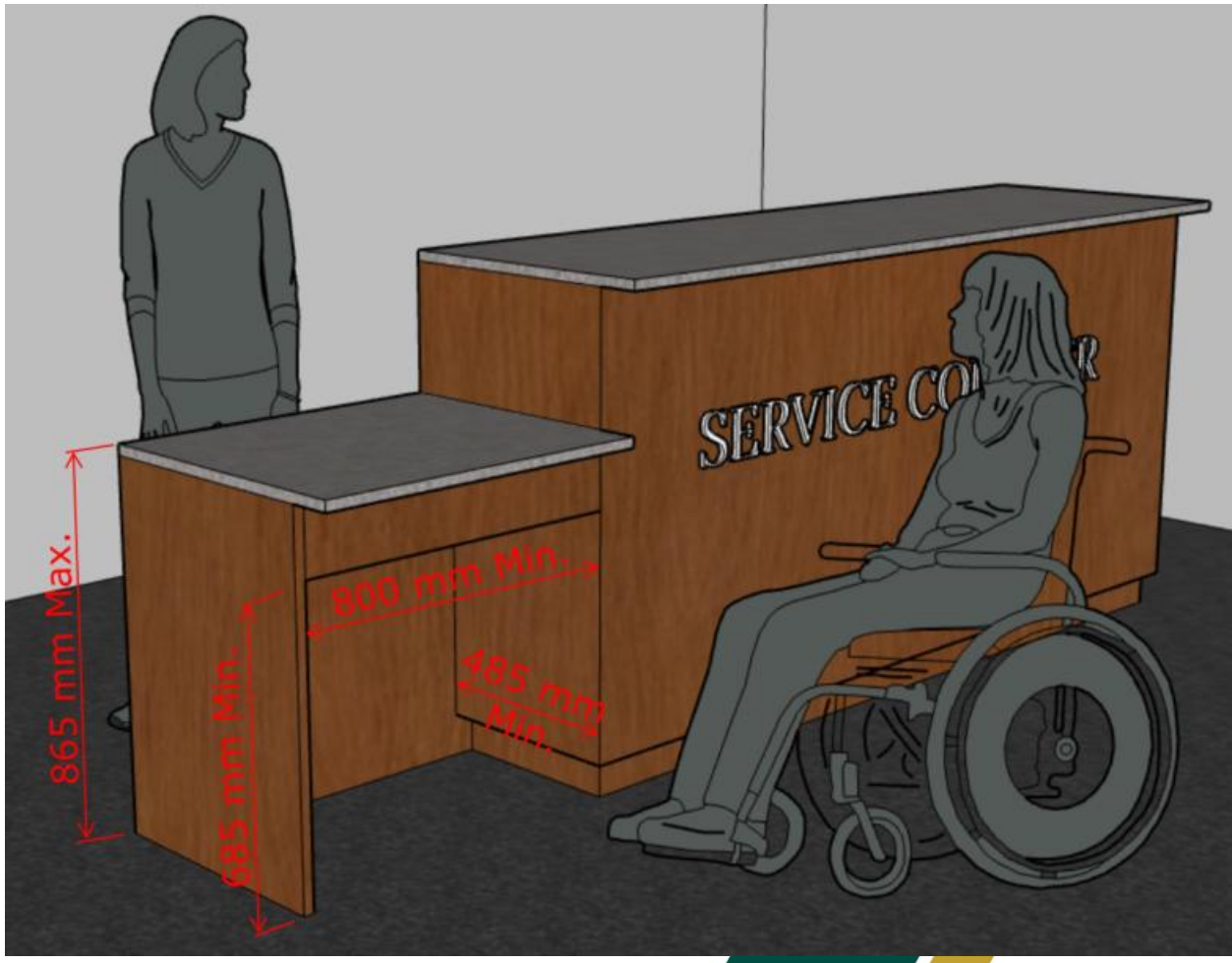
(c) where forward-facing interaction with a person or a device is required, have a knee space underneath it that is

(i) not less than 800 mm wide,

(ii) not less than 685 mm high, and

(iii) not less than 485 mm deep.

(See Note A-3.8.3.14.(2)(c))



Barrier-Free Design

Div B. A-3.8.3.14. – Service Counters

- The appendix adds some further description of how it applies:

  …Examples of counters that should be barrier free include check-in counters, those in financial institutions, reception areas, as well as any counter at which processing and signing of documents takes place…

Barrier-Free Design

Div B. 3.8.3.16A. – Water-Bottle Filling Stations

- New article with requirements *where installed*, including:
  - Control requirements or auto activation
  - Clear floor space in front
  - Knee clearance
  - 1200 max height

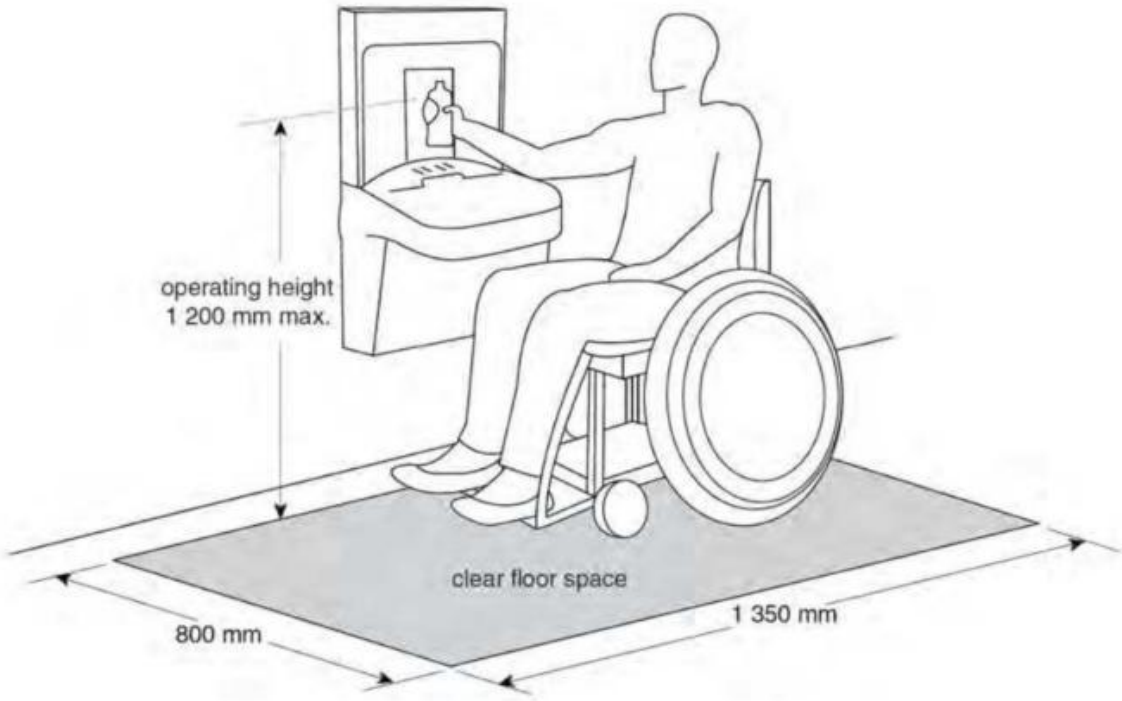


Figure A-3.8.3.16A.(2)(b) and (d)
Clear Floor Space and Operating Height Requirements for Water-Bottle Filling Stations

Bela Novak

MBO - Mechanical

Plumbing Requirements

Plumbing

Privacy – 3.7.4.15.

(2) Except in a room for *private use*, water closets, urinals, ~~lavatories~~, showers and bathtubs shall not be visible from the entrance to the room where it contains at least

(a) two water closets,

(b) one water closet and one urinal,

(c) one shower stall, or

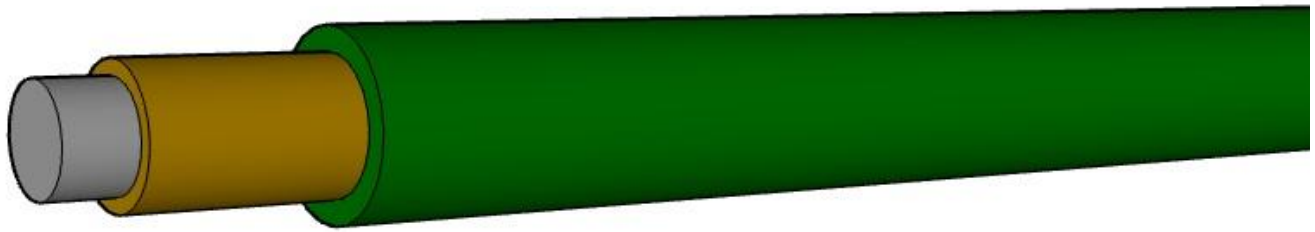
(d) one bathtub.

Plumbing

Tracer Wire – 7.2.2.2.

(1) Except as provided in Sentence (2), a 14 gauge TW **solid copper** light coloured plastic coated tracer wire shall be attached to every non-metallic *water service pipe* or *fire service main*.

(2) A 12 gauge **copper clad steel** light coloured plastic coated wire.



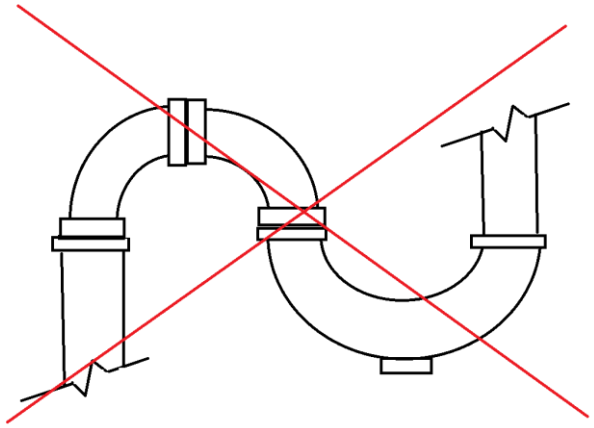
Plumbing

Traps – 7.2.3.1.(5)

2012 OBC

A bell *trap* or an ~~S-*trap*~~ shall

not be installed in a *drainage system*.



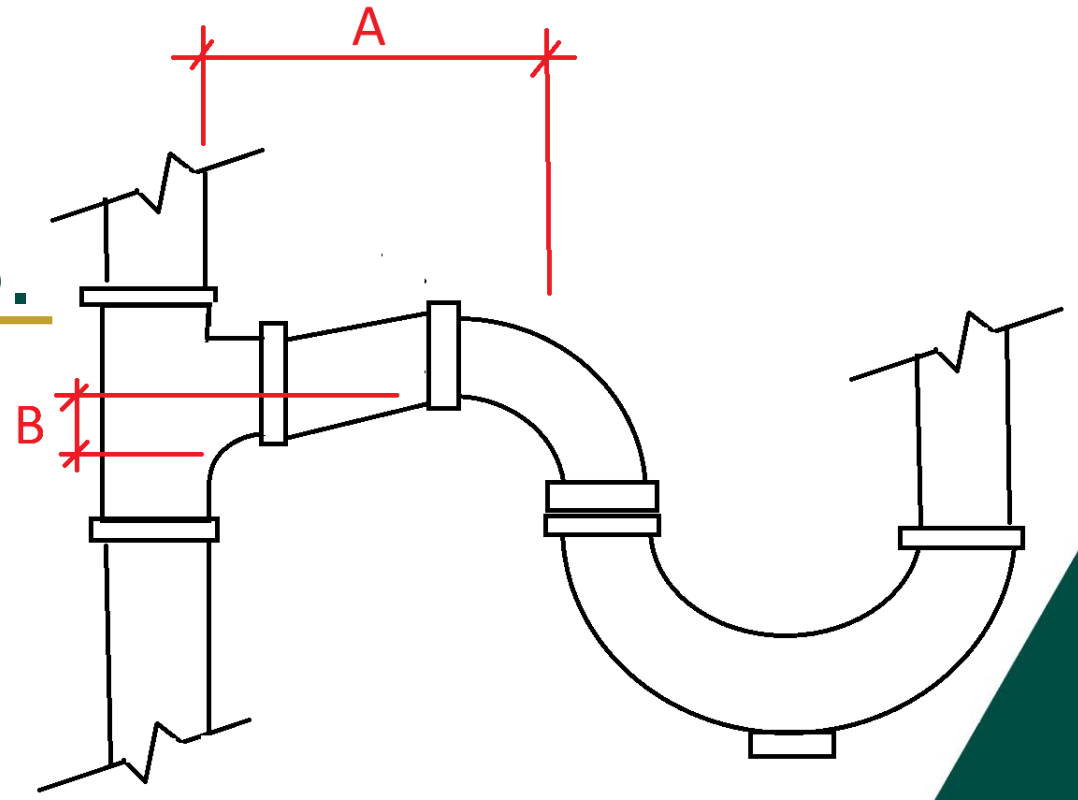
2024 OBC

A bell trap shall not be installed in a drainage system.

Although the word S-trap was removed an S-trap can still NOT be used in a drainage system as they do not meet any of the venting requirements.

Plumbing

Location of vents – 7.5.6.3.



A = trap arm length

Min. 7.5.6.3.(1)(a) 2x the pipe diameter

Max. T.7.5.6.3. (about 48x pipe diameter)

Max. 7.5.6.3.(1)

(b) the total fall of the *trap arm* is not greater than its inside diameter

Plumbing

Water Supply Fittings – 7.6.4.1.

(3) Each lavatory in a washroom with *fixtures* for *public use* shall be equipped with a device capable of automatically shutting off the flow of water when the lavatory is not in use.

Private use means, when applied to plumbing *fixtures, fixtures* in residences and apartments, in private bathrooms of hotels, and in similar installations in other *buildings* for a single household or an individual.

Plumbing

Location of Vent Pipes – 7.5.6.3.(5)

2012 OBC

7.5.6.3 (5) The *vent pipe* from a water closet or any other *fixture* that has an integral siphonic flushing action may be connected to the *vertical leg* of its drainage pipe.

2024 OBC

Sentence (5) was removed meaning you can no longer vent off the vertical leg of a drainage pipe for fixtures like toilets that depend on integral symphonic flushing action

Plumbing

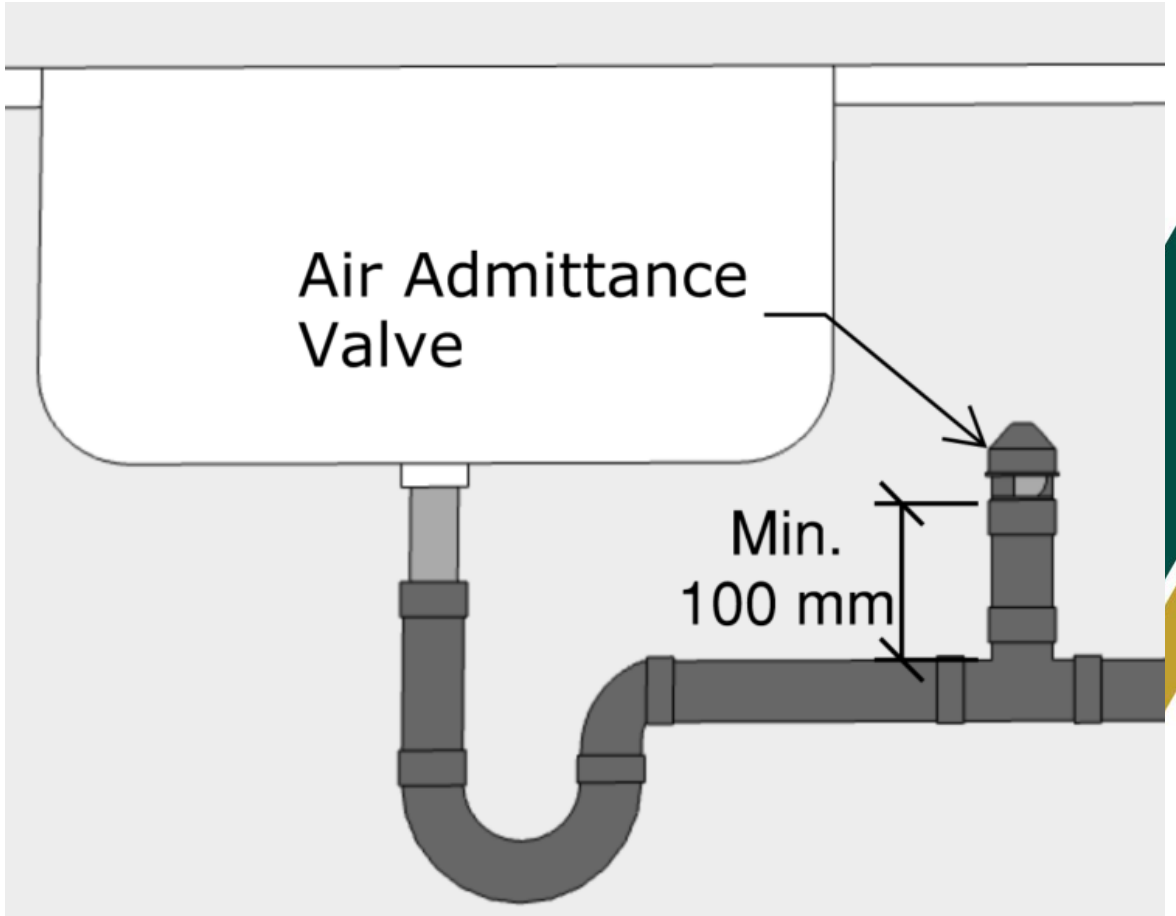
Air Admittance Valves – 7.5.9.2.(2)

Air admittance valves shall be located

(a) not less then 100 mm above the *fixture drain* being vented,

(b) Within the maximum *developed length* permitted for the *vent*, and

(c) not less than 150 mm above insulation materials.



Plumbing

Non-Potable Water System – 7.7.1.2.(1)

2012 OBC

Non-Potable water system for re-use purposes shall be Marked

In accordance with CAN/CSA-B128.1, “Design and Installation of Non-Potable Water Systems”

2024 OBC

Non-Potable water piping and outlet for re-use purposes shall be identified and marked In accordance with CAN/CSA-B128.1, “Design and Installation of Non-Potable Water Systems

Plumbing

Non-Potable Water System – 7.7.1.3.

2012 OBC formally 7.7.3.1.

(1) Non-*potable* water piping shall not be located,

(a) where food is prepared in a food processing plant,

(b) above food-handling equipment,

(c) above a non-pressurized *potable* water tank, or

(d) above a cover of a pressurized *potable* water tank.

Plumbing

Non-Potable Water System – 7.7.1.3.

2024 OBC

(1) Non-*potable* water piping shall not be located,

(a) areas where food, drinks, or products that's are intended for human consumption are prepared, handled, dispensed or stored,

(b) a non pressurized, or pressurized water tank or

(c) food handling equipment

Plumbing

Non-Potable Rain Harvesting System – 7.7.2.

2024 Reference Highlights

7.7.2.3. (1) Roof surfaces that supply rainwater to a non potable rainwater harvesting system shall be inaccessible to vehicular and pedestrian traffic

7.7.2.4.(2) Non-potable rain harvesting system shall not include water discharged from an evaporative heat rejection system

7.7.2.4. Make up water connections to a non-potable rainwater harvesting system shall be equipped with reduced pressure backflow flow preventer or airgap

Presented By:

City of Kitchener Building Division

200 King Street West – Customer Service Centre

519-741-2312

IRV 519-741-2761

building@kitchener.ca

www.kitchener.ca/building