



# APPENDIX I

KESWICK SECONDARY PLAN

# URBAN DESIGN & ARCHITECTURAL CONTROL GUIDELINES

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# 1. INTRODUCTION

## 1.1 Context and Role of the Guidelines

### 1.1.1 Context

The Keswick Secondary Plan is the guiding document used to direct and manage growth in Keswick. It articulates the vision and guiding principles for how the community should be developed and outlines the policies for how land in the community should be used.

The Secondary Plan helps to ensure that future planning and development meets the specific needs of the community. The Secondary Plan addresses topics such as:

- Where new housing, offices and shops will be located;
- What services like roads, watermain, sewers, parks, and schools will be needed;
- When, how, and in what order, parts of the community will grow; and,
- Community improvement initiatives.

The Town recognizes that one of the key objectives for the successful evolution and development of the community is ensuring design excellence.

### 1.1.2 What Are Urban Design and Architectural Control Guidelines?

Urban Design and Architectural Control Guidelines (“the Guidelines”) are statements that include design guidance, criteria, and standards for how to shape the built environment, both the individual elements, as well as how these should be spatially arranged and relate to one another. The Guidelines address diverse scales of development, from site specific to community-wide and typically address the design of buildings and landscape features, their organization within a defined area, and their relationship to their built and natural surroundings.

### 1.1.3 Zoning By-law

The Zoning by-law addresses matters such as lot coverage, parking, setbacks and height - the quantitative aspects of a community’s physical form. While zoning regulates how buildings sit within a lot or block, it represents only one of the planning tools that may be used to guide and shape development. Zoning is best used in conjunction with the Guidelines to create development that promotes design excellence, and is compatible with, and fits within its surrounding context.

The Guidelines address the relative height, massing, and articulation of buildings and landscapes, and their relationship to one another and to their surroundings. These qualitative aspects of physical form work in combination with zoning parameters to lend shape and character to a community.

### 1.1.4 How Will They be Used?

The Urban Design and Architectural Control Guidelines:

- Will be used as the basis for the creation of development specific Urban Design and Architectural Control Guidelines, which in turn will be implemented through the site plan approval process or a control architect at the building permit stage of a subdivision;
- Will also be used to inform the design of new site specific developments at the site plan stage which are subject to site specific guidelines;
- Are intended to provide guidance for homeowners, designers, architects, developers, and landscape architects by outlining the Town’s expectations for new development; and,
- As a planning tool minor changes or adjustments may be considered on a case-by-case basis without amendment to this document. However, major changes to the document are to be approved by Council.

## 1.2 Vision

*Keswick will become a more complete, healthy and vibrant community, balancing its existing lakeside character with new development that meets the community's employment, shopping and entertainment needs, and provides more rental and affordable housing to support a diverse population. As Keswick evolves, new development and investment will prioritize the creation of a stronger sense of community, a well-connected and multimodal transportation network, the protection of natural areas and a commitment to environmental sustainability and resiliency.*

## 1.3 Principles

To realize the vision for Keswick, the Guidelines shall support the Secondary Plan to achieve the following principles which will guide how the community will be designed and shaped, these include:

- To develop as a complete, healthy, attractive, safe, inclusive, and accessible community for the present and future residents of Keswick;
- To ensure a balance of low, medium and high density and mixed use development and intensification to meet the Town's growth targets and provide a full mix and range of housing options, including affordable and rental housing;
- To promote and strengthen community identity and cohesion by supporting mixed use community nodes, a high quality public realm and stronger connections and public access to the Lake Simcoe shoreline;
- To ensure that new development contributes to building resiliency, reflects efficient land use patterns and mitigates the impacts of climate change;
- To ensure that new development is integrated with existing land uses in a logical, orderly and efficient manner, and is coordinated with planning for transportation and municipal services;
- To ensure the provision of an accessible, efficient, connected and multimodal transportation network, that supports pedestrian-oriented environments and gives priority to the creation of complete streets and the provision of active transportation and transit infrastructure;
- To ensure that Keswick develops in a manner that promotes a competitive and adaptable economic environment that protects for future employment generating activities, encourages investment, provides a diversity of business and employment opportunities and incorporates high quality broadband connectivity; and,
- To protect the health and connectivity of Lake Simcoe and the Natural Heritage System and Parks Network, including public parks, open space and natural heritage and hydrologic features and their functions.



A pedestrian-oriented environment encourages walking and daily physical activity.

## 1.4 Urban Structure

Keswick's urban structure helps to organize the distribution of land use and identifies a number of key geographic components of the community that identify where growth will occur.

### **The Settlement Area Boundary**

The Settlement Area Boundary establishes the jurisdictional extent of this Secondary Plan.

### **The Urban Service Area Boundary**

Development on lands within the Urban Service Area Boundary are to be serviced by municipal sewer and water supply services. The Urban Service Area Boundary coincides with Settlement Area Boundary.

### **The Natural Heritage System and Parks Network**

The Natural Heritage System and Parks Network provides an important structural element throughout Keswick, and includes lands designated Environmental Protection Area and Parks and Open Space.

### **The Delineated Built-up Area**

The Delineated Built-up Area was defined in 2006 by the Province in order to identify those areas within the Settlement Area Boundary where the intensification target is to be measured.

### **The Designated Greenfield Area**

The Designated Greenfield Area includes those areas within the Settlement Area Boundary that are outside of the Delineated Built-Up Area.

### **The Local Strategic Growth Area**

The Local Strategic Growth Area are lands which have been identified as the focus for accommodating intensification, higher-density and a mix of uses in a more compact built form.





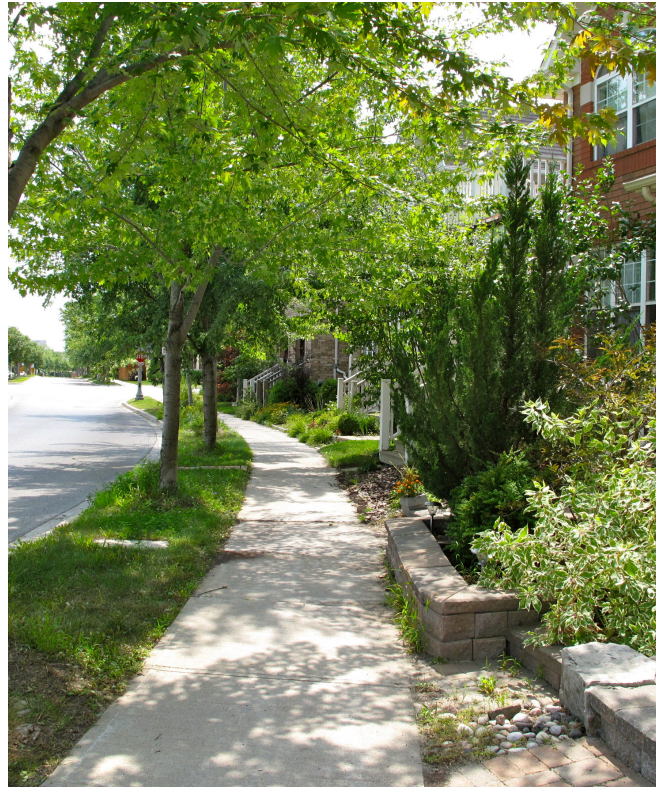
## 2. THE PUBLIC REALM

As the population of Keswick continues to grow, it will require a public realm that continues to support the needs of its existing residents, new residents, and visitors. The public realm comprises public roads, lanes, parks and open spaces, natural heritage features and their associated buffers, stormwater management facilities, and the public use activity areas of other public lands and private development sites and buildings. Moving people efficiently through the community and providing a variety of public spaces for socializing and recreation are key priorities that form the basis of the public realm guidelines.

The guidelines will be considered when municipal initiatives or private development applications impacts elements of the public realm.

### 2.1 General Guidelines

1. Encourage opportunities for vibrant, diverse and pedestrian-oriented urban environments that provide for public safety, changing experiences, social engagement, and meaningful destinations.
2. Provide for mixed-use neighbourhoods that are walkable with connected public gathering places, where opportunities for social interaction are increased and services can be provided within easy walking or cycling distance or by use of public transit.
3. Promote internal connectivity and multiple connections to the community at large, taking into account the existing and proposed urban structure of adjacent and adjoining areas.
4. Provide for an interconnected network of sidewalks, bicycle routes, transit, and multi-use trails ensuring proper integration with surrounding neighbourhoods and a variety of destinations, allowing for continuous movement throughout the community.



Street trees provide shade over the sidewalk.



An enhanced public realm with plantings, decorative paving, and wood awning.

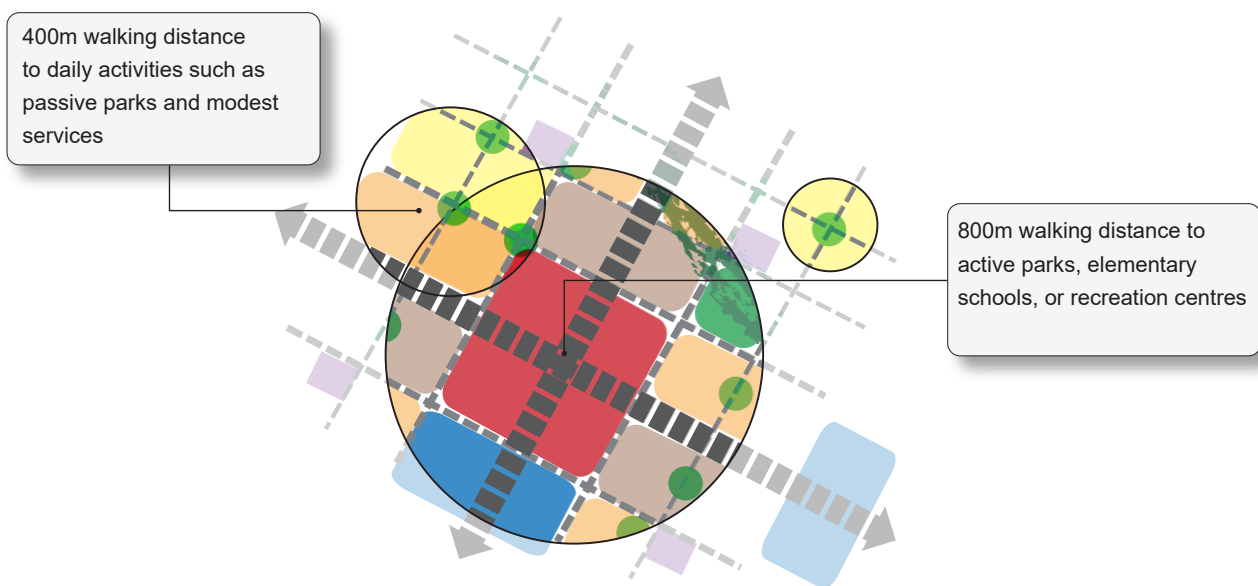
5. Ensure a typical walking distance of 400 metres (5 minute walk) to daily activities, such as passive parks, and modest services, or 800 metres (10 minute walk) to active parks, elementary schools, or recreation centres.
6. Design the street layout to ensure efficient walking routes to schools, centres, transit, and other key destinations. Continuous sidewalks, or equivalent provisions for walking should be provided on both sides of the road, where necessary.
7. Implement traffic calming measures in high activity areas, such as those around Urban Centres and Neighbourhood Centres, that may include on-street parking, reduced lane widths, public laneways, woonerfs, or home zones (i.e. the speed limit is under 15km/hr and vehicles must yield to pedestrians and cyclists), raised intersections, medians, curb bulb-outs, and/or traffic circles to reduce vehicular traffic speeds and to ensure safe walking and cycling environments.
8. Provide neighbourhood permeability by designing blocks to be between 150 to 250 metres in length to promote active transportation, discourage excessive driver speed, and disperse traffic movements.

## 2.2 Guidelines for Roads

Refer to Appendix A of the Town of Georgina Development Design Criteria for typical road cross sections in the Town. Regional Roads are under the jurisdiction of York Region and reference shall be made to those standards. The specific technical details of the road cross-sections (i.e., engineering standards) will be determined through the appropriate design review process.

### 2.2.1 General Guidelines

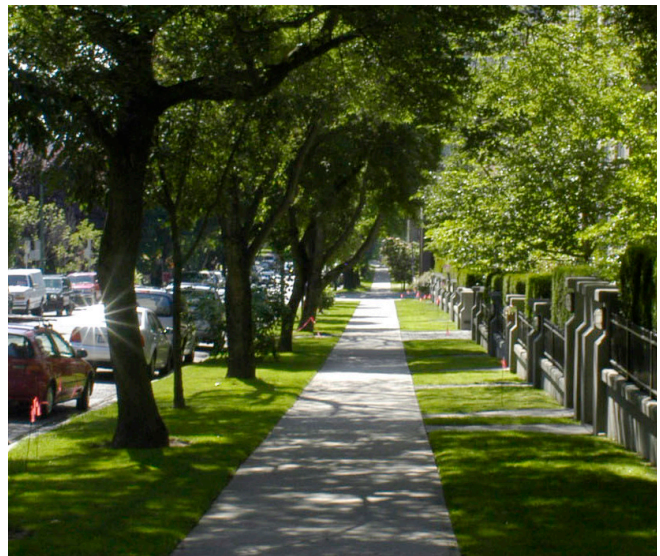
1. Design a permeable network of roads with strong links and route choices between urban and neighbourhood centres, mixed use corridors, and neighbourhoods.
2. Design the road and block pattern to emphasize connections and walkability both internally and with surrounding neighbourhoods, through a grid or modified grid pattern discouraging cul-de-sacs, p-loops and crescents, except where necessary due to grading and topography.
3. Avoid back-lotting or reverse lot frontages where feasible, and is not considered unless demonstrated to be the only option.



Locating services and amenities within walking distance supports daily physical activity and reduces the reliance on the private automobile.



4. For blocks with grade-related residential units, encourage street and block alignments within 15-degrees of geographic east-west to maximize passive solar orientation of buildings.
5. Respond to natural heritage features in planning the road network and provide public streets along the edges of natural heritage features.
6. The design of all roads shall include defined and, wherever possible, continuous zones for plantings, street furnishings, utilities, pedestrian sidewalks, bicycle lanes, and vehicular pavements.
7. Construct all sidewalks to municipal standards and accommodate on all street types, generally on both sides of the street, to facilitate pedestrian and bicycle circulation.
8. Plant street trees to create and enhance the urban tree canopy while providing shade over sidewalks.
9. Road design for Arterial and Collector Roads is encouraged to include a raised centre median, with a minimum width of 4.0 metres, and will include trees, shrubs, and ground covers. Centre medians should be used to signify a gateway or entrance to a centre or a neighbourhood.
10. Introduce green infrastructure, such as bioswales, within the public right-of-way to enhance ground water infiltration and improve water quality as part of a comprehensive water management plan.
11. Terminate roads at public facilities or landmark buildings, where possible.



Large canopy trees provide shade over the sidewalk.



Planted median used to signify an entrance to an urban centre.



Local Road with a bioswale in the right-of-way to assist with run-off and infiltration.



## 2.2.2 Regional Roads

Regional Roads are primarily envisioned as providing routes for vehicles, pedestrians, and cyclists through Keswick and across Georgina.

1. Regional Roads, such as Woodbine Avenue, Old Homestead Road, and Ravenshoe Road are primarily designed to function as transportation corridors providing routes for vehicles, pedestrians, and cyclists through Keswick and across Georgina.
2. Regional Roads are intended to accommodate large volumes of traffic and generally have a right-of-way-width of up to 36.0 metres.
3. Regional Roads will be designed to Regional standards and access to individual properties may be permitted although the number, design, and location of access points will be controlled.

## 2.2.3 Collector Roads

Collector Roads connect to Arterial Roads and provide primary connections to Local Roads.

1. Collector Roads generally have a right-of-way width of 23.0 to 30.0 metres.
2. Collector Roads may include optional 3.0 metre on-street parking on both sides of the road.
3. Collector Roads have boulevards on both sides of the pavement and accommodate a grass verge with street trees and minimum 1.5 metre sidewalks on both sides. Provide separated or shared space for cyclists with or without separation from traffic lanes.
4. Transit facilities may be accommodated on all Collector Roads.
5. Limit individual direct access to any development site to minimize disruptions to traffic flow and to maximize safety and the attractiveness of the road.
6. Ensure buildings that abut Collector Roads present a facade with architectural detailing and landscape features that address the road frontage.



Collector Road lined with rear lane live-work units and lay-by parking.



## 2.2.4 Local Roads

Local Roads provide the fine-grain transportation network for the community, connecting to Collector Roads and linking with public spaces.

1. Local Roads generally have a right-of-way width of 18.0 to 20.0 metres.
2. The road surface will be a maximum of 8.5 metres, including a parking lane on one side of the road, that could alternate to both sides of the road.
3. Local Roads have boulevards on both sides of the pavement and accommodate a grass verge with street trees and a minimum 1.5 metre sidewalk on either the north or east side of the road.
4. Accommodate parking on Local Roads adjacent to centres, corridors, and main streets. On-street parking may be accommodated on both sides of the road.
5. Individual direct access onto Local Roads is permitted.
6. Ensure buildings that abut Local Roads present a facade with architectural detailing and landscape features that address the road frontage.



A Local Road with street tree planting.

## 2.2.5 Main Streets

The Queensway provides a north-south route through Keswick, including all three Urban Centres - the Glenwoods Urban Centre, the Maskinonge Urban Centre, and the Uptown Keswick Urban Centre.

The character of The Queensway within the Urban Centres is that of a pedestrian scale Main Street with small scale street-oriented built form. These centres have an urban character and serve the needs of the existing neighbourhoods that surround them.

1. Design Main Streets to include the following:
  - a. Traffic calming measures at intersections;
  - b. Tightly spaced street trees in planters and continuous street pits;
  - c. Wider sidewalks with a minimum width of 1.8 to 3.0 metres in high pedestrian areas in Urban Centres particularly where retail is provided along the street;
  - d. Coordinated street furniture, lighting, and signage; and,
  - e. On-street and lay-by parking areas.



A Main Street with strong street presence through street parking, wide sidewalks, special paving, street trees, landscaping, and street furniture.

## 2.2.6 Window Roads

Window Roads are proposed in particular situations to avoid residential reverse lotting and frontages directly along arterial roads. Window Roads can be Collector or Local Roads that are typically single-loaded and are parallel to adjacent Regional Roads, and can be used along natural heritage features, to provide the opportunity to enhance the character of the community.

Window Roads are intended to provide a safe and comfortable pedestrian experience with allowances for driveway access from the road.

1. Window Roads generally have a 18.0 metre right-of-way with one lane in each direction, on-street parking and a 1.5 metre wide sidewalk on the residential side. A second sidewalk or, where feasible, multi-use trail will be integrated into the right-of-way of the adjoining Regional Road with direct pedestrian connections to the window street.
2. The boulevard treatment shall consist of street trees on the dwelling side boulevard and trees with buffer planting and low decorative fencing within a grass boulevard adjacent to the Regional Road boulevard. Landscaping of Window Roads shall be consistent in design.



Window Road with street trees and buffer plantings on the boulevard adjacent to a Regional Road.

3. Design of Window Road treatments shall take into consideration noise attenuation, grading issues, the need for headlight screening and safe pedestrian access into the neighbourhood.
4. Highlight pedestrian access points with decorative hard or soft landscaping.
5. Single-loaded Collector or Local Roads, adjacent to natural features will provide unobstructed views to the natural areas and, where appropriate, accommodate a trail along the edge of the street for active uses, such as walking and cycling.

## 2.2.7 Private Roads

The following guidelines apply to new roads which will not be owned or maintained by the Town and which facilitate access to new multi-unit residential, commercial, or mixed-use developments on private properties. The guidelines do not apply to historic private roads which facilitate access to existing development.

1. Private Roads generally have a right-of-way width of 9.0 metres with a minimum paved surface width of 6.0 metres.
2. Provide a minimum 1.5 metre landscaped utility corridor on either side of the Private Road.
3. Sidewalks are required on at least one side of a Private Road, and may be located within the utility corridor.
4. Consider the use of permeable or porous materials in areas where sufficient drainage exists.



## 2.2.8 Municipal Lanes

Rear Lanes provide significant benefits such as enabling continuous street tree planting and creating safer pedestrian environments through the removal of driveways from the street edge. Lanes may be used in key locations where private access along prominent streets should be minimized.

1. Provide Lanes along Regional or Collector Roads where garages and front driveways are not permitted, and in areas where driveways will detract from the character of a specific location, such as along a retail street.
2. Lanes generally have a right-of-way width of 8.0 metres with a minimum paved surface of 6.0 metres and a 1.0-metre utility corridor on either side of the Lane.
3. Consider the use of permeable or porous materials in areas where sufficient drainage exists
4. Any garage should be set back a minimum of 0.6 metres from the Lane right-of-way.
5. The desirable Lane length is a maximum of 150 metres to be consistent with fire hydrant spacing on road connections.
6. Consider Lanes in the rear of residential units facing Neighbourhood Parks.
7. Provide landscape areas in Lanes where possible to enhance lane appeal and promote their use as gathering and playing areas.



Lane with landscaping to enhance the visual appeal.

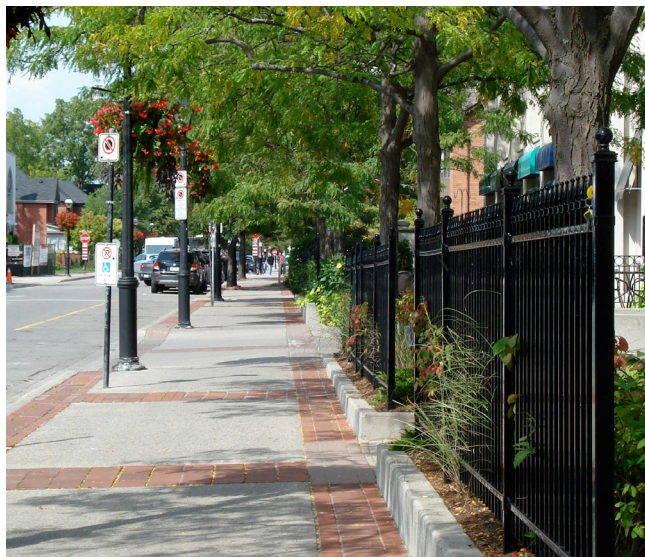


Lane with parking pad and private outdoor amenity space over the garage.





Decorative paving and wider sidewalks in Urban Centres.



Sidewalks with street trees to provide shade.



Planters and benches concentrated at key intersections in Urban Centres.

## 2.2.9 Streetscape Elements

### Sidewalks

1. Ensure sidewalks are continuous throughout the community and constitute an integral part of the pedestrian system to promote active transportation. Design sidewalks as follows:
  - 1.5 metres on Local Roads;
  - 1.5 to 2.0 metres on Collector and Regional Roads; and,
  - 1.8 to 3.0 metres in high pedestrian areas in Urban Centres particularly where retail is provided along the street.

In all cases, provide sufficient space for street furnishings, public utilities, lighting, tree plantings, and transit shelters.

2. In order to accommodate the needs of persons with disabilities and the elderly, design sidewalks to applicable municipal standards.

### Street Trees and Planting

1. Plant street trees to contribute to the urban tree canopy, to incorporate a buffer to separate the pedestrian from moving vehicles, and to create a canopy and shade over sidewalks in order to enhance pedestrian comfort and safety.
2. Where appropriate, use drought resistant and salt tolerant landscaping within medians to visually soften the pedestrian environment.
3. Utilize a comprehensive planting and soils strategy based upon species diversity, resiliency, and urban tolerance.
4. Consider a diversity of native tree species along each street.

### Street Furniture

1. Concentrate street furniture in areas with the highest pedestrian traffic, such as urban centres, key intersections, and parks.



2. Street furniture should include elements such as pedestrian scaled lighting, benches, bicycle racks, and trash bins and where possible, should be manufactured from recycled material.

### Wayfinding Signage

1. Develop comprehensive wayfinding strategies to include directional signage and mapping at key locations, such as mixed-use nodes, neighbourhood centres, and key intersections. Key destinations also include the waterfront, parks, public transit stations, community/recreation centres, and off-road trails. The purpose of wayfinding signage is take residents or visitors from one location to a desired destination by walking or cycling.
2. Create wayfinding signage from high quality materials and ensure it is easy to understand, highly visible, visually interesting, and aid pedestrians and drivers in navigating the area, especially at night.

### Pedestrian Crossings

1. In order to promote walkability and a pedestrian-focused environment provide formal pedestrian crossings at every four-way intersection in high pedestrian areas.
2. Provide signalized pedestrian crosswalks at locations where important destinations or significant walking traffic is anticipated, such as near retail shops, schools, and places of worship.

3. Ensure pedestrian crossings have a minimum width of 3.0 metres, are continuous, and connect to adjacent sidewalks.
4. To enhance the visibility and quality of pedestrian crossings, utilize distinctive feature paving to minimize the conflict between vehicles and pedestrians. This could include the use of alternative paving markings or materials. At a minimum, identify crossings with distinctive painted lines.
5. Minimize the height of curb cuts to facilitate wheel-chair and stroller usage in high pedestrian areas.

### On-Street Parking

On-street parking functions as a traffic calming device by slowing traffic and acts as a safety buffer by separating the pedestrian realm from vehicles.

1. Provide parking on the same side of the street as the sidewalk for Local and Collector Roads.
2. Provide lay-by parking or on-street parking bays on both sides of the road in the Urban Centres.



Lay-by parking in front of retail in an Urban Centre.





Integrate the natural heritage system with the community.



Incorporate recreational opportunities such as cycling trails within the natural heritage system to encourage physical activity.

## 2.3 The Natural Heritage System and Parks Network

The Natural Heritage System and Parks Network is a major functional, structural, and aesthetic component of Keswick and should be designed to provide a fair distribution of amenity spaces for a range of users.

The natural environment, urban forest, parks, open space, and trail systems are essential components of a healthy, sustainable community ensuring residents have convenient access to a connected and diverse range of recreational opportunities.

### 2.3.1 Natural Heritage System

The Natural Heritage System contributes to the community's character and is a key structural element of Keswick.

The following guidelines aim to protect, restore and enhance the Natural Heritage System, while mitigating any existing or potential negative impacts due to urbanization and development. They ensure natural heritage features are woven into the fabric of the community, providing important ecological functions, enhancements to community character through views, and recreational opportunities, where appropriate.

#### General Guidelines

1. As opportunities arise, connect and integrate the Natural Heritage System with the Parks Network and the local and regional trail systems to buffer and expand natural heritage features and functions, ensuring ecological systems are not interrupted.
2. Integrate the Natural Heritage System as a key structural element in each neighbourhood's design by providing for a range of development interfaces that create opportunities for public vistas and connections to the Natural Heritage System (e.g. terminal views at the end of prominent streets).
3. Incorporate recreational opportunities such as trails within the Natural Heritage System to encourage physical activity, where negative impacts will not occur.



4. Provide frequent access points to, and significant street frontage along, NHS areas to promote views, where appropriate.
5. Provide naturalization planting and restoration to enhance the urban ecology and function of natural heritage features and their adjacent lands.

### Woodlands

1. Preserve and expand existing tree cover to connect and buffer protected woodlands and other natural areas and to mitigate heat island impacts.
2. Provide opportunities for naturalized plantings and landscape restoration to enhance and help to establish local ecological features.
3. Prevent direct access from private properties backing onto woodlands.
4. Locate pedestrian access to trails where there is no long term impact to the existing vegetation and wildlife communities.
5. Lighting within woodlands is discouraged to protect ecological features and functions of the natural setting.

### Urban Forest

Trees provide ecological services that benefit human and environmental health, such as reducing heat island effect, sequestering greenhouse gases, providing shade in the summer, separating pedestrians from vehicular traffic, and contributing to more appealing sidewalks and streets.

1. Provide robust species selection to anticipate climate change conditions and operational constraints.
2. Provide street trees on both sides of the road in the public right-of-way.
3. Encourage a diversity of tree species along each road, native to the Municipality and Region, non-invasive, drought and salt tolerant, and low maintenance.



Opportunities for walking trails through the natural heritage system.



Trails to the natural heritage system should be connected to the public sidewalk.



Street tree canopy contributes to the urban forest.





Street tree canopy in a planting trench with low shrubs.



Houses fronting the park and trail system.



Houses overlooking a playground.

4. Plant a double row of trees in key areas, such as adjacent to parks and where a wider boulevard exists.
5. Encourage the delivery of alternative planting strategies along high-pedestrian areas such as silva-cells, sufficient soil medium, continuous planting trenches, etc., to sustain long-term growth and healthier tree life.

## 2.3.2 Parks Network

A Parks Network is connected to the natural environment, and throughout the community, and provides for a variety of open spaces, parks, and recreation facilities to support opportunities for improved public health. Convenient access to these amenities encourages residents to walk and cycle, in addition to providing places for gathering, socializing, and active and passive recreation.

1. Incorporate the following Crime Prevention through Environmental Design principles into the design of parks:
  - Ensure clear views into and out of surrounding areas, including:
  - Adequate lighting to illuminate paths;
  - Buildings oriented to overlook public spaces. Playgrounds should be highly visible to public streets and/or houses to enhance safety;
  - Proper site design and signage for ease of access and egress; and,
  - Program parks with a mix of activities for constant use of the space.
2. Ensure new trees and landscaping within parks are native plant materials, and where possible, salvaged from the site or the local area.
3. Provide lighting that is Dark Sky/Nighttime Friendly compliant.
4. Incorporate LED lighting or solar powered lighting for natural trails, park pathways, and other public spaces to reduce electric energy supply in the public realm.



5. Consider public art as focal points in open spaces to reflect the cultural heritage of the location. Public art can include memorials, sculptures, water features, or individual installations at visually prominent sites.
6. Locate and design parks and open spaces to support, complement, and buffer the Natural Heritage System

### 2.3.3 Community Parks

1. Community Parks are intended to primarily serve the broader community and shall generally be between 4.0 to 8.0 hectares in size.
2. Locate Community Parks at the intersection of arterial or collector roads, with significant frontage for easy access to the surrounding neighbourhoods and/or a defined service area.
3. Consider locating Community Parks adjacent to secondary schools to allow for shared use of facilities and parking.
4. Link Community Parks to the Natural Heritage System and pedestrian and bicycle trails, where feasible.
5. Direct lighting for sports fields within Community Parks away from the Natural Heritage System and designed to minimize disturbance to adjacent properties.
6. Consider incorporating community facilities such as community centres, recreation centres, and/or arenas in a Community Park.
7. Community centres or recreation centres in Community Parks will be designed such that the building addresses the principal street edge and provides sidewalk connections to adjacent transit stops to create a pedestrian-oriented public edge. Multi-storey buildings are encouraged to make efficient use of land and contribute to a compact built form.
8. Consider community gardens in Community Parks to encourage social interaction and provide access to locally grown produce.



Public Art serves as a defining feature for a public park.



Pathways in a park encourage safe and efficient pedestrian circulation.



Parks located adjacent to the natural heritage system.

### 2.3.4 Neighbourhood Parks

1. Neighbourhood Parks are intended to primarily serve local residents within a 10 minute walk (approximately 800 metres) and shall generally be between 1.5 to 2.0 hectares in size
2. Plan Neighbourhood Parks as focal points of neighbourhoods, preferably centrally located at the terminus of a major street or at the corner of a main intersection, and within walking distance of schools and other community amenities and destinations.
3. Ensure Neighbourhood Parks have significant frontage on adjacent streets to promote views and reinforce their focal nature. Street frontage shall not be less than 30% of the park perimeter.
4. Locate Neighbourhood Parks adjacent to school sites, where appropriate, to allow for shared amenities, such as parking lots and recreational fields. Recreational fields shall be constructed using appropriate durable turf treatments to minimize maintenance and extend the life of the field.
5. Provide on-street parking adjacent to the park to create a barrier edge. Parking can be either lay-by parking or on-street, depending on the scale of the park and the nature of the streetscape.
6. The backing of residential lots onto Neighbourhood Parks is discouraged.
7. Coordinate the design of park structures, such as gazebos, with other neighbourhood elements such as transit stops and community mail boxes.
8. Include a range of active and passive recreation, such as playgrounds, courts, walkways, seating, planting areas, and/or natural or cultural features in Neighbourhood Parks.
9. Provide bicycle parking in Neighbourhood Parks. Bike racks should be accessible and conveniently located adjacent to play areas and park entrances, with hard surfaces under the bike rack.



Residential fronting onto the Neighbourhood Park, with areas for seating and shade.



### 2.3.5 Village Greens

1. Village Greens are intended to primarily serve higher density areas with a more urban character and/or where the provision of a neighbourhood park is not practical or feasible.
2. Village Greens may be less than 0.5 hectares in size and are generally located within urban centres and mixed use corridors and planned as active use spaces with playgrounds, seating areas, and walking paths.
3. Ensure Village Greens have street frontage on at least two public streets, three is encouraged.
4. Locate Village Greens to achieve significant public exposure and access. Urban design options include surrounding the park with streets or fronting dwellings directly onto the Village Green to create visually attractive 'edges' to these spaces and eyes-on the park.
5. Design Village Greens to enhance the character of the adjacent land uses, provide spaces for gathering, areas for seating, plantings to provide shade over seating areas or along pathways, and active use spaces.
6. Ensure Village Greens complement and enhance the surrounding public realm by integrating the design of landscape treatments such as built form features, site furniture, and landscape elements with adjacent streetscapes and public spaces.
7. Connect formalized paths within Village Greens should connect to pedestrian sidewalks and trails.
8. To ensure utilization and presence, the Village Green should be fronted by animated uses with a consistent building setback and a high level of transparency. These would be in high pedestrian areas with uses such as restaurants and cafes, preferably with some outdoor seating areas.



Active recreation through the use of playgrounds.



Residential surrounding the Village Green.



Provide areas of shade and seating in Village Greens.





Larger urban Village Greens with distinctive and high quality paving can be used to hold large-scale, occasional events, such as a farmers market.



Pedestrian linkage that connects to the Natural Heritage System.



Open space linkages support active transportation and should connect to the natural heritage system.

9. When located in an Urban Centre, use distinctive, high quality paving treatments for the Village Green, with consideration given to extending the paving treatment onto the street to give the space further prominence. This additional area would delineate an extended space that could be occasionally utilized for large-scale events such as a farmers market or festival.

### 2.3.6 Open Space Linkages

1. Open space linkages are linear parks that support active transportation, improve community connectivity, and link parks, open space areas, and the Natural Heritage System. Support community connectivity by providing frequent openings and access points along open space linkages.
2. Utilize utility corridors, abandoned railway lines, or easements for open space linkages to contribute to a continuous linear open space system.
3. Open space linkages may include multi-purpose trails intended for passive recreational purposes such as walking, jogging, cycling, and mobility aid riding. Design multi-use trails to accommodate a range of users and abilities and to be barrier-free, where appropriate.
4. Refer to Section 2.4.1 for additional guidelines for the pedestrian and cycling system.

### 2.3.7 Urban Agriculture

Urban agriculture provides the opportunity for an alternative use of green space and as a transition in land uses such as community gardens and traditional farm areas at community peripheries.

1. Promote initiatives such as sustainable food production practices as a component of a new development. Development plans and building designs shall incorporate opportunities for local food production through:
  - Community gardens;
  - Edible landscapes;



- Small scale food processing (i.e., community kitchens, food co-ops, community food centres);
  - Food-related home occupations/ industries;
  - Small and medium scaled food retailers; and,
  - Local market space (i.e., a farmer's market).
2. Incorporate urban agriculture as part of a neighbourhood's character and open space system, while also providing a transitional use between the natural and built environments. Measures to protect natural features must be considered.

### 2.3.8 Gateways

1. Design gateways to identify the intersection as an entry point into the community.
2. Incorporate gateway features, such as community signage, low walls, fencing or enhanced landscape treatment in the design of entry road intersections. Coordinate the design and materials with adjacent structures.
3. Include a planted centre median and other design features for gateways and entry roads into the community to signify their importance.
4. Utilize distinctive surface treatment for pedestrian crossings, including wider sidewalks, and connections to bus shelters at gateway intersections.

### 2.3.9 Views and Vistas

Enhancing the views of important community elements for residents can assist in the creation of a sense of place. The best way to achieve those views is through the orientation of streets and buildings.

1. Orient streets to maximize views to the natural heritage system and Lake Simcoe. These views are an opportunity to reinforce these natural elements as landmark features.



Urban agriculture as a component of the parks system.



Streetscape features to enhance a gateway entrance.



Natural heritage features should be located at the terminus of view corridors.





View across Cook's Bay.



Naturalized edge of a stormwater management pond.



Ponds should blend with the natural landscape.

2. Existing natural features should form the basis for directing views.
3. Protect significant views through the location and configuration of open space opportunities.
4. Where possible, site community buildings such as schools, churches, and community facilities as view terminations.
5. Design buildings that terminate views as special landmark buildings.

### 2.3.10 Stormwater Management Facilities

Stormwater management facilities should be developed in a manner that will yield the greatest environmental and amenity benefit to the neighbourhood, which can be achieved first through reducing stormwater run-off and flow to the ponds, and secondly, through the design and landscaping of the pond. These facilities promote sustainability by providing habitat, enhancing ecosystem structure and resilience, and managing stormwater on site.

1. Design stormwater management facilities as major open space features that provide passive recreational and educational opportunities, while augmenting the extent of the community's open spaces and associated microclimatic benefits.
2. Enhance views and access to ponds by designing a portion of the pond to be bounded by either streets and/or open space.
3. Pond Design and Landscaping:
  - a. Locate ponds off line and as buffering to environmental features;
  - b. Landscape ponds to contribute to the urban tree canopy, add to the natural features of the community, and support wildlife habitat;
  - c. In addition to functional objectives related to flow moderation and water quality, design ponds as key focal/visual features within the community; and,



- d. Design ponds as part of the overall pedestrian and trail system with view points and interpretive signage. Surround ponds with public walking or cycling trails and extend along stormwater channels.
4. Fencing of the entire perimeter of stormwater management ponds is discouraged, except where necessary along steep slopes, or the rear or flankage of residential property lines. Install 1.8 metre high black-vinyl-coated chainlink fencing along the property line where the stormwater management facility block abuts private property. It should be continuous with no gates permitted.
5. Fencing is not required along the property line where a stormwater management facility abuts a public park, open space, natural area, or road right-of-way.
6. Consider on-site treatment of stormwater through the use of green infrastructure such as bioswales, at source infiltration, and permeable pavement.
7. Design stormwater management facilities to blend with the natural landscape. Where feasible, conceal inlet and outlet structures using a combination of planting, grading, and natural stone.
8. Ensure the edges of ponds abutting natural heritage features remain naturalized.
9. Install signage at prominent locations along the road frontage or in an appropriate location along the interface between the pond block and the adjacent open space to ensure it is highly visible to the public. The purpose of signage is to identify the site as a stormwater management facility and raise public awareness of the functional aspects and related potential hazards of the facility.
10. Coordinate landscape components such as look-outs, seating areas, fountains and gazebos to complement the overall character of the pond.



Formal hardscaped paths, seating, and playgrounds are located around the perimeter of the pond.



Permeable pavers to support on site stormwater infiltration.



Ponds incorporated as an amenity, with trails and lookouts.





Pedestrian walkways through parks.



Clearly marked cycling lanes painted on the road.



Bicycle parking at transit stops.

## 2.4 Active Transportation

### 2.4.1 Pedestrian and Cycling Network

Encourage active transportation and support physical activity through the provision of a linked system of trails that ensure residents have increased access and mobility options to local destinations for work and play. The following guidelines should be considered in relation to the pedestrian and cycling network.

1. Create a continuous and diverse active transportation network of inter-connected pedestrian and cycling routes and trails, walkways, sidewalks, and bicycle lanes that link the community with surrounding neighbourhoods, integrate with existing and future public transit infrastructure, and connect to sidewalks and the open space system.
2. Encourage safe routes to schools by providing a network of connected local streets with inherent traffic calming measures. To ensure safe use by young pedestrians and cyclists, such measures may include reduced lane widths, raised intersections, slower vehicle speeds, on-street parking, and crosswalks.
3. Develop a cycling network that includes bike lanes and off-road cycling or multi-use trails that connect to existing bike lanes and trails. The standards of the York Region Pedestrian and Cycling Master Plan should be followed where appropriate.
4. Design shared off-street pedestrian and bicycle paths based on the requirements of the route. Provide a continuous, linked, legible, and clearly marked system of trails throughout the community as part of the open space network. Pedestrian and cycling lanes should be painted along multi-use trails or clearly identified by other means to minimize pedestrian and cycling conflicts.
5. Provide, where feasible, clearly marked bike lanes on Collector Roads and consider further separation by including a painted buffer.
6. Wherever possible, connect pedestrian and cycling routes with transit stops.



7. Design trails to be barrier-free and accommodate a range of users and abilities, where appropriate. Where possible, slopes, should be under 5%. Provide curb-cuts and other safety measures to improve access at road crossings.
8. Trails must be clearly signed regarding permitted uses and speed. Provide wayfinding signage and trail markers throughout the trail network.
9. Incorporate interpretive signage on trails located in proximity to significant natural heritage features or adjacent to stormwater management facilities to educate and promote stewardship initiatives that will protect and enhance the features and functions of the natural landscape.
10. Consider special treatments at trail head entrances including features such as landscaping, benches, natural or built shade structures, decorative paving pattern, interpretive or directional signage, or wider pathway widths.
11. Design trails to minimize and mitigate impacts on natural heritage features. Consider the use of low impact materials such as wood chips, limestone screenings, or permeable materials for trail construction in areas where sufficient drainage exists.
12. Trails with asphalt surfaces may be incorporated into the trails system to address accessibility and active transportation needs.
13. Provide lighting for pedestrian safety along primary connecting trails. Lighting is not acceptable in natural heritage features.
14. Avoid constructing trails in low-lying areas. Where they do occur, implement boardwalks, bridges, culverts, and swales as support systems.
15. Along trails abutting natural features use native, non-invasive species that can contribute to the urban tree canopy and shade trails.



Trail designed to accommodate a range of users.



Wayfinding signage at a trail head.



Trail designed using permeable materials.







### 3. THE PRIVATE REALM

The private realm within Keswick is comprised of the built form and site design within development blocks and their relationship to adjacent open spaces and roads. The residential, institutional, commercial, and mixed-use buildings within a community contribute to its character and can assist in further defining and complementing the public realm. The design of development within the private realm shall be based upon principles of place-making and design excellence.

#### Place-Making

Place-making involves a multi-faceted approach to the planning, design, and management of private development. Place-making involves creating quality spaces that recognize and enhance a community's unique aspects. The unique aspects of a neighbourhood contribute to creating a recognizable and defined character which are collectively experienced from the viewpoint of the public realm.

#### Design Excellence

Good urban design practices will promote excellence in the design of the private realm. While the specifics of each development proposal may vary, the overall objectives will remain the same throughout Keswick. These objectives include:

- Creating distinctive, appealing, and pedestrian friendly streetscapes through attention to building design and detailing;
- Ensuring appropriate massing, materials, building siting, and design compatibility; and.
- Identifying enhanced design requirements for priority lots having highly visible elevations.

This section of the document provides guidance for the design of built form in the private realm and how it should address roads and open spaces. These Guidelines are to be read in conjunction with the policies of the Keswick Secondary Plan.

The guidelines will be considered and implemented through the review of development applications within the private realm which are visible from the public realm.



Townhouse units fronting onto a pedestrian walkway.



Four storey apartment building with an articulated facade.





Example of a Mid-rise building.



Multi-storey mixed use buildings with activity at the ground level.



Public art in an urban centre acts as a focal point.

## 3.1 General Guidelines for all Development

All development shall ensure excellence in design, be designed to achieve a high degree of environmental sustainability and demonstrate high quality architectural detailing, in accordance with the following guidelines.

### 3.1.1 Urban Centres and Mixed-Use Corridors

1. All development within the three Urban Centres: Glenwoods Urban Centre, Maskinonge Urban Centre, and Uptown Keswick Urban Centre; and the two Mixed-Use Corridors: The Queensway and Woodbine Avenue, shall be compatible with adjacent uses. Any proposed new development will have regard for adjacent low-rise residential built forms, with respect to existing building mass, height, setbacks, orientation, landscaping, and visual impact.
2. All development shall demonstrate design excellence and compatibility with its surrounding context. Architectural detailing, landscape treatments, colour, and building materials shall be representative of the highest quality possible.
3. Locate higher density forms of development, mixed uses, and live-work units in Urban Centres, along Mixed-Use Corridors, and at gateways to create areas of community focus.
4. Promote multi-storey buildings that create an urban street condition with building façade proportions that contribute to a comfortable pedestrian experience.
5. Encourage public art in Urban Centres and Mixed-Use Corridors, and as focal points in open spaces to reflect the character of the location. Public art can include memorials, sculptures, water features, murals or individual installations at visually prominent sites.



6. Ensure all buildings abutting The Queensway include the use of quality materials, articulated façades with window displays, and high activity uses at-grade, such as retail stores and restaurants, to animate the streetscape.
7. Ensure access from sidewalks and public open space areas to primary building entrances is convenient and direct, with minimum changes in grade. Entrances shall be accessible to people who are mobility challenged.
8. Ensure primary entrances to buildings are clearly visible, include lighting, and are located on a public road or onto public open spaces in order to support public transit and for reasons of public safety and convenience. Secondary doors, such as those that face a parking area, emergency exits, or service doors should be designed to blend in with the building façade.

### 3.1.2 Neighbourhoods

1. New residential blocks shall contain a mix of dwelling types with a variety of elevations to ensure a diverse housing stock and to avoid a homogeneous streetscape.
2. Residential lots should be generally simple and rectilinear however, variations are permitted if deemed necessary based on environmental features, topography, property boundaries, or other limiting features.
3. Ensure appropriate transitions in terms of height and massing between buildings of different densities, particularly if they belong in the same block.
4. Townhouse built forms may be used to transition from low-rise neighbourhoods to denser areas with mid- and high-rise buildings.
5. Rear Lane vehicular access is encouraged for grade related residential development to provide for a more pedestrian-friendly streetscape.



Mix and variety of housing types.



Example of Live-work units.



Example of a single detached unit.



### 3.1.3 Cultural Heritage

The development and sensitive integration of new buildings and landscapes shall ensure that adjacent cultural heritage resources are respected, protected, and enhanced.

1. Encourage the adaptive reuse of heritage structures, where appropriate. Relocation is encouraged only where maintaining the original location is not feasible.
2. The retention, restoration, and adaptive reuse of existing heritage buildings in their original locations is a priority to provide a tangible example of the cultural heritage of the area.
3. Where cultural heritage resources have been identified, new development shall provide a transition in lot sizes, setbacks, massing, and grading that complements the cultural heritage resource.
4. For new buildings located adjacent to cultural heritage resources, ensure that designs are complementary to existing heritage buildings with respect to colour and material palettes.



Adaptive reuse of a heritage home incorporated into the community.

## 3.2 Site Planning

Site planning plays an important role in how a development is experienced and how it functions, including elements such as building placement, site access, and landscaping.

### 3.2.1 Site Layout

1. Encourage community permeability by providing internal pedestrian connections through development sites which connect to external sidewalks, parks, and trails. These mid-block connections shall be a minimum of 4 metres wide, with a paved path of at least 2 metres.
2. The edges of a development, either residential or non-residential should reflect and complement the type of use at grade.
3. In order to minimize the visual impact of long blocks, the lots located on the end should be turned 90-degrees to face the flanking road.
4. Provide a safe, clear, and accessible site circulation system for pedestrians, cyclists, and vehicles, including connections to the surrounding street network, public sidewalks, transit stops, and parking areas. Pedestrian and bicycle movements should be prioritized through design and signage.



Turn lots on the end of the block 90 degrees to minimize the visual impact of long blocks.

5. Create a pedestrian-scaled environment by arranging buildings to create comfortable and protected pedestrian spaces that provide a sense of enclosure.
6. All pedestrian connections and entrances shall be universally accessible. If ramps are needed, they should be incorporated into the building design. Walkways should be distinguished from driveways through a change in material or by using a planted or sodded edge.
7. In mixed-use areas consider flexible spaces or opportunities to reclaim or re-purpose underutilized roadways and excess parking spaces. These roadways and parking spaces may be used to create additional public space for benches, planters, landscaping, bicycle parking, and café tables seating, where feasible.
8. Enhance wayfinding by using buildings as gateways and landmarks, public spaces as focal points and streetscapes to frame significant views.
9. The design of shared mailbox facilities should consider:
  - a. Locations where they act as an integral component of the streetscape, or in central areas such as an amenity area or park space. Seating and waste receptacles may be provided, where appropriate; and,
  - b. Including landscaping and/or privacy fencing as a buffer when located at a corner or end lot.

### 3.2.2 General Site Landscaping

Landscaping design should reinforce the structure of the site with a focus on creating a safe, comfortable, and animated pedestrian environment.

1. Develop a comprehensive strategy for planting, built features, fencing, walls, paving, lighting, signage, and site furnishings.



Example of a site layout illustrating building placement, access, and landscaping.





Amenity areas and green roofs in a high-rise development.



Low wall and plantings define the private and public realms.



Street tree planting to buffer the sidewalk from the street.

2. Base planting strategies on year-round interest, hardiness, drought, salt and disease tolerance, and bio-diversity.
3. Preserve, protect, and incorporate existing healthy and mature trees into the building and landscape designs.
4. Minimize the use of hard, paved areas to reduce surface run-off and heat island effect. Permeable paving should be used wherever possible.
5. High-quality, durable materials are to be used for all landscape features such as paving, fences, walls, planters, site furniture, and shade structures.
6. Residential units should include landscaping elements, such as steps, low walls, and plantings to delineate private front-yards and to provide a transition between private areas and the public realm.
7. Consider green roofs for mid- and high-rise buildings. This will assist with reducing heat island effects and improving air quality and noise insulation.
8. Incorporate a combination of soft landscaping, planters, and trees along non-residential frontages to delineate and differentiate private open spaces, entrances, and individual units at grade.
9. Appropriate planting conditions such as soil depth, volume, and growing mediums must be provided for successful landscapes.
10. Provide a photometric plan that coordinates site, building, and landscape lighting to ensure pedestrian safety and comfort.
11. The design of lighting shall avoid light spill over onto abutting properties, and most importantly, adjacent residential neighbourhoods.



### 3.2.3 Fences and Walls

1. The design of fences and walls should be coordinated with building design and site layout.
2. Corner lot privacy fencing for single detached, semi-detached, and townhouse dwelling units shall be provided in accordance with the following criteria:
  - a. Provide for screening of rear yard amenity areas on all corner lots where the rear yard is exposed to the street;
  - b. Ensure the fence meets the side of the house at the rear corner of the unit;
  - c. Ensure a height of 1.8 metres or as recommended in a noise attenuation report approved by the Town;
  - d. Fencing must be consistent throughout a development;
  - e. Design to include a gate on the portion of the fence that returns from the lot line to the side wall; and,
  - f. The exact location and design of corner lot privacy fencing will be approved by the Town and reflected in the Subdivision Agreement.
3. Avoid using noise attenuation fences or walls if possible. Noise attenuation fencing shall be provided if no other solution is possible and should integrate pedestrian connections to the adjacent communities, as appropriate.
4. Where noise attenuation fences or walls are used they should be integrated with the design with their surroundings. Coordination in the design, colour, texture, and plantings is encouraged.



Decorative fencing with a gate.



Side yard fencing.



Noise attenuation fencing .





Single detached dwelling with front porch and side driveway.



Example of an upgraded elevation with variety in roof lines, materials, and a front porch.



Example of a semi-detached dwelling.

### 3.3 Low-Rise Buildings

The following guidelines apply to low-rise buildings up to 3 storeys in height.

#### 3.3.1 General Guidelines

1. All low-rise buildings shall demonstrate design excellence and compatibility with the surrounding context. Architectural detailing, landscape treatments, colour, and building materials shall be representative of the highest quality possible.
2. The height difference between adjacent low-rise buildings on the same block should not vary by more than 1 storey to maintain a consistent street wall.
3. Where side and rear elevations of units are exposed and visible from a public space or visible from a Regional Road, they shall have upgraded elevations that are consistent and continuous in design, quality, and material as the front elevation.
4. Locate garages and driveways on a Local Road or Rear Lane, off Arterial or Collector Roads.
5. Screen utility meters, air conditioning units, and similar features from public view and integrate into the design of dwelling units through the use of wall recesses, enclosures, screening, or inseting within the building walls. Rear lane units shall locate utility meters at the rear lot line.

#### 3.3.2 Typologies

##### 3.3.2.1 Single Detached, Semi Detached, and Duplex Dwellings

1. Design dwellings to frame the street edge with a consistent setback, and have front doors, windows, and entry features facing the road to create a consistent street wall.
2. Design the front elevation of the dwelling so that its front entrance and architectural elements reduce the visual dominance of the garage and driveway.



3. Garages shall not protrude beyond the main front wall of the dwelling unit. Garages shall be set behind or flush with the main building face or accessed from a rear lane.
4. The setback to the main building face should be 3.0 to 6.0 metres from the edge of the right-of-way. The main building face could be the main front wall, second floor room over or beside the garage, or a significant element such as a roofed porch or verandah.
5. Porches, stairs, canopies, and other entrance features may encroach into the required setbacks, a maximum of 1.5 metres.
6. Design driveways to reduce the amount of asphalt on front yards and enhance the visibility of the street.
7. Semi-detached and duplex dwellings with a front facing garage and driveway should pair the garages to maximize the extent of continuous green planting area.
8. Ensure semi-detached and duplex dwellings have a single unified roof form and continuous and consistent architectural details and materials for both dwelling units.
9. Duplex buildings shall have separate entrances for each unit.

### 3.3.2.2 Townhouses and Other Multiple Unit Dwellings

1. Coordinate the siting, massing, and facade design of townhouse units on a block-by-block basis.
2. Articulate the elevation of the townhouse block in a manner that provides variation between units with common characteristics that visually unites the block.
3. Utilize variety in the design of roofs through the use of traditional gables and dormers, or more contemporary designs that include cantilevers and parapet details to break up the massing of units within a block. The main roof should appear as one roof where possible and reflect the architectural style of the unit block.



Duplex building with two units.



Example of front drive townhouses.



Rear lane accessed townhouses.





Architectural detailing gives visual interest to the facade.



Corner unit with an upgraded elevation.



Live-work units with consistent architectural details on the facade.

4. Blocks of street townhouses should be limited to a maximum of 8 units, with 6 units preferred. The length of the townhouse blocks should not exceed 50 metres, unless it is essential to the architectural style of the townhouse block.
5. Orient blocks of attached townhouse units to the street with integrated front garages accessed from the street. For rear lane townhouses an attached or detached garage will be located at the rear of the block and accessed from a lane.
6. Front garages shall not exceed 50% of the width of the unit and should be paired to allow for more substantial front yard green space. Garages shall not protrude beyond the main front wall of the dwelling unit.
7. Orient the main front entry of interior units to the front lot line or higher order street. The entry of the end unit shall be oriented to the exterior lot line when on a corner lot. Where a dwelling unit flanks a private street or laneway, the main entrance shall face the front lot line.
8. Ensure rear lane accessed garages are complementary in design and building material with the principal dwelling.
9. Consider outdoor amenity areas in the form of second floor decks or rooftop patios for townhouses with an attached garage in the rear over traditional rear yard amenity areas.

### 3.3.2.3 Live-Work Units

Live-Work units introduce a flexible built form use that allows for the unit to be used fully as a residence or a residence above with retail, commercial or office uses at grade. Live-Work units are ideally suited for the mixed-use context in the Urban Centres and along the Mixed-Use Corridors.

1. Design Live-Work buildings to support pedestrian activity through minimal front yard setbacks, pedestrian weather protection such as canopies, and enlarged clear glazed windows and pedestrian-scaled detailing for commercial space.



2. Provide on-street parking by using lay-by parking with resident parking provided at the rear of the building and accessed from a lane or a private road.
3. Ensure Live-Work units have continuous and consistent architectural details and materials for the entirety of the block.
4. Screen mechanical equipment including air conditioning units and utility meters or locate away from public view.

### 3.3.2.4 Low-Rise Apartment Buildings

1. The design of the building and the site layout shall consider overall form, massing and proportions, and rhythm of major repetitive building elements to create a streetscape that supports the pedestrian scale.
2. The majority of the main building facade shall front the abutting street. The implementing Zoning By-law may establish a front yard build-within zone along the street line to ensure pedestrian comfort and streetscape activation.
3. Locate and orient primary building entrances to public roads and design to be visible and accessible to the public.
4. Locate a visitor drop off area at the side or rear of the building with lane access or private drive.
5. Locate parking below grade, where possible. Locate visitor parking, loading, and service areas in areas of low public visibility in side or rear yards and set back from the front facade of the building.
6. Where it is only possible to provide parking at grade, it shall be screened from street view through the use of landscaping, including features such as wrought-iron/metal fencing with masonry pillars and landscaping or a similar combination that is consistent with the building's architectural style.



Live-work units with lay-by parking.



Low-rise apartment with the main building facade abutting the street.



Low-rise building with balconies and entrances along the street.



### 3.3.3 Siting and Setbacks

1. Integrate existing topography and natural features into the development, and minimize alteration to the existing grading of the site, if feasible.
2. Locate dwelling units and townhouse blocks close to the street edge to create a pedestrian-oriented streetscape.
3. Orient dwelling units and townhouse blocks to face the public realm, and particularly any adjacent streetscape, pedestrian connection or open space, to promote a high level of comfort and create a safe environment.
4. Ensure the front yard setback of new units is consistent with that of adjacent units. If there are differing setbacks on adjacent lots, the new unit should be located to act as a transition between the differing setbacks.
5. Where infill development occurs through the severance of large lots into smaller lots, the resulting lots should reflect the rhythm and scale of lots in the surrounding area.
6. Where lot depths permit, dwellings on long, straight streets shall be designed to give the appearance of a diversity of setbacks, through architectural details and permitted encroachments.
7. The following elements may be permitted to encroach into front, rear, and exterior side yards, when appropriate:
  - Bay windows;
  - Balconies or decks; and,
  - Porches of up to 1 storey.
8. Where the first floor of the dwelling or townhouse unit is within 3 metres of a sidewalk, the entry of the unit shall be raised a minimum of 0.9 metres to a maximum of 1.2 metres above the sidewalk grade. The change of grade should be reinforced through landscaping features.
9. Maintain consistent side yard setbacks along the streetscape. If there are differing setbacks on adjacent lots, the side yard setbacks of new units should be the average distance of those on either side of the development.
10. Increase side yard setbacks at pedestrian links and public open spaces.
11. Low-rise developments are to have front-to-front or back-to-back dwelling configuration along streets, lanes, or around open spaces.
12. Avoid front-to-back façade configurations where possible. If necessary, the 'rear' facing units of front-to-back façade configurations are to include:
  - Recessed garages;
  - Enhanced landscaping; and,
  - Upgraded façades.
13. Locate built form to minimize the need for noise attenuation walls.
14. Upgrade the façade treatment for side and rear elevations visible from public areas.

### 3.3.4 Private Outdoor Amenity Space

The design of private outdoor amenity areas, such as balconies, terraces, back yards, or gardens provide an important extension to the livable space of a dwelling unit.

1. Design private outdoor amenity spaces to have direct access to sunlight and sky view.
2. Avoid a 'rear yard' condition along streets and parks/open spaces.
3. Locate private outdoor amenity spaces for family-sized units so that they have views and access to outdoor play areas, where possible.
4. Design roof top private amenity spaces to limit overlook into adjacent neighbourhoods.
5. Inset or partially inset balconies to offer greater privacy and shelter from wind, reduce the building bulk and minimize the impact of shadow on other amenity spaces below.



Garages should not dominate the facade.

### 3.3.5 Garages and Driveways

The design of garages can have a major impact on the visual character of the individual dwelling and the collective streetscape. A cohesive streetscape where garages compliment instead of dominate the streetscape is intended.

#### 3.3.5.1 Front Garages

In order to minimize the presence of the garage, the following guidelines shall be applied for attached and detached garages accessed from the front yard.

1. Ensure garages are a natural extension of the design, massing, and materials of the main dwelling.
2. Ensure garages are set behind or flush with the main building face and do not project beyond the main wall of the dwelling. Garage doors facing a public road should be setback a distance of 6.0 metres from the right-of-way.
3. Design attached garages as follows:
  - a. De-emphasize their presence on the streetscape by recessing garages 0.5 to 1.5 metres from the main wall of the dwelling;
  - b. Accommodate a maximum of 2 garage doors for garages fronting the road, with a maximum width 50% of the dwelling width.



Front garages flush with the front facade.



Glazed top panels in the garage door.





Attached garage setback from the main building face.



Detached garage with consistent materials as the main dwelling.



Detached rear lane garage with a secondary suite.

Three garage doors may be permitted for single detached dwellings on a large lot but is not encouraged;

- c. Include two single garage doors separated by a masonry pier for double garages;
  - d. Setback a second storey built over the garage a maximum of 2.0 metres;
  - e. Consider glazed top panels or transom lights for all garage doors, especially for traditional style dwellings; and,
  - f. Utilize a consistent garage door throughout a townhouse block.
4. Detached garages are only permitted in the rear yard and interior side yard.
  5. Design detached garages as follows:
    - a. Provide access from either a rear lane or the street by a driveway;
    - b. Provide main cladding materials consistent with those of the exterior of the main dwelling;
    - c. Create staggering garage door depths and planes, and varying roof styles and details along lanes;
    - d. Ensure a minimum setback of 2.0 metres from the dwelling;
    - e. Ensure a minimum setback of 1.2 metres from the side lot line; and,
    - f. Ensure a maximum height of 2 storeys.



### 3.3.5.2 Lane-Accessed Garages

Garages that are accessed from a laneway can either be detached or attached to the main dwelling at the rear. Attached garages can be set into the house with access at the rear, or they can be attached to the main dwelling through a breezeway which forms a side courtyard for amenity space.

1. The minimum setback for garages accessed by a lane should be 0.6 metres from the lane right-of-way.
2. Side yard setbacks may be a minimum of 1.2 metres if the garage has doors or windows facing the side yard.
3. Side yard setbacks may be a minimum of 0.3 metres if the garage has no doors or windows facing the side yard. A nil setback is allowed where the garages on abutting lots are attached.
4. Where possible, pair garages to allow for increased rear yards or an outdoor parking pad.
5. The maximum number of attached garages on adjacent lots should be three.

### 3.3.5.3 Driveways

1. Ensure driveway widths are no larger than the interior width of the garage. A maximum driveway width of 3.0 metres shall be permitted for single car garages and a maximum driveway width of 6.0 metres shall be permitted for double car garages.
2. Utilize light-coloured paving material for driveways to reduce heat island effect.
3. Utilize porous or permeable pavement for surfacing driveways and parking areas instead of asphalt and concrete to reduce stormwater run-off.
4. Locate driveways as far as possible from parks, open space features, public walkways, schools, and intersections.



Rear garage attached to the main dwelling through a breezeway.



Lane based garages in groups of three.



Light coloured materials reduce heat island effect.





Priority corner lot designed to address both streets.



Example of a Priority Lot Plan that locates corner lots, gateway lots, lots and facing parks.

### 3.3.6 Priority Lots

Priority lots are those which are situated in prominent locations and are highly visible from the public realm. Priority lots include:

- Gateway lots;
- Corner lots;
- Lots which terminate at “T” intersections;
- Lots facing, adjacent to, or backing onto parks, open spaces, and pedestrian links; and,
- Window street lots.

1. Architectural and siting treatments for priority lots are recommended in order to promote a defined and attractive streetscape with visual focal points.
2. Developers shall submit final approved draft plans to the Control Architect for the preparation of a priority lot map and unit designs.
3. Where a townhouse is sited on a corner lot, the end unit flanking a street is defined as a priority lot.
4. In cases where a semi-detached dwelling is sited on a corner lot, both units should be defined as a priority lot.

#### 3.3.6.1 Gateway lots

1. Dwellings on gateway lots shall be given special consideration in architectural design, massing, orientation, siting, and materials, and shall be of high architectural quality.
2. Utilize entry elements and porches to produce interest in the facade, as well as to help define the entrance to the neighbourhood.
3. Pair similar model units on lots directly opposite to each other to establish and enhance a gateway condition. Use stone or other quality materials as the main massing material for gateway units where possible.
4. Provide upgraded landscape features on gateway lots including decorative fencing, where appropriate.

5. Coordinate the materials of dwellings on gateway lots with those used on gateway features.

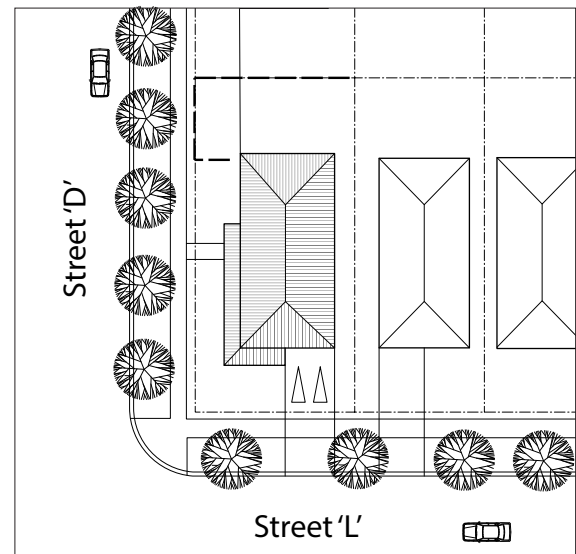
### 3.3.6.2 Corner lots

1. Wrap around windows, porches and other architectural treatments shall be considered for corner lot dwelling units.
2. Ensure active living spaces are designed for the rooms adjacent to the corner.
3. Locate main entry features on the flankage elevation where possible.
4. Coordinate privacy fencing design for all corner lots to prevent views into the private rear yard amenity area.
5. Articulate rooflines to include vertical features and elements such as a tower or turret, incorporate steeper roof slopes on traditional units, or break the roof plane in keeping with any wall projection for contemporary styles.

### 3.3.6.3 “T” Intersections

“T” intersections occur when one street terminates at a right angle to another.

1. Ensure the architecture on lots at the end of “T” intersections is of a highly articulated facade design such as coordinated fenestration, masonry detailing, and entry elements.
2. Incorporate special built form such as added height, turrets, or bay windows for “T” intersection lots.
3. Pair side yards to form a landscaped area at the terminus of the “T” intersection.
4. Locate garages away from the “T” intersection of the streets.
5. Provide larger front yard setbacks at the view terminus for “T” intersections.



Dwellings located at the intersection of two streets shall address both streets



Example of corner lot condition.



Dwelling unit at the end of a “T” intersection





A porch flanking a park creates “eyes on the park”.



An example of front porches overlooking amenity areas.



Main entrance to the townhouse unit is located on the side elevation facing the street.

### 3.3.6.4 Lots Adjacent to Parks and Open Spaces

1. Ensure front, side, and rear elevations exposed to public spaces such as neighbourhood parks and village greens are highly articulated. Utilize a combination of fenestration, bay windows, material changes, and dormers in addition to other design elements to achieve the objective.
2. Ensure side and rear elevations adopt a similar design and use materials that are consistent with those used on front elevations. Architectural detailing such as corbelling should continue from front to side elevations, where visible to the public.
3. Ensure the location of porches, windows, and entry doors for units surrounding parks and village greens maximizes opportunities for overview.
4. Locate driveways of adjacent dwellings as far away as possible from the public space.

### 3.3.6.5 Window Street Lots

1. Ensure units facing or flanking a Regional or Collector Road are of a high architectural quality and given special consideration in design, massing, orientation, siting, and materials.
2. For units flanking a window street, the main front door should be visible from, and oriented to, the exterior side elevation of the dwelling with access to the sidewalk. Ensure the entries are articulated through the use of entry features such as projecting porches facing the street.
3. Ensure garages are recessed from the front wall of the dwelling to reduce their presence on the streetscape.

### 3.3.7 Building Design

#### 3.3.7.1 Height and Massing

1. Ensure generally consistent height and massing along a street.
2. Provide appropriate transitions between all unit types to avoid drastic changes in height and/or massing.
3. Ensure appropriate design compatibility where different unit types are located adjacent to each other.
4. Limit the height of new dwellings in existing neighbourhoods to no more than one storey greater than the height of existing, adjacent buildings.

#### 3.3.7.2 Articulation and Architectural Features

1. For infill development, ensure the elevation design reflects that of the adjacent homes. For example, the vertical rhythm and horizontal expression of the windows and door should be similar to surrounding homes.
  2. For new subdivisions, the following requirements apply to single detached, semi-detached, and townhouse dwelling units:
    - a. Each model shall have a minimum of 3 distinct elevations;
  - b. Identical building elevations shall be separated by a minimum of 3 lots;
  - c. Both units of a semi-detached dwelling shall share the same elevation;
  - d. Both units on a semi-detached dwelling are considered one elevation and shall be separated by a minimum of 3 lots;
  - e. Identical building elevations may comprise a maximum of 30% of a street block;
  - f. Exterior colour packages for single detached and semi-detached dwellings shall be separated by a minimum of 3 lots; and,
  - g. In a townhouse block identical exterior colour packages shall be separated by a minimum of 2 units to avoid repetition and monotony along the streetscape.
3. Ensure façade details throughout all building elevations are consistent with their intended architectural style.
  4. Avoid mixing architectural styles within a single dwelling.
  5. Any masonry details shall project a minimum of 12 millimetres from the wall face.
  6. Provide high quality and complementary light fixtures at main entrances and above garage doors.



Both units of a semi-detached dwelling share the same elevation.



A block of townhouse units with a variety of elevations and colours.





Front porch highlights the dwelling entrance and addresses the street.



Low wall, plantings, and articulated front porch along the street.



Variety of porch railing styles.

### 3.3.7.3 Porches and Entry Features

1. Articulate front elevations by highlighting front entries with features like porches, verandahs, arches, generous overhangs and massing elements such as a cantilevered or recessed upper storeys.
2. Front entry features with more than three steps shall be poured in concrete with masonry casing.
3. Ensure steps from a front porch are not located closer than 1 metre from a property line.
4. To ensure porches and verandahs are useable they should be a minimum of 1.5 metres in depth.
5. Encourage the use of a variety of column styles such as single columns, double columns, and columns with a masonry base.
6. Provide porch railings which are pre-finished and maintenance-free. Encourage a variety of railing styles and materials such as pre-finished aluminum, vinyl, wrought iron, painted or natural wood, or glass.
7. Provide prominently displayed municipal address signage that is visible and legible from the street.
8. Ensure that porch base materials extend to grade and are consistent with the chosen architectural style.

### 3.3.7.4 Windows and Doors

1. Use consistent window types, shapes, and styles on all individual dwellings and townhouse blocks.
2. Provide large ground floor windows where appropriate to the selected architectural style.
3. Provide windows which are maintenance free, thermally sealed, double glazed, and either casement, single or double hung.
4. Avoid the use of black glass.



5. Incorporate transom windows where floor heights permit.
6. Position windows on interior side elevations away from the windows of adjacent dwellings.
7. Ensure the window frame colour is compatible with the exterior colour package.
8. Include main entry doors and doorways that are scaled to complement the building's facade. Avoid sliding doors on front and exposed elevations.
9. Incorporate sidelights and/or transoms in single entry doors. Where these are not possible due to floor plan arrangement, provide a vision panel (glazing) in the entry door.

### 3.3.7.5 Roofs

1. Utilize a variety of roof forms, including cottage or hipped roof, front gabled, side gabled, cross gabled, mansard and flat roofs. The chosen roof style and pitch should reflect and complement the dwelling's architectural style.
2. Utilize a variety of roof features including accent gables, dormers, porches, and variation of roof ridges.
3. Coordinate the roof material and colour for detached garages with the main building.
4. For townhouse blocks, emphasize individual units through the articulation of roof lines (e.g. variations in roof slopes at end units, dormers, differing roof pitches, etc.) while maintaining a consistent roof style throughout the same block.
5. Provide frieze boards below the house and garage roof eaves on front and flanking elevations, as the architectural style permits.
6. Ensure all roof vents and plumbing stacks blend with the roof colour and are located on the rear slope of the roof, away from public view, where possible.



Articulated front entry elements include front steps, roofs, variation in colour and materials.



Corner windows, turrets, and gable roofs provide variety.



7. Use only flush mount skylights and ensure their colours are similar to the colours of the roof tiles.
8. When solar panels are visible to the public avoid aluminum frames and white backing sheets. Choose colors that are similar to those of the roof tiles and, when feasible, set photovoltaic panels flush to the roof.

### **3.3.7.6 Foundations**

1. Exposed foundation walls are to be avoided.
2. The main wall cladding shall be a maximum of:
  - a. 10 inches (250 millimetres) from finished grade on elevations exposed to the public; or,
  - b. 12 inches (300 millimetres) from finished grade on interior or rear elevations not exposed to the public.
3. Foundation walls must be appropriately check-stepped along sloping grades.

### **3.3.7.7 Exterior Materials, Wall Cladding and Colours**

1. Ensure materials reflect and complement the architectural style of the unit.
2. For traditional styles, provide a variety of high quality and complementary wall cladding materials such as brick, stone, stucco or cementitious siding.
3. For contemporary styles, include materials such as brick masonry with smooth finishes, high quality stone cut to larger calibre pieces, wood corrugated steel panelling, marble, metal, concrete, and metal roofing.
4. A maximum of two main wall cladding materials shall be permitted on a unit, with a third permitted for accents and architectural details such as gables, box-outs and bay windows.
5. Incorporate metal flashing which matches wall cladding or roof material.

6. Encourage a variety of colour palettes that include different, but complementary tones.
7. Ensure soffits, eave troughs, frieze boards, and fascias are the same colour throughout the dwelling.
8. Ensure material changes on exposed elevations occur at transition points, such as a change of plane.
9. Ensure rear and side walls exposed to public view are of a similar composition to the front wall.

### **3.3.7.8 Utility Meters and Mechanical Equipment**

1. Where possible, locate utilities and meters in interior side yards, away from public view.
2. Locate utility and service meters discreetly by:
  - a. Integrating into the design of the building;
  - b. Screening through landscaping;
  - c. Recessing or enclosing in the porch entry or landing;
  - d. Installing below porch slabs and porch steps;
  - e. Grouping in one location in a wall recess, enclosure or, where appropriate, a small roof overhang; and,
  - f. Screening meters on exposed elevations by integrating them into a wall or below porches and steps, providing complementary landscaping, or placing them behind a change in plane towards the rear of the elevation.
3. Locate dryer vents, exhaust fans, furnaces and hot water tanks on rear elevations.
4. Locate air conditioning units in the rear yard, interior side yard, or on or under a rear deck.
5. For flat roofs locate air conditioning units on the roof, setback from the edge so they are out of sight from public view, where possible.

## 3.4 Mid-Rise and High-Rise Buildings

The following guidelines apply to mid- and high-rise built form. Mid- and High-rise buildings provide opportunities for framing and defining the public realm, while allowing for increased densities that more efficiently use land and infrastructure. They support mixed use communities, promote active transportation, and if done properly, generate livable pedestrian experiences.

Mid-rise buildings have a maximum height of 6 storeys and High-rise buildings have a maximum height of 12 storeys.

### 3.4.1 General Guidelines

1. Concentrate the greatest heights and massing along the frontage of a Regional, Collector, or Main Street.
2. Ensure the scale of mid- and high-rise buildings is compatible and sensitively integrated with surrounding residential uses in terms of building mass, height, setbacks, orientation, privacy, landscaping, shadow casting, accessibility, and visual impact.
3. To demonstrate mitigation of potential shadow or wind impacts on existing or proposed pedestrian routes, public spaces, and adjacent development technical studies may be required including a wind study and/or sun/shadow study.
4. Development transition requirements may be met using a combination of the following:
  - a. Separate mid- and high-rise buildings from low-rise buildings with a Local Road;
  - b. Locate less dense and lower scale buildings in locations adjacent to existing low-rise neighbourhoods;
  - c. Require a minimum 7.5 metre rear yard setback where mid- and high-rise development abuts low-rise properties;
  - d. Mitigate the actual and perceived massing impacts of a mid- and high-rise building by breaking up the mass



Example of stacked townhouses.



Example of a 6 storey mid-rise building.



Example of a 12 storey apartment building adjacent to low-rise.



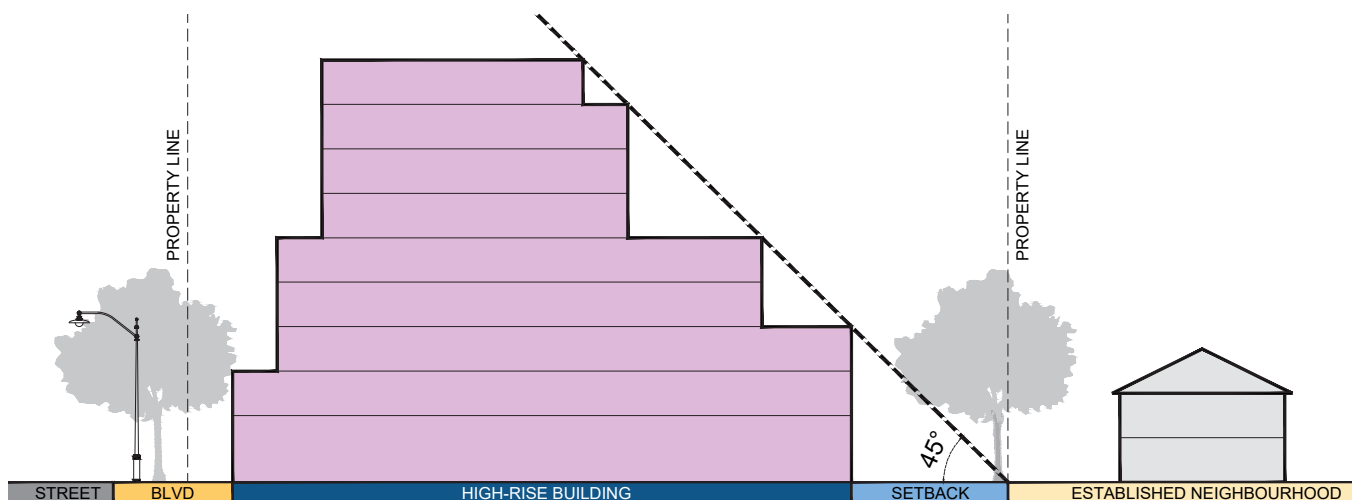
horizontally and vertically, through the creative incorporation of changes in materials, balcony and floor plate design, architectural features, and unit/amenity locations;

- e. Provide rear and side step-backs for upper storeys to provide contextually appropriate transitions from the mid- and high-rise buildings to the surrounding low-rise neighbourhoods; and,
- f. Provide high quality landscape treatment such as decorative fencing, trees, shrubs, grassed areas, and berming.



Use of step-backs to provide appropriate transition to adjacent uses.

- 5. Angular planes can be used as a tool to evaluate the massing and height transitions of proposed developments to ensure appropriate skyview, light, and separation. Development within the Urban Centres and Mixed-use Corridors shall apply a minimum 45 degree rear yard angular plane measured from the abutting property line where a building transitions to an adjacent low-rise residential area.
- 6. Ensure new development is compatible with adjacent and neighbouring development by siting and massing new buildings to avoid undue adverse impacts on adjacent properties particularly in regard to adequate privacy conditions for residential buildings and their outdoor amenity areas.
- 7. Use prominent built form to address gateway locations within the community. Within Urban Centres, 'paired' corner buildings on either side of a street to emphasize a sense of entry.
- 8. Locate and orient primary building entrances to public roads, and design to be visible and accessible to the public.
- 9. Screen rooftop mechanical equipment from view through architectural design that reflects the building's façade treatment. Add-on screening elements such as lattice are prohibited.



Angular plane diagram - 45 degree angular plane measured from property line.

## 3.4.2 Typologies

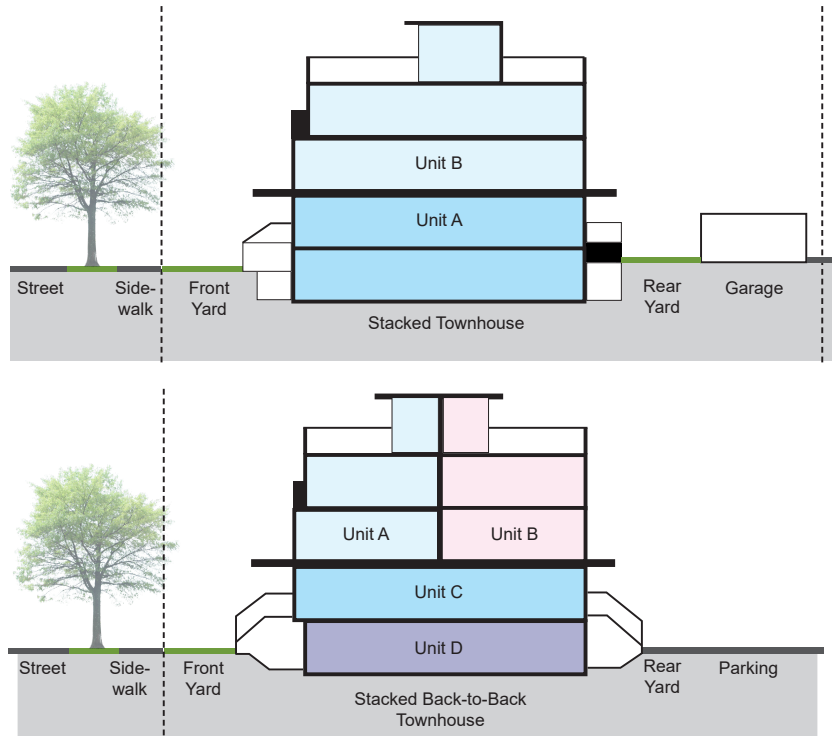
### 3.4.2.1 Stacked and Back-to-Back Stacked Townhouses

Stacked townhouses are typically a 3 to 4 storey building of attached units which are stacked one above the other and oriented to the street.

Stacked townhouses have units stacked vertically. This can include three units located on top of each other, a two storey unit stacked on top of a one storey unit, or a two storey unit stacked on top of two storey unit. Each unit has its own entrance at grade.

Back-to-Back Stacked townhouses share a rear and side wall and are two stacked townhouses placed back-to-back.

1. Articulate the elevation of the townhouse block in a manner that provides variation between units and reinforces common characteristics that visually unites the block.
2. Ensure variety in the design of roofs through the use of traditional gables and dormers, or more contemporary designs that include cantilevers and parapet details to break up the massing of units within a block. However, the main roof should appear as a single unified roof where possible and reflect the architectural style of the building.
3. Locate and orient windows, decks, and balconies to limit overlook into nearby windows and amenity spaces of adjacent properties while enabling “eyes on the street” for common public areas.
4. Limit stacked townhouse buildings to 3 to 8 units per block and the length of the townhouse block should not exceed 50 metres, unless it is essential to the architectural style of the building.
5. Use continuous and consistent architectural details and materials for the entirety of the building.
6. Locate attached garages at the rear of the building to be accessed from a lane or private drive.
7. Stacked back-to-back buildings shall have underground parking with direct access to each unit.
8. Limit the use of retaining walls, particularly along street frontages, parks, ravines and other areas of the public realm.
9. Where retaining walls cannot be avoided, provide them in the form of low terraces with the total height not to exceed 1 metre. Incorporate intensive soft landscaping in these low terraces and construct with durable and attractive materials.
10. Provide prominent, well-designed and integrated building entrances such as porches, porticos, or canopies along the building frontage.
11. On corner or double-fronting sites, locate building fronts and entrances facing both streets. Buildings on corner sites require additional attention to detail to enhance the corner.



Typical sections for Stacked and Back-to-Back Stacked townhouses.





Example of podium townhouses.



Examples of 4 and 6 storey residential buildings.



Example of a 6 storey residential building.

### 3.4.2.2 Podium and Liner Townhouses

These dwellings are typically 3 to 4 storey townhouse buildings that wrap around or are located at the base of an apartment building or parking structure.

1. Ensure podium and liner townhouses have continuous and consistent architectural details and materials among units, coordinated with those of the main mid- or high-rise building.
2. Utilize podium and liner townhouses as a residential veneer to create a 'street' or 'ground-related' façade to enhance the pedestrian realm of mid- and high-rise buildings.
3. Provide parking in a structure associated with the mid- or high-rise building.

### 3.4.2.3 Mid-Rise and High-Rise Buildings

These buildings are multi-storey structures that contribute to complete communities, provide a mix of housing and activity, and are built at densities that improve the viability of transit.

1. Mid- and high-rise buildings may include commercial and office uses at grade and multi-unit residential above or behind. Design ground floors to be appealing to pedestrians and include uses that are more active in terms of pedestrian traffic, such as commercial/retail, personal service, and restaurant type uses on the ground floor.
2. Provide retail and service commercial uses on the ground floors of buildings to bring animation to the street and encourage pedestrian activity. Such uses should have a minimum 4.25 metre floor-to-ceiling height.
3. Ensure residential entrances are clearly distinguished from the commercial entrances through building design and locate at the front or side of the building.
4. Balconies on all storeys above grade are encouraged.
5. Locate visitor drop off areas at the side or rear of buildings with lane or private drive access.

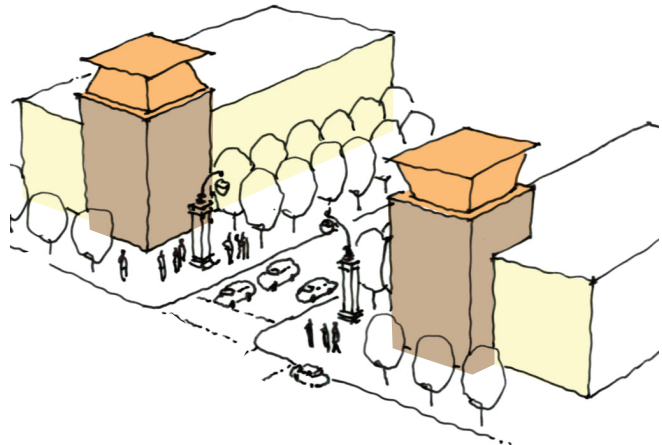
6. Design interior courtyards to maximize sun exposure through the massing and location of tall building elements.
7. Private outdoor amenity spaces can be provided in a variety of forms including front verandas on buildings where the podium is designed to incorporate townhouse units, roof-top decks, balconies, or a design with similar intent. See guidelines under 3.4.5.

### 3.4.3 Siting and Setbacks

1. Locate buildings close to the street edge to frame and animate the public realm. Where it supports a high quality public realm, new development should generally maintain and reinforce existing setbacks by aligning the base with adjacent building bases, or by placing it at the average distance between those of adjacent properties.
2. Organize and design the site (internal circulation and arrangement of structures) to reflect the urban context and fabric of the surrounding neighbourhood.
3. Provide mid-block pedestrian connections and multiple access-points to enhance visual and pedestrian permeability.
4. Include the provision of a minimum separation distance of 25 metres between high-rise buildings on the same site and a minimum tower setback of 12.5 metres from side and rear property lines. This will maximize sky views and natural sunlight, provide proper privacy, and minimize wind and shade impacts on surrounding areas.
5. Allow balconies to encroach on the 25 metre separation between buildings, while not contributing excessively to the building massing.
6. Use prominent built form to address gateways and other key locations within the community. On larger sites, create 'paired' corner buildings on either side of a street to emphasize a sense of entry or to distinguish one street district from another.



9 storey building located close to the street edge.



Paired corner buildings to emphasize a sense of entry.



Corner building as a gateway feature.

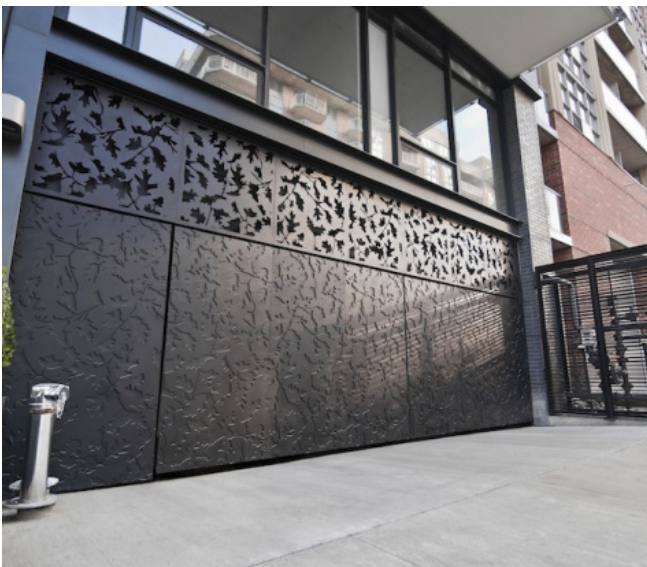




Parking for stacked townhouses located in a rear lane.



Parking lot with smaller courts, plantings, and decorative paving.



Underground parking garage access screened by decorative door.

### 3.4.4 Access, Parking and Servicing

1. Provide access to parking, servicing and loading from the rear of the building, or a laneway where possible. On corner sites, provide access from secondary streets provided the entrance facilities are well integrated into the rest of the frontage.
2. Encourage lane-based and/or underground parking. Where not feasible, at grade and structured parking above grade may be permitted at the back of the building, preferably lined with active uses along all public frontages.
3. Locate and screen parking, loading, utilities, and servicing areas away from the public view through a combination of soft and hard landscaping, as well as other integrated architectural elements such as walls and pergolas.
4. Facilities for handling, storing, and separating waste and recycling should be integrated into the building design and screened from public view through landscaping and architectural elements.
5. Where it is only possible to provide parking at grade, split the surface parking into small courtyards by using walkways, public art, or landscaped strips.
6. Avoid vehicular site access from higher order roads. Provide access from local roads or rear lanes where possible.
7. Consolidate vehicular entrances to serve multiple buildings in order to minimize the number of interruptions to the street wall and sidewalk network. Limit the number of accesses from the same street to two.
8. Design underground/above ground parking ramps and service entrances as part of the building façade.
9. Provide long-term bicycle storage inside the building and short-term bicycle parking areas and racks close to entrances and external to the building.

### 3.4.5 Building Design

#### 3.4.5.1 Height and Massing

Mid-rise and high-rise buildings are generally comprised of a podium, tower, and top.

1. The height of the podium, and the tower step-backs above, should generally reflect the established streetwall. Ensure the height of the podium matches existing adjacent structures to reinforce the pedestrian scale of the streetscape.
2. Where no established streetwall exists, the minimum height of the podium shall be 3 storeys to frame the streetscape.
3. For mid- and high-rise buildings with retail or other active uses at grade, provide a minimum ground floor height of 4.5 m. Residential ground floors should be a minimum of 4.0 m in height.
4. The tower should step-back a minimum of 3 metres from the podium to differentiate between the building podium and tower and to ensure usable outdoor amenity space.
5. Consider an additional step-back for buildings taller than 8 storeys in height.
6. Provide a height transition towards adjacent existing or planned built form. Refer to Guideline 3.4.1.5 for Angular Plane application.
7. The top of the building defines the tower while further distinguishing a unique and interesting skyline. Design the top of buildings to include a variety of elements, such as step-backs, material variations, lighting, and other architectural elements to reinforce a strong presence at the top of the building.
8. Where possible, include outdoor amenity space within the top of the building, including balconies, patios, terraces, and rooftop gardens.
9. All mechanical penthouses should be designed and clad with materials that complement the main building façades.

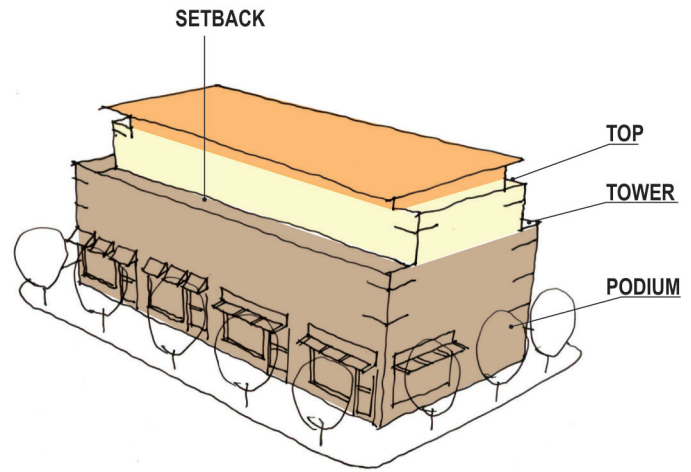


Diagram illustrating the building components of podium, tower and top.



The height of the podium on the mid-rise building should match the adjacent dwellings.



Top of the building designed with visual interest.



10. Locate mechanical rooms to the centre of the building rooftop and integrate into the rooftop design so they are not visible from the public realm.
11. Avoid blank or long expansive elevations which are exposed to the public view. Where unavoidable, consider art or special wall treatments (i.e., screens, living walls, metallic or wooden textures).
12. For developments with more than one building, provide a range of heights and establish a height hierarchy related to site conditions and context.

#### 3.4.5.2 Articulation and Architectural Features

1. To animate the public realm and promote safe environments encourage active uses at grade based on the street character (i.e., retail, commercial uses, day-care facilities, townhouses, etc).
2. Mitigate the actual and perceived impacts of mid- and high-rise buildings by breaking up the mass both vertically and horizontally through the creative incorporation of changes in materials, balcony and floor plate design, architectural features, and amenity locations.
3. Incorporate windows and balconies on all elevations, especially if exposed to public view.
4. Locate entrances strategically so they are highly visible and well connected to the public realm.
5. Provide a high level of glazing at ground level, especially for those areas related to lobbies, common/amenity areas, and non-residential uses (i.e. commercial uses).
6. Encourage weather protective design 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.

#### 3.4.5.3 Exterior Materials

1. Ensure high quality and durable materials are used on all elements and elevations of the development.
2. Select materials to complement the architecture, character, size, and style of the building, as well as the streetscape.
3. Maintain consistent materials between elevations.
4. Incorporate changes in materials to visually break-up the building massing.
5. Use reflective, low intensity colours on rooftops to reduce heat island effect and HVAC loads. Refer to 4.1.7 and 4.1.8 for cool roofing material and solar reflectance guidelines.
6. Minimize danger to migratory birds by:
  - a. Avoiding untreated reflective glass or clear glass that reflects trees and the sky;
  - b. Ensuring glass has visual markers and is not reflective within the first 12 metres of building height; and,
  - c. Locating and managing lighting to reduce reflections that might confuse migratory birds.



Changes in exterior materials lessen the visual impact of the building.

#### 3.4.5.4 Developments within Heritage Contexts

1. Locate and design buildings to respect and complement the scale, character, form and siting of on-site and surrounding cultural heritage resources.
2. Use existing heritage buildings to inform the site plan and podium layout and design.
3. Building bases should respect the scale of the surrounding historic fabric.
4. When an existing building is adapted or incorporated into the base of a high-rise building, the size and shape of the original window openings and entrances should be maintained.

#### 3.4.6 Private Outdoor Amenity Space

Private outdoor amenity spaces should have access to sunlight, be comfortable, and designed to afford a level of privacy.

1. New multi-unit residential development shall provide shared space for both indoor and outdoor amenities.
2. Design private outdoor amenity spaces to:
  - a. Have direct access to sunlight and sky view;



Example of a building with inset balconies to minimize shadowing the balconies below.

- b. Mitigate impacts on the public realm and neighbours - increased facing distances between buildings may be required to reduce impacts;
  - c. Provide generous and well-designed landscaped areas to offer privacy, screening, and attractive interface with the public realm; and,
  - d. Include railing designs to help increase privacy, screen items from view, and reduce risk of bird strikes.
3. Raised terraces shall provide an entrance to only one unit and provide privacy with planting and architectural elements and translucent or solid railings.
  4. Raised terraces shall be raised a minimum of 0.6 metres and a maximum of 1.2 metres.
  5. Design roof top private amenity spaces to limit overlook into the adjacent neighbourhood:
  6. Design roof top terraces with parapets, solid or translucent railings.
  7. Inset balconies or partially inset to offer greater privacy and shelter from wind, reduce the building bulk, and minimize the impact of shadow on other amenity spaces below.
  8. Limit the size and avoid continuous projecting balconies, especially on residential streets, or when a private outdoor amenity space, pedestrian mews, and/or landscaped walkway is located below.





A consistent building setback frames the street..



The massing of buildings define the streetscape and create a sense of enclosure.



Corner buildings address both sides of the street with windows, signage, lighting, and a continuation of public walkways.

## 3.5 Commercial and Mixed Use Buildings

In Keswick, commercial and mixed use development is directed to the Urban Centres and Mixed-Use Corridors.

Urban Centres will generally contain a mixture of retail, service commercial, office, institutional/ community, and mid-rise built forms. The Mixed-Use Corridor along The Queensway will support the Urban Centres and generally accommodate higher intensity development with a mid-rise, mixed-use character, in a manner that is sensitive to the adjacent Existing Neighbourhood areas.

The Mixed-Use Corridor along Woodbine Avenue is intended to provide an array of retail shopping opportunities, community facilities, and mid-to high-rise development.

### 3.5.1 Building Design

#### 3.5.1.1 Building Placement and Orientation

Building placement refers to the location of the building in relation to the street. The orientation and placement of buildings along the street can help to reinforce the public realm by enhancing the pedestrian environment and creating a sense of enclosure. Key guidelines for the orientation and placement of buildings are as follows:

1. Use mixed-use buildings and smaller scale retail and commercial stores to frame the street with a consistent building setback.
2. Ensure the siting and massing of buildings provides a consistent relationship, continuity, and enclosure to adjacent public roads.
3. At key corner sites, sidewalk cafes, kiosks, and street vendors are encouraged, and larger setbacks may be permitted. The area within the front yard setback should be hardscaped with paving for visual extension into the sidewalk.
4. Ensure buildings located adjacent to, or at the edge of parks or urban squares provide opportunities for overlook into the public space with windows and doors. The massing,



siting and scale of these buildings should create a degree of enclosure or definition appropriate to the type of open space they enclose.

5. Ensure primary entrances to buildings are clearly visible and located on a public road or onto a public open space for reasons of public safety and convenience. Secondary doors, such as those that face the parking area, emergency exits, and service doors should be designed to blend in with the building façade.
6. Ensure access to primary building entrances from sidewalks and public open space areas are illuminated, convenient, and direct with minimum changes in grade.
7. No parking, driveways, or lanes should be located between the buildings and the street. Exceptions may be granted for large buildings on large sites with multiple buildings where the larger buildings are be situated to the interior of the block with smaller buildings facing the street.
8. Locate patios along primary streets in areas that maximize sun exposure and effectively animate the public realm.
9. Provide accessible and secure bicycle racks and parking at retail, commercial, and employment developments, as well as at other key locations to promote active transportation.

### 3.5.1.2 Building Articulation, Massing, and Architecture

The aesthetic qualities of the building, its façade, roof line, windows, and access points are all vital factors in how the public perceive a building and how that building impacts their experience of the street.

1. Divide building frontages that exceed 12 metres in width into functionally and visually smaller units through the use of façade articulation, internal courtyards, and networks of connected walkways and landscaping.



Primary entrances located along the street frontage.



Building entrance is located on the corner of the building and wrap-around windows continue along both sides of the street.



Parking is accommodated through on-street parking with surface lots located in the interior of the site.



2. Articulate large walls visible from the street through various treatments such as offsets in massing, façade, and fenestration treatments.
3. For stand-alone commercial uses, minimize the building footprint by providing a multi-storey building in order to deliver compact form and conserve land.
4. Require a high level of architectural quality for the façade of buildings located at corner sites along Regional and Collector Roads.
5. Design sites with multiple buildings to reflect a consistent architectural theme. Similar building elements could include colours, materials, signage, and the base and top of buildings. Design individual buildings to offer visual interest and variety in design through architectural features.
6. Ensure consistent high quality building design and architectural elements on all building elevations, particularly on facades in public view or backing onto residential properties.
7. Establish a rhythm of minor breaks or articulation along the façade, distinguishing one unit (retail or residential) or building component from the next.
8. Incorporate architectural elements to enhance the pedestrian environment such as canopies, overhangs, awnings, projecting display windows, architectural arcades, and colonnades. These elements should be designed as integral parts of the building in terms of form, style, material, and colour.
9. Steps and ramps should be architecturally incorporated into the building entrance.
10. Fully screen and locate garbage, recycling, loading, and service areas away from public view. These facilities should be located in the rear or side yards away from residential uses, major roads, and open space areas. Where possible, integrate these functions within buildings.
11. Incorporate garbage and recycling storage bins that can be accessed for pick up into the principal building design. Food waste shall always be stored in climate controlled rooms.

### 3.5.1.3 Drive-Thrus

1. Drive-thru sites and buildings are permitted along Woodbine Avenue. Drive-through sites and buildings should be designed to:
  - a. Locate buildings close to or at the streetline to define and support the street edge and facilitate pedestrian activity and access;
  - b. Align new buildings with the front facades of existing buildings;
  - c. Ensure an appropriate transition in setback from existing and adjacent buildings along the street;
  - d. Locate the main entrance directly off the public sidewalk;
  - e. Ensure walls visible from the street are transparent with windows, doors, and other forms of transparent building materials to maximize views in and out of the building enhancing the relationship between interior and exterior to support and animate the public street and sidewalk;



The building is articulated with a clearly defined material selection and architectural quality.

- f. Provide vehicular access and stacking lanes along the side or the rear of the building away from adjacent residential uses, streetscapes, and open spaces. Do not locate stacking lanes or driveways between the building and the street;
- g. Provide parking adjacent to the secondary entrance to the facility so it is not necessary for pedestrians who arrive by car to cross driveways or stacking lanes to enter the building;
- h. Locate utilities and service components such as transformers, loading, and garbage pick up at the rear or flank of the building out of view from the street and other public areas; and,
- i. Provide sufficient signage where necessary to indicate direction of vehicular travel, stop signs, or no entrance areas.

### 3.5.1.4 Storefronts

1. Provide retail and service commercial uses on the ground floors of buildings to bring animation to the street and encourage pedestrian activity. The floor-to-ceiling height of ground floors for all new buildings shall be at least 4.25 metres.
2. Locate entrances to stores and the ground floor of live-work units at grade and design to be universally accessible, highly visible, and clearly articulated.
3. Provide spill-out space around the base of buildings for uses such as patios, street furniture, and special events.
4. Where retail uses are provided at-grade, ensure a significant amount of the building frontage on the ground floor and at building base levels is glass to allow views of the indoor uses and create visual interest for pedestrians. Clear glass is preferred to promote the highest level of visibility.
5. Awnings or canopies are encouraged above windows and doors.
6. Ensure storefronts on corner sites address both street frontages through entries and glazing.



Active uses such as restaurants and cafes extend their uses onto the sidewalks with outdoor seating, planters, and distinctive paving.



High level of transparency with glass windows create visual interest along the street.



Awnings, canopies, and signage provide shade and weather protection for pedestrians.



### 3.5.1.5 Signage

Signage plays an important role in the overall image of any area. Signs contribute to the quality of individual buildings and the overall streetscape, and reflect the unique characteristic of their context. Signage should be subject to the following guidelines:

1. Integrate signage in the building design and ensure it complements the building's elevation, animates the ground level and enhances the streetscape.
2. Design signage to be consistent with respect to materials, size, location (on a building), lettering and lighting, while also allowing some flexibility for tenant branding.
3. Ensure signage lighting design complements the design of the building.
4. Direct signage lighting to limit light trespass to surrounding properties and to prevent light pollution.
5. Signage should add diversity and interest to the street and not overwhelm either the storefront or streetscape. Design building

signage to be compatible and complement the architecture of the building in its scale, material, consistency and design.

6. Signage should not obscure windows, cornices or other architectural elements.
7. Back-lit illuminated sign boxes are discouraged.
8. Projecting or hanging signs should be permitted to encroach over the streetline provided that they do not project more than 1.0 metre from the building. There should be a minimum 2.4 metre clearance between the bottom of the sign and grade.

### 3.5.2 Parking

1. Provide a variety of parking options, including on-street parking, underground parking, structured, and screened at-rear parking courtyards. Avoid the use of large surface parking areas, where possible.
2. Locate parking areas away from the street frontage, at the rear or sides of the principal building.



Lighting above signage is directed at the sign and complements the design of the building.



High quality signage is in keeping with the scale and material of the rest of the building.



Hanging signs encroach over the streetline and extend into the pedestrian realm.



3. Design surface parking to minimize environmental impacts by reducing parking area size, considering shared parking facilities with adjacent buildings, and providing preferential parking for fuel efficient vehicles.
4. Break large parking areas into smaller courts by providing walkways at a minimum interval of 8 rows of parking. Locate walkways flanking a lane or between 2 parking rows.
5. Use landscaping to break up parking areas to assist with reducing the heat island effect. Landscaping islands should have a minimum width of 2.5 metres.
6. Screen surface parking lots from roads, open spaces, and adjacent residential areas with the use of buildings, low fencing, architectural features, landscaping, berms, or other mitigating design measures, such as lowered parking surfaces with landscaped buffers.
7. Incorporate pedestrian walkways and landscaping into surface parking areas along primary vehicular routes to enable safe, barrier free, and direct movement to principal building entrances and the sidewalk.
8. Design walkways with a minimum width of 1.8 metres.
9. Where walkways cross drive aisles, they should be differentiated from the driving surface through the use of surface materials and colour.
10. Consider above or below grade parking structures where possible and feasible in efforts to conserve land, promote compact development, and reduce heat island effect.
11. Design and landscape parking facilities at-grade or in structures to complement the urban streetscape.
12. Incorporate active uses at-grade for above grade parking structures facing onto any Regional, or Collector Road, where possible.



Lowered parking surfaces and landscaped buffers help screen parking areas from street view.



Landscaped islands, pedestrian walkways with distinct paving, lighting, and plantings provide safe crossing through the parking lot.



Example of a parking structure set back from the street.



13. Where above grade parking structures abut a road, minimize the visual impact of the building through screening or by treating the building face like an occupied building through expressing an architectural vocabulary and material compatible with adjacent façades.

### 3.5.3 Servicing, Storage and Loading

Servicing, utility, storage, and loading are necessary components of all building sites. These areas need to be functional and easily accessible and their visual impact minimized through location and screening.

1. Coordinate, consolidate, and integrate loading docks, service areas, and storage within the building envelope, where possible.
2. Locate loading, service, storage, and utility areas away from public streets and screened from public view.
3. Ensure that waste collection vehicles have ample room to maneuver at the site planning stage to ensure that these functions do not spill over into either the public right-of-way or public spaces.
4. Provide access to servicing and loading areas from secondary streets or rear laneways. Include design treatments to minimize impact and improve safety for pedestrians and cyclists crossing these areas.
5. Locate all utilities underground. Where components of utilities must be located above ground, utility providers are encouraged to consider innovative methods of containing utility services on or within streetscape features.
6. For all restaurant uses, cooking ventilation systems, incorporate ecologizer, water wash, ultraviolet, or other equivalent odour extraction mechanisms that are sufficient to ensure that the resulting exhaust is substantially odour free and will not affect surrounding residents.
7. Integrate facilities for handling, storing, and separating waste and recycling into the building design.

8. Ensure waste facilities within an external structure are consistent in design, colour, and materials to the main building and are not in a prominent location.

## 3.6 Public Service Facilities

Public service facilities provide important opportunities for place-making and landmarking. With distinct architecture and high quality public spaces, and the potential to co-locate and share facilities, these sites can become hubs of activity and focal points for social interaction, gathering, and civic events.

Buildings serving these uses include schools, recreation centres, libraries, places of worship, and fire stations. Careful attention must be paid to the design of these structures to ensure they reflect the built quality and integrate with the scale of the surrounding neighbourhood.

### 3.6.1 General Guidelines

1. Site public service facilities prominently and where possible, to terminate views. Ensure buildings are sited to specifically differ from the surrounding urban fabric in order to emphasize their importance as landmarks.
2. Locate public service facilities in community hubs to promote cost-effectiveness and facilitate service integration and access to transit.



The public service facility building is located close to the road to frame the street edge.

3. Locate public service facilities close to the road to reinforce the street wall and define intersections.
4. Ensure public service facilities have direct access from the surrounding community through a comprehensive and connected active transportation network with linked trails and parks.
5. The site should be well landscaped and visible at the pedestrian level.
6. Locate vehicular parking at the side or rear of the building. Parking for cyclists should be located near building entrances and where visual surveillance can be maximized.
7. Provide drop-off areas for buses and cars in the public right-of-way where possible, but when located on site they should be at the side, and not the front of the building.
8. Ensure public service facilities contribute to the creation of compact neighbourhoods through multi-storey buildings in order to maximize the site and services, minimize building footprint, as well as contribute to an urban street condition
9. Ensure the site and building incorporates accessibly for all individuals of varying ages and abilities.

### 3.6.2 Building Design

1. Design public service facilities as special landmark buildings with high quality architectural design, materials, and finishes.
2. Locate the most active portions of the buildings facing higher order streets. Locate large portions of buildings such as gymnasiums or auditoriums to the sides, rear, or interior of buildings.
3. Incorporate architectural elements such as massing and special features to terminate important views and vistas.
4. Respond to the local context and site conditions when siting buildings. Where applicable, design buildings to respond to the site's topography.



Bicycle parking is provided in close proximity to the front entrance of the school.



Multi-storey building is massed around a central open space.



Example of the use of architectural features to denote landmark community facilities.



5. Ensure highly articulated façade design for all elevations exposed to public view. This includes changes in plane and materials, fenestration, projections, relief, and horizontal and vertical elements. Blank, uninterrupted walls shall be avoided.
6. For buildings located at corners, design elevations to equally address the two street frontages. Additionally, use prominent massing, height, architectural elements and detailing to emphasize these locations.
7. Provide integrated weather protection elements at main entrances and ensure they complement the building's design.
8. Ensure the front door of all public service buildings are connected by a walkway to the sidewalk and have direct access to transit stops.
9. Coordinate building materials and ensure they reflect, complement, and enhance the building's architectural style and detailing.
10. Provide a high level of visual transparency and permeability at eye level for lobbies by using windows and prominent entrances.
11. Utilize daylighting strategies, such as building orientation, uniform windows across the facade, or skylights to capture natural light and reduce the need for electric lights during the day.
12. Consider roof forms other than flat roofs to respond to the context and character of the neighbourhood, particularly where there is a heritage context, and to highlight the nature of the public or institutional building.
13. Where flat roofs are used, incorporate green roofs in the design of the building to minimize surface runoff, reduce heat island effect, provide noise insulation, and improve local air quality.
14. Screen rooftop mechanical equipment with materials that are complementary to the building or through parapet height where applicable.
15. Ensure the design of ancillary buildings and structures is coordinated with that of the principal building in terms of height, massing, architectural details, lighting, signage, materials, and colours.
16. Integrate signage within the building design and ensure it complements the building's elevation, animates the ground level, and enhances the streetscape.
17. Direct signage lighting to limit light trespass to surrounding properties and downcast to prevent light pollution.
18. Ensure signage provides a high level of clarity, visibility, and visual interest, and should aid pedestrians and drivers in navigating the area, especially at night.

### 3.6.3 School Sites

1. Minimize the land area required for school sites in order to promote compact development and conserve land. School Boards are encouraged to build more compact facilities including three storey elementary schools and buildings located close to the street.
2. Where possible, locate elementary school sites adjacent to a neighbourhood park so that playfields can be shared to promote compact development and minimize land area requirements. Explore the use of appropriate



Example of a multi-storey elementary school.

and innovative engineered turf material to increase the durability of the playfields and minimize maintenance requirements.

3. Consider shared parking lots for elementary school sites with neighbourhood parks, and secondary school sites with community parks, in order to reduce the number of parking requirements. Locate and site the shared parking lot to facilitate easy and safe access, and to minimize the need for crossing required by students.
4. Schools sites that are located adjacent to the natural heritage system should maximize the opportunity for using the natural heritage system for passive open space uses such as trails and trail heads.
5. Design schools to ensure safe pedestrian crossing and cycling practices. Whenever possible, ensure students are able to easily reach building entrances without crossing bus zones, parking entrances, and student drop-off areas.
6. Design school sites to provide for visitor parking and bus pickup and drop off in demarcated bays in the adjacent Collector Road right of way.

7. Locate schools near transit stops and mixed-use areas, where appropriate. Locate Secondary schools within a 200 metre walking distance of a transit stop.

### 3.6.4 Fire Stations

1. Locate fire stations in a prominent and visible location with convenient access to a Regional or Collector Road.
2. Ensure fire stations have a close relationship to the intended service area by integrating with the surrounding development, through appropriate architectural design, landscaping and buffering from residential buildings.

### 3.6.5 Places of Worship

1. Locate Places of Worship on Regional or Collector Roads along public transit routes in order to maximize transit ridership.
2. Consider the joint use of parking areas with adjacent uses in order to reduce land requirements and promote compact development, especially in mixed use areas.
3. Ensure the massing and scale of the building is compatible with the character of adjacent development, especially within low-rise areas through the use of similar setbacks, material selection, and the use of architectural elements.



Parking is located to the rear of the building off the main road and the front entrance to the building is directly connected to the public sidewalk.







## 4. GREEN INFRASTRUCTURE AND BUILDING

While sustainability is an overarching objective throughout the Guideline, this section provides guidance on green infrastructure and building practices and helps achieve the broad sustainability principles of the Official Plan and the specific policies as set out in the Secondary Plan.

As part of the strategy to achieve a high level of sustainability in regards to the reduction of energy, water, and waste within Keswick, the Green Infrastructure and Building Guidelines apply to both the private and public realm.

### 4.1 Energy Conservation

Provide for the reduction of energy use and consider the inclusion of alternative energy sources.

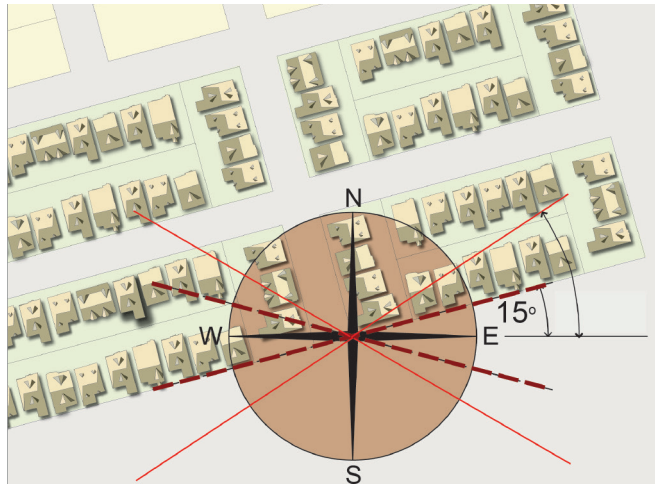
1. Where feasible, provide alternative community energy systems such as district energy, geo-exchange, sewer heat recovery, and/or inter-seasonal thermal energy.
2. Consider reducing demand for energy from the grid and encourage renewable energy production. Renewable energy sources that could be employed may include the use of solar thermal and photo voltaic equipment or wind power. Proposed alternative energy sources could be used in combination with energy from the grid.
3. Encourage passive solar building orientation to permit enhanced energy efficiencies by creating optimum conditions for the use of passive and active solar strategies. The integration of passive building systems is enhanced with buildings oriented to maximize the potential for sunlight and natural ventilation.
4. Where feasible, implement street and block alignment within 15 degrees of geographic east-west to maximize passive solar orientation of buildings front and rear windows.



Wind turbines on the roof of an office building.



Solar canopies in surface parking lots.



To maximize passive solar orientation the street and block alignment should be designed within 15 degrees of geographic east-west.





Solar panels on the roof of low-rise development.



Light coloured pavers assist with the reduction of heat island effect.



Charging stations for electric vehicles in mixed use areas.

5. Consider constructing all low and mid-rise residential buildings to be Solar Ready. Being Solar Ready means built with all the necessary piping and equipment that would be needed to install a rooftop solar power system.
6. Where available, consider using energy from renewable resources.
7. Reduce heat absorption through the use of cool roofs that are designed to reflect more sunlight and absorb less heat than a standard roof. Cool roofs can be made of a highly reflective type of paint, a sheet covering, or highly reflective tiles or shingles. Consider cool roofing material with a minimum initial solar reflectance of 0.65 and minimum thermal emittance of 0.90.
8. For a low sloped roof, typical of commercial and institutional buildings, the cool roof Solar Reflectance Index (SRI) value should be 0.64 and for steep sloped roofs, typical of residential, the SRI value should be 15.
9. Mitigate heat island impacts through the installation of light-coloured paving materials including white concrete, grey concrete, open pavers, and any material with a solar reflectance index of at least 29.
10. Implement the strategic use of deciduous trees or preserve existing trees to help with evapotranspiration and the shading of sidewalks and hard surface areas in the summer and solar access in the winter.
11. Charging stations that would supply electricity for electric vehicles are encouraged in new development. Provide charging stations in parking areas of mixed-use, office, institutional, or employment uses, or within underground garages for multi-unit residential buildings.
12. Consider paving driveways for grade related residential dwellings with light-coloured material to reduce heat island effect.



## 4.2 Water Use and Management

Compact development reduces impervious surfaces and makes it easier to protect natural areas which are important steps a community can take to maintain local water quality.

1. In order to promote water conservation, all new developments are encouraged to:
  - a. Achieve 10% greater water efficiency than the Ontario Building Code and to encourage through appropriate incentive programs, 20% greater water efficiency than the Ontario Building Code;
  - b. Restrict the use of potable water for outdoor watering;
  - c. Consider the use of water efficient and drought resistant plant materials in parks, along streetscapes, and in public and private landscaping;
  - d. Avoid use of turf grass areas, and when required, install drought resistant sod;
  - e. Increase topsoil depths and provide soil scarification;
  - f. Utilize native species; and,
  - g. Reduce the impact caused by new development on the natural hydrological cycle by installing permeable driveway and parking lot surfaces.
2. Encourage the implementation of Low Impact Development standards that emphasize the use of bioswales, innovative stormwater practices, constructed wetlands, at-source infiltration, greywater re-use systems, and alternative filtration systems such as treatment trains.
3. Implement a comprehensive rainwater and water recharge strategy in conjunction with required stormwater management facilities.
4. Consider strategies for stormwater retention and run-off such as:
  - a. Retain stormwater on-site through rainwater harvesting, on-site infiltration, and evapotranspiration;



Bioswales in the public right-of-way to improve infiltration.



Example of an innovative stormwater management facility.



Bioretention planters assist with street greening and have stormwater management benefit .





Landscaped island with a bioswale to filter run-off from the parking lot.



Example of the use of permeable paving material on a road.



Collect, store, and distribute rainwater in underground storage tanks.

- b. Direct flow to landscaped areas and minimize the use of hard surfaces in order to reduce the volume of run-off into the storm drainage system;
  - c. Store snow piles away from drainage courses, storm drain inlets, and planted areas; and,
  - d. Use infiltration trenches, dry swales and naturalized bioswales adjacent to parking areas to improve on-site infiltration.
5. Stormwater management quality control devices which require frequent operation or maintenance such as Oil Grit Separators are discouraged within the public right-of-way.
6. Introduce green infrastructure, such as bioswales, within the public right-of-way to enhance ground water infiltration and improve water quality as part of a comprehensive water management plan.
7. As a stormwater run-off management strategy consider the use of porous or permeable pavement instead of standard asphalt and concrete for surfacing sidewalks, driveways, parking areas, and road surfaces.
8. Consider the inclusion of third pipe greywater systems and rain water harvesting for watering lawns, and gardening, to reduce demand on potable water use;
9. Implement a rainwater harvesting program to provide the passive irrigation of public and private greenspace, including absorbent landscaping, cisterns, rain barrels, underground storage tanks, infiltration trenches, etc.
10. Consider the installation of subsurface basins below parking lots to enable stormwater to be stored and absorbed slowly into surrounding soils.
11. Where feasible, implement curb cuts along sidewalks and driveways to allow water to flow onto planted zones or infiltration basins.



12. Implement xeriscaping using native, drought-tolerant plants as a cost-effective landscape method to conserve water and other resources on a residential and community-wide level.

### 4.3 Lighting

1. Promote Dark Sky/Nighttime Friendly compliant practices to minimize light pollution and the intrusion of unwanted lighting on natural areas.
2. Consider high efficiency street lighting to reduce energy use.
3. Ensure lighting products (bulbs, fixtures) are compatible with existing lighting products used throughout the Town.
4. Consider opportunities for renewable energy use to reduce electric energy supply in the public realm, such as solar powered lighting for natural trails and park pathways.

### 4.4 Green Buildings and Green Sites

Promote innovative programs to encourage the design and construction of energy efficient green buildings and sites.

1. Consider Leadership in Energy and Environmental Design (LEED)® Certified or accredited third-party certification programs, such as LEED for New Development, LEED H, LEED NC, LEED for Schools Energy Star, and BREAM, etc.,).
2. Consider innovative residential development designs which contribute to affordability and energy and natural resource conservation.
3. Encourage synergies between buildings and site management practices that conserve water, reduce waste, and are energy efficient.
4. Green roofs are encouraged for high-rise residential, office buildings, as well as, public institutional buildings to minimize surface runoff, reduce heat island effect, provide noise insulation, and improve local air quality.



LED street lighting.



Solar powered lighting for trails and parks.



Green roofs reduce surface run-off on mid-and high-rise buildings.



5. Provide green roofs for 80% of all high density development. In high-rise residential buildings, design roofs as amenity areas.
6. Develop a heat island reduction strategy for community and public buildings to install green roofs with 50% coverage with the remainder of the roof covered with light coloured material. Light coloured roofs have a high solar reflectance which reduces energy costs and reduces heat island effect. Refer to 4.1.7 and 4.1.8.
7. In order to promote Energy Efficiency:
  - a. Where feasible, provide alternative community energy systems such as geoexchange, sewer heat recovery, or inter-seasonal thermal energy; and,
  - b. Development plans and building designs shall provide opportunities for south facing windows and building orientation to maximize potential for passive and active solar energy.
8. In order to promote Water Efficiency:
  - a. Strive to achieve a minimum 10% water savings beyond the Ontario Building Code requirements for new buildings;
  - b. Use Low Impact Development strategies to deal with on-site run-off and heat island effects;
  - d. Incorporate water efficient and drought resistant site landscaping by using native planting materials; and,
  - e. Pre-design for grey water pipe infrastructure.
9. In order to promote Green Materials:
  - a. Incorporate waste reduction work plans and construction best practices that reduce construction waste;
  - b. Incorporate green building material standards to reduce impact on the environment and ensure materials are purchased/obtained from a responsible ethical sources;

- c. Utilize low or non-volatile organic compound products in building construction and finishing to enhance indoor air quality; and,
- d. Source materials from certified local businesses.

## 4.5 Stewardship and Education

For new development in Keswick the following should be considered to support homeowner education and stewardship.

1. Create a Homebuyer's Environmental Instruction Guide that explains the unique environmental aspects of the development and special maintenance considerations.
2. Include an owner/tenant education package at the time of purchase or rental regarding activities to improve energy and water efficiency, access to transit, location of recycling station, etc. Coordinate with existing municipal and regional information
3. Include environmental builder specifications in all subcontracts.
4. Produce detailed sales and promotion materials that feature conservation aspects of the development.
5. Develop subdivision covenants that establish ground rules for the maintenance of shared open lands and individual lots.

## 4.6 Retrofitting Existing Private Properties

Flooding is an issue of concern for the residents of Keswick. The following guidelines provide suggestions for improvements to individual properties to protect from flooding. Retrofits to private properties must comply with site alteration by-laws and municipal stormwater management plans. All required permits must be obtained, where necessary.

Related Information can be found on the [Lake Simcoe Region Conservation Authority](#) website <sup>1</sup>.

1. Ensure the property is properly graded and that water drains away from basement walls.
2. Install a rain barrel to capture water runoff.
3. Ensure that downspouts extend a minimum 2.0 metres from the basement wall.
4. Install porous or permeable pavement or pavers instead of standard asphalt and concrete for surfacing walkways, driveways, or parking areas to assist with the capture and absorption of rain water.
5. Plant a rain garden to capture and store rain where it falls, filtering through the soil. Rain gardens should be located:
  - a. at least 3.0 metres from the dwelling unit;
  - b. at least 4.0 metres from a septic system; and,
  - c. 15.0 metres from any steep slope (more than 15%) on or around the property.
6. Plant rain gardens with native plants that are hardy to the area. The following is a list of native plants that are suitable for rain gardens. Related Information can be found on the [Toronto Region Conservation Authority](#) website <sup>2</sup>.

### Grasses

- Big bluestem (*Andropogon gerardii*)
- Canada wild rye (*Elymus Canadensis*)
- Tufted hairgrass (*Deschampsia cespitosa*)
- Little bluestem (*Schizachyrium scoparium*)

### Flowering herbaceous plants

- Wild columbine (*Aquilegia canadensis*)
- Butterfly weed (*Asclepias tuberosa*)
- White turtlehead (*Chelone glabra*)
- Showy tick-trefoil (*Desmodium canadense*)
- Spotted Joe-pye weed (*Eupatorium maculatum*)
- Oxeye sunflower (*Heliopsis helianthoides*) – sun
- Wild bergamot (*Monarda fistulosa*)
- Black-eyed Susan (*Rudbeckia hirta*)
- New England aster (*Symphyotrichum novae-angliae*)
- Swamp milkweed (*Asclepias incarnata*)

### Shrubs

- Red-osier dogwood (*Cornus sericea*)
- Eastern ninebark (*Physocarpus opulifolius*)
- Nannyberry (*Viburnum lentago*)
- Common elderberry (*Sambucus canadensis*)

1 Lake Simcoe Region Conservation Authority: <https://www.lsrca.on.ca/permits/stormwater-management>

2 Toronto Region Conservation Authority: <https://trca.ca/news/complete-guide-building-maintaining-rain-garden/>



