18th Annual Industry Workshop

Wednesday November 16, 2022

10:00 am

Agenda

10:00	Administration
10:10	Zoning By-Law Update
10:30	Technical Specialist Update
11:25	Part 9 Updates
11:40	Part 3 Updates
12:00	Wrap-up and Lunch

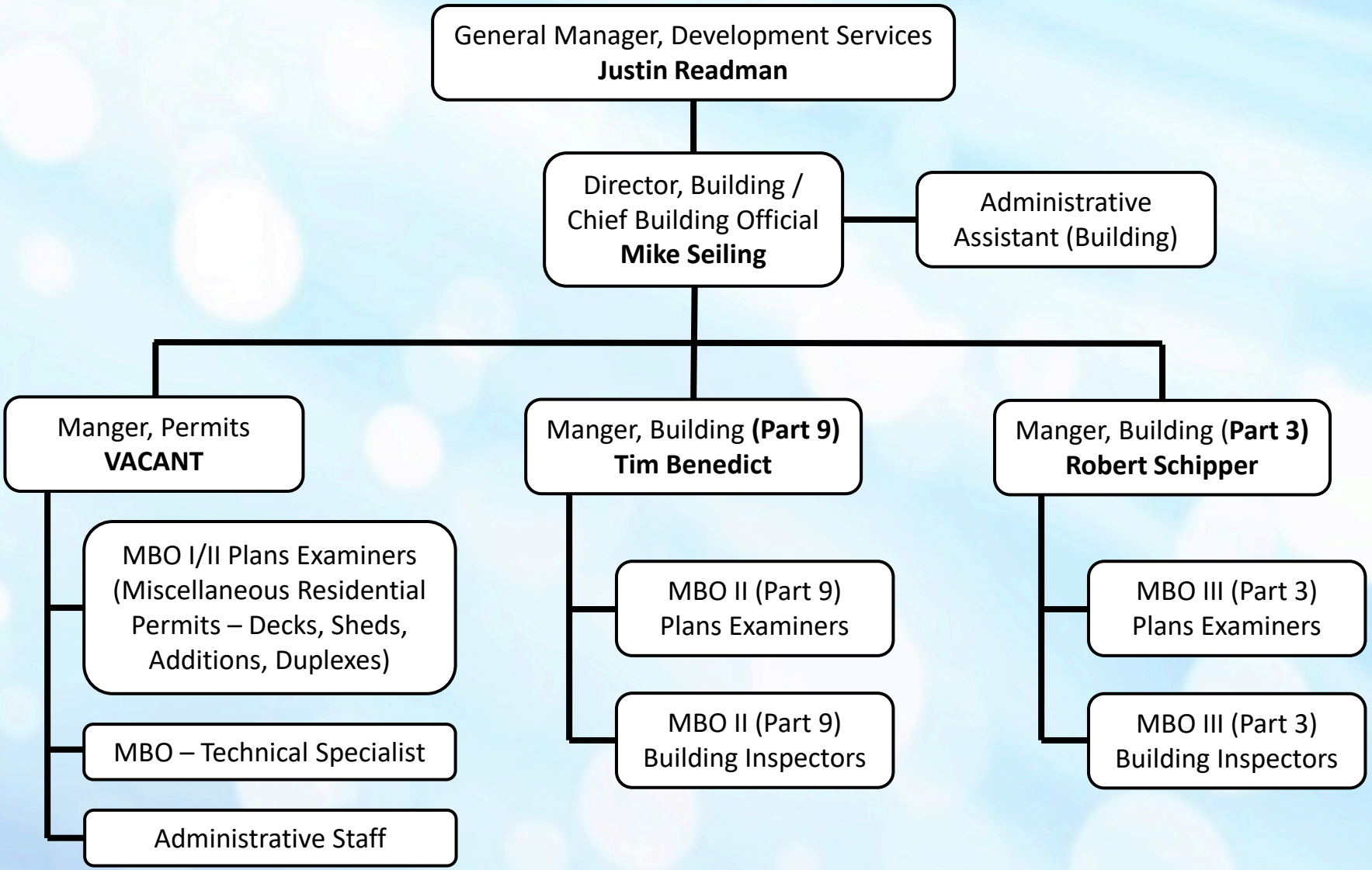
Welcome & Administration

Mike Seiling

Chief Building Official/Director

Why the Industry Workshop?

Building Organizational Chart



2023 Permit Fees

NO CHANGE from 2022 rates;

- Singles, semis, towns - $1.07/sq. ft.
- Apartment Building - $1.07/sq. ft.
- Interior Finishes - $0.37/sq. ft.
  (basement finishes & major renovations)
- Deck - $95.00 each
- Solar Panels - $ 95.00 for singles and duplex's
- Residential Revisions -$0.20/sq. ft. (min. $106.00), will be charged for each revision submitted

Development Charge Increase

2023 Development Charge Rates (check website)

- City of Kitchener (8.5% increase from current)*
- Region of Waterloo (17.2% increase from current)*
- School Boards (WRDSB & WCDSB) rates remain unchanged until June 1, 2027 (unless amended)

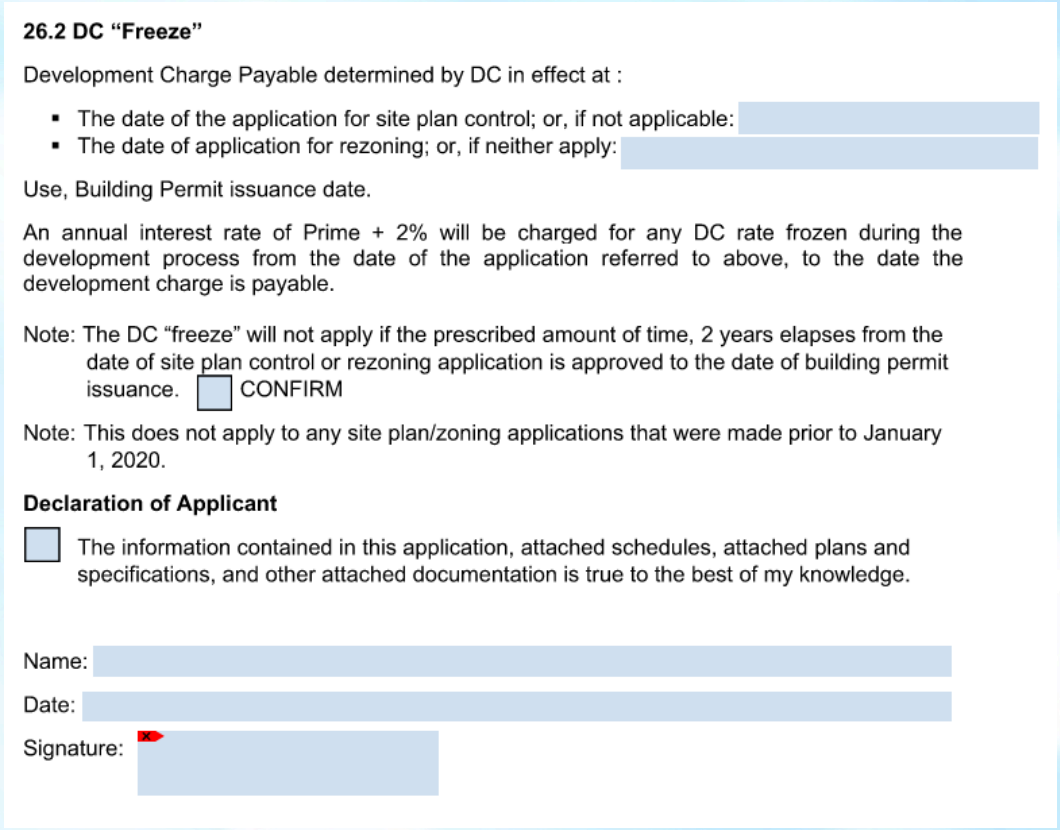
Complete applications for 10 business day (new single detached dwelling) review must be applied for by end of day Nov. 16th, 2022.

The new development charge rates will apply to all singles issued after Dec. 1, 2022

DC Freeze (applies to some projects)

DC Rate "Freeze"

- DC payable determined by DC rate in effect at date of complete SPA Application if applicable
- Plus interest charged, if there is a DC rate increase
- DC "freeze" does not apply if 2 yrs. has lapsed from date of approved planning application (SPA) to date of permit issuance
- If no SPA, i.e. sub-division permits, current DC rate applies



26.2 DC "Freeze"

Development Charge Payable determined by DC in effect at :

- The date of the application for site plan control; or, if not applicable:
- The date of application for rezoning; or, if neither apply:

Use, Building Permit issuance date.

An annual interest rate of Prime + 2% will be charged for any DC rate frozen during the development process from the date of the application referred to above, to the date the development charge is payable.

Note: The DC "freeze" will not apply if the prescribed amount of time, 2 years elapses from the date of site plan control or rezoning application is approved to the date of building permit issuance. ☐ CONFIRM

Note: This does not apply to any site plan/zoning applications that were made prior to January 1, 2020.

Declaration of Applicant

☐ The information contained in this application, attached schedules, attached plans and specifications, and other attached documentation is true to the best of my knowledge.

Name:

Date:

Signature:

DC Deferral (applies to some projects)

Deferred Payments

- Applies to:
- Rental housing *
- Institutional use *
- Non-profit housing
- Can choose to pay DCs upfront with Early Payment Agreement
- First payment is collected on date of first occupancy permitted in building
- * = Interest applies

26.1 Deferred Payments

☐ The project does not qualify for deferred payments.

☐ I intend on entering into an agreement to pay the Development Charges in full at the time of Building Permit issuance as permitted by Section 27 of the Development Charges Act.

I am applying for a project that meets the definition of:

☐ Rental housing development as defined by the Development Charges Act, 1997, S.O. 1997, c. 27 (Provide a description in the space below)

☐ Institutional development as defined by the Development Charges Act, 1997, S.O. 1997, c. 27 (Provide a description in the space below and submit any corroborative documentation)

☐ Non-profit housing development as defined by the Development Charges Act, 1997, S.O. 1997, c. 27 (Submit any corroborative documentation)

Provide Description of Rental Housing or Institutional Development if applicable:

☐ I acknowledge that the installments will begin on the date of the first occupancy permitted in the building and continue for;

☐ 5 years for rental and institutional (6 Payments in total)

☐ 20 years for non-profit (21 payments in total)

☐ If at any time prior to the payment of the Development Charge in full the type of development changes and would no longer be eligible for deferred payments, the full DC is payable with interest, less any installments already made.

The City's policy regarding rates for DC Deferrals includes:

a) An annual interest rate of Prime + 2% will be charged for any DC charges deferred in relation to:
   i. Rental housing development (that is not non-profit)
   ii. Institutional development
b) The Prime interest rate to be used will be the rate in effect at the time of building permit issuance as noted in Subsection 26.1(7) of the DCA.
c) No annual interest rate will be charged for any DC charges deferred in relation to non-profit housing development

Tips to Expedite your Permit

- Take the time needed up front;
  - Apply after the application is complete and coordinated,
  - Incomplete or uncoordinated applications are not processed faster than complete,
  - Where applicable, ensure re-submissions address ALL status letter items and only submit complete re-submissions.
- Clarify; Status letter on last day and responses

Update on 2022 in the works….

- CLEVEST Inspection Scheduling Software
  - Still in the works
- Repeat Houses (pilot)
  - Complete - Leslie will provide update
- Determination of grade
  - Complete - Matt will provide update
- Alternative Solution Process
  - Still in the works
- Next Edition of the OBC, currently open for public comment.
  - Ongoing - Matt will provide further update


ANY QUESTIONS?

Zoning By-Law Update

Richard Kelly-Ruetz

Senior Planner

What you can hope to learn

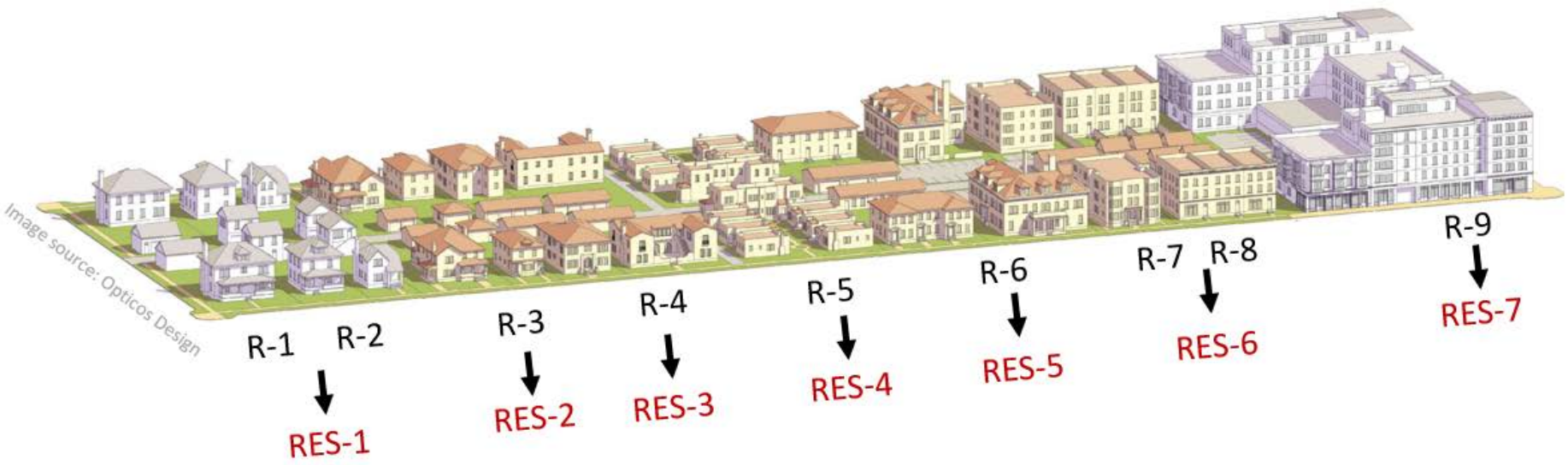
1. Status of new zoning by-law
2. How to look up new zoning
3. Start building understanding of key differences between old and new zoning

Status of new zoning by-law (1)

- Kitchener's old zoning by-law: By-law 85-1
- Kitchener's new zoning by-law: By-law 2019-051
  - Stage 1: Non-residential zones (2019)
  - **Stage 2: Residential zones (2022)**

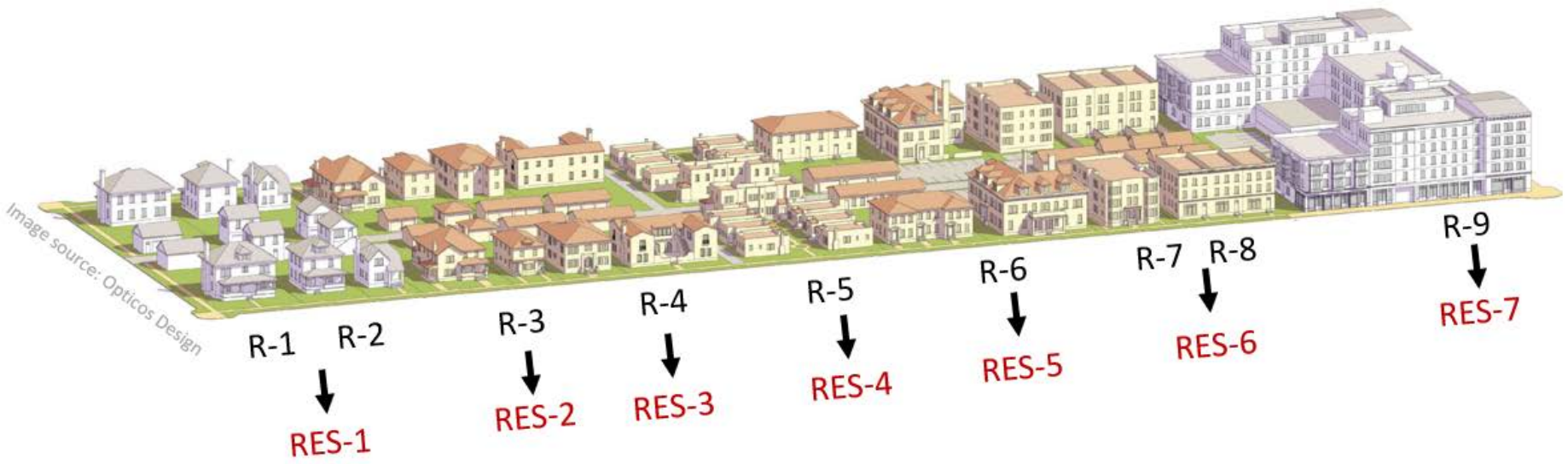
Status of new zoning by-law (2)

- What was approved earlier in 2022?
  - New zoning on 54,000 properties (mostly residential)
  - Replaces old zoning by-law 85-1 on these properties
- Zoning By-law 2019-051 / CRoZBy

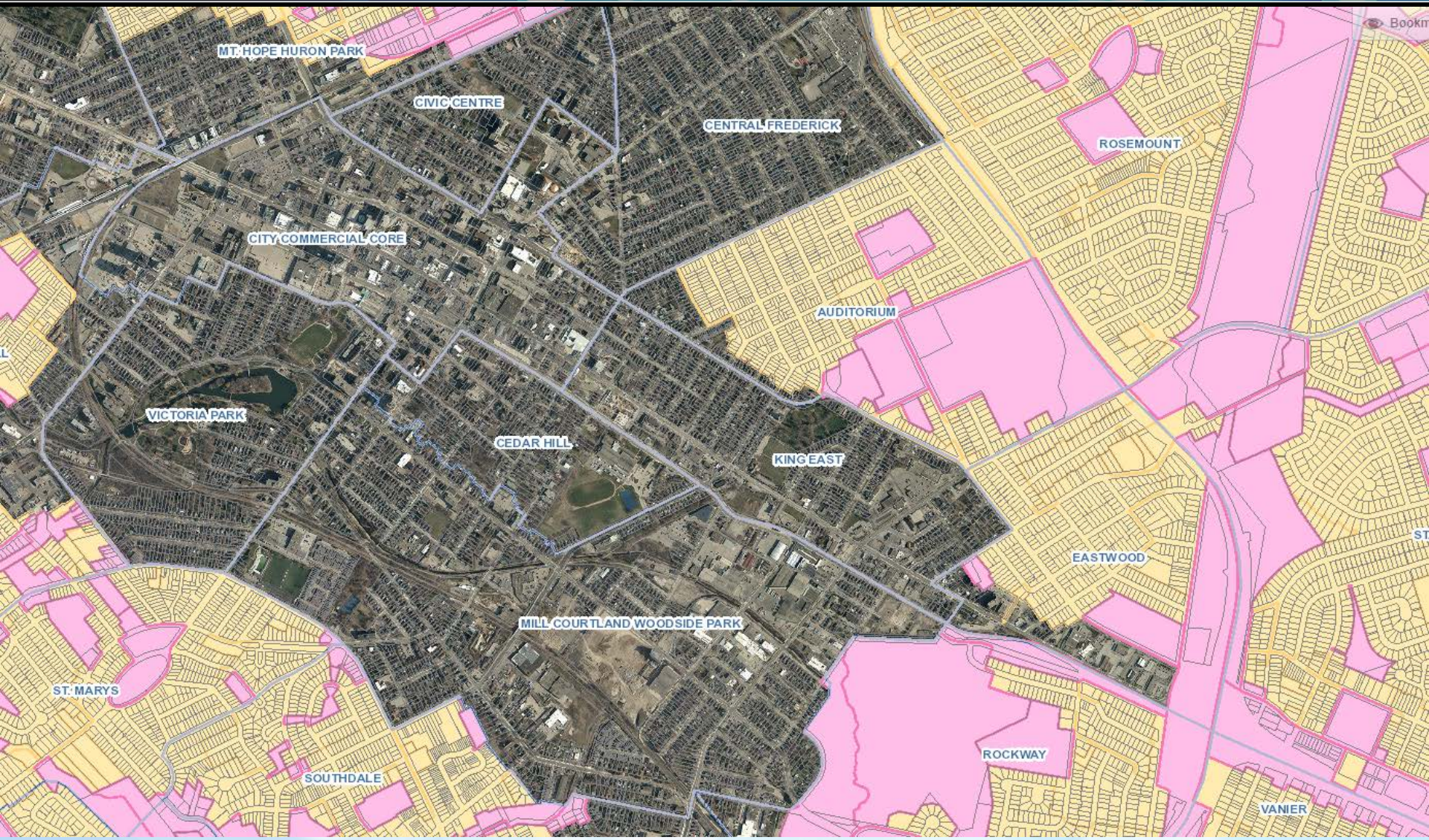


Status of new zoning by-law (3)

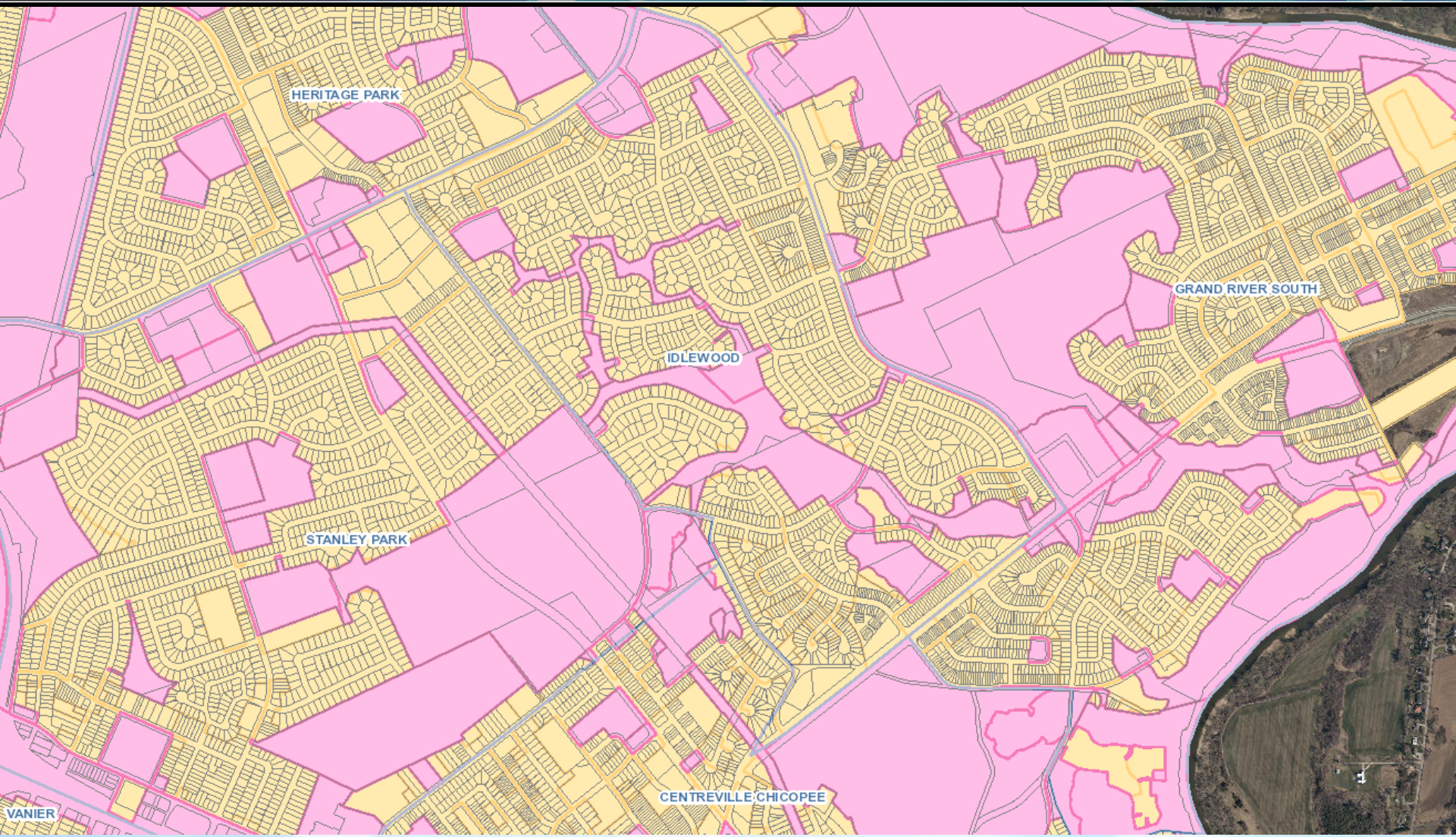
- Where does it apply?
  - Many <u>but not all</u> of Kitchener's residential properties
  - Confirm if new zoning applies to property before using it



Status of new zoning by-law (4)

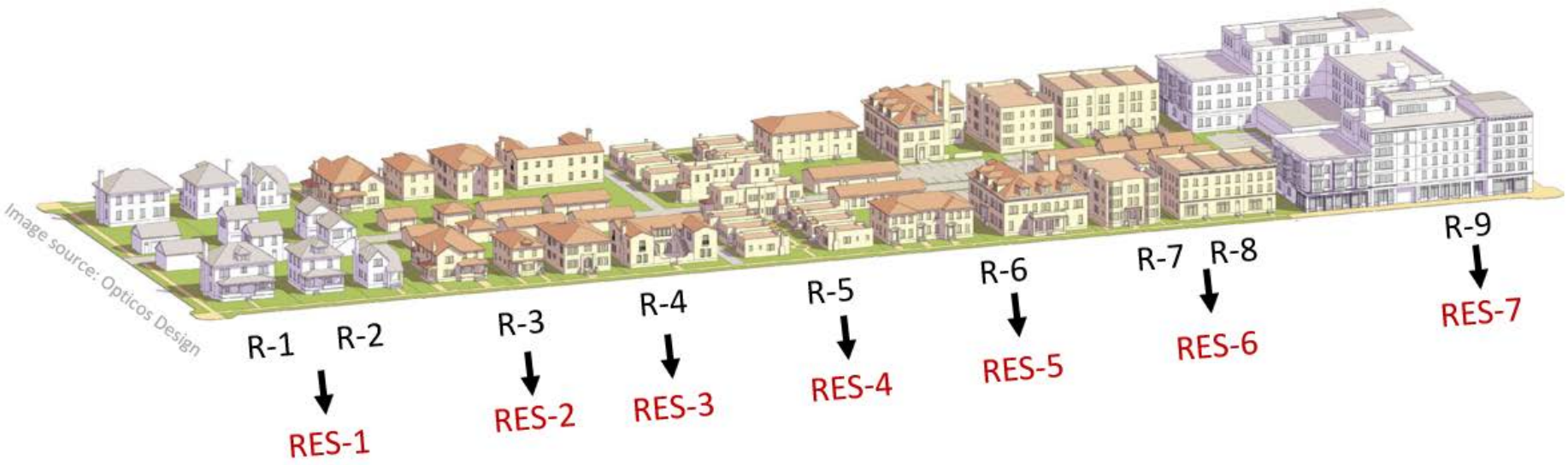


Status of new zoning by-law (5)

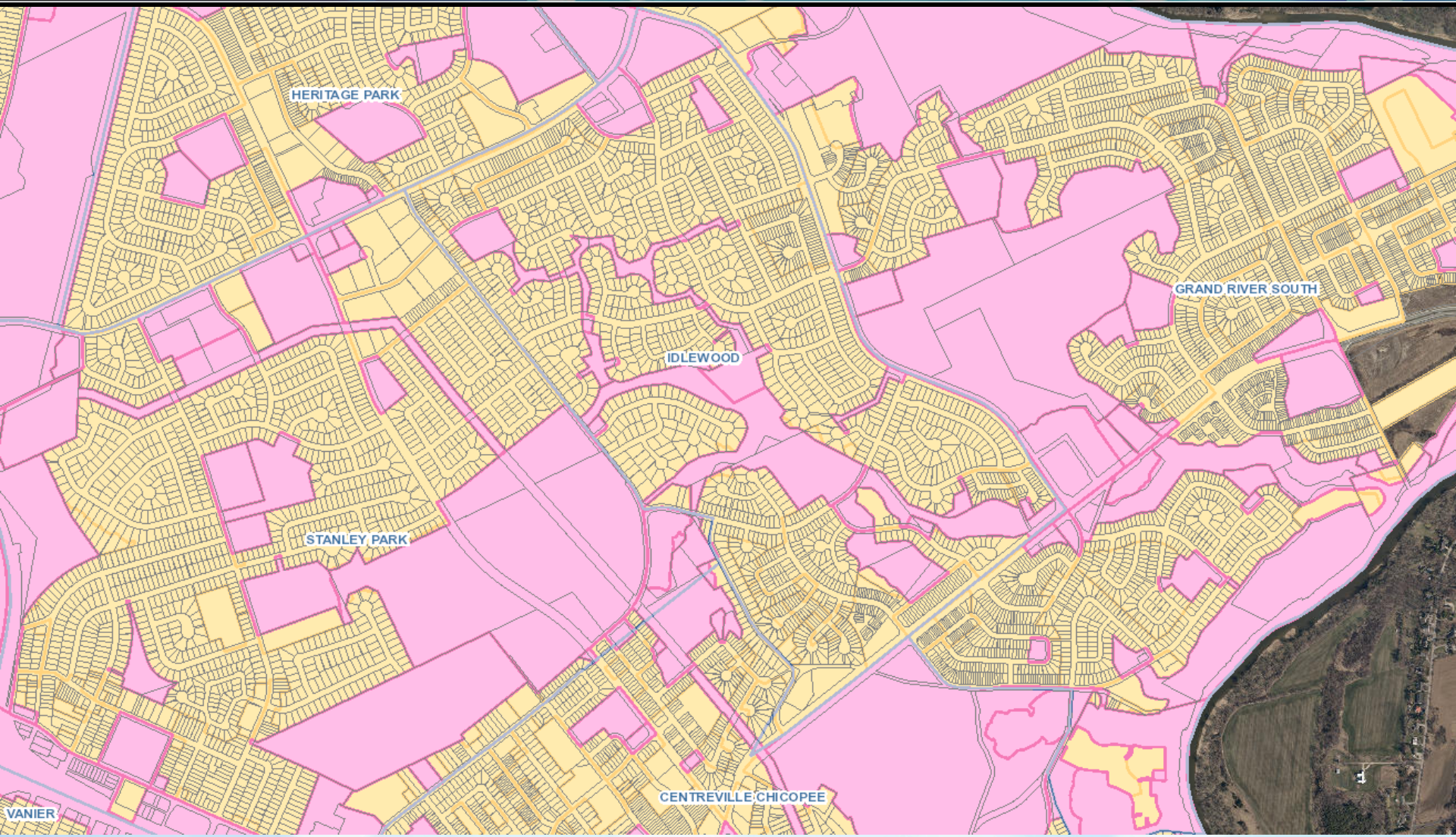


Status of new zoning by-law (6)

- When do we start using the new zoning by-law?
  - The new by-law is currently under appeal.
  - During the appeal, all properties within the new zoning must meet the most restrictive of new and old zoning by-laws.
  - Once the appeal is resolved, only new by-law would apply on that property.

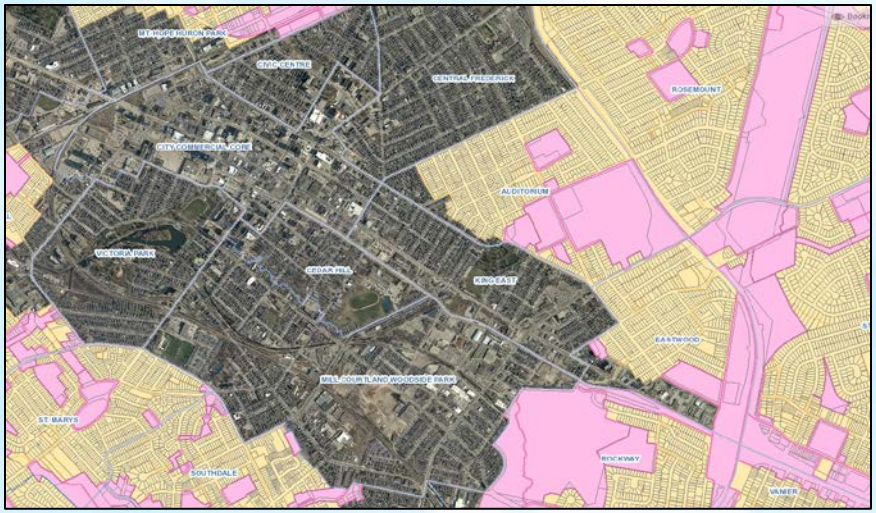


Status of new zoning by-law (7)



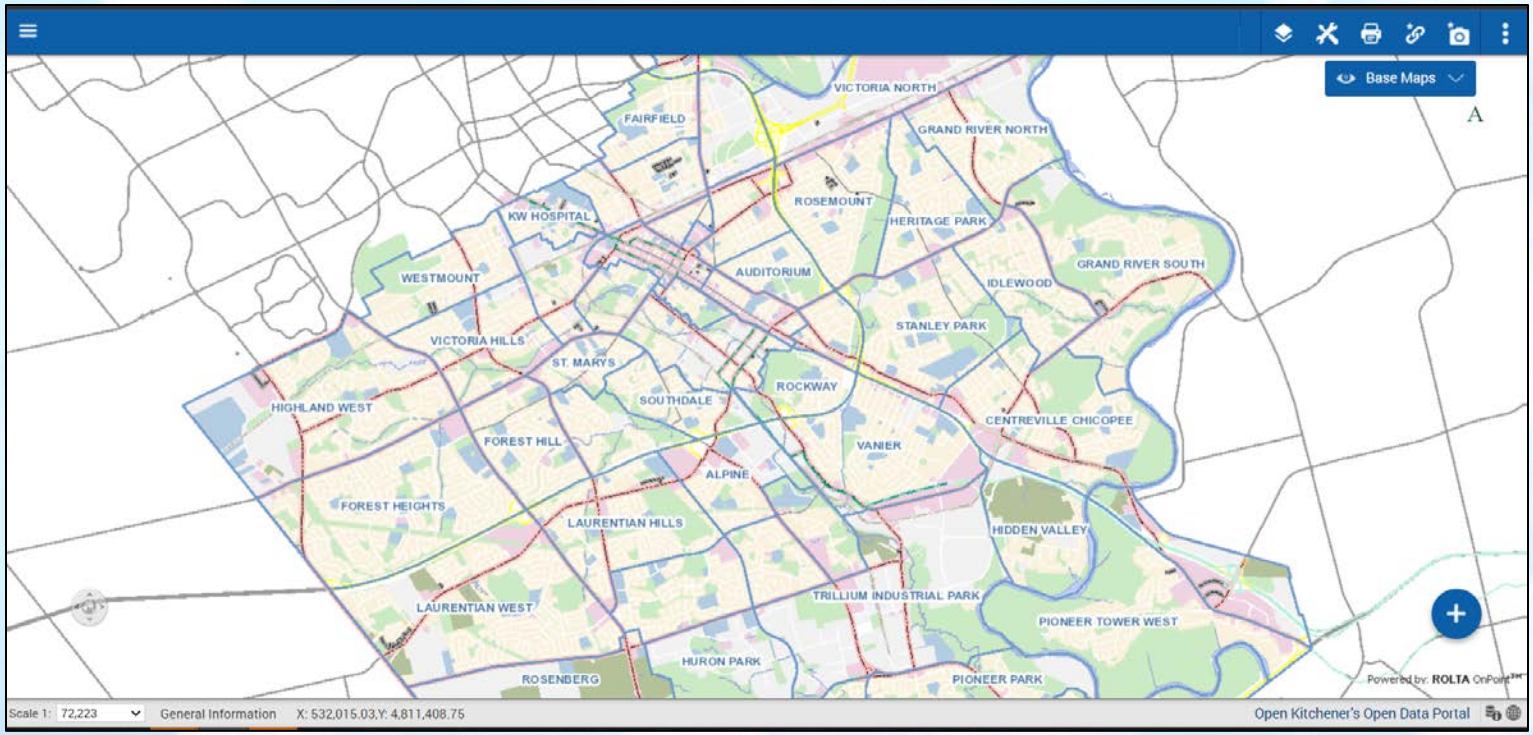
Key takeaway

1. Confirm if a property is within new zoning (2019-051) or old zoning (85-1)



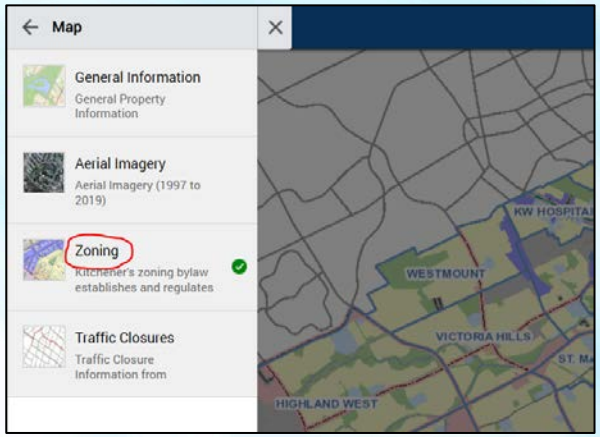
Does new zoning apply to a property? (1)

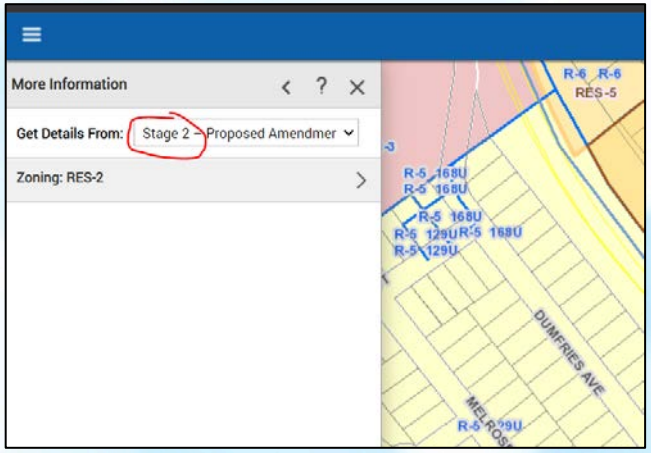
- Use Interactive Mapping to confirm if property is within new zoning
  - Google search: “Kitchener interactive mapping”



Does new zoning apply to a property? (2)

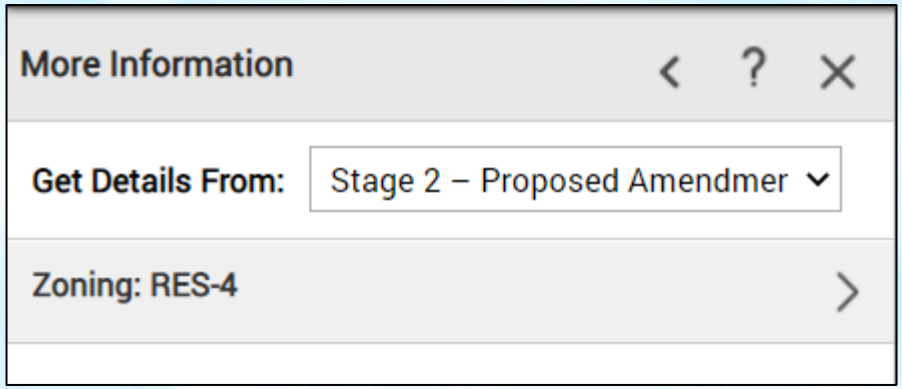
1. Make sure ‘Zoning’ map is on
2. Navigate to property address
3. When you click on property, check if property is within “Stage 2”



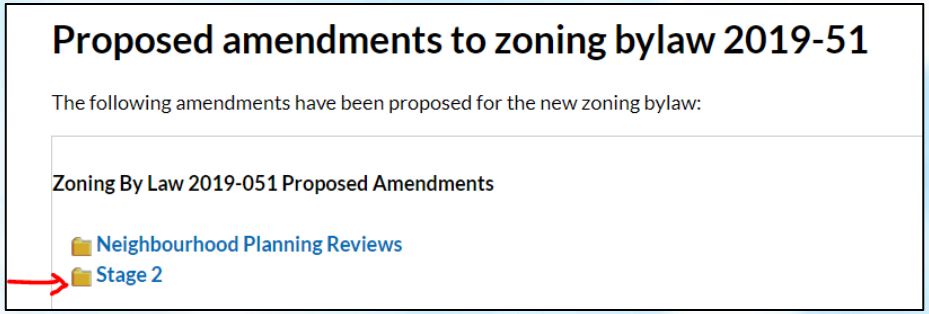


Where to read new zoning regulations?

- In OnPoint
  - Use identify tool to select property and navigate to "Stage 2"

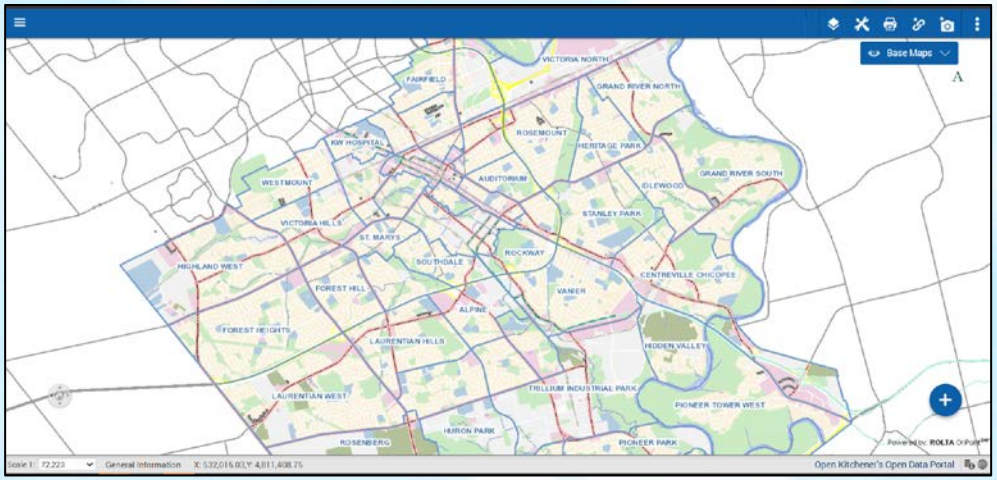


- On zoning by-law webpage



Another key takeaway

1. There are two ways to look up zoning: (1) interactive mapping and (2) zoning by-law webpage.



Training Overview

- Overview of Regulation Changes
  - Will use <u>one</u> of these for each regulation:

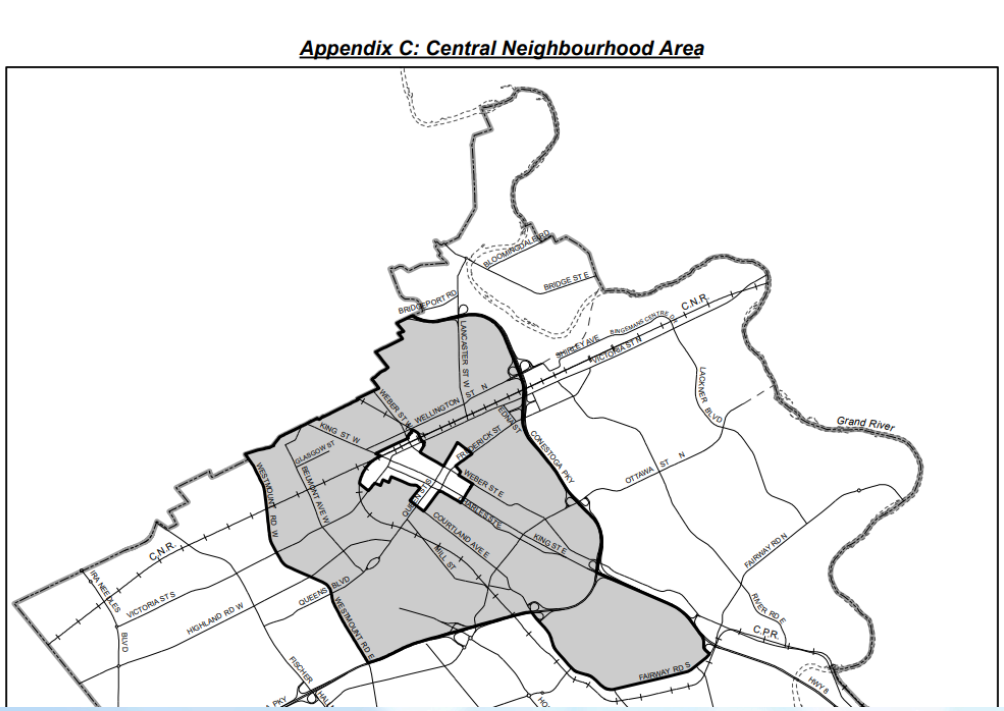
New By-law 2019-051 is more **restrictive** than old By-law 85-1

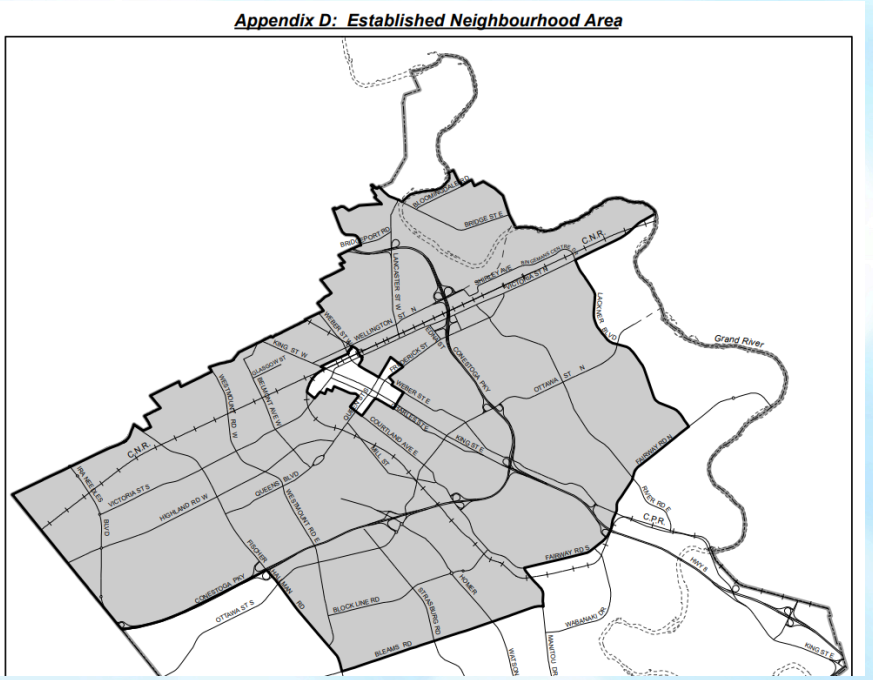
Regulations in new By-law 2019-051 are the **same** as old By-law 85-1

New By-law 2019-051 is more **permissive** than old By-law 85-1

RIENS Structure

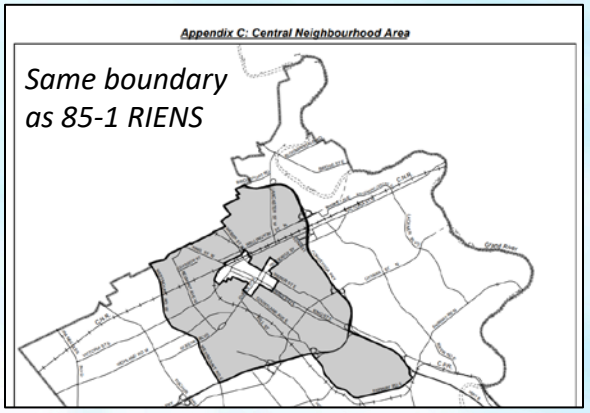
- Appendix C + Appendix D
- Important for new additions in front yard and new dwellings

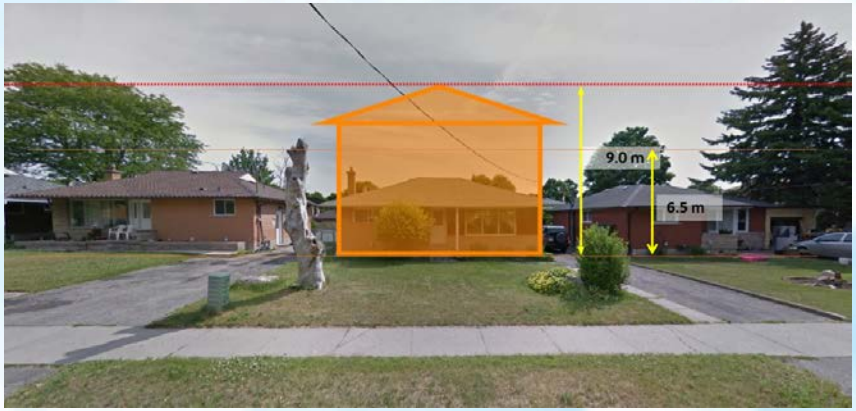




RIENS Structure – Appendix C

- Appendix C (Central Neighbourhoods)
  1. Front yard setback must align with adjacent properties for new dwellings and additions
  2. Garages cannot project from front façade of dwelling
  3. *new* max. 50% garage to façade width
  4. *new* 40% maximum driveway width compared to lot width (hard max. of 8m)
  5. *new* building height limits of 9m (rather than 11m) where building is between two shorter buildings 6.5m or less in height

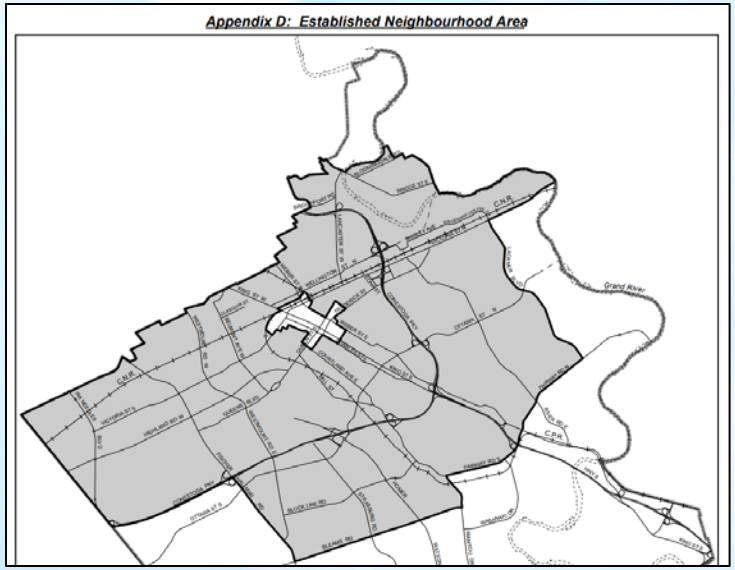




New By-law 2019-051 is more **restrictive** than old By-law 85-1

RIENS Structure – Appendix D

- Appendix D (Established Neighbourhoods)
  - Front yard setback must align with adjacent properties for new dwellings and additions



(3) For lands identified in Appendix D, despite the minimum *front yard* required in any *zone*, the minimum *front yard* is the *established front yard* minus one metre.

In all other cases, the minimum *front yard* shall be in accordance with this Table. Despite the foregoing, no part of any *building* used to accommodate off street parking shall be located closer than 6.0 metres to the *street line*.

(3a) For lands identified on Appendix D, the maximum *front yard* shall be the *established front yard* plus one metre. In all other cases there is no maximum *front yard*.

Established Front Yard - means

a) In the case of a *lot* that is not a *corner lot:* the average of the *front yards* of the abutting *lots* with a *low rise residential zone* and where there is a vacant *lot* abutting the affected *lot*, the average of the *front yards* of the next adjacent *lot* with a *low rise residential zone*; and

b) in the case of a *corner lot:*

the *front yard* of the abutting *lot* with a *low rise residential zone*, in which the principal pedestrian entrance is oriented towards the same *street*, and where there is a vacant *lot* abutting the affected *lot*, the *front yard* of the next adjacent *lot* with a *low rise residential zone*.

New By-law 2019-051 is more **restrictive** than old By-law 85-1

Building Height

Section in 2019-051:
- Section 3 (Definitions)
- Section 7.3 (Regulations)

KITCHENER

- **Summary:**
  - Still calculated from highest finished ground to uppermost point of the building.
  - Single detached dwelling is still only use that can exceed 110% from lowest finished ground
  - Building height has been increased to 11 metres (previously 10.5m) for most low-rise uses

Table 7-2: For Single Detached Dwellings

Regulation	RES-1 (5)	RES-2 (5)	RES-3 (5)	RES-4 (5)	RES-5 (5)	RES-6	RES-7
Maximum *Building Height*	11.0m(6)	11.0m(6)	11.0m(6)	11.0m(6)	11.0m(6)		

Building Height – means the vertical distance between the highest elevation of the finished ground immediately surrounding the perimeter of the *building* and the uppermost point of the *building*. For all *uses* except a *single detached dwelling* with or without *additional dwelling unit(s) (attached)*, at no point shall the vertical distance between the lowest elevation of the finished ground immediately surrounding the perimeter of the *building* and the uppermost point of the *building* exceed 110% of the maximum *building height* in the applicable *zone*.

New By-law 2019-051 is more **permissive** than old By-law 85-1

Lot Coverage

Section in 2019-051:

- Section 7.3 (Regulations)

- **Summary:**
  - In By-law 2019-051, the lot coverage may be up to 55% for all buildings – no longer limited to 45% for habitable portion of dwelling like in old By-law 85-1
  - 55% is the total maximum lot coverage **for all buildings** (main house + all accessory structures)

Lot Coverage – means that percentage of the *lot area* covered by all *buildings*.

Table 7-2: For Single Detached Dwellings

Regulation	RES-1 (5)	RES-2 (5)	RES-3 (5)	RES-4 (5)	RES-5 (5)	RES-6	RES-7
Maximum *Lot Coverage*	55%(4)	55%(4)	55%(4)	55%(4)	55%(4)		

(4) A combined total of 55 percent for all *buildings* and *structures* on the *lot*. *Accessory buildings* or *structures*, whether attached or detached, and *additional dwelling units (detached)* shall not exceed 15 percent.

New By-law 2019-051 is more **permissive** than old By-law 85-1

Garage Width

Section in 2019-051:
- Section 5.4
- Table 5-2 & 5-3

- Maximum garage width to façade is now 65% (previously 70%)
- For lands in Appendix C (Central Neighbourhoods), maximum garage width to façade is 50%
  - Confirm property in Appendix C is within new zoning by-law first

Table 5-2: Private Garage Width and Driveway Width Regulations by Use

Residential Use	Maximum *private garage width*	Maximum *driveway* width with an attached *private garage*	Maximum *driveway* width without an attached *private garage*
Single Detached Dwelling	65% of the width of the front *façade* closest to the *street* at *grade*	50% of the *lot width* or a *driveway* may be as wide as the attached *garage*. The *driveway* may extend beyond the width of the attached *garage* to a maximum total width of 50% of the *lot*; and shall be located no closer than the required *side yard setback* of the *dwelling*.	50% of the *lot width*.

Table 5-3: Private Garage Width and Driveway Width Regulations by Use for lands identified on Appendix C – Central Neighbourhoods

Residential Use	Maximum *private garage width*	Maximum *driveway* width with an attached *garage*	Maximum *driveway* width without an attached *garage*
Single Detached Dwelling	50% of the width of the front *façade* closest to the *street* at *grade*	40% of the *lot width* or a *driveway* may be as wide as the attached *garage* The *driveway* may extend beyond the width of the attached *garage* to a maximum total width of 40% of the *lot*; and shall be located no closer than the required *side yard setback* of the *dwelling* which is not located along the common wall of the same *dwelling*.	40% of the *lot width*.

New By-law 2019-051 is more **restrictive** than old By-law 85-1

Garage Projection

Section in 2019-051:

- Table 5-2 a)
- Table 5-2 b)

- Maximum garage projection from front façade is 1.8m
  - Where a garage does project, a **porch much be provided** in accordance with Section 4.14.7
- For lands in Appendix C (Central Neighbourhoods) no garage projection permitted
  - Confirm property in Appendix C is within new zoning by-law first

a) For lands identified on Appendix C (Central Neighbourhoods), and within a *low-rise residential zone* an attached *private garage* associated with a *single detached dwelling*, *semi-detached dwelling*, or *street townhouse*; with or without an *additional dwelling unit(s)* shall not project beyond the front *façade* of the habitable at *grade* portion of the *dwelling unit*.

b) For lands not identified on Appendix C (Central Neighbourhoods), an attached *private garage* associated with a *single detached dwelling, semi-detached dwelling* or *street townhouse dwelling*; with or without an *additional dwelling unit(s)*:

i) An attached *private garage* may project beyond the front *façade* of the habitable portion of the *dwelling unit* a maximum of 1.8 metres.

ii) Where a *private garage* projects beyond the habitable portion of the front *façade* of the *dwelling unit*, a *porch* abutting the *private garage* shall be provided in accordance with Section 4.14.7.

iii) A *private garage* shall not project beyond the front of a *porch*.

New By-law 2019-051 is more **restrictive** than old By-law 85-1

Porch Requirement

Section in 2019-051:

- Section 4.14.7

- New porches must be at least 1.5 metres deep
- Where a garage projects beyond the front façade of the dwelling, a porch must be provided and garage cannot project beyond porch

4.14.7 Porches

a) The minimum depth of a porch associated with a *dwelling unit* shall be 1.5 metres; or in the case of an *existing* porch with a depth of less than 1.5 metres, the minimum depth shall be the *existing* depth.

b) Unenclosed porches associated with a *dwelling unit* may project into a *front yard* or *exterior side yard* provided that the porch is located a minimum of 3 metres from a *street line* and the floor of the porch does not exceed 1 metre in height above the ground. A cold room may be located beneath the porch.

c) Despite Subsection b), a porch attached or unattached to the *principal building* of a *structure* designated under the Ontario Heritage Act may be located or reconstructed within a required *front yard* or *side yard* provided that the *setback*, *gross floor area*, dimensions, and height do not exceed what legally existed on or before March 5, 2012.

New By-law 2019-051 is more **restrictive** than old By-law 85-1

Size of Parking Spaces

Section in 2019-051:
- Section 5.3.1, Table 5-1

- Garage spaces are now 3m by 5.5m (previously 3.04m by 5.49m)
  - **Note**: a second required space within a garage may have a size of 2.6m by 5.5m
- Outdoor parking spaces have same size at 2.6m by 5.5m

Table 5-1: Regulations for Parking Space Dimensions

Type of Parking Space	Minimum Dimensions
Angled parking space	2.6 m in width and 5.5 m in length (1)
Parallel parking space (interior space)	2.4 m in width and 6.7 m in length (2)(3)
Parallel parking space (end space)	2.4 m in width and 5.5 m in length (2)(3)(4)
Parking space within a *private garage*	3 m in width and 5.5 m in length (5)

(5) Where 2 or more required parking spaces are located within a private garage, the minimum width of the first space is 3 metres and 2.6 metres for every additional parking space.

Some **minor tweaks** in new by-law 2019-051 compared to old by-law 85-1

Projections into Garage Parking Space

Section in 2019-051:

- n/a

- Steps and walls are no longer permitted to project into a garage parking space
  - In old By-law 85-1, steps were permitted a 0.46m projection and walls were permitted a 0.15m projection – this is no longer allowed.
- Parking spaces must be unobstructed and meet minimum size dimensions

Parking space within a *private garage*	3 m in width and 5.5 m in length (5)

New By-law 2019-051 is more **restrictive** than old By-law 85-1

Steps (Exterior to dwelling)

Section in 2019-051:

- Section 4.14.10

- ***New:*** Steps 0.6m or less above ground level may be located in any side yard (previously 0.75m setback for steps higher than 0m)
- Steps above 0.6m above ground level = 0.75m from side and rear yard; 3 metres from street line
- ***More restrictive***: steps above the first storey must have 1.2m setback from side and rear lot line

4.14.10 Steps and Access Ramps

a) Steps and access ramps that do not exceed 0.6 metres above ground level may be located within any *yard side yard*.

b) Steps and access ramps that exceed 0.6 metres above ground level shall be located a minimum of 3 metres from a *street line* and a minimum of 0.75 metres from an *interior side lot line* or *rear lot line*. Portions of steps and access ramps located above the *ground floor storey* shall be located a minimum of 1.2 metres from an *interior side lot line* or *rear lot line*.

c) The maximum area of steps and access ramps located in a *front* yard shall not exceed 40 percent of the area of the *front yard*.

New By-law 2019-051 is more **permissive** than old By-law 85-1

Driveway Widths

Section in 2019-051:
- Section 5.4
- Table 5-2 and 5-3

- Maximum driveway widths remain at 50% of lot width or as wide as attached garage
  - For lands in Appendix C (Central Neighbourhoods), maximum driveway width is 40%
- *new* - driveway must be setback the same as the requirement for the dwelling (typically 1.2m) – previously the driveway setback was 0.6m

Table 5-2: Private Garage Width and Driveway Width Regulations by Use

Residential Use	Maximum *private garage width*	Maximum *driveway* width with an attached *private garage*	Maximum *driveway* width without an attached *private garage*
Single Detached Dwelling	65% of the width of the front *façade* closest to the *street* at *grade*	50% of the *lot width* or a *driveway* may be as wide as the attached *garage*. The *driveway* may extend beyond the width of the attached *garage* to a maximum total width of 50% of the *lot*; and shall be located no closer than the required *side yard setback* of the *dwelling*.	50% of the *lot width*.

Table 5-3: Private Garage Width and Driveway Width Regulations by Use for lands identified on Appendix C – Central Neighbourhoods

Residential Use	Maximum *private garage width*	Maximum *driveway* width with an attached *garage*	Maximum *driveway* width without an attached *garage*
Single Detached Dwelling	50% of the width of the front *façade* closest to the *street* at *grade*	40% of the *lot width* or a *driveway* may be as wide as the attached *garage* The *driveway* may extend beyond the width of the attached *garage* to a maximum total width of 40% of the *lot*; and shall be located no closer than the required *side yard setback* of the *dwelling* which is not located along the common wall of the same *dwelling*.	40% of the *lot width*.

New By-law 2019-051 is more **restrictive** than old By-law 85-1

Accessory Structures

Section in 2019-051:

- Section 4.1

- Accessory structures 10 square metres or less with maximum height of 3 metres can locate in any side yard (no change from 85-1)
- Accessory structure more than 3 metres in height require 0.6 metre setback (no change from 85-1)
- Maximum building height is 3 metres to fascia and 5.5 metres to peak (no change from 85-1)

4.1 ACCESSORY BUILDINGS AND STRUCTURES

a) Unless otherwise provided for in this By-law, no *accessory building* or *structure* shall be used for human habitation.

b) *Accessory buildings* or *structures* to *dwelling units* having a maximum *gross floor area* of 10 square metres or less and a maximum *height* of 3 metres are permitted within a required *rear yard* or a required *interior side yard*.

c) *Accessory buildings* and *structures* to *dwelling units* with a *building height* greater than 3 metres shall be located a minimum of 0.6 metres from an *interior side lot line* and *rear lot line*.

d) For *accessory buildings* to *single detached dwellings*, *semi-detached dwellings*, and *street townhouse dwellings*, with or without an *accessory dwelling unit (attached)* or *accessory dwelling unit (detached)*, and to *multiple dwellings*, the maximum height of the underside of any fascia shall be 3 metres, the maximum *building height* shall be 5.5 metres, and the maximum *lot coverage* shall be 15 percent.

e) *Accessory buildings* or *structures* to *dwelling units* shall not be located in a *front yard* or *exterior side yard*.

Regulations in new By-law 2019-051 are the **same** as old By-law 85-1

Decks

Section in 2019-051:

- Section 4.14.4

- Decks that do not exceed 0.6m from the ground can locate in any rear/side yard (no change from 85-1)
- Unenclosed decks above 0.6m must meet side yard setback of dwelling (no change from 85-1) and be located a minimum of 4 metres from rear yard
- *NEW* covered decks above 0.6m from the ground can locate 4m from the rear lot line (previously 7.5m) as long as they are not enclosed

4.14.4 Decks

a) All decks shall meet the *setback* regulations required for the *building* in the applicable *zone*.

b) Despite Subsection a) in a *residential zone*, unenclosed decks that do not exceed 0.6 metres in height above the ground, may be located within a required *rear yard* or *interior side yard*.

c) Despite Subsection a) in a *residential zone*, entirely unenclosed decks that exceed 0.6 metres in height above the ground, may be located within a required *rear yard* provided that they are located a minimum of 4 metres from the *rear lot line* and meet the *side yard setback* regulations required for the *dwelling* in the applicable *zone*.

d) Despite Subsection a) covered, unenclosed decks attached to the *principal building* may be located within a required *rear yard* provided that they are located a minimum of 4 metres from the *rear lot line* and meet the *side yard setback* regulations required for the *dwelling* in the applicable *zone*.

New By-law 2019-051 is more **permissive** than old By-law 85-1

Duplexes

Section in 2019-051:

- Section 4.12.1
- Section 5.3.3

- Now called “Additional Dwelling Unit (Attached)” in zoning
- Permitted in low rise zones RES-1 through RES-5
- Tandem parking continues to be allowed

ii)	Despite Subsection i), where two or more *parking spaces* are required, one *parking space* may locate on the *driveway* within 6 metres of the *front lot line* or *exterior side lot line* and may be a *tandem parking space*; and,

Table 7-1: Permitted Uses within the Residential Zones

Use	RES-1	RES-2	RES-3	RES-4	RES-5	RES-6	RES-7
Residential Uses							
Single Detached Dwelling	✓	✓	✓	✓	✓		
Additional Dwelling Units (Attached)(1)	✓	✓	✓	✓	✓		

Regulations in new By-law 2019-051 are the **same** as old By-law 85-1

Summary of Key Takeaways

1. Two different zoning by-laws in Kitchener – confirm which zoning applies first.
2. Look up zoning on our interactive map or zoning by-law webpage.
3. If your property is within an established neighbourhood, special rules may apply (Appendix C & D).
4. If in doubt, contact planning.

Zoning Questions?

planning@kitchener.ca

519-741-2426

Matt Ruetz

MBO Technical Specialist

Code Consultations - OBC

Next Edition of the OBC

Anticipated to be in effect early 2024

- e-laws version anticipated to be available mid 2023 to allow industry to prepare

- Phase 1 – Harmonization with the 2015 NBC
  - Fall 2021 (now closed)
- Phase 2 – Harmonization with the 2020 NBC
  - Winter 2022 (now closed)
- Phase 3– Ontario Specific Changes
  - Open for comments until December 9, 2022

Code Consultations - NBC

National Building Code (NBC) 2025

- Participate in the public review of proposed changes to the National Building Codes
  - National Building Code of Canada (NBC)
  - National Fire Code of Canada (NFC)
  - National Energy Code of Canada for Buildings (NEBC)
  - National Plumbing Code of Canada (NPC)
- Public review taking place until December 23, 2022
  - Link to public consultation

Ensure your OBC is up to date

- How to obtain OBC amendment packages?
  - Visit Publications Ontario
    - There are currently 10 amendment packages to the 2012 OBC.
    - If you are missing several updates, ensure to insert in your code in order of release.
- Additional Resources
  - e-laws website
    - Has html version of OBC and can select past versions
  - Email MMAH to request a FREE digital copy
    - buildingtransformation@ontario.ca

Updated OBC Matrix - 1

The City of Kitchener OBC matrices have been updated

- OBC Matrix for New Buildings
- OBC Matrix for Existing Buildings

We have also created a guide with detailed explanation to assist with the completion of each matrix.

These will be updated and added on our website soon

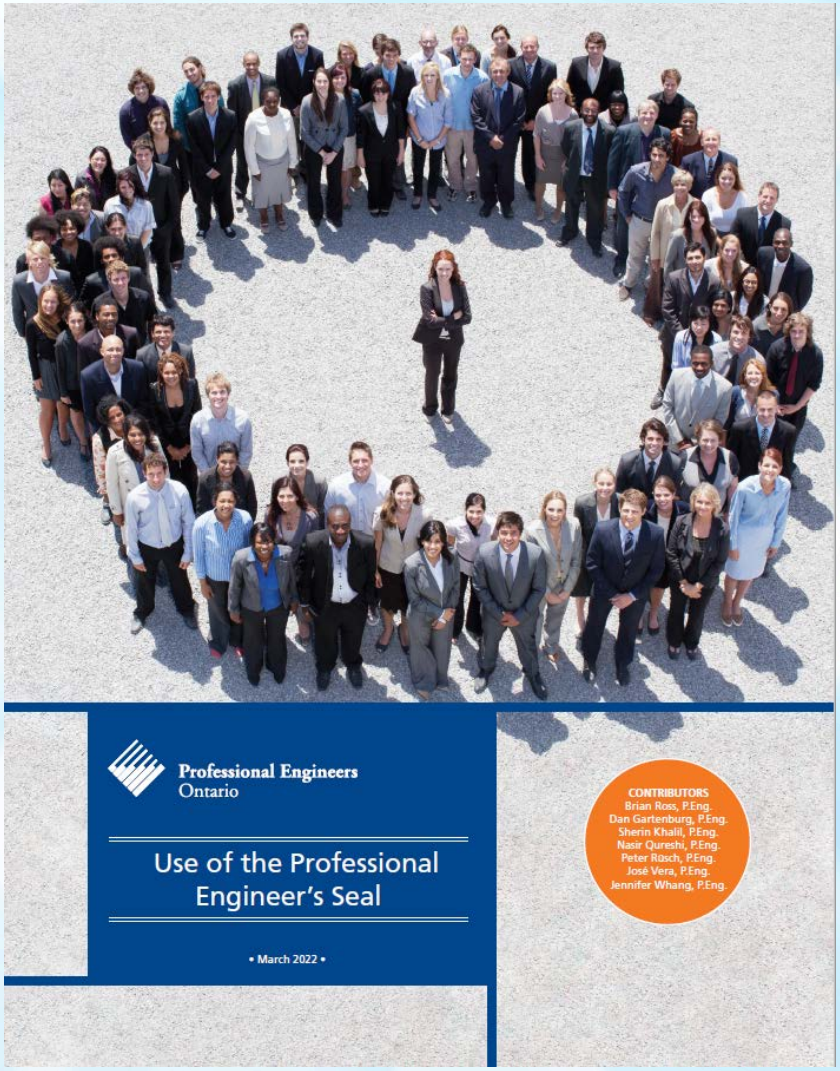
Updated OBC Matrix - 2

Tips for Completion of the Part 10/11 – Change of Use and/or Performance Level Evaluation of Existing Buildings.

- The Building Size (Small, Medium, Large, >Large) is based on the **Building Area**, not suite area or area of work
- For Reduction in Performance Level, and Compensating Construction, **do not** just check "No" under every category unless it is actually No.

Engineer Seal Guidelines

- The PEO have issued a guidance document on the Use of the Professional Engineer's Seal - March 2022
- Engineering documents to be sealed;
  - Drawings (including sketches)
  - Reports (including field reports)
  - Letters
  - Opinions
  - Engineering judgements
  - Alternative Solutions
  - Site Instructions
  - Etc.



Architect Seal Guidelines

- The OAA have a Regulatory Notice RN.01, version 6.0 dated Nov 16, 2021
  - OAA Professional Seal – Application (usage)

- Documents to be sealed when governing the construction of a building;
  - Drawings (including sketches)
  - Reports
  - Final Letters
  - Opinions
  - Alternative Solutions
  - Site Instructions, Change Orders, and Change Directives
  - Etc.

Alternative Solutions

How to Submit an Alternative Solution

- Alternative Solutions must be accompanied with a building permit application.
- Complete the Alternative Solution Application Form
- Submit the proposal along with the permit application submission

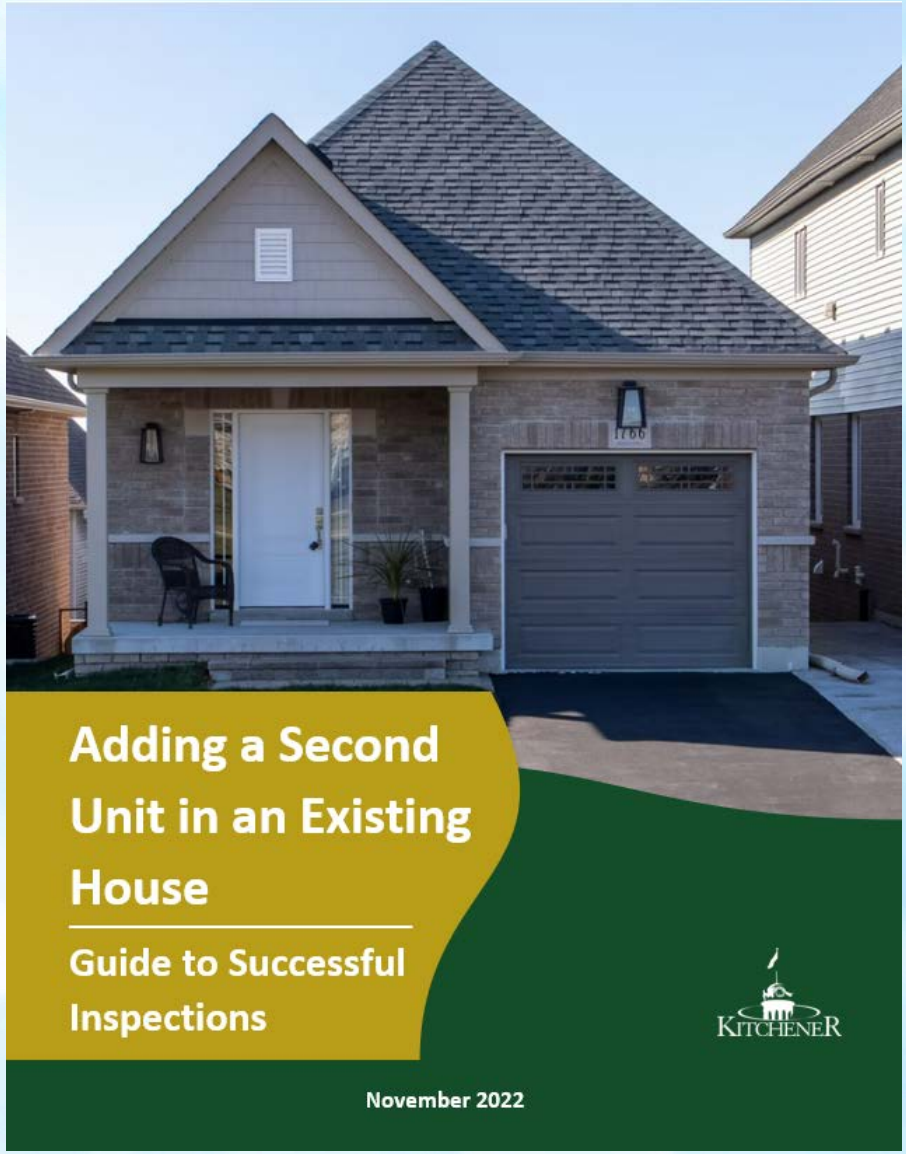
Duplex Inspection Guide

Adding a Second Unit in an Existing House

Guide to Successful Inspections

- Outlines Code provisions with;
  - Detailed Explanations,
  - Photos, and
  - Tips and Tricks

Anticipated to be available on our website December 2022



Key Internal Policies and Interpretations

Restaurants with Seating - 1

ALL RESTAURANTS WITH SEATING ARE PART 3

Restaurants with Seating - 2

- Restaurants with seating are classified as Group A2 occupancies as per OBC, Div. A, 1.4.1.2. definition of *assembly occupancy.*
  - *Assembly occupancy* means the occupancy or the use of a building or part of a building by a gathering of persons for civic, political, travel, religious, social, educational, recreational or similar purposes or for the consumption of food or drink.

- Div. A, 1.1.2. for the Application of the Parts of the Code, all assembly occupancies fall under Part 3.

- Div. B, 3.1.2.6. permits a restaurant containing not more than 30 patrons to be classified as a Group E major occupancy.

- In both Group A2 and Group E restaurants with seating the design remains in Part 3.

Take-out Only Restaurants

- Take-out only food establishments are classified as Mercantile Occupancy (Group E) major occupancies.

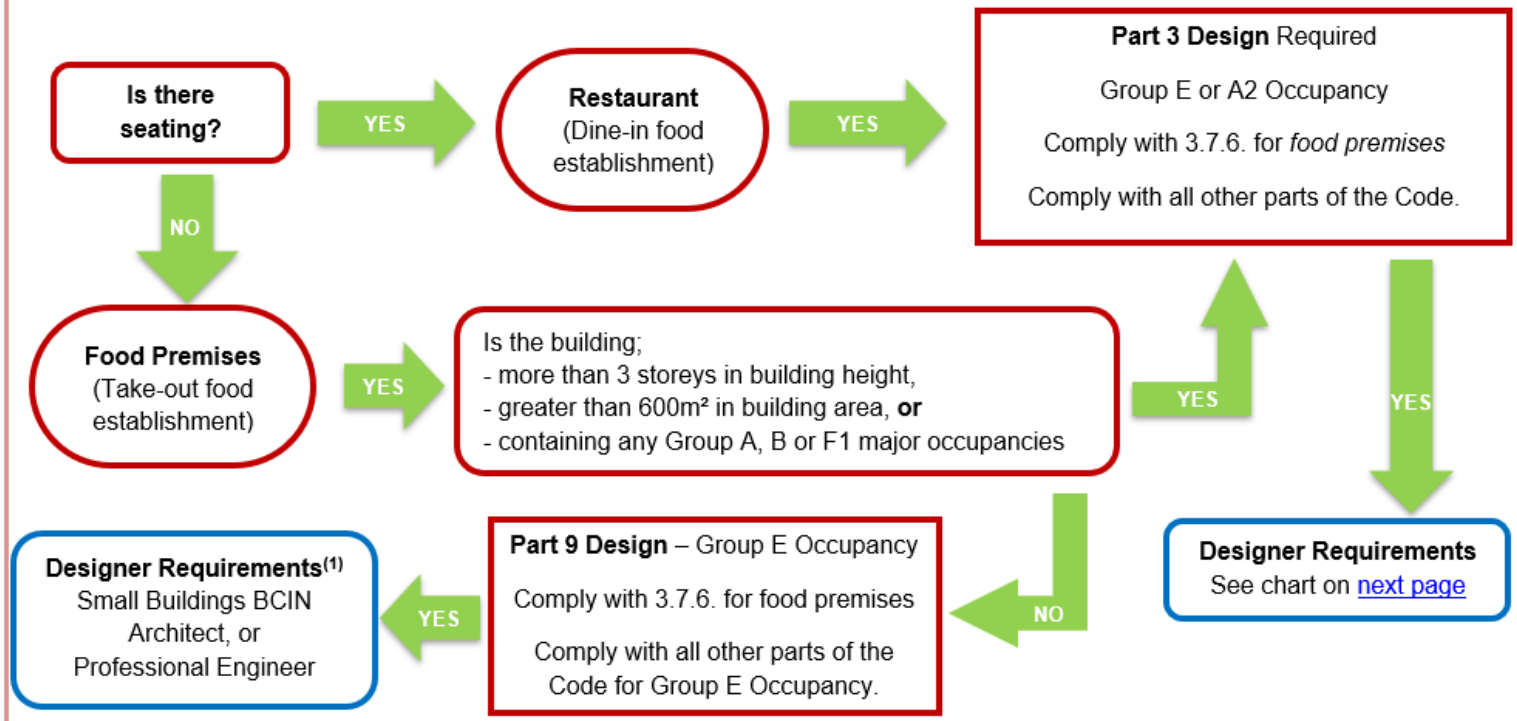
- Part 9 may apply to take-out only food establishments, where the building characteristics are in accordance with Div. A, 1.1.2.4. Application of Part 9.

Application of OBC for Restaurants

Is a Part 9 or Part 3 Review Required?

Restaurant: A place (floor area) where people pay to sit and eat meals that are cooked and served on the premises.

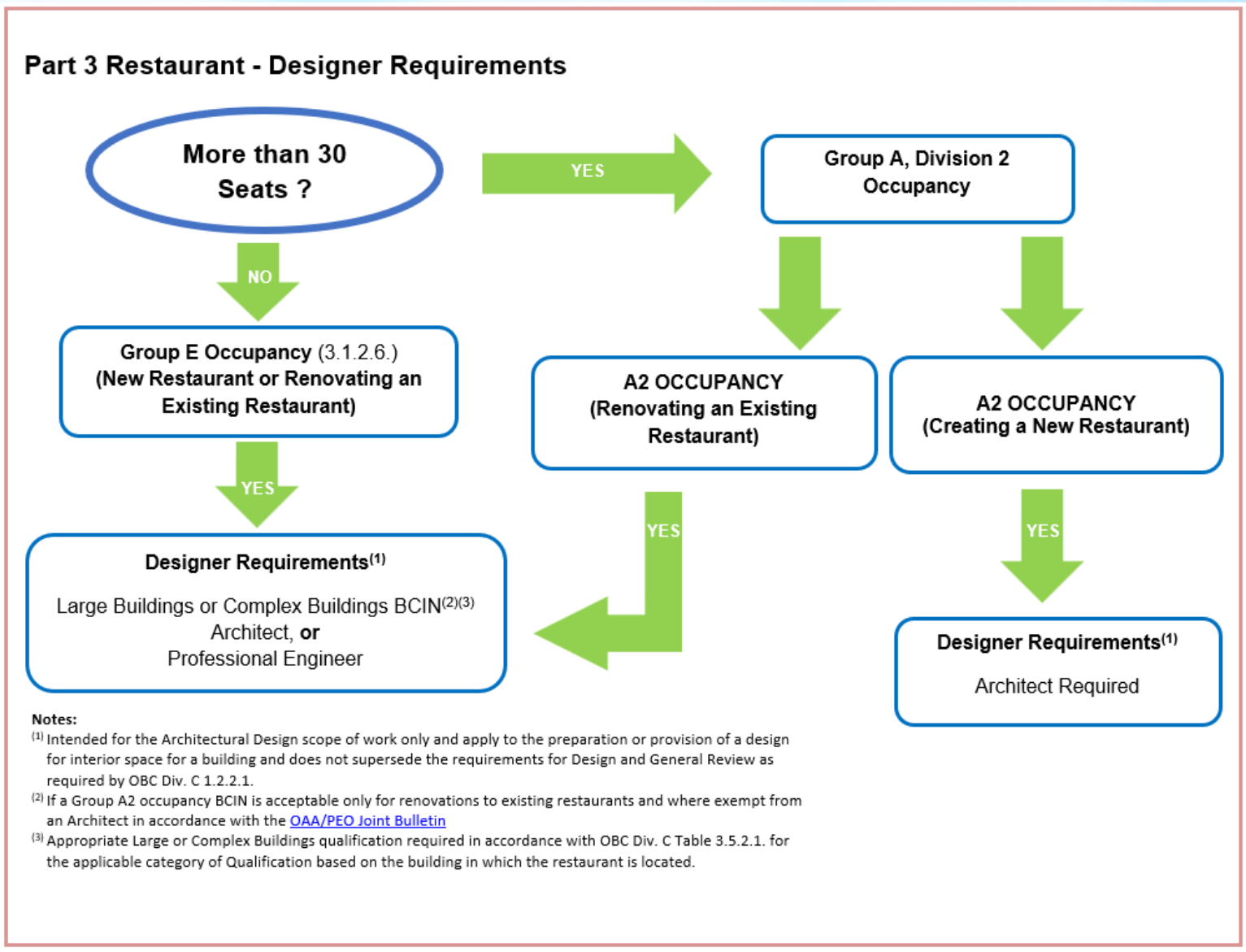
Food Premises: A floor area where food or drink for human consumption, or ingredient for food or drink for human consumption, is manufactured, processed, prepared, stored, displayed, handled, served, distributed, sold or offered for sale (see OBC 1.4.1.1. for list of exclusions) – this includes "Take-out food establishments".



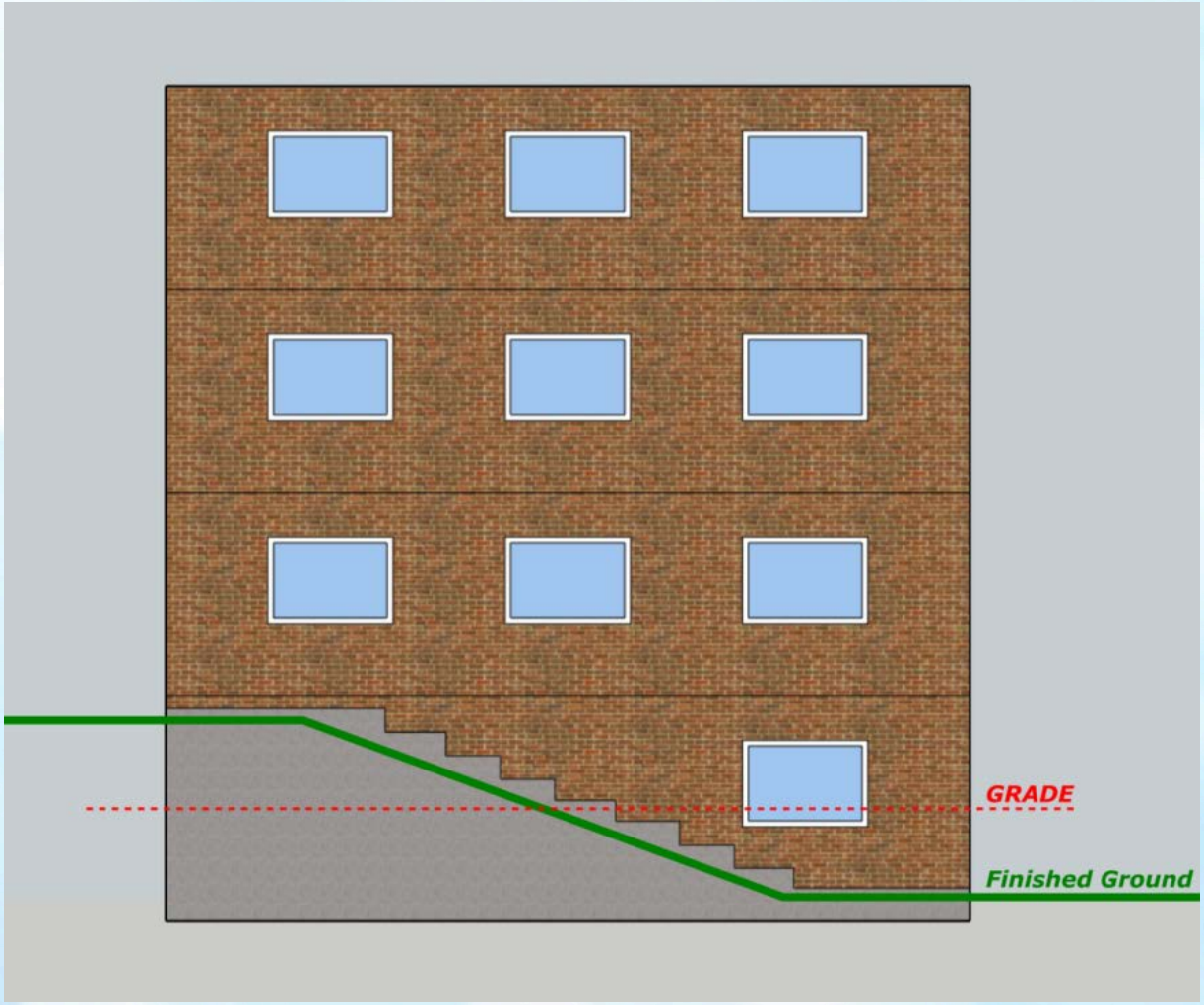
Notes:

(1) Intended for the Architectural Design scope of work only and apply to the preparation or provision of a design for interior space for a building and does not supersede the requirements for Design and General Review as required by OBC Div. C 1.2.2.1.

Designer Requirements for Restaurants



Determination of Grade - 1



Grade means the average level of proposed or finished ground adjoining a *building* at all exterior walls.

Determination of Grade - 2

Clarification for defining and establishing ‘finished ground’ adjoining a building at exterior walls for the determination of grade as defined by the OBC.

The establishment of grade allows for the determination of building height. Building height is the criteria for the application of many other requirements in the OBC including:

- the classification of the building into Part 9, Part 3 or as a high building,
- the type of construction required and the rating of fire separations between storeys, and,
- the necessity for fire detection systems, fire suppression systems, etc.

Determination of Grade - 3

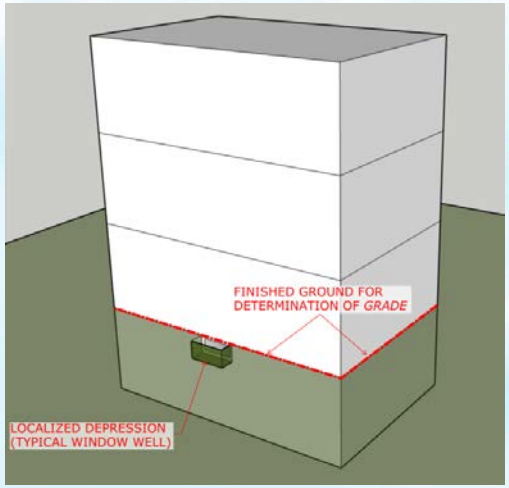
For the determination of finished ground adjoining a building the following interpretations have been established;

Minor localized depressions and localized projections **need not be considered** as finished ground in the determination of grade where they do not affect accessibility for firefighting or evacuation.

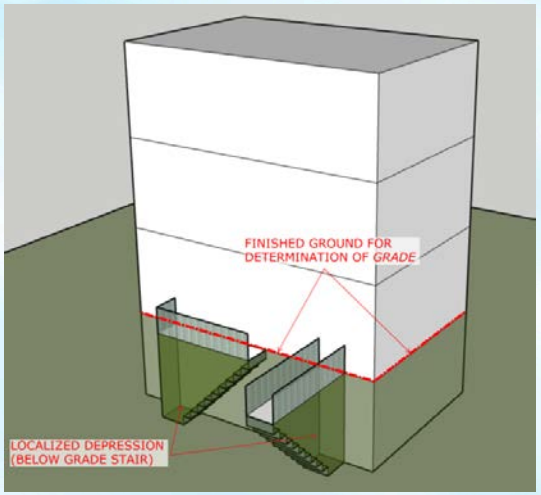
Determination of Grade - 4

Minor localized <u>depressions</u> may include but are not limited to;

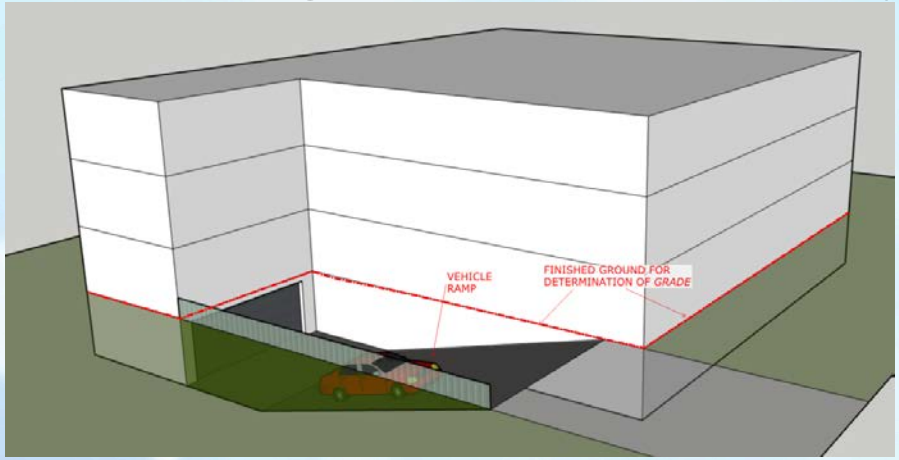
Typical Window Wells



Exterior Below Grade Stairs



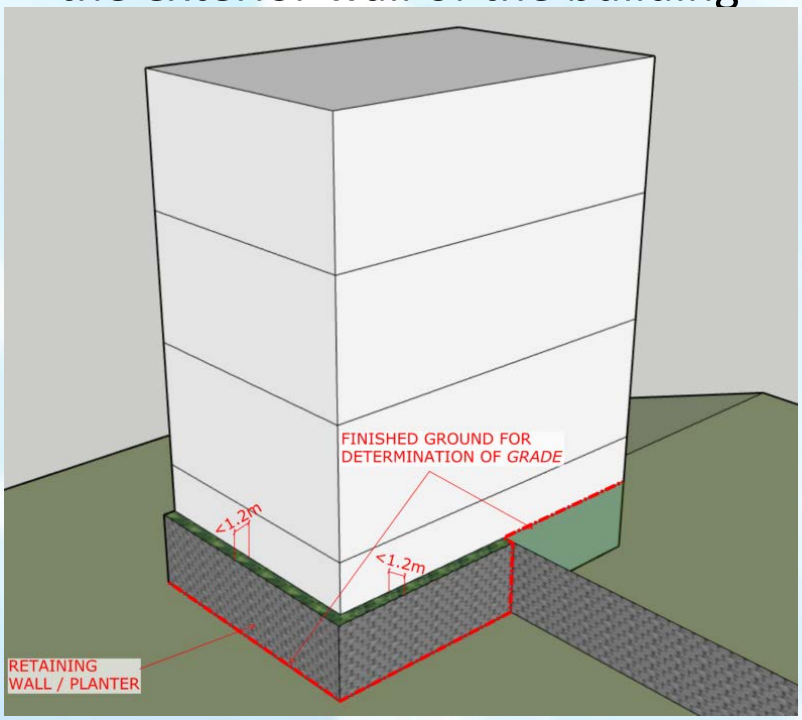
Exterior below grade vehicular access ramps



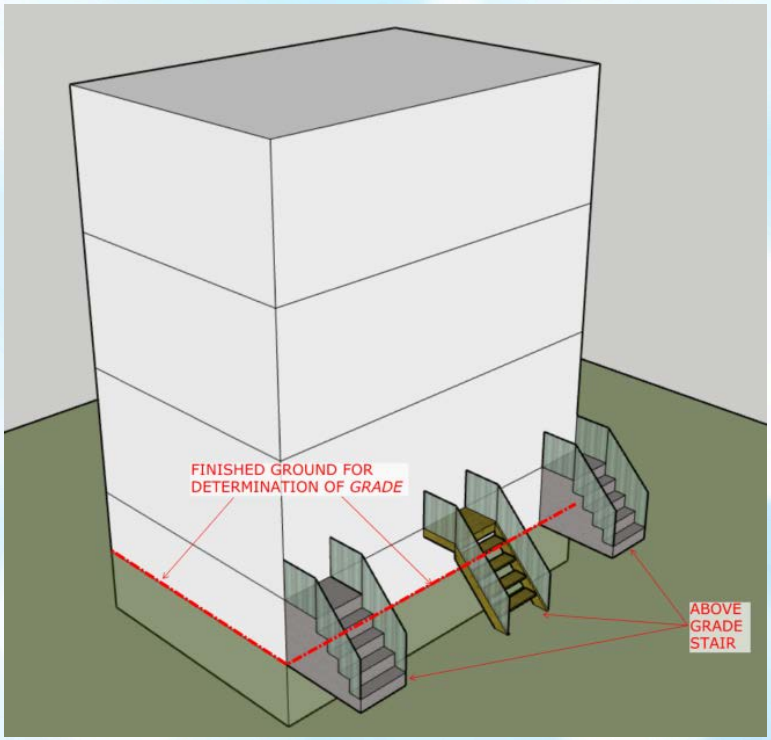
Determination of Grade - 5

Minor localized <u>projections</u> may include but are not limited to;

Retaining walls or planters that extend <u>less than 1.2m</u> away from the exterior wall of the building



Exterior above grade stairs and landings

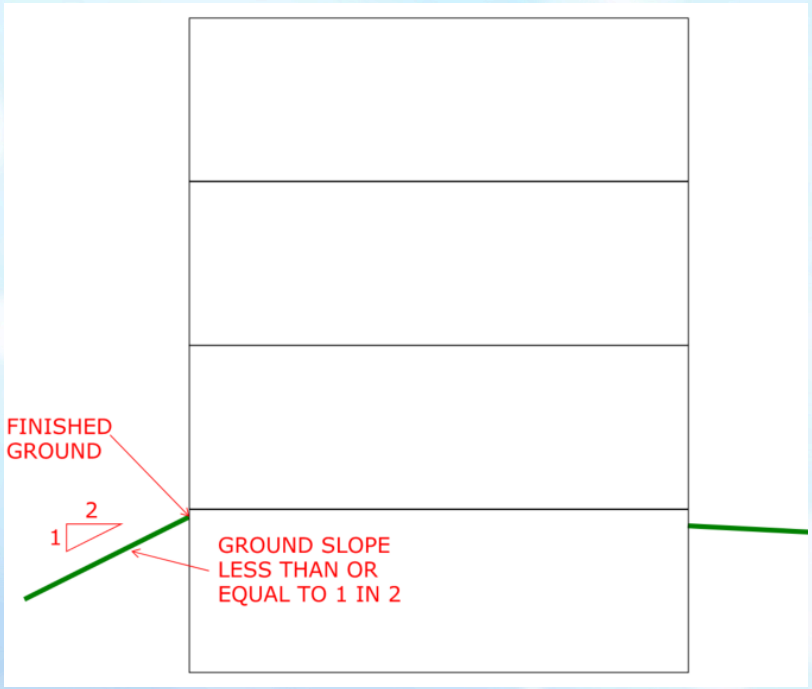


Sloped or mounded soil adjacent to the building with a slope greater than 1 in 2

Determination of Grade - 6

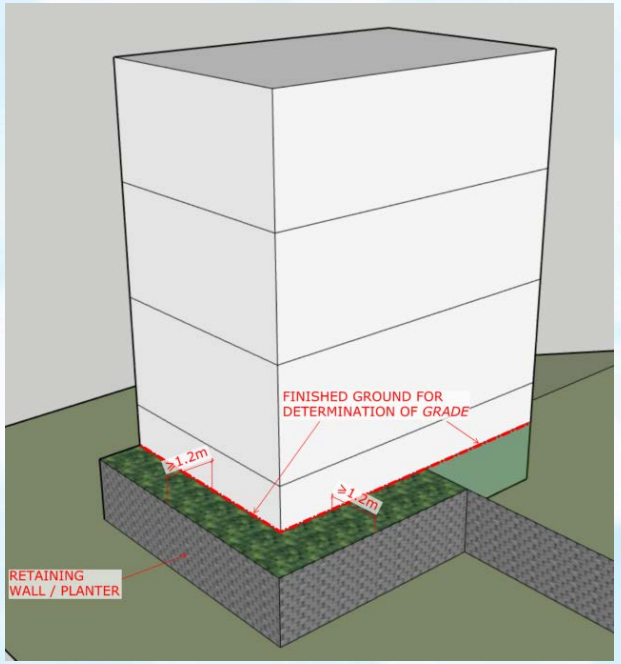
Elements that are NOT considered minor localized depressions or projections **shall be considered** to establish finished ground at the exterior wall of the building. Examples include but are not limited to;

Sloped or mounded soil adjacent to the building with a slope **not** more than 1 in 2 extending away from the building,



Retaining walls or planters that extend;

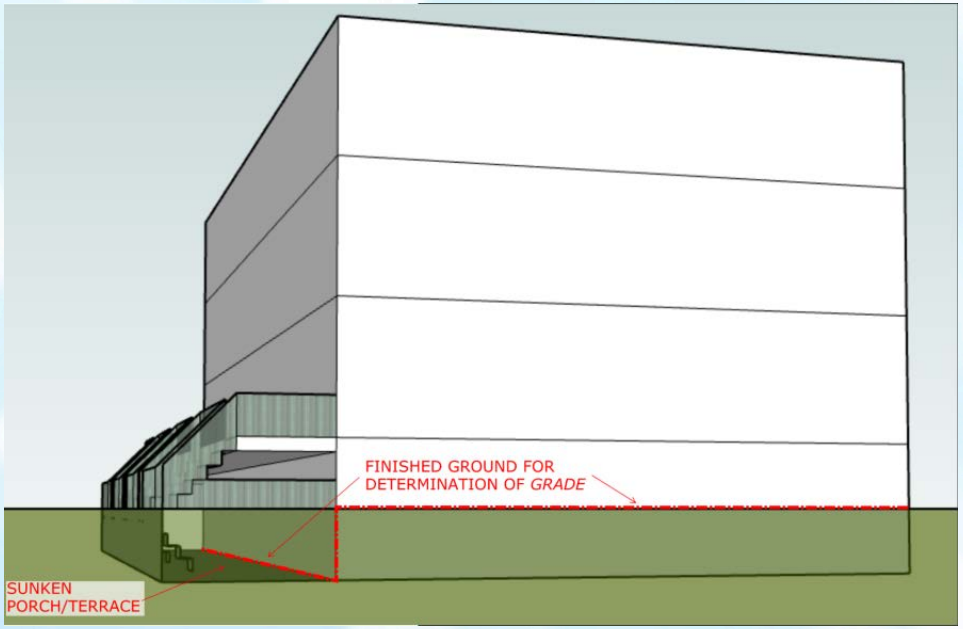
- 1.2m or greater away from the exterior face of the building, or
- to a public thoroughfare, access route, property line or adjacent building, whichever distance is less.



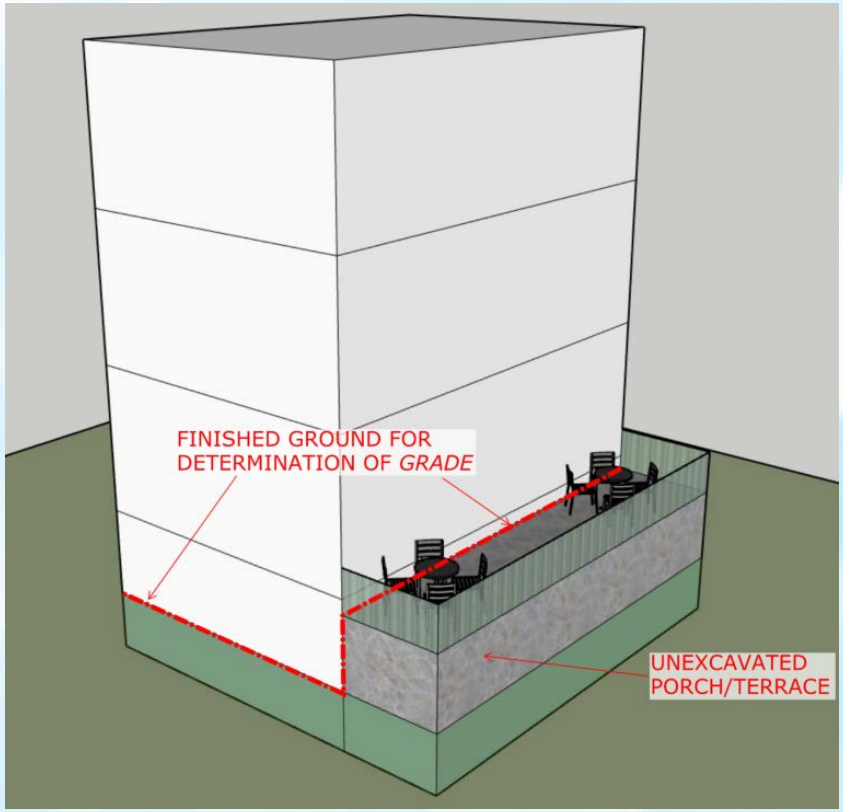
Determination of Grade - 7

Elements that are NOT considered minor localized depressions or projections **shall be considered** to establish finished ground at the exterior wall of the building. Examples include but are not limited to;

Sunken Terrance's / Patio's

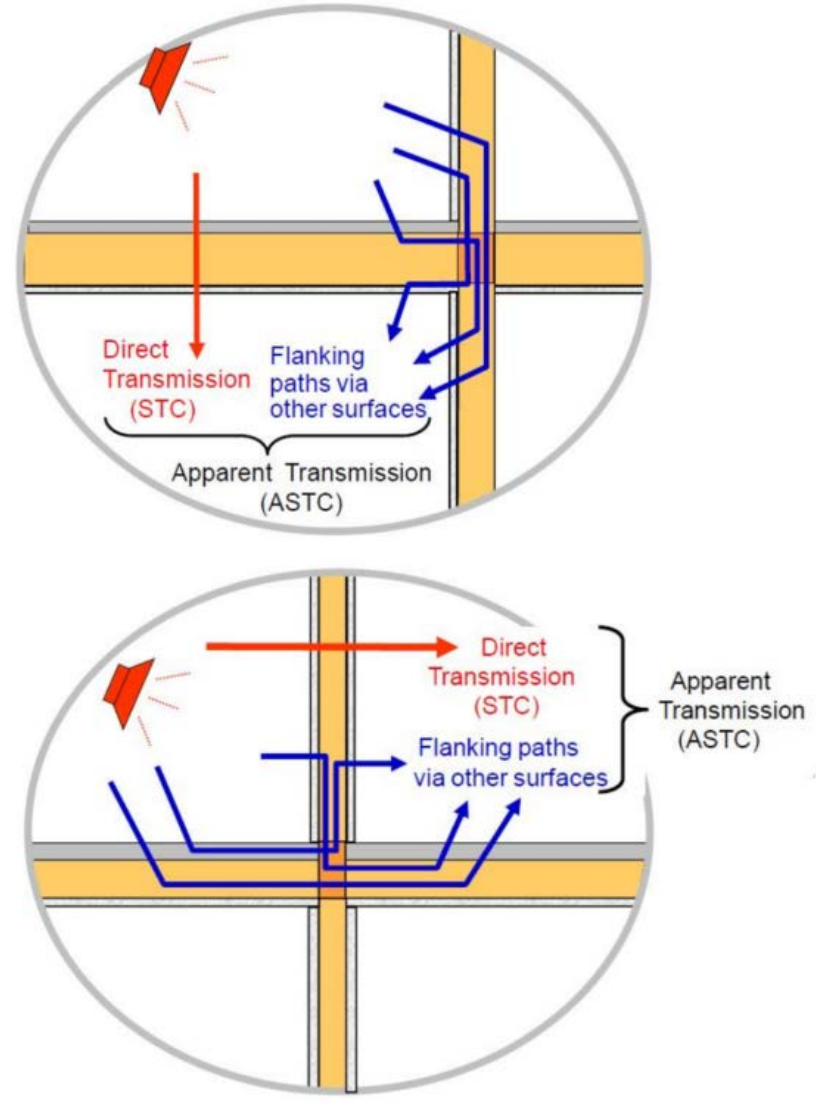


Above grade terraces which are unexcavated / filled with soil

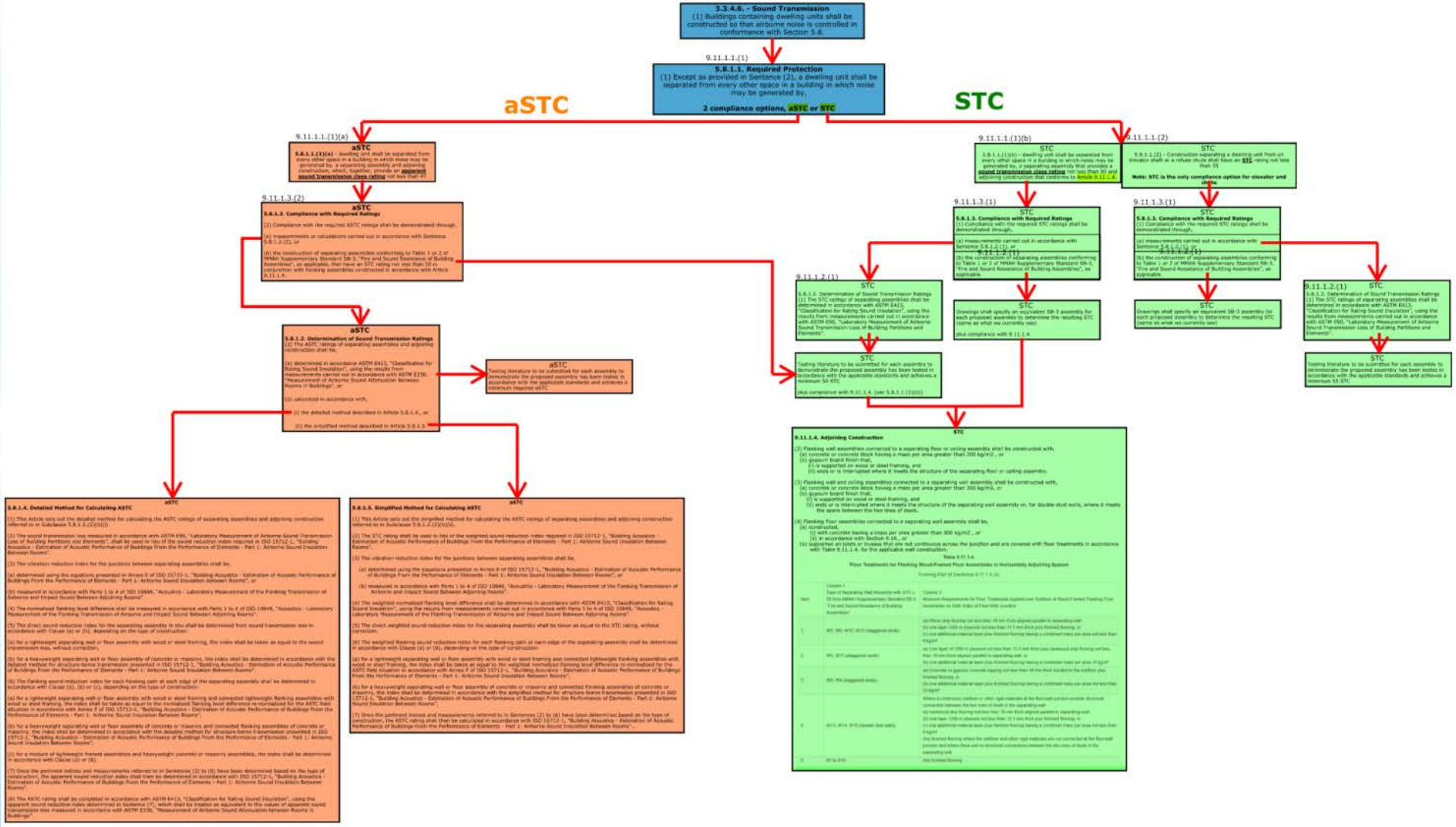


Sound Transmission - 1

- Sound Transmission requirements were substantially revised and effective **Jan. 1, <u>2020</u>**
- Introduced apparent sound transmission (ASTC) in addition to the conventional STC compliance option and introduced flanking requirements.



Sound Transmission - 2

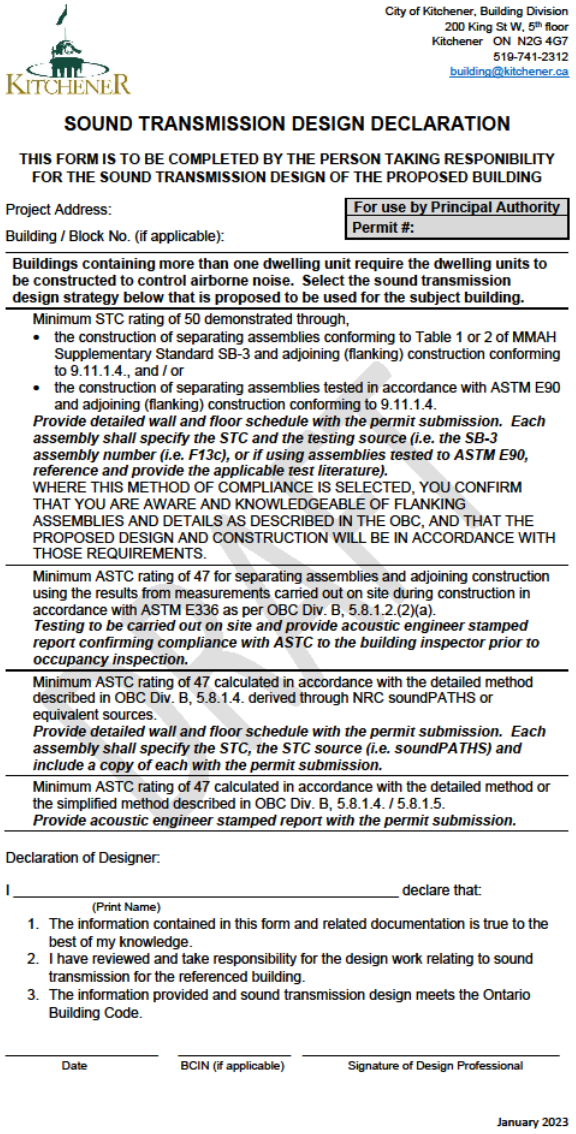


Sound Transmission - 3

New form created

Sound Transmission Design Declaration

- Required to be completed for **new** buildings containing more than one dwelling unit
- Required effective Jan. 1, 2023



KITCHENER

City of Kitchener, Building Division
200 King St W, 5th floor
Kitchener ON N2G 4G7
519-741-2312
building@kitchener.ca

SOUND TRANSMISSION DESIGN DECLARATION

THIS FORM IS TO BE COMPLETED BY THE PERSON TAKING RESPONIBILITY FOR THE SOUND TRANSMISSION DESIGN OF THE PROPOSED BUILDING

Project Address:

Building / Block No. (if applicable):

For use by Principal Authority
Permit #:

Buildings containing more than one dwelling unit require the dwelling units to be constructed to control airborne noise. Select the sound transmission design strategy below that is proposed to be used for the subject building.

Minimum STC rating of 50 demonstrated through,

- the construction of separating assemblies conforming to Table 1 or 2 of MMAH Supplementary Standard SB-3 and adjoining (flanking) construction conforming to 9.11.1.4., and / or
- the construction of separating assemblies tested in accordance with ASTM E90 and adjoining (flanking) construction conforming to 9.11.1.4.

Provide detailed wall and floor schedule with the permit submission. Each assembly shall specify the STC and the testing source (i.e. the SB-3 assembly number (i.e. F13c), or if using assemblies tested to ASTM E90, reference and provide the applicable test literature).

WHERE THIS METHOD OF COMPLIANCE IS SELECTED, YOU CONFIRM THAT YOU ARE AWARE AND KNOWLEDGEABLE OF FLANKING ASSEMBLIES AND DETAILS AS DESCRIBED IN THE OBC, AND THAT THE PROPOSED DESIGN AND CONSTRUCTION WILL BE IN ACCORDANCE WITH THOSE REQUIREMENTS.

Minimum ASTC rating of 47 for separating assemblies and adjoining construction using the results from measurements carried out on site during construction in accordance with ASTM E336 as per OBC Div. B, 5.8.1.2.(2)(a).
Testing to be carried out on site and provide acoustic engineer stamped report confirming compliance with ASTC to the building inspector prior to occupancy inspection.

Minimum ASTC rating of 47 calculated in accordance with the detailed method described in OBC Div. B, 5.8.1.4. derived through NRC soundPATHS or equivalent sources.
Provide detailed wall and floor schedule with the permit submission. Each assembly shall specify the STC, the STC source (i.e. soundPATHS) and include a copy of each with the permit submission.

Minimum ASTC rating of 47 calculated in accordance with the detailed method or the simplified method described in OBC Div. B, 5.8.1.4. / 5.8.1.5.
Provide acoustic engineer stamped report with the permit submission.

Declaration of Designer:

I _____ declare that:
(Print Name)

1. The information contained in this form and related documentation is true to the best of my knowledge.
2. I have reviewed and take responsibility for the design work relating to sound transmission for the referenced building.
3. The information provided and sound transmission design meets the Ontario Building Code.

Date | BCIN (if applicable) | Signature of Design Professional

January 2023

Sound Transmission - 4

Compliance Options:

1. Minimum STC rating of 50 demonstrated through,

- the construction of separating assemblies conforming to Table 1 or 2 of MMAH Supplementary Standard SB-3 **and** adjoining (flanking) construction conforming to 9.11.1.4.,

and / or

- the construction of separating assemblies tested in accordance with ASTM E90 **and** adjoining (flanking) construction conforming to 9.11.1.4.

Provide detailed wall and floor schedule with the permit submission. Each assembly shall specify the STC and the testing source (i.e. the SB-3 assembly number (i.e. F13c), or if using assemblies tested to ASTM E90, reference and provide the applicable test literature).

WHERE THIS METHOD OF COMPLIANCE IS SELECTED, YOU CONFIRM THAT YOU ARE AWARE AND KNOWLEDGEABLE OF FLANKING ASSEMBLIES AND DETAILS AS DESCRIBED IN THE OBC, AND THAT THE PROPOSED DESIGN AND CONSTRUCTION WILL BE IN ACCORDANCE WITH THOSE REQUIREMENTS.

Sound Transmission - 5

Compliance Options:

2. On Site Testing.

Minimum ASTC rating of 47 for separating assemblies and adjoining construction using the results from measurements carried out on site during construction in accordance with ASTM E336 as per OBC Div. B, 5.8.1.2.(2)(a).

Testing to be carried out on site and provide acoustic engineer stamped report confirming compliance with ASTC to the building inspector prior to occupancy inspection.

Sound Transmission - 6

Compliance Options:

3. NRC SoundPATHS

Minimum ASTC rating of 47 calculated in accordance with the detailed method described in OBC Div. B, 5.8.1.4. derived through NRC soundPATHS or equivalent sources.

Provide detailed wall and floor schedule with the permit submission. Each assembly shall specify the aSTC, the aSTC source (i.e. soundPATHS) and include a copy of each with the permit submission.

Sound Transmission - 7

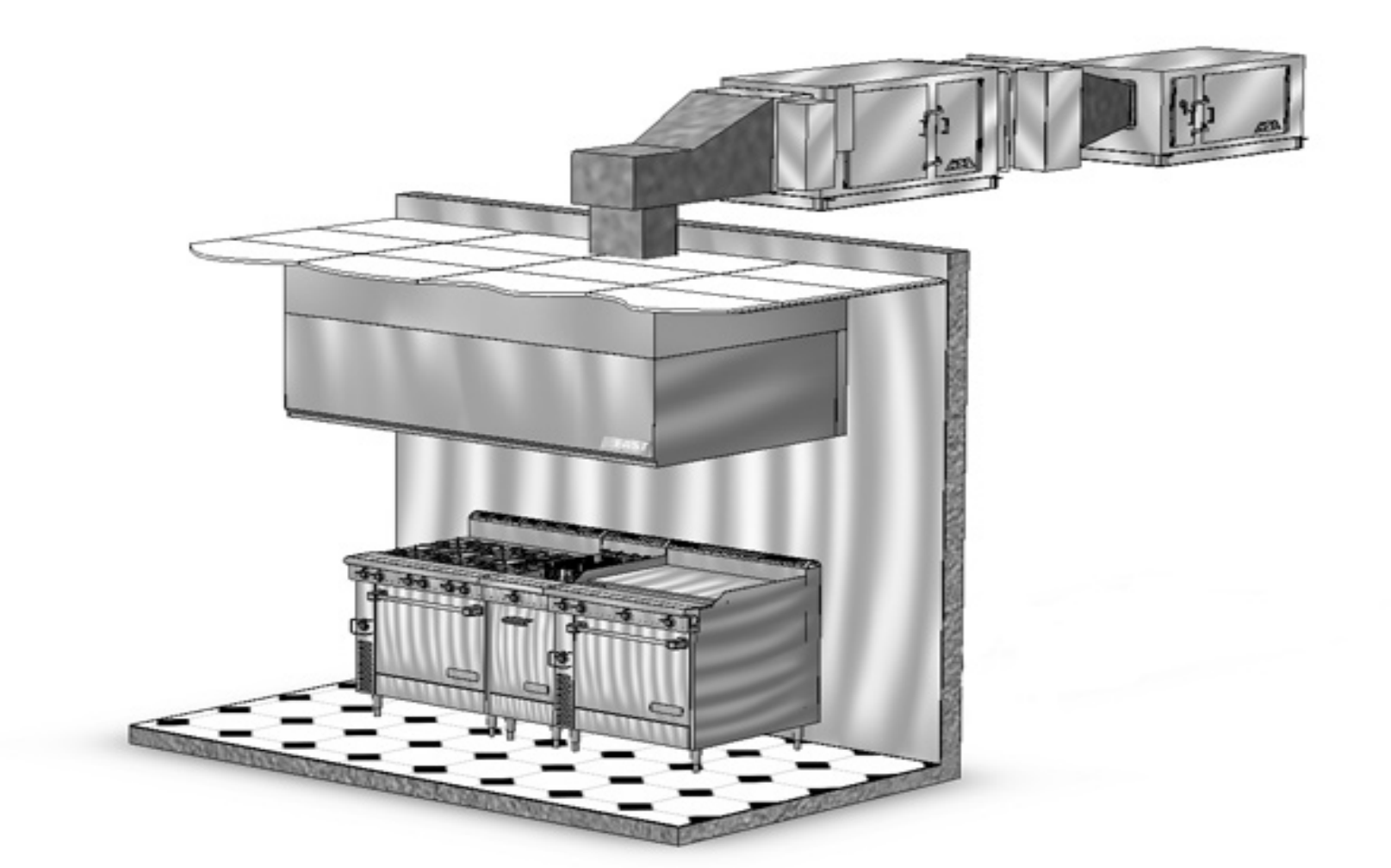
Compliance Options:

4. Acoustic Engineer Calculations

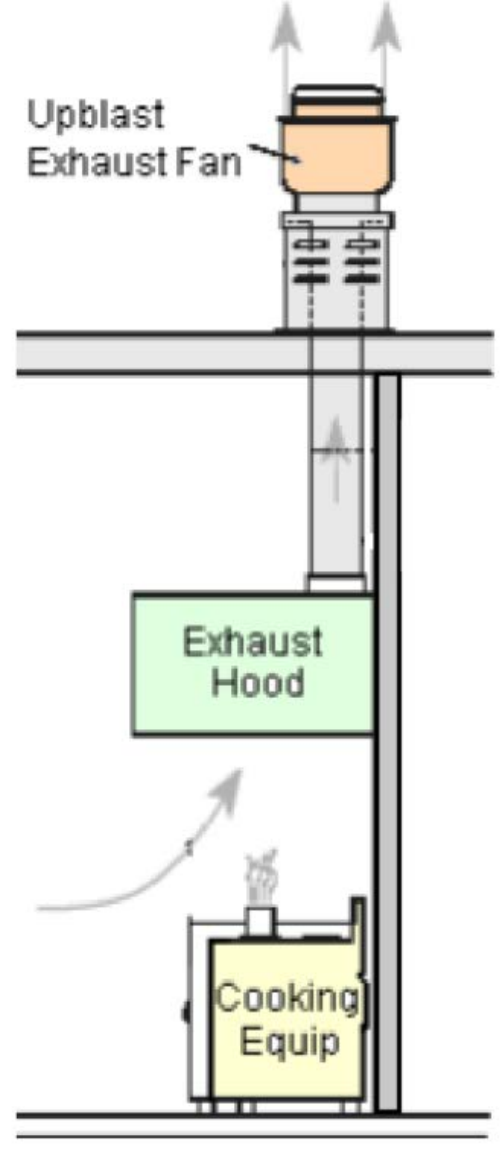
Minimum ASTC rating of 47 calculated in accordance with the detailed method or the simplified method described in OBC Div. B, 5.8.1.4. / 5.8.1.5.

Provide acoustic engineer stamped report with the permit submission.

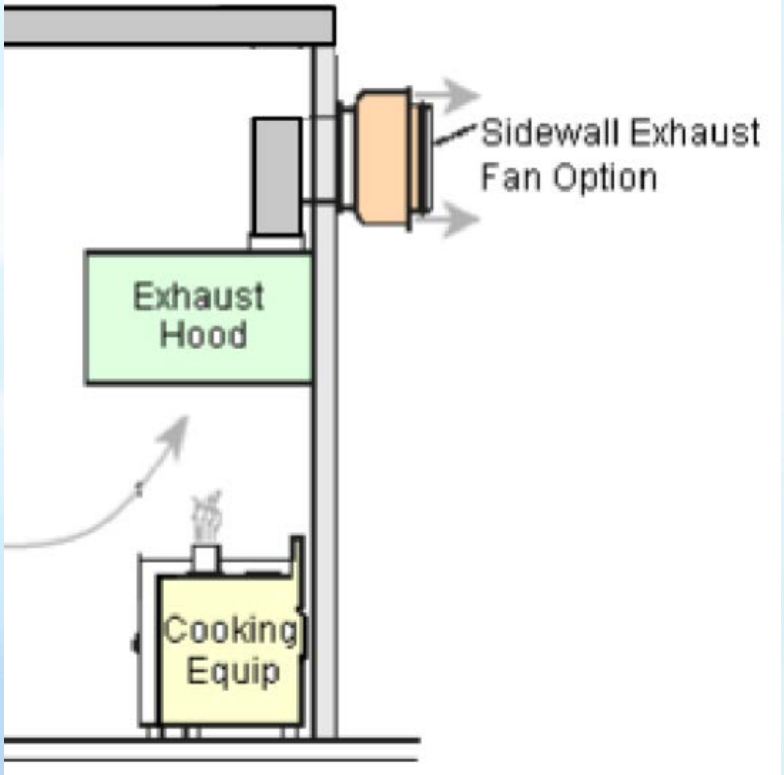
Ecology Units - 1

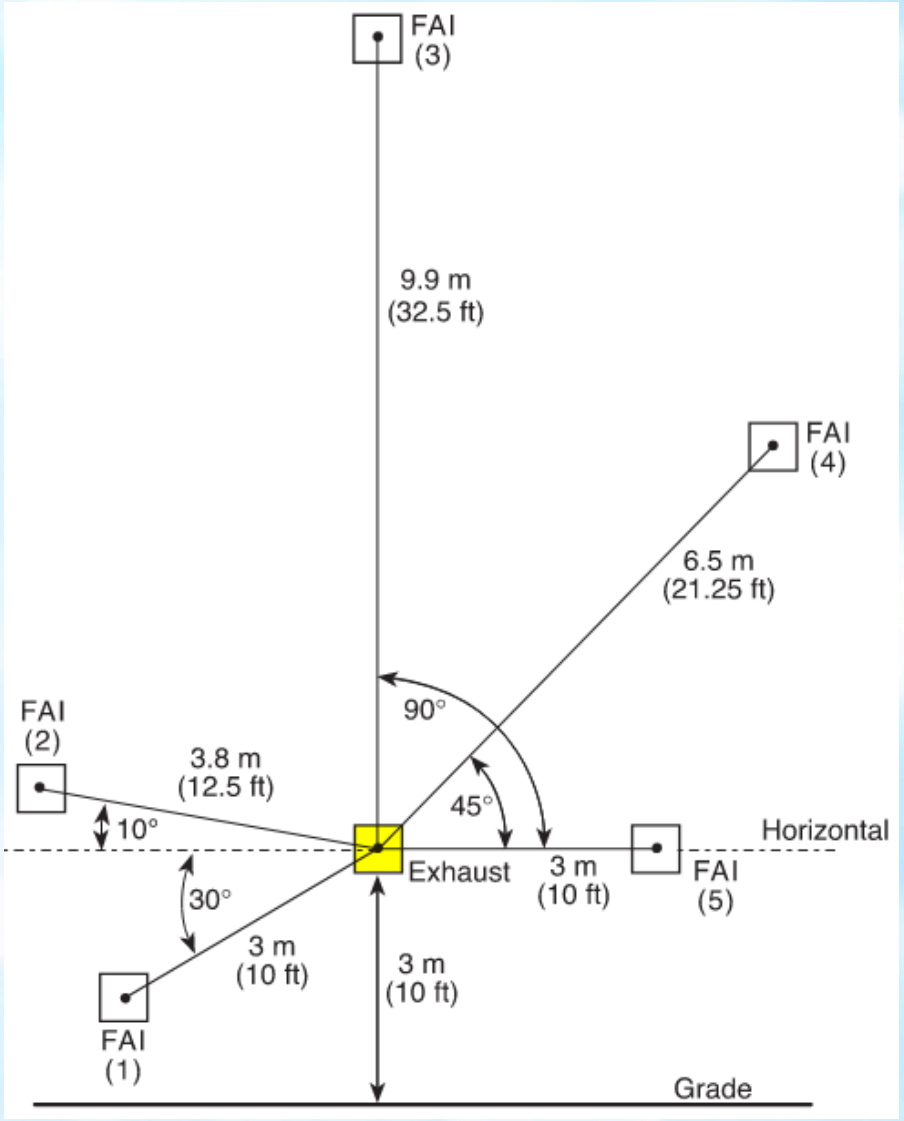


NFPA 96 – Roof Termination



NFPA 96 – Wall Terminations





Ecology Units - 2

The NFPA 96 standard contains provisions for when an Air Pollution Control Device (ecology unit) is used within the system.

However, NFPA 96 does not stipulate any reduction or waiver from the clearances for the termination of exhaust.

Ecology Unit Exhaust Equivalency

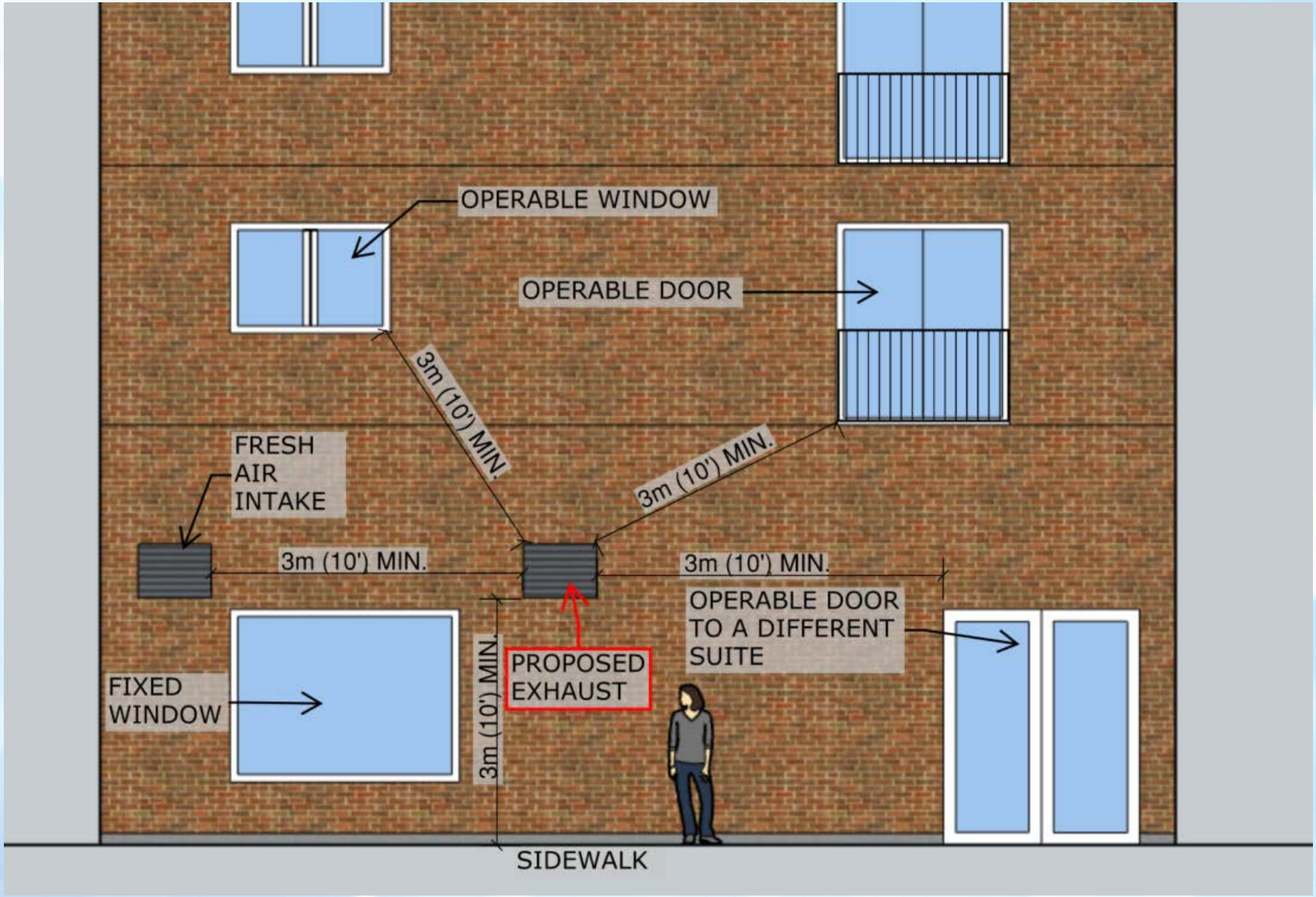
NFPA 96 allows for the Design Mechanical Engineer to propose an equivalency to the exhaust clearance requirements.

- The proposal shall be in the form of a letter or report from a Mechanical Engineer and include rationale, demonstrating why exhausting through the proposed ecology unit with reduced clearances should be considered equivalent.

- Report and drawings should include make and model, number of filter banks and filter within each bank, MERV rating of filters and provisions for odour control.

- A partial elevation drawing showing the location of the proposed exhaust grille with dimensions to all adjacent operable windows, doors and air intakes.
  - Exhaust grill shall be minimum 10 feet from any operable window, door or air intake

Ecology Unit Exhaust Clearances



Standpipe – Protection of Piping - 1

- The OBC requires that standpipe systems conform with NFPA 14
- The current OBC referenced edition of NFPA 14 is the 2013 edition.
- NFPA 14 – 2016 and 2019 editions include changes to the protection of above ground piping
- The current OBC and NFPA 14 have some differing terms and conflicting requirements
  - This is expected to be cleared up in the next edition of the OBC

Standpipe – Protection of Piping - 2

Key Definitions from NFPA 14 (2013)

- **Branch Line -** A piping system, generally in a horizontal plane, connecting not more than one hose connection with a standpipe.

- **Feed Main -** The portion of a standpipe system that supplies water to one or more standpipes.
  - City interpretation - Where a Feed Main contains a control valve, downstream of the valve is considered a Standpipe.

- **Standpipe –** The system piping that delivers the water supply for hose connections, **vertically floor to floor**.
  - City interpretation - A Standpipe can run either vertically or horizontally. The key is does it deliver water supply from floor to floor (storey to storey).

- **Horizontal Standpipe –** The horizontal portion of the system piping that delivers the water supply for two or more hose connections, **on a single level**.
  - City Interpretation - A Horizontal Standpipe can run either vertically or horizontally. The key is does it deliver water supply only on a single floor (storey).

Standpipe – Protection of Piping - 3

NFPA 14 (2013) – Protection of Above Ground Piping

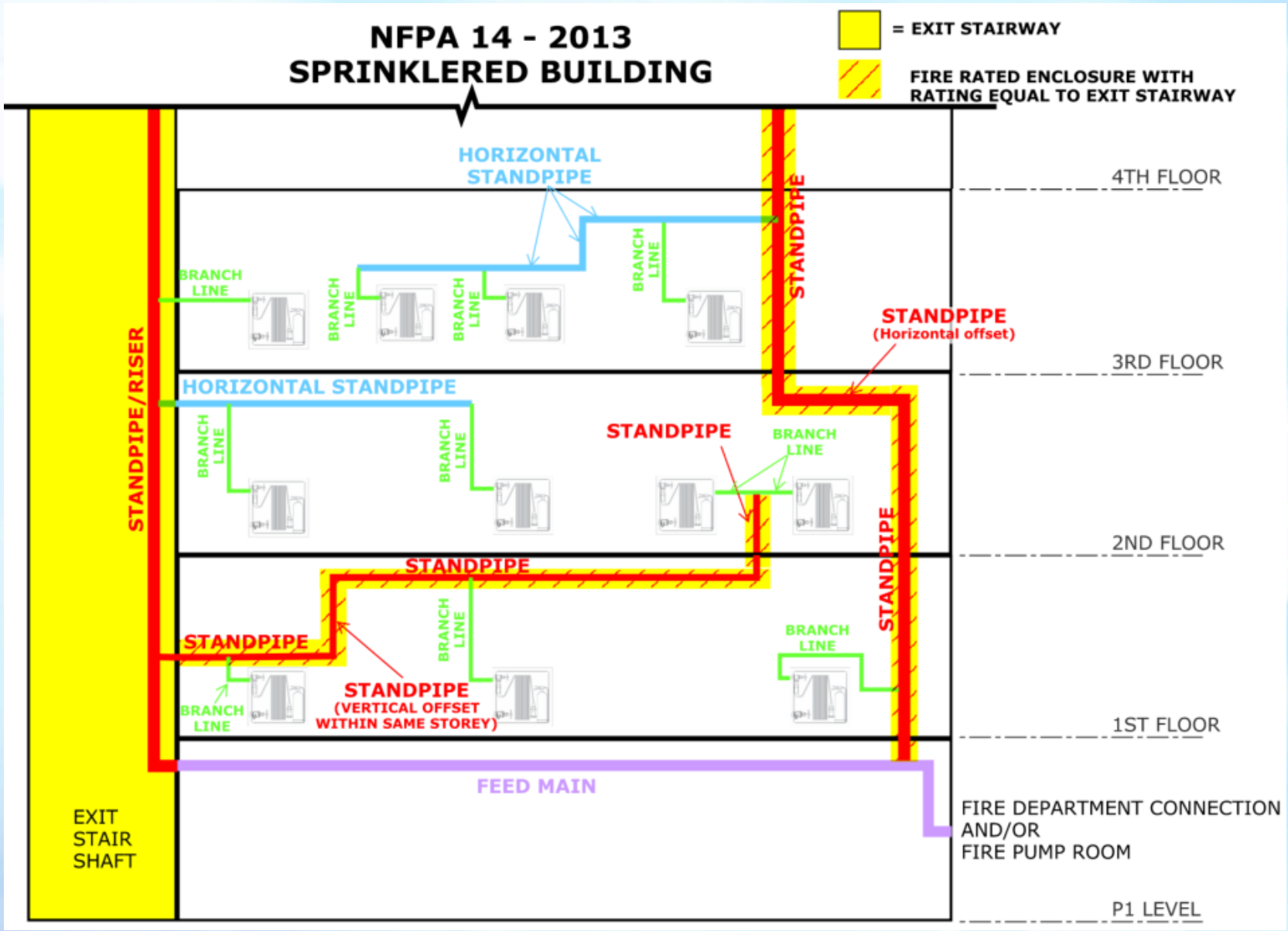
The requirements for protection of above ground piping in the 2013 edition are prescribed under subsection 6.1.2. of the Standard;

6.1.2 Protection of Aboveground Piping.

- **6.1.2.2 - Feed mains**, **standpipes**, **horizontal standpipes**, and **branch lines** supplied by standpipes shall be located in enclosed exit stairways or **shall be protected** by a degree of fire resistance equal to that required for enclosed exit stairways in the building in which they are located.

- **6.1.2.2.1 -** In **buildings equipped with** an approved automatic **sprinkler system**, **horizontal standpipes**, **feed mains**, and **branch lines** shall **not be required to be protected**.
    - **Standpipes are not exempt from protection**

Standpipe – Protection of Piping - 4



Standpipe – Protection of Piping - 5

NFPA 14 (2016 / 2019) – Protection of Above Ground Piping

6.1.2 Protection of Aboveground Piping.

- **6.1.2.2** - Standpipe systems shall be protected in accordance with Table 6.1.2.2.

Construction Type	Sprinkler Protection	Standpipe	Horizontal[a]	Branch line
		High-Rise Buildings		
I	AS[b]	✓	N/A	N/A
I	NS[c]	✓	✓	✓
II	AS	✓	N/A	N/A
II	NS	✓	✓	✓
III, IV, & V	AS/NS	✓	✓	✓

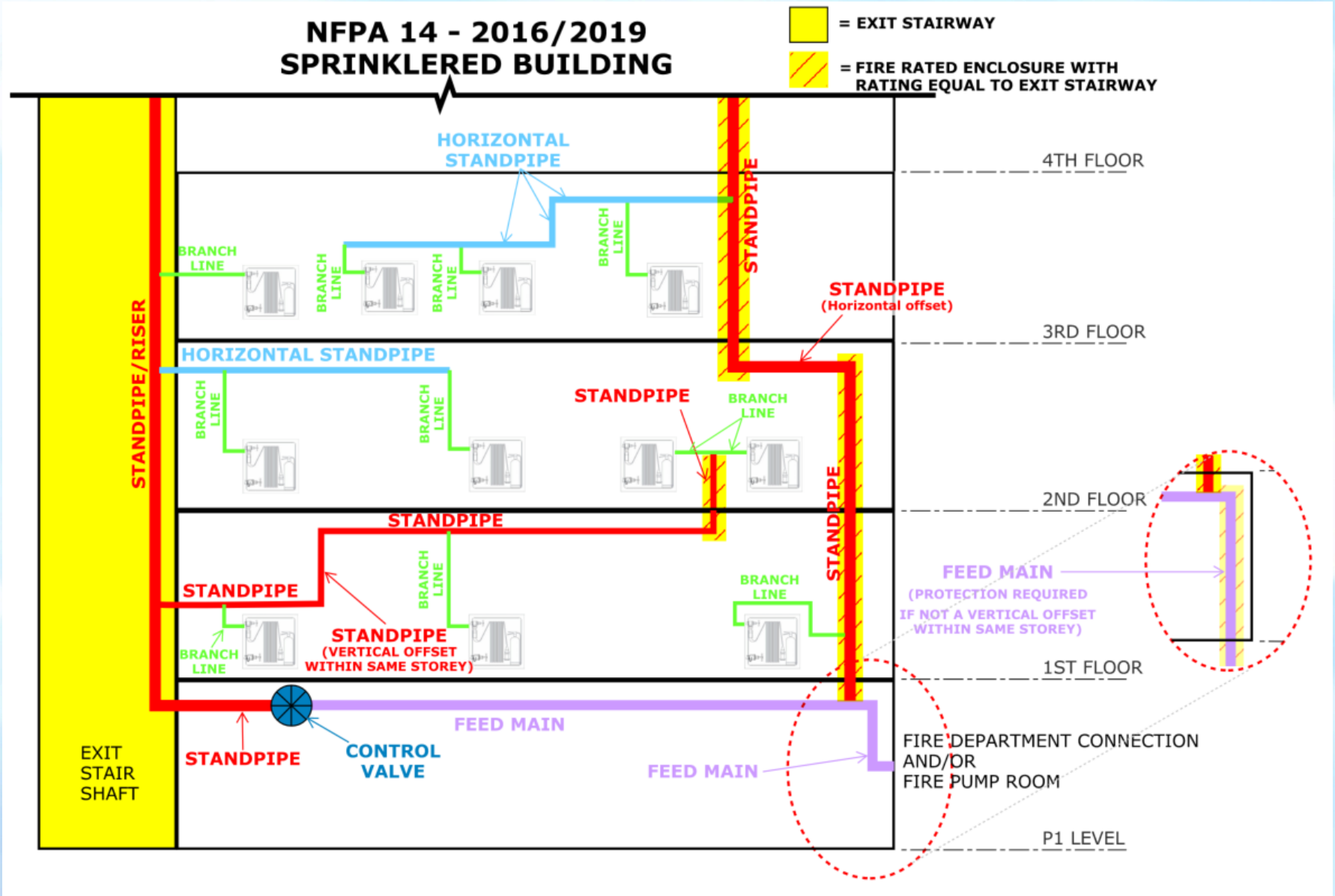
Notes:

[a] refers to either a horizontal standpipe or the horizontal portion of any standpipe such as a feed main.

[b]AS = fully sprinklered building in accordance with NFPA 13

[c]NS = nonsprinklered or partially sprinklered building

Standpipe – Protection of Piping - 6



Fire Wrap Products

- Fire wrap products may only be used in applications where they have been tested to

Application	Applicable OBC / Referenced Standard Reference(s)	Required Testing Standards
Grease Duct Systems • NFPA 96 oClearance to Combustibles	6.2.2.6.→ NFPA 96; 4.2. →	ASTM E2336
Grease Duct Systems • NFPA 96 oGrease Duct Enclosures / Fire Rated Shaft	OBC 3.6.3.5. →	CAN/ULC-S144
Ventilation Systems • Ventilation Ducts • Stair Pressurization Ducts	OBC 3.1.7.1.(1) → OBC 9.10.3.1.(1) → Part 3	CAN/ULC-S101
Piping Systems • Standpipe • Sprinkler • Plumbing • Gas	OBC 3.1.7.1.(1) → OBC 9.10.3.1.(1) → Part 3	CAN/ULC-S101


ANY QUESTIONS?

Part 9

Leslie Collins

MBO II

Repeat Plans

- We successfully completed a pilot program for repeat plans with Mattamy Homes last year.
- 12 Single Detached Dwelling and 6 Townhouse models with multiple elevations were setup as repeats.
- There is no additional cost for the review of the repeat drawings
- In an 8-month period, from November 2021 – June 2022 a total of 293 permits were issued.

Repeat Plans – Requirements

- The repeat plans program requires all documentation to be submitted 6 months prior to permit applications being made.
- <u>Required documentations:</u>
  - Architectural drawings for each elevation
  - Each option to be on a separate page
  - EEDS form and other supporting required reports
  - Pre-engineered floor joist layout drawings (if applicable)
  - Truss layout drawings (if applicable)
  - HVAC calculations
  - Structural engineer's review if required

Repeat Plans Program – Applications

- Application to include a completed application form and site grading plan
- Application form to include all the option(s) that the purchaser has selected
- Other pre-approved documents will be attached once the permit review has been completed

Repeat Plans Program

- This program is not designed for everyone, it is best suited to large volume repeat builders
- No customizing/deviation from the approved master set is permitted within this program
- If you are interested in seeing if this program is for you or to start the process, reach out to;

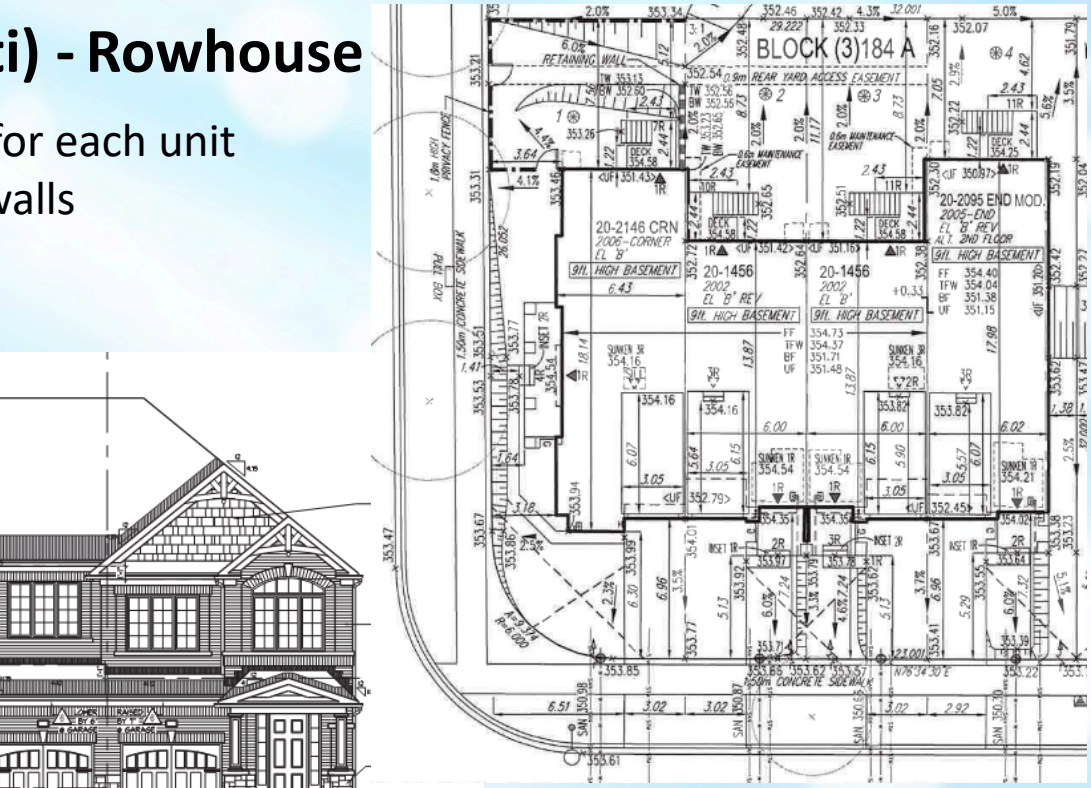
Tim Benedict - Manager, Building

tim.benedict@kitchener.ca

Multi Applications - 1

Residential Building (Multi) - Rowhouse

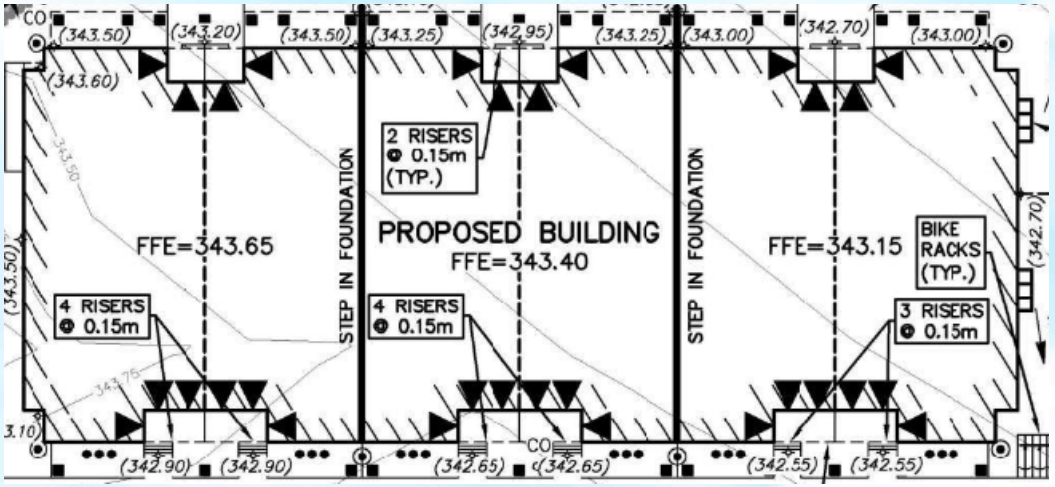
- One application is required for each unit located between the party walls



Multi Applications - 2

Residential Building (Multi) - Rowhouse (3 or more)

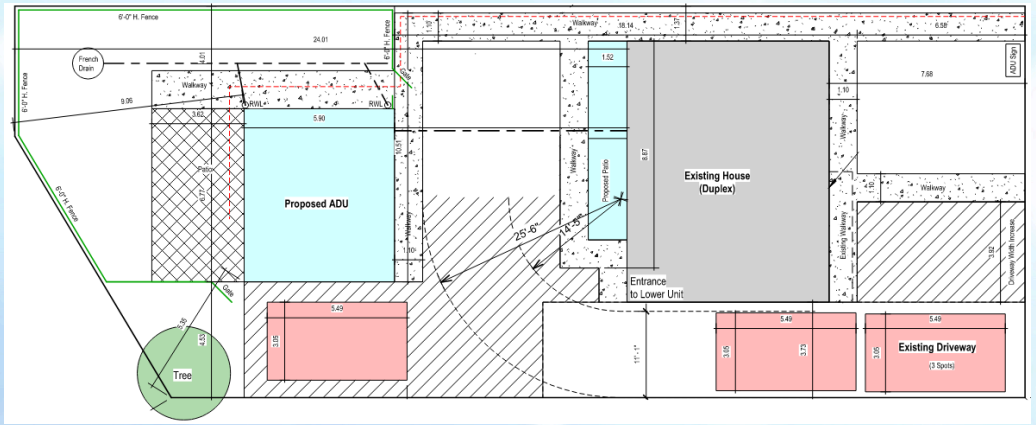
- One application is required for the whole building



Additional Detached Dwelling Unit

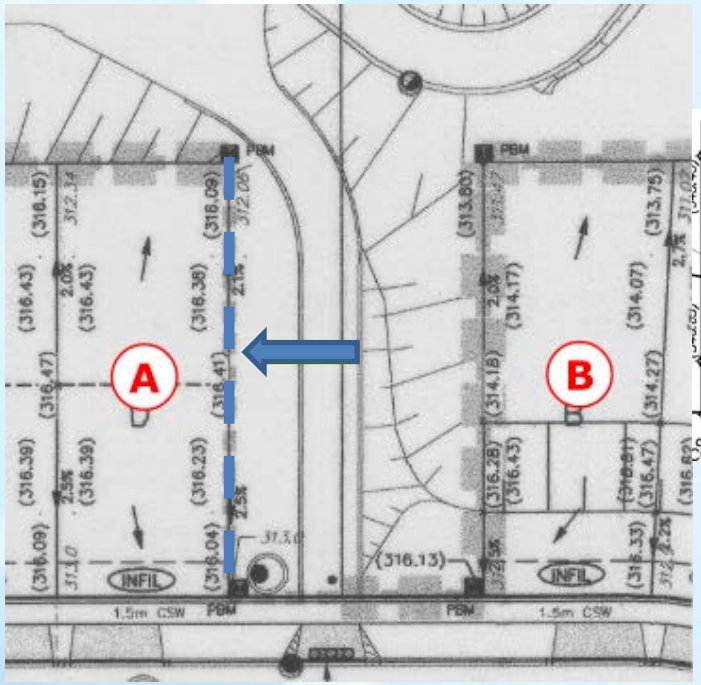
Things to remember when designing an additional detached unit

- All min. room areas apply
- Min. ceiling heights are required
- Stairs to meet all the code requirements
- Limiting distance requirements apply

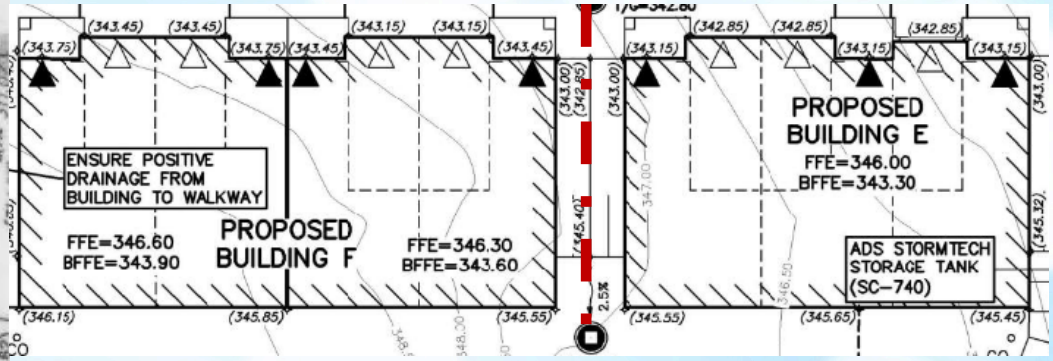


Limiting Distance

Limiting distance means the distance from an exposing building face to a property line, to the center line of a street, lane or public thoroughfare or to an imaginary line between two buildings or fire compartments on the same property, measured at right angles to the exposing building face.



Example #1



Example #2

Part 9

Moira Coughlan

MBO II

Foundation Walls & Required Lateral Support - 1

We have recently noticed some compliance issues with the OBC requirements for foundation walls and required lateral support. Particularly, OBC, Div. B, 9.15.4.2. and 9.15.4.3.

Here is a quick overview of these OBC requirements and what we are looking for on building permit drawings.

Foundation Walls & Required Lateral Support - 2

9.15.4.2 Foundation Wall Thickness and Required Lateral Support

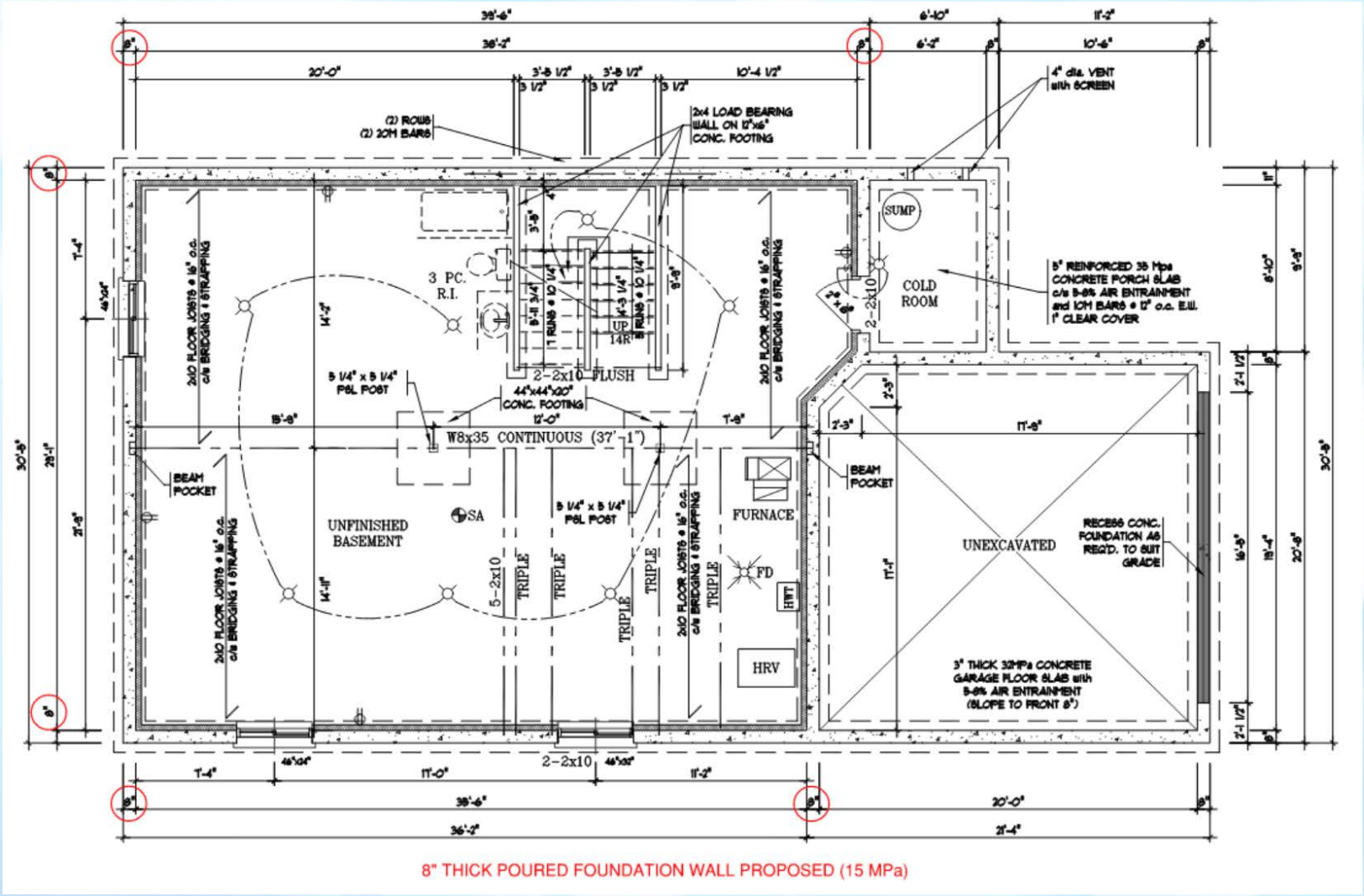
(1) Except as required in Sentence (2), the thickness of *foundation* walls made of unreinforced concrete block or solid concrete and subject to lateral earth pressure shall conform to Table 9.15.4.2.A. for walls not exceeding 3.0m in unsupported height.

Table 9.15.4.2.A.
Thickness of Solid Concrete and Unreinforced Concrete Block Foundation Walls
Forming Part of Sentence 9.15.4.2.(1)

Type of *Foundation* Wall	Minimum Wall Thickness, mm	Maximum Height of Finish Ground Above *Basement* Floor or Crawl Space Ground Cover, m			
		Height of *Foundation* Wall Laterally Unsupported at the Top(1)(2)	Height of *Foundation* Wall Laterally Supported at the Top(1)(2)		
		≤ 3.0 m	≤ 2.5 m	> 2.5 m and ≤ 2.75 m	> 2.75 m and ≤ 3.0 m
Solid concrete, 15 MPa min. strength	150	0.8	1.5	1.5	1.4
	200	1.2	2.15	2.15	2.1
	250	1.4	2.3	2.6	2.5
	300	1.5	2.3	2.6	2.85
Solid concrete, 20 MPa min. strength	150	0.8	1.8	1.6	1.6
	200	1.2	2.3	2.3	2.2
	250	1.4	2.3	2.6	2.85
	300	1.5	2.3	2.6	2.85
Unreinforced concrete block	140	0.6	0.8	—	—
	190	0.9	1.2	(3)	(3)
	240	1.2	1.8	(3)	(3)
	290	1.4	2.2	—	—
Column 1	2	3	4	5	6

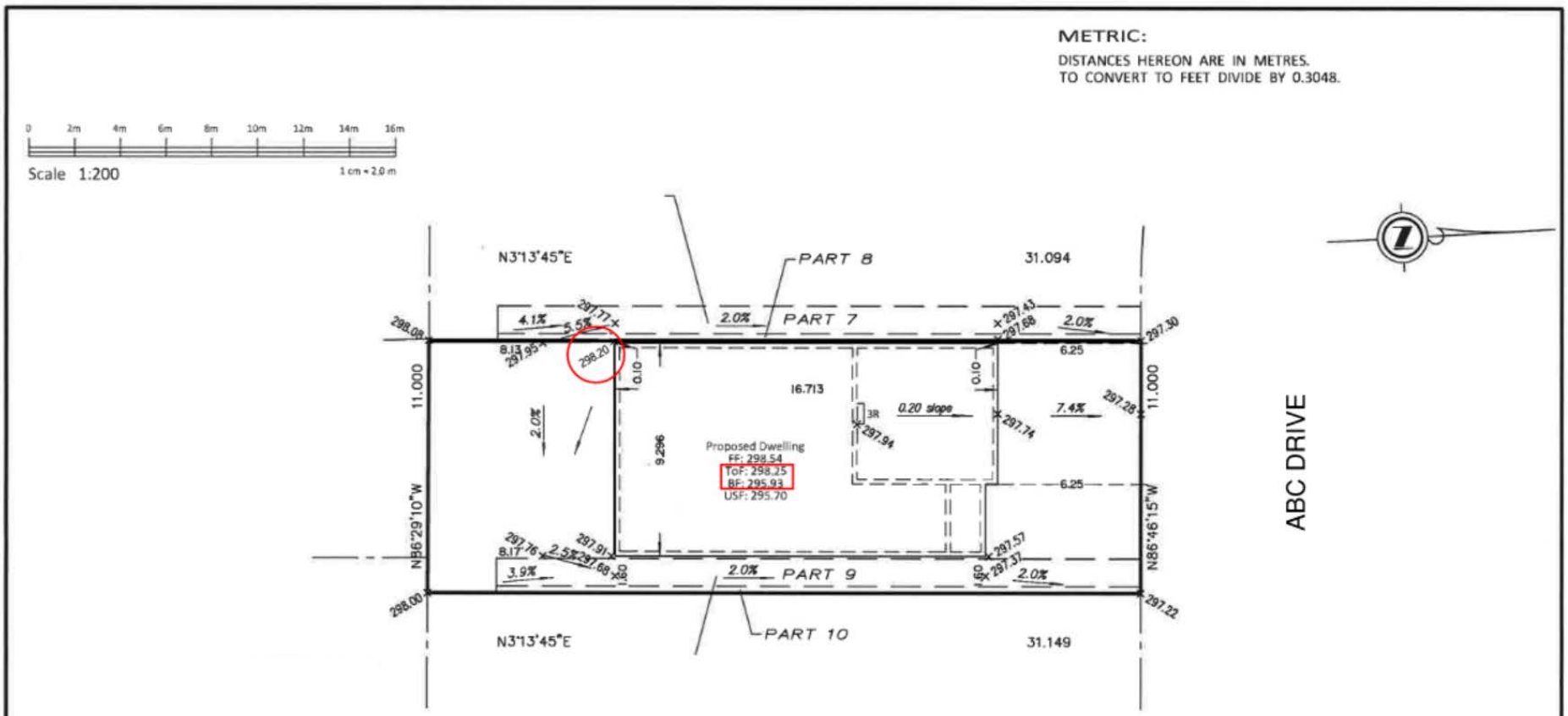
Notes to Table 9.15.4.2.A.:
(1) See Article 9.15.4.3.
(2) See Article 9.15.4.6.
(3) See Table 9.15.4.2.B.

Foundation Walls & Required Lateral Support - 3



8" THICK POURED FOUNDATION WALL PROPOSED (15 MPa)

Foundation Walls & Required Lateral Support - 4



1) CALCULATE HEIGHT OF FOUNDATION WALL

TOP OF FOUNDATION ELEVATION (ToF) - BASEMENT FLOOR ELEVATION (BF).

= 298.25 - 295.93 = **2.32m**

2) CALCULATE MAXIMUM HEIGHT OF FINISHED GROUND ABOVE BASEMENT FLOOR

HIGHEST GRADE ELEVATION - BASEMENT FLOOR ELEVATION (BF).

298.20 - 295.93 = **2.27m**

Foundation Walls & Required Lateral Support - 5

Table 9.15.4.2.A.
Thickness of Solid Concrete and Unreinforced Concrete Block Foundation Walls
Forming Part of Sentence 9.15.4.2.(1)

Type of *Foundation* Wall	Minimum Wall Thickness, mm	Maximum Height of Finish Ground Above *Basement* Floor or Crawl Space Ground Cover, m			
		Height of *Foundation* Wall Laterally Unsupported at the Top[1)(2)]	Height of *Foundation* Wall Laterally Supported at the Top[1)(2)]		
		≤ 3.0 m	≤ 2.5 m	> 2.5 m and ≤ 2.75 m	> 2.75 m and ≤ 3.0 m
Solid concrete, 15 MPa min. strength	150	0.8	1.5	1.5	1.4
	200	1.2	2.15	2.15	2.1
	250	1.4	2.3	2.6	2.5
	300	1.5	2.3	2.6	2.85
Solid concrete, 20 MPa min. strength	150	0.8	1.8	1.6	1.6
	200	1.2	2.3	2.3	2.2
	250	1.4	2.3	2.6	2.85
	300	1.5	2.3	2.6	2.85
Unreinforced concrete block	140	0.6	0.8	—	—
	190	0.9	1.2	(3)	(3)
	240	1.2	1.8	(3)	(3)
	290	1.4	2.2	—	—
Column 1	2	3	4	5	6

Notes to Table 9.15.4.2.A.:
(1) See Article 9.15.4.3.
(2) See Article 9.15.4.6.
(3) See Table 9.15.4.2.B.

MAXIMUM BACKFILL HEIGHT FOR AN 8", 15MPa POURED FOUNDATION WALL.

Foundation Walls & Required Lateral Support - 6

- In this case, the proposed backfill height exceeds what is permitted for an 8” thick, 15MPa poured foundation wall.

- Options for compliance:
  - Increase foundation thickness to 10” @ 15MPa.
  - Keep 8” thickness but increase to 20MPa.
  - Provide OBC, Div. B, Part 4 design.

Foundation Walls & Required Lateral Support - 7

Moving forward:

- Please coordinate the grade elevations on your grading plan with your architectural drawings and with the requirements of OBC, Div. B, 9.15.4.2.
- Architectural drawings must indicate the strength (MPa) and thickness of foundation walls.
- If you can't comply with 9.15.4.2, Part 4 design is required and must be provided at time of building permit application.

Foundation Walls & Required Lateral Support - 8

9.15.4.3. Foundation Walls Considered to be Laterally Supported at the Top

(1) Sentences (2) to (4) apply to lateral support for walls described in Sentence 9.15.4.2.(1).

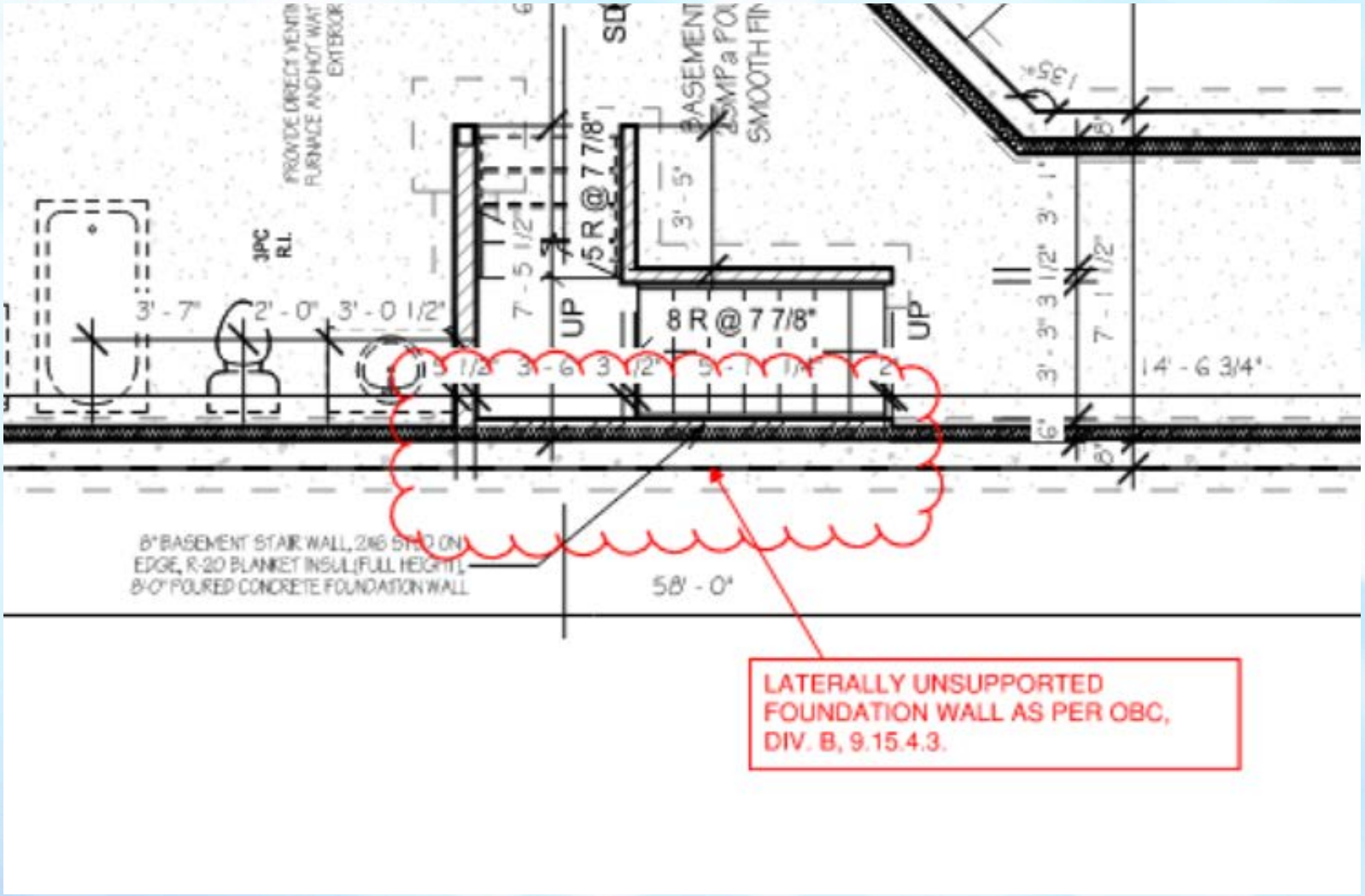
(2) *Foundation* walls shall be considered to be laterally supported at the top if,
(a) such walls support solid masonry superstructure,
(b) the floor joists are embedded in the top of the *foundation* walls, or
(c) the floor system is anchored to the top of the *foundation* walls with anchor bolts, in which case the joists may run either parallel or perpendicular to the *foundation* walls.

(3) Unless the wall around an opening is reinforced to withstand earth pressure, the portion of the *foundation* wall beneath an opening shall be considered laterally unsupported, if,
(a) the opening is more than 1.2 m wide, or
(b) the total width of the openings in the *foundation* wall constitutes more than 25% of the length of the wall.

(4) For the purposes of Sentence (3), the combined width of the openings shall be considered as a single opening if the average width is greater than the width of solid wall between them.

(5) Flat insulating concrete form *foundation* walls shall be considered to be laterally supported at the top if the floor joists are installed according to Article 9.20.17.5.

Foundation Walls & Required Lateral Support - 9



Foundation Walls & Required Lateral Support - 10

- If stair opening is greater than 1.2m wide or the total width of openings (including stair opening) constitutes more than 25% of the length of the wall, OBC, Div. B, Part 4 design is required and must be provided at time of building permit application.

Part 9

Jordan MacLaughlin

MBO II

Stair Configurations - 9.8.3.

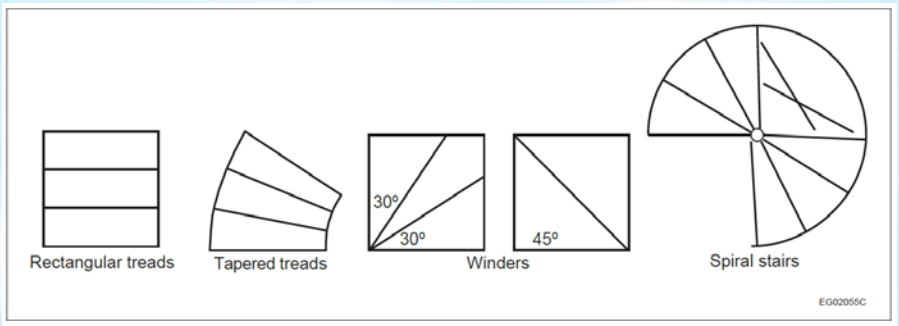
r11.2 **9.8.3.1. Straight and Curved Runs in Stairs** (See Appendix A and A-9.8.4. in Appendix A.)

(1) Except as permitted in Sentence (2), stairs shall consist of,
(a) straight *flights*,
(b) curved *flights*, or
(c) spiral stairs.

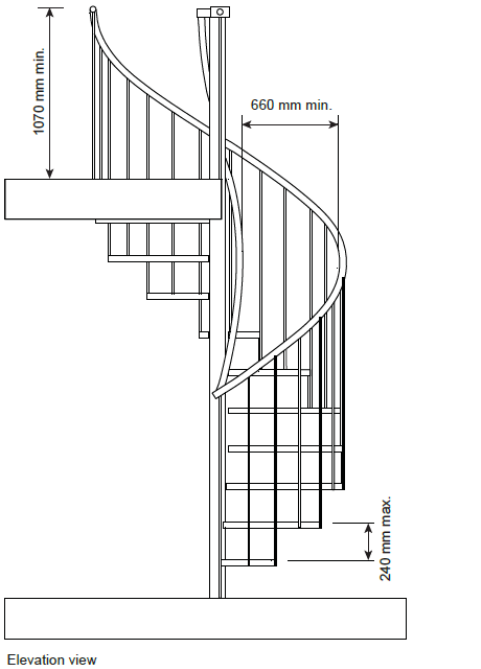
(2) Stairs within *houses* and individual *dwelling units* may consist of,
(a) *flights* with rectangular treads and winders provided winders as described in Article 9.8.4.5. are installed between floor levels, or
(b) *flights* with a mix of rectangular and *tapered treads* provided all *tapered treads* within a *flight* turn in the same direction.

(3) Curved *flights* in *exits* shall comply with Sentence 3.4.6.9.(2).

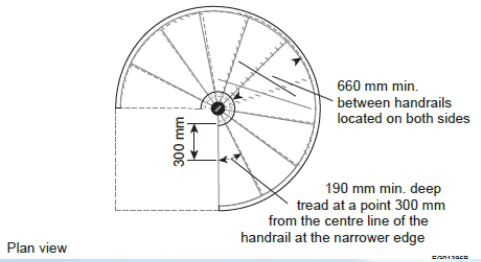
(4) Spiral stairs shall comply with Article 9.8.4.5A.



Spiral Stairs – 9.8.4.5A.



Elevation view



Plan view

r11.2 **9.8.4.5A. Spiral Stairs** (See Appendix A.)

(1) Spiral stairs shall have,
(a) handrails on both sides, the outer handrail being not less than 1 070 mm high,
(b) a clear width not less than 660 mm between handrails,
(c) risers that are not more than 240 mm high,
(d) treads that,
  (i) are a minimum of 190 mm deep at a point 300 mm from the centre line of the inside handrail,
  (ii) have a consistent angle and uniform dimension, and
  (iii) turn in the same direction, and
(e) a clear height not less than 1 980 mm.

(2) Spiral stairs conforming to Sentence (1) are permitted to be used as the only *means of egress* where they serve not more than 3 persons.

(3) Except as permitted by Sentence (2), spiral stairs shall not serve as an *exit*.

Stair Configurations - 9.8.3.

a10.2 **A-9.8.3.1. Permitted Stair Configurations.**

Table A-9.8.3.1.
Permitted Stair Configurations

Location/Use of Stairs	Configuration of Stair Treads				
	Straight Flight with Rectangular Treads	Curved Flight with Tapered Treads	Winders	Flight with a mix of Rectangular Treads and Tapered Treads	Spiral Stairs
Stairs within dwelling units	Permitted(1)	Permitted(2)	Permitted(3)	Permitted(4)	Permitted(5)
Public stairs	Permitted(1)	Permitted(6)	Not permitted	Not permitted	Permitted(5)
Exit stairs	Permitted(1)	Permitted(6)	Not permitted	Not permitted	Not permitted

Notes to Table A-9.8.3.1.:

1. See Articles 9.8.4.1. and 9.8.4.2.
2. See Article 9.8.4.1. and 9.8.4.3.
3. See Article 9.8.4.5.
4. See Article 9.8.4.4A.
5. See Sentence 9.8.4.5A.
6. See Articles 3.4.6.9. and 9.8.4.3.

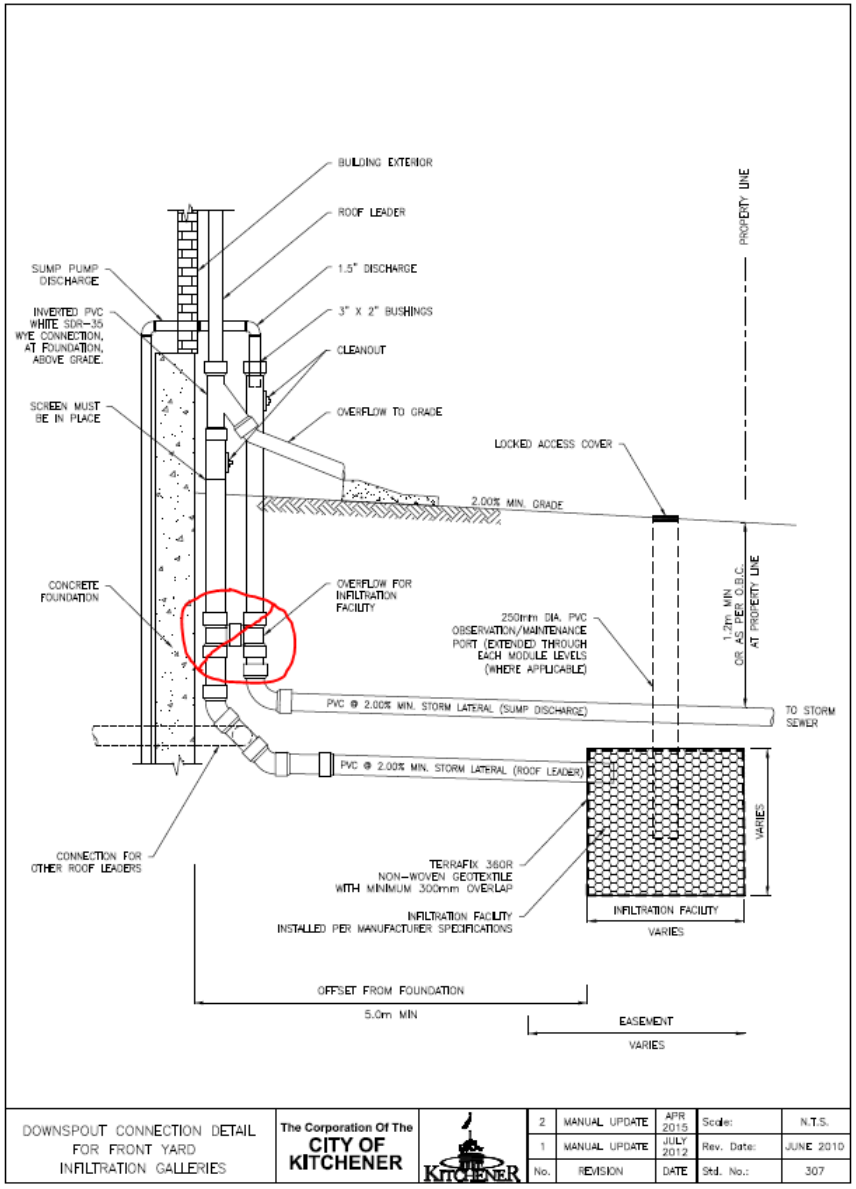
Step Dimensions - 9.8.4.

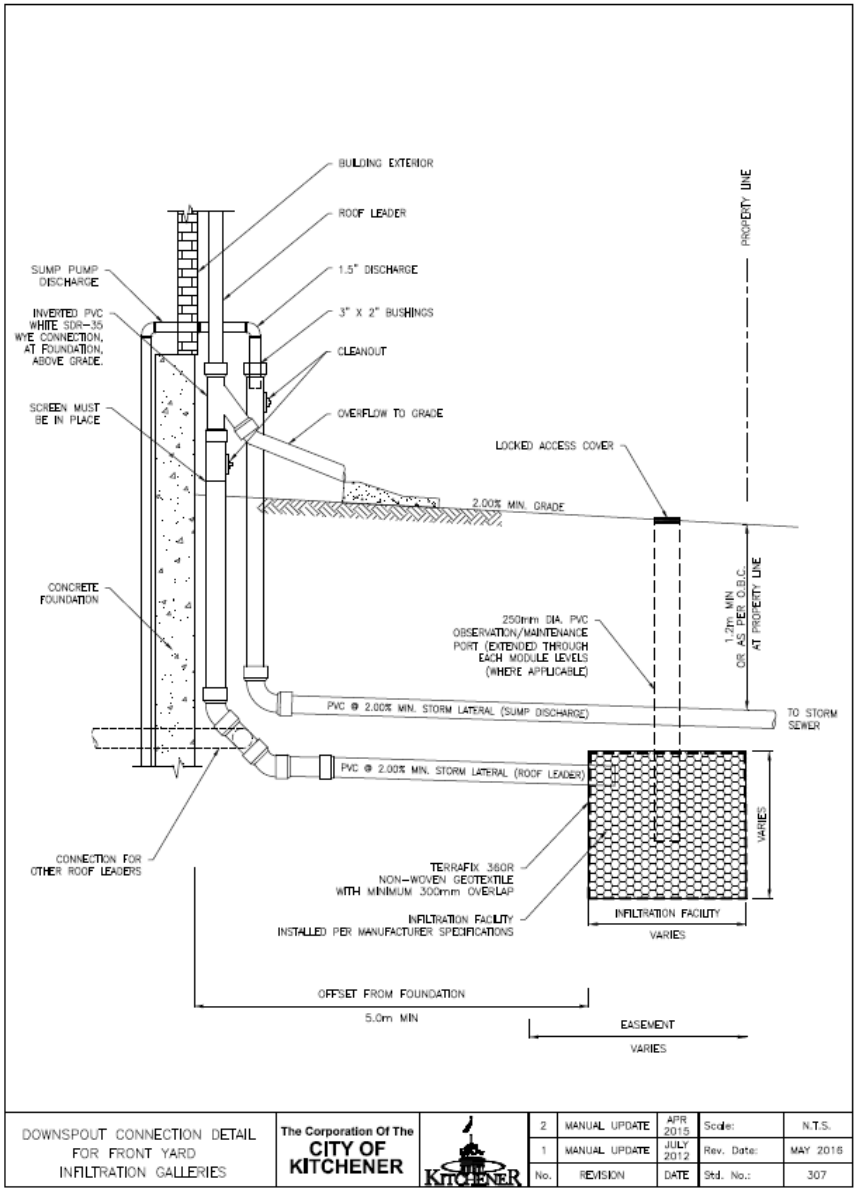
r11.2

Table 9.8.4.1.
Rise for Rectangular Treads, Tapered Treads and Winders and Run for Rectangular Treads
Forming Part of Sentences 9.8.4.1.(1) and 9.8.4.2.(1)

Stair Type	Max. Rise, mm, for All Steps	Min. Rise, mm, for All Steps	Max. *Run*, mm, for Rectangular Treads	Min. *Run*, mm, for Rectangular Treads
Private stairs(1)	200	125	355	255
Public stairs(2)	180	125	no limit	280
Service stairs(3)	no limit	125	355	no limit
Stairs to unoccupied attic space(4)	no limit	125	355	no limit
Stairs to crawl spaces	no limit	125	355	no limit
Stairs that serve *mezzanines* not exceeding 20 m² within *live/work units*	no limit	125	355	no limit
Column 1	2	3	4	5

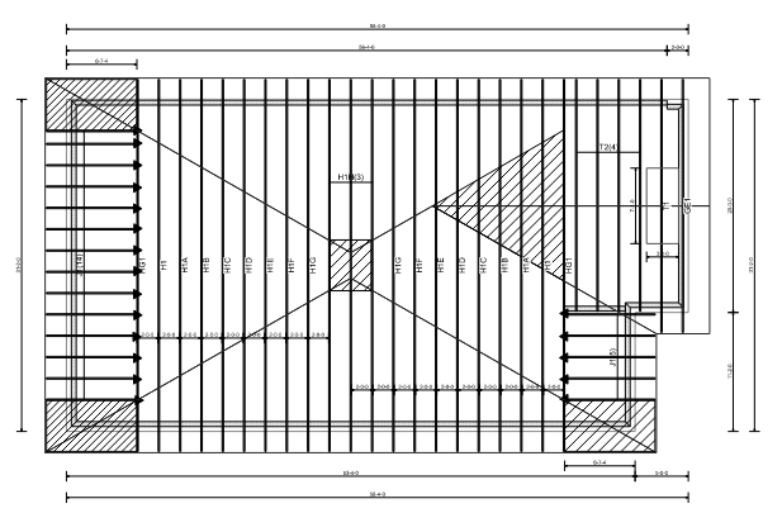
Inspection Topics - Infiltration

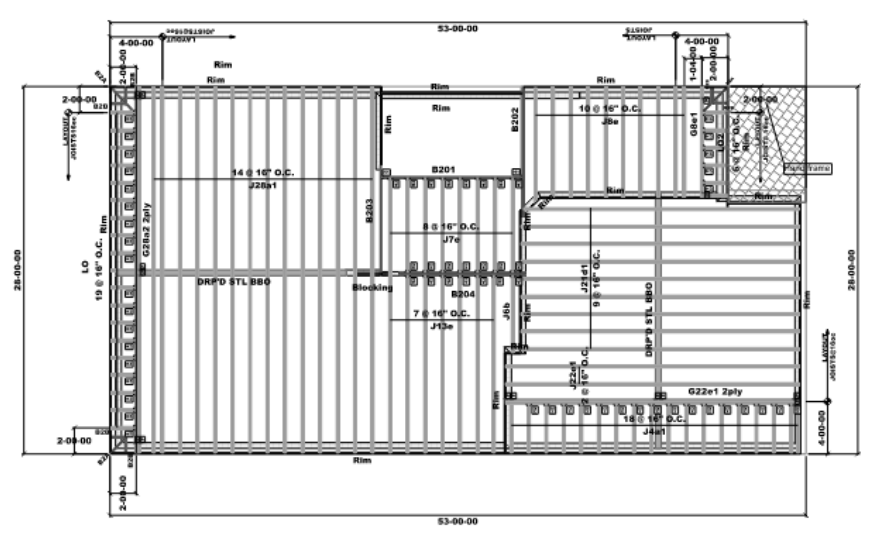




Inspection Topics – Trusses - 1

We only require truss/pre-engineered floor joist layout drawings at the time of permit application and not the full set of drawings. Only the layout drawings will be uploaded as a part of the approved permit documents as they are all that is reviewed by the plans examiner.





Inspection Topics – Trusses - 2

While the full set of truss/pre-engineered floor drawings are not uploaded as part of the approved permit documents the Building Bylaw still requires that these drawings be provided to the Building Inspector on site.

Winter Conditions

- For safety reasons, inspections may be postponed during inclement weather. Notification will be given via email and social media platforms
- Keep all stairs and pathways clear from snow and ice.
- Be mindful when using gas powered equipment in enclosed areas. (e.g. basements)

Cold Weather Protection

- Concrete footings cannot be placed on frozen ground.
- Concrete footings, walls and slabs shall be protected to ensure a minimum temperature of 10°C for 72 hours after placement. Install tarps or adequate amount of straw for protection.
- All mortar and masonry shall be maintained at 5°C or greater during installation and the temperature shall be maintained for not less than 48 hours after installation.


ANY QUESTIONS?

Part 3 - Plans Exam

Robert Schipper

Manager, Building

Permit Intake - 1

- For new applications or status letter resubmissions, contact Permit Expeditor (permit.expeditor@kitchener.ca) for link to sharefile where submission can be uploaded

- Do not upload resubmissions to the public portal as the Plans Examiner will not be notified if files have been uploaded

- Ensure all submitted drawings / documents / forms are not locked or secured

Permit Intake - 2

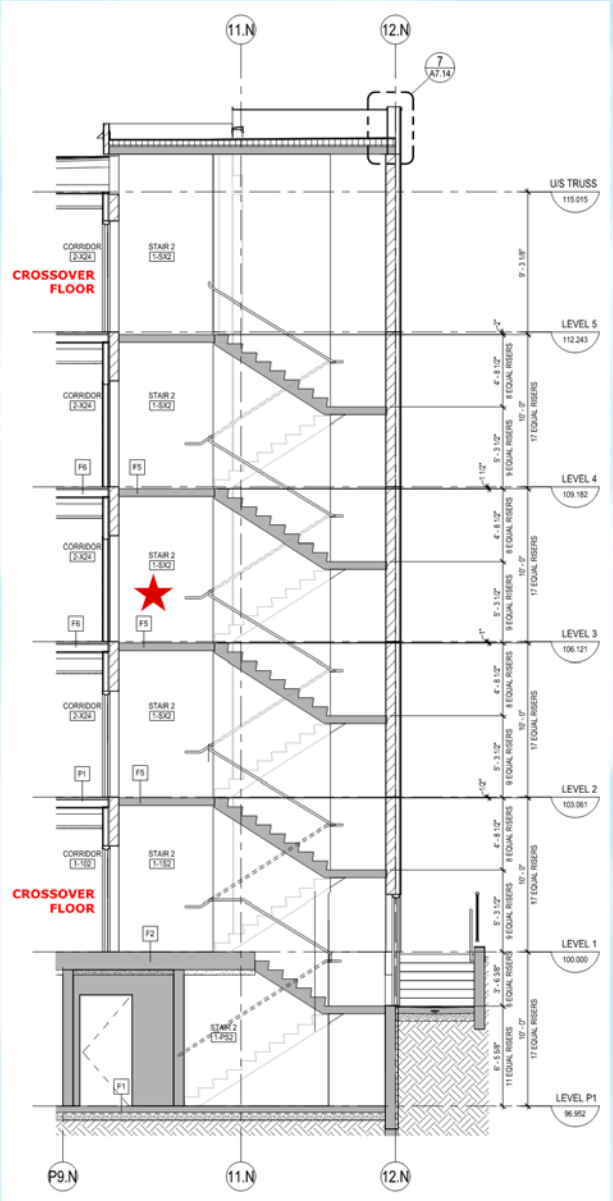
- Regarding the application form:
  a. Whoever completes Section C, must sign Section I
  b. Provide the construction value in Section A
  c. Provide the area of work in Section A
  d. The company address for the applicant is to be listed in Section A.

- Regarding the commitment to general review form:
  a. Ensure the owner or authorized agent signs Part A
  b. It's ok if the Architect/P.Eng sign these forms separately, however, combine as one complete pdf form, prior to submission. Please do not submit as separate forms for each Architect/P.Eng
  c. Ensure P.Eng indicates which discipline they are taking responsibility for (check the box)

- Regarding the clean water act notice:
  a. The applicant listed on the application form, is the applicant's name that needs to be listed on the CWA notice.
  b. The applicant must sign page 2 (beside the Region's signature)

Emergency Crossover Access to Floor Areas OBC Div. B, 3.4.6.18.

- Doors providing access to floor areas from exit stairs shall not have locking devices to prevent entry into any floor area from where the travel distance up or down to an unlocked door is more than 2 storeys



Stud Wall Reinforcement for Main Bathrooms in Dwelling Units

Stud reinforcement is a requirement for **ALL** dwelling units as per OBC 3.3.4.9. for future installation of grab bars to the following criteria:

- Water closet grab bars OBC 3.8.3.8.(3)(a) & (c)
- Shower grab bar as per OBC 3.8.3.13.(2)(f), and
- Bathtub grab bar as per OBC 3.8.3.13.(4)(c)

Stud Wall Reinforcement

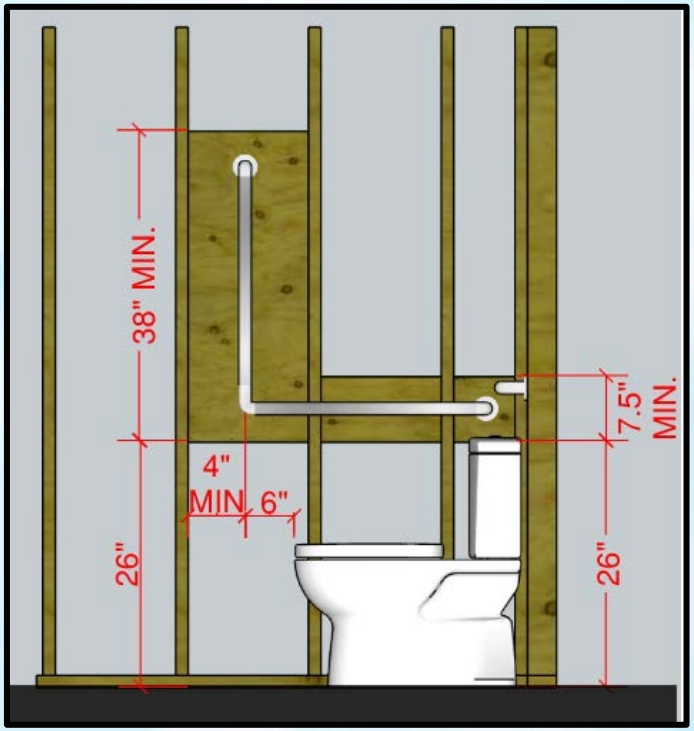
Appendix note for OBC 3.8.2.1.(6) for residential bathrooms states:

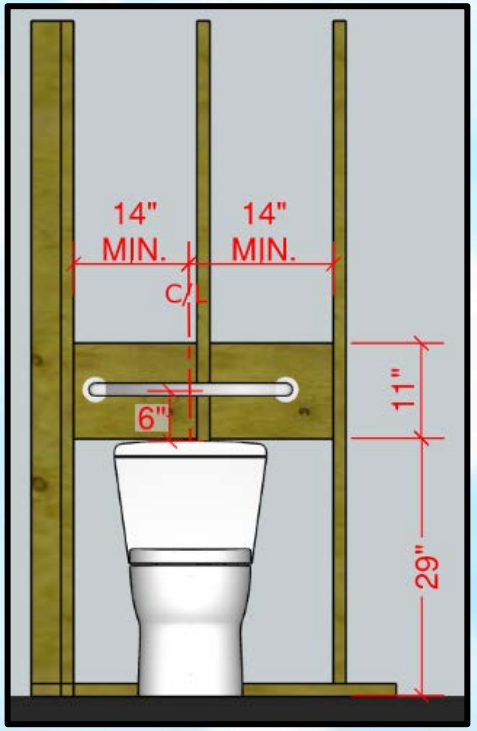
- Stud wall reinforcement for the future installation of grab bars is required in the main bathroom in all dwelling units as set out in Articles 9.5.2.3. and 3.3.4.9.

Grab Bar Blocking for Water Closet

Water closet grab bar blocking

OBC 3.8.3.8.(3)(a) & (c)



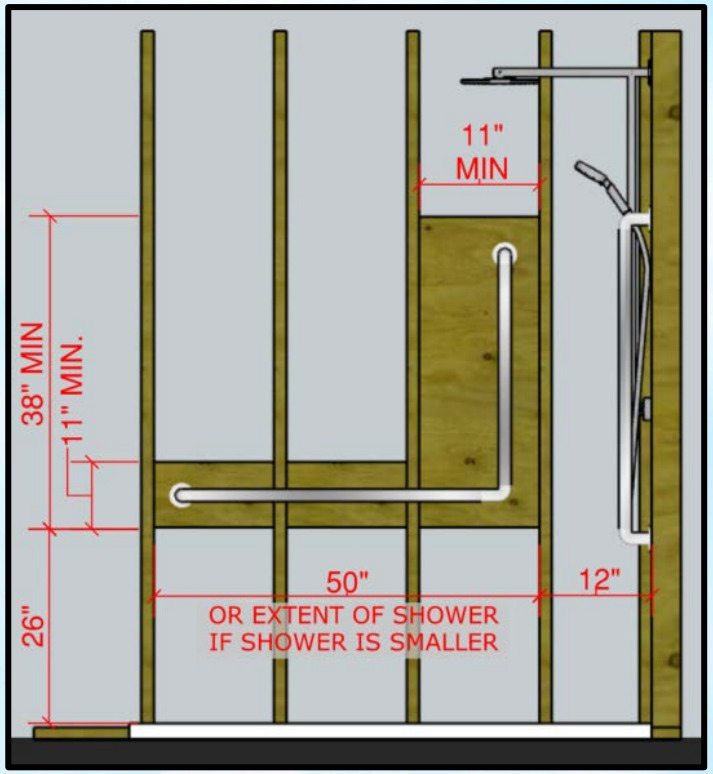


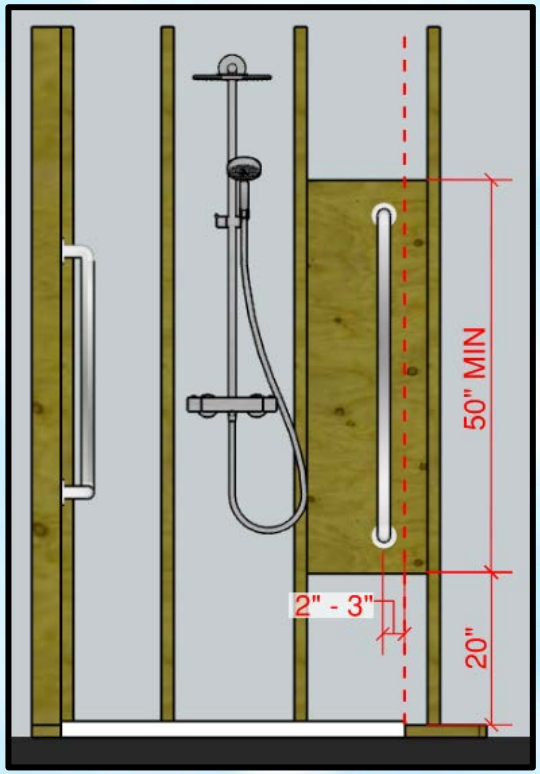
Grab bars shown for illustrative purposes only

Grab Bar Blocking for Shower

Shower grab bar blocking

OBC 3.8.3.13.(2)(f)



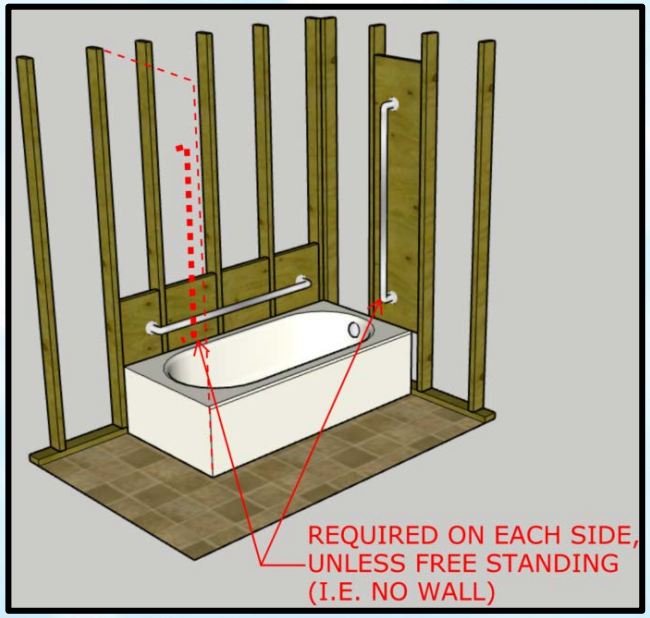


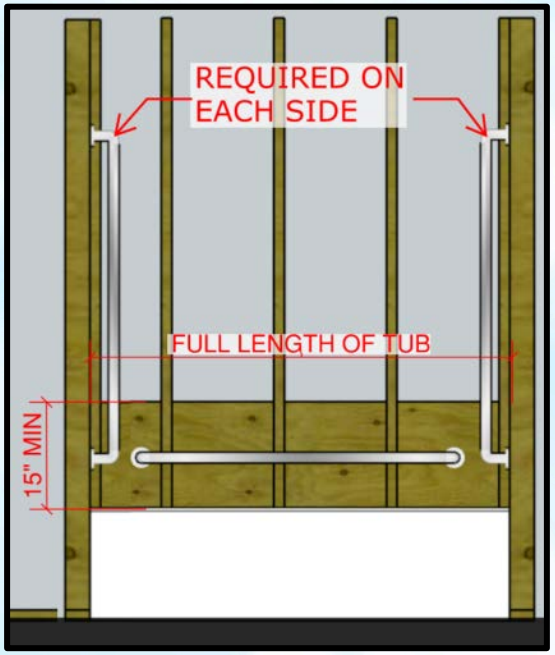
Grab bars shown for illustrative purposes only

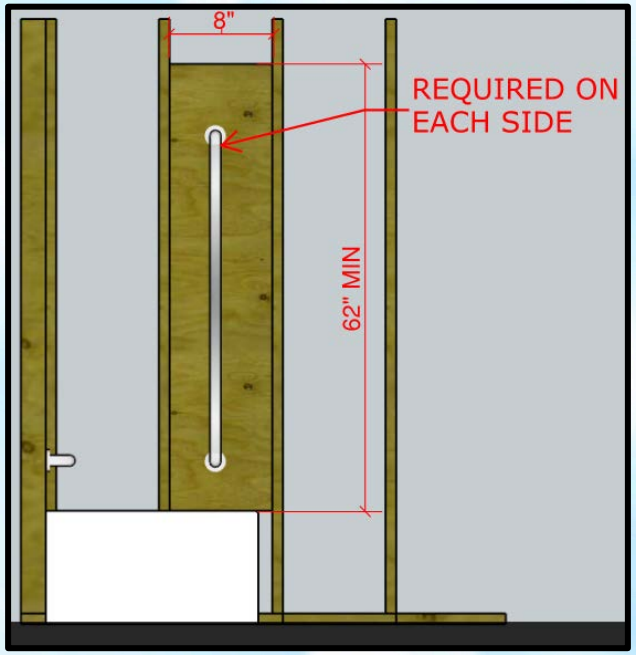
Grab Bar Blocking for Bathtub

Bathtub grab bar blocking

OBC 3.8.3.13.(4)(c)







Grab bars shown for illustrative purposes only

Early and Partial Occupancy of **Super Tall Buildings**

New requirements as of Nov. 1, 2022 for Occupancy of Super Tall Buildings.

- New Article Div. C, 1.3.3.7.
- Only applies to buildings 65 storeys or more, or over 250m in height.
- Can still be building super structure above and occupy the storeys below.
- Does not permit occupancy of exterior balconies, platforms, podiums, etc.

Partial Occupancy of Part 3 - 1 Buildings – **less than 65 Storeys**

Currently a typical high rise in Kitchener is less than 65 storeys and falls under Div. C 1.3.3.1.(3). Which does not speak to partial or early occupancy when all conditions of Sentence (3) are not complete.

Partial Occupancy of Part 3 - 2 Buildings – **less than 65 Storeys**

Before you book an inspection for partial occupancy:

- Involve the project architect to plan how OBC occupancy requirements will be addressed
- Work closely with your Building Inspector to clear HVAC, fire separations and fire stopping deficiencies
- Organize and submit document packages ahead of target occupancy date NOT at the last minute

Partial Occupancy of Part 3 - 3 Buildings – **less than 65 Storeys**

Key details Architect should be providing/clarifying if they want partial occupancy and should be submitted in advance:

- Occupancy phasing and exiting plan
- Confirm how the occupied areas will be protected from ingress of water if the envelope is not complete
- Final letters required for each phase
- Consideration needed for life safety items (stair pressurization, fire fighter elevators, fire alarm system, etc.)


ANY QUESTIONS?

Part 3 – Code Changes

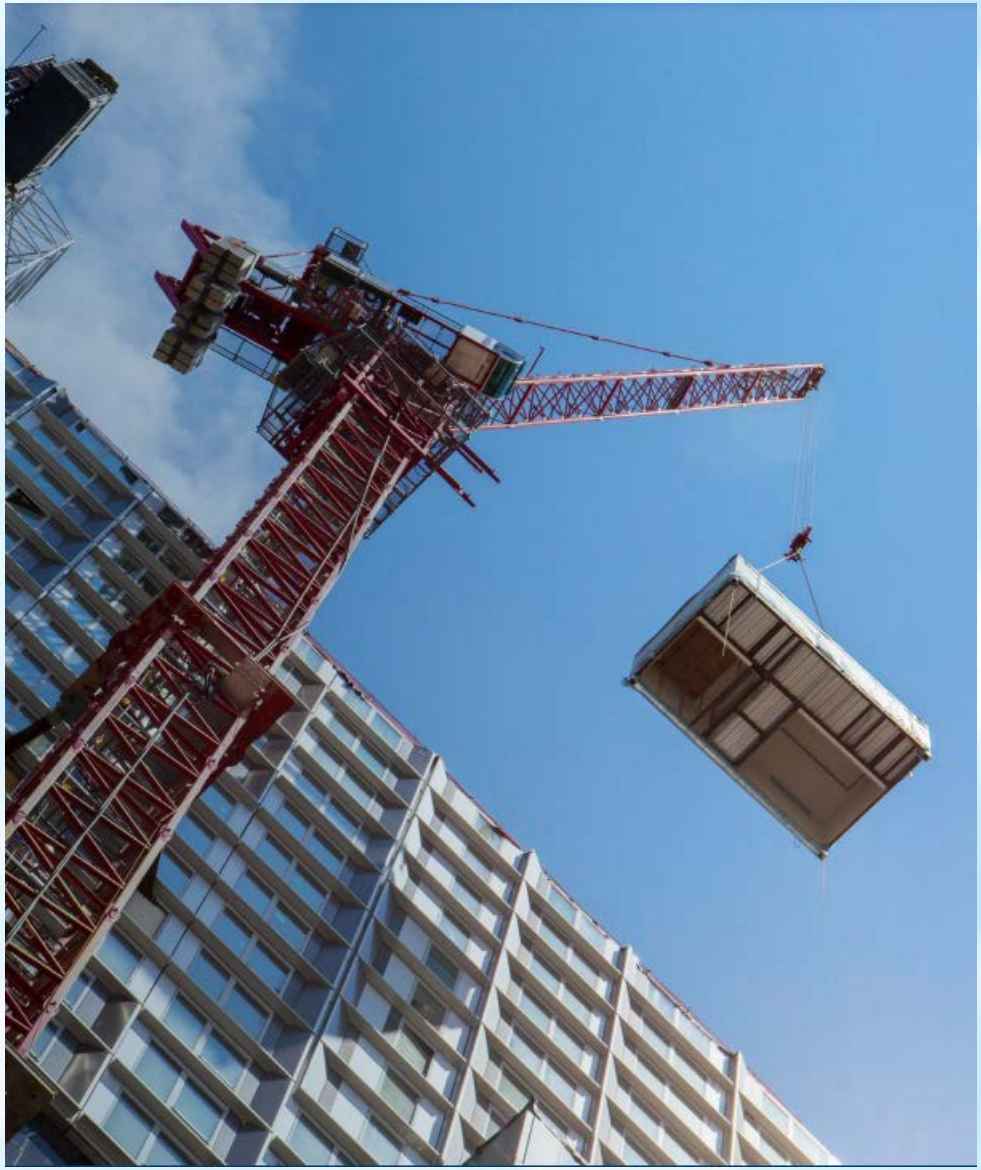
KITCHENER

Matt Ruetz

MBO Technical Specialist

Pre-Fabricated Buildings

- CSA A277 “Procedure for Certification of Prefabricated Buildings, Modules, and Panels” can now prescriptively be used for Part 3 buildings.
- Div. C, 1.12.1.1.(1)

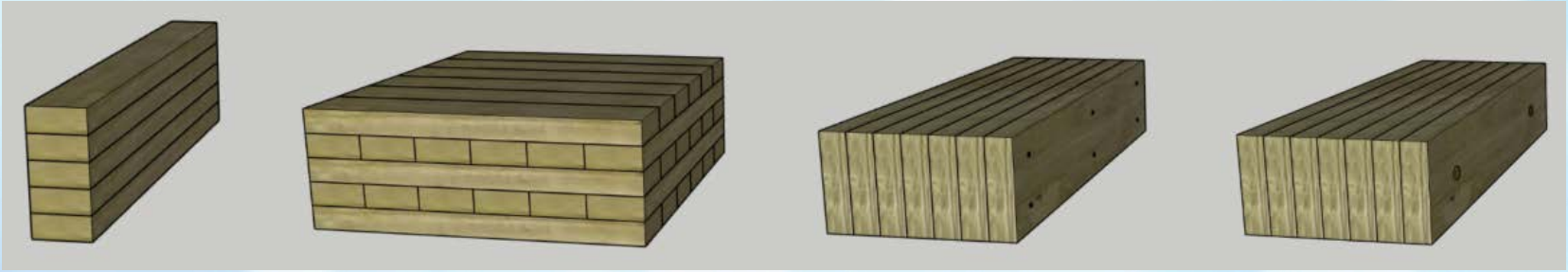


Encapsulated Mass Timber - 1

- Came into effect July 1, 2022
- New provisions added to OBC allowing Encapsulated Mass Timber Construction (EMTC) buildings up to 12 storeys high

Encapsulated Mass Timber - 2

- Mass timber structural elements could consist of any number of large cross-section timber products, such as:
  - Solid-sawn timber
  - Glued-Laminated Timber (Glulam)
  - Cross-Laminated Timber (CLT)
  - Nail-Laminated Timber (NLT)
  - Dowel-Laminated Timber (DLT)
  - Structural Composite Lumber (SCL)



Glulam CLT NLT DLT

Encapsulated Mass Timber - 3

Not EMTC **EMTC**

Encapsulated Mass Timber - 4

New defined terms added

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

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

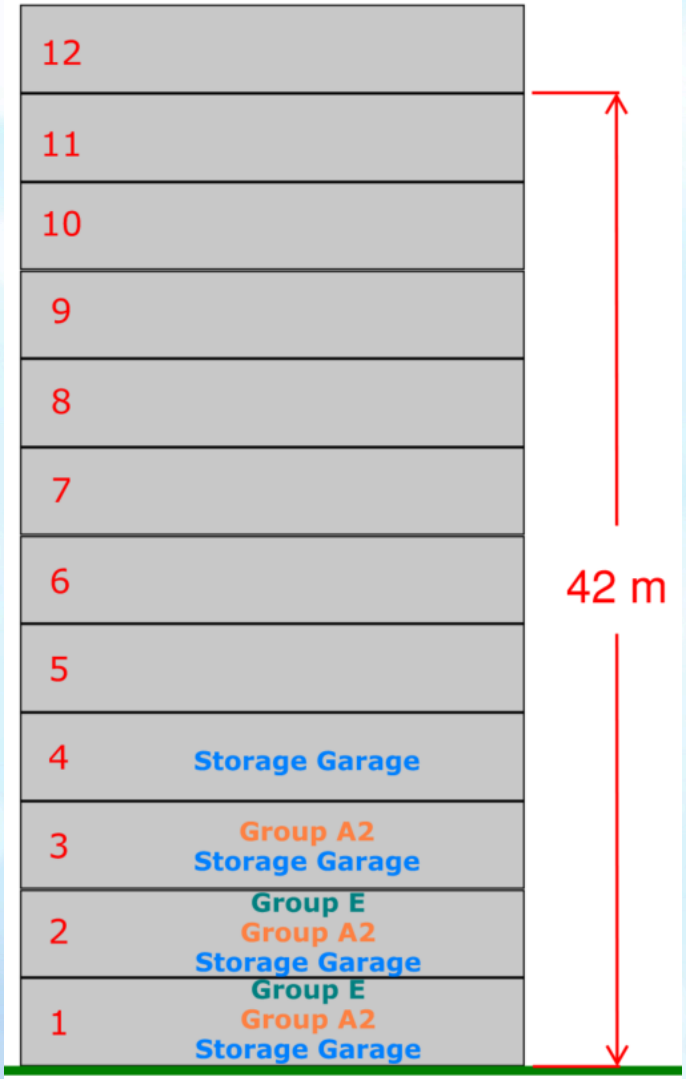
Encapsulated Mass Timber - 5

New Subsection added

- 3.1.6. Encapsulated Mass Timber Construction which is now a 3rd construction type.
  - Combustible Construction (3.1.4.)
  - Non-Combustible Construction (3.1.5.)
  - **Encapsulated Mass Timber Construction (3.1.6.)**

Encapsulated Mass Timber - 6

Group C - 3.2.2.42A.



Storeys: up to 12

Height: 42 m

Building Area: ≤ 6,000 m²

Encapsulated Mass Timber

Floor FRR: 2 h

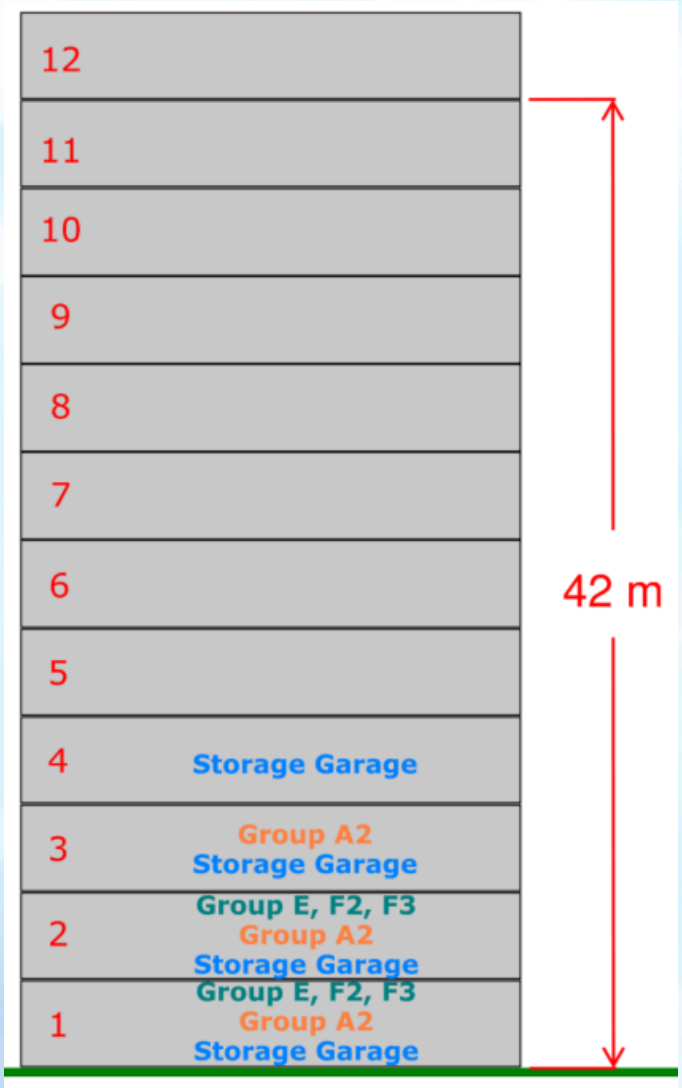
Mezzanine FRR: 1 h

Other Occupancies Permitted

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

Encapsulated Mass Timber - 7

Group D - 3.2.2.49A.



Storeys: up to 12

Height: 42 m

Building Area: ≤ 7,200 m²

Encapsulated Mass Timber

Floor FRR: 2 h

Mezzanine FRR: 1 h

Other Occupancies Permitted

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

Encapsulated Mass Timber - 8

Table 3.1.6.3.

Minimum Dimensions of Structural Mass Timber Elements in Encapsulated Mass Timber Construction

Structural Wood Elements	Minimum Thickness, mm	Minimum Width x Depth, mm x mm
Walls that are not *fire separations* or exterior walls (1-sided fire exposure)	96	N/A
Walls that require a *fire-resistance rating*, but are not *fire separations* (2-sided fire exposure)	192	N/A
Floors and roofs (1-sided fire exposure)	96	N/A
Beams, columns and arches (2- or 3-sided fire exposure)	N/A	192 x 192
Beams, columns and arches (4-sided fire exposure)	N/A	224 x 224

Encapsulated Mass Timber - 9

3.1.6.4. Encapsulation of Mass Timber Elements

- The mass timber must be protected (encapsulated) with prescribed materials that provide an encapsulation rating of at least 50 min.
- Limits on amount of mass timber that can be exposed on walls and ceilings within a suite.
  - Walls are based on total wall area of the perimeter of the suite
    - Therefore, we will require detailed key plans and/or information provided with the permit submission to demonstrate compliance.

Encapsulated Mass Timber - 10

Encapsulation Rating and Materials

- The encapsulation rating shall be determined in accordance with CAN/ULC-S146 “Testes for the Evaluation of Encapsulation Materials and Assemblies of Materials for the Protection of Structural Timber Elements”.
- 3.1.6.6. has listed prescriptive materials deemed to meet the required 50 minute encapsulation rating.

Encapsulated Mass Timber - 11

3.1.6.9. Exterior Cladding

- Exterior cladding shall be non-combustible
- However, exceptions provided to allow some combustible cladding with limits.
  - Prescriptive requirements provided on max percent of each exterior wall permitted to be combustible with differing requirements based on a number of criteria
    - Therefore, we will require detailed key plans and/or information provided with the permit submission to demonstrate compliance.

Encapsulated Mass Timber - 12

Additional EMTC Resources

- Vortex Fire - EMTC Webinar
- FP Innovations - EMTC Guidelines


ANY QUESTIONS?

Closing Remarks

In the works for 2023….

- 2024 Ontario Building Code
  - Expected to be finalized and will be working through all the changes
- Alternative Solutions
  - Updated Forms, and internal processes
- Possible Part 11/Change of use
  - Seminar / Video
- Pre-Engineered Guard System Review
- New Public Portal in the works

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