

An architectural rendering of a city street scene. In the foreground, two elderly people are seen from behind, walking on a sidewalk. The street is lined with trees and modern, multi-story buildings. A white bus is driving on the road, and a silver car is parked on the side. The sky is blue with light clouds. The overall scene depicts a vibrant, walkable urban environment.

City of Burlington  
**Tall Building  
Guidelines**

**BrookMcIlroy/  
August 2016**



Credit: Brook McIlroy



Credit: Brook McIlroy



Credit: Brook McIlroy



Credit: Brook McIlroy



Credit: st75mbp (Flickr)

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# 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 suitability of a tall building should be considered on a site-by-site basis, examining site dimensions, adjacent uses, and access to transit. 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-stories. 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 intensification strategy, tall buildings support healthy and sustainable cities by providing a critical mass of people in close proximity to jobs and transit.

## 1.2 Where are the Tall Buildings Guidelines Applicable?

The Tall Building Guidelines are applicable across the City, wherever tall buildings are permitted. The suitability of a tall building should be considered on a site-by-site basis, examining site dimensions, adjacent uses, and access to transit. 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 the tool for developers and architects designing tall buildings in the City of Burlington, and will be used by City staff in evaluating development applications and mobility hub planning. The objective of the guidelines are to provide direction related to building height, massing, transitions, sun/shadowing, and building articulation to create appropriate building envelopes.

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. 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, its merits should be considered on a case-by-case basis. Where additional advice is appropriate, the City may wish to consider peer review by an independent third party.

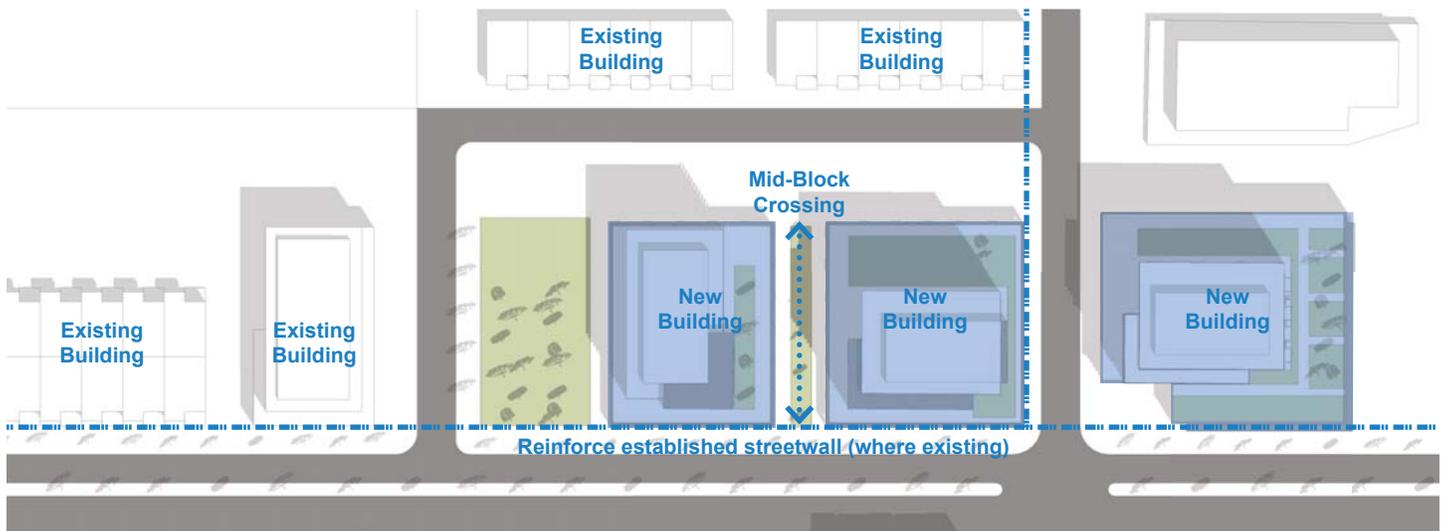
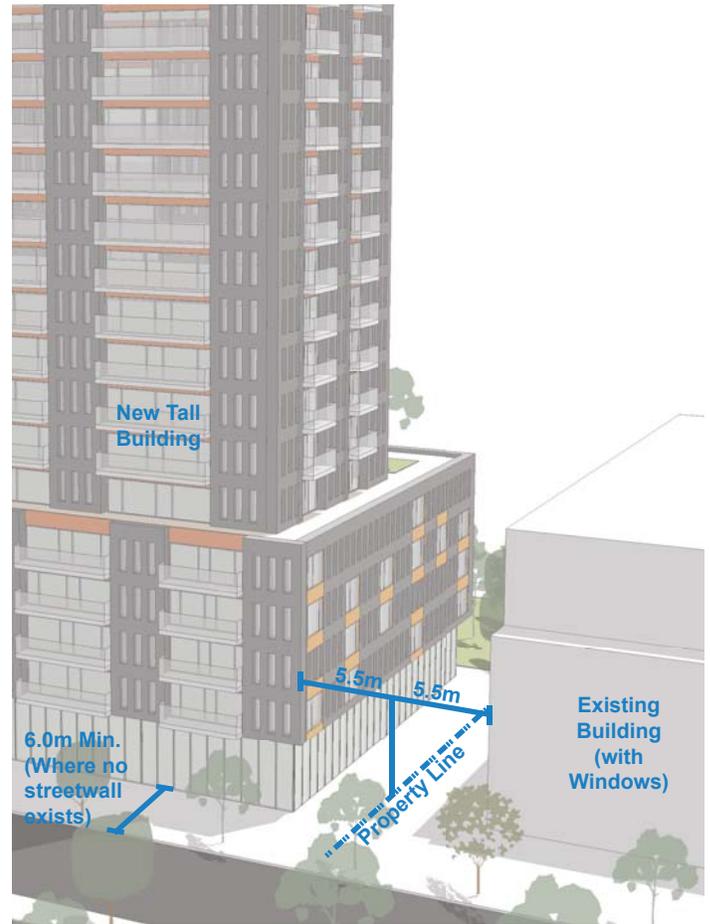


## 2.0 Building Base (Podium)

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, setbacks should create a 6.0 metre boulevard width to accommodate pedestrians, street trees and landscaping, and active at-grade uses.
- 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 properties. Where no adjacent buildings exist, a 5.5 metre setback is appropriate.

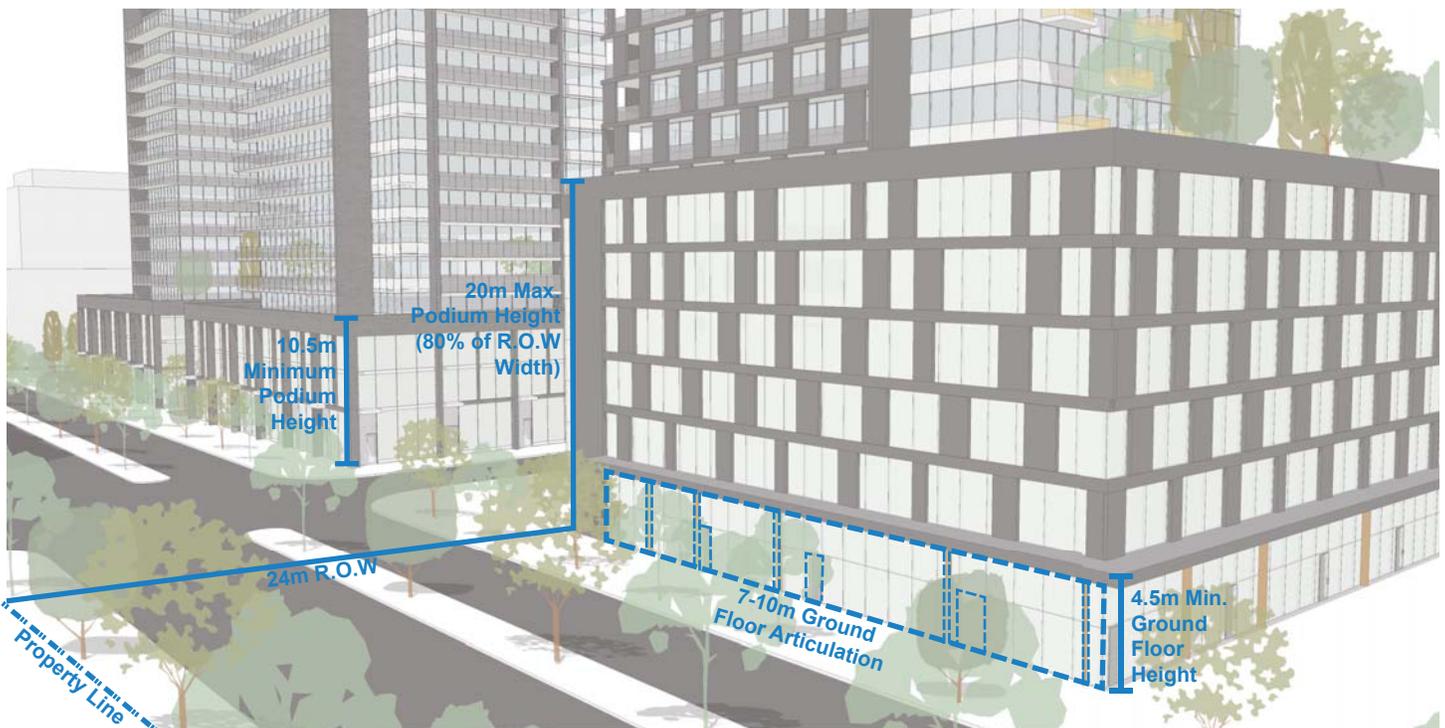


## 2.2 Podium Height and Massing

- a) The height of the podium, and the tower stepbacks above, should generally reflect the established 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 should be 10.5 metres.
- c) The maximum height of the podium should be 80% of the adjacent right-of-way width, up to a max of 20 metres.
- d) The floor-to-ceiling height of the ground floor shall be a minimum of 4.5 metres to accommodate internal servicing and loading, and active commercial uses (where permitted).
- e) Above the podium, stepbacks should be provided on all sides to clearly differentiate between the building podium and tower.
- f) Stepbacks should be a minimum of 3 metres to ensure usable outdoor amenity space (i.e. patios).

## 2.3 Shadows/Sky Views

- a) As a rule-of-thumb, the height and massing of the podium (not including the tower) shall ensure a minimum of five hours of sunlight on the opposite side of the street 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) Where tall buildings are located adjacent to existing heritage buildings, they shall respect (but not mimic) the established character, including materials, facade articulation (i.e. entrances, cornice design, window placement, etc.).
- c) Materials shall reflect their intended use, and should not mimic other materials. They should complement the established character of the street where appropriate.
- d) The design of the podium should be primarily constructed of 'heavy' materials such as brick, stone, or metal, to anchor the building.
- e) Portions of the podium that are not occupied by a tower should be used as outdoor amenity space to provide casual surveillance and interesting views from the street.
- f) Large podiums shall be broken into smaller components both visually and functionally. 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.



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

- 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 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 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) Canopies located on the ground floor should be at least 1.5 metres deep. More robust weather protection (i.e. building overhangs) should be located at the top of the podium and should be 3.0 metres deep. Weather-protection elements should not encroach into the public right-of-way.

- m) Balconies should not be provided below the first three storeys to protect privacy, and minimize conflicts with adjacent mature tree growth. Above the third storey, inset and/or Juliette balconies are appropriate within the podium.
- n) Notwithstanding the above, the design and materiality of the podium should reflect bird-friendly best practices.



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

## 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.
- c) Publicly-accessible private open space, including courtyards and plazas, parkettes, or Neighbourhood Parks (where site size permits) should be encouraged within tall building sites through applicable planning tools (i.e. Section 37).
- d) Publicly-accessible private 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 private 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). 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).

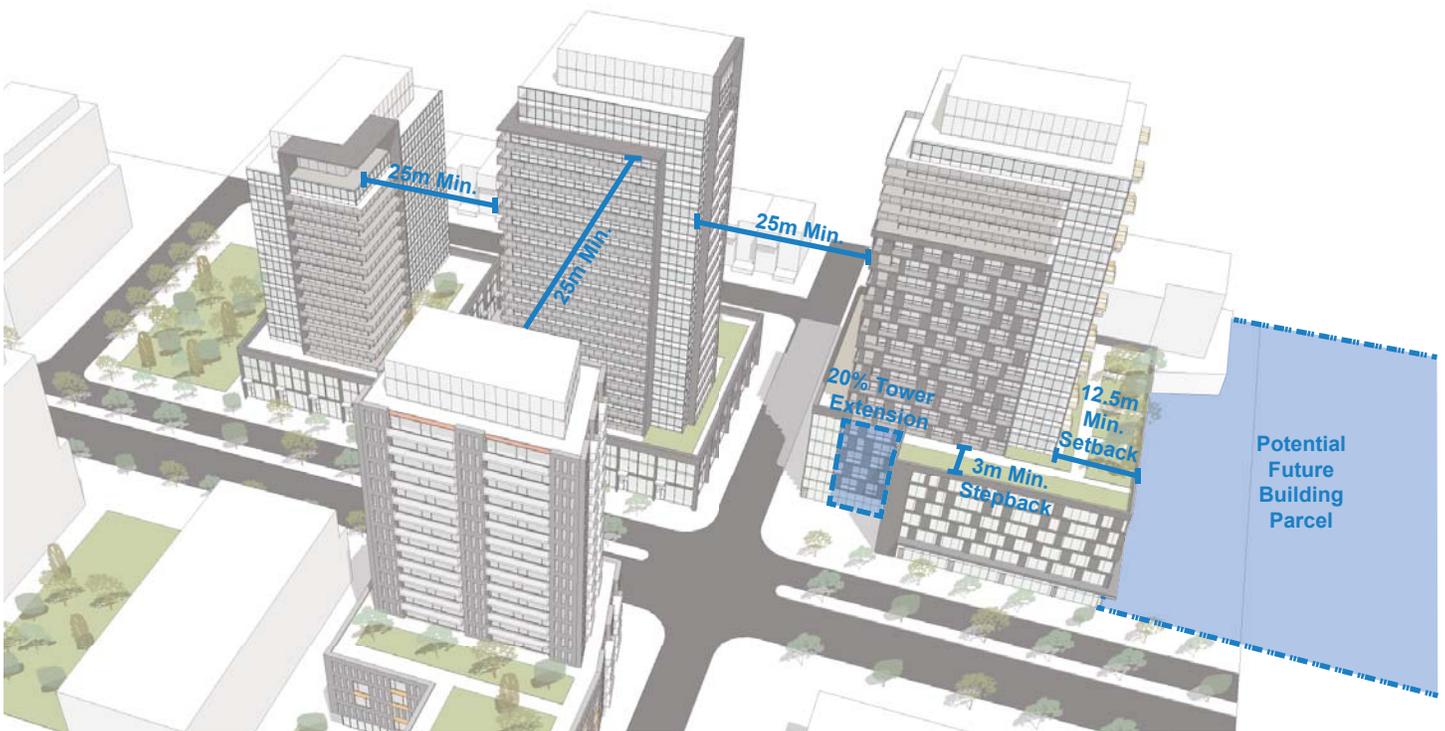


## 3.0 Building Middle (Tower)

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) The placement of the tower shall have no adverse impacts on adjacent Residential Neighbourhood Areas, parks, open spaces, or natural areas.
- b) Where multiple towers exist on a site, they shall be arranged to provide a gradual and appropriate transition in height to adjacent uses.
- c) A minimum separation distance of 25 metres shall be provided between towers to maximize privacy and sky views, and to minimize the cumulative shadow impacts of multiple tall buildings. Balconies shall not be provided within this separation distance.
- d) Where no towers currently exist, proposed towers shall be set back 12.5 metres from adjacent property lines to protect for a future 25 metre separation distance (split between each property).
- e) 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).
- f) 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 impacts.



## 3.2 Tower Height and Massing

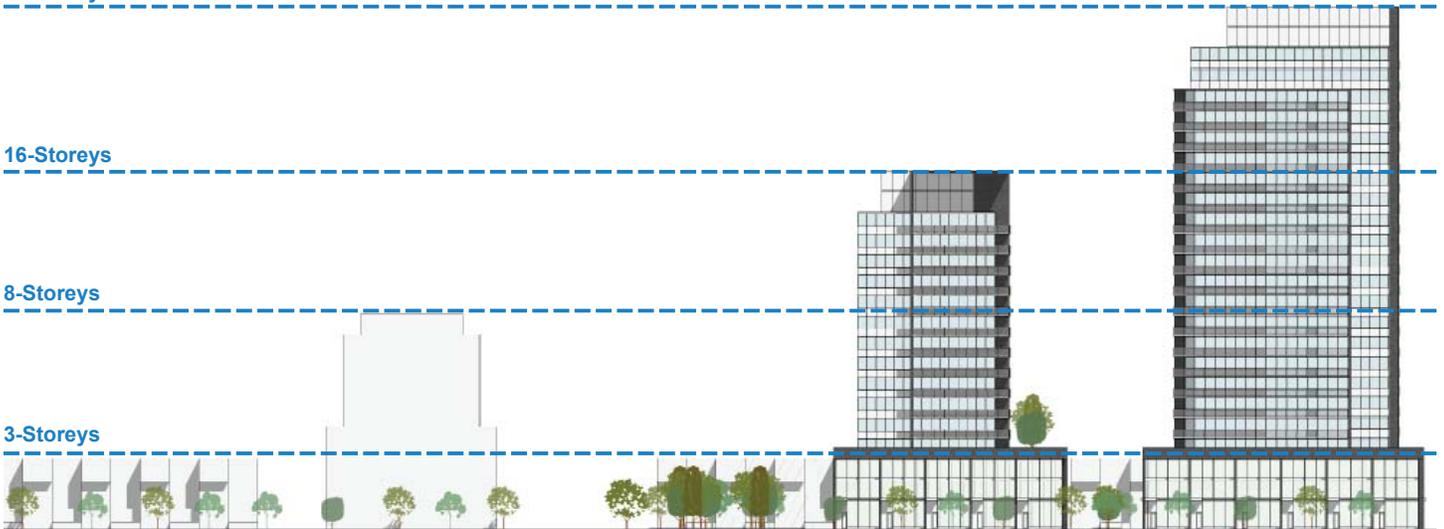
- a) The total height of the tower (including the top) shall ensure no adverse impacts on adjacent Residential Neighbourhood Areas, parks, open spaces, or natural areas.
- b) The height of the tower, and its location on the building base, shall provide a gradual and appropriate transition in height to adjacent uses. Where multiple towers exist on a site, this transition shall be reflected across the entire site.
- c) The tower portion of a tall building should be slender and shall not exceed 750 square metres, excluding balconies.
- d) The massing of the tower, and its relationship to the building base, shall not result in adverse wind effects at the street level.

24-Storeys

16-Storeys

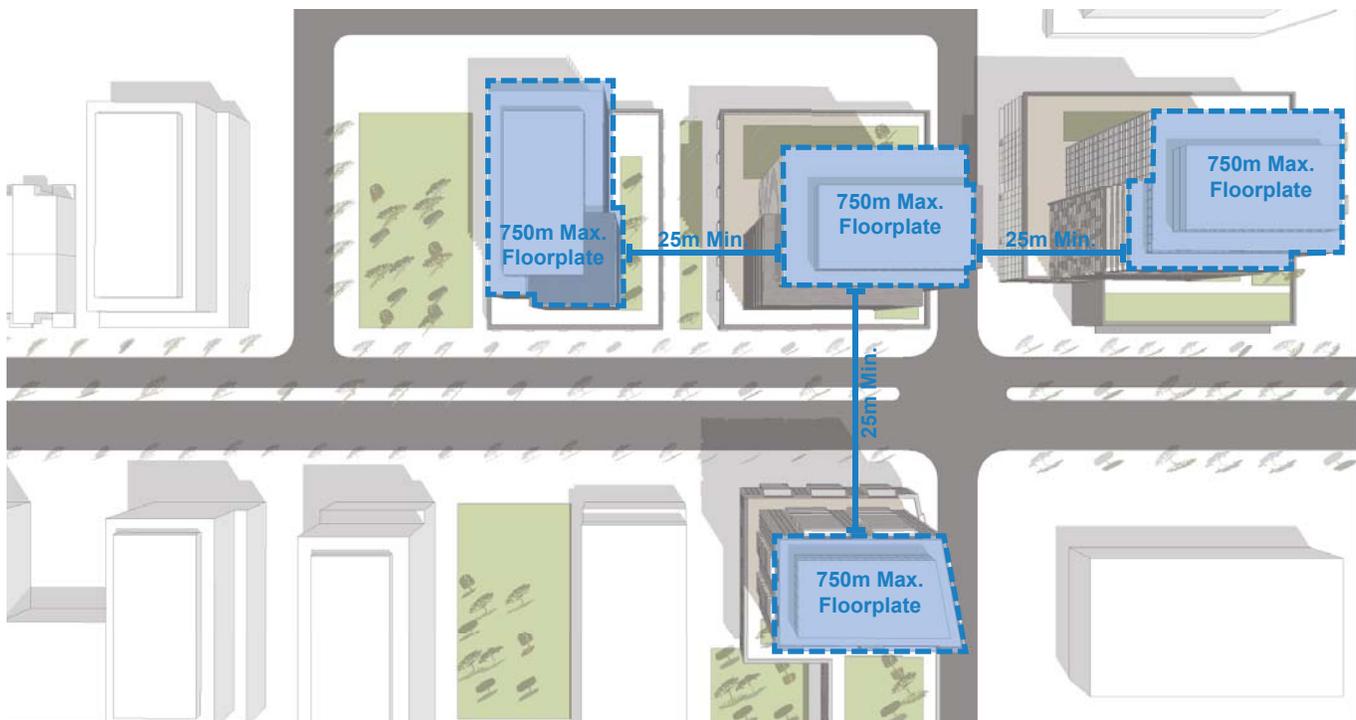
8-Storeys

3-Storeys



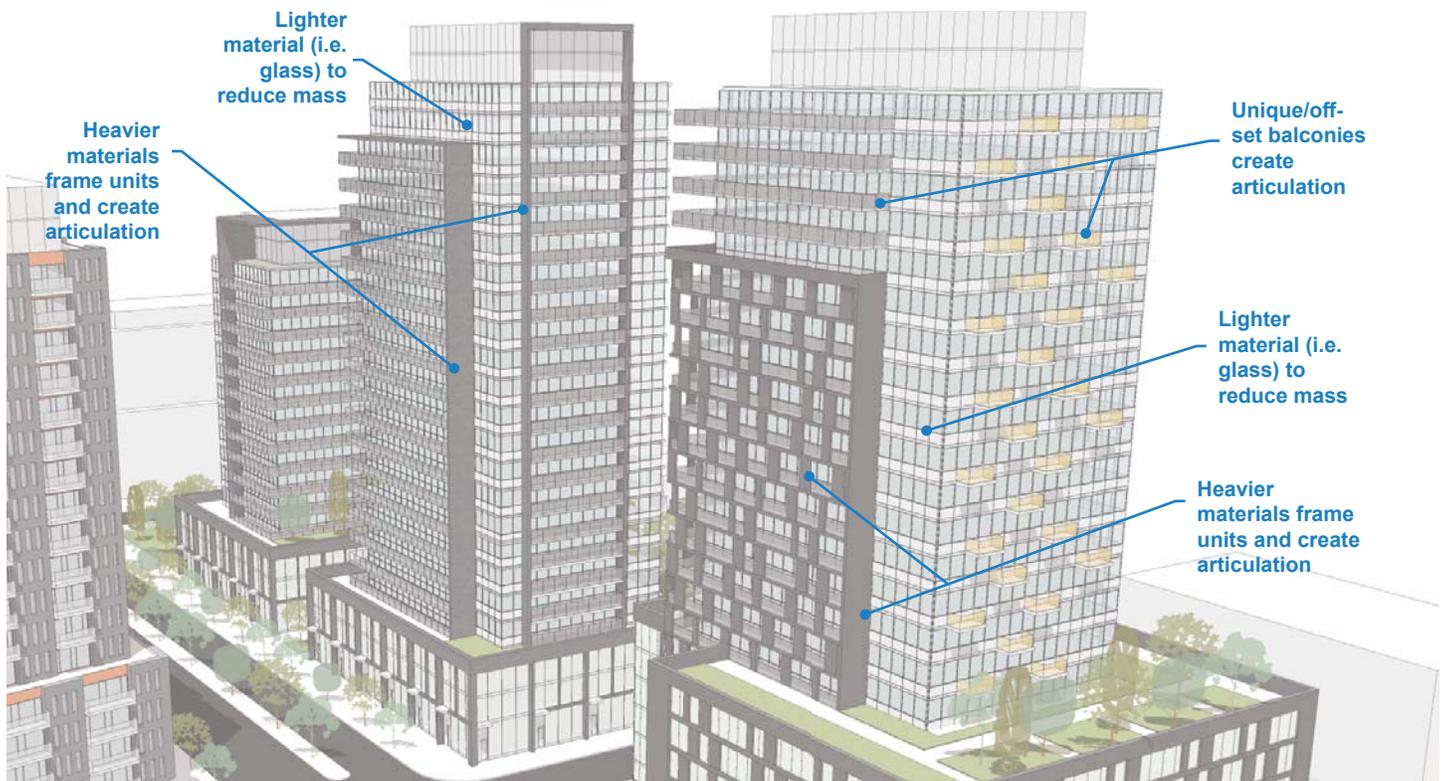
### 3.3 Shadow/Sky Views

- a) The design and placement of the tower shall be carefully considered to minimize the size of shadows on the opposite streetscape, and the time it takes for them to pass.
- b) The design and placement of the tower shall have minimal impacts on adjacent residential neighbourhoods, parks, open spaces, or natural areas. Adverse shadow impacts shall not hinder the viability or enjoyment of these areas.
- c) The widest edge of the tower should generally be oriented in an east-west direction to minimize the impacts of shadows.
- d) It is recommended that a shadow study be provided with tall building applications to demonstrate the impacts at the equinoxes (March 21 and September 21).

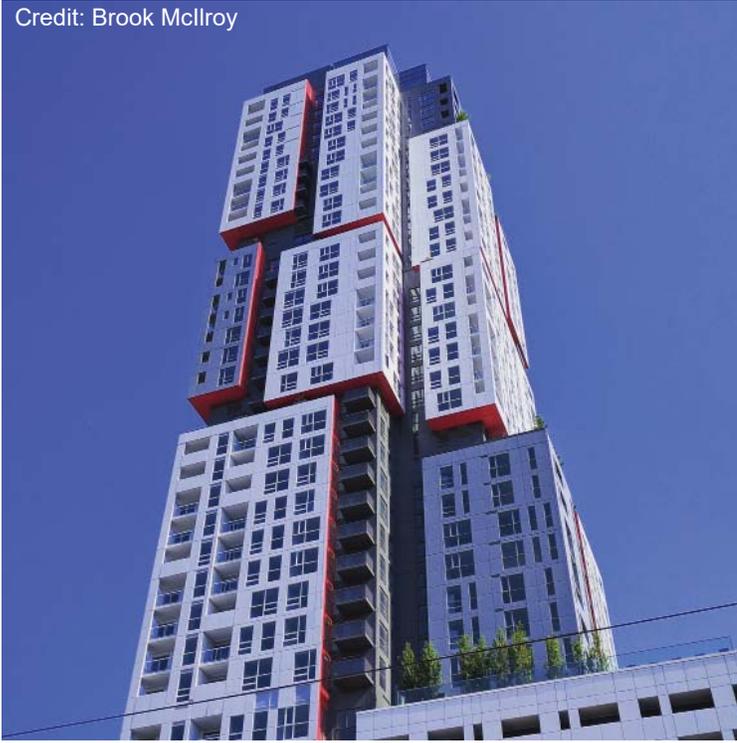


### 3.4 Tower Design and Articulation

- 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) The design of the tower should be primarily constructed of 'lighter' materials such as glazing to minimize the perceived mass.
- d) Heavier accent materials, such as metal, brick, or stone may 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.



Credit: Brook Mclroy



Credit: Brook Mclroy



Credit: Brook Mclroy



Credit: Michael Gaida (Pixabay.com)



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

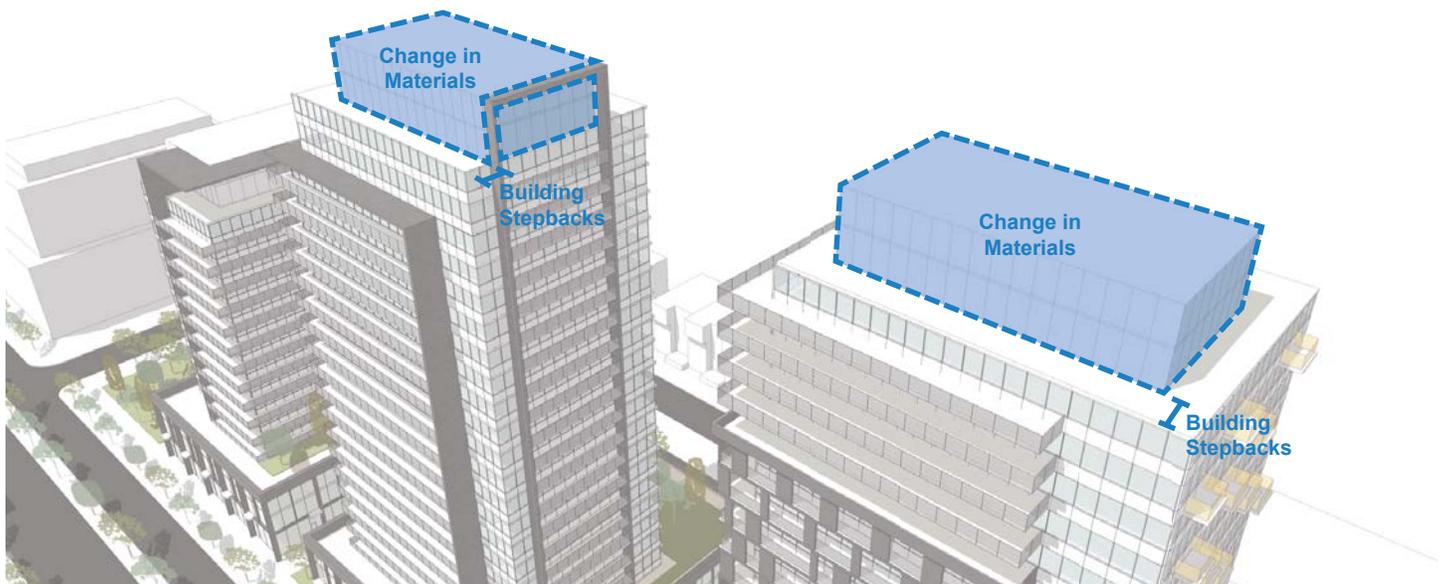


## 4.0 Building Top

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) Towers should have a lighter appearance in general, which may be achieved with material selection as well as tower top design.

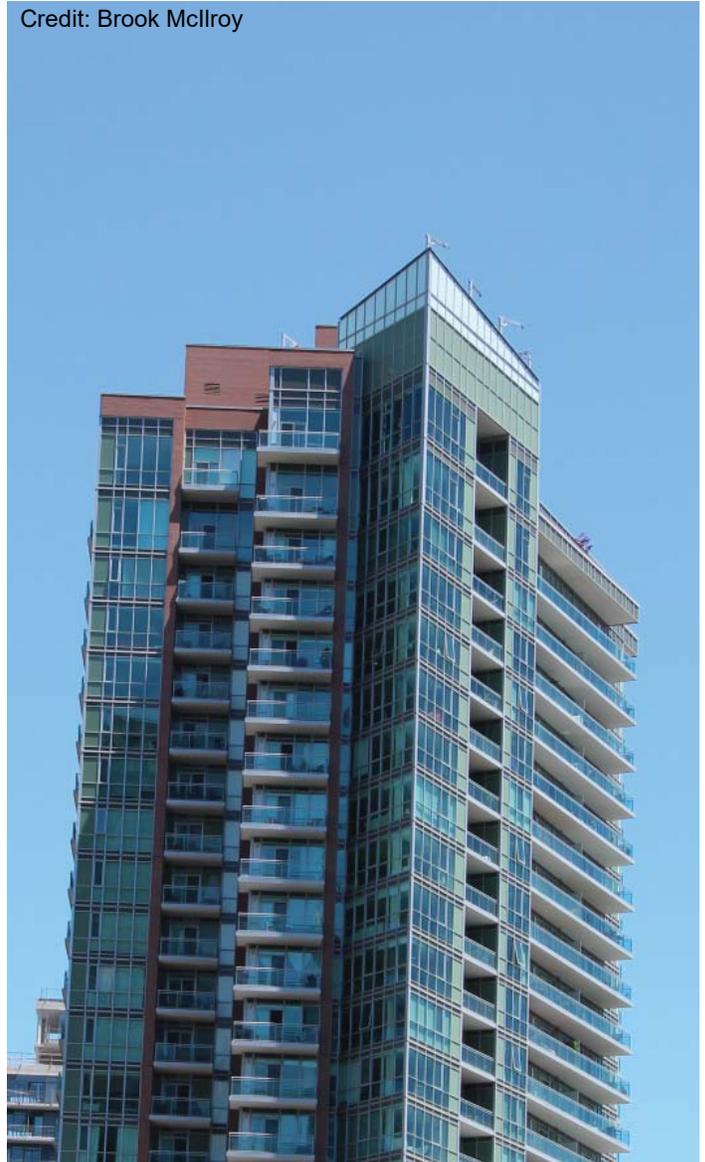


- d) Where located at a gateway intersection or terminating view, the tower top is encouraged to act as a recognizable landmark with signature features defining its importance.
- e) Where possible, outdoor amenity space should be included within the top of the building, including balconies and patios, terraces, rooftop gardens, pools, etc.
- f) 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 limited to no more than 50% of the area of the uppermost floor, and stepbacks on all sides should be no less than 3 metres from the edge of the floor below to ensure they are screened from view.

Credit: Brook McIlroy



Credit: Scott Webb (Unsplash.com)



Credit: tookapic (Pixabay.com)



Credit: Andreas Ronnington (Unsplash.com)



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.



## 5.0 Sustainability

**Burlington is a waterfront city, and is home to many significant natural heritage features, including open spaces, streams and woodlots. To minimize adverse impacts on these features, sustainable design should be at the forefront of all tall building development. Where feasible, on-site stormwater management is encouraged, while other initiatives (i.e. green roofs, rooftop gardens, green walls, etc.) are recommended to reduce the urban heat island effect.**

## Site Design and Landscaping

- a) Site design shall minimize impervious hard surfaces. Parking should be located underground, and driveways should be as small as possible within allowable standards.
- b) On larger sites, vegetative or grassy swales should be provided between buildings, and within courtyards and open spaces. These drainage basins should be planted with native plant materials that thrive in wet conditions.
- c) Porous pavement, and landscaped areas with adequate size and soil conditions, should be maximized to increase the total amount of water run-off absorbed through infiltration.
- d) Existing significant trees and vegetation should be protected and incorporated into site design.
- e) Recommended landscape materials should include species that are native to the City of Burlington and non-invasive, as well as species that are generally drought resistant and require minimal maintenance.
- f) Landscape design should incorporate strategies to minimize water consumption (i.e. use of mulches and compost, alternatives to grass and rainwater collection systems).
- g) Well-drained snow storage areas should be provided on site in locations that enable melting snow to enter a filtration feature prior to being released into the storm water drainage system.



Bioswales help to reduce surface run-off on larger tall building sites (Credit: David Baker + Partners (Design) and Brian Rose (Photograph))

## Building Design

- a) New buildings should be encouraged to seek Leadership in Energy and Environmental Design (LEED) certification, or an equivalent design standard.
- b) New buildings are encouraged to reduce the energy consumption of building and site systems (HVAC, hot water, lighting) through the use of appropriate mechanical and construction technology (natural cooling, light recovery, passive solar design, etc.).
- c) Mixed-use, commercial and apartment buildings shall provide flexibility in the building floor plate, envelope and façade design to accommodate a variety of uses over their lifespan.
- d) Vegetated or “green” roofs are recommended, especially in areas with minimal landscaping, to minimize water runoff, improve building insulation, and provide additional outdoor amenity areas.
- e) Water use reduction technologies are encouraged, including water-efficient appliances, such as aerators, low-flow shower heads, dual-flush toilets, front-loading washers, waterless urinals and high-efficiency dishwashers.
- f) Waste water technologies, such as rain barrels or cisterns, are encouraged in new buildings to collect and filter rain water to be recycled for non-potable domestic uses.
- g) All buildings should have conveniently located waste management facilities to support the separation of waste into different streams according to reuse and recycling regulation (i.e. compost, paper, plastics, etc.).
- h) Where possible, construction materials should be recycled to reduce the environmental impacts of extracting and manufacturing new materials. If there are no salvageable materials available, efforts should be made to purchase materials from demolition sales, salvage contractors and used materials dealers.
- i) New construction materials should be locally sourced to reduce the impacts of transportation. Canadian products are generally designed to withstand our climate.
- j) Construction materials should be durable and consider life cycle costing to avoid premature replacement.



Sustainable design should be incorporated into all tall buildings, including rooftop gardens (top), solar panels (bottom), and other opportunities.



# 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.

## 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

Places of connectivity between regional and rapid transit services, where different modes of transportation 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.

### 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.