

Township of Leeds and the Thousand Islands

# 2024 Ontario Building Code Change Summary

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# **2024 OBC Timing and Transition Rules**



## 2024 Ontario Building Code Amendments

#### Harmonization with National codes

- Eliminating 1730 technical variations between the OBC/NBC requirements harmonization at 80%
- Adopting the NBC with Ontario specific amendments within one compendium.
- Focus on housing supply, innovation and health and safety

### Key Changes (Parts 1-3)

- Farm Buildings, introducing new part for Division B for large farm buildings and G classifications
- Large building (Accessibility) all pedestrian entrances to be accessible
- Large building (Fire safety) standpipe connections in exits, if sprinklered, a fire alarm is required, sprinklers required on all storeys below sprinklered storey, mezzanine and interconnected floor space changes to exits, egress, fire compartments, travel distance
- Large building (Exterior cladding) combustible cladding removing 6 storey limitation, comb wall components permitted when protected by concrete/masonry
- 18 Storey Mass Timber

#### Key Changes (Parts 4-6):

- Post disaster buildings expanded to include control centers for natural gas distribution, air and marine transportation, sewage treatment, water storage and water treatment facilities, new loading criteria for canopies and solar panels on roofs
- Subsections, articles and sentences renumbered and minor editorial changes to harmonize with the NBC
- Air leakage requirements updated; and carbon monoxide expanded to care occupancies
- Ventilation systems revised to minimize adverse health effects, distance to outdoor air intakes, building drainage system connection, maintenance inspection access and crawlspaces when unconditioned and unoccupied
- Maximum temperature of exposed pipes reduced from 70 degree to 52 degrees Celsius.

### Key Changes (Parts 7-9):

- New provisions for Rainwater Harvesting
- Hot water control in care and childcare facilities
- New provisions for vent pipe to property line
- Treatment and holding tanks safety screens
- Alternate trace wire for leaching chambers
- Absorption trench construction
- Filter beds
- Type A dispersal beds
- Secondary suites reduced headroom and door heights and all 5/8" type X, cannot interconnect air
- Radon Rough-In required
- Clarified firefighting when not on a street and no dwelling unit above another
- New section for braced walls for medium and extreme seismic areas
- Revised fastening requirements to include insulated vinyl siding, polypropylene siding and above Ground flat insulating concrete form walls
- The indoor design temperature in unfinished basements has been lowered from 22°C to 18°C.

#### Key Changes (Parts 10-12):

- Farm Buildings added to Part 10 and 11 and new table for early warning and evacuation
- Changed Group B, Division 2 and 3 to reference Part 6
- Compliance alternatives amended to include secondary suites
- Each dwelling unit required to have a thermostat

### Coming Soon:

- Single exit for mid-rise (4 storey) buildings
- Qualification consistency across Province
- Standard design catalogue support modular targets ADU and 4-unit buildings



Township of Leeds and the Thousand Islands

# Division B Part 3 Fire Protection, Occupant Safety and Accessibility Changes

### **Highlight Areas**

**Fire Prevention** 

Mass Timber

Lighting and Emergency Power

Interconnected Floor Spaces

Mezzanine Exiting and Egress

Safety within Floor Areas

Exits

**Barrier Free** 

### **Division B Part 3 – Fire Prevention**

#### 3.1.5.1 Combustible Cladding on Exterior Walls - Removed the 6-storey restriction.

- Revised Sentence (1) Combustible cladding and combustible components are permitted in an exterior wall assembly of a building required to be non-combustible construction provided,
   (a) the building is
  - (i) not more than 3 storeys in building height, or
  - (ii) not more than 6 storeys in building height if sprinklered Sprinklered throughout

# **3.1.13.1. Interior Finishes, Furnishings and Decorative Materials** – new sentence related to the OFC and NFCC for interior finishes

New Sentence (1) except as otherwise provided in this subsection, interior finishes, furnishings
and decorative materials shall conform to (a) the Fire Code made under the Fire Protection and
Prevention Act or (b) the National Fire Code of Canada in the absence of regulations in the OFC



#### 3.2.2.18 Automatic Sprinkler System Required – requires lower floors to be sprinklered

• New Sentence (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.

# **3.2.2.20 - 3.2.2.92 Building Size and Construction Relative to Occupancy -** renumbered to align with NBC and require sprinklers:

- 3.2.2.21. Group A1, 1 Storey, Limited Area, Sprinklered
- 3.2.2.22. Group A1, 1 Storey, Sprinklered No roof rating
- 3.2.2.29. Group A3, Any Height, Any Area, **Sprinklered** No longer includes reference to trade shows
- 3.2.2.38. to 3.2.2.41 Group B2, removed B3 and added to New 3.2.2.42.to 3.2.2.46 for B3 Occupancies
- Group C occupancies shifted down from 3.2.2.42 to 3.2.2.47 through 3.2.2.55E
- 3.2.2.56. Group D, Any Height, Any Area Now requires sprinkler protection (formerly 3.2.2.49)
- 3.2.2.60. Group D, Up to 6 Storeys, Sprinklered, Combustible now outlined for combustible and non-combustible
- 3.2.2.79. Group F2, Up to 4 storeys, **Sprinklered** (was 3.2.2.70)

- 3.2.2.82. Group F3, Any Height, Any Area, **Sprinklered** (was 3.2.2.73)
- New 3.2.2.78. F2, up to 3 storeys

**3.2.4.1. Determination of Requirement for a Fire Alarm System -** Fire alarm required in all sprinklered buildings

- New Sentence (1) Except as permitted in Sentences (2) and (3), a fire alarm system shall be installed in buildings in which an automatic sprinkler system is installed. (must meet electrical supervision and monitoring)
- Exceptions:
  - New Sentence (2) Buildings in which a sprinkler system is installed in accordance with NFPA 13D, "Standard for the Installation of Sprinkler Systems in One- and Two-Family Dwellings and Manufactured Homes," need not comply with Sentence (1).
  - New Sentence (3) Buildings that contain fewer than 9 sprinklers conforming to Sentence 3.2.5.12.(4) need not comply with Sentence (1).

#### 3.2.4.16. Manual Stations - Sentence (1) required at every exit as opposed to every required exit.

#### **3.2.4.18. Audibility of Alarm Systems –** sleeping room low frequency signal

• New Sentence (6) Audible signal devices in sleeping rooms in a building of residential or care occupancy shall emit a low frequency signal

#### 3.2.4.20. Smoke Alarms - visual signalling component added

- Sentence (10) Suites of residential occupancy are permitted to be equipped with <u>smoke detectors</u> in lieu of smoke alarms, provided the smoke detectors
  - a) are capable of independently sounding audible signals with a sound pressure level between 75 dBA and 110 dBA within the individual suites,
  - b) except as permitted by Sentence (11), are installed in conformance with CAN/ULC-S524, "Standard for the Installation of Fire Alarm Systems," and verified in conformance with CAN/ULC-S537, "Standard for the Verification of Fire Alarm Systems," and
  - c) form part of the fire alarm system, and
  - d) **are equipped with visual signalling components** (NFPA 72 for light, color, pulse and 175 cd in sleeping rooms).

#### 3.2.5.1. Access to Above Grade Storeys – revised height above floor for firefighting access

• Revised Sentence (2) An opening for access shall a) have a sill no higher than 1 070 900 mm above the inside floor

#### 3.2.5.8. Standpipe Systems (formerly 3.2.9.) Reduced area

 Revised Sentence (1) F2, 1 storey with a building area over <u>1500m<sup>2</sup></u> requires a standpipe (previously was a building area of 2000m<sup>2</sup>)

#### **3.2.5.10.** Hose Connections – clarified locations for hose connections, permitted in exits

- Sentence (1) shall be located in exits (NFPA 14)
- Sentence (2) not required within a floor area (previously 38mm required in each storey)
- Sentence (3) shall be provided with sufficient clearance to permit the use of a standard fire department hose key
- Sentence (4) Except (5), hose connections shall be 64mm in diameter (previously more than 25m or area more than 4000m2)
- Sentence (5) 64mm hose connections not required in unsprinklered buildings under 25m high (grade to ceiling of top storey)

Category	2024	2012
Standpipe exemption for 1 storey F2 buildings	Max 1500m2	Max 2000m2
Water pressure at topmost hose connection	690 kPa (3.2.5.9)	450 kPa
Hose connection location	Must be in exit	Exit or floor area
Hose Stations	Required if unsprinklered. Within 5m of exits	Required within 3m of exits
Fire pumps (3.2.5.18)	NFPA 20 for all pumps	NFPA 20 if pressure >280kPa
Distilleries	38mm Hose stations supplied by sprinkler piping	

#### 3.2.5.11. Hose Stations - revised provisions

- Sentence (1) and (2) Unsprinklered buildings shall have <u>38mm diameter</u> hose installed within every unsprinklered floor area
- Sentence (3) Hose stations shall be located within 5m of exits and at other locations to ensure full coverage of subject floor area
- New Sentence (6) Sprinklered building (or part of building) containing a distillery are permitted to have small (38mm) hose stations supplied from interior sprinkler piping.
- New Sentence (7) Hose station provided in grain handling/storage facilities risk of dust explosions

   fog and fine spray nozzles (instead of solid stream of water) shall be used to prevent combustible dusts from being suspended.

#### 3.2.5.12. Automatic Sprinkler Systems – extended to include row houses

• Sentence (3) The application of NFPA 13D, "Standard for the Installation of Sprinkler Systems in One- and Two-Family Dwellings and Manufactured Homes.

	2024 OBC – changes and additions to sentence 3
NFPA 13D	<ul> <li>Group C that contains more than two dwelling units, provided:</li> <li>No dwelling unit above another dwelling unit (except secondary suites)</li> <li>All suites separated by a continuous vertical fire separation from top of footing to underside of roof deck with 1h FRR</li> <li>Each dwelling unit has its own sprinkler water supply</li> <li>A passive purge sprinkler design is used as described</li> <li>If sprinkler system is installed to reduce required limiting distance, all rooms including closets, bathrooms and attached garages that adjoin the exposed building face are sprinklered</li> </ul>

• New sentence (9) except as permitted in subsection 3.2.8., closely spaced sprinklers and associated draft stops need not be installed around floor openings in conformance with NFPA 13.

### **Division B Part 3 – Mass Timber**

There are changes to the Ontario Building Code for encapsulated mass timber in sections 3.1.6, 3.2.2.7 and 3.2.2.93. these can be found under the following reference

3.1.6.4(7), (8), & (9) 3.1.6.6 3.1.6.9 (1), (4) & (5) 3.2.2.7 (4) 3.2.2.93 (1) to (7)

# **Division B Part 3 – Lighting and Emergency Power**

### 3.2.7.1. Minimum Lighting Requirements – new minimum lighting requirements

- New Sentence (4) The minimum level of illumination over the entire length of escalators and moving walks shall be not less than 100 lx at tread level of the treads and walking surfaces.
- New Sentence (5) Except as provided in Sentence (6) and except for light switches and internally illuminated controls, the minimum level of illumination at controls required by Article 3.8.1.5. shall be not less than 100 lx.
- New Sentence (6), Where visual information is provided at controls referred to in Sentence (5), the minimum level of illumination at the controls shall be not less than 200 lx, except where the visual information is internally illuminated.
- New Sentence (7) Except for internally illuminated signs, the minimum level of illumination at signs displaying visual information required by Clauses 3.4.6.10.(5)(b) and 3.4.6.16.(5)(g), Sentence 3.4.6.18.(3), Clause 3.4.6.18.(4)(a) and Articles 3.4.6.19. and 3.8.3.1. shall be not less than 200 lx:
  - Each side of horizontal exit, indicating door swing
  - "Emergency Exit Unlocked By Fire Alarm" on exit door
  - "Re-entry Door Unlocked BY Fire Alarm" on exit door
  - Exit/Access Doors
  - Floor Numbering Signs/Exit Stair Shaft Identification AND Accessibility Signs

### 3.2.7.3. Emergency Lighting – new locations where emergency lighting is required

- Emergency lighting (min. 10 lx at floor/tread level) required in:
- New Sentence (1)(m) locations where doors are equipped with an electromagnetic lock [3.4.6.16.(5)(k)]
- New Sentence (1)(n) universal washrooms (3.8.3.12) and required universal shower rooms (3.8.3.13)

# **3.2.8.1 Application of Interconnected Floor Spaces -** Group B3 can now have interconnected floor space

• **Revised Sentence (3)** A floor area containing sleeping rooms in a building of Group B, Division 2 or 3 major occupancy shall not be constructed as part of an interconnected floor space

**3.2.8.3 Sprinklers New Article** – cylinder requirements removed. All interconnected floor spaces to be sprinklered

- New Sentence (1) A building with an interconnected space shall be sprinklered throughout
- New Sentence (2) Except for large openings as defined in NFPA13, closely spaced sprinklers and draft stops shall be installed around the opening

## **Division B Part 3 – Interconnected Floor Spaces**

**3.2.8.2 Exceptions to Special Protection** – mezzanines over 500m2 must meet vertical separation (except A1 and 3 as noted) **Revised Sentence (1)** – A mezzanine need not terminate at a vertical fire separation nor be protected in conformance with the requirements of articles 3.2.8.3. to <del>3.2.8.11</del>. 3.2.8.8. provided the mezzanine:

- 1. Serves a Group A, Div. 1 occupancy
- 2. Serves a Group A, Div. 3 occupancy in a building not more than 2 storeys in building height, or
- 3. Serves a Group A, C, D, E or F occupancy and the mezzanine conforms to Sentence 3.2.1.1.(3) or (8),
  - i. Is 500m2 or less in area, and
  - ii. Conforms to Sentence 3.2.1.1.(3) or (4) (requirements for storey vs mezzanine)

# **3.2.8.4 Vestibules** – New Article pressurized vestibules protecting exits have new smoke control requirements

- New Sentence (1) Exits opening into an interconnected floor space shall be protected at each opening in the interconnected floor space by a vestibule:
  - With doorways min. 1.8m apart
  - That is separated by a non-rated fire separation
  - Designed to limit the passage of smoke so the exit stair shaft does not contain more than 1% by volume of contaminated air from the fire floor
- New Sentence (2) A exit opening into an interconnected floor space shall conform to Sentence 3.4.3.2.(6) (cumulative exits)
- New Sentence (3) If an elevator hoistway opens into an interconnected floor space and into storeys above the interconnected floor space, either the elevator doors opening into the interconnected floor space or the elevator doors opening into the storey above the interconnected floor space shall be protected by vestibules conforming to Sentence (1)

#### 3.2.8.5 Protected Floor Space

- New Sentence (1) A protected floor space used to meet the requirements of 3.4.3.2.(6)(b) shall:
  - (a) Be separated from the interconnected space with a fire separation with a fire resistance rating not less than required for the floor
  - (b) Have all openings in the vertical fire separation between the protected floor space and the adjacent interconnected space with protected with vestibules, and
  - (c) Be designed so that it is not necessary to enter the interconnected space to reach an exit.

# New definition - "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

#### 3.2.8.6 Draft Stops - required at the edge of interconnected opening

• New Sentence (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.

#### **3.4.3.2. Exit Width** – exit width for exit stairs that serve IFS must be cumulative

- Sentence (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
  - (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 floor space.

#### 3.2.8.7 Mechanical Exhaust System New Article

- New Sentence (1) A mechanical system is required to remove air from the interconnected floor space at a rate of 4 air changes per hour
- New Sentence (2) The mechanical exhaust system shall be actuated by a switch located on the storey containing the firefighting entrance, near the annunciator for the fire alarm system

#### 3.2.8.8 Combustible Content Limits – New Article

 New Sentence (1) - Combustible contents excluding interior finishes in parts of the floor area where the ceiling exceeds 8m above the floor are limited to not more than 16g of combustible material for each cubic metre of volume of the interconnected floor space



### **Division B Part 3 – Mezzanine Exiting and Egress**

**3.4.2.2 Means of Egress from Mezzanines -** new means of egress table rather than 3.3.1.5.A and 3.3.1.5.B

Occupancy of Space	Max. Area, m2	Distance Limits, m	Occupancy of Space	Max. Area, m2	Distance Limits, m
Assembly	150	15	Mercantile	150	15
Residential	100	15	F2 Industrial	150	10
Business/Personal	200	25	F3 Low Hazard Industrial	200	15

 Revised Sentence (1) – Except as permitted provided by Sentence (2) to (4) and (3) the space above a mezzanine shall be provided with exits on the same basis as required for floor areas by this section served by means of egress leading to exits accessible at the mezzanine level on the same basis as floor areas

The general rule: mezzanine is served by a means of egress leading to exits accessible at the mezzanine level on the same basis as floor areas:

- Served by minimum 2 enclosed exit stairs (fire separated),
- Enclosed exit stairs meet all appliable exit provisions in Section 3.4. (e.g. distance between exits),
- Exits leads to a safe space outside the building (exterior open space that is protected from fire exposure
- New Sentence (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 3.2.8.2.(1)

b. The occupant load is not more than 60

- c. The area of the mezzanine does not exceed area limits 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 3.3.1.5.(1).
- Revised Sentence (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)

### **Division B Part 3 – Safety Within Floor Areas**

**3.3.1.5. Egress in a floor area unsprinklered Modified Table – A –** table aligns with 3.4.2.2.

Occupancy		2024		2012
	Suite Area	Travel Distance	Suite Area	Travel Distance
Group A	150m2	15m	150m2	15m
Group C	100m2	15m	150m2	25m
Group D	200m2	25m	200m2	25m
Group E	150m2	15m	200m2	25m
Group F2	150m2	10m	200m2	25m
Group F3	200m2	15m	200m2	25m

#### 3.4.3.2 Exit Width - New Tables

- New Sentence (8) the min. widths of exits shall conform to Tables 3.4.3.2.-A and 3.4.3.2.-B
  - As per Tables 3.4.3.2.-A and B the exit width for doorways has increased from 790 mm to 850mm for all doorways including doorways not serving patient or residents sleeping rooms, all other exit widths for stairs, ramps, exit corridors and passageways remain the same

#### 3.4.6.5 Handrails - graspable area increased

 Revised Sentence (5) - The maximum outside diameter size of a graspable handrail has been increased from 43 mm to 50 mm for circular handrails, and the maximum cross section perimeter of a non-circular handrail is increased from 125 mm to 160 mm

### **Division B Part 3 – Exits**

#### 3.4.6.16 Door Release Hardware

- **Revised Sentence (2)(3)** Requires that the door release hardware in an assembly occupancy shall:
  - Extend across not less than one-half of the width of the door,
  - Release the latch, and allow the door to swing wide open in the direction of travel
- Revised (5)(g)(h) Where electromagnetic locks are used, permanently mounted visual and tactile information signs required on doors indicating EMERGENCY EXIT UNLOCKED BY FIRE ALARM (previous requirement to provide a legible sign with lettering that is min. 25mm high with a 5mm stroke)
- New (I) Where electromagnetic locks are installed on doors providing emergency crossover access to floor areas from exit stairs:
  - The device will release on operation of a manual pull station located on the wall on the exit stair side <u>not more than 600mm from the door</u>

- <u>Provide a visual and tactile information sign</u> permanently mounted on the door on the exit side "RE-ENTRY DOOR UNLOCKED BY FIRE ALARM"
- Revised Sentence (7) Door release hardware shall be installed between 900 mm and 1100 mm above the finished floor (previous requirement sentence (8) to be installed at 1200mm above the floor)

**3.6.2.8.** - 2 hr fire separation around service rooms containing generators used for life safety systems (previously 1 hour)

### **Division B Part 3 – Barrier Free**

3.8.1.2 Barrier Free Entrances – all pedestrian entrances required to be accessible

 Revised Sentence (1) - The previous ratio of pedestrian entrances into a building required to be barrier free is removed, and except for rapid transit stations that require only one barrier free entrance, and for service entrances, ALL pedestrian entrances are required to be barrier free and connect to a barrier free exterior path of travel

#### **3.8.2.1** Exempt from Barrier Free path of travel requirements – new exemptions

- New subclauses (I) and (m) added to where a barrier free path of travel is not required throughout the entrance storey and any normally occupied floor areas and rooftop amenity:
  - I. Within a parking level with no barrier free parking spaces
  - m. To the floor level above or below the entrance level in buildings no more than 2 storeys in building height or in 2 storey suites, <u>unless</u> the floor level above or below:
    - i. Is served by a passenger elevator, a platform equipped passenger elevating device, and escalator, or an inclined moving walk,
    - i. Is 600m2 or more in floor area
    - ii. Contains facilities that are not contained on the entrance level, but that are integral to the principal function of the entrance level or,
    - iii. Contains an assembly occupancy of more than 100m2 in floor area

# **3.8.2.2 Barrier Free Paths of Travel to Building Entrances, Exterior Passenger Loading Zones, and Access to Parking Areas**

- Revised Sentence (1) To provide a direct barrier free path of travel is required to a public thoroughfare in addition to where designated parking or an exterior passenger loading zone are provided
- New Sentence (4) In storage garages barrier free path of travel is required between each level with barrier free parking and all other parts of the building that are served by the storage garage

#### **3.8.3.1 Accessibility Signs -** additional signage areas and requirement for tactical signs

- **Revised Sentence (1)** In addition to previous requirements for signage at barrier free entrances, ramps, and exterior passenger loading zones, additional signs shall be provided:
  - Barrier free washrooms, showers, elevators, parking spaces and assistive listening devices or adaptive tech
  - Directional signs are to be provided with visual information
  - Signs installed at or near doors shall be both tactical and visual
  - Visual and Tactile information to comply with CSA B651 Accessible design for the built environment
- New Sentence (5) clarifies that directional signs are to be provided with visual information.
  - New Sentence (7) New requirements for Tactical signs to:
    - Incorporate both braille and tactile characters

- Be installed on the wall closest to the latch side or on the nearest wall in the right side of the door where there is no wall on the latch side, and
- Be centered 1500mm above the floor with the edge of the sign not more than 300mm from the door (previous requirement to mount the sign between 1200-1500mm above the floor)



#### 3.8.3.2 Exterior walks

 Revised Sentence (1)(e) – have not less than 1600mm 1100mm wide surface with a different texture to that surrounding it, where the line of travel is level and even with adjacent walking surfaces

#### 3.8.3.3 Doorways and Doors

- **Revised Sentence (1)** All doorways in a barrier free path or travel are required to be min 850mm (reduced from 860mm for consistency)
- **Revised Sentence (4)** Every pedestrian entrance door is required to be provided with a power door operator regardless of occupancy (previously exempted group F)
- New Sentence (4.1) New requirements for doors with self-closing devices in a barrier free path
  of travel including interior doors of vestibules, entrance doors to suites or rooms served by a public
  corridor or a corridor used by the public shall have a power door operator

#### 3.8.3.4 Barrier Free Ramps – Revised sentences

- Sentence (1)(a) The min. width of barrier free ramps between handrails is increased to 1000mm from 900mm and,
- Sentence (1)(c) The level area at the top and bottom is increased to 1700x1700mm from 1670x1670mm
- Sentence (1)(g) Clarification that a ramp be provided with a 50mm curb OR a horizontal rail or other barrier that extends to 50mm of the top of the ramp

#### **3.8.3.5 Passenger Elevating Devices -** New clear floor area and entry door or gate requirements

- Revised Sentence (1) Passenger elevators in addition to complying with CSA B355 "Lifts for Persons with Physical Disabilities, must also now include:
  - Clear floor space of 1500mm long x 1000mm wide
  - Entry Doors or Gates with

- a clear width of 850mm in the open position if on the short side of the elevator or
- 1100mm in the open position if on either end of the long side of the elevator

#### 3.8.3.13 Showers and Bathtubs - New requirements

- New Sentence (4)(5) Provides that at each location where showers are provided for customers, the public or common use areas for employees, at least one universal dressing and shower room shall be provided and shall:
  - Be located in a barrier free path of travel
  - Have a door capable of being locked from the inside and released from the outside
  - Have a lavatory and mirror as per 3.8.3.11. (Barrier free)
  - Have a barrier free shower in conformance with sentence 3.8.3.132
  - Have a bench at least 1830mm long x 760mm wide and between 480-520mm high
  - Have a transfer space on the long side of the bench 900mm wide by 1830mm long
  - Have a coat hook max. 1200mm above the floor on a side wall with max 50mm projection

#### 3.8.3.14 Service Counters (3.8.3.14.): New Article with minimum dimensions

- Where a service counter is provided a section of the counter shall:
  - Be not less than 800mm long centred over a knee space that is not less than 800mm wide, 685mm high and 485mm deep
  - Have a surface that is not more than 856mm above the floor

#### 3.8.3.16. A Water Bottle Filling Stations – New Article

- At each location where water bottle filling stations are provided at least one shall be equipped with controls that activate automatically or comply with 3.8.1.5.(1)(c). Water bottle stations shall:
  - Be located in a barrier free path of travel
  - Have a clear space of 800mm x 1350mm in front
  - Have a knee space where there is frontal access
  - Be operable at a height of not more than 1200mm above the floor
  - Be equipped with automatic controls or as per 3.8.1.5.(1)





Township of Leeds and the Thousand Islands

# Division B Part 4 Structural Design Changes

## **Highlight Areas**

Key Changes

Wind Load

Earthquake Load and Effects

## **Division B Part 4 – Key Changes**

#### 1.4.1.2./Div A Post Disaster Buildings

- Post disaster buildings expanded to include control centers for natural gas distribution, air and marine transportation, sewage treatment, water storage and water treatment facilities
- The definition also includes Emergency response facilities, Fire, rescue and police stations and Communication facilities (unless exempted by the municipality)

#### 4.1.3.4 Load Combinations for Serviceability

- Moves User's Guide NBC 2015: Part 4 of Division B material on load combinations for serviceability to the main body of the Code
  - Load combinations to check deflection limits for materials not subject to creep, materials subject to creep
    - Principal and companion loads or principal loads only
    - Importance factors for environmental loads applied
    - Includes creep induced deflection as per the applicable design standard(s)
  - A signpost for guidance on vibration serviceability in the Structural Commentaries (User's Guide – NBC 2020) is introduced

Line Charte	Structural	land Care	Load Combinations		
Limit State	Parameter	Load Case	Principal Loads	Companion Loads	
Deflection for materials <b>not</b> subject to creep	Deflection of the structure or of components of the structure <sup>(1)</sup>	1 2 3	1.0 <b>D</b> + 1.0 <b>L</b> 1.0 <b>D</b> + 1.0 <b>W</b> 1.0 <b>D</b> + 1.0 <b>S</b>	0.3W or 0.35S 0.35L <sup>(2)</sup> or 0.35S 0.3W or 0.35L <sup>(2)</sup>	
Deflection for materials <b>subject</b> <b>to creep</b>	Total deflection of the structure or of components of the structure <sup>(3)</sup>	1 2 3	$\begin{array}{c} 1.0 \text{D} + 1.0 \text{L}_{\text{s}}^{(4)} + \\ 1.0 \text{L}_{\text{t}}^{(5)} \\ 1.0 \text{D} + 1.0 \text{W} \\ 1.0 \text{D} + 1.0 \text{S} \end{array}$	0.3W or 0.35S 0.35L <sup>(2)</sup> or 0.35S 0.3W or 0.35L <sup>(2)</sup>	
Vibration serviceability	Acceleration		(6)		

#### 4.1.5.5. Loads for Roof and Parking Decks and Exterior Areas subject to vehicular traffic

- Expands the design requirements for roof parking decks and exterior areas accessible to vehicular traffic to ensure that such areas will be designed for the combination of live load and snow load appropriate for their intended use to <u>the greater of</u>:
  - Load combination including live and snow loads with companion load factor for snow reduced from 1.0 to 0.2.
  - Snow and rain loads

#### 4.1.6.2.(2) Snow Loads for roofs with a Mean Height Lower than 2m

- Clarifies the basic snow roof factor, Cb, for roofs with a mean height less than 1 + Ss/γ, in m, above grade,
  - Cb shall be taken as 1.0
    - vs. Cb less than one for higher roofs
  - The effect of wind tending to drift snow off a roof is diminished when the roof/structural slab is at or in close proximity to the ground level.

#### 4.1.6.16 Snow Loads for roofs with Solar Panels - new loading criteria

- Introduces requirements for the determination of design snow loads for roofs with solar panels.
  - Considers the most critical effect of two load cases:
    - Snow load on roof without solar array

- Snow load on roof with solar array
- Factors Cs (slope factor) and Ca (accumulation factor) are tuned to account for the effect of solar panels
- Solar panels are classified as:
  - Parallel Flush, Parallel Raised or Tilted depending on their angle and distance above the roof compared to snow accumulation height, CbCwSs/γ

#### 4.1.7.12 Canopies and Parapets - new loading criteria

- Introduces provisions for the wind load design of attached canopies on low buildings.
  - Canopies are different from roof overhangs
  - Change based on wind tunnel tests p = IW q Ce Ct Cg Cp (Design of fastener of the top and soffit elements) Pnet = IW q Ce Ct (Cg Cp) net Design of the structure of the canopy.

### Division B Part 4.1.7 – Wind Load

#### 4.1.7.9 Full and Partial Wind Loading

**Sentence (1)** - Except where the wind loads are derived from the combined  $C_gC_p$  values determined in accordance with Article 4.1.7.6., *buildings* and structural members shall be capable of withstanding the effects of the following loads:

2024 OBC		2012 OBC
The full wind loads acting along each of the <u>2</u> principal horizontal axes considered separately,	(a)	The full wind loads acting along each of the <del>two</del> principal horizontal axes considered separately,
75% of the wind loads described in Clause (a) but offset from the central geometric axis of the <i>building</i> by 15% of its width normal to the direction of the force to produce the worst load effect,	(b)	The wind loads as described in Clause (a) but with 100% of the load removed from any on portion of the area,
75% of the wind loads described in Clause (a) but with both axes considered simultaneously, and	(c)	The wind loads as described in Clause (a) but with both axes considered simultaneously at 75% of their full value, and
56% of the wind loads described in Clause (a) but with both axes considered simultaneously and offset from the central geometric axis of the <i>building</i> by 15% of its width normal to the direction of the force.	(d)	The wind loads as described in Clause (c) but with 50% of these loads removed from any portion of the area

#### 4.1.7.13 Wind Loads for Roofs with Solar Panels new loading criteria

- Introduces provisions for roof-mounted solar panels that are based on material from the "Structural Commentaries (User's Guide – NBC 2015: Part 4 of Division B)."
  - Considers the most critical effect of two load cases:
    - Wind load on roof without solar array
    - Wind load on roof with solar array
  - Wind load calculated using p = IW q Ce Ct Cg Cp E Ya Where: E and Ya are the edge factor and pressure equalization factor

#### 4.1.8.4 and SB-1 Introduces NBC 2020 Seismic Hazard Tools

#### 4.1.8.5 Seismic Categories

- Seismic categories are introduced, more user-friendly, to represent the expected magnitude of inertial seismic force in a more realistic manner.
  - Seismic categories determined based on limits for IES(0.2) and IES(1.0)
  - Affects triggering thresholds in Section 4.1.8. in its entirety

 The Seismic Category of a building shall be taken as the more severe of the categories determined based on IES(0.2) and IES(1.0), irrespective of the fundamental lateral period of the building.

#### Table 4.1.8.5.-B Seismic Categories for Buildings Forming Part of Sentence 4.1.8.5.(2)

Seismic Category <sup>(1)</sup>	I∈S(0.2)	IES(1.0)	
SC1	I <sub>E</sub> S(0.2) < 0.2	I <sub>E</sub> S(1.0) < 0.1	
SC2	0.2 ≤ I <sub>E</sub> S(0.2) < 0.35	$0.1 \le I_E S(1.0) \le 0.2$	
SC3	$0.35 \le I_E S(0.2) \le 0.75$	$0.2 \le I_{\rm E} {\rm S}(1.0) \le 0.3$	
SC4	I <sub>E</sub> S(0.2) > 0.75	$I_{\rm E}S(1.0) > 0.3$	

Notes to Table 4.1.8.5.-B:

(1) The Seismic Category of a *building* shall be taken as the more severe of the categories determined on the basis of I<sub>E</sub>S(0.2) and I<sub>E</sub>S(1.0), irrespective of the fundamental lateral period of the *building*, T<sub>a</sub>.

#### **Division B Part 4.1.8 Earthquake Load and Effects**

#### 4.1.8.6 New Sloped Column Irregularity and Related Requirements (Table 4.1.8.6)

- A definition of sloped column irregularity is introduced in Table 4.1.8.6., Structural Irregularities, and requirements for buildings with sloped columns are added.
  - The presence of inclined vertical members in a building leads to a coupling of its horizontal and vertical vibrational modes.
  - Introduces requirements that address the adverse effects of sloped columns in buildings
    - Post-disaster buildings shall not have Type 10 irregularities where the seismic category is SC3 or SC4.
    - High Importance Category buildings shall not have Type 10 irregularities where the seismic category is SC4

Revised	Table 4.1.8.6. Structural Irregularities	
Туре	Irregularity Type and Definition	Notes
1	Vertical Stiffness Irregularity For concrete and masonry shear walls, vertical stiffness irregularity shall be considered to exist where the lateral stiffness of the SFRS in any <u>storeys less</u> than 70% of the stiffness in an adjacent storey, or less than 80% of the average stiffness in the three <u>storeys</u> above or below. For all other types of SFRS, vertical stiffness irregularity shall be considered to exist where the inter storey deflection under lateral earthquake forces divided by the inter-storey height h <sub>s</sub> , of any storey is greater than 130% of that adjacent storey.	(3)(4)(5)
10	Sloped Column Irregularity Sloped column irregularity shall be considered to exist where a vertical member that is inclined more than 2deg from the vertical supports a portion of the weight of the building in axial compression.	(4)

#### 4.1.8.9 New Steel SFRS: Moderately Ductile Steel Plate Walls

- Revised Table 4.1.8.9. to include two new systems:
  - Moderately Ductile Steel Truss Moment-Resisting Frames
    - RdRo of 3.5 and 1.6
    - No limit on the height for SC1 and SC2
    - A limit of 50 and 30 m for SC3 and SC4, respectively
    - Requirements in Annex L of CSA S16-19
  - Moderately Ductile Steel Plate Walls
    - RdRo of 3.5 and 1.3
    - No limit on the height for SC1 and SC2
    - A limit of 40 m for SC3 and SC4
    - Requirements in 27.10 of CSA S16-19

#### 2024 OBC

# SFRS Ductility-Related Force Modification Factors, R4. Overstrength-Related Force Modification Factors, R., and General Restrictions<sup>(1)</sup> Forming Part of Sertiences 4.1.8 %(1) and (5)

# Table 4.1.8.9. SFRS Ductility-Related Force Modification Factors, R4. Overstrength-Related Force Modification Factors, R4. Forming Part of Sentences 4.1.8.9.(1) and (5), 4.1.8.10.(5) and (8), 4.1.8.11.(12), 4.1.8.15.(9) and 4.1.8.20.(8)

Type of SFRS Steel Structur Ductle moment resisting frames Moderately ductile moment -resisting trames Moderately ductile truss moment -rosisting trames Moderately ductile on concentrically braned trames Temoro-compression traces	Ra	Re	Restrictions/P Sesarric Category				
Steel Structur	es Designed and I	Detailed Accord	ing to CSA S16	2)(4)		_	
Ductile moment-resisting frames	5.0	1.5	NL	NL	NL	NL	
Moderately ductile moment-resisting frames	35	1.5	NL.	NL	NI.	NL.	
Limited ductility moment-resisting frames	2.0	1.3	NL.	NL.	60	30	
Moderately ductile truss moment-resisting trames	3.5	1.6	N.	NL.	50	30	
Moderately ductile concentrically braced frames							
Tension-compression braces	3.0	1.3	N.	NL.	40	40	
Tension only braces	3.0	13	NL.	NL.	20	20	
Limited ductility concentrically braced frames							
Tension-compression braces	2.0	1.3	NL.	NL.	60	60	
Tension only braces	2.0	1.3	NL	NL.	40	40	
Ductile buckling-restrained braced frames	4.0	1.2	NL	NL	40	40	
Ductile eccentrically braced frames	4.0	1.5	NL	NL	NL	NL	
Ductile plate walls	5.0	1.6	NL	NL.	NL	NL	
Moderately ductrie plate walls	35	1.3	N.	NL	40	40	
1 5 9 9 99 43 W	20		4=	**	100		

	Re	Ro	Restrictions <sup>(2)</sup>					
Type of SFRS				Cases Where IsF#S#(0.2)			Cases Where IcF.S.(1.0)	
			< 0.2	≥ 0.2 to < 0.35	≥ 0.35 to ≤ 0.75	> 0.75	> 0.3	
Steel S	tructures Des	igned and Det	ailed According	to CSA S16 <sup>2</sup>	(6)			
Ductile moment-resisting frames	5.0	1.5	NL.	NL.	NL.	NL.	NL	
Moderalely ductile moment-resisting frames	3,5	1.5	NL.	NL	NL	NL	NL	
Limited ductility moment-resisting frames	2.0	1,3	NL	NL	60	30	30	
Moderately ductile concentrically braced frames								
Tension-compression braces	3.0	1.3	NL.	NL	-40	40	40	
Tension only braces	3.0	1.3	NL	NL	20	20	20	
Limited ductility concentrically braced trames								
Tension-compression braces	2.0	1.3	NL	NL	60	60	60	
Tension only braces	2.0	1.3	NL	NL	40	40	40	
Ductile buckling-restrained braced frames	4.0	1.2	NL	NL	40	40	-40	
Ductile accentrically braced frames	4.0	1.5	NL.	NL	NL.	NL.	NL	
Ductile plate walls	5.0	1.6	NL	NL	NL	NL	NL	
Limited ductility plate walls	2.0	1.5	NL	NL	60	60	60	
		-		-				

#### 4.1.8.11.(9) Revised Requirements for Irregularity Type 9

- Revised requirements for Irregularity Type 9 buildings with high irregularity ratio, α ≥ 0.2 in highhazard seismic areas.
  - It requires non-linear dynamic analysis to account for complex aspects of the building response like:
    - Considering vertical ground accelerations
    - Reduced allowable sidesway movement by 40%
    - Vertical response of the building mass

#### 4.1.8.18 Elements of Structures, Non-Structural Component

- The lateral earthquake force calculations in Sentence 4.1.8.18.(1) have been revised for clarity and to align with the 2020 NBC.
  - For non-structural elements and components of buildings, they must be designed for a specified lateral earthquake force VP, distributed according to the distribution of mass as per the revised formula: Vp= 0.3 S(0.2) IESpWp
- Revised Table 4.1.8.18 Specifying that cladding panels be designed using category 1 or 2 as appropriate.

Category	Part or Portion of Building	Cp	A	Rp
rchitectural a	and Structural Components			
1	All exterior and interior walls, and cladding panels, except those in Category 2 or 3	1.00	1.00	2.50
2	Cantilever parapet and other cantilever walls, including cantilever cladding panels, except retaining walls	1.00	2.50	2.50
3	Exterior and interior ornamentations and appendages	1.00	2.50	2.50
4	Floors and roofs acting as diaphragms <sup>(2)</sup>	-		
5	Towers, chimneys, smokestacks and penthouses when connected to or forming part of a building	1.00	2.50	2.50
6	Horizontally cantilevered floors, balconies, beams, etc.	1.00	1.00	2.50
7	Suspended ceilings, light fotures and other attachments to ceilings with independent vertical support	1.00	1.00	2.50
8	Masonry veneer connections	1.00	1.00	1.50
9	Access floors	1.00	1.00	2.50
40	Masonry or concrete fences more than 1.8 m tall	1.00	1.00	2.50

Table 4.1.8.18.

Elements of Structures and Non-Structural Components and Equipment<sup>(1)</sup>

Forming Part of Sentences 4.1.8.18.(1) to (3), (6), (7) and (16), and Clauses 4.1.8.23.(2)(c) and (3)(c)

# **4.2** Foundations - An engineer is now required for subsurface investigation, including groundwater conditions

- The term "qualified person" in Section 4.2. has been replaced by "professional engineer" to harmonize with the 2020 NBC, set examples below:
  - Under Article 4.2.2.1., a subsurface investigation, including groundwater conditions must be carried out, by or under the direction of a <u>professional engineer</u>.
  - Under Article 4.2.4.1., design basis, communication, interaction and coordination must take place between the designer and the <u>professional engineer</u> responsible for the geotechnical aspects of the project

#### 4.4.3.1. Design of Storage Racks – New provisions

- Mandate that storage racks are required to comply with structural design loads identified in the Building Code.
  - This change would ensure the same level of safety for storage racks as other structures.
  - Now that their design is addressed in Part 4, it is a shift from current practice considering storage racks as industrial furniture and dealing with its connection to building.

#### 4.4.5. Manure Storage Tanks relocated to Part 2

- Requirements for Manure Storage Tanks in 4.4.5. have been moved to Part 2, Farm Buildings.
  - OBC Part 4 requirements are maintained and combined with NBC requirements in Article 2.3.2.5. Additional requirements adopted from the 2020 NBC include:
    - Liquid manure tanks are of Normal Importance (2.3.1.1.(3))
    - Top of liquid manure tanks subject to any occupancy or environmental loads must be designed to the appropriate loads.
    - Walls and partitions of liquid manure tanks must be designed for internal pressure based on fluid density of 10 kN/m3 or anticipated ice pressure.



Township of Leeds and the Thousand Islands

# Division B Part 5 Environmental Separation Changes

**Highlighted Areas** 

Key Changes

## **Division B Part 5 – Key Changes**

#### 5.1.1.1. Scope - Clarifies what Part 5 addresses

(1) The scope of this Part shall be as described in Subsection 1.1.2. of Division A. (See Appendix A)

- Sentence (1) This Part is concerned with
  - (a) the control of condensation
    - (i) in building components and assemblies, and
    - (ii) on building materials, components and assemblies, and
  - (b) the transfer of heat, air, moisture and sound through
    - (i) building materials, components and assemblies, and
    - (ii) interfaces between building materials, components and assemblies.

# **5.1.4.2. Resistance to Deterioration** – revised to exclude CSA 478's prescribed min. service life of building and designer consideration

- Sentence (3) Design and construction of assemblies separating dissimilar environments and assemblies exposed to the exterior shall be in accordance with good practice, such as described in CSA S478, "Durability in buildings," except that the prescribed minimum design service life of a building and the prescribed minimum design service life of building elements need not comply with Table 1 and Table 2 of that Standard.
- New Sentence (4) The design service life of a building and the design service life of a building element shall be considered by the designer in consultation with the building owner.

#### 5.4.1.1. - Required Resistance to Air Leakage - revised sentence 1 to include radon when air sealing

- Sentence (1) Where a building component or assembly separates interior conditioned space from exterior space, interior space from the ground, or environmentally dissimilar interior spaces, the properties and position of the materials and components in those components or assemblies shall be such that they control air leakage or permit venting to the exterior so as to,
  - (e) minimize the ingress of airborne radon and other soil gases from the ground with an aim to controlling the indoor concentrations of these gases to an acceptable level

# 5.4.1.1. – Required Resistance to Air Leakage – New max air leakage rates for air barrier assemblies and continuity

- Sentence (2) Except as provided in Sentence (7), an air barrier system shall be installed designed and constructed to provide the principal resistance to air leakage to meet the requirements of Sentence (1).
- New Sentence (3) The air barrier system shall incorporate air barrier assemblies that meet the appropriate Performance Class as defined in Table 5.4.1.1.
- New Sentence (4) The air barrier system shall be designed and constructed to be Continuous
  - (a) across construction, control and expansion joints,
  - (b) across junctions between different air barrier assemblies, and
  - (c) around penetrations through air barrier assemblies.
- New Sentence (5) The structural design of air barrier assemblies, including junctions between air barrier assemblies, subject to air pressure loads shall comply with Article 5.1.4.1. and Subsection 5.2.2.
- New Sentence (6) The maximum air leakage rates specified in Table 5.4.1.1. are permitted to be increased where it can be shown that the higher rate will not adversely affect any of

- (a) the health or safety of the building users,(b) the intended use of the building, or(c) the operation of building services.

Table 5.4.1.1.							
Maximum	Air Leakage Rates for Air Barrier Assemblies						
Forming Part of	Sentences 5.4.1.1.(3) and (6) and 5.4.1.2.(1) and	(2)					

Performance Class	Maximum Air Leakage Rate, L / (s × m <sup>2</sup> ), at a Pressure Differential of 75 Pa
1	0.05
2	0.10
3	0.15
4	0.20
5	0.50



Township of Leeds and the Thousand Islands

# Division B Part 6 Heating, Ventilating and Air Conditioning Changes

## **Highlighted Areas**

Ventilation Systems

Ventilation, Insultation and Fire Safety

Fire Safety Systems

Heating and Air Conditioning Restructuring

### **Division B Part 6 – Ventilation Systems**

#### 6.3.1.2. Crawl Spaces and Attic or Roof Spaces - Revised crawlspaces and required ventilation

#### 6.3.1.3.(1) Ventilation of Storage and Repair Garage - Revised

- changed to 5 or more requiring mechanical ventilation to align with part 9 changes
- Clause 1(a) no longer prescribes 900-1800mm from floor when measuring the concentration limit of carbon monoxide.

#### 6.3.2.2.(1) Drain Pans - Revised

 Modified to clarify drain pans required for all HVAC systems that generate condensate or introduce liquid water into the airstream in ducts

# **6.3.2.3.(1) Materials in Air Duct Systems - Revised -** Provides fire safety provisions in ducts construction

• References Article 3.6.5.1. for the fire safety requirements of materials used to construct ducts, duct connectors, associate fittings and plenums.

#### 6.3.2.5.(1) Duct Coverings, Linings, Adhesives and Insulation – Revised - References part 3

• References Article 3.6.5.4. for the fire safety characteristics of coverings, linings and associated adhesives and insulation used in air ducts, plenums and other parts of air duct systems.

#### 6.3.2.9. Supply, Return, Intake and Exhaust Air Openings, formerly 6.2.3.12.

Revised Sentence (3) Outdoor air intakes shall be located so that they are separated a minimum distance from sources of contaminants in accordance with table 6.2.3.12. installed not less than 0.3 m above roofs, landscape grades or other surfaces, taking into account anticipated snow accumulation levels.

#### 6.3.2.15. (new sentences 1-11) and 6.3.2.16 (new sentences 2-6) - revised to minimize health effects

- Requires evaporative heat rejection equipment to incorporate a means to disperse entrained water droplets and comply with the manufacturer's specifications for the design discharge velocity. (6.3.2.15.(1))
- Continuous water circulation required in all parts of the system that are normally wetted during operation. When not operating, these systems are also required to incorporate a method to prevent water stagnation. (6.3.2.15.(2)) and 6.3.2.16.(2)
- Systems and components are to be constructed of corrosion-resistant, non-porous materials that do not promote the proliferation of disease-causing micro-organisms. 6.3.2.15.(3) and 6.3.2.16.(3) and (5)
- Specifies distance between air discharge locations and certain outdoor spaces and building components. 6.3.2.15.(5))
  - (a) 2.15 m above sidewalks and driveways,
  - (b) 7.6 m from outdoor air intakes,
  - (c) 3 m horizontally or vertically from exterior doors and operable windows, and
  - (d) 3 m horizontally or vertically from occupiable outdoor spaces, excluding maintenance spaces.
- Requires air intakes to incorporate measures to minimize entrainment of organic matter. 6.3.2.15.(7)
- Make-up water connections are required to be equipped with backflow prevention devices 6.3.2.15.(8) and 6.3.2.16.(6)
- Requires drains, overflows and blowdowns to be connected to the building's drainage system. 6.3.2.15.(10)

- Systems and equipment for controlling the proliferation of disease-causing micro-organisms shall Include means for drainage, dilution, cleaning, and application of chemicals for the control of scale, corrosion and biological contamination. 6.3.2.15.(9)
- Provided with access openings, service platforms, fixed ladders and fall-restraint connections to allow inspection, maintenance and testing. 6.3.2.15.(11) and 6.3.2.15.(4)
- Associated sumps include auxiliary drains to prevent the overflow of water into ductwork, and be installed so that they can be flushed, drained, cleaned and disinfected. 6.3.2.16.(4)

### **Division B Part 6 – Ventilation, Insulation and Fire Safety**

**6.3.3.1. Chimneys and Ventilation Systems** – combustion products from appliances be discharged away to avoid contamination

- New Sentence (2) Except as provided in Article 6.2.1.5., vented products of combustion, other than those referred to in Sentence (1), shall be discharged away from the building, so as not to reenter it, to a distance not less than
  - (a) 2.15 m above sidewalks and driveways,
  - (b) 3 m from outdoor air intakes,
  - (c) 3 m horizontally or vertically from doors and operable windows, and
  - (d) 3 m horizontally or vertically from occupiable outdoor spaces, excluding maintenance spaces.

# **6.5.1.1. Insulation and Coverings** – Amended Sentence (3) to reduce max temp from 70 to 52 degrees where subject to human contact

• Exposed piping or equipment subject to human contact shall be insulated so that the temperature of the exposed surface does not exceed 52°C.

# **6.9.1.1. Fire Safety Requirements – New** sentences (1) and (2) reference part 3 with some fire safety characteristics

- Sentence (1) The fire safety characteristics of heating, ventilating and air conditioning systems shall comply with Subsection 3.6.5.
- Sentence (2) Characteristics referred to in Sentence (1) include but are not limited to
  - (a) use of combustible materials in duct systems,
  - (b) flame-spread ratings and smoke-developed ratings of duct and pipe materials and coverings,
  - (c) installation of equipment relative to property lines, and
  - (d) requirements for fire dampers and fire stop flaps.

### **Division B Part 6 – Fire Safety Systems**

**6.9.3.1 Carbon Monoxide Alarms, - expands to care occupancies** and other parts of residential occupancies

- Sentence (1) Article 6.9.3.2. applies to every building that
  - (a) contains a residential occupancy, a care occupancy with individual suites, or a care occupancy containing sleeping rooms not within a suite, and contains a fuel-burning appliance or a storage garage, or
  - (b) contains a residential occupancy and is served by a forced-air fuel-burning appliance not contained within the building.

This Subsection applies to every building that, (a) contains a residential occupancy, and (b) contains a fuel burning appliance or a storage garage

• Sentence (2) Clarifies Articles 6.9.3.3. and 6.9.3.4. apply to every building

# **6.9.3.2.** Location of Carbon Monoxide Alarms, – Expands to care occupancies in addition to residential occupancies

- Sentence (1) A carbon monoxide alarm shall be installed in a suite of residential occupancy or care
  occupancy where,
  - (a) a fuel-burning appliance or a flue is installed in the suite,
  - (b) a forced-air fuel-burning appliance provides heated air directly to the suite,
  - (c) a fuel-burning appliance or a flue is located in a room, suite or area that shares a common wall or floor or ceiling assembly with the suite, or
  - (d) a storage garage shares a common wall or floor or ceiling assembly with the suite. Where a fuel burning appliance is installed in a suite of residential occupancy, a carbon monoxide alarm shall be installed adjacent to each sleeping area in the suite.
- Sentence (2) specifies carbon monoxide alarms must be installed in a suite of residential occupancy or care occupancy, adjacent to each sleeping room and on each storey without a sleeping room, except in combined living and sleeping areas
- Sentence (3) specifies carbon monoxide alarms in combined living and sleeping areas in a suite of residential occupancy or care occupancy shall be installed in the combined living and sleeping area

#### 6.9.3.2. Location of Carbon Monoxide Alarms, - where required and located

- New Sentence (4) In addition to the carbon monoxide alarms required to be installed in a suite of residential occupancy or care occupancy in accordance with Sentence (2), a carbon monoxide alarm shall be installed in each sleeping room within the suite where the sleeping room
  - (a) contains a fuel-burning appliance or a flue, or
  - (b) shares a common wall or floor or ceiling assembly with
    - (i) a room, suite or area that is located outside the suite and contains a fuel-burning appliance or a flue, or
    - (ii) a storage garage.
- New Sentence (5) Carbon monoxide alarms shall be installed in public corridors serving suites of residential occupancy where the corridor is directly heated by a forced-air fuel-burning appliance.
   <u>Placement</u>:
  - New Sentence (6) Where carbon monoxide alarms are required to be installed in a public corridor, the carbon monoxide alarms shall be installed such that
  - (a) there is at least one carbon monoxide alarm in each portion of a divided corridor, and
  - (b) each carbon monoxide alarm in an undivided portion of a corridor is spaced not more than 25 m apart.

# **6.9.3.3. Location of Carbon Monoxide Alarms in <u>All Buildings</u> – Requires carbon monoxide regardless of the occupancy type**

- Sentence (1) A carbon monoxide alarm shall be installed <u>in service rooms</u> or other areas of a building where the service room or other area
  - (a) contains a fuel-burning appliance used for building services or laundry drying equipment, and
  - (b) is not located within a suite of residential occupancy.

# **6.9.3.4. Installation and Conformance to Standards** – allows battery operated and introduces visual component

 Sentence (1) has been expanded to specify the duration of operation for permanently connected carbon monoxide alarms under back-up battery mode to not less than 8-12 hours. Additionally, the wiring requirements of carbon monoxide alarms now include activation of alarms in a public corridor serving suites of residential occupancy Exceptions:

- Sentence (2) where a building is not supplied with electrical power, carbon monoxide alarms are permitted to be battery operated.
- New Sentence (3) Except as permitted in Sentence (4), the carbon monoxide alarms required by Articles 6.9.4.2. and 6.9.4.3. shall have a visual signaling component conforming to the requirements in 18.5.3. (Light, Color and Pulse Characteristics) of NFPA 72, Exceptions:
  - Sentence (4) Where the building is not supplied with electrical power, carbon monoxide alarms need not have a visual signaling component.
  - Sentence (6) The visual signaling component need not (a) be integrated with the carbon monoxide alarm provided it is interconnected to it, (b) be on battery backup, or (c) have synchronized flash rates, when installed in a dwelling unit.
- New Sentence (5) The luminous intensity for visual signaling components required by Sentence (3) that are installed in sleeping rooms or combined living and sleeping areas shall be a minimum of 175 cd.
- New Sentence (7) The carbon monoxide alarms required by Articles 6.9.3.2. and 6.9.3.3. shall be installed
  - at the manufacturer's recommended height, or
  - in the absence of specific instructions, on or near the ceiling

### Heating and Air Conditioning Restructuring

The following Table lists the relocation of the Articles from Part 6 to Part 3 in the 2024 OBC

2012 OBC	2024 OBC	Article Title
6.2.3.2	3.6.5.1.	Materials in Air Duct Systems
6.2.3.16.	3.6.5.2.	Vibration Isolation Connectors
6.2.3.17.	3.6.5.3.	Таре
6.2.3.4	3.6.5.4.	Coverings, Linings, Adhesives and Insulation
6.2.9.2.	3.6.5.5.	Insulation and Coverings
6.2.3.20.	3.6.5.8.	Return-Air Systems
6.2.4.10.	3.6.5.6.	Clearance of Ducts and Plenums

The following Table lists the relocation of the Articles from former Subsection 6.2.4. to 9.33.6. in the 2024 OBC

2012 OBC	2024 OBC	Article Title
6.2.4.1.	9.33.6.1.	Application
6.2.4.2.	9.33.6.2.	Material in Air Duct Systems
6.2.4.9.	9.33.6.3.	Таре
6.2.4.8.	9.33.6.4.	Coverings, Linings and Insulation
6.2.4.2.(3).	9.33.6.5.	Galvanized Steel or Aluminum Supply Ducts
6.2.4.3.	9.33.6.6.	Construction of Ducts and Plenums
6.2.4.3.	9.33.6.7.	Installation of Ducts and Plenums
6.2.4.10.	9.33.6.8.	Clearances of Ducts and Plenums
6.2.4.6.	9.33.6.9.	Adjustable Dampers and Balance Stops
6.2.4.13.	9.33.6.10	Warm-Air Supply Outlets and Return-Outlets
6.2.4.13.	9.33.6.10A.	Supply, Return, Intake and Exhaust Openings
6.2.4.4.	9.33.6.11	Warm-Air Supply Outlets
6.2.4.7.	9.33.6.12	Return-Air Inlets
6.2.4.14.	9.33.6.14	Filters and Odour Removal Equipment
6.2.4.11.	9.33.6.14A	Exhaust Ducts and Outlets



Township of Leeds and the Thousand Islands

# Division B Part 7 Plumbing Changes

## **Highlighted Areas**

Materials and Equipment

Piping and Resting

Drainage Systems

Venting Systems

Non-Potable Water

Non-Potable Water Systems

## **Division B Part 7 – Materials and Equipment**

#### Editorial Changes - Harmonize with the National Plumbing Code

- The defined term "size" has been replaced with "nominal pipe size" or "NPS" to align with industry terminology.
- The term "certified to" has been replaced by "conform to" for consistency with the 2020 NPC with respect to referencing material standards

**7.1.3.1 Lighting and Ventilation Requirements** – requires lighting and ventilation where plumbing fixtures are installed

• New Sentence (1) prohibits plumbing fixtures from being located in a room without lighting and ventilation.

# **7.1.4.1.(1) Section Seismic Restraints and Design -** New Section to provide seismic protection of plumbing systems

• New Sentence (1) - Plumbing systems in buildings constructed in accordance with Part 3 shall be designed and installed to accommodate the seismic forces addressed in Subsection 4.1.8

**7.2.1.6. Working Pressure of Water Service Pipe -** regulate working pressure to not less than max watermain pressure

• New Sentence (1) - The working pressure rating of a water service pipe shall not be less than the maximum water main pressure at their point of connection as established by the water supply authority.

**7.2.3.1. Traps** – always require a cleanout plug at the lowest part of the trap **or** part of the trap removable for cleaning

- Clause 3(b) has been revised so that only part of the trap is required to be removable for cleaning purposes.
- Clause 3(c) has been removed as an option for cleanout provision when the trap is installed below the floor without a cleanout plug. be provided with a cleanout installed above the floor as close as practical downstream of the trap when the trap is, (i) installed below the floor, and (ii) not readily accessible for cleaning as required by Clause (a)
- Sentence (4) no longer makes reference to the S-trap.

# **7.2.5.15 Polyethylene of Raised Temperature Tube and Fittings - New Article** Introduces PE-RT and acceptable uses

- New Sentence (1) Polyethylene of raised temperature (PE-RT) tube and manufacturer-approved fittings used in hot and cold potable water systems shall conform to CSA B137.18, "Polyethylene of raised temperature resistance (PE-RT) tubing systems for pressure applications."
  - New Sentence (2) The use of PE-RT tube shall conform to Table 7.2.5.15

Table 7.2.5.15.

### Permitted Uses of Polyethylene of Raised Temperature (PE-RT) Tube

Forming Part of Sentence 7.2.5.15.(2)

	Plumbing Purposes(1)								
Type of	Drainage System			Venting System		Potable Water System			
Tube	Aboveground inside building	Underground under building	Building Sewer	Above- ground	Under- ground	Cold	Hot	Under building	Outside building
PE-RT	N	N	N	N	N	Р	P	Р	Р

#### 7.2.5.16 Cellular Core PVC Pipe and Fittings - New Article Introduces Cellular Core pipe

- New Sentence (1) Cellular core PVC pipe shall
  - a. Conform to ASTM F3128, "Standard Specification for Poly(Vinyl Chloride) (PVC)Schedule 40 Drain, Waste, and Vent Pipe with a Cellular Core," and
  - b. Be light grey, as specified in CSA B181.2, "Polyvinylchloride (PVC) and chlorinated polyvinylchloride (CPVC) drain, waste, and vent pipe and pipe fittings."
- New Sentence (2) Fittings and solvent cements for cellular core PVC pipe shall conform to CSA B181.2, "Polyvinylchloride (PVC) and chlorinated polyvinylchloride (CPVC) drain, waste, and vent pipe and pipe fittings."
- New Sentence (3) Cellular core PVC pipe shall only be used in residential buildings containing 1 or 2 dwelling units and in row houses that do not exceed 3 storeys in height.

#### 7.2.7.1 Copper and Brass Pipe - Where copper pipe is permitted

- Revised Sentence (1) Copper pipe shall conform to
  - (a) ASTM B42, "Standard Specification for Seamless Copper Pipe, Standard Sizes," and
  - (b) Table 7.2.7.4.

Type of Copper Tube or Pipe	Water Distribution System		Building	Drainag	e System	Venting System	
	Underground	Above-ground	Sewer	Underground	Above-ground	Underground	Above-ground
K & L hard temper	N	P	Р	Р	P	Р	P
K & L soft temper	Р	P	N	N	N	N	N
M hard temper	N	P	N	N	P	N	P
M soft temper	N	N	N	N	N	N	N
DWV	N	N	N	N	P	N	P

Table 7.2.7.4. Permitted Use of Copper Tube and Pipe Forming Part of Sentences 7.2.7.1.(1) and 7.2.7.4.(2)

Notes to Table 72.7.4.:

(1) P = Permitted and N = Not Permitted.

#### 7.2.7.4 Copper Tube - extend prohibition on copper use for urinals

 New Sentence (3) – Copper tube shall not be used for the fixture drain or the portion of the vent pipe below the flood level rim of a urinal

#### 7.2.10.6 Valves, Supply and Waste Fittings

• New Sentence (2) - Except for lavatories in healthcare facilities, emergency eye washes, and emergency showers, supply fittings and individual shower heads shall have an integral means of limiting the maximum water flow rate to that specified in Table 7.2.10.6.

Table 7.2.10.5. Water Flow Rates from Supply Fitting Forming Part of Santance 2.2.10.6 (2)	Table 7.6.4.1. Maximum Flow Rates for Water Supply Fittings Forming Part of Sentence 7.6.4.1.(1)			
Supply Fittings	Maximum Water Flow Rate, LPM	Fitting	Maximum Flow, L/min	Test Pressure, kPa
Lavatory supply fittings		Lavatory Faucets in Residential Occupancy	5.7	413
private	5.7	Lavatory Faucets in Other Occupancies	1.9	413
nubic	19	Kitchen Faucet	8.35	413
pase		Shower Heads in Residential Occupancy	7.6	550
Kitchen supply fittings (except those in industrial, commercial or institutional kitchens)	8.3	Shower Heads in Other Occupancies	9.5	550
Shower heads	7.6	Column 1	2	3

#### Water Temperature Control (7.2.10.7.): automatically maintain selected water temperature

- New Sentence (1) Except as provided in Sentences (2) and (3), water supplied to shower heads or bathtubs shall be controlled by an automatic compensating valve conforming to
  - a. ASME A112.18.1 / CSA B125.1, "Plumbing Supply Fittings," or
  - b. ASSE 1016 / ASME A112.1016 / CSA B125.16, "Performance Requirements for Automatic Compensating Valves for Individual Showers and Tub/Shower Combinations."

Exceptions:

- New Sentence (2) The requirement in Sentence (1) is permitted to be waived where hot water supplied <u>only to bathtubs</u> is controlled by
  - (a) an automatic compensating valve conforming to CSA B125.3, "Plumbing fittings," or
  - (b) a temperature-limiting device conforming to ASSE 1070 / ASME A112.1070 / CSA B125.70, "Performance requirements for water temperature limiting devices."
- New Sentence (3) The requirement in Sentence (1) is permitted to be waived where the water is supplied by a single tempered water line controlled by an automatic compensating valve conforming to CSA B125.3, "Plumbing fittings."
- Revised Sentence (4) Except as provided in Sentences (5) and 7.6.5.3.(1), the maximum temperature of hot water supplied to fittings in a residential occupancy discharging from a shower head or into a bathtub shall not exceed 49°C. (requires all occupancies where showers provided, not just residential)

#### Exceptions:

- New Sentence (5) In healthcare facilities and retirement homes, the temperature of water discharging from <u>a shower head or into a bathtub shall</u>
  - a. Not exceed 43°C, and
  - b. Be adjusted at the shower or bathtub controls.

#### 7.2.10.7.A Temperature Control Devices - Require Temp Control in Child Care Centres

- Revised Sentence (1) A water distribution system supplying hot water to any bathtub, shower or hand basin that is accessible to a patient or resident in a Group B, Division 2 or 3 occupancy or a resident of a group home, home for special care or residence for adults with developmental disabilities, or children within childcare centres shall have one or more temperature gauges and control devices that are
  - a. Accessible only to supervisory staff, and
  - b. Capable of being adjusted to ensure that the temperature of the water supplied to the fixtures does not exceed 49°C.

# 7.2.10.7.C Linings and Coatings of Water Storage Tanks - Not applicable to domestic tanks in a house

• Revised Sentence (1) - Linings and coatings of domestic water storage tanks that come into contact with potable water and are not within a secondary suite or an individual dwelling unit shall conform to NSF/ANSI 61, "Drinking Water System Components - Health Effects."

# **7.2.11.3 Tracer Wire (7.2.11.3.):** Additional option for tracer wire installed underground on fire service mains

- Revised Sentence (1) Except as provided in Sentence (2), every non-metallic water service pipe or fire service main shall have attached to it
  - a. 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 or,
  - b. a 12 gauge copper clad steel light coloured plastic coated tracer wire.

# **7.3.3.1. Drilled and Tapped Joints -** Allow drilled and tapped joints in sanitary drainage pipe and fittings

• Sentence (1) has been amended to allow drilled and tapped joints in sanitary drainage pipe and fittings only if suitable provision for drilling and tapping has been made.

# **7.3.3.2. Extracted Tees -** Conditions for extracting tees in copper tube used in a water distribution system

- New Sentence (1) Tees may be extracted from the wall thickness of Types K and L copper tube used in a water distribution system, provided that,
  - a. A tool specifically designed for the purpose is used,
  - b. The branch is at least one NPS smaller than the tube in which the tee is formed,
  - c. The end of the branch incorporates a means to prevent it from penetrating into the run and thereby obstructing flow, and
  - d. The joint at the tee is brazed with a filler metal having a melting point not below 540°C.

#### 7.3.3.4. Unions and Slip Joints

• Revised Sentence (1) which prohibits union joints downstream of a trap weir in a drainage system or venting system, has been amended to recognise the existing exception in Sentence 7.4.6.3.(6) which allows the use of union joints for pumped sumps.

#### 7.3.3.8 Connection of Floor Outlet Fixtures

• New Sentence (5) has been introduced to allow that floor mounted water closets can be attached to either the floor or floor flange.

### **Division B Part 7 – Piping and Testing**

#### 7.3.4.5. Support for Horizontal Piping

- Revised Sentence (2) Nominally horizontal piping shall be supported as stated in Table 7.3.4.5.
- Revised Sentence (3) to now specify PVC, CPVC or ABS plastic types for hanger support
- New Sentence (4) (Additional hanger restrictions for plastic pipe) Where PEX, PE-RT, PP-R, PE/AL/PE or PEX/AL/PEX plastic pipe or tube is installed, hangers shall not compress, cut or abrade the pipe.

Table 7 3 4 5

Piping Material	Maximum Horizontal Spacing of Supports, m	Additional Support Conditions
ABS or PVC plastic pipe	12	At the end of branches or fixture drains and at changes in direction and elevation
ABS or PVC plastic trap arm or fixture drain pipe > 1 m long	n/a	As close as possible to the trap
Cast-iron pipe	30	At or adjacent to each hub or joint
Cast-iron pipe with mechanical joints that is ≤ 300 mm long between adjacent fittings	1.0	None
Copper tube or copper and brass pipe, hard temper		
<ul> <li>diameter &gt; NPS 1</li> <li>diameter &lt; NPS 1</li> </ul>	3.0 2.5	None
Copper tube, soft temper	25	None
CPVC pipe	1.0	None
Galvanized iron or steel pipe • diameter ≥ MPS 6 • diameter < NPS 6	3.75 25	None
Lead pipe	Throughout length of pipe	None
PE/AL/PE composite pipe	1.0	None
PEX/AL/PEX composite pipe	1.0	None
PEX plastic pipe	08	None
PE-RT tube	0.8	None
PP-R plastic pipe	1.0	At the end of <i>branches</i> and at changes in direction and elevation
Stainloss stool pipe		
<ul> <li>diameter ≥ NPS 1</li> <li>diameter &lt; NPS 1</li> </ul>	3.0 2.5	None
Stainless steel tube		
<ul> <li>diameter ≥ NPS 1</li> <li>diameter &lt; NPS 1</li> </ul>	3.0 2.5	None

7.3.6.7 Ball Tests - Requires test Ball size for pipes less than 3"NPS

- Revised Sentence (2) The diameter of the ball shall be not less than
  - a. 50 mm where the size of the pipe is NPS 3 4 in. pipe or more, or
  - b. 25 mm where the size of the pipe is less than NPS 3.

#### 7.4.2.1 Connections to Sanitary Drainage Systems

Subclause (1)(a)(ii) has been amended to require a backwater valve to be installed in the fountain fixture drain when the system is subject to backflow

### **Division B Part 7 – Drainage Systems**

#### 7.4.5.1 Traps for Sanitary Drainage Systems - Allow an interceptor with a water seal to serve as a trap.

 Revised Sentence (5) - An interceptor with an effective water seal of not less than 38 mm is permitted to serve as a trap. A grease interceptor shall not serve as a fixture trap and each fixture discharging through the interceptor shall be trapped and vented.

# 7.4.5.2 Traps for Storm Drainage Systems - Requirements for the trap that protects a floor drain connected to storm

- New Sentence (2) A floor drain that drains to a storm drainage system shall be protected by a trap that
  - a. is located between the floor drain and a leader, storm building drain or storm building sewer,
  - b. may serve all floor drains located in the same room, and
  - c. need not be protected by a vent pipe.

#### 7.4.6.3 Sumps or Tanks – require a water and airtight cover

- New Sentence (3) has been added to require a water and airtight cover where the sump or tank receives subsurface water from a subsoil drainage pipe
- 7.4.7.1 Cleanouts for Drainage Systems Change in direction permitted on pipes not more than 6"
- New Sentence (5) A building sewer shall not change direction or slope between the building and public sewer or between cleanouts, except that pipes not more than NPS 6 may change direction
  - a. by not more than 5° every 3 m, or
  - b. by the use of fittings with a cumulative change in direction of not more than 45°.
- Revised Sentence (7) Clause 7(b) has been amended to require a cleanout fitting not more than 3 m upstream of the bottom of the stack (used to be 1000mm)

# 7.4.7.2 Size and Spacing of Cleanouts - increases developed length between building and first manhole

Revised Sentence (3) - The developed length of a building sewer between the building and the first
manhole to which the building sewer connects shall not exceed 75 m. 30 m.

**7.4.9.3 Size of Fixture Outlet Pipes** – Specify sizing requirements for clothes washer trap not draining into laundry trays

- Revised Sentence (3) Where clothes washers do not drain to a laundry tray, the trap inlet shall be not less than NPS 2 and be fitted with a vertical standpipe that is not less than 600 mm long measured from the trap weir and terminates above the flood level rim of the clothes washer.
- **Revised Notes to Table 7.4.9.3** clarify that there is no requirement for hydraulic load for emergency floor drains.

# **7.4.10.3 Hydraulic Loads from Fixtures with a Continuous Flow** – amended to address flow drains to a combined sewer

• Revised Sentence (2) - Where a fixture or equipment that produces a continuous or semi-continuous flow drains to a combined sewer or to a storm sewer, storm drainage system, the hydraulic load from the fixture is 900 L for each litre per second of flow.

#### 7.4.10.6 Hydraulic Loads to Soil or Waste Pipes - New Tables 7.4.10.6.B and 7.4.10.6.C added

**7.4.10.7 Hydraulic Loads on Branches -** Reference to Table 7.4.10.7. in Sentence (1) replaced by new Table 7.4.10.6.B for hydraulic load that is drained to a branch.

#### 7.5.4.5. Fixtures Draining into Vent Pipes

• Revised Sentence (1) to require the section of the vent pipe that acts as a wet vent to be not less than NPS 2.

Table 7.4.10.6B Maximum Permitted Hydraulic Load Drained to a Branch Forming Part of Sentences 7.4.10.6.(2), 7.4.10.7.(1) and 7.5.7.3.(2)			
Nominal Pipe Size of Branch, NPS	Maximum Hydraulic Load, fixture units		
1%	2		
1½	3		
2	6		
3	27		
4	180		
5	390		
6	700		
8	1 600		
10	2 500		
12	3 900		

7.4.10.10 Hydraulic Loads to Roof Gutters - Sentence (1) in new Article 7.4.10.10. references Table 7.4.10.10. for hydraulic loads Table 7.4.10.10. Maximum Permitted Hydraulic Load Drained to a Roof Gutter

Forming Part of Article 7.4.10.10.

			Maximum Hydraulic Load, L			
Nominal Pipe Size of Gutter,	Area of Gutter, cm <sup>3</sup>	Slope				
NF3		1 in 200	1 in 100	1 in 50	1 in 25	
3	22.8	406	559	812	1 140	
4	40.5	838	1 190	1 700	2 410	
5	63.3	1 470	2 080	2 950	4 170	
6	91.2	2 260	3 200	4 520	6 530	
7	124.1	3 250	4 600	6 500	9 190	
8	162.1	4 700	6 600	9 400	13 200	
10	253.4	8 480	12 000	17 000	23 600	

Table 7.4.10.6.-C<sup>(1)</sup> Maximum Permitted Hydraulic Load Drained to a Sanitary Building Drain or Sewer Forming Part of Sentence 7.4.10.6.(2) and Article 7.4.10.8.

Nominal Pipe			Maximum Hydrauli	c Load, fixture units		
Size of Drain or			Slo	per		
Sewer, NPS	1 in 400	1 in 200	1 in 133	1 in 100	1 in 50	1 in 25
3	n/a	n/a	n/a	n/a	27	36
4	n/a	n/a	n/a	180	240	300
5	n/a	n/a	380	390	480	670
6	n/a	n/a	600	700	840	1 300
8	n/a	1 400	1 500	1 600	2 250	3 370
10	n/a	2 500	2 700	3 000	4 500	6 500
12	2 240	3 900	4 500	5 400	8 300	13 000
15	4 800	7 000	9 300	10 400	16 300	22 500

7.4.10.11 Hydraulic Loads on Leaders – Table updated to include non-circular Leaders

Table 7.4.10.11. Maximum Permitted Hydraulic Load Drained to a Leader Forming Part of Sentence 7.4.10.11.(1)

Circular	Leader	Non-Circular Leader		
Nominal Pipe Size of Leader, NPS	Maximum Hydraulic Load, L	Area of Leader, cm <sup>2</sup>	Maximum Hydraulic Load, L	
2	1 700	20.3	1 520	
21/2	3 070	31.6	2 770	
3	5 000	45.6	4 500	
4	10 800	81.1	9 700	
5	19 500	126.6	17 600	
6	31 800	182.4	28 700	
8	68 300	324.3	61 500	

### **Division B Part 7 – Venting Systems**

7.5.6.5 Terminals – New provisions for vent pipes to property line and additional frost protection options

- Revised Sentence (4) Except for a fresh air inlet, where a vent pipe is terminated in open air, the terminal shall be located
  - a. not less than 1 m above **and** or not less than 3.5 m in any other direction from every air inlet, openable window or door,
  - b. not less than 2 m above **and** or not less than 3.5 m in any other direction from a roof that supports an occupancy,
  - c. not less than 2 m above ground, and
  - d. not less than 1.8 m from every property line.
- Revised Sentence (6) Where a vent pipe passes through a roof and may be subject to frost closure, or an outside wall of a building, it shall be protected from frost closure by
  - a. increasing its diameter at least one **NPS**, but not less than **NPS 3**, <del>3 in. in size</del> immediately before it penetrates the roof,
  - b. insulating the pipe, or
  - c. protecting it in some other manner.

Air Admittance Valves as a Vent Terminal (7.5.9.2.): Dimension of 100mm above fixture being vented

Revised Sentence (2) - Air admittance valves shall be located

- a. not less than 100 mm above the fixture drain being vented, flood level rim of the fixture it serves,
- b. within the maximum developed length permitted for the vent, and
- c. not less than 150 mm above insulation materials. d. Installed in a location not subject to back pressure

**7.6.3.4.** - Revised Sentence (5) In residential buildings containing more than one dwelling unit one or two dwelling units, the water system may be sized in accordance with table 7.6.3.4., provided, the minimum water pressure at the entry to the building is 200 kPa, the total maximum length of the water system is 90 m, and the hydraulic loads are not less than 100% of the total hydraulic load

Mator	Water Velocity (m/s)						
Pipe	2.	4	1.5	3.0			
Size		Hydraulic Load (Fixture	Units)				
	More than One dwelling	One dwelling unit					
1/2"	Up to 7	Up to 7	4	8			
3/4"	7 to 16	7 to 26	9	21			
1"	16 to 31	26 to 31	18	43			
1%"	31 to 57	31 to 57	30	83			

### **Division B Part 7 – Non-Potable Water**

#### 7.7.1.1. General -

- **Revised Sentence (1)** Non-potable water systems shall be designed, fabricated and installed in accordance with this Subsection and good engineering practice.
- Revised Sentence (2) Except as permitted provided in Sentence (2) and (3) and Subsection 7.7.2., non-potable water systems shall only be used to supply water closets, urinals, trap seal primers, and directly connected underground irrigation systems that only dispense water below the surface of the ground. shall not be connected to a potable water system.
- New Sentence (3) Non-potable water systems shall not be used to supply fixtures in healthcare facilities.
- New Sentence (4) Where a non-potable water system is supplied by a potable water system, the potable water system shall be protected in accordance with Article 7.6.2.1. (Protection from contamination CSA B64.10)
- New Sentence (5) Where the static pressure at any fixture in a non-potable water system may exceed 550 kPa, a pressure-reducing valve shall be installed to limit the maximum static pressure at the fixture to 550 kPa.

# **7.7.2.1 General -** New requirements for rainwater harvesting systems and storm and grey water reuse (7.7.2)

- New Sentence (1) For the purposes of this Subsection, rainwater shall mean storm water discharged from an above-ground roof surface.
- New Sentence (2) For the purposes of this Subsection, a non-potable rainwater harvesting system shall mean a storage tank, a pump, pipes, fittings and other plumbing appurtenances used to collect and distribute rainwater, but shall not include a rain barrel not connected to a plumbing system.

## **Division B Part 7 – Non-Potable Water Systems**

7.7.2.2 Permitted Applications – limits the supply of harvested rainwater applications

• New Sentence (1) - Non-potable rainwater harvesting systems are only permitted to supply

- a. water closets and urinals,
- b. clothes washers,
- c. floor-mounted service sinks and laundry trays,
- d. trap primers,
- e. irrigation systems,
- f. hydronic systems,
- g. make-up water systems for heat rejection systems, or
- h. any other application where the harvested rainwater is not expected to be ingested or inhaled.

#### 7.7.2.3 Roof Design - New Article introduces requirements for design of roofs

- New Sentence (1) Roof surfaces that supply rainwater to a non-potable rainwater harvesting system shall be inaccessible to vehicular and pedestrian traffic.
- New Sentence (2) Roofing components and conveyance systems in contact with rainwater that is supplied to a non-potable rainwater harvesting system shall be constructed of materials that will not introduce substances into the rainwater that could adversely affect its intended end use

**7.7.2.4 Non-Potable Rainwater Harvesting System Design** – New Article introduces requirements for design of system

- New Sentence (1) Non-potable rainwater harvesting systems and their connections shall be designed, fabricated and installed in accordance with this Subsection and good engineering practice.
- New Sentence (2) Non-potable rainwater harvesting systems shall not collect water discharged from an evaporative heat rejection system.
- New Sentence (3) Non-potable rainwater harvesting systems shall be provided with a means to treat the harvested rainwater in such a manner that the quality of the delivered non-potable water conforms to appropriate provincial or territorial requirements or, in the absence of such requirements, the systems shall conform to Sentence (4).
- New Sentence (4) Except as provided in Sentence (3), non-potable rainwater harvesting systems shall be provided with
  - a. water treatment system consisting of
    - i. a debris screen with a mesh size of not more than 6 mm ahead of the storage tank inlet,
    - ii. a first-flush diversion system with a capacity of not less than 0.3 L/m2 of roof area ahead of the storage tank inlet,
    - iii. a calming inlet or settling chamber ahead of the storage tank inlet,
    - iv. a device to prevent the entrainment of sediment into the pump, and
    - v. where the harvested rainwater is used for an indoor application, a filter with a mesh size of not more than 50 µm ahead of the storage tank inlet, or
  - a means to treat the harvested rainwater in such a manner that the delivered non-potable water contains not more than the maximum acceptable levels of contaminants stated in CSA B805 / ICC 805, "Rainwater harvesting systems."

#### 7.7.2.4 Non-Potable Rainwater Harvesting System Design

- New Sentence (5) Where the static pressure at any fixture in a non-potable rainwater harvesting system may exceed 550 kPa, a pressure reducing valve shall be installed to limit the maximum static pressure at the fixture to 550 kPa.
- New Sentence (6) Storage tanks in non-potable rainwater harvesting systems shall be designed and installed in accordance with
  - a. CAN/CSA-B126.0, "General requirements and methods of testing for water cisterns," and
  - b. CAN/CSA-B126.1, "Installation of water cisterns."

- New Sentence (7) Storage tanks in non-potable rainwater harvesting systems shall be equipped with an overflow that directs excess rainwater to
  - a. a public storm sewer,
  - b. a public combined sewer,
  - c. a storm water management system, or
  - d. a designated storm water disposal location.
- New Sentence (8) Where the storage tank outlet is located below the level of the adjoining street, the storage tank overflow required by Sentence (7) shall
  - a. with an indirect connection that is not located within the building, or
  - b. be equipped with a backwater valve.
- New Sentence (9) Make-up water connections to non-potable rainwater harvesting systems shall
  - a. be equipped with a reduced pressure principle backflow preventer, or
  - b. have an air gap.



Township of Leeds and the Thousand Islands

# Division B Part 8 Sewage Systems Changes

### **Highlighted Areas**

Sewage Systems

### **Division B Part 8 – Sewage Systems**

#### The following items have changes:

- Treatment and Holding Tanks
- Alternative tracing wire for Leaching Chamber
- Absorption Trench Construction
- Filter Beds
- Type A Dispersal Bed

#### 8.2.2 Treatment and Holding Tanks

#### 8.2.2.2 Tanks and 8.2.2.3 Septic Tanks

- CSA B66 "Design, Material, and Manufacturing Requirements for Prefabricated Septic Tanks and Sewage Holding Tanks" standard referenced in Articles 8.2.2.2. and 8.2.2.3. has been updated to the 2021 edition in Table 1.3.1.2.
- A notable change to the standard now requires a secondary safety screen beneath tank covers for additional public health and safety protection

#### 8.7.2.3 Leaching Chambers within Leaching Beds

- New Clause 8.7.2.3.(4)(c) has been added which permits 12-gauge copper clad steel light colored plastic coated tracer wire as another detection material to determine location of the header line and leaching chambers.
- Some Articles renumbered in Subsection 8.7.3.

#### 8.7.5 Filter Beds

- Sentence (2) of Article 8.7.5.3. Construction Requirements has been amended to improve clarity with respect to the installation of distribution piping within filter beds and specifying that the outer most distribution pipe or leaching chamber is not more 600 mm from the perimeter of that area.
- Appendix Note A-8.7.5.3.(6) and (7) added with illustrations to clarify loading areas for filter beds.
- Appendix Note A-8.7.5.3.(6) and (7)
- The filter beds must be designed using the loading rates set out in Sentence 8.7.4.1.(1). The purpose of the loading area is to ensure that the treated effluent can be dispersed into the underlying soil. This area includes the 15 m extension, commonly referred to as the mantle



#### 8.7.7 Type A Dispersal Beds

• Construction Requirements in Article 8.7.7.1. for Type A dispersal beds includes changes to Sentence 8.7.7.1.(5) to clarify that where the underlying soil that has a percolation time of more than 15 min, the sand layer be extended using unsaturated soil or leaching bed fill having a percolation time of not more than 15 min and a depth of at least 300 mm to at least 15 m beyond the perimeter in any direction in which effluent will move horizontally, as well as over the required contact area



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# Division B Part 9 Housing and Small Buildings Changes

## **Highlighted Areas**

Security Suites

Guards and Door Hardware

**Snow Loads** 

**Fire Protection** 

Soil Gas Control

Drainage and Foundations

Ventilation

Depressurization

Carbon Monoxide

Heating and Air Conditioning

### **Division B Part 9 – Secondary Suites**

1.4.1.2 Definitions - House definition replaced with Secondary Suite throughout code

• Secondary Suite means a self-contained dwelling unit located in a building or a portion of a building of only residential occupancy that contains only one other dwelling unit and common spaces, and where both dwelling units constitute a single real estate entity.

# Ceiling Heights of Rooms or Spaces (9.5.3.1.(2) and (3), 9.5.5.1.(2) and (9.8.2.2.(4)) serving house with secondary suite

Room or Space	Secondary Suite	Primary Suite
Ceiling Height 9.5.3.1.(2)	1.95m (new)	2.1m to 2.3m (same)
Under beams and ducts 9.5.3.1.(3) <b>AND</b> Over stairs located under beams and ducting 9.8.2.2.(4)	1.85m (new)	1.95m (same)
Doorways	1.89m (new)	1.98m (same)

**9.9.9.3 Shared Egress Facilities -** exception for house with secondary suite in (1) with new egress requirements in (2)

- New Sentence (2) Where a dwelling unit is located above another dwelling unit or common space in a house with a secondary suite, the upper dwelling unit shall be provided with a second and separate means of egress where an egress door from that dwelling unit opens onto an exterior passageway that,
  - a. Has a floor assembly with a fire resistance rating less than 45min,
  - b. Is served by a single exit stairway or ramp, and
  - c. Is located more than 1.5m above adjacent ground

### **Division B Part 9 – Guards and Door Hardware**

#### 9.8.8.1.(5) Required Guards - Revised for residential occupancies

- Required for all dwelling units (removed exemption for a dwelling unit that is not located above another suite)
- Changed top of window sill above the floor from 480mm to 900mm to the bottom edge of the openable portion of the window
- Openable portion of all windows 1.8m or higher above exterior grade will now require a guard, a 100mm limiter or be 900mm above the floor.

#### 9.8.8.2 Loads on Guards – Balusters must resist opening over 100mm under a 0.1kN load

 New Sentence (2) The size of the opening between any 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 subjected to a specified live load of 0.1kN applies in opposite directions in the in-plane direction of the guard so as to produce the most critical effect

#### 9.8.8.5 Openings in Guards – triangle space between guard and tread defined

• New Sentence (2) Except for guards that serve industrial occupancies, the triangular opening formed by the stairs, stair treads, and the bottom element of any guard shall be of a size that prevents the passage of a 150mm diam. Sphere.

Dwelling units in houses with secondary suites can share a single means of egress. Note: Second means of egress required where upper unit opens onto an exterior passageway



#### 9.9.6.7 Door release hardware - reduced height

• Revised Sentence (3) Reduced from under 1200 above floor to between 900mm and 1100mm

#### **Division B Part 9 – Snow Loads**

#### 9.4.2.2 Snow Loads - Added roof steps - address snow load and drifting

- New Sentence (4) Where the height of a step at the intersection of an upper-level roof and a lowerlevel roof is greater than 2m, and the upper-level roof has a slope less than 1 in 6 and an area greater than 600m2, the specified snow load on the lower roof shall be:
  - a. for distances from the roof step that are less than or equal to the drift length, Xd, calculated in accordance with sentence (5) not less than 1.5 times the specified snow load, S, calculated using the formula in Sentence (1) with Cb equal to 0.55 and
  - b. for distances from the roof step that are greater than the drift length, Xd, calculated in accordance with sentence (5), as specified in Sentence (1).
- New Sentence (5) For the purposes of sentence (4), the drift length, Xd, in m, shall be calculated as follows:

$$x_{d} = 5\left(h - \frac{0.55S_{s}}{\gamma}\right)$$

where:

- h = height of the roof step, in m, and
- y = specific weight of snow as specified in Clause 9.4.2.1.(1)(f)
- Ss = 1 in 50-year ground snow load in kPa, MMAH SB-1

**9.9.6.4 Door Action -** revised to exempt exit doors from swinging on vertical axis in certain occupancies

- Revised Sentence (5) Exit doors need not conform to Sentence (1) or (2) where,
  - a. The doors serve accessory buildings where life safety is not adversely affected
  - b. The doors serve storage garages or other accessory buildings serving not more than one dwelling unit or,
  - c. the doors
    - (i) Serve storage suites of not more than 28m2 in gross area that are in warehousing buildings of not more than one storey and,
    - (ii) Open directly to the exterior at ground level



### **Division B Part 9.10 Fire Protection**

#### 9.10.9.2 Continuous Barrier - Revised sentences 1-6

- 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
   Added the passage of smoke in addition to the spread of fire
- Added the passage of smoke in addition to the spread of fire



#### Smoke Tight Barrier – requires continuous 15.9 type x

A continuous smoke tight barrier of at least 15.9mm type X gypsum board, installed on both sides of walls and the underside of floor-ceiling framing at assemblies that separate suites.

#### 9.10.9.16 Separation of Residential Suites - Removed 30-minute separation requirement

Revised Sentence (2) - sleeping rooms in boarding, lodging and rooming houses where sleeping accommodation is provided for not more than 8 boarders or lodgers need not be shall be separated from the remainder of the floor area as required by sentence (1) by a fire separation having a fire resistance rating of not less than 30 min where the sleeping rooms form part of the proprietor's residence and do not contain cooking facilities.

#### 9.10.9.17 Separation of Public Corridors - exemption for sprinklered area

- New Sentence (5) No fire separation is required in a sprinklered floor area between a public corridor and a space containing plumbing fixtures required by Article 3.7.4.2. and Section 9.31, provided,
  - a. The space and the public corridor are separated from the remainder of the storey by a fire separation having a fire resistance rating not less than that required between the public corridor and the remainder of the storey, and
  - b. The plumbing fixtures are not located within a dwelling unit or suite

#### 9.10.12.3 Exterior Walls Meeting at an Angle - expanded to include house with secondary suite

- Revised Sentence (1) Except as provided in Article 9.9.4.5., were exterior walls of a building meet at an external angle of less than 135 or less, the horizontal distance from an unprotected opening in one exterior wall to an unprotected opening in the other exterior wall shall be not less than 1.2m where the opening are
  - a. In different fire compartments, or
  - b. In different dwelling units, ancillary spaces or common spaces in a house with a secondary suite



 New Sentence (3) – where interior walls between dwelling units, ancillary spaces or common spaces in a house with a secondary suite are not constructed as fire separations, the exterior wall of each dwelling unit, ancillary space or common space referred to in Sentence (1) within the 1.2m distance shall be finished on the interior with not less than 15.9mm thick Type X gypsum board.

# 9.10.14.5 Construction of Exposing Building Face and Walls Above Exposing Building Face – soffits protection

- New Sentence (12) Where roof soffits project to less than 1.2m from the property line, the centre line of a public way or imaginary line between two buildings or fire compartments on the same property, they shall
  - a. Have no openings, and be protected by:
    - Not less than 0.38 mm thick sheet steel,
    - Unvented aluminum soffit,
    - Not less than 12.7mm thick gypsum soffit board or gypsum ceiling boa,
    - Not Less than 11 mm thick plywood,
    - Not less than 12.5 mm thick OSB or waferboard,
    - Not less than 11mm thick lumber

9.10.14.4 9.10.15.4(6) 9.10.15.5.(4) Openings in exposing building face and construction of exposing building faces for detached garage or accessory building are limited to serving <u>only</u> <u>one dwelling unit</u> - no longer exemption for a house (2 units) limits apply to every accessory serving more than 1 dwelling unit

#### 9.10.15.4.(7) - Doubles area of unprotected openings similar to part 3

- New Sentence The maximum aggregate area of glazed openings in an exposing building face is permitted to be up to twice the area determined in accordance with Sentence (1), where,
  - a. the glazed openings consist of glass blocks, as described in Article 9.10.13.7., or
  - b. the building is sprinklered, provided all rooms, including closets, bathrooms and attached garages, that are adjacent to the exposing building face and that have glazed openings are sprinklered, notwithstanding any exemptions in the sprinkler standards referenced in Article 3.2.5.12

**9.10.15.5.(2)(c) Construction of Exposing Building Face of Houses -** additional construction options where limiting distance < 0.6m

 New Exemption for non-combustible cladding where limiting distance is less than 0.6m to include cladding as per Clause 3.1.5.5.(1)(b) when tested in conformance with CAN/ULC-S134 "Standard Method of Fire Test of Exterior Wall Assemblies"

**9.10.16.2.(2)(d) Required Fire Blocks in Wall Assemblies -** New Exemption for Fire Blocking where the concealed wall space is filled with insulation

**9.10.9.5 Interconnection of Smoke Alarms -** permits wireless technology for smoke alarms in house with secondary suite

New Sentence (2) – Smoke alarms in a house with a secondary suite shall be wirelessly
interconnected or interconnected by hardwiring so that the activation of any one smoke alarm causes
all smoke alarms within the house with a secondary suite to sound.

# **9.10.20.1 Windows or Access Panels Required (For Firefighting) -** clarifies access to upper storeys in unsprinklered buildings

- Revised Sentence (3) Access panels required in Sentence (1) need not be provided in houses
  - a. Buildings containing only dwelling units where there is no dwelling unit over another dwelling unit, or
  - b. Houses with a secondary suite

#### 9.10.20.3 Fire Department Access to Buildings - refers to part 3 for fire access route design

• Revised Sentence (1) – Access for fire department equipment shall be provided to each building by means of a street, private roadway or yard (see Notes A-9.10.20.3.(1) and A-3.2.5.6.(1))

# 9.13.4.1 Application and Scope – Soil Gas Control - Clarifies Scope in accordance with SB-9 for Soil Gas Control

- Revised Sentence (1) Applies to
  - a. Wall, roof and floor assemblies separating conditioned space from the ground, and
  - b. The rough-in to allow the future protection of conditioned space that is separated from the ground by a wall, roof or floor assembly
- New Sentence (2) Addresses the leakage of soil gas from the ground into the building.
- New Sentence (3) In area of the province where radon gases are known to be a problem, the building shall be designed and constructed to meet the radon limitations in Article 9.1.1.7.

#### 9.13.4.2 Protection from Soil Gas Ingress - Revised to limit when not required

 Revised Sentence (1.1) – Construction to resist leakage of soil gas into the building is not required for garages and unenclosed portions of buildings only

### **Division B Part 9.13.4 Soil Gas Control**

 New Sentence (2) – <u>Unless</u> the space between the air barrier system and the ground is <u>designed to be accessible</u> for the future installation of a subfloor depressurization system, dwelling units and buildings containing residential occupancies shall be provided with the roughin for a radon extraction system conforming to Article 9.13.4.3.

#### 9.13.4.3 Providing for the Rough-in for a Subfloor Depressurization System

- New Sentence (1) Floors-on-ground shall be provided with a rough-in for subfloor depressurization consisting of
  - a. A gas-permeable layer, an inlet and an outlet as described in Sentence (2), or
  - b. Clean granular material and a pipe as described in Sentence (3)
- New Sentence (2) the rough-in for gas permeable layer:
  - a. Installed in the space between the air barrier and the ground,
  - b. An inlet that allows for effective depressurization of the gas-permeable layer, and
  - c. An outlet in the conditioned space that i. Permits connection to depressurization equipment, ii. Is sealed to maintain the integrity
- New Sentence (3) the rough-in referred to in Clause (1)(b) shall include:
  - a. Clean granular material installed below the floor-on-ground, and
  - b. 100mm in diameter pipe installed so that its bottom end opens into the granular layer at or near the centre of the floor and not less than 100mm of granular material projects

beyond the terminus of the pipe, top end permits connection to an airtight cap, and the Pipe is clearly labeled every 1.8m and at every change in direction.



permanently sealed cap radon labeled on pipe

oranular material

100 mm

minimum

end of pipe open to

gas permeable laver





9.13.4.2. Sentence (3) FOR ALL OTHER a. 9.13.4.3 or BUILDINGS: b. Parts 5 and 6

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# **Division B Part 9.14 Drainage and 9.15 Foundations**

### 9.14.5.2.(1) Sump Pumps - New Sump sizes provided

- a. Not less than 750mm(30") deep
- b. Not less than .25m2(2.7sqft or approx. 20" diam) in area, and
- c. Provided with a cover

## 9.15.1.1 General - ICF design expanded to include all buildings that are:

- light-frame or flat ICF construction
- not more than 2 storeys in building height, and
- max floor-to-floor height of 3 m

## 9.15.4.2 Foundation walls thickness and required lateral support

- **Revised Sentence (1)** to include "concrete core in flat wall insulating concrete forms" as an additional foundation wall type.
- **Revised Clause (2)(a)** by increasing the concrete core size in flat insulating concrete form foundation walls from <u>140 mm to 150 mm</u>.

### 9.15.4.3. Foundation walls considered laterally supported at the top

• New Sentence (2) (d) If they extend from the footing to no more than 300 mm above the finished ground level and are backfilled on both sides such that the difference in elevation between the finished ground levels on either side of the wall is no more than 150 mm

## 9.15.4.4 Foundation walls considered laterally supported at the bottom

- New Sentence (1)(c)(ii) Where doweled to the footing with not less than
  - i) 15M bars spaced not more than 1.2 m o.c., or
  - ii) 10M bars spaced not more than 600 mm o.c

# **Division B Part 9.32 Ventilation**

### 9.32.1.1.(1) Ventilation - Specific to ventilation of rooms and spaces in residential Occupancies

- Ventilation of all other occupancies shall conform to Part 6
- A storage garage for up to 4 motor vehicles that serves a residential occupancy may be considered to be part of that occupancy.

**9.32.1.2 Mechanical Ventilation for Dwelling Units -** all residential as per 9.32.2. and part 6 (except self-contained unit)

- Revised Sentence (1) Every residential occupancy shall incorporate-dwelling unit that is supplied with electrical power shall be provided with a mechanical ventilation system in accordance with Subsection 9.32.2
  - a. Provisions for non-heating-season ventilation in accordance with Subsection 9.32.2., and
  - b. Except as required by Sentence (2) and (3), if supplied with electrical power and a heating system, provisions for heating-season ventilation in accordance with Part 6
- New Sentence (2) A self-contained heating-season ventilation system serving a single dwelling unit shall comply with Sub 9.32.3.
- New Sentence (3) In houses that contain a secondary suite, heating-season ventilation (mechanical ventilation) need not be provided for
  - a. Exits
  - b. Public corridors, and
  - c. Ancillary spaces that are not within a dwelling unit, except as provided in Sentence (4).



Reduced from 5 motor

vehicles previously

• New Sentence (4) – Where ancillary spaces described in Clause (3)(c) contain exhaust devices, these spaces shall be provided with make-up air in accordance with Article 9.32.8.

#### 9.32.2.1 Non-Heating-Season Ventilation, Required Ventilation – New sentence

- New Sentence (1) The non-heating-season ventilation required by Clause 9.32.1.2.(1)(a) shall be supplied by
  - a. Natural ventilation in accordance with Article 9.32.2.2., or
  - b. A mechanical ventilation system in accordance with Article 9.32.2.3.

**9.32.2.3 Non-Heating-Season Mechanical Ventilation -** revised from sum of individual room capacities given in table 9.32.3.2

- Revised Sentence (1) Where a habitable room or space is not provided with natural ventilation (no operable windows) as described in Article 9.32.2.2. and <u>is mechanically</u> <u>cooled</u>, its non-heating-season mechanical ventilation system shall
  - a. Have the capacity to exhaust air from inside the room or space, or to introduce outdoor air into that room or space, at a rate (air changes) conforming with Table 9.32.2.3., or
  - b. Comply with Subsection 9.32.3.

#### 9.32.3.3.(2) Principal Ventilation System

 New minimum and maximum range for principal ventilation based on bedrooms

> Non-Heating Season = Natural or Mechanical Ventilation Heating Season = Mechanical Ventilation

Normal Operating Exhaust Capacity of Principal Ventilation Fan			
Number of	Normal Operating Exhaust Capacity of Principal Ventilation Fan, L/s		
Bedrooms in Dwelling Unit	Minimum (2024)	Maximum (2024)	Capacity, L/s
1	16	24	<del>15</del>
2	18	28	22.5
3	22	32	30
4	26	38	37.5
5	30	45	45
More than 5	System must comply with Clause 9.32.3.1.(1)(a)		Comply with 6.2.1.1.(1)

### **Division B Part 9.32 Depressurization**

**9.32.3.8 Protection Against Depressurization -** applies where fuel fired appliances other than direct or mechanically vented

- New Sentence (1) This Article applies to
  - a. Dwelling units that contain a fuel-fired space-heating appliance or fuel-fired water-heating appliance of other than direct-vented or mechanically vented types, and
  - b. Ancillary spaces that contain an exhaust device, where the space is not within a dwelling unit in a house with a secondary suite and where the house with a secondary suite contains a fuel-fired space-heating appliance or fuel-fired water-heating appliance of other than directvented or mechanically vented types.
- New Sentence (2) Except as provided in Sentences (6) to (8), any mechanical air exhausting device, other than the principal ventilation fan operating at a rate not greater than the maximum permitted by Table 9.32.3.3., shall be provided with outdoor makeup air supplied by a fan rated to deliver outdoor air to the dwelling unit at a rate
  - a. Not less than the exhaust capacity of the device, and
  - b. Not greater than that exhaust capacity plus 10%.
- New Sentence (3) An outdoor makeup air supply fan required by Sentence (2) shall be wired so
  that it is activated whenever the device for which it supplies outdoor makeup air is activated. 
  –
  Interconnection between outdoor air and exhaust device
- New Sentence (4) The outdoor makeup air required by Sentence (2) shall be

- a. Introduced to a normally unoccupied area in the dwelling unit, or
- b. Tempered to at least 12°C before being introduced to occupied areas or to a supply duct system.

### **Division B Part 9.32 Carbon Monoxide**

**9.32.3.9.(1)** Application of Carbon Monoxide Alarms - Expanded to additional spaces within residential occupancies

- Article 9.32.3.9.A. applies to every building containing a residential occupancy and:
  - a. contains a fuel-burning appliance or a storage garage, or
  - b. is served by a forced-air fuel-burning appliance not contained within the building
- Articles 9.32.3.9.B and 9.32.3.9.C. apply to every building with fuel burning appliance and/or fuel burning laundry equipment.

# 9.32.3.9.A and 9.32.3.9.B Location of Carbon Monoxide Alarms and 9.32.3.9.C Installation Conformance to Standards

Residential (9.32.3.9.A) sentences 1-6 where required	Every Building (9.32.3.9.B and 9.32.3.9.C) sentences 1-5
Adjacent to each sleeping room in the suite and on each storey without a sleeping room in a suite (same)	Service Rooms or other areas that contain a fuel burning appliance or fuel burning clothes dryers (9.32.3.9.B)
In a combined living/sleeping area (same)	Visual signalling component with synchronized flash rates
Each sleeping room containing a fuel-burning appliance or a flue	Luminous intensity min 175cd (sleeping rooms)
<ul> <li>Sleeping room adjacent to:</li> <li>a room, suite or area that is located outside the suite and contains a fuel-burning appliance or a flue,</li> <li>a storage garage, or an attic or crawl space to which the storage garage is also adjacent.</li> </ul>	Permanently connected to electrical circuit with backup power source that can continue to provide power to the CO alarm for not less than 8 h in the standby condition, followed by the operation of the carbon monoxide alarm for an alarm signal for at least 12 hours
<ul> <li>Public Corridors heated by forced air fuel burning appliance</li> <li>At least 1 CO alarm in each portion of a divided corridor, and</li> <li>Each CO alarm in undivided corridor spaced not more than 25m</li> </ul>	Interconnected in a house with a secondary suite, including common spaces and public corridors serving residential occupancies

# 9.32.3.13 Outdoor Intake and Exhaust Openings - 1800mm clearance from exhaust outlets to air intakes

- Revised Sentence (3) The distance separating air intakes for mechanical ventilation from exhaust
  outlets that are potential sources of contaminants, such as gas vents or oil fill pipes, shall be not
  less than 1 800 mm-900mm.
- New Sentence (4) Except as provided in Sentences (5) and (6), exhaust outlets that discharge air containing moisture, such as bathroom ventilation and clothes dryer exhaust outlets, shall be located at least 1 800 mm from air intakes and vented soffits.
- New Sentence (5) Where an exhaust outlet referred to in Sentence (4) is located within a soffit, the soffit shall either be unvented, or if vented, the full depth of the soffit shall be blocked for a distance of 1 800 mm on each side of the exhaust outlet.
- New Sentence (6) Where an exhaust outlet referred to in Sentence (4) is located in a side wall less than 1 800 mm from a soffit, a section of the soffit above the exhaust outlet shall be unvented, or if vented, the full depth of the soffit shall be blocked in accordance with the widths stipulated in Table 9.32.3.13.-A, centred over the location of the outlet.

Table 9.32.3.13.-A Widths of Unvented or Blocked Soffits Where Exhaust Outlets Are Less Than 1 800 mm from a Soffit Forming Part of Sentence 9.32.3.13.(6)

Distance Between Exhaust Outlet and Soffit, mm	Total Width of Unvented or Blocked Soffit Centred Over Location of Exhaust Outlet, mm
1 to 300	3 600
301 to 600	3 400
601 to 900	3 100
901 to 1 200	2 700
1 201 to 1 500	2 000
1 501 to 1 799	1 000

### **Division B Part 9.33 Heating and Air Conditioning**

9.33.1.1 Heating and Air Conditioning – applicable to houses and houses with secondary suites

- Revised Sentence (1) This Section applies to the design and installation of
  - a. Heating systems, including requirements for combustion air, and air-conditioning systems serving only one dwelling unit, and
  - b. Radiant heating systems in houses with a secondary suite including their common spaces.
- **Revised Sentence (2)** The design and installation of heating systems, including requirements for combustion air, and air-conditioning systems other than those described in Sentence (1) shall conform to Part 6.
- New Sentence (3) Air duct distribution systems serving one of the dwelling units in a house with a secondary suite shall not be directly interconnected with other parts of the house.



**9.33.3.1 Indoor Design Temperatures** temperature in unfinished basements lowered from 22 to 18 degrees and new other Revised Sentence (1)(c) - outside design temperature, required heating facilities shall be capable of maintaining an indoor air temperature of not less than:

Room	2024	2012
All living spaces	22 C	22 C
Unfinished basements	18 C	22 C
Common service rooms, ancillary spaces, exits in houses with a secondary suite	18 C	N/A
Heated crawl space	15 C	15 C

#### 9.33.4.3 Heating System Control – Each dwelling unit to have a thermostat

• New Sentence (1) - Each dwelling unit shall be provided with a temperature control in accordance with Article 12.3.1.3.

**9.33.4.4 Access -** Requires access for inspection, maintenance and repair for all components of heating and air conditioning

• New Sentence (1) - Equipment forming part of a heating or air-conditioning system, with the exception of embedded pipes or ducts, shall be installed with provision for access for inspection, maintenance, repair and cleaning.

**9.33.6.13 Return-Air System** – removed exemption for a house with a secondary suite and in-duct smoke detector (6.2.4.7.(14))

• Revised Sentence (7.1) Return-air from a dwelling unit shall not be recirculated to any other dwelling unit

#### 9.33.8.2 Insulation and Coverings - Revised temperature similar to part 3

• Revised Sentence (5) Pipes that are exposed to human contact shall be insulated so that the exposed surface does not exceed 70 52 degrees Celsius

#### 9.35.1.1 Application - removed serving a house or individual dwelling unit

• Revised Sentence (1) This Section applies to garages and carports serving a house or an individual dwelling unit not more than one dwelling unit.



Township of Leeds and the Thousand Islands

# Division B Part 10 Change of Use Changes

### **Highlighted Areas**

General Classification of Existing Buildings

### Division B – Part 10.1 and 10.2 – General and Classification of Existing Buildings

#### 10.1.1.2 Change in Major Occupancy – Amended to add Farm Buildings

- Clause 10.1.1.2.(1)(c) a farm building or part of a farm building is changed to another major occupancy other than a Group G major occupancy,
- New Clause 10.1.1.2.(1)(g) a farm building or part of a farm building is changed to a Group G, Division 1 major occupancy.

#### 10.2.1.1. Classification of Major Occupancy – part 2 added

• Sentence 10.2.1.1.(1) Every existing building or part of it shall be classified according to its major occupancy in accordance with the requirements of **Part 2 or** Subsection 3.1.2.

#### 10.2.1.2. Classification According to Construction and Occupancy – amended to clarify G as F2

- Sentence (1) **Except as provided in Sentence (2)**, for the purposes of this Part, existing buildings shall be classified as to their construction and occupancy as provided for in Sentence 11.2.1.1.(1)
- New Sentence (2) For the purpose of Parts 10 and 11, the calculation of the construction index and hazard index for Group G major occupancy is permitted to be based on Group F, Division 2 major occupancy.

#### 10.2.1.3 Building Size and Construction – adding Part 2 and revised references to Part 3

• Sentence (1) The requirements of Articles 2.2.2.3. to 2.2.2.8. and 3.2.2.20. to 3.2.2.92. do not apply to this Part.

#### **10.3.2.1 General** – timing for performance level

• New Sentence 10.3.2.1.(3) For the purpose of this Subsection, where a permit to construct a farm building has been applied for before January 1, 2025, the performance level of the farm building is permitted to be evaluated based on the applicable requirements of Ontario Regulation 332/12 (Building Code) made under the Act, as it read on December 31, 2024.

#### 10.3.1.1. General – B2 and B3 to conform to Part 6

- Sentence (1) Code references updated to reflect the relevant numbering in the other parts of the Building Code.
- New Sentence 10.3.1.1.(2) Where a major occupancy is changed to a Group B, Division 2 major occupancy, heating, ventilating, and air conditioning systems shall conform to the requirements of Sentence 6.2.1.1.(1).
- New Sentence 10.3.1.1.(3) Where a major occupancy is changed to a Group B, Division 3 major occupancy, ventilation, air circulation, and filtration systems, shall conform to the requirements of Sentence 6.2.1.1.(1).

#### **10.3.2.2. Reduction in Performance Level – New Table footnote for farm buildings**

• (2) In the case of farm buildings, Early Warning and Evacuation to be evaluated against the corresponding Part 2 requirements to items (a) to (e) and (g) and (i) in this Table.

Early Warning / Evacuation Evaluation (2)	Compliance Alternative <sup>(1)</sup>
Early Warning and Evacuation to be evaluated against	
(a) access to exit widths based on occupant load in Subsection 3.3.1. or 9.9.3.;	EARLY WARNING
<ul> <li>(b) exit widths based on occupant load in Subsection 3.4.3. or 9.9.3.;</li> <li>(c) exit signs in Subsection 3.4.5. or 9.9.11.;</li> <li>(d) lighting of exits, lighting of access to exits and emergency lighting in Subsection 3.2.7. or 9.9.12.;</li> </ul>	(a) Compliance alternatives as listed may be used.
(e) fire alarm system in Subsection 3.2.4. or 9.10.18.;	EVACUATION
<ul> <li>(i) Smoke alarms in Subsection 9.10.19.,</li> <li>(g) travel distance and number of <i>exits</i> in other Parts of this Division;</li> <li>(h) smoke control measures, and at least one elevator to permit transport of firefighters to all floors in <i>hotels</i> whose floor level is more than 18 m high, measured between <i>grade</i> and floor level of the top <i>storey</i> as per Subsection 3.2.6.; and</li> <li>(i) door release hardware requirements in Articles 3.3.1.13. and 3.4.6.16.,</li> </ul>	(b) Compliance alternatives as listed to access to exit and exit widths, number of exits, door release hardware, and travel distance may be used.
and deficiencies shall be upgraded.	



Township of Leeds and the Thousand Islands

# Division B Part 11 Renovations Changes

# **Highlighted Areas**

General and Performance Level Evaluation and Compensation Construction

# Division B Part 11 – General and Performance Level Evaluation and Compensation Construction

#### **11.2.1.1. Construction Index and Hazard Index - adding Part 2 and revised references to Part 3**

- Sentence (3) The requirements of Articles 2.2.2.3. to 2.2.2.8. and 3.2.2.20. to 3.2.2.92. do not apply to this Part.
- New Sentence (4) For the purpose of this Part, the calculation of the construction index and hazard index for a Group G major occupancy is permitted to be based on a Group F, Division 2 major occupancy.

#### 11.2.1.3. Prohibition of Occupancy Combinations – amended to add reference to Part 2

• Sentence (1) Nothing in this Part relieves an applicant from complying with the requirements of Article **2.2.1.2**., 3.1.3.2. or 9.10.9.14.

#### 11.4.1.1. Performance Level

• New Sentence (4) For the purpose of this Subsection, where a permit to construct a farm building has been applied for before January 1, 2025, the performance level of the farm building is permitted to be evaluated based on the applicable requirements of Ontario Regulation 332/12 (Building Code) made under the Act, as it read on December 31, 2024.

#### 11.4.2.3. Change of Major Occupancy – updated to include farm buildings

- Clause 11.4.2.3.(1)(d) a farm building or part of a farm building is changed to another major occupancy other than a Group G major occupancy,
- New Clause 11.4.2.3.(1)(h) the change of a farm building or part of a farm building is changed to a Group G, Division 1 major occupancy.
- Sentence (4) adds 2.2.1.4 to include farm buildings for the reduction in performance level.

#### 11.4.3.3. Increase in Occupant Load – amended to add Part 2

• Sentence (3) Where the performance level of an existing building is reduced under Sentence 11.4.2.2.(1), additional construction shall be required in order that the building or part of the building subject to the increase in occupant load conforms to the requirements of Sentences **2.4.2.1.(1)** and 6.3.1.1.(2), Subsection 3.7.4. and Article 9.31.1.1.

#### 11.4.3.4. Change in Major Occupancy

- Sentence (2) Code references updated to reflect the relevant numbering in the other Parts of the Building Code.
- New Sentence (8) Where a major occupancy is changed to a Group B, Division 2 major occupancy, heating, ventilating, air conditioning systems shall conform to the requirements of Sentence 6.2.1.1.(1).
- New Sentence (9) Where a major occupancy is changed to a Group B, Division 3 major occupancy, ventilation, air circulation, and filtration systems shall conform to the requirements of Sentence 6.2.1.1.(1).

# 11.5.1.1. Compliance Alternatives – tables 11.5.1.1.A through 11.5.1.1.F updated, renumbered and new

• Revised A25 - 3.2.5.8. to 3.2.5.11. Does not apply to buildings 6 storeys and less. Does not apply to sprinklered buildings

- Revised A73 and B75 3.8.3.3.(1) Existing doorway acceptable, provided not less than 810 800 mm wide.
- New A80 and B82- 3.8.3.16A Existing water bottle filling stations are acceptable.
- Revised C102 9.5.3.1. In a house Except for secondary suites, in a dwelling unit, (a) minimum room height shall not be less than 1 950 mm over the required floor area and in any location that would normally be used as a means of egress, or (b) minimum room height shall not be less than 2 030 mm over at least 50% of the required floor area, provided that any part of the floor having a clear height of less than 1 400 mm shall not be considered in computing the required floor area.
- Revised C136 9.9.7.5. Except as provided in C.A. C139, in a house single dwelling unit or a house with a secondary suite, the Code requirement applies.

# 11.5.1.1. Compliance Alternatives – tables 11.5.1.1.A through 11.5.1.1.F updated, renumbered and new

- Revised C139 9.9.9. house replaced with single dwelling unit or a house with a secondary suite
- Revised C140 9.9.10.1. In a <u>house</u> single dwelling unit or a house with a secondary suite, existing acceptable, where there is direct access to the exterior.
- Revised C141 9.9.11. In a house single dwelling unit or a house with a secondary suite, the requirements under this Subsection do not apply.
- Revised C143 9.9.12. In a house single dwelling unit or a house with a secondary suite, the requirements under this Subsection apply only where the condition described in (b) of C.A. C139 exists.
- Revised C150 9.10.8.1.; 9.10.8.3; 9.10.8.8. and C156 9.10.9.16.(1) and (3); 9.10.9.17.(1) (a) Except as provided in (b) and (c), 30 min rating is acceptable. (b) In a house with a secondary suite, 15 min horizontal fire separation is acceptable where, (i) smoke alarms are installed in every dwelling unit and in common areas in conformance with Subsection 9.10.19., and (ii) smoke alarms are interconnected. (c) In a house with a secondary suite, the fire-resistance rating of the fire separation is waived where the building is sprinklered throughout.
- New C151, DE128 and F127 9.10.8.4. Assemblies required to be of non-combustible construction may be supported by combustible construction having at least the same fire-resistance rating as that supported.
- Revised C157 9.10.10.3 (a) Except as provided in (b) and (c) and in Articles 9.10.10.5. and 9.10.10.6., 30 min fire separation is acceptable. (b) In a house with a secondary suite, the fire-resistance rating of the vertical fire separation is waived where, (i) smoke alarms are installed in every dwelling unit and in common areas in conformance with Subsection 9.10.19., and (ii) smoke alarms are interconnected. (c) In a house with a secondary suite, the fire-resistance rating of the vertical fire separation areas are sprinklered.
- Revised C168 9.10.11.2.(1) In a house an individual dwelling unit or a house with a secondary suite, a party wall with 1 h fire-resistance rating is acceptable.

# 11.5.1.1. Compliance Alternatives – tables 11.5.1.1.A through 11.5.1.1.F updated, renumbered and new

- Revised C160 9.10.13.2.(1) In a house an individual dwelling unit or a house with a secondary suite, existing unlabelled doors at least 45 mm solid core wood or metal clad are acceptable. For existing closures, ratings of 20 min will not be required where the entire floor area is sprinklered.
- Revised C174 9.10.13.14.;9.10.5.1. In a house an individual dwelling unit or a house with a secondary suite, existing acceptable.
- New C181 9.11.1.1. Where a house contains a secondary suite, each dwelling unit shall be separated from every other space in the house in which noise may be transmitted by: (a)

construction (i) whose joist spaces are filled with sound absorbing material of not less than 150 mm nominal thickness, (ii) whose stud spaces are filled with sound-absorbing material, (iii) having a resilient channel on one side of the separation spaced 400 or 600 mm o.c., and, (iv) having not less than 12.7 mm thick gypsum board on ceilings and on both sides of walls, (b) construction providing an STC rating of not less than 43, or (c) a separating assembly and adjoining constructions, which together provide an ASTC rating of not less than 40.

- Revised C199 9.32. In a house an individual dwelling unit or a house with a secondary suite, rooms or spaces shall be ventilated by natural means in accordance with Subsection 9.32.2. or by providing adequate mechanical ventilation.
- New C203 9.33.6.5.(1);9.33.6.6.(1) to (3), )5), (11) and (12) Existing acceptable. (duct construction)
- New C204 9.33.6.6.(8) Where the duct system is being altered, lesser amounts and extent of insulation will be permitted.
- New C205 9.33.6.13.(7.1) In a building containing not more than four dwelling units or residential suites, the existing heating or air-conditioning system may be altered to serve more than one dwelling unit or suite, provided smoke alarms are installed in each dwelling unit or suite and provided a smoke detector is installed in the supply or return air duct system serving the entire building which would turn off the fuel supply and electrical power to the heating system upon activation of such detector.
- New F26 3.2.5.8. to 3.2.5.11 Does not apply to buildings 6 storeys and less of "F2" and "F3" occupancies. Does not apply to sprinklered buildings.
- New F73 3.6.5.5. Existing acceptable for "F2" and "F3" occupancies.



Township of Leeds and the Thousand Islands

# Division B Part 12 Resource Conservation and Environmental Integrity Changes

## **Highlighted Areas**

Energy Efficiency Design

## **Division B Part 12 – Energy Efficiency Design**

The energy efficiency requirements <u>remain unchanged</u> in the 2024 Building Code, Supplementary Standards SB-10 and SB-12 continue to be in effect without any technical changes. Changes to Part 12 are mostly <u>housekeeping changes</u> or revisions to align the content with the other Parts of the Code.

#### 12.2.1.1. Revoked

#### Energy Efficiency Design before January 1, 2017. Reserved

#### 12.2.1.2. Energy Efficiency Design

- Article 12.2.1.2. "Energy Efficiency Design After December 31, 2016 "Energy Efficiency Design".
- Sentence (1) no longer carries any significance and has been revoked and labelled reserved.
- Sentence (2) Except as provided in Sentences (3) and (4), the energy efficiency of all buildings shall (a) be designed to exceed by not less than 13% the energy efficiency levels required by Sentence 12.2.1.1.(2) of O. Reg. 332/12 (Building Code) as it read on December 31, 2024, or (b) conform to Division 1 and Division 3 or 5 of MMA Supplementary Standard SB-10, "Energy Efficiency Requirements."
- Sentence (3) Except as provided in Sentence (4), the energy efficiency of a building or part of a building of residential occupancy that is within the scope of Part 9 and is intended for occupancy on a continuing basis during the winter months shall (a) be designed to exceed by not less than 15% the energy efficiency levels required by Sentence 12.2.1.1.(3) of O. Reg. 332/12 (Building Code) as it read on December 31, 2024, or (b) conform to Chapters 1 and 3 of MMA Supplementary Standard SB-12, "Energy Efficiency for Housing."
- Sentence (4) has been revised for clarity and is aligned with changes made elsewhere in Part 9. Similar revisions to Sentence 12.2.1.2.(4) have also been made to Sentences 12.2.2.1.(2) and 12.2.3.1.(2).

# **12.3.1.3. Temperature Control in Houses and Dwelling Units** – revised to align with 9.33.4.3 and clarify that each dwelling unit is required to have a thermostat

- Sentence (1) Except as provided in Sentence (3) and except where space heating energy is provided by a solid fuel-burning appliance or a ground source heat pump,
  - (a) where a house contains two dwelling units and each dwelling unit is served by a separate heating system, the indoor air temperature in each heating system in an individual dwelling unit shall be controlled by at least one programmable thermostatic control device located in the dwelling unit, and
  - (b) where a house contains one dwelling unit or contains two dwelling units and both are served by one heating system, the indoor temperature in the house a secondary suite, each dwelling unit shall be controlled by at least one programmable thermostatic control device located in the dwelling unit.
  - (c) the indoor air temperature in an individual dwelling unit in a building other than a house shall be controlled by at least one programmable thermostatic control device located in the dwelling unit.

#### 12.3.1.5. – Revised sentence 1

• Sentence (1) A furnace serving a house or an individual dwelling unit in a house shall be equipped with a brushless direct current motor. (See Note A-12.3.1.5.(1))



Township of Leeds and the Thousand Islands

# Division C Part 1 Administrative Provisions Changes

# **Highlighted Areas**

General

#### **Division C Part 1 General**

#### 1.2.1.2. Design by Architect or Professional Engineer - underpinning

• Sentence 1.2.1.2.(1) and (4) have been amended and restructured into Clause format with new Clauses (1)(b) and 4(b) that require a professional engineer for the design and general review of a building foundation where underpinning of a foundation is undertaken.

#### 1.2.2.1 General Review by Architect or Professional Engineer

• **Table 1.2.2.1.** referenced in Sentence 1.2.2.1.(1) has been amended to include 3 new categories, where buildings of agricultural occupancies are required to have a general review undertaken by an architect and/or a professional engineer.

Classification Major Occupancy	Building Description	General Review By:
Agricultural occupancy only and where there are no subsidiary occupancies	Every building that exceeds 600m2 in gross area or 3 storeys in building height	Architect or professional engineer
Agricultural occupancy and one or more other major occupancies where the portion of the area occupied by one of the other major occupancies or subsidiary occupancies exceeds 600m2	The non-agricultural portion of every building	Architect and professional engineer
	The agricultural portion of every building	Architect or professional engineer
Agricultural occupancy and one or more other major occupancies where no portion of the area occupied by one of the other major or subsidiary occupancies exceeds 600m2	Every building that exceeds 600m2 in gross area or 3 storeys in building height	Architect or professional engineer

#### 1.3. Occupancy Permits - Compliance with Section 168.3.1 of the EPA

- New requirements have been added that place restrictions on the issuance of an occupancy permit unless it complies with Section 168.3.1. of the Environmental Protection Act as applicable.
  - Article 1.3.3.1., Occupancy Permit General: Sentence (5)
  - Article 1.3.3.2., Conditions for Residential Occupancy: Sentence (3)
  - Article 1.3.3.4., Occupancy Permit Certain Buildings of Residential Occupancy: Sentence (6)