Neptis Foundation

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Ontario Building Code

Missing Middle Study

Bridging the gap between houses and high-rises

June 2026

Draft Report

Authors

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Conrad Speckert is a building code consultant with a background in architecture. His work focuses on the regulatory environment of low-rise housing in Canada, with particular emphasis on multiplexes and small apartment buildings. He has authored research on single-stair provisions worldwide, supported mid-rise policy reforms in Toronto, and consults on code-related design and feasibility questions for residential projects across the country.

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Jack is a senior fire protection engineer. He has designed and reviewed fire protection systems and life-safety strategies for buildings of every scale, from low-rise housing to complex mixed-use and high-rise developments. His practice covers means of egress, fire-resistance and compartmentation, suppression systems, and alternative-solutions analysis under the Ontario Building Code and the National Building Code of Canada.

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Houses

An elevator, fire alarm system, and sprinklers are not required and a single means of egress is acceptable if each dwelling unit has its own separate entrance.

- single-detached houses
- houses with secondary suites
- rowhouses
- stacked townhouses

Missing Middle Housing

Two exit stairs are required in buildings where multiple dwelling units share the same means of egress. An elevator, fire alarm system, sprinklers, and standpipe are required if more than 3 storeys. Wood-frame construction is permitted.

- multiplexes
- walk-up apartment buildings (max. 3 storeys)
- small apartment buildings (4 to 6 storeys)
- mixed-use mainstreets housing

High-rise Buildings

OBC Subsection 3.2.6. applies to buildings that are more than 18 metres in height and additional measures for firefighting, emergency power, and smoke control are required. Noncombustible or mass timber construction is required.

- any residential building over 18m in height
- tall buildings in urban centres
- transit-oriented development near MTSAs
- large mid-rise buildings along avenues

Executive Summary

Ontario is facing a housing shortage, particularly in walkable neighbourhoods.

The barriers generally fall into two categories: market-driven and regulatory. The former includes interest rates, labour availability, and material costs that are shaped by economic forces. The latter includes zoning, permitting, taxation, building codes, and site servicing — factors that are primarily under federal, provincial, or municipal control. Recent reforms have already addressed zoning, permitting, and taxation; however, the Ontario Building Code (OBC) plays a crucial role in determining what types of housing can actually be built.

Residential lots in urban areas are typically between 25 and 50 feet wide. These lots were originally planned for houses, but they can comfortably accommodate a range of missing middle housing types: triplexes, fourplexes, sixplexes and even low-rise apartment buildings — gentle density that fits into existing contexts while increasing housing options and access to homeownership. However, the transition in code compliance from houses to housing leads to increased costs and complexity, rendering the layout of the buildings very awkward, inefficient, and often financially unviable.

The “feasibility cliff” in the building code going from three to four storeys is also incentivizing extremes: stacked townhouses, which are not barrier-free accessible and have few safety requirements, or large apartment buildings, which require land assembly and have long approval timelines.

Building codes should be subject to frequent iterative review, but there hasn’t been a deliberate effort to examine the provisions for low-rise housing since the mid-1990s. Recent code changes have increased safety and accessibility to achieve laudable public policy goals, but they are not without trade-offs. Mandating sprinklers and elevators in four-storey buildings leads to the construction of more three-storey buildings. Requiring two staircases in any multiplex or low-rise apartment buildings leads to the construction of more stacked townhouses.

In other words, affordable, safe, and accessible housing that could otherwise pencil out on narrow lots isn’t actually being built. Even though zoning by-laws have been changed to expand housing options, the building code hasn’t been updated to make them feasible in ways that are best suited to meet people’s needs.

If the goal is for zoning reforms to actually deliver new housing supply at scale, then certain building code provisions should be revised so that costs and complexity do not increase disproportionately to building size and risk profile.

Learning from code provisions in other jurisdictions and previous work prepared in the mid-1990s, this study offers eight OBC recommendations to build more "missing middle" housing, without decreasing the acceptable level of safety in the code.

1. **Mezzanines in Dwelling Units:** Allow mezzanines on the uppermost floor level of a three-storey building to not count as an additional storey.

2. **Rooftop Enclosures Not a Storey:** Allow elevator lobbies and very small rooftop floor areas to not count as an additional storey.

3. **Combustible Sidewalls:** Allow mass timber and wood-frame walls near a property line, if the fire-resistance rating of the wall is increased.

4. **Emergency Generators in Low-rise Buildings:** Allow smaller systems and dual feed connections for buildings less than 18 metres in height.

5. **Single Exit:** Allow a single exit stair in low-rise residential buildings that are sprinklered, under specific conditions.

6. **Distance between Exits:** Allow a reduced distance between exits and between exterior discharges in low-rise residential buildings.

7. **Elevator within Exit:** Allow an elevator in three-storey buildings to be located in an exit if the elevator doors only open into the exit.

8. **Elevator Size and Speed:** Allow faster elevators that are not stretcher-sized in low-rise residential buildings.

These recommendations are not revolutionary. They are not even new ideas.

However, their combined impact upon low-rise housing design and feasibility is substantial. If fully implemented, these changes would save up to $200,000 in construction costs and add up to 168m^2 in area. For a small rental housing project in southern Ontario, this increases the net operating income by more than $50,000 per year, unlocking more than $1 million in development value.

These recommendations also unlock opportunities to renovate existing buildings and to provide fire alarms, sprinklers, and elevators where otherwise not required — resulting in more affordable, safe, and accessible new housing.

Ulster Street Multiplex, Toronto, LGA Architectural Partners, 2024.
Photo by Doublespace.

These recommendations would have added two more bedrooms and an elevator to this multiplex.

Foreword

Many Canadians want what great cities have: neighbourhood vitality, walkable density, and homes that work through different stages of life. The neighbourhoods that deliver this combination almost always include buildings of four to six storeys on small lots. In Ontario, this housing is almost *impossible* to build.

The Neptis Foundation is a privately endowed charitable foundation established in 1997 to bring independent research and analysis to the question of how Canadian cities grow. For over 20 years it has published work on infrastructure, transit, employment geography, and the Greater Golden Horseshoe's regional plans, without industry affiliation, without clients, and without political alignment. For the past five years, Neptis has been investigating more material and architectural questions: what shapes the buildings that get built?

The Ontario Building Code's provisions for missing middle housing have not been thoroughly reviewed since the mid-1990s. In the same period, zoning has been reformed and low-rise typologies have been legalized. The Building Code Act and the Planning Act govern in parallel. A review of the OBC is the right response to this gap.

A serious review of this kind requires technical input from many voices. The Province will hear extensively from builders' associations, product manufacturers, fire chiefs, building officials, and other stakeholders. Each contribution is valuable. Few are independent.

Neptis commissioned Conrad Speckert and Jack Keays to identify OBC provisions that inappropriately constrain missing middle housing and to propose alternatives. Speckert is a code consultant with a background in architecture. Keays is a senior fire protection engineer. Both have designed and reviewed many buildings of this scale and the recommendations that follow are theirs.

Building codes are not architecture, but they govern what architecture can do. These recommendations make better housing *possible* along the streets where many people want to live and where economic opportunities and supporting infrastructure already exist.

Neptis offers this report to the curious public and to the Province as it reviews the code.

— Zoë Coombes, Executive Director, Neptis Foundation

Impossible Toronto: On the Courtyard, Learning from European Blocks,
Studio VAARO and Gabriel Fain Architects, Neptis Foundation, 2025.
Visualization by Aron Lorincz Ateliers.

This design is impossible to build in Ontario.

1 Introduction

1.1 Scope

This study looks at the “missing middle” of housing. Within the context of the Ontario Building Code, this means small multi-unit residential buildings not more than six storeys or 18 metres in height. The recommendations are intended to apply to floor areas of residential major occupancy — however, some of them may be appropriate for other major occupancies as well.

18m is measured from grade to the floor level of the highest storey

The study is co-authored by an architect and fire protection engineer and is limited to topics that are addressed in Part 3 and Part 9 of the code. The scope is also limited only to topics directly regulated by the Ontario Building Code. Changes to reference standards for elevators and emergency generators are relevant but outside the scope.

Part 3: Fire Protection, Occupant Safety and Accessibility

Part 9: Housing and Small Buildings

A comprehensive risk assessment and impact analysis for each of the recommendations has not been completed as part of this study. The process of developing any proposed code change follows a technical review and consultation process led by the responsible regulator.

The Ontario Building Code and the National Building Code of Canada

For the purpose of this study, the “OBC” or “the code” refers to Volume I & II of the 2024 Ontario Building Code and the “NBC” or “the National Building Code of Canada” refers to the 2025 National Building Code of Canada, 1st printing.

The first edition of the Ontario Building Code was published in 1975, modelled after the National Building Code of Canada with provincial modifications. The first edition of the NBC was published in 1941 and was primarily based on American and British building codes written at the turn of the 20th century. These codes were responsive to the methods of construction and fire protection available at the time — however, many of the underlying assumptions remain in the code provisions today and should be reaffirmed or updated to align with modern conditions.

In particular, certain provisions that apply to high-rise buildings also apply to much smaller buildings (except for houses) and there has not been a concerted and deliberate effort to review the provisions for low-rise housing since the mid-1990s.

1.2 Housing Affordability in Growing Urban Areas

The combination of housing affordability and car-dependency crises has increased the demand to build more housing within existing urban areas. As a measure of long-term municipal servicing and infrastructure costs, suburban expansion and greenfield development is no longer acceptable to a broad consensus of policy-makers seeking to create more sustainable and affordable communities.

Within the Greater Toronto Area, greenbelt protections established in 2005 and provincial transit-oriented planning policy enacted in 2025 have slowly shifted the focus of future housing supply toward urban infill development. In Toronto, the "Expanding Housing Options in Neighbourhoods" (EHON) planning policy initiative has allowed fourplexes city-wide and sixplexes in some parts of the city, as well as six-storey apartment buildings on major streets. Other cities have also made changes to legalize "missing middle" housing in response to the federal government's Housing Accelerator Fund.

Toronto's planners estimate that by 2051 more than 87,000 multiplex and 41,000 major streets housing units will be built in the city. They have also calculated that the EHON initiative has unlocked the potential for more than 1 million new homes citywide.

"Neighbourhood Intensification Bulletin," Toronto City Planning, March 2025.

These new permissions create opportunities to build more sustainable and affordable designs using low-cost and low-carbon methods of construction. It is therefore very timely for the OBC to be updated to improve the safety, accessibility, and feasibility of this scale of housing.

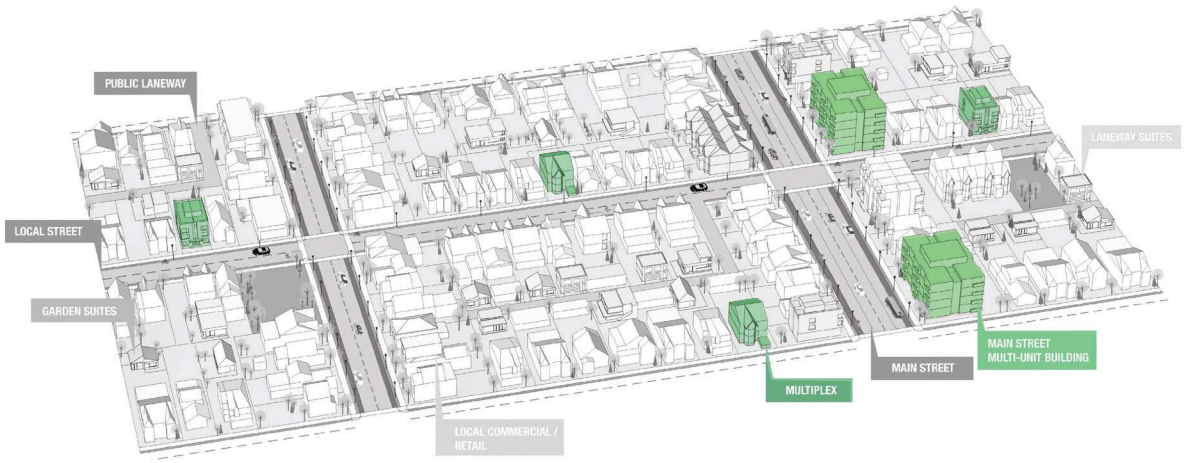


Diagram by Toronto City Planning (recoloured)

1.3 1990s Ontario Building Code Study

In the mid-1990s, the provincial government worked with a building code consultant, architect, and cost estimator to propose OBC changes that would support "Mainstreets Development." The work was overseen by technical staff from the City of Toronto and the Building Policy Section of the Ontario Ministry of Municipal Affairs and Housing.

Some of the proposed changes in the mid-1990s study have since been adopted by the OBC and the NBC. However, many of the topics remain highly relevant more than 30 years later. The table below summarizes the current status of each proposal.

Refer to Appendix A for more detailed discussion.

5 of the proposals were adopted by the OBC and are also in the NBC today	1. Unprotected openings close to property line 5. Multi-level suites - smoke alarm 12. Spiral stairs (modified to an occupant load of 3 persons) 26. Winders 27. Stair configuration in suite
9 of the proposals were adopted by the OBC but are not in the NBC today	3. Inside corner openings (modified to require sprinklers) 7. Standpipe coverage for suites with exterior access 11. Door swing in corridor 13. Egress and balconies - multi-level suites 17. Separation of exit path from open-air parking 18. Lobby egress 20. Landing configuration (not addressed by the NBC) 23. Exit door swing 29. Multi-level commercial suite
3 of the proposals were overridden by harmonization of the OBC with the NBC	4. Protection above windows in E or F2 occupancy 8. Hose through exit 9. Protection on floor areas with a barrier-free path of travel
12 of the proposals were not adopted by the OBC and are not in the NBC today	2. Glazed openings 6. Low-rise emergency generator 10. Dead-end corridors 14. Direct egress 15. Single exit descriptors (adopted in British Columbia) 16. Distance between exits (adopted in City of Vancouver) 19. Elevator open to stair 21. Handrail extensions 22. Steps in horizontal exits 24. Minimum number of risers 25. Landing at top of stair 28. Exit corridor width

1.4 Feasibility Cliff

Residential buildings that are not more than three storeys in height and 600m^2 in area (building footprint) fit within Part 9 of the code. Residential buildings that exceed this threshold must comply with Part 3 of the code. However, the difference between code requirements is not delivering desirable public policy outcomes. Consider the following:

> **OBC Part 9:** A three-storey rowhouse, stacked townhouse, or multiplex with separate entrances to each dwelling unit does not require an elevator, sprinklers, fire alarm system, or a licensed architect and engineer to design the building. Such projects are very cost-effective forms of low-rise housing.
>
> **OBC Part 3:** A four-storey apartment building with only one or two homes on each level requires an elevator, sprinklers, standpipe, fire alarm system, two exit stairs, and a licensed architect and engineer to design the building. Such projects are not likely to be feasible because of these additional costs.

The result is a feasibility cliff between low-cost three-storey housing and expensive four-storey housing. This further exacerbates the "tall or sprawl" urban planning problem by inducing the development of larger buildings with sufficient economies of scale to distribute the relative cost and complexity.

Four-Storey Multiplexes

This feasibility cliff was also described in a recent report to Toronto City Council's Planning and Housing Committee as it was considering whether to allow four-storey multiplexes. The staff report provided the following explanation as part of the rationale to maintain the maximum permitted height for multiplexes at three storeys:

> "Preliminary findings show that a substantial amount of floor area of a four-storey sixplex on a narrow lot would be occupied by circulation areas, such as exit stairs and elevator shafts, and that the remaining occupiable areas can only accommodate small or inefficiently configured dwelling units."

"Housing Accelerator Fund: Expanding Permissions in Neighbourhoods for Low-Rise Sixplexes – Final Report," City of Toronto, May 28, 2025.

1.5 Harmonization of Codes

This study provides recommendations for the OBC. However, these changes could also increase innovation and housing supply across the country.

Provinces and territories signed a Construction Codes Reconciliation Agreement in 2019, which will result in "the reduction or elimination of variations in the technical requirements of Construction Codes." The agreement states that "After 2025, any new codes will be further harmonized with applicable National Codes and with leading practices from the provinces and territories, subject to exceptions provided for under the agreement."

Proponents should therefore consider if a change is more appropriate as a "leading practice" of a provincial jurisdiction or is more appropriate to be submitted to the national model codes development system.

Canadian Board for Harmonized Construction Codes

Changes to the NBC are developed by the CBHCC on a five-year code cycle. Following publication of the next edition of the code, harmonization at the provincial level is expected within 18 months. This means that a request submitted to CBHCC will take at least 6.5 years (if prioritized for the next code cycle) to be adopted provincially. The timeline for requests submitted directly to the provincial government is unknown.

CBHCC — Canadian Board for Harmonized Construction Codes

MMAH — Ministry of Municipal Affairs and Housing (Ontario)

Section 2 of this document provides a general description for each of the recommendations with draft code language to support further discussion.

Additional research, risk assessment, and impact analysis are encouraged to support the development of code changes at MMAH or CBHCC for any of these topics.

1.6 Authors' Note

This work would not have been possible without the support of the Neptis Foundation. Neptis is an independent, privately capitalized charitable foundation that conducts and disseminates nonpartisan research, analysis, and mapping related to the design and function of Canadian urban regions. Neptis aims to inform and to improve policy and decision-making around regional urban growth and management.

A special thank you to Marc Alam (Canada Wood Council), Andre D'Elia (Superkül), Andrew Harmsworth (GHL Consultants), David Hine (David Hine Engineering), Shea Gallagher (Superkül), Allen Larden (Larden Code Consulting Architect), Janna Levitt (LGA Architectural Partners), Frank Lohmann (Canadian Home Builders' Association), Victor Lü (AES Engineering), Kevin Martin (LGA Architectural Partners), François Martineau (ADHOC architectes), Andrew McLeod (KJA Elevator Consultants), Sam Naylor (Nominal), Uros Novakovic (Office Ou), Chris Spoke (Toronto Standard), and Brendan Whitsitt (Imprint Development) for their thoughtful feedback.

This study is intended for information and discussion purposes only.

2 Recommendations

Bridging the Gap between Houses and High-rises

The following recommendations improve the design flexibility and feasibility of "missing middle" housing. These were chosen based on the experience of the authors and are supported by code provisions in other jurisdictions, examples of approved alternative solutions, and recent conversations with other architects, engineers, building officials, planners, and builders across Canada.

The recommendations for emergency generators in low-rise buildings, single exit, distance between exits, and elevator within exit were proposed in the mid-1990s but not adopted at the time. These have been reaffirmed and updated.

The recommendation for mezzanines in dwelling units and rooftop enclosures not a storey are based on code provisions in other Canadian jurisdictions. The recommendation for combustible sidewalls is based on several alternative solutions that have been accepted by authorities having jurisdiction in Ontario. The recommendation for elevator size and speed is based on a review of code provisions in other jurisdictions.

Topic	*OBC Article*	*Summary*
Mezzanines in Dwelling Units	3.2.1.1. 9.10.4.1.	Allow mezzanines on the uppermost level of a three-storey building to not count as an additional storey
Rooftop Enclosures Not a Storey	3.2.1.1. 9.10.4.4.	Allow elevator lobbies and small rooftop areas to not count as an additional storey
Combustible Sidewalls	3.2.3.7. 9.10.14.5	Allow mass timber and wood-frame walls near a property line, if the fire-resistance rating of the wall is increased
Emergency Generators in Low-rise Buildings	3.2.7.9.	Allow smaller systems or dual feed electrical service connections for buildings less than 18 metres in height
Single Exit	3.4.2.1. 9.9.8.2.	Allow a single exit stair in low-rise residential buildings that are sprinklered, under specific conditions
Distance between Exits	3.4.2.3.	Allow a reduced distance between exits and between exterior discharges in low-rise residential buildings
Elevator within Exit	3.4.4.4. 9.9.4.2.	Allow an elevator in three-storey buildings to be located in an exit if the elevator doors only open into the exit
Elevator Size and Speed	3.5.4.1.	Allow small and fast elevators in low-rise residential buildings

Project ADHOC, Montreal, ADHOC architectes, 2016.
Photo by Adrien Williams.

This three-storey sixplex in Montreal has a mezzanine that adds two more bedrooms to the building.

It would be classified as four storeys in Ontario.

2 Recommendations

2.1 Mezzanines in Dwelling Units

Mezzanines are defined by the code as intermediate floor levels that cannot exceed 40% of the area of the room below (if the mezzanine is open to the room below) or 10% of the area of the suite (if the mezzanine is enclosed). Inside dwelling units, mezzanines are typically referred to as "lofts" that can be accessed from a private stair in a double-height room to provide additional living space without adding another storey.

The City of Montreal offers a special solution for mezzanines in dwelling units. Article 28 in Montreal's By-Law 11-018 provides an exception to the Quebec building code that allows a fourth floor that is not more than 40% of the area of the suite on the level below to be added to a three-storey building without triggering a change in height classification. This makes it possible to add additional living space to each of the uppermost dwelling units without triggering the requirements that apply to four-storey buildings. This local exception is distinct because the mezzanine does not need to be fully open to the room below and a fire alarm system is required to be installed.

"Règlement modifiant le Règlement sur la construction et la transformation de bâtiments (11-018) (11-018-3)," Ville de Montreal, January 2020.

Code Reference: 3.2.1.1. Exceptions in Determining Building Height
9.10.4.1. Mezzanines Not Considered as Storeys

Recommendation: Allow mezzanines on the uppermost storey of a three-storey building to be up to 40% of the area of the dwelling unit on the floor level below if a fire alarm system is installed.

This allows a mezzanine bedroom to have more privacy from living spaces on the level below and creates opportunities for an adjacent rooftop terrace. The requirement for a fire alarm system with heat detectors in each dwelling unit increases the overall level of safety in the building.

In Montreal, many three-storey buildings make use of the local exception to add a recessed fourth floor level without disrupting the pattern of three-storey facades along the street. For a three-storey triplex with a building area of 100m^2, this increases the total gross floor area from 300m^2 to 340m^2, adding enough space for another large bedroom and bathroom in the upper dwelling unit.

Cost Impact: For a three-storey apartment building of 300m^2 in building area, this could unlock 120m^2 in additional living space without requiring sprinklers and an elevator. This saves $211,200 in construction costs that would otherwise apply if classified as four storeys.

The cost of sprinklers for a coverage area of 1020m^2 is $61,200 ($60/m^2) and the cost of a 4-stop elevator is at least $150,000.

2 Recommendations

2.1 Mezzanines in Dwelling Units

There are many recently built examples of three-storey buildings in Montreal that use this mezzanine code exception (highlighted in green). Outside Montreal, these designs would be classified as four storeys and require sprinkler systems, standpipes, elevators, and other additional costs.

Project:
Projet ADHOC

Architect:
ADHOC architectes

Year Built:
2016

Location:
Verdun, Montreal, Quebec

Drawing by ADHOC architectes (recoloured). Photo by Adrien Williams.

2 Recommendations

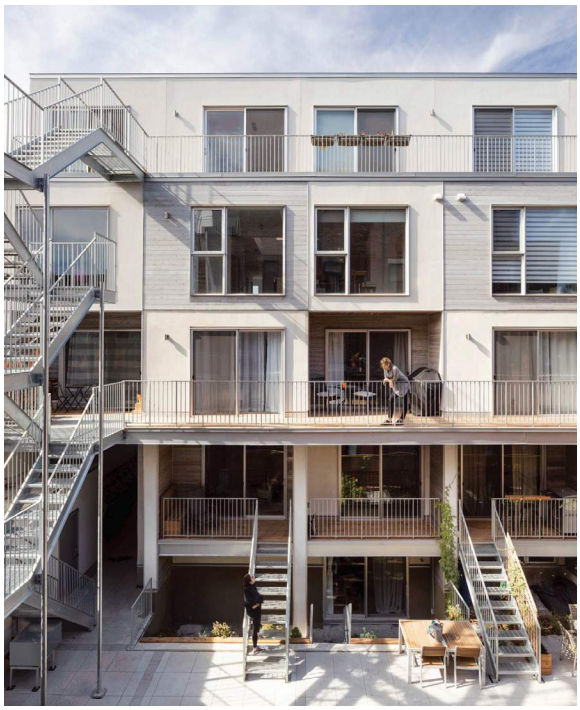
2.1 Mezzanines in Dwelling Units

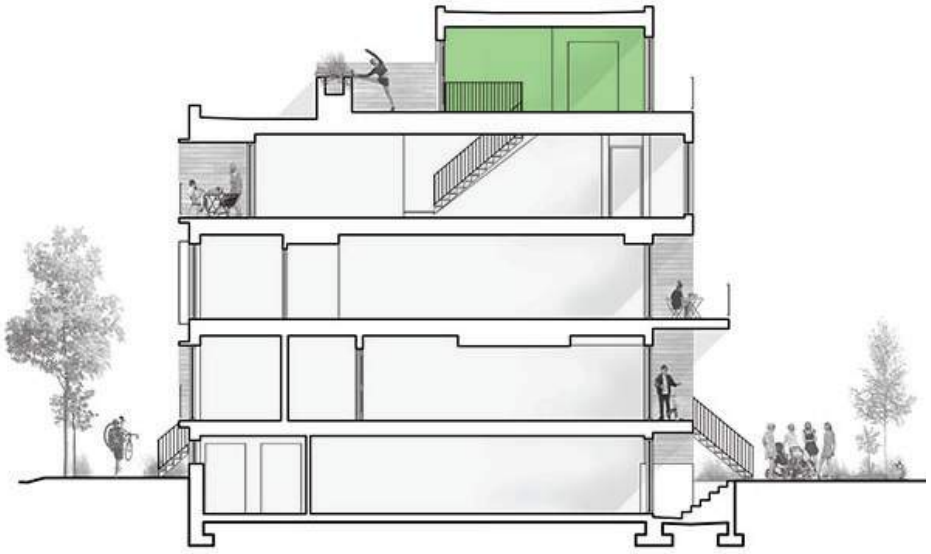
Project:
Le Jardinier

Architect:
ADHOC architectes

Year Built:
2017

Location:
Hochelaga-Maisonneuve,
Montreal, Quebec





Drawing by ADHOC architectes (recoloured). Photo by Maxime Brouillet.

2 Recommendations

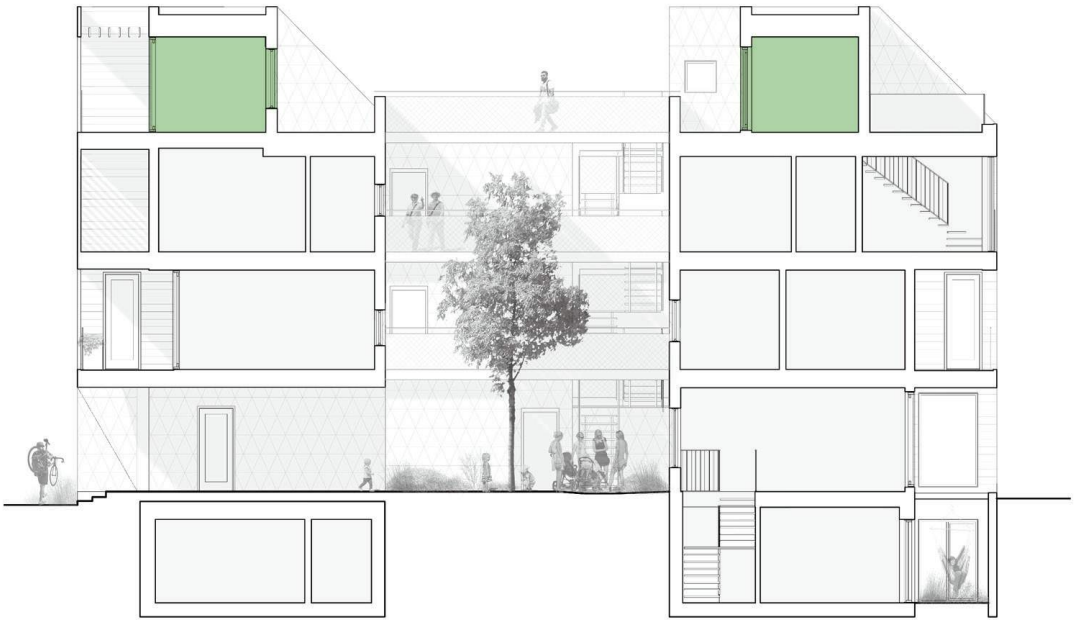
2.1 Mezzanines in Dwelling Units

Project:
La Géode

Architect:
ADHOC architectes

Year Built:
2017

Location:
Plateau Mont-Royal, Montreal, Quebec



Drawing by ADHOC architectes (recoloured). Photo by Adrien Williams.

2 Recommendations

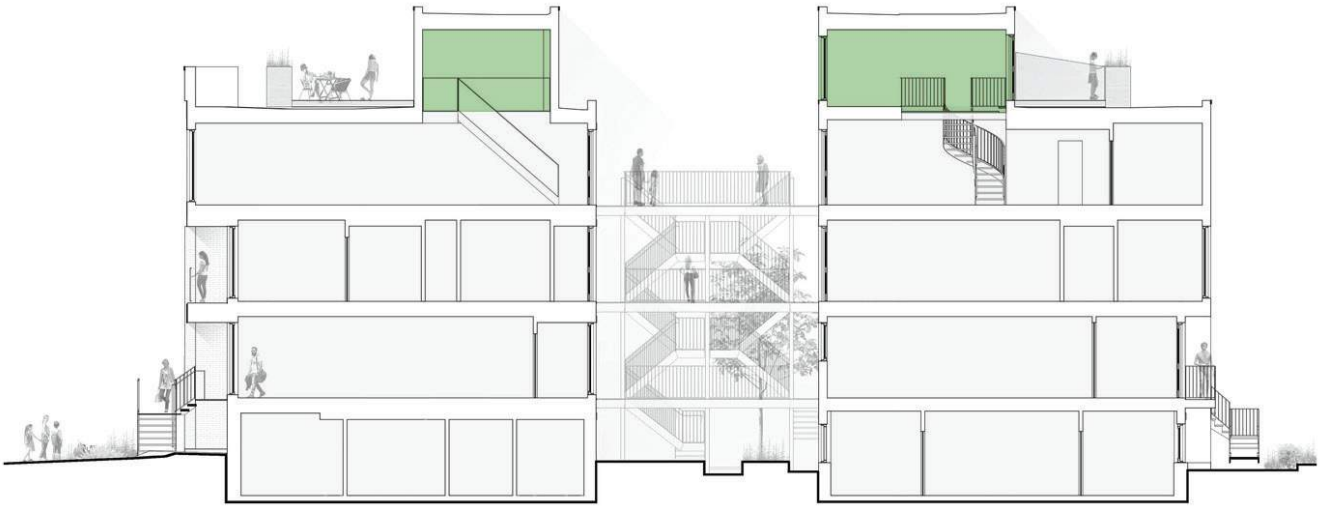
2.1 Mezzanines in Dwelling Units

Project:
Inverness

Architect:
ADHOC architectes

Year Built:
2019

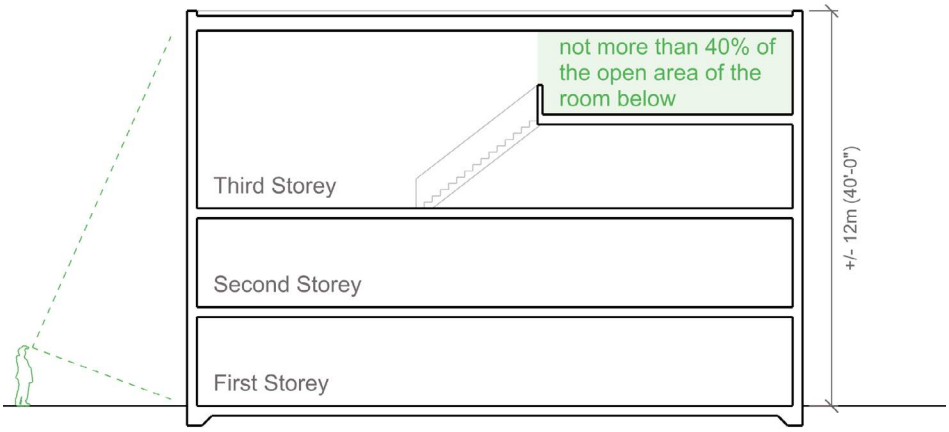
Location:
Côte-des-Neiges, Montreal, Quebec



Drawings by ADHOC architectes (recoloured). Photo by Maxime Brouillet.

2 Recommendations

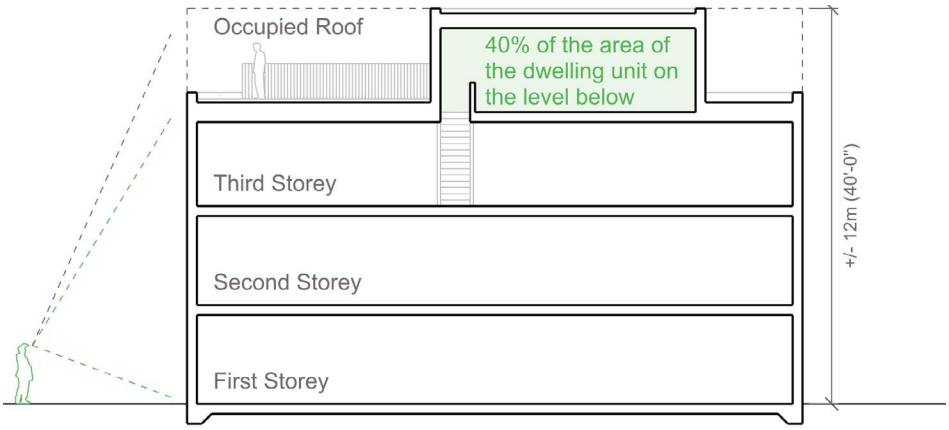
2.1 Mezzanines in Dwelling Units



Refer to the Explanatory Figure 9.1.-6 and 9.1.-7 in the Illustrated User's Guide of the NBC 2020: Part 9 of Division B to understand how the concept of open and enclosed mezzanines is currently applied in the NBC and OBC.

Classified by the OBC as 3 Storeys (Part 9)

- mezzanine area not more than 40% of the open area of the room below and required to be open to the room below



In Montreal, if the mezzanine is accessed from an open staircase inside the dwelling unit and a fire alarm system is installed, this building is classified as three storeys (Part 9).

Classified by the OBC as 4 Storeys (Part 3)

Recommendation based on Montreal's local exception:

- mezzanine area not more than 40% of the area of the dwelling unit on the floor level below, but need not be open to the room below
- mezzanine must be accessed from an unenclosed staircase inside the dwelling unit and a fire alarm system is required to be installed in the building with heat detectors in each dwelling unit
- the mezzanine can provide access to an adjacent occupied rooftop outdoor space

2.1 Mezzanines in Dwelling Units

Part 3 Fire Protection, Occupant Safety and Accessibility
3.2. Building Fire Safety
3.2.1. General
3.2.1.1. Exceptions in Determining Building Height

(3) Except as required by Sentence (5) and 3.2.1.7.(1), the space above a *mezzanine* need not be considered as a storey in calculating *building height* provided

(a) the aggregate area of *mezzanines* that are not superimposed does not exceed 40% of the open area of the room in which they are located, and
(See Note A-3.2.1.1.(3)(a))

(b) except as permitted in Sentences (7), 3.2.1.7.(1) and 3.3.2.13.(3) the space above the *mezzanine* is used as an open area without partitions or subdividing walls higher than 1 070 mm above the *mezzanine* floor.

3.2.1.7. Mezzanines in Dwelling Units

(1) A *mezzanine* located inside a *dwelling unit* on the top *storey* of a *building* need not be open to the room below and need not be considered as a *storey* in calculating *building height* provided

(a) the *building* is not more than three *storeys* in *building height*,

(b) the area of the *mezzanine* does not exceed 40% of the area of the *suite* on the floor level below,

(c) the area of the *mezzanine* does not extend horizontally beyond the vertical *fire separations* of the *suite* in which it is located,

(d) an unenclosed interior stairway from the *floor area* below is provided to the *mezzanine*,

(e) the *fire separations* between the *suite* containing the *mezzanine* and the remainder of the *building* have a *fire-resistance rating* not less than 1 h, and

(f) the *building* is equipped with a fire alarm system without exception and a *heat detector* is installed in every *dwelling unit* and every room not part of a *dwelling unit*.

Refer to "Règlement modifiant le Règlement sur la construction et la transformation de bâtiments (11-018) (11-018-3)," Ville de Montreal, January 2020.

Part 9 Housing and Small Buildings
9.10. Fire Protection
9.10.4. Building Size Determination
9.10.4.1. Mezzanines Not Considered as Storeys

(2) Except as required by Sentence 9.10.4.2.(1) and 9.10.4.1.(6), the space above…

(6) A *mezzanine* located inside a *dwelling unit* on the top *storey* of a *building* need not be open to the room below and need not be considered as a *storey* in calculating *building height* provided

(a) the area of the *mezzanine* does not exceed 40% of the area of the *suite* on the floor level below,

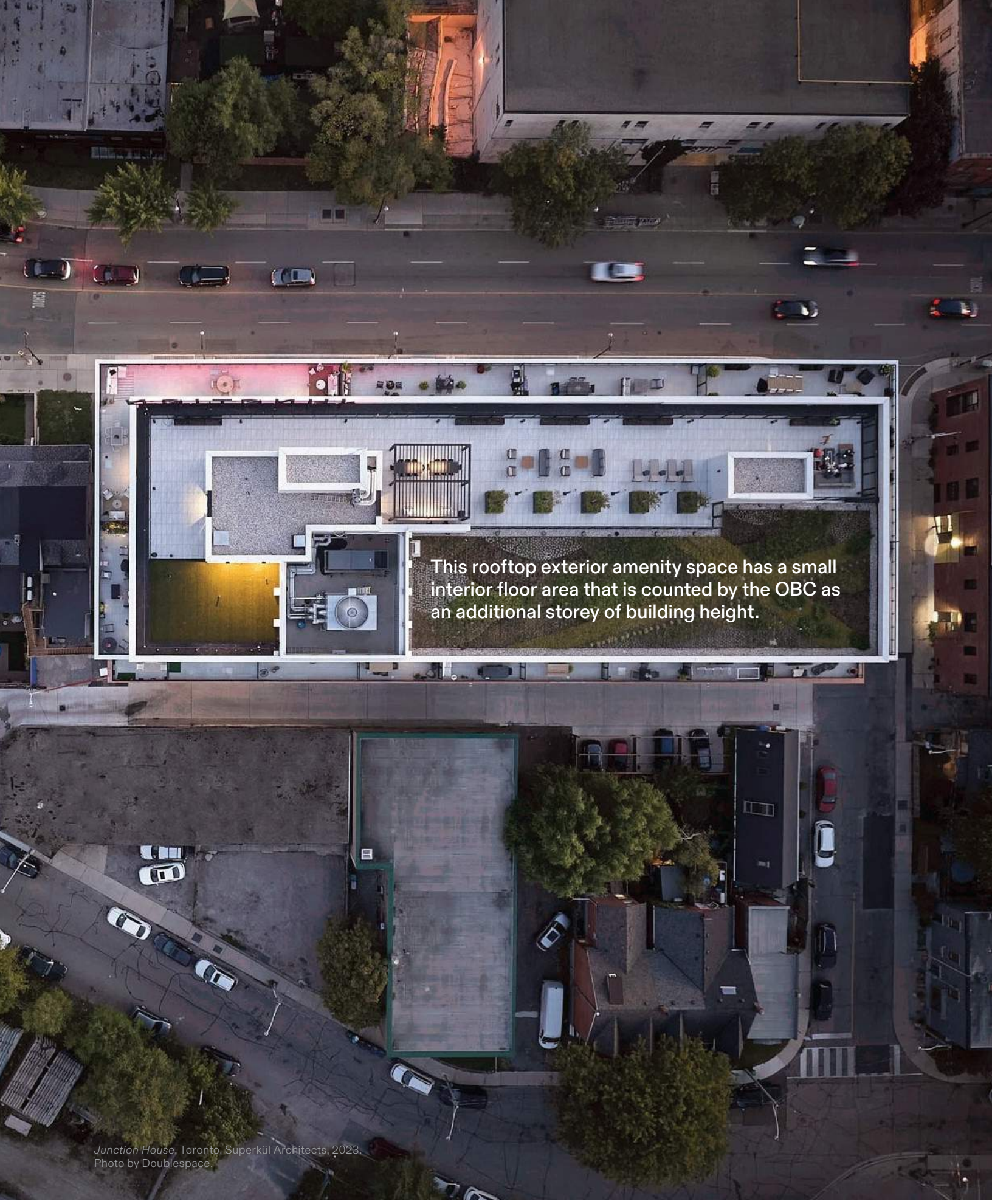
(b) the area of the *mezzanine* does not extend horizontally beyond the vertical *fire separations* of the *suite* in which it is located,

(c) an unenclosed interior stairway from the *floor area* below is provided to the *mezzanine*,

(d) the *fire separations* between the *suite* containing the *mezzanine* and the remainder of the *building* have a *fire-resistance rating* not less than 1 h, and

(e) the *building* is equipped with a fire alarm system without exception and a *heat detector* is installed in every *dwelling unit* and every room not part of a *dwelling unit*.

A fire alarm system is not required by OBC 3.2.4.1.(5) and 9.10.18.2.(5) where not more than four dwelling units share the means of egress or an exterior exit facility is provided.



Junction House, Toronto, Superkül Architects, 2023.
Photo by Doublespace.

2.2 Rooftop Enclosures Not a Storey

The code provides exceptions in determining building height for rooftop enclosures that contain elevator machinery, a stairway, or a service room used for no purpose other than for service to the building. However, the rooftops of apartment buildings are often used as shared outdoor amenity spaces or as private terraces accessed from within each dwelling unit. If such rooftop outdoor spaces are accessed only from a stairway, they are not classified as an additional storey in building height.

Section 3.8 of the code requires a barrier-free path of travel to be provided for shared residential amenity spaces. Commercial elevators are not normally designed to withstand direct exposure to the outdoors, such that an elevator lobby is required. Where an elevator lobby is provided on the roof level, the OBC does not clarify if it constitutes an additional storey. For three storey buildings, classifying a rooftop floor area as an additional storey shifts the required compliance from Part 9 to Part 3 of the code. For six storey buildings, it changes the permitted construction types.

Recognizing that an elevator lobby is a very small and intermittently occupied floor area, British Columbia updated its building code to add elevator lobbies to the list of exceptions in determining building height. This allows rooftop amenity spaces to be provided with a barrier-free path of travel without increasing the building height by an additional storey.

In addition to elevator lobbies, very small interior floor areas should also be considered as exceptions to building height if a fire alarm system is installed. This allows for universal washrooms and storage rooms to be located on the same level as a rooftop amenity space without increasing the building height by an additional storey.

Code Reference: 3.2.1.1. Exceptions in Determining Building Height
9.10.4.4. Rooftop Enclosures

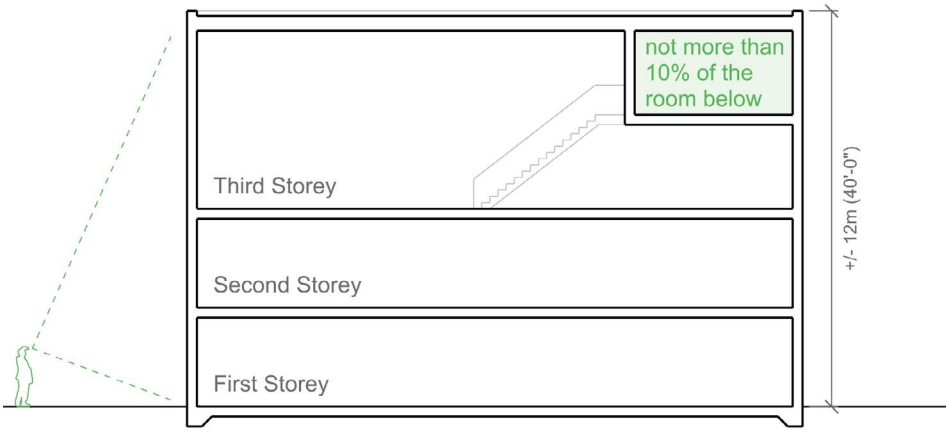
Recommendation A: Include elevator lobbies in the list of exceptions in determining building height, consistent with recent changes to the British Columbia Building Code.

Recommendation B: Allow floor areas that are not more than 10% of the floor area of the storey below and not more than 60m^2 in area to be considered as an exception in determining building height.

Cost Impact: For a six-storey apartment building of 600m^2 in building area, this would unlock 60m^2 of rooftop interior amenity space without triggering a change in the construction type from wood-frame to steel or concrete construction.

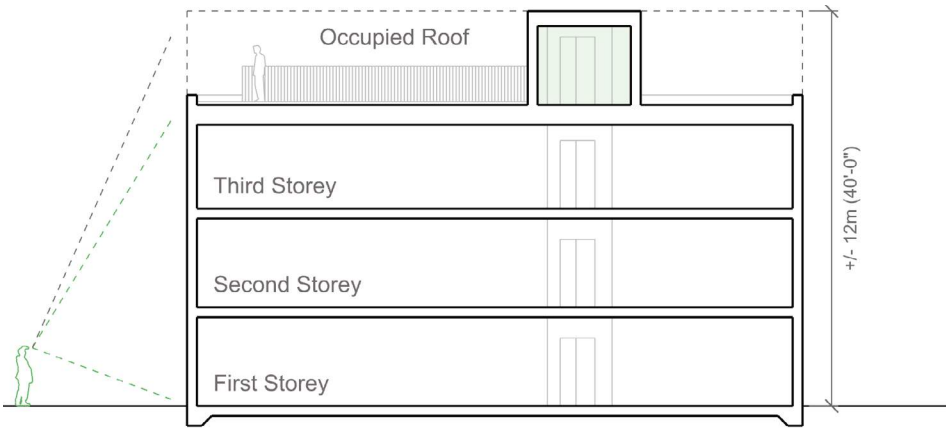
Cost differences between construction types vary significantly, but a 5% change in construction cost for 3,660m^2 of gross construction area (at $3750/m^2) amounts to a difference of $686,250.

2.2 Rooftop Enclosures Not a Storey



Classified by the OBC as 3 Storeys (Part 9)

- mezzanine area not more than 10% of the area of the room below and not required to be open to the room below



In British Columbia, an elevator lobby serving a rooftop outdoor space does not count as an additional storey in determining building height.

Classified by the OBC as 4 Storeys (Part 3)

Recommendation based on British Columbia's code:

- elevator lobby to be added to the list of exceptions in determining building height (number of storeys)

Additional Recommendation:

- where an interior floor area on the roof level is not more than 10% of the floor area of the storey below and is not more than 60m^2, it need not count as an additional storey in determining building height if a fire alarm system is installed

2.2 Rooftop Enclosures Not a Storey

Part 3 Fire Protection, Occupant Safety and Accessibility
3.2. Building Fire Safety
3.2.1. General
3.2.1.1. Exceptions in Determining Building Height

~~**(1)** A rooftop enclosure provided for elevator machinery, a stairway or a *service room* used for no purpose other than for service to the *building*, shall not be considered as a *storey* in calculating the *building height*.~~

(1) A rooftop enclosure shall not be considered as a *storey* in calculating the *building height* if the rooftop enclosure is provided for
a) elevator machinery,
b) a *service room*,
c) a stairway used for no purpose other than for access or egress,
d) an elevator lobby used for no purpose other than for access or egress, or
e) a combination thereof.

Refer to British Columbia Building Code (BCBC) 2018 "Proposed Code Changes to Rooftop Enclosures and Occupancies."

... No changes to Sentences (2) and (8) ...

(9) A *floor area* on the top *storey* of a *building* that is not more than 10% of the *floor area* on the *storey* below need not be considered as a *storey* in calculating the *building height*, provided the *building* is equipped with a fire alarm system.

(10) The *floor area* described in Sentence (9) shall not exceed 60 m^2.

Part 9 Housing and Small Buildings
9.10. Fire Protection
9.10.4. Building Size Determination
9.10.4.4. Rooftop Enclosures

~~**(1)** Rooftop enclosures provided for elevator machinery, stairways or *service rooms*, used for no purpose other than for service to the *building*, shall not be considered as a *storey* in calculating the *building height*.~~

(1) A rooftop enclosure shall not be considered as a *storey* in calculating the *building height* if the rooftop enclosure is provided for
a) elevator machinery,
b) a *service room*,
c) a stairway used for no purpose other than for access or egress,
d) an elevator lobby used for no purpose other than for access or egress, or
e) a combination thereof.

(2) A *floor area* on the top *storey* of a *building* that is not more than 10% of the *floor area* on the *storey* below need not be considered as a *storey* in calculating the *building height*, provided the *building* is equipped with a fire alarm system.

A fire alarm system is not required by 2024 OBC 9.10.18.2.(5) where not more than four dwelling units share the means of egress or an exterior exit facility is provided. The above Sentence (2) overrides 9.10.18.2.(5) to require a fire alarm system without exception. This rooftop floor area inherently cannot exceed 60m^2 because Part 9 buildings are subject to a maximum building area of 600m^2.

412 Barton, Hamilton, mcCallumSather, 2025.
Photo by Riley Snelling.

This six-storey affordable housing project in Hamilton required an alternative solution for the prefabricated wood-frame walls adjacent to the property line.

2.3 Combustible Sidewalls

The code requires any sidewall near a property line to be built of noncombustible construction, except that houses (and houses with secondary suites) are exempt. This means that the two main walls of multiplexes and small apartment buildings on narrow lots are required to be of concrete, masonry, or steel construction. This adds costs and design complexity when these sidewalls require a different structural system than the rest of a wood-frame or mass timber building.

Part 11 of the OBC also does not include a compliance alternative for existing buildings to address this topic. This limits the feasibility of renovations and additions to convert wood-frame houses into multiplexes because the existing wood-frame sidewalls are required to be replaced with noncombustible construction.

Several alternative solutions have been accepted for wood-frame and mass timber sidewalls less than 1.2 metres from an adjacent property line. The OBC requires noncombustible construction and a fire-resistance rating of 1 hour for protection from fire from the interior side of the wall, whereas these alternative solutions compensate for the use of wood studs with two layers of gypsum wallboard on the interior side and mineral wool insulation in the stud cavities to increase the fire-resistance rating of the wall assembly to 2 hours.

"Alternative Solutions Guide," Canada Wood Council, 2025.

"R-Town Vertical 6 | Mass Timber Midrise," Canada Wood Council, 2022.

Code Reference: 3.2.3.7. Construction of Exposing Building Face
9.10.14.5. Construction of Exposing Building Face and Walls Above Exposing Building Face

Recommendation: Allow combustible construction of an "exposing building face" where the percentage of unprotected openings permitted is less than 10%, provided that the fire-resistance rating of the wall is increased from 1 hour to 2 hours.

This will decrease construction complexity and cost on narrow lots. It will make it easier to convert existing houses into multiplexes and it will unlock more opportunities for wood-frame and mass timber construction. It will decrease the carbon emissions of new construction by allowing the same sustainable materials to be used for the entire above-grade structure. The risk of structural failure or fire spread to adjacent buildings is reduced by increasing the fire-resistance rating of the walls.

Cost Impact: Builders estimate that switching from 1-hour steel stud to 2-hour wood stud sidewalls on a three-storey multiplex project would save roughly $15,300 and reduce the construction schedule by two weeks. Switching from 1-hour masonry to 2-hour wood stud sidewalls would save roughly $70,000 and three to four weeks.

Cost estimate based on a sidewall length of 17m and a wall height of 9m.

2.3 Combustible Sidewalls

Photo by Riley Snelling.

Project:
412 Barton

Architect:
mcCallumSather

Year Built:
2025

Location:
Hamilton, Ontario

This six-storey affordable housing project in Hamilton required an alternative solution for the prefabricated wood-frame sidewalls.

2.3 Combustible Sidewalls

Photo Courtesy of Assembly Corp.

Project:
V6 Leslieville

Architect:
CMV Group Architects

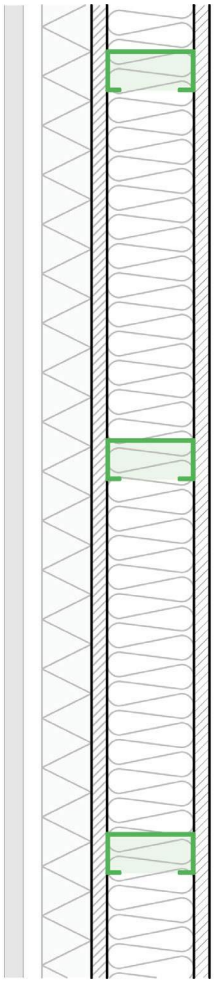
Year Built:
2021

Location:
Toronto, Ontario

Photo by Albert Chen.

This six-storey apartment building on Queen Street East in Toronto required an alternative solution for the mass timber sidewalls.

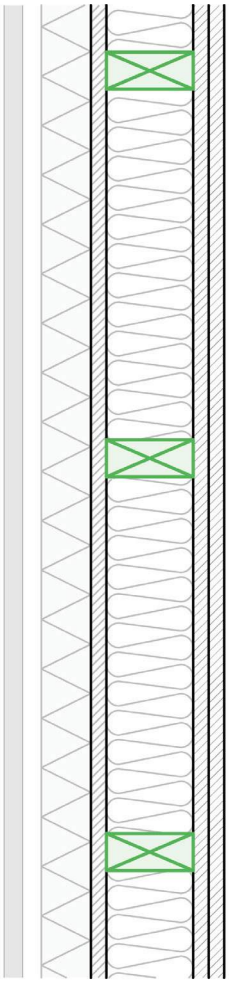
2.3 Combustible Sidewalls



1-Hour Steel Stud Wall Assembly
Noncombustible Construction

based on ULC Design No. U473 (loadbearing)

- one layer 5/8” fire-rated gypsum wallboard
- **cold-formed steel studs**
- cavity filled with mineral wool batt insulation
- noncombustible exterior sheathing
- noncombustible continuous insulation
- noncombustible strapping
- noncombustible cladding



2-Hour Wood Stud Wall Assembly
Combustible Construction

based on ULC Design No. W408 (loadbearing)

- two layers 5/8” fire-rated gypsum wallboard
- **wood studs**
- cavity filled with mineral wool batt insulation
- noncombustible exterior sheathing
- noncombustible continuous insulation
- noncombustible strapping
- noncombustible cladding

2.3 Combustible Sidewalls

Part 3 Fire Protection, Occupant Safety and Accessibility
3.2. Building Fire Safety
3.2.3. Spatial Separation and Exposure Protection
3.2.3.7. Construction of Exposing Building Face

(1) Except as provided by Sentences (3) and (4) and Articles 3.2.3.10. and 3.2.3.11., the *fire-resistance rating*, construction and cladding for *exposing building faces* of *buildings* or *fire compartments* of Group A, B, C, D or Group F, Division 3 *occupancy* classification shall comply with Table 3.2.3.7

Table 3.2.3.7.
Minimum Construction Requirements for Exposing Building Faces
Forming Part of Sentences 3.1.6.9.(5) and 3.2.3.7.(1) to (4)

Occupancy Classification of *Building* or *Fire Compartment*	Maximum Area of *Unprotected Openings* Permitted, % of *Exposing Building Face* Area	Minimum Required *Fire-Resistance Rating*	Type of Construction Required	Type of Cladding Required
Group A, B, C, D, or Group F, Division 3	0 to 10	1 h	*Noncombustible*	*Noncombustible*
		2 h	*Combustible* or *Encapsulated Mass Timber Construction*	*Noncombustible*
	> 10 to 25	1 h	*Combustible, Encapsulated Mass Timber Construction,* or *Noncombustible*	*Noncombustible*
	> 25 to 50	45 min	*Combustible, Encapsulated Mass Timber Construction,* or *Noncombustible*	*Noncombustible*
	> 50 to < 100	45 min	*Combustible, Encapsulated Mass Timber Construction,* or *Noncombustible*	*Combustible* or *Noncombustible* (1) (2)
Group E, or Group F, Division 1 or 2	0 to 10	2 h	*Noncombustible*	*Noncombustible*
	> 10 to 25	2 h	*Combustible, Encapsulated Mass Timber Construction,* or *Noncombustible*	*Noncombustible*
	> 25 to 50	1 h	*Combustible, Encapsulated Mass Timber Construction,* or *Noncombustible*	*Noncombustible*
	> 50 to < 100	1 h	*Combustible, Encapsulated Mass Timber Construction,* or *Noncombustible*	*Combustible* or *Noncombustible*

Notes to Table 3.2.3.7.:
(1) The cladding on Group C *buildings* within the scope of Article 3.2.2.51. and on Group D *buildings* within the scope of Article 3.2.2.60. shall be *noncombustible* or consist of a wall that satisfies the requirements of Article 3.1.4.8.
(2) The cladding on *buildings* or parts thereof conforming to Article 3.2.2.48., 3.2.2.57. or 3.2.2.93. shall conform to Article 3.1.6.9. or be *noncombustible*.

2.3 Combustible Sidewalls

Part 9 Housing and Small Buildings
9.10. Fire Protection
9.10.14. Spatial Separation Between Buildings
9.10.14.5. Construction of Exposing Building Face and Walls Above Exposing Building Face

(1) Except as provided in Sentences (4) to (14), each *exposing building face* and any exterior wall located above an *exposing building face* that encloses an *attic* or *roof space* shall be constructed in conformance with Table 9.10.14.5. and Subsection 9.10.8. (See Note A-9.10.14.5.(1))

Table 9.10.14.5.
Minimum Construction Requirements for Exposing Building Faces
Forming Part of Sentence 9.10.14.5.(1)

Occupancy Classification of *Building*	Maximum Area of *Unprotected Openings* Permitted, % of *Exposing Building Face* Area	Minimum Required *Fire-Resistance Rating*	Type of Construction Required	Type of Cladding Required
Residential, business and *personal services,* and *low-hazard industrial*	0 - 10	1 h	*Noncombustible*	*Noncombustible*
		2 h	*Combustible* or *Noncombustible*	*Noncombustible*
	> 10 but ≤ 25	1 h	*Combustible* or *Noncombustible*	*Noncombustible*
	> 25 but < 100	45 min	*Combustible* or *Noncombustible*	*Combustible* or *Noncombustible*
Mercantile and *medium-hazard industrial*	0 - 10	2 h	*Noncombustible*	*Noncombustible*
	> 10 but ≤ 25	2 h	*Combustible* or *Noncombustible*	*Noncombustible*
	> 25 but < 100	1 h	*Combustible* or *Noncombustible*	*Combustible* or *Noncombustible*

2024 OBC 9.10.8.4. requires noncombustible construction to be supported by noncombustible construction. This relates to the ability to do rooftop or third floor additions to a house when converting to a multiplex.

2024 OBC 9.10.9.10. requires measures to prevent the collapse of combustible construction from leading to the collapse of noncombustible fire separations. This relates to the requirement for balloon framing (joist hangers) where wood-frame floor assemblies are bearing on noncombustible sidewalls (platform framing not permitted).

The NBC 2020 Illustrated User's Guide for Part 9 notes under 9.10.14.5. that the intent is to address fires originating within the building and to "keep a wall from being consumed during a fire." This is also noted in the NBC 2020 Intent Statements for NBC 9.10.14.5.(1).

> "The level of fire resistance required is intended to contain the fire to the building where it originated. The requirements pertaining to noncombustibility for buildings other than houses are intended to keep a wall from being consumed during a fire, which would add to the exposure risk. Noncombustible cladding will therefore provide added protection for adjacent buildings."

72 Amroth Avenue, Toronto, Superkül for the CreateTO Missing Middle Pilot Project, 2025. Visualization by Superkül.

Even though all the other mechanical systems in this building are electric, a diesel tank or gas line is required for the emergency generator.

2.4 Emergency Generators in Low-rise Buildings

The availability of sufficient water pressure for sprinkler systems in low-rise buildings can be challenging. Where the pressure of the municipal water supply from the street is insufficient, a fire pump is necessary. The code also requires fire pumps to be provided with an emergency power supply from a generator that is capable of operating under a full load for a minimum duration of 2 hours.

The OBC previously distinguished the runtime of emergency generators based on building height, allowing 30 minutes in low-rise buildings and only requiring 2 hours for high-rise buildings. This distinction was removed in 2024 to harmonize with the NBC provision for 2 hours, although both codes allow a shorter emergency power supply duration of 30 minutes or 1 hour for lighting and fire alarm systems.

Refer to the 2012 OBC, Sentence 3.2.7.9.(4). for the previous duration provisions.

A 2-hour generator runtime does not change the need for a fire pump, but it enlarges the fuel storage burden. This is manageable for high-rise buildings but is disproportionate for low-rise housing. Small apartment buildings have tight constraints on service room area, mechanical exhaust routing, acoustic separations, exterior access, and coordination with utilities.

The NFPA 20 “Standard for the Installation of Stationary Pumps for Fire Protection” also does not require an emergency generator for buildings that are serviced by reliable underground electrical infrastructure where the probability of a building fire and electrical grid outage occuring simultaneously is very low.

NFPA — National Fire Protection Association

Code Reference: 3.2.7.9. Emergency Power Supply for Building Services

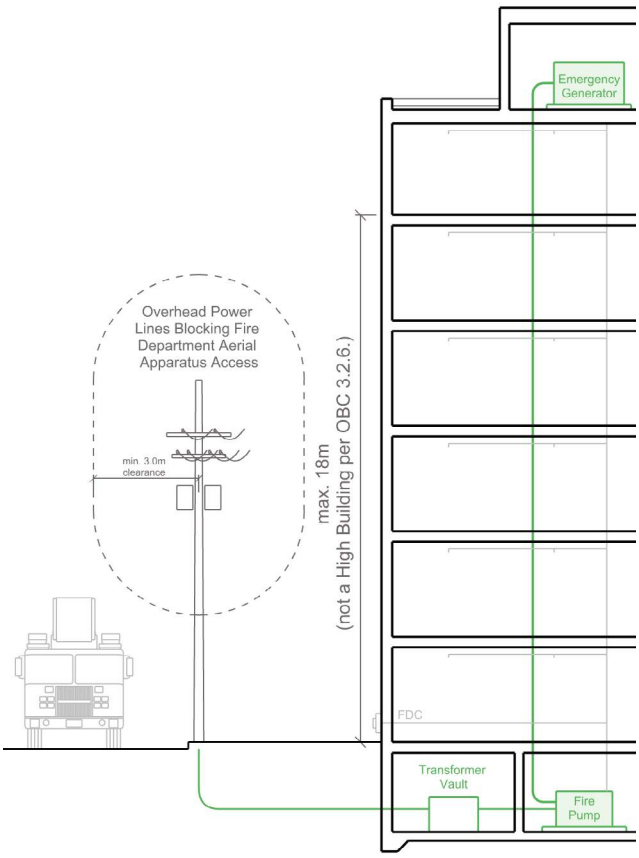
Recommendation A: Reduce the minimum operating duration of the emergency power supply for building services to the same runtime as required for emergency lighting and fire alarm systems.

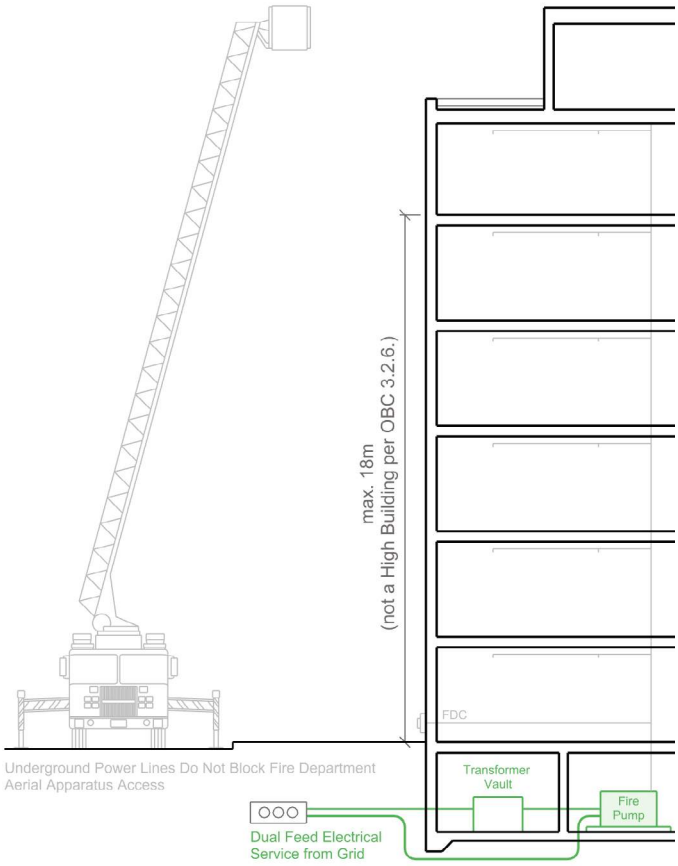
Recommendation B: Delete the requirement for an emergency generator in buildings where a reliable underground electrical power supply is available. This does not relax the requirement for a fire pump, it only removes the cost of the emergency generator.

Cost Impact: The supply and install cost of a listed emergency generator (including the cost of the equipment, enclosure and related vibration and ventilation requirements) is roughly $300,000. This does not include the annual operating and maintenance cost of the natural gas line or diesel tanks, especially if the other mechanical systems in the building are all-electric. Burying overhead electrical conductors infront of a building is estimated to cost roughly half as much, resulting in $150,000 in upfront cost savings.

$300,000 is based on a recent cost estimate for a six-storey apartment building in Toronto.

2.4 Emergency Generators in Low-rise Buildings





Emergency Generator Required for Fire Pump
Where a fire pump is required in a low-rise building, the OBC requires a 2-hour emergency generator.

Recommendation A: Reduce the minimum operating duration of the emergency generator to 30 minutes or 1 hour (consistent with the duration required for emergency lighting and fire alarm systems) in low-rise buildings not more than 18 metres in height.

Reliable Underground Electrical Service as Alternative
NFPA 20 describes a reliable power source for fire pumps as not being supplied by overhead conductors and not routinely experiencing power outages.

Recommendation B: Delete the requirement for an emergency generator in low-rise buildings not more than 18 metres in height if a reliable underground electrical service is provided that meets the characteristics described in Annex A-9.3.1.(1) of NFPA 20.

2.4 Emergency Generators in Low-rise Buildings

Part 3 Fire Protection, Occupant Safety and Accessibility
3.2. Building Fire Safety
3.2.7. Lighting and Emergency Power Systems
3.2.7.9. Emergency Power for Building Services

(1) Except as permitted by Sentence (5), an emergency power supply capable of operating under a full load for not less than ~~2 h~~ the duration required by Clause 3.2.7.4.(1)(b) shall be provided by an emergency generator for,

(a) every elevator serving *storeys* above the *first storey* in a *building* that is more than 36 m high measured between *grade* and the floor level of the *top storey* and every elevator for firefighters in conformance with Sentence (2),

(b) equipment that supplies water for fire suppression as required by Articles 3.2.5.7. and 3.2.5.8. and Sentences 3.2.5.12.(1) and (2) and 3.2.5.18.(1), if the supply depends solely on electrical power supplied to the *building*,

(c) fans and other electrical equipment that are installed to maintain the air quality specified in Articles 3.2.6.2. and 3.3.3.6.,

(d) fans required for venting by Article 3.2.6.6., and

(e) fans required by Clause 3.2.8.4.(1)(c) and Article 3.2.8.7. in *buildings* within the scope of Subsection 3.2.6. (See Note A-3.2.7.9.(1))

Clause 3.2.7.4.(1)(b) requires the following relevant minimum operating durations:

(i) 2 h for a *building* within the scope of Subsection 3.2.6.

(iii) 1 h for a *building* within the scope of Article 3.2.2.51. or 3.2.2.60.

(iv) 30 min for a *building* of any other *occupancy*.

... No changes to Sentences (2) and (4) ...

(5) If the *building* is not within the scope of Subsection 3.2.6., an emergency generator need not be provided where the emergency power supply required by Sentence (1) consists of a **reliable** separate electrical service or separately derived source dedicated to the fire pump or fire pumps, where permitted by NFPA 20, "Standard for the Installation of Stationary Pumps for Fire Protection."

Relevant Excerpt from Annex A of NFPA 20 "Standard for the Installation of Stationary Pumps for Fire Protection"

A.9.3.1(1) A **reliable** power source possesses the following characteristics:

(1) The source power plant has not experienced any shut-downs longer than 10 continuous hours in the year prior to plan submittal. NFPA 25 requires special undertakings (i.e., fire watches) when a water-based fire protection system is taken out of service for longer than 10 hours. If the normal source power plant has been intentionally shut down for longer than 10 hours in the past, it is reasonable to require a backup source of power.

(2) Power outages have not routinely been experienced in the area of the protected facility caused by failures in generation or transmission. **This standard does not require that the normal source of power be infallible to deem the power reliable, nor does it intend to require a backup source of power for every installation using an electric-motor-driven fire pump.**

(3) **The normal source of power is not supplied by overhead conductors outside the protected facility**. Fire departments responding to an incident at the protected facility will not operate aerial apparatus near live overhead power lines, without exception. A backup source of power is required in case this scenario occurs and the normal source of power must be shut off. Additionally, many utility providers will remove power to the protected facility by physically cutting the overhead conductors. If the normal source of power is provided by overhead conductors, which will not be identified, the utility provider could mistakenly cut the overhead conductor supplying the fire pump.

(4) Only the disconnect switches and overcurrent protection devices permitted by 9.2.3 are installed in the normal source of power. Power disconnection and activated over-current protection should occur only in the fire pump controller. The requirements of 9.2.2 for the disconnect switch and overcurrent protection essentially require disconnection and overcurrent protection to occur in the fire pump controller. If unanticipated disconnect switches or overcurrent protection devices are installed in the normal source of power that do not meet the requirements of 9.2.2, the normal source of power must be considered not reliable and a backup source of power is necessary.

This recommendation will also benefit from a review of CSA C282 "Emergency electrical power supply for buildings." This technical standard provides fuel supply and load-testing criteria that exceed the OBC and NBC provisions.

Single Stair Pilot Project, Toronto, LGA Architectural Partners for the CMHC Housing Supply Challenge, 2025. Visualization by LGA.

This three-storey apartment building is required by the OBC to have two exits.

An alternative solution was developed for a single exit with sprinklers, upgraded doors, and protected balconies.

2.5 Single Exit

The OBC requires two exit stairs in any apartment building more than two storeys in height. This rule made a lot of sense when it was introduced in North American codes in the early 20th century. However, methods of construction and fire protection have evolved since then and other jurisdictions are more permissive in terms of maximum building height if other safety measures are provided.

Refer to Appendix C for the jurisdictional scan of single exit provisions.

The U.S. model building code (IBC) was updated in the early 2000s to allow a single exit in sprinklered apartment buildings up to three storeys with a maximum of four homes per floor. The "NFPA 101 Life Safety Code" also permits four storeys with a maximum of four homes per floor. New York City and the City of Seattle allow up to six storeys and several other U.S. cities have recently adopted similar permissions.

The NFPA 101 Life Safety Code is published by the U.S.-based National Fire Protection Association.

A single exit layout increases the efficiency of small-scale housing by 5% to 15% and unlocks enough space to add another bedroom on each floor of the building. It also improves the feasibility of small apartment buildings with elevators, sprinklers, and fire alarm systems where stacked townhouses would otherwise be built, thereby increasing the barrier-free accessibility and safety of new housing.

"Alternative Solutions Guide for Point Access Blocks," City of Edmonton, March, 2025.

British Columbia changed its code to allow six storeys in 2024 and Vancouver changed its code in January 2026 (with modified provisions for exterior stairs). Toronto and Edmonton have also published reports to support alternative solutions compliance, and several pilot projects have since been approved in both cities.

"Single Stair Alternative Solutions," LGA Architectural Partners, 2025. www.singlestair.ca

Code Reference: 3.4.2.1. Minimum Number of Exits
9.9.8.2. Number of Required Exits

Recommendation A: Change Part 3 of the OBC to allow a single exit stair in four-storey buildings, serving not more than four dwelling units per storey.

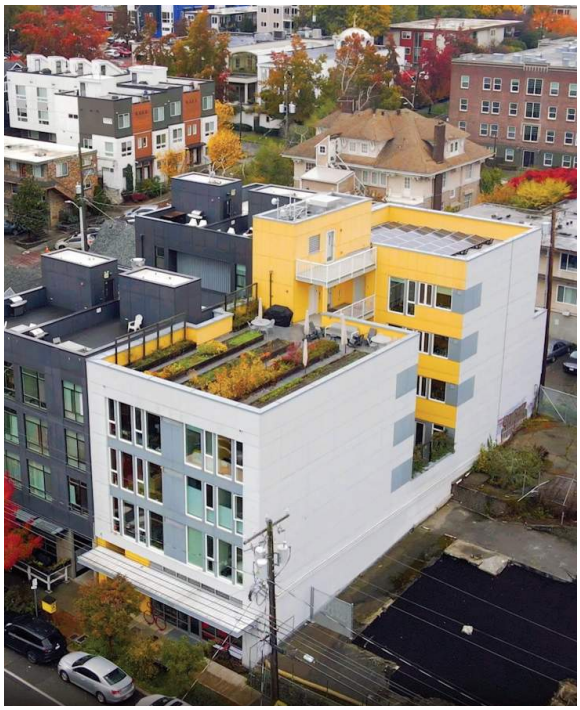
Recommendation B: Change Part 9 of the OBC to allow a single exit stair in three-storey buildings, serving not more than four dwelling units per storey.

Cost Impact: For a four-storey apartment building, this could unlock between 12m^2 and 24m^2 of area per storey (total of 48m^2) to add four more bedrooms and increase the annualized net operating income of the building by $14,400. It also increases the ability to deliver new housing on small and constrained lots without requiring land assembly of multiple adjacent properties.

This net operating income calculation assumes a monthly rent of $3 per sq. ft. and 25% operating expenses.

2.5 Single Exit

There are many three- to six-storey buildings in the United States with a single exit stair.



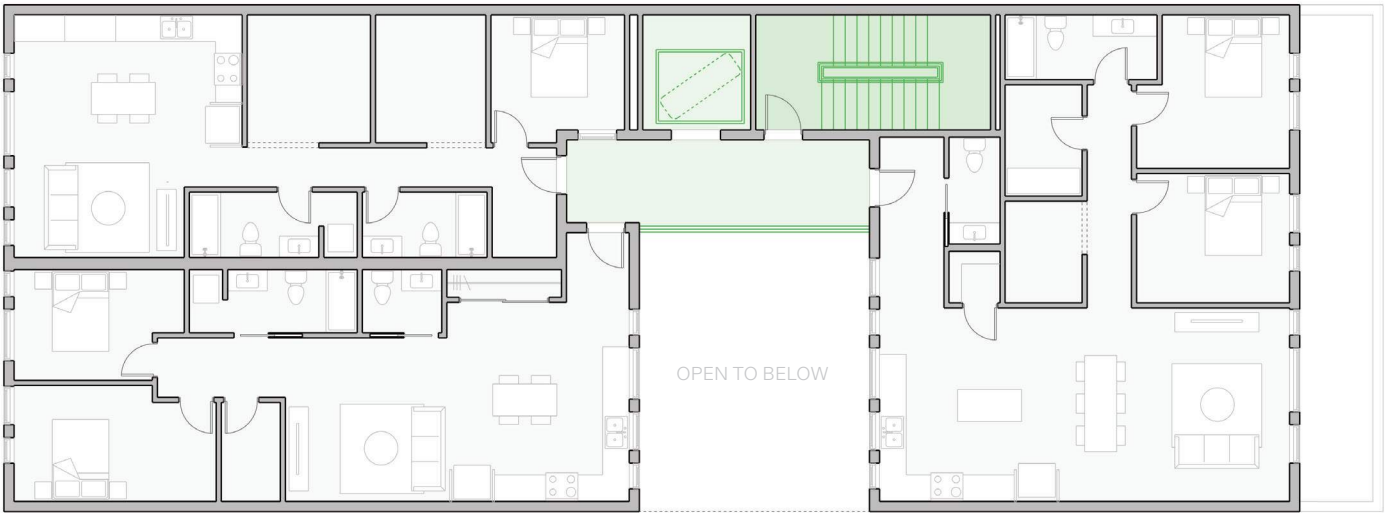
Project:
Capitol Hill Urban Cohousing

Architect:
Schemata Workshop

Year Built:
2016

Location:
Seattle, Washington, USA

This co-housing development has a total of nine dwelling units and an office space on the ground floor. The five-storey building is sprinklered and the stairway is pressurized.



Plan by Schemata Workshop (redrawn). Photo by Uytae Lee.

2.5 Single Exit

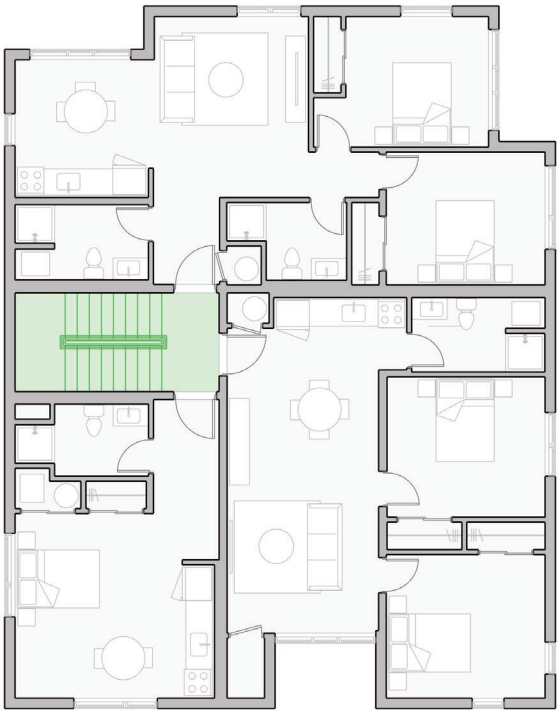
Project:
Jackson Hole Workforce Housing

Architect:
Merge Architects

Year Built:
2023

Location:
Jackson, Wyoming, USA

This three-storey building has three units per floor that open directly into the exit stair. The building is sprinklered and the suite entry doors have a 45-minute fire rating.



Plan by Merge Architects (redrawn). Photo by Krafty Photos.

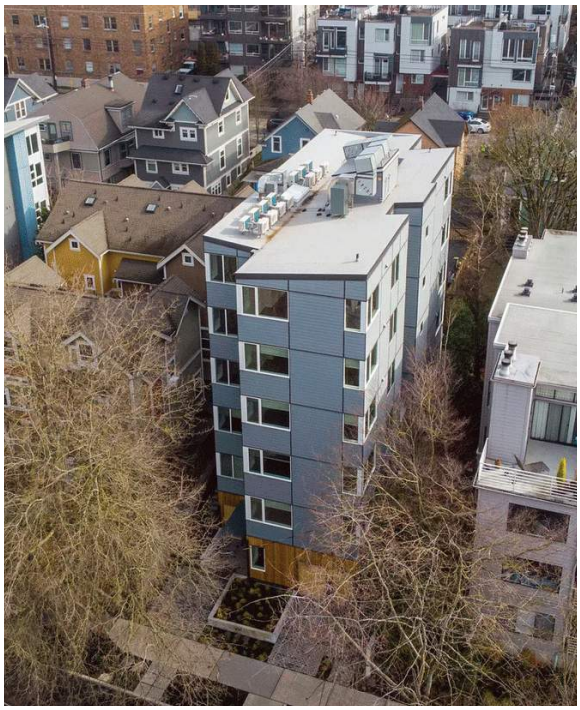
2.5 Single Exit

Project:
Capitol View Community

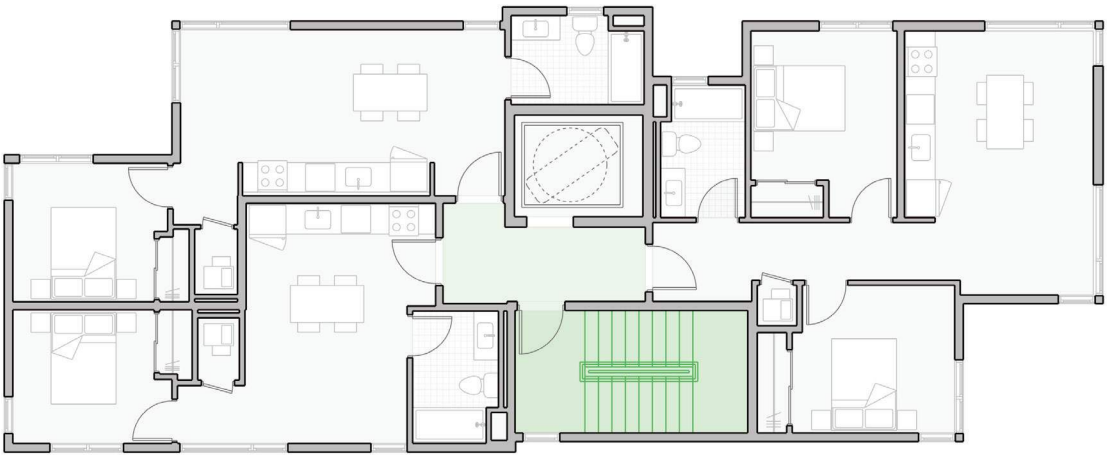
Architect:
JW Architects

Year Built:
2023

Location:
Seattle, Washington, USA



This 13-unit affordable housing project sits on a 40-foot-wide typical residential lot. The six-storey building is sprinklered and the stairway is pressurized.



Plan by JW Architects (redrawn). Photo Courtesy of Habitat for Humanity Seattle.

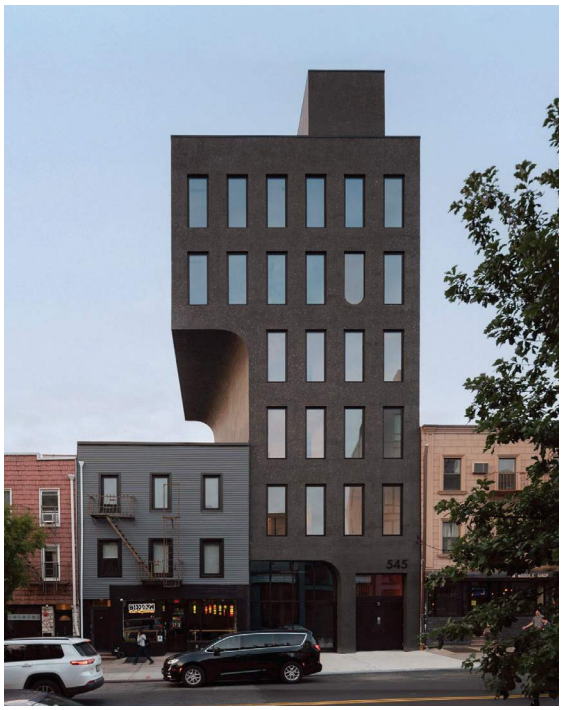
2.5 Single Exit

Project:
Metropolitan Avenue

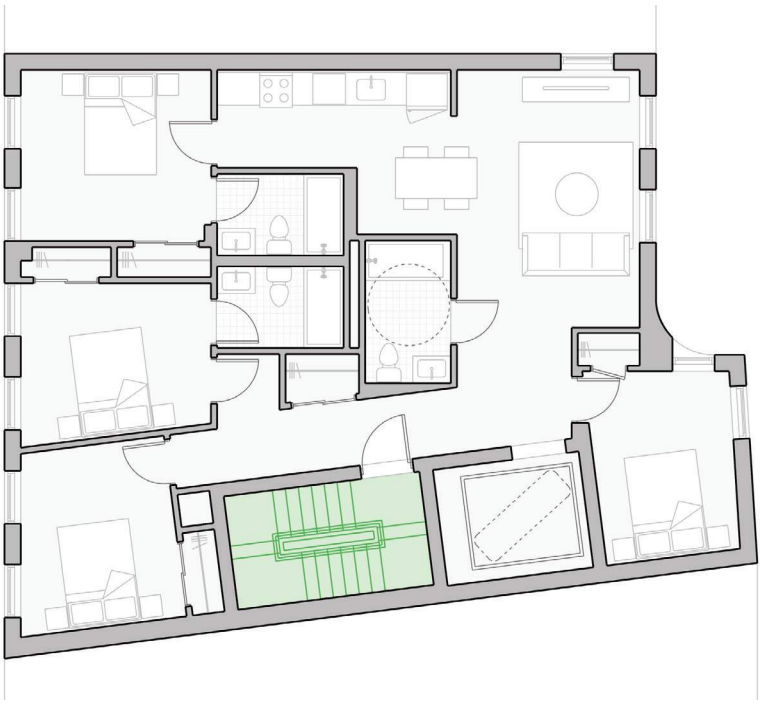
Architect:
commoncraft

Year Built:
2025

Location:
New York City, New York, USA



This six-storey apartment building has one large dwelling unit on each of the upper storeys. The units open directly into the stair and the building is sprinklered.

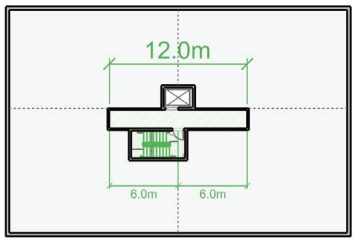


Plan by commoncraft (redrawn). Photo by Andrew Fu.

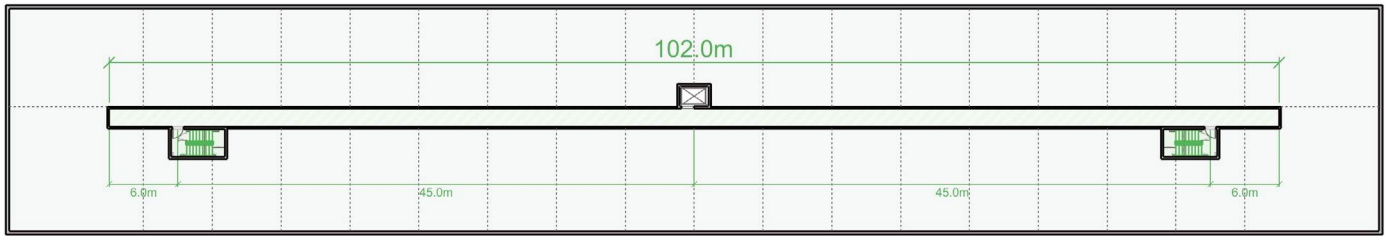
2.5 Single Exit

Summary of the Recommended Requirements for Single Exit Stair (SES) Residential Buildings up to Three or Four Storeys

- not more than four dwelling units per storey (consistent with dead-end corridor limits per OBC Table 9.9.7.3. and the U.S. model codes)
- not more than 600m^2 of floor area served by the single exit per storey, consistent with the established code threshold for “small buildings”
- the building is required to be sprinklered regardless of the building height and the sprinklers must be monitored by a fire alarm system
- the self-closing suite entry doors must be installed as smoke doors and be upgraded from a fire-protection rating of 20 minutes to 45 minutes
- these buildings are not permitted to be located in rural or suburban areas where the fire department response time exceeds 10 minutes
- if the building is more than three storeys in height, dwelling units are not permitted to open directly into the exit
- if the building is two or three storeys in height, dwelling units can open directly into the exit if each dwelling unit has a balcony that meets the conditions of OBC 3.3.1.7.(4)



Single Exit Stair Recommendation
maximum travel distance of 6m to the exit where a corridor is provided and 25m from any part of the floor area.



Maximum Two Exit Stair Design per OBC
maximum travel distance of 45m to one of the exits and 6m for dead-end conditions. No limit on travel distance in dwelling units.

2.5 Single Exit

Case Study: CMHC Housing Design Catalogue — Ontario Sixplex

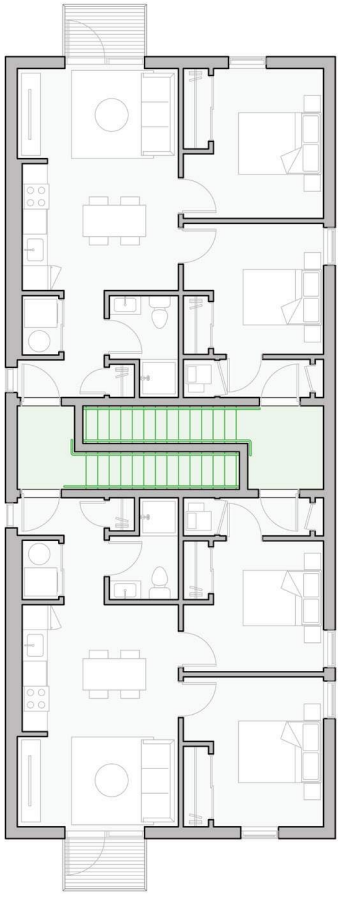
These drawings compare the typical floor plan of a three-storey building with two dwelling units per storey and a single stair design within the same footprint.

On the left is the original floor plan with scissor stairs, as permitted by the code. A corridor between the exit stair and each suite is not required (OBC 9.9.9.3). The building is not sprinklered and does not require a fire alarm system.

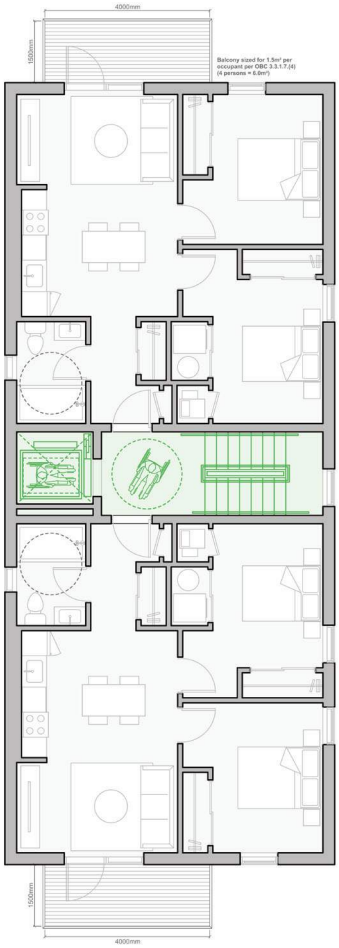
On the right is a single stair floor plan with an elevator. Enough space is unlocked to provide barrier-free access. The building has sprinklers monitored by the fire alarm system. Each unit has a balcony that meets the dimensional criteria of OBC 3.3.1.7.(4). The stair also has a mid-landing, reducing the risk of injury due to trips and falls.

Ontario Sixplex, LGA Architectural Partners, CMHC Housing Design Catalogue, 2025.
Visualization by Office In Search Of.

Available at:
housingcatalogue.cmhc-schl.gc.ca



Scissor Stairs
No sprinklers
No fire alarm system
Elevator is not feasible



Single Exit Stair
Sprinklers provided
Fire alarm system provided
Elevator is feasible

2.5 Single Exit

Part 3 Fire Protection, Occupant Safety and Accessibility
3.4. Exits
3.4.2. Number and Location of Exits from Floor Areas

3.4.2.7. Single Exit Stair Residential Buildings

(1) *Dwelling units* in an apartment *building* are permitted to be served by a single *exit* if the *building* is not more than four *storeys* in *building height* and the *exit* serves
(a) an *occupant load* of not more than 30 persons per *storey*,
(b) not more than four *dwelling units* per *storey*,
(c) not more than 600m^2 of *floor area* per *storey*, and
(d) the *travel distance* from any part of the *floor area* to the *exit* is not more than 25 m.

(2) This Article does not apply to *buildings* where the time from receipt of notification of a fire by the fire department until the arrival of the first fire department vehicle at the *building* exceeds 10 min in 10% or more of all fire department calls to the *building*.

(3) A *building* to which this Article applies shall be *sprinklered*.

(4) All *suite* entry doors served by the *exit* described in Sentence (1) shall have a *fire-protection rating* of not less than 45 min and be protected with leakage-rated door assemblies installed in accordance with NFPA 105, "Standard for Smoke Door Assemblies and Other Opening Protectives."

OBC 3.1.8.12. permits 20-minute closures for suite entry doors.

(5) In *buildings* not more than three *storeys* in *building height*, *dwelling units* are permitted to open directly into the *exit* described in Sentence (1) where each *suite* is provided with a balcony that meets the requirements of Article 3.3.1.7.(4).

OBC 3.3.1.7.(4) requires a balcony not less than 1.5m deep having an area of not less than 0.5m^2 per occupant.

(6) The exterior discharge from the *exit* described in Sentence (1) shall be located not less than 3 m and not more than 15 m from the closest portion of the access route required for fire department use.

(7) The *exit* described in Sentence (1) is permitted to lead through a lobby designed and constructed in accordance with Article 3.4.4.2, except that
(a) the *fire-resistance rating* of the *fire separation* between the lobby and any adjacent rooms or premises is not permitted to be less than that required for the *exit*, and
(b) the exception for *sprinklered occupancies* under 3.4.4.2.(2)(e)(iii) does not apply.

(8) Where a roof, podium, terrace, platform, or contained open space intended for *occupancy* is served by the *exit* described in Sentence (1), the *occupant load* of the open space shall not exceed 30 persons.

OBC 3.3.1.3.(4) permits an occupant load of 60 persons on a roof served by a single means of egress.

2.5 Single Exit

Part 9 Housing and Small Buildings
9.9. Means of Egress
9.9.8. Exits from Floor Areas

9.9.8.7. Single Exit Stair Residential Buildings

(1) *Dwelling units* in an apartment *building* are permitted to be served by a single *exit* if the *exit* serves
(a) an *occupant load* of not more than 30 persons per *storey*,
(b) not more than four *dwelling units* per *storey*, and
(c) the *travel distance* from any part of the *floor area* to the *exit* is not more than 25 m.

(2) This Article does not apply to *buildings* where the time from receipt of notification of a fire by the fire department until the arrival of the first fire department vehicle at the *building* exceeds 10 min in 10% or more of all fire department calls to the *building*.

(3) A *building* to which this Article applies shall be *sprinklered*.

(4) All *suite* entry doors served by the *exit* described in Sentence (1) shall have a *fire-protection rating* of not less than 45 min and be protected with leakage-rated door assemblies installed in accordance with NFPA 105, "Standard for Smoke Door Assemblies and Other Opening Protectives."

OBC 9.10.13.1. permits 20-minute closures for suite entry doors.

(5) *Dwelling units* are permitted to open directly into the *exit* described in Sentence (1) where each *suite* is provided with a balcony that meets the requirements of Article 3.3.1.7.(4).

(6) The exterior discharge from the *exit* described in Sentence (1) shall be located not less than 3 m and not more than 15 m from the closest portion of the access route required for fire department use.

OBC 3.3.1.7.(4) requires a balcony not less than 1.5m deep having an area of not less than 0.5m^2 per occupant.

(7) The *exit* described in Sentence (1) is permitted to lead through a lobby designed and constructed in accordance with Article 9.9.8.5, except that
(a) the *fire-resistance rating* of the *fire separation* between the lobby and any adjacent rooms or premises is not permitted to be less than that required for the *exit*, and
(b) the exception for *sprinklered occupancies* under 9.9.8.5.(4) does not apply.

(8) Where a roof, podium, terrace, platform, or contained open space intended for *occupancy* is served by the *exit* described in Sentence (1), the *occupant load* of the open space shall not exceed 30 persons.

OBC 9.9.7.1.(2) permits an occupant load of 60 persons on a roof served by a single means of egress.

Reference Literature

1. Gates, B. & Sandori, P. (1984). "Fire Safety and the Design of Apartments." Canada Mortgage and Housing Corporation.
2. Speckert, C. (2022). "Jurisdictions: Maximum Permitted Height for Single Stair Buildings [Infographic]." McGill University.
3. Public Architecture. (March 2023). "Single Stair Residential Buildings." BC Housing Research Centre.
4. LMDG Building Code Consultants. (June 2024). "Single Exit Stair: Ontario Building Code Feasibility Study."
5. Jensen Hughes Canada. (June 2024). "Single Egress Stair Building Designs: Policy and Technical Options Report."
6. British Columbia Building Code. (August 2024). "BCBC Revision 3 (PDF)."
7. Jursnick, S. (December 2024). "The Seattle Special: A US City's Unique Approach to Small Infill Lots."
8. City of Edmonton. (March 2025). "Alternative Solutions Guide for Point Access Blocks."
9. Pew Trust. (February 2025). "Small Single-Stairway Apartment Buildings Have Strong Safety Record."
10. GHL Consultants. (March 2025). "Single Exit Stair Building Design Supporting Documentation and Recommendations."
11. City of Vancouver. (November 2025). "Potential to Update the Vancouver Building By-Law to Enable Single Egress Stairs."
12. State of Minnesota. (December 2025). "Minnesota Single-Exit Stairway Apartment Building Study."

656 Annette, Toronto, Bernard Watt Architect, 2025.
Photo by Lachlan Holmes.

This four-storey building on a narrow lot in Toronto has “scissor stairs” to meet the OBC requirement for two exits.

2.6 Distance between Exits

The OBC requires a minimum separation distance of nine metres between two required exits from a public corridor. This only applies to Part 3 buildings (not applicable to Part 9). The separation distance is measured as the shortest distance that smoke would have to travel between the exits and is intended to require the exit access doors to be sufficiently remote from each other. The conditions do not differentiate between sprinklered and unsprinklered floor areas.

Effective January 2026, the City of Vancouver updated the Vancouver Building By-Law to reduce the minimum separation distance between exits to 4.5 metres for low-rise residential buildings not more than six storeys in height and 600m^2 in area. This change was developed as part of a package of "new space-saving stair designs" in collaboration with Vancouver Fire Rescue Services, industry experts, and building officials. The change also reduces the minimum distance between exterior exit discharges to increase the feasibility of apartment buildings on small and constrained lots.

"New Vancouver building rules aim to improve safety and housing supply," City of Vancouver, December 2025.

Code Reference: 3.4.2.3. Distance between Exits

Recommendation A: Allow a reduced minimum separation distance between exits and between exterior discharges from floor areas of residential occupancy in buildings of limited height and area.

This will increase the floor area efficiency of apartment buildings up to six storeys in height. The reduction in distance between exit discharges will also increase design flexibility on narrow lots facing one street.

Cost Impact: For a six-storey apartment building, this could unlock roughly 12m^2 of area per storey (60m^2 total) to increase the annualized net operating income by $18,000. Alternatively, it deletes the need for a fire separation dividing the public corridor on each storey, decreasing the construction cost by roughly $15,000.

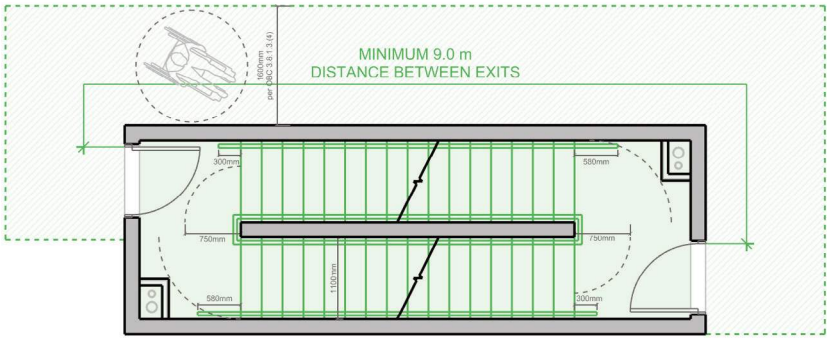
Each self-closing fire-rated door on the five upper storeys costs roughly $3,000 or higher if hold-open devices are provided.

2.6 Distance between Exits

Typical OBC Two Exits Layout

In a small four-storey apartment building, two exits are typically provided as “scissor stairs” with a minimum distance of 9m between the exit access doorways.

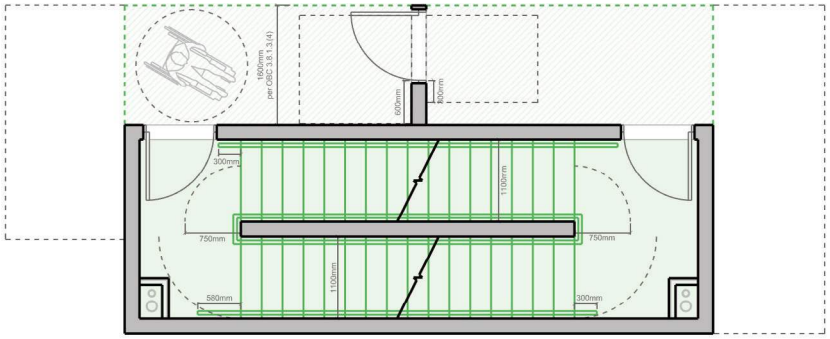
22.2m² scissor stair area
24.6m² public corridor area
46.8m² total circulation area



Minimum OBC Two Exits Layout

The code provides an exception from the minimum distance between exits if the public corridor is divided by a fire door so that smoke cannot easily spread from one side to the other.

22.2m² scissor stair area
12.6m² public corridor area
34.8m² total circulation area



Recommendation 2.6 Layout

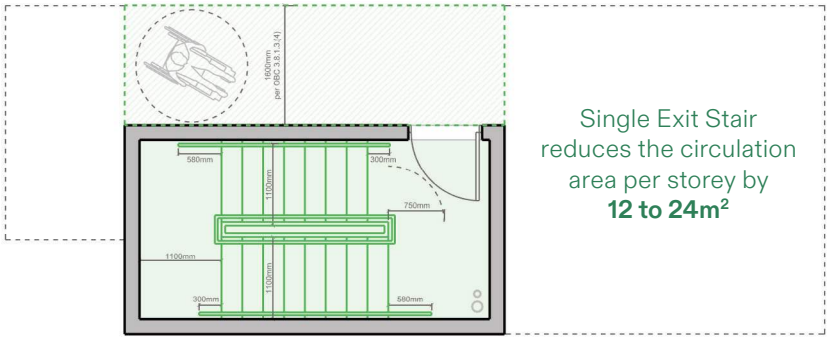
Vancouver does not require a fire separation to divide the public corridor between exit access doorways in residential buildings up to six storeys and 600m² in area.

22.2m² scissor stair area
12.6m² public corridor area
34.8m² total circulation area

Recommendation 2.5 Layout

A single exit stair optimizes the circulation area in very small residential buildings.

14.2m² single exit stair area
8.2m² public corridor area
22.4m² total circulation area



Single Exit Stair reduces the circulation area per storey by **12 to 24m²**

2.6 Distance between Exits

Part 3 Fire Protection, Occupant Safety and Accessibility
3.4. Exits
3.4.2. Number and Location of Exits from Floor Areas
3.4.2.3. Distance Between Exits

(1) Except as provided in Sentence (2) and (5), the least distance between 2 required *exits* from a *floor area* shall be
(a) one-half the maximum diagonal dimension of the *floor area*, but need not be more than 9 m for a *floor area* having a *public corridor*, or
(b) one-half the maximum diagonal dimension of the *floor area*, but not less than 9 m for all other *floor areas*.
(See Note A-3.4.2.3.(1))

(2) *Exits* need not comply with Sentence (1) where
(a) the *floor area* is divided so that not less than one-third of the *floor area* is on each side of a *fire separation*, and
(b) it is necessary to pass through the *fire separation* to travel from one exit to another exit.

(3) The minimum distance between *exits* referred to in Sentence (1) shall be the shortest distance that smoke would have to travel between the *exits*, assuming that the smoke will not penetrate an intervening *fire separation*.

(4) Except as provided in Sentence (5), the distance between 2 exterior discharges leading from two or more *exit* stairs serving the same *floor area* shall be
(a) not less than 9 m, or
(b) not less than 6 m, where
(i) the *building* is *sprinklered* throughout, and
(ii) the 2 exterior discharges are located within 15 m of a street.

(5) The minimum distance between *exits* from a *floor area* of *residential occupancy* and the distance between 2 exterior discharges from *exit* stairs serving the same *floor area* need not exceed 4.5 m where the the *building*
(a) is not more than six *storeys* in *building height*,
(b) has a *building area* not exceeding 600 m², and
(c) is *sprinklered*.

OBC 3.4.4.1.(2) requires scissor stairs to be separated by a smoke-tight fire separation.

Relevant Excerpt from the 2025 Vancouver Building By-Law, Consolidated to February 26, 2026:

A-3.4.2.3.(5) Distance Between Exits for Small Residential Buildings.
The provision to decrease the minimum distance between exits for small residential buildings to 4.5 m is intended to facilitate construction of buildings with space efficient egress using scissor stairs. The 4.5 m distance takes into consideration the geometry of scissor stairs and floor to floor elevation differences in a typical residential building. See also Note A-3.2.10 for fire protection and firefighting assumptions in the development of this code provision. The intent is all existing code provisions for a building with scissor stairs remain unchanged except for the relaxation of distance between exit doors from a floor area, and their discharge points, for small buildings of residential occupancy only.

High Street Apartments, Melbourne, Australia, Gardiner Architects, 2022.
Photo by Rory Gardiner.

This five-storey apartment building in Australia has an elevator opening into the exit.

2.7 Elevator in Exit

The OBC does not permit an elevator to be located within an exit. Elevators typically open into public corridors or directly into floor areas and into a lobby on the ground floor. This means that the elevator hoistway penetrates the fire separations between several fire compartments. Although elevator doors have a fire-protection rating, there is a risk of smoke spreading between floors when movement of the elevator leads to a condition known as the "piston effect," driving changes in air pressure between the hoistway and adjacent areas.

An elevator located entirely within an exit stair enclosure inherently removes the risk of the hoistway contributing to the spread of smoke. However, the code restricts the types of openings that are permitted to penetrate an exit enclosure, even if an elevator is located entirely inside the exit and the elevator doors open only into the exit. The OBC also does not permit wires or cables that do not serve the exit to penetrate the exit enclosure.

J. H. Klote and G. T. Tamura, "Elevator piston effect and the smoke problem," National Research Council of Canada, 1986.

Code Reference: 3.4.4.4. Integrity of Exits
9.9.4.2. Fire Separation for Exits

Recommendation: Allow a passenger elevator in three-storey buildings to open into an exit provided the elevator does not also open into any adjacent public corridor or floor areas.

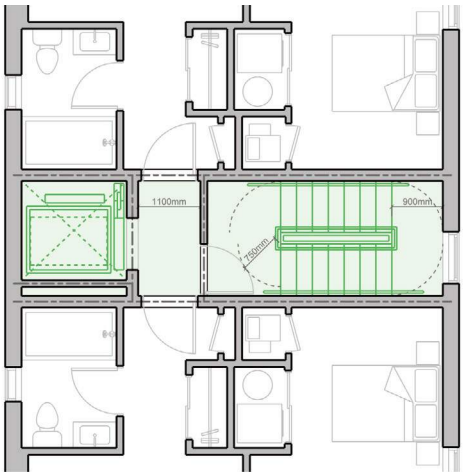
This will make it easier to provide an elevator in three-storey buildings where an elevator is not required and public corridors are not required. It will improve the compartmentation between floor areas by eliminating the risk of the elevator spreading smoke between floors. It also allows for the extended use of the elevator as a means of egress for persons with limited mobility as it continues to operate until smoke is detected in the exit, whereas an elevator opening into a floor area or public corridor will recall when smoke is detected.

Cost Impact: For a three-storey multiplex or small apartment building, this could unlock at least 4m^2 of area per storey (12m^2 total) to increase the annualized net operating income by $3,600.

2.7 Elevator in Exit

Elevator Opens into Corridor

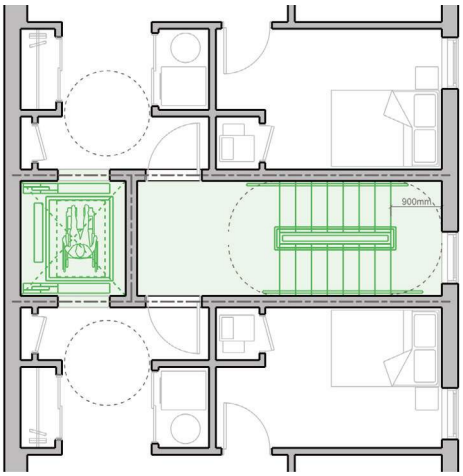
This design complies with the OBC although the elevator penetrates the fire separation between floors and the corridor cannot fit the minimum clear floor area at the elevator landing that is required by various Canadian accessibility standards.



These drawings illustrate options for providing barrier-free access to the "Ontario Sixplex" from the CMHC Housing Design Catalogue and include Recommendation 2.5 for a single exit as well.

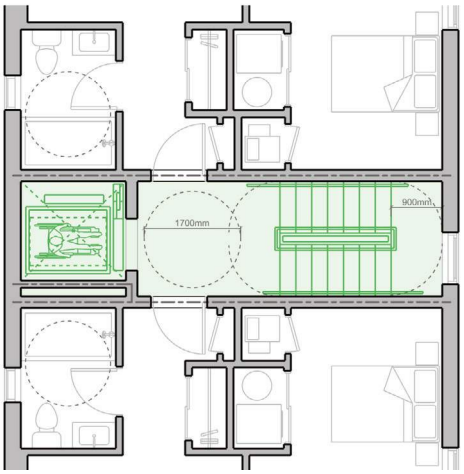
Elevator Opens into Dwelling Units

This design complies with the OBC although the elevator penetrates the fire separation between floors and 4m^2 of usable space is lost in each home because the bathrooms need to be shifted elsewhere.



Elevator Opens Only into Exit

This design does not comply with the OBC even though the elevator does not penetrate the fire separation between floors and is contained entirely within the exit enclosure. The elevator and stair share a larger landing.



2.7 Elevator in Exit

Part 3 Fire Protection, Occupant Safety and Accessibility
3.4. Exits
3.4.2. Fire Separation of Exits
3.4.4.1. Integrity of Exits

(1) A *fire separation* that separates an *exit* from the remainder of the *building* shall have no openings except for
- (a) standpipe and sprinkler piping,
- (b) electrical wires and cables, totally enclosed noncombustible raceways and noncombustible piping that serve only the *exit*,
- (c) openings required by the provisions of Subsection 3.2.6.,
- (d) *exit* doorways,
- (e) wired glass and glass block permitted by Article 3.1.8.16., ~~and~~
- (f) a sprinkler protected glazed wall assembly conforming to Article 3.1.8.20., and
- (g) electrical wires and cables that serve the passenger elevator referred to in Sentence (10).

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

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

(4) A fuel-fired *appliance* shall not be installed in an *exit*.

(5) An *exit* shall not be used as a plenum for a heating, ventilating or *air-conditioning* system.

(6) An *exit* shall be designed for no purpose other than for exiting, except that an *exit* is permitted also to be designed to serve as an access to a *floor area*.

(7) A *service room* shall not open directly into an *exit*.

(8) Storage rooms, washrooms, toilet rooms, laundry rooms and similar ancillary rooms shall not open directly into an *exit*.

(9) *Service spaces* referred to in Sentence 3.2.1.1.(8) shall not open directly into an *exit*.

(10) In *buildings* not more than three *storeys* in *building height*, a passenger elevator is permitted to be located in an *exit*, provided the elevator doors only open into the *exit* and the building is *sprinklered*.

Relevant Defined Terms in the 2024 Ontario Building Code

Service space means space provided in a *building* to facilitate or conceal the installation of *building* service facilities such as chutes, ducts, pipes, shafts or wires.

Vertical service space means a shaft oriented essentially vertically that is provided in a *building* to facilitate the installation of *building* services including mechanical, electrical and plumbing installations and facilities **such as elevators**, refuse chutes and linen chutes.

2.7 Elevator in Exit

Part 9 Housing and Small Buildings
9.9. Means of Egress
9.9.4. Fire Protection of Exits
9.9.4.2. Fire Separation for Exits

(1) Except as provided in Sentence (5) and Article 9.9.8.5., every *exit* other than an *exit* doorway shall be separated from each adjacent *floor area* or from another *exit* by a *fire separation* having a *fire-resistance rating* not less than that required for the floor assembly above the *floor area*.

(2) Where there is no floor assembly above, the *fire-resistance rating* required in Sentence (1) shall not be less than that required by Subsection 9.10.8. for the floor assembly below, but in no case shall the *fire-resistance rating* be less than 45 min.

(3) A *fire separation* common to 2 *exits* shall be smoke-tight and not be pierced by doorways, duct work, piping or any other opening that may affect the continuity of the separation.

(4) A *fire separation* that separates an *exit* from the remainder of the building shall have no openings except those for electrical wiring, *noncombustible* conduit and *noncombustible* piping that serve only the *exit* or the passenger elevator referred to in Sentence (6), and for standpipes, sprinkler piping, *exit* doorways and wired glass and glass block permitted in Article 9.9.4.3.

(5) The requirements in Sentence (1) do not apply to an exterior *exit* passageway provided the passageway has at least 50% of its exterior sides open to the outdoors and is served by an *exit* stair at each end of the passageway.

(6) A passenger elevator is permitted to be located in an *exit*, provided the elevator doors only open into the *exit* and the *building* is *sprinklered*.

Delaware "Missing Middle" Development, Toronto, Office Ou, expected completion 2027.
Visualization by Office Ou.

This three-storey multiplex has a very slow elevator.

2.8 Elevator Size and Speed

The OBC requires elevators to be able to accommodate an ambulance stretcher in the prone position, with an exception for LU/LA lifts. These are smaller and more affordable than commercial elevators but very slow, travelling roughly 30 feet per minute (0.15m/s). Commercial elevators move at 200 feet per minute (1.0m/s).

LU/LA — limited use, limited application

The North American technical standard for elevators limits the use of LU/LA lifts to a maximum vertical travel distance of 25 feet (7.6m). However, the Ontario Technical Standards and Safety Authority exempts this province from that limitation. Only the manufacturer constraints apply and several companies offer LU/LA lifts that can travel up to 50 feet (15.2m) vertically, reaching up to five or six storeys in height.

ASME A17.1 - 2019 / CSA B44 : 19 Safety code for elevators and escalators. Published by CSA Group

The OBC requires barrier-free access to the upper floors in residential buildings more than three storeys in height. This means that four-storey buildings require a large stretcher-sized elevator or a very slow LU/LA lift. Other jurisdictions allow elevators that fit a wheelchair in low-rise buildings and require them to be stretcher-sized only in taller buildings. For instance, Australia allows small elevators up to a vertical travel distance of 12 metres and New York City allows small elevators up to four storeys.

12m measured to the floor level is equal to four or five storeys depending on ceiling heights.

The high cost of elevators is one of the reasons why builders avoid them by constructing stacked townhouses. Allowing elevators that comfortably fit a wheelchair and are much faster than LU/LA lifts will make it easier to build barrier-free housing, which also unlocks the ability for smaller developments to qualify for CMHC mortgage loan insurance and other financing programs.

Stacked townhouses are a layout where each unit has a separate entrance and internal staircases.

Code Reference: 3.5.4.1. Elevator Car Dimensions

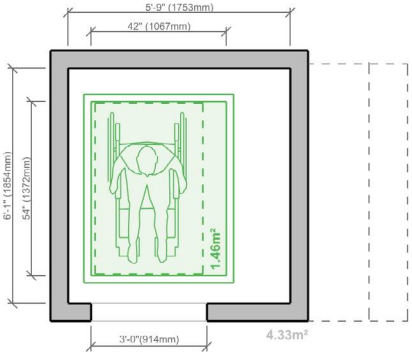
Recommendation: Allow passenger elevators that fit a wheelchair in lieu of stretcher-sized elevators in small apartment buildings not more than four storeys in height and 600m^2 in area.

This will unlock the use of elevators that are small but fast in low-rise apartment buildings where a LU/LA lift is already permitted. The hoistway dimensions are reduced compared to a stretcher-sized elevator, making it easier to align with an adjacent exit stair. This also simplifies the grid layouts for modular and panelized construction.

Refer to Appendix E of ASME A17.1 / CSA B44 for minimum dimensions to fit a wheelchair.

Cost Impact: For a four-storey building, this could unlock 0.6m^2 of area per storey (2.4m^2 total) to increase the annualized net operating income by $720. The main benefit is unlocking the use of a small elevator that is much faster than a LU/LA lift.

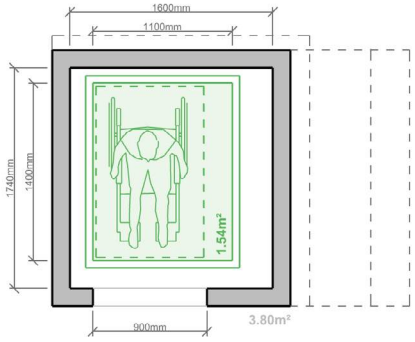
2.8 Elevator Size and Speed



Canadian LU/LA Lift

permitted by OBC/TSSA and exempt from the 7.6m maximum vertical travel distance in ASME 17.1 / CSA B44.

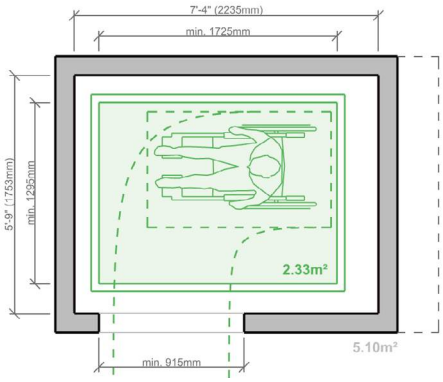
Size	**1067mm x 1372mm**
Speed	**0.15m/s**
Load	635 kg (1400 lb.)
Cost	+/- $150,000



European Barrier-Free Elevator

permitted in Europe, United Kingdom and Australia for low-rise apartment buildings of 4 to 6 storeys in height.

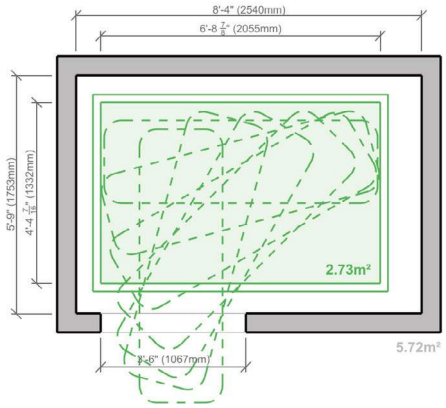
Size	**1100mm x 1400mm**
Speed	**1.0m/s**
Load	630 kg (1389 lb.)
Cost	Unknown (not available in Canada)



Canadian Barrier-Free Elevator

meets minimum dimensions required by Appendix E of ASME 17.1 / CSA B44

Size	**1725mm x 1295mm**
Speed	**1.0m/s**
Load	907 kg (2000 lb.)
Cost	+/- $220,000



Canadian Stretcher-Size Elevator

as required by the OBC to allow for a patient stretcher in the prone position

Size	**2050mm x 1332mm**
Speed	**1.0m/s**
Load	1133 kg (2500 lb.)
Cost	+/- $250,000

2.8 Elevator Size and Speed

Part 3 Fire Protection, Occupant Safety and Accessibility
3.5. Vertical Transportation
3.5.4. Dimensions and Signs
3.5.4.1. Elevator Car Dimensions

(1) Except as provided in Sentence (2) and (4), if an elevator is installed to conform to the requirements of Article 3.3.1.7., or if one or more elevators are provided in a *building* more than three *storeys* in *building height*, each *storey* having elevator service shall be served by at least one elevator that has inside dimensions that will accommodate and provide adequate access for a patient stretcher 2 010 mm long and 610 mm wide in the prone position. (See Note A-3.5.4.1.(1))

(2) The inside dimensions stipulated in Sentence (1) do not apply to limited-use/limited-application elevators designed and installed in accordance with ASME A17.1/CSA B44, "Safety Code for Elevators and Escalators."

(3) An elevator satisfying the requirements of Sentence (1) shall be clearly identified on the main entrance level of the *building*.

(4) An elevator is permitted to have dimensions that are less than the dimensions in Sentence (1) but not less than the dimensions required in Appendix E of ASME A17.1/CSAB44, "Safety Code for Elevators and Escalators," provided the elevator serves *floor areas* of *residential major occupancy* in a *building* not more than 4 *storeys* in *building height* and not more than 600 m^2 in *building area*.

OBC 3.5.2.2. requires conformity with Appendix E of the CSA B44 technical standard, which establishes minimum acceptable elevator car dimensions for persons with physical disabilities.

3.5.2.2. Barrier-Free Design

(1) Passenger elevators shall conform to Appendix E of ASME A17.1 / CSA B44, "Safety Code for Elevators and Escalators."

OBC 3.8.2.1.(2)(b) exempts small apartment buildings not more than three storeys in building height and 600m^2 in building area from requiring a barrier-free path of travel to the upper storeys.

3.8.2.1. Areas Requiring Barrier-Free Path of Travel

(2) A barrier-free path of travel described in Clause (1)(b) is not required to extend
(b) to *floor areas* containing Group C or Group D *occupancies* that are located in a *building* that
(i) is three or fewer *storeys* in *building height*, and
(ii) has a *building area* not exceeding 600 m^2. (See Note A.3.8.2.1.(2)(b))

A-3.8.2.1.(2)(b) Exemptions from Barrier-Free Path of Travel for Small Buildings.
Some small buildings are restricted in building area by lot size, including small infill properties between existing buildings. In those cases, it may not be feasible to require an elevator for the building. This Clause does not exempt areas requiring barrier-free path of travel described in Clause 3.8.2.1.(1)(a) and Sentence 3.8.2.1.(5), from being met.

Ontario TSSA exempts LU/LA Lifts from the maximum rise limitation specified in ASME A17.1/CSA B44. Relevant Excerpt from Ontario Technical Standards & Safety Authority (TSSA) "Elevating Devices Code Adoption Document Amendment" (Reference No" 295 / 22):

3.1 Applied Codes and Standards

"(c) The requirements of ASME A17.1-2019/CSA B44-19 Safety Code for Elevators and Escalators are adopted with the following modifications and clarifications:
(16) Requirement 5.2.1.16.5 - Maximum Rise limitation for LULA elevators is not adopted;"

3 Impact Estimate

The following table estimates the cumulative construction cost, net operating income and value impact of the recommendations across low-rise housing archetypes ranging from three to six storeys in height.

For simplicity, the calculations are based on the change in rentable floor area, multiplied by the number of storeys, to derive the change in the annual net operating income (NOI) of the building. The calculations assume an NOI of $300/m^2 (monthly rent of roughly $3 per sq. ft. minus 25% operating expenses). This is equivalent to a monthly rent of $1,500 for a 500 ft^2 one-bedroom home or $2,250 for a 750 ft^2 two-bedroom home.

Recommendation 2.1 and 2.2 increase the gross construction area of the building such that they result in both an increase in upfront construction cost and increase in annual income. For example, adding a rooftop amenity space of 60m^2 to the Archetype 4 building would cost approximately $225,000. However, it unlocks 60m^2 in rentable floor area on one of the storeys below, increasing the NOI by $18,000 without triggering a change in the OBC classification and permitted construction type. The construction cost of the 60m^2 rooftop amenity space is therefore fully amortized by the additional NOI within 12.5 years.

$225,000 is based on a construction cost estimate of $3750/m^2 ($350/sq. ft.)

Recommendations 2.3 and 2.4 are summarized differently to capture the decrease in construction cost rather than change in rentable floor area. The shortened construction timeline for the wood-frame sidewalls and reduced maintenance costs related to the deletion of the generator have been ignored for simplicity.

Recommendation 2.5 increases the construction cost because of the additional safety measures, however the increase in construction cost is amortized within a few years by the increase in NOI. For example, installing a sprinkler system in the three-storey Archetype 2 building (gross floor area of 900m^2) would cost $54,000. However, the single exit unlocks an additional $10,800 in NOI. The cost of the sprinklers is therefore fully amortized within five years.

$54,000 is based on an estimated cost of $60/m^2 to install sprinklers.

Some of the recommendations are not applicable across all of the archetypes. Recommendation 2.5 and 2.6 are also mutually exclusive.

Ontario Fourplex, LGA Architectural Partners, CMHC Housing Design Catalogue, 2025.
Visualization by Office In Search Of.

These recommendations improve the feasibility of this building by more than $600,000.

3 Impact Estimate

		Archetype 1	Archetype 2	Archetype 3	Archetype 4
	Building Height	3 Storeys (Part 9)	3 Storeys (Part 9)	4 Storeys (Part 3)	6 Storeys (Part 3)
	Building Area (Building Type) *Gross Floor Area*	100m² (multiplex) +/- 300m²	300m² (apartments) +/- 900m²	400m² (apartments) +/- 1600m²	600m² (apartments) +/- 3600m²
2.1	Mezzanines in Dwelling Units	Add 40m² to the uppermost storey = **+$12,000** NOI	Add 120m² to the uppermost storey = **+$36,000** NOI	Not Applicable (limited to 3 storeys)	Not Applicable (limited to 3 storeys)
2.2	Rooftop Enclosures Not a Storey	Ignored because 2.1 adds more area	Ignored because 2.1 adds more area	Add 40m² on roof = **+$12,000** NOI	Add 60m² on roof = **+$18,000** NOI
2.3	Combustible Sidewalls Estimated difference from steel to wood studs of $50/m²	2 walls of 17m x 9m = 306m² Construction cost reduced by **$15,300**	2 walls of 20m x 9m = 360m² Construction cost reduced by **$18,000**	2 walls of 20m x 12m = 480m² Construction cost reduced by **$24,000**	2 walls of 20m x 18m = 720m² Construction cost reduced by **$36,000**
2.4	Emergency Generator in Low-rise Buildings	Not Applicable to Part 9 buildings	Not Applicable to Part 9 buildings	Construction cost reduced by **$150,000**	Construction cost reduced by **$150,000**
2.5	Single Exit	Add 12m² / storey = +36m² total = **+$10,800** NOI	Add 12m² / storey = +36m² total = **+$10,800** NOI	Add 12m² / storey = +48m² total = **+$14,400** NOI	Not Applicable (limited to 4 storeys)
2.6	Distance between Exits Estimate of $3,000 per fire door	Not Applicable to Part 9 buildings	Not Applicable to Part 9 buildings	Ignored because 2.5 adds more area	Construction cost reduced by **$15,000**
2.7	Elevator in Exit	Add 4m² / storey = +12m² total = **+$3,600** NOI	Add 4m² / storey = +12m² total = **+$3,600** NOI	Not Applicable (limited to 3 storeys)	Not Applicable (limited to 3 storeys)
2.8	Elevator Size and Speed	Benefit is speed relative to LU/LA lifts	Benefit is speed relative to LU/LA lifts	Benefit is speed relative to LU/LA lifts	Not Applicable (limited to 4 storeys)
	Total Construction Cost Impact	at least **$15,300** in cost savings	at least **$18,000** in cost savings	at least **$174,000** in cost savings	at least **$201,000** in cost savings
	Total Area and NOI Impact	= +88m² total = +$26,400 NOI	= +168m² total = +$50,400 NOI	= +88m² total = +$26,400 NOI	= +60m² total = +$18,000 NOI
	Cumulative Impact Estimate of the Recommendations	**+$675,300**	**+$1,278,000**	**+$834,000**	**+$651,000**

The calculations assume an annual net operating income (NOI) of $300/m² (monthly rent of $3 per sq. ft. minus 25% operating expenses), which is equal to monthly rents of $1,500 for a 500ft² one-bedroom home or $2,250 for a 750ft² two-bedroom home. The total value impact is the sum of the construction cost savings and the NOI divided by a capitalization rate of 4.

These are simplified and indicative calculations that ignore many additional variables to determining the financial feasibility of new housing supply. Further analysis of each of the recommendations with detailed elemental cost estimates and pro forma modelling is strongly recommended.

Appendix A Current Status of the 1990s OBC Study

This table summarizes which of the 29 proposed changes in the original 1990s OBC Study have since been adopted by the OBC and/or the NBC. Please refer to the original document for more detailed descriptions, rationale, and cost impact statements for each of the proposed changes.

A copy of the original mid-1990s OBC study is accessible online: https://www.codenews.ca/OBC/docs/OntarioMainStreets-A1995.pdf

Each of the proposed changes was discussed as part of the OBC review process in the mid-1990s. Some of the proposed changes were adopted by the OBC but have not been adopted by the NBC. Further archival analysis is required to determine if code change requests were submitted to the national model codes system for each topic. If requests were not submitted to the national model codes system, then the topic has never been considered for adoption by the NBC.

Green text means the proposed change has been adopted by the code.
Grey text means the proposed change has not been adopted by the code.

Description	*Current Status*
1. Unprotected openings close to property line Proposal to allow limiting distance agreements to be used for the purposes of determining spatial separation.	**Adopted by the OBC and in the Appendix to the NBC** The 2024 OBC permits the use of limiting distance agreements between owners of adjacent properties and the municipality for the purposes of determining limiting distance (OBC 3.2.3.1.(11)). This provision was added between the 1993 and 1997 OBC. The 2025 NBC does not have the same provisions, but the following text was added to Appendix Note A-3.2.3 in the 2010 NBC: "The authority having jurisdiction may also address limiting distances through legal agreements with the parties involved that stipulate that the limiting distance be measured to a line that is not the property line. Such agreements would normally be registered with the titles of both properties."
2. Glazed openings Proposal to allow glazed openings near exterior exit stairs that lead away from the building and extend not more than 2m above or 3m below grade.	**Not adopted by the OBC or NBC** The 2024 OBC does not distinguish protection provisions between unenclosed exterior exit stairs that are perpendicular and lead away from the building or run along the building (OBC 3.2.3.13.(2). This provision is unchanged from previous editions of the OBC. The 2025 NBC has the same provision.
3. Inside corner openings Proposal to allow unprotected openings in exterior walls between residential suites if they are separated by a distance of not less than 2m.	**Modified Version adopted by the OBC (requires sprinklers)** The 2024 OBC provides an exception to the distance between unprotected openings in sprinklered buildings (OBC 3.2.3.14.(3)). The 2025 NBC has the same provisions.
4. Protection above windows in E or F2 occupancy Proposal to only require the floor area of the Group E or F2 occupancy to be sprinklered, not the storey above and not the entire building.	**Overridden by Harmonization with the NBC in 2024** The 2024 OBC includes provisions for "Canopy Protection for Vertically Separated Openings" that are only waived if the building is sprinklered throughout (OBC 3.2.3.17.) The 2025 NBC has the same provisions. The proposal was previously adopted between the 1993 and 1997 OBC and remained unchanged in the 2012 OBC to only require sprinklers for the storey of E or F2 occupancy and the storey above, not the entire building.

Appendix A Current Status of the 1990s OBC Study

Description	*Current Status*
5. Multi-level suites — smoke alarm Proposal to require a smoke alarm on each storey of dwelling units.	**Adopted by the OBC and the NBC** The 2024 OBC requires a smoke alarm to be installed on each storey or mezzanine of a dwelling unit and in each sleeping room (OBC 3.2.4.20.). The 2025 NBC has the same provision. This provision was changed between the 1993 and 1997 OBC to require a smoke alarm on each storey and between the 2006 and 2012 OBC to require a smoke alarm in each sleeping room.
6. Low rise emergency generator Proposal to delete the requirement for an emergency generator capable of operating under a full load for not less than 30 minutes in low-rise buildings less than 18m in height. Refer to Recommendation 2.4	**Not adopted by the OBC or NBC** The 2024 OBC requires an emergency power supply provided by a generator capable of operating under a full load for not less than 2 h for equipment that supplies water for fire suppression (OBC 3.2.7.9.(1)(b)). The 2025 NBC has the same provision. In previous editions of the OBC, an exception was provided to allow a 30-min operating duration for generators in low-rise buildings. This provision was changed between the 2012 OBC and the 2024 OBC as part of harmonization with the NBC.
7. Standpipe coverage for suites with exterior access Proposal to not require a standpipe in rowhouse/stacked townhouse configurations where the building area exceeds the applicable limit without standpipes of 1,000m^2 at three storeys.	**Adopted by the OBC** The 2024 OBC does not require a standpipe system in dwelling units cut off from the remainder of the building in buildings that are not more than four storeys above grade (OBC 3.2.5.8.(3)). This provision was changed between the 1993 and 1997 OBC for buildings up to three storeys, and was changed between the 2012 and 2024 OBC to apply to buildings up to four storeys. **Not adopted by the NBC** The 2025 NBC requires a standpipe system in buildings over three storeys in building height or in three-storey buildings that exceed the area limits of NBC Table 3.2.5.8.
8. Hose through exit Proposal to allow hose stations to be located so that an exit can be penetrated by the hose under specific conditions.	**Overridden by Harmonization with the NBC in 2024** This provision was changed between the 1993 and 1997 OBC (OBC 3.2.9.4.(7)). However, Subsection 3.2.9 of the OBC was deleted and the provisions for firefighting were harmonized with the NBC under 3.2.5.8 in the 2024 OBC. Hose connections are to be located in the exits (OBC 3.2.5.10.) and hose stations are not required in sprinklered buildings (OBC 3.2.5.11). The 2024 OBC requires residential buildings of four or more storeys in building height to be sprinklered (except as permitted by OBC 3.2.2.50).
9. Protection on floor areas with a barrier-free path of travel Proposal to adjust the height at which elevator features for the protection of a barrier-free path of travel are applicable, to accommodate multi-level suites with elevator access only on the third floor.	**Overridden by Harmonization with the NBC in 2010 to require sprinklers at four storeys** The 2024 OBC requires elevators in buildings over three storeys in building height to be protected against smoke movement unless the building is sprinklered or each suite is provided with balconies (OBC 3.3.1.7.(1)). The 2025 NBC has the same provision. The 2024 OBC requires residential buildings of four or more storeys in building height to be sprinklered (except as permitted by OBC 3.2.2.50), such that this proposal is overridden by the sprinkler requirement that was introduced in 2010.
10. Dead-end corridors Proposal to increase the permitted length of dead-end corridors in a residential occupancy from 6m to 8m.	**Not adopted by the OBC or NBC** The 2024 OBC permits dead-end corridors in a residential occupancy not more than 6m long (OBC 3.3.1.9.(7)). This provision is unchanged from previous editions of the OBC. The 2025 NBC has the same provision.

Description	*Current Status*
11. Door swing in corridor Proposal to allow doors that divide a corridor to not swing in the direction of exit travel where the occupant load is not more than 60 persons.	**Adopted by the OBC** The 2024 OBC does not require doors that divide a corridor to swing in the direction of travel if the occupant load does not exceed 60 persons (OBC 3.3.1.11.(3)). This provision was changed between the 1993 and 1997 OBC. **Not adopted by the NBC** The 2025 NBC requires doors that divide a corridor to swing in the direction of travel regardless of occupant load.
12. Spiral stairs Proposal to allow spiral stairs as means of egress within suites, with an occupant load of not more than six persons.	**Partially adopted by the OBC and NBC (Occupant Load of 3)** The 2024 OBC permits the use of a spiral stair as the only means of egress where it serves an occupant load of not more than three persons (OBC 9.8.4.7.). The 2025 NBC has the same provision. The 1990 OBC did not permit the use of spiral stairs as the minimum run for curved stairs was 150 mm (3.3.1.15 and 9.8.5.2.). This provision was originally changed in the 2012 OBC to allow the use of spiral stairs (2012 OBC 9.8.4.5A.).
13. Egress and balconies — multi-level suites Proposal to allow three-storey dwelling units to have a single egress door if a balcony is provided and the building is not more than six storeys in height.	**Adopted by the OBC** The 2024 OBC does not require an egress door at the uppermost and lowest storey of a multi-storey dwelling unit where a balcony is provided and the building is not more than six storeys in height (OBC 3.3.4.4.(4)(d)). This provision was changed between the 1993 and 1997 OBC. **Not adopted by the NBC** The 2025 NBC requires an egress door or stairway from the uppermost and lowest storey (NBC 3.3.4.4.(4)).
14. Direct egress Proposal to allow dwelling units to open directly into a single exit stair in three-storey buildings if each dwelling is provided with a balcony and there are no more than two dwellings on each storey. Refer to Recommendation 2.5	**Not adopted by the OBC or NBC** The 2024 OBC requires two means of egress from dwelling units that open directly into an exit stairway in buildings up to three storeys in building height (OBC 3.3.4.4.(5)). This provision is unchanged from previous editions of the OBC. The 2025 NBC has the same provision.
15. Single exit descriptors Proposal to allow single exit buildings up to six storeys with a limited occupant load, area and number of dwelling. It includes conditions as a variable of building height for sprinklers, balconies, and pressurized vestibules or exterior passageways. Refer to Recommendation 2.5	**Not adopted by the OBC or NBC** The 2024 OBC requires two exits in buildings more than two storeys in building height (OBC 3.4.2.1.). This provision is unchanged from previous editions of the OBC. The 2025 NBC has the same provision. **The Vancouver Building By-Law was changed in January 2026 to address this topic and the British Columbia Building Code was changed in August 2024 to address this topic.**
16. Distance between exits Proposal to allow small buildings of not more than 600m^2 in building area to be exempt from the minimum distance between exits of 9m. Refer to Recommendation 2.6	**Not adopted by the OBC or NBC** The 2024 OBC requires a minimum distance of 9m between exits (OBC 3.4.2.3.(1)) for Part 3 buildings. Part 9 buildings are exempt. This provision is unchanged from previous editions of the OBC. An exception for floor areas divided by a fire separation was added in the 2006 OBC. The 2025 NBC has the same provision. **The Vancouver Building By-Law was changed in January 2026 to address this topic.**

Description	*Current Status*
17. Separation of exit path from open-air parking Proposal to allow an exit to discharge through an open-air parking below a roof or floor assembly provided that the exit has an alternate path of travel not leading through the open-air parking.	**Adopted by the OBC** The 2024 OBC permits the path of exit travel to lead through an open air parking where the path of travel is not more than 9m in length, vehicles do not encroach on the path of travel and an alternate means of egress not leading through the open-air parking is provided (OBC 3.4.4.1.(4)). This provision was added between the 1993 and 1997 OBC. This language was not added to Part 9 (9.9.4.2.). **Not adopted by the NBC** The 2025 NBC does not permit the path of exit travel to lead through an open-air parking below a roof or floor (NBC 3.4.4.1.).
18. Lobby egress Proposal to allow dwelling units to open directly onto an exit lobby provided that the lobby is sprinklered or the exit has an alternate path of travel not leading through the lobby.	**Adopted by the OBC** The 2024 OBC permits dwelling units to open directly onto an exit lobby where an alternate means of egress from the exit is provided or the floor area is sprinklered (OBC 3.4.4.2.(2)(c)). This provision was changed between the 1993 and 1997 OBC. This language was not added to Part 9 (OBC 9.9.8.5.). **Not adopted by the NBC** The 2025 NBC does not permit an adjacent room of residential occupancy to have direct access to the exit lobby (OBC 3.4.4.2.).
19. Elevator open to stair Proposal to allow elevators within exits in buildings of up to three and six storeys. Refer to Recommendation 2.7	**Not adopted by the OBC or the NBC** The 2024 OBC and 2025 NBC provide exit integrity requirements under 3.4.4.4 and 9.9.4.2. These have not been changed to specifically address elevators opening into exits.
20. Landing configuration Proposal to clarify that landings are permitted to be chamfered or curved	**Adopted by the OBC** The 2024 OBC clarifies that landings are permitted to be chamfered or curved. An additional clause was added under OBC 3.4.6.3.(6) between the 1993 and 1997 OBC for clarification. **Not specifically addressed by the NBC** The 2025 NBC does not include this language and therefore remains subject to interpretation.
21. Handrail extensions Proposal that handrails need not extend more than 300mm beyond the top and bottom of the stair nosing.	**Not adopted by the OBC** The 2024 OBC requires handrails to extend horizontally 300mm at the top riser and the depth of one tread plus 300mm horizontally beyond the bottom riser (OBC 3.4.6.5.(12)). This provision was changed between the 1993 and 1997 OBC to require the additional depth of one tread beyond the bottom riser, resulting in a total horizontal extension of 580mm beyond the bottom riser. **Not specifically addressed by the NBC** The 2025 NBC does not include this language. However Figure A-78 in the 1995 NBC Illustrated User's Guide shows the depth of one tread plus 300mm horizontally beyond the bottom riser.
22. Steps in horizontal exits Proposal to allow steps to be used in a horizontal exit provided that the change in level does not exceed 2m.	**Not adopted by the OBC or NBC** The 2024 OBC does not permit steps in a horizontal exit (OBC 3.4.6.10.). This provision is unchanged from previous editions of the OBC. The 2025 NBC has the same provision. A requirement for the change in floor level to not exceed 2m was added between the 1993 and 1997 OBC. This provision is in the 2024 OBC, but is not in the 2025 NBC. This indicates that the restrictive element of the proposed change was adopted but the permissive element was not.

Appendix A Current Status of the 1990s OBC Study

Description	*Current Status*
23. Exit door swing Proposal to allow exit doors to not swing in the direction of travel where the occupant load served does not exceed 60 persons.	**Adopted by the OBC** The 2024 OBC allows doors to not swing in the direction of exit travel where the door serves an occupant load of not more than 60 persons (OBC 3.4.6.12.(2). This provision was changed between the 1993 and 1997 OBC. **Not adopted by the NBC** The 2025 NBC requires exit doors to swing in the direction of exit travel regardless of occupant load (NBC 3.4.6.12).
24. Minimum number of risers Proposal to allow less than three risers on interior stairs, provided that the tread depth is increased to 330mm and visual contrasting strips are provided.	**Not adopted by the OBC or NBC** The 2024 OBC requires interior stairs except within a dwelling unit to have at least three risers (OBC 9.8.3.2.). This provision is unchanged from previous editions of the OBC. The 2025 NBC has the same provision.
25. Landing at top of stair Proposal to not require a landing at the top of exterior stairs with no more than six risers serving a single dwelling unit.	**Not adopted by the OBC or NBC** The 2024 OBC requires a landing at the top on an exterior stair with more than three risers (OBC 9.8.6.2.(3)(a)). This provision is unchanged from previous editions of the OBC. The 2025 NBC has the same provision.
26. Winders Proposal to allow 45 degree winders on stairs within dwelling units (previously limited to 30 degrees).	**Adopted by the OBC and the NBC** The 2024 OBC allows winders in dwelling units to turn through an angle of not less than 30 and not more than 45 degrees (OBC 9.8.4.6). This was changed between the 1993 and 1997 OBC. The NBC was changed between the 1995 and 2005 NBC, but requires either 30 or 45 degrees, instead of an acceptable range.
27. Stair configuration in suite Proposal to allow more than one set of winders in stairways within suites.	**Adopted by the OBC and the NBC** The 2024 OBC allows more than one set of winders in dwelling units, separated at least 1,200mm in plan (OBC 9.8.4.6). This provision was changed between the 1993 and 1997 OBC. The NBC was also changed between 1995 and 2005 to allow this without the minimum separation distance of 1,200mm.
28. Exit corridor width Proposal to reduce the width of public corridors in Part 9 buildings from 1,100mm to the same minimum required width as exit stairs (900mm).	**Not adopted by the OBC or NBC** The 2024 OBC requires exit corridors and public corridors in Part 9 buildings to be 1,100mm in width (OBC 9.9.3.3.). This provision is unchanged from previous editions of the OBC. The 2025 NBC requires a minimum width of 1,100mm.
29. Multi-level commercial suite Proposal to allow stairways in three-storey office suites in Part 9 buildings to not be constructed as exits, to facilitate live-work arrangements.	**Adopted by the OBC** The 2024 OBC allows stairways in three-storey Group D or E buildings to not be constructed as exits (OBC 9.9.4.7.). This provision was changed between the 1993 and 1997 OBC. **Not adopted by the NBC** The 2025 NBC does not allow this (NBC 9.9.4.7) as it limits the building height to two storeys, consistent with the 1993 OBC.

Appendix B Jurisdictional Scan of Elevator Sizes

This table briefly summarizes elevator sizes (minimum elevator car dimensions) in Canada and other English-speaking jurisdictions. Most countries other than the United States, Japan, and Canada use the EN81-70 European Standard, which provides five options for elevator car dimensions depending on the building type and use (existing buildings, new buildings, public buildings, etc.).

Jurisdictions that do not require a stretcher-sized elevator in four-storey residential buildings are coloured in green.

EN81-70 Accessibility to lifts for persons including persons with disability

To learn more about elevators in North America: https://centerforbuilding.org/publication/elevators

Jurisdiction	*Height Threshold for Elevator Car Dimensions*	*Technical Standard*
Canada	Elevator required in apartment buildings of 4 or more storeys, or 3 storeys if the building area is more than 600m^2 Stretcher size required for buildings of 4 or more storeys * LU/LA lifts are exempt, subject to vertical travel distance limitations	ASME A17.1 / CSA B44
United States	Stretcher size is required for buildings of 4 or more storeys	
New York City	Stretcher size is required for buildings of 5 or more storeys	
England & Wales	min. 900mm x 1250mm for passenger lifts serving visitable dwellings min. 1100mm x 1400mm for passenger lifts serving accessible dwellings	EN 81-70 (with modifications)
Ireland	min. 1100mm x 1400mm for passenger lifts serving apartment buildings min. 2000mm x 1400mm for passenger lifts serving large public buildings	
Scotland	Elevator required in domestic buildings if 5 or more storeys min. 1100mm x 1400mm for passenger lifts serving domestic buildings	
Australia	min. 1100mm x 1400mm for passenger lifts with max. 12m vertical travel (equal to 4 or 5 storeys depending on ceiling heights) Stretcher-sized lift is required where vertical travel exceeds 12m (equal to 5 or 6 storeys depending on ceiling heights)	
New Zealand	min. 1400mm x 1400mm for lifts serving an accessible route	

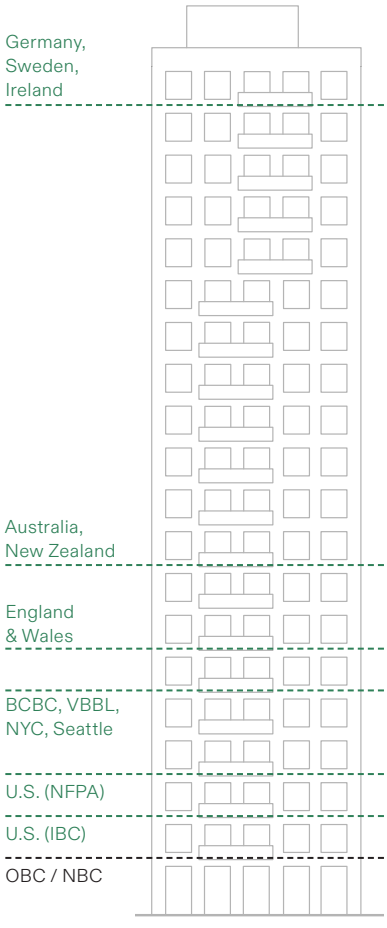
To receive a copy of the source documentation that was used to populate this table, please email: conrad@semibold.ca

Jurisdictional Scan of Single Exit Provisions

This table briefly summarizes single exit stair requirements (maximum building height and other key provisions) in Canada and several other jurisdictions. Most countries allow single exit stair residential buildings with a limited number of dwelling units per storey, occupant load per storey, sprinkler requirements, and other measures.

Jurisdictions that allow three-storey single exit buildings are coloured in green.

Jurisdiction	*Maximum Building Height for Single Exit Apartment Building*
OBC / NBC	**2 storeys** and 100m^2 of unsprinklered or 150m^2 of sprinklered floor area served by the single exit. Not more than 60 persons.
British Columbia (BCBC)	**6 storeys** and 4 dwellings per storey. Not more than 24 persons per storey. Sprinklers required. Smoke control measure required.
City of Vancouver (VBBL)	**6 storeys** and 4 or 6 dwellings per storey. Not more than 24 persons per storey. Sprinklers required. Exterior stair required.
U.S. (IBC)	**3 storeys** and 4 dwellings per storey. Sprinklers required.
U.S. (NFPA)	**4 storeys** and 4 dwellings per storey. Sprinklers required.
New York City	**6 storeys** and 2,000 sq. ft. per storey. Sprinklers required. Noncombustible construction required.
Seattle	**6 storeys** and 4 dwellings per storey. Sprinklers required. Pressurization required if an interior exit stair is provided.
England & Wales	**18 metres** (7 storeys) if sprinklered or 11 metres if unsprinklered, measured to uppermost floor.
Australia	**25 metres** (9 storeys) if sprinklered or 3 storeys if unsprinklered, measured to the uppermost floor.
New Zealand	**25 metres** (9 storeys) if sprinklered or 10 metres if unsprinklered, measured to the uppermost floor.
Ireland	**60 metres** (20 storeys) if sprinklered or 10 metres if unsprinklered. Sprinklers required if more than 15 metres.
Sweden	**20 storeys**. Sprinklers not required in apartment buildings. Updated in 2025 from 16 storeys.
Germany	**60 metres** (20 storeys) where smoke control measures are provided or 22 metres where suites open directly into the exit.



To receive a copy of the source documentation that was used to populate this table, please email: conrad@semibold.ca