City of Burlington

Tall Building Guidelines

BrookMcIlroy/
May 2017

Credit: Brook McIlroy

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Contents

1.0 Introduction & Overview 1

1.1 What is a Tall Building? 2

1.2 Where are the Tall Buildings Guidelines Applicable? 2

1.3 How to Use the Guidelines 2

2.0 Building Base (Podium) 3

2.1 Podium Location 4

2.2 Podium Height and Massing 5

2.3 Shadows/Sky Views 5

2.4 Podium Design and Articulation 6

2.5 Site Design, Open Space and Streetscaping 7

3.0 Building Middle (Tower) 9

3.1 Tower Location 10

3.2 Tower Height and Massing 11

3.3 Shadow/Sky Views 12

3.4 Tower Design and Articulation 13

4.0 Building Top 15

4.1 Rooftop Design and Articulation 16

4.2 Mechanical Penthouse 17

i. Glossary of Terms 19

Credit: Timur Saglambilek (Pexels.com)

1.0 Introduction & Overview

For the purposes of these guidelines, tall buildings are defined as any building over 11-storeys. The guidelines are applicable across the City wherever tall buildings are permitted. The guidelines represent best practices, and where the *intent* of the guidelines can be met, alternative solutions should be permitted and encouraged. Tall Building Guidelines will ensure new tall buildings promote design excellence, support vibrant streets, and provide a positive addition to the City's skyline.

Credit: PIVISO (Flickr)

1.1 What is a Tall Building?

For the purpose of these guidelines, tall buildings are defined as any building over 11-storeys. When carefully designed and located, tall buildings become a distinct and defining component of a city's character, forging a memorable skyline and establishing city-wide landmarks. As part of a broader growth framework and intensification strategy, tall buildings support healthy and sustainable cities by providing a critical mass of people in close proximity to jobs, transit and living spaces.

Sustainable design should be at the forefront of all tall building development. The City's Sustainable Building and Development Guidelines should be referred to for more detailed and specific guidance on sustainable design measures.

1.2 Where are the Tall Buildings Guidelines Applicable?

The Tall Building Guidelines are applicable across the City, wherever tall buildings are permitted by the Official Plan and Zoning By-law. Within these areas, the suitability of a property to accommodate tall buildings, should be considered on a site-by-site basis, to ensure the *intent* of these guidelines can be met. Sites that are too small to permit the setbacks outlined in these guidelines, or transitions to adjacent uses, may not be appropriate for tall buildings as permitting towers on 'small sites' creates shadowing and privacy concerns, and limits the development potential of adjacent properties.

1.3 How to Use the Guidelines

The Tall Building Guidelines provide guidance for developers and architects designing tall buildings in the City of Burlington, and will be used by City staff as one tool in evaluating development applications and mobility hub planning. Other tools include but are not limited to: the Strategic Plan, Official Plan, and Zoning By-law. The objective of the guideline is to provide best practices related to building height, massing, transitions, sun / shadowing, and building articulation to promote and encourage high-quality tall building proposals.

The guidelines are broken down by the components of a tall building as follows:

- Building Base (Podium);
- Building Middle (Tower); and,
- Building Top.

Together, these sections address all aspects of the building, and should be referenced in their entirety in the design and review of all projects. The guidelines set expectations for high quality design outcomes but do not anticipate every development scenario. **It is not the intention of the guidelines to limit creativity. Where it can be demonstrated that an alternative built form achieves the intent of the guidelines, alternative solutions should be permitted and encouraged.** Where additional advice is appropriate, the City may consider peer review by an independent third party.

Credit: Brook McIlroy

2.0 Building Base (Podium)

The podium of a tall building anchors the tower and defines the pedestrian experience at the street. Its location and height should frame and create a positive relationship to the street. It should be carefully designed, including a mix of horizontal and vertical elements, to reinforce a human scale. Clear-glazing, and the arrangement of internal uses, should create a visual connection between the public and private realm, while promoting vibrancy and activity throughout the day.

2.1 Podium Location

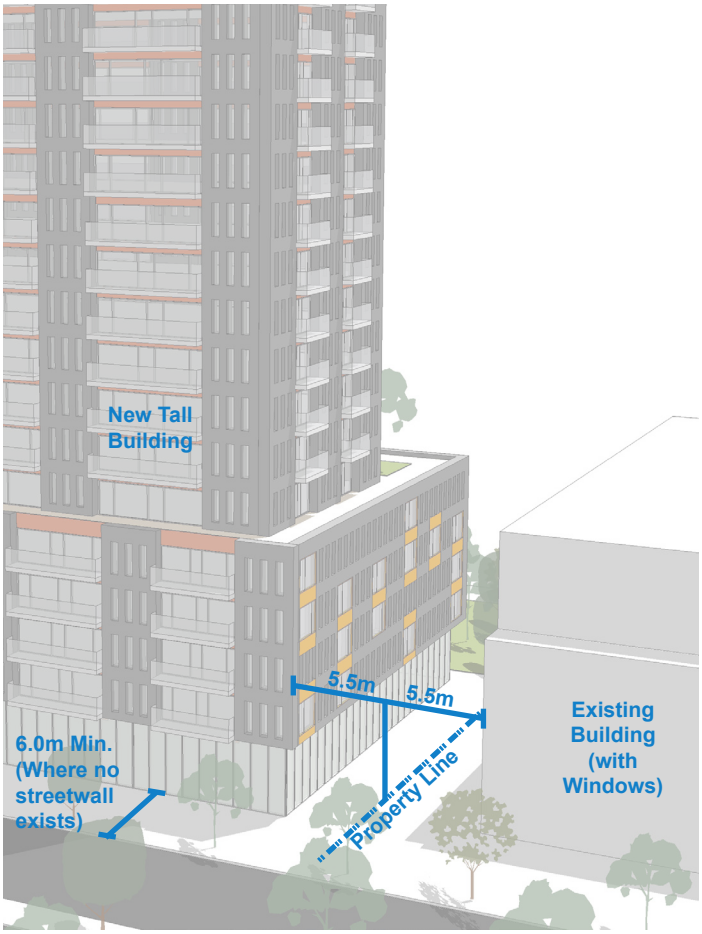
a) The podium shall be located to frame the street. On corner lots, the podium shall be located to frame both streets.

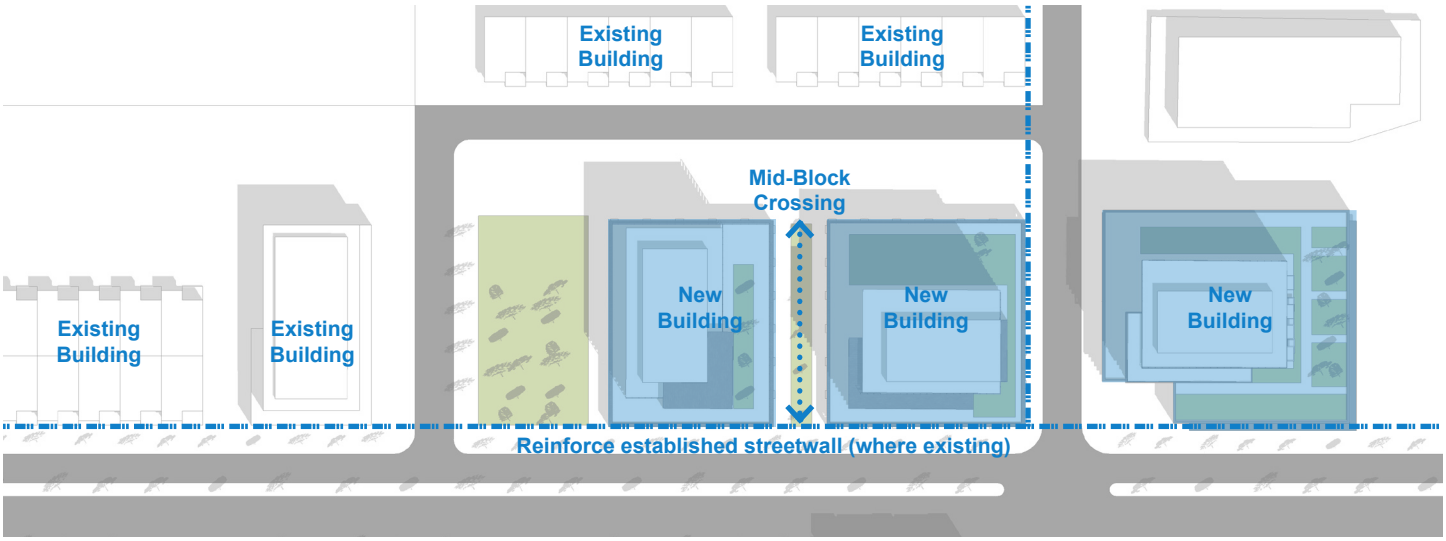
b) On retail streets (i.e. Brant Street), and other streets where a strong streetwall exists, the location of the podium should reinforce the established streetwall.

c) Where no streetwall has been established, podiums should be set back at grade to create wide boulevards that accommodate pedestrians, street trees and landscaping, and active at-grade uses. A 6.0 metre boulevard measured from curb is preferred, except where existing conditions preclude. The intent is that a road widening will not be required to specifically achieve this guideline.

d) On sites with multiple towers, mid-block pedestrian connections should be provided through the podium to enhance permeability, break-up the podium, and create additional corner conditions.

e) Where windows are proposed within the podium, an 11 metre separation distance shall be provided between adjacent buildings. Where no adjacent buildings exist, a 5.5 metre setback is appropriate. Where a continuous streetwall is desirable, no side-yard setbacks are necessary. Continuous streetwalls are generally desirable, except where special site or block conditions require breaks to access mid-block connections, public courtyards, or





other open spaces. (See 2.5.e).

f) Buildings can cantilever over side yard setbacks to create a weather protected mid-block connection, public courtyard, or other public open space. Buildings can cantilever above a) a grade level height of 4.5 m or more or b) above the second floor where the grade level height is less than 4.5 m.

2.2 Podium Height and Massing

a) The height of the podium, and the tower stepbacks above, should generally reflect the established and planned streetwall subject to the guidelines below. Small variations are encouraged to create a varied streetscape.

b) Where no established streetwall exists, the minimum height of the podium shall be 10.5 metres (3-storeys) to frame the streetscape and reinforce a human-scale.

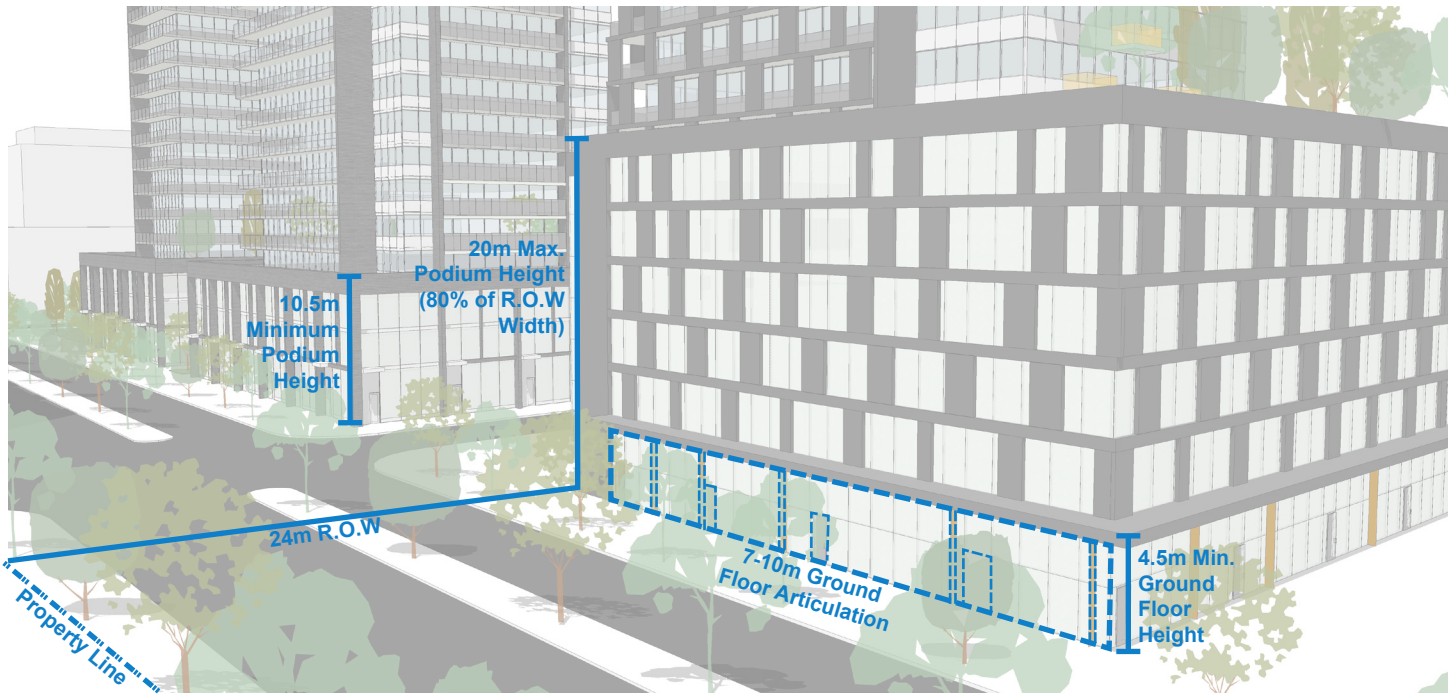
c) The maximum height of the podium shall be 80% of the adjacent right-of-way width. A maximum height of 20 metres is recommended to maintain a human-scale.

d) The floor-to-ceiling height of the ground floor should be a minimum of 4.5 metres to accommodate internal servicing and loading, and active commercial uses (where permitted).

2.3 Shadows/Sky Views

a) The height and massing of the podium (not including the tower) should ensure a minimum of five consecutive hours of sunlight on the opposite side of the street at the equinoxes (March 21 and September 21) except where existing conditions preclude.

b) The height and massing of the podium shall ensure a minimum of five consecutive hours of sunlight over more than 60% of a park or playground area or a public open space at the equinoxes (March 21 and September 21).



2.4 Podium Design and Articulation

a) All sides of the podium should be constructed with the highest quality of architectural design and materials.

b) Materials shall reflect their intended use, and should not mimic other materials (i.e. stucco made to look like stone). They should complement the established character of the street where appropriate.

c) The use of 'heavy' materials (i.e. brick, stone, or metal) should be used within the podium to anchor the building.

d) Portions of the podium roof that are not occupied by a tower should be used as outdoor amenity space to provide casual surveillance and interesting views from the street.

e) Large podiums shall be visually broken into smaller components. Mixed-use podiums shall reflect multiple retail units, while residential buildings shall provide individual entrances for ground floor units. In the downtown, podiums shall reflect the traditional 7-10 metre lot width.

f) At grade residential units should be set back a minimum of 3.0 metres from street wall. Front yards should incorporate landscaping and enclosure to provide privacy to individual units (hedges and fencing should be no taller than 1.5 metres).

g) Main building entrances shall be clearly demarcated, and should be a focal point of the building design. Where applicable, main building entrances should be located at the corner of an intersection and/or in close proximity to transit stops.

h) Architectural elements and expressions, including entrances, windows, canopies, steps, and recesses and projections, should

Precedent demonstrating a variety of ways that a podium can be articulated, both horizontally and vertically (Credit: Brook McIlroy).

highlight individual units and reinforce a variety of scales and textures within the podium.

i) Within a retail podium, the ground floor shall be predominantly clear-glazed to provide visual connections between public and private realm and enhance safety. Similarly, public elements of a residential podium (i.e. lobby, amenity space) shall be predominantly clear-glazed.

j) On corner lots, articulation of the podium should acknowledge its important location through corner entrances, chamfering (and associated public space), and/or other architectural features.

k) Mixed-use buildings with retail at grade should incorporate vestibules, frequent building entrances, canopies and structural overhangs to provide weather protection for the length of the street.

l) Weather protective design should be provided at grade and at the podium level through canopies, arcades and cantilevers. Canopies located on the ground floor should be at least 1.5 metres deep. Weather-protection elements may encroach in building setbacks and should not encroach into the public right-of-way.

m) Projecting balconies should not be provided in podiums. Inset and/or Juliette balconies are appropriate within the podium.

2.5 Site Design, Open Space and Streetscaping

a) Parking, servicing and loading shall be accommodated internally within the building podium and screened from the street.

b) Access to parking, servicing and loading shall be provided from the rear of the building, or a laneway where possible. On corner sites, access may be provided from secondary streets provided the entrance facilities are well integrated into the rest of the frontage.

Precedents demonstrating podium articulation, including a mixed-use corner site (top) and street-related residential units (bottom) (Credit: Brook McIlroy)

c) Publicly-accessible privately owned open space, including courtyards, plazas, and parkettes should be encouraged where appropriate within tall building sites through applicable planning tools (i.e. Section 37 of the *Planning Act*).

d) Publicly-accessible privately owned open spaces shall be designed and located to encourage public use, provide connections to the broader open space network, and/or highlight important site characteristics (i.e. plazas at corner sites).

e) Publicly-accessible privately owned open spaces should be used to provide mid-block pedestrian connections through the site and create short block lengths (80-120 metres).

f) Public art should be encouraged within tall building sites where appropriate (i.e. on corner sites, sites with publicly-accessible private open spaces, etc.) through applicable planning tools (i.e. Section 37 of the *Planning Act*). The selection and location of public art should reinforce the objectives of the City's Public Art Master Plan.

Credit: Michael Gaida (Pixabay.com)

Credit: Brook McIlroy

Tall buildings sites should incorporate publicly-accessible private open spaces wherever possible, particularly within larger sites (left). Publicly-accessible private open spaces can be used to create mid-block connections through larger podiums (right).

Credit: Booledozer (Flickr)

3.0 Building Middle (Tower)

The tower is the most substantial and impactful component of a tall building. It enhances the skyline and provides a defining landmark throughout the City. The design and massing of the tower should recognize and reflect this important role, and should be carefully considered to minimize adverse impacts on adjacent neighbourhoods, parks and open spaces. The tower should maximize sky views and access to sunlight through slender floorplates and spacious setbacks between towers.

3.1 Tower Location

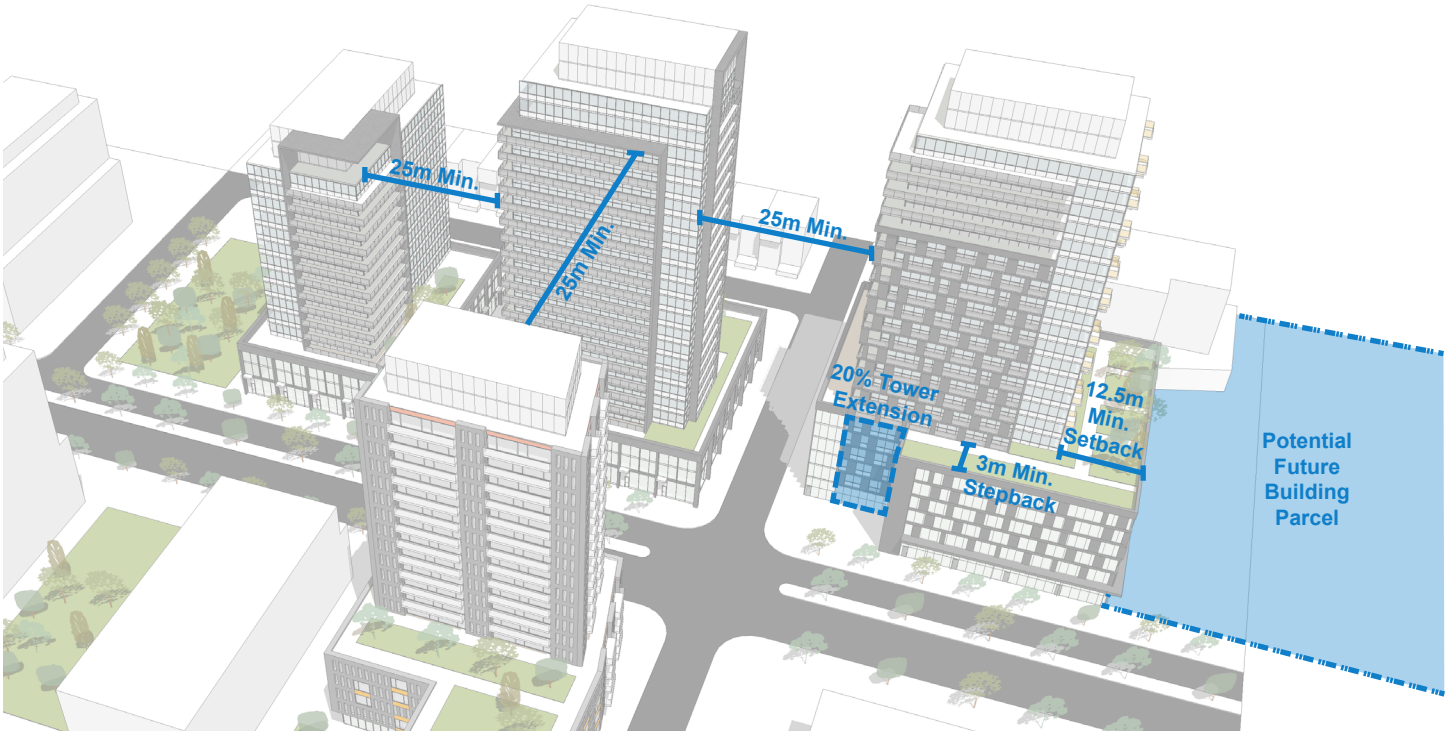
a) Where multiple towers are proposed on a site, they shall be arranged to provide a gradual and appropriate transition in height to the adjacent established or planned context.

b) A minimum separation distance of 25 metres should be provided between towers to maximize privacy and sky views, and to minimize the cumulative shadow impacts of multiple tall buildings. Balconies may be provided within this separation distance provided they do not excessively contribute to a building's massing.

c) Where no towers currently exist, proposed towers should be set back 12.5 metres from adjacent property lines to protect for a future 25 metre separation distance (split between each property).

d) The tower should be stepped back at least 3 metres from the podium to differentiate between the building podium and tower, and to ensure usable outdoor amenity space (i.e. patios).

e) For design flexibility, a portion of the tower (i.e. up to 20%) may extend to the edge of the podium without a stepback provided it can be demonstrated that there are no adverse wind and shadow impacts.

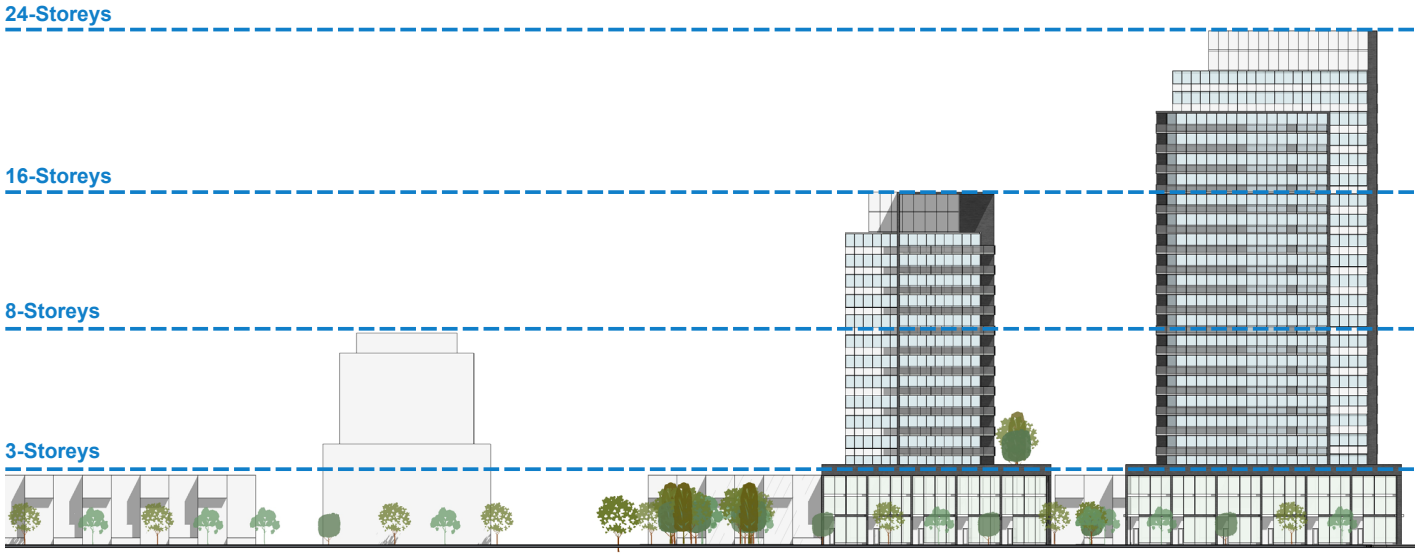


3.2 Tower Height and Massing

a) The height of the tower, and its location on the building base, shall provide a gradual and appropriate transition in height to help mitigate potential impacts on the adjacent established or planned context. Where multiple towers exist on a site, this transition shall be reflected across the entire site.

b) The tower portion of a tall building should be slender and should not exceed 750 square metres, excluding balconies.

c) The massing of the tower, and its relationship to the building base, shall not result in adverse wind effects at the street level.



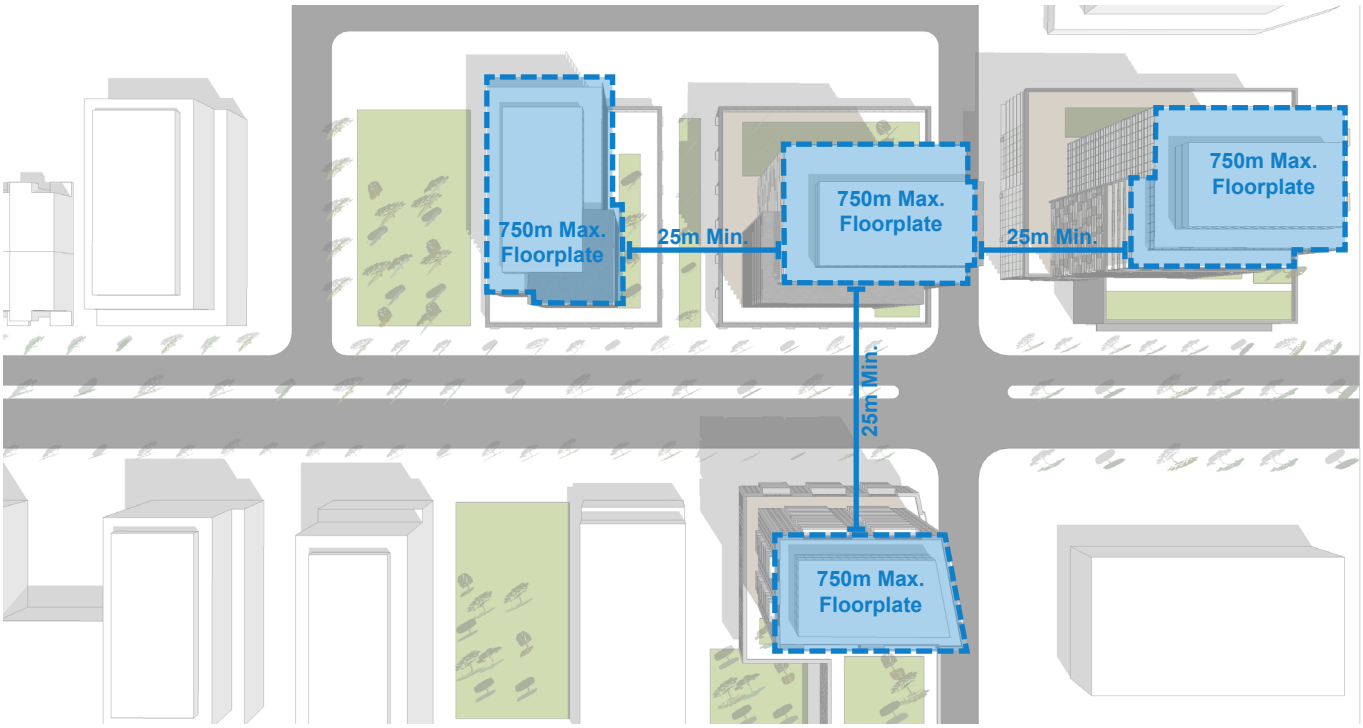
3.3 Shadow/Sky Views

a) The design and placement of the tower shall be carefully considered to minimize the size of shadows on the opposite streetscape.

b) The design, height, and placement of the tower shall be compatible with adjacent established residential neighbourhoods, parks, open spaces, or natural areas.

c) The widest edge of the tower should generally be oriented to minimize the impacts of shadows.

d) A shadow study shall be provided with tall building applications to demonstrate the impacts at the equinoxes (March 21 and September 21).



3.4 Tower Design and Articulation

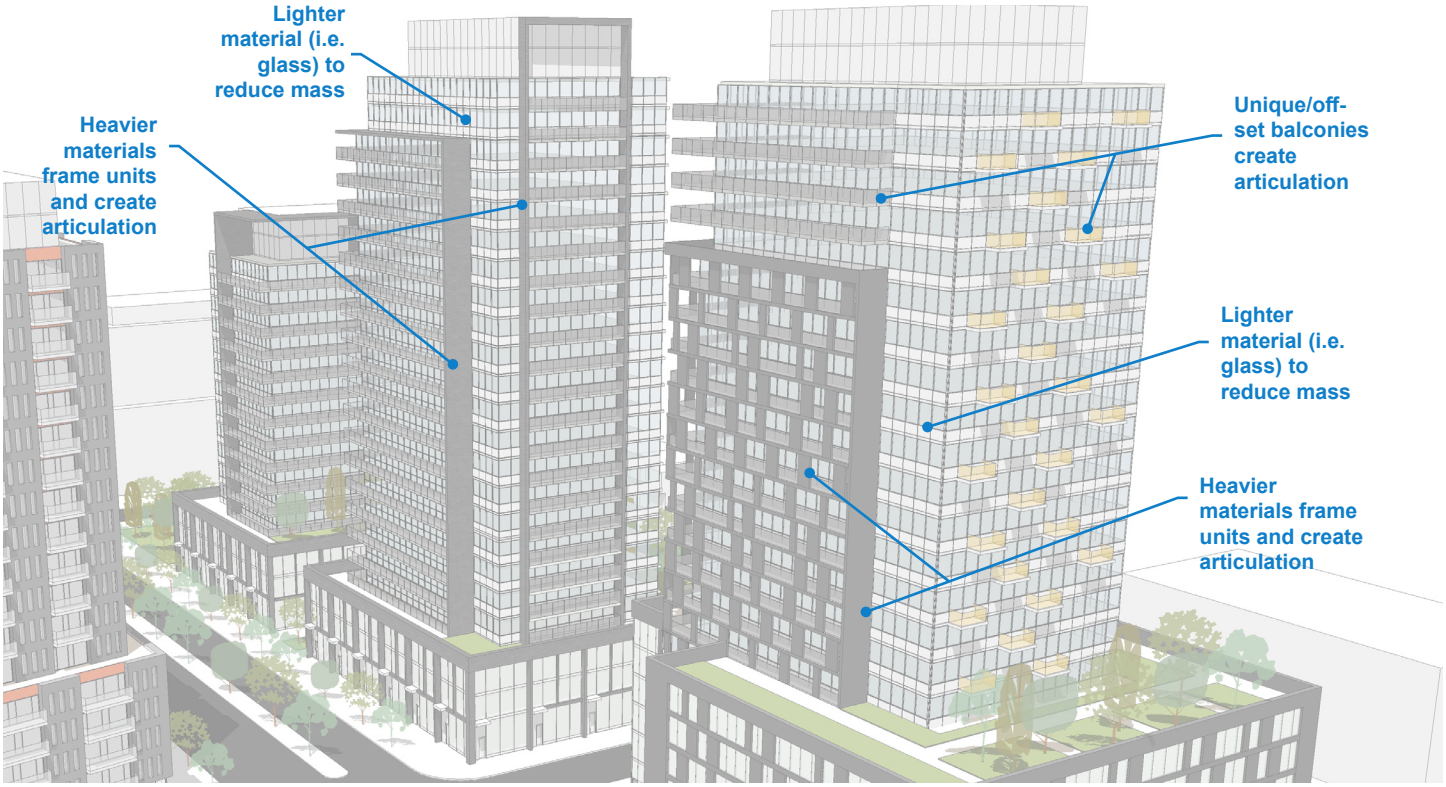
a) A variety of techniques shall be used to articulate the tower, both vertically and horizontally, to create visual interest and encourage unique designs.

b) All sides of the tower shall be constructed with the highest quality of architectural design and materials.

c) Lighter materials, such as glass, are encouraged in the design of the tower to minimize the perceived mass.

d) Heavier materials, such as metal, brick, or stone should be used to define unique components within the tower and/or to create vertical and horizontal articulation.

e) Balconies are encouraged within the tower to provide amenity space and additional articulation. They may be inset or extruding, but should be a minimum of 1.5 metres to provide usable outdoor amenity space.



Precedents demonstrating a variety of ways in which a tower can be articulated, both horizontally and vertically.

Credit: Brook McIlroy

4.0 Building Top

The top of the building defines the tower while further distinguishing a unique and interesting skyline. A variety of elements, including stepbacks, material variations, lighting, and other architectural elements are recommended to reinforce a strong presence at the top of the building. Where possible, rooftop amenity space is recommended to create activity at the upper levels of the building. Structural elements, such as the mechanical penthouse and elevator shafts should not be visible from ground level.

4.1 Rooftop Design and Articulation

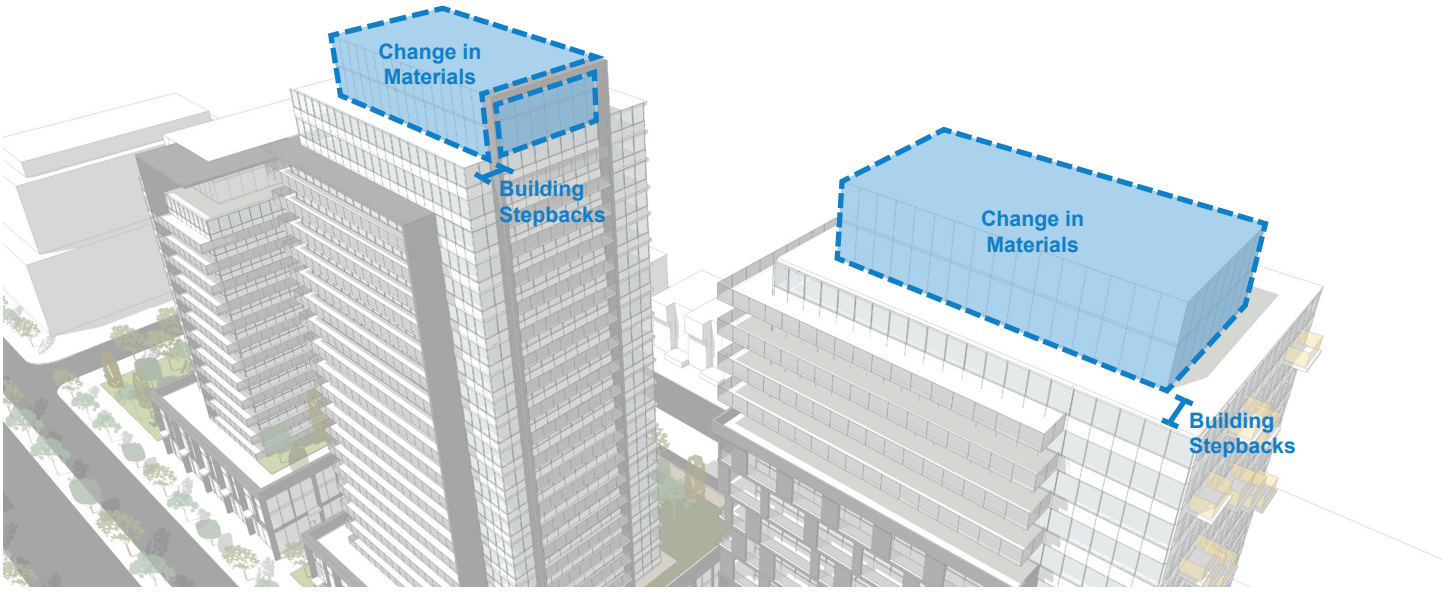
a) Design the upper floors of tall building to clearly distinguish the top of the building from the tower, to further reduce the building profile, and to achieve a distinct skyline. This may include stepbacks, material variations, and/or unique articulation.

b) Where the design of the tower itself is unique, and creates an interesting and varied skyline, a clearly distinguishable top may not be required.

c) Where located at a gateway intersection or terminating view, the tower top is encouraged to act as a recognizable landmark with signature features defining its importance.

d) Where possible, outdoor amenity space should be included within the top of the building, including balconies and patios, terraces, rooftop gardens, pools, etc.

e) Decorative lighting could be included within the tower design but over lighting or up lighting should be avoided.

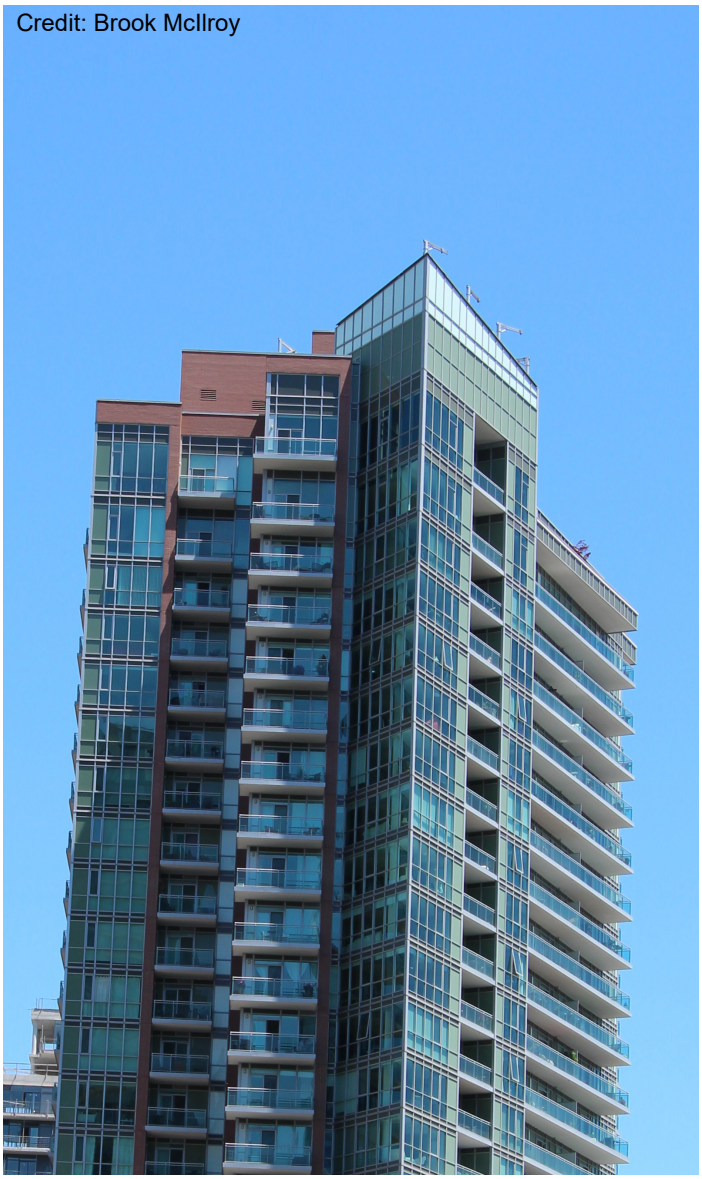


4.2 Mechanical Penthouse

a) Rooftop mechanical equipment shall be sized and located and screened from view, in order to protect or enhance views from other buildings and the public realm.

b) Where possible, rooftop mechanical equipment should be wrapped by residential units, or other occupiable space (i.e. amenity areas).

c) Rooftop mechanical equipment should be stepped back, on all sides, no less than 3 metres from the edge of the floor below. Equipment should be screened from view.


Credit: Brook McIlroy

Precedents demonstrating a variety of ways in which the top of a tall building can be clearly articulated including stepbacks, unique architecture, lighting, and material changes.

i. Glossary of Terms

Active Uses
Generally refers to ground level uses, or uses within the podium, that help to animate and create interest on the street. May include window displays, spill-out retail, public areas (i.e. lobby, mid-block connections), amenity space, etc.

Amenity Space
Public or private space, both indoor and outdoor, used for the enjoyment of building residents (private) or the greater community (public).

Articulation
Articulation refers to the layout or pattern of building elements, including walls, doors, roofs, windows and decorative elements, such as cornices and belt-courses.

Boulevard
The boulevard is the area between edge of the curb and the front property line or building face.

Building Character
The elements that define a building, including materials, facade articulation, entrances, cornice design, window placement, etc.

Built Form
The overall size and shape of a building, including all design elements.

Cantilever
A horizontal building element extending beyond its vertical support.

Casual Surveillance
Providing surveillance of a space simply through the presence of people. Usually used in relation to safety.

Chamfer/Chamfering
Cutting away the corner of a building to create a 45-degree angle.

Façade
The exterior wall of a building. On a corner lot, the facade includes all building walls facing onto a public street.

Floorplate (Tower)
The total built area of a tower, not including balconies.

Human Scale
The quality of the physical environment which reflects a sympathetic proportional relationship to human dimensions and which contributes to the citizen's perception and comprehension of buildings or other features of the built environment.

Inset Balcony
A balcony that is located behind the face of the building.

Juliette Balcony
A railing at a window opening that reaches to the floor and creates the appearance of a balcony when the window is open.

Massing
The general size and shape of a building, not including detailed design elements.

Mid-Block Connections
Pedestrian connections between buildings, both internal and external, that provide permeability through large blocks and sites.

Mixed-Use
Refers to multiple types of uses within a building or set of buildings. This may include a combination of residential, employment, retail, institutional, or other land uses.

Mobility Hub
"Major transit station areas, as defined in the Growth Plan for the Greater Golden Horseshoe, that ...are places of connectivity between regional rapid transit services ...where different modes of transportation, from walking to high-speed rail, come together seamlessly. They have, or are planned to have an attractive, intensive concentration of employment, living, shopping and enjoyment around a major transit station." (2011 Mobility Hub Guidelines)

Private Realm
Refers to any space that is within a private property line and is perceived as being private.

Projections
Refers to building design where horizontal and/or vertical elements extrude from the main structure of the building. Examples include roof overhangs, awnings, and balconies.

Public Realm
Refers to spaces under City ownership including streets, boulevards, parks, and public buildings and structures.

Publicly-Accessible Private Open Space
Open spaces that are privately owned, but legally required to be open to the public under a city's zoning bylaw

Recesses
Refers to building design where horizontal and/or vertical elements are inlaid from the main structure of the building. Examples include inset balconies, recessed entrances, etc.

Right-of-Way
The part of the street that is publicly owned and lies between the property lines.

Separation Distance
The space between two entities, such as elements of a building (i.e. towers, podiums).

Setbacks
Refers to the distance between a property line and the front, side or rear of a building.

Skyview
The ability to see the sky, unobstructed by buildings, from the opposite side of a street.

Spill-Out Retail
Retail uses that expand beyond the interior of a building, and occupy space within the boulevard or an adjacent laneway or open space. Spill-out uses include cafe and restaurant seating, marketing signage, sale items and displays, etc.

Stepbacks
Refers to an offset of one element of a building from another element below (i.e. tower from podium). Stepbacks help to create a transition between built form elements.

Storey
A habitable or occupiable level within a building, excluding raised basements.

Streetscape
The combination of a variety of elements along a street, including signage, paving materials, street furniture, pedestrian amenities and the setback and form of surrounding buildings.

Streetwall
The condition of enclosure along a street created by the fronts of buildings, and enhanced by the continuity and height of the enclosing buildings.

Transitions
Refers to the physical design elements of a building or site that contribute to an appropriate height reduction as tall buildings approach more stable and low-rise uses, including mid-rise buildings, stable residential neighbourhoods, and parks and open spaces.

Vibrant Streets
A combination of streetscape elements, spill-out retail uses, and built form, that results in significant pedestrian activity along a street throughout the day.