

River Mill Community

CITY OF CAMBRIDGE

URBAN DESIGN GUIDELINES



SEPTEMBER 2020

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Introduction

1.1 DOCUMENT PURPOSE & STRUCTURE

The River Mill Community is located on the north-east side of Equestrian Way and Speedsville Road, and encompasses a 49.7ha (122.8ac) parcel of land within the municipality of City of Cambridge.

As part of the approval process, a Draft Plan of Subdivision has been prepared by T. Johns Consulting Group and shall form the basis of these Urban Design Guidelines. Land uses within the Draft Plan consist of a proposed mix of residential densities, mixed use block, a neighbourhood park, stormwater management ponds (SWMP) and the Natural Heritage System (NHS). This Urban Design Guidelines will provide design direction related to the implementation of the vision and intent for this development. It focuses on the physical design, with particular reference to opportunities and constraints, structuring elements, pedestrian circulation, vehicular access and parking, streetscape treatment, landscape amenities, and built form characteristics.

These Urban Design Guidelines consist of seven sections which have been broken down into the following:

Section 1:

Provides a description and analysis of the study area, community goals, and opportunities and constraints.

Section 2:

Describes the proposed Community Design Plan and identifies the structuring elements.

Section 3:

Describes the landscape and open space features with corresponding design guidelines.

Section 4:

Describes the streetscape guidelines.

Section 5:

Addresses the built form vision and corresponding guidelines.

Section 6:

Outlines the sustainability and low impact design approaches.

Section 7:

Comments on the implementation and approval process.

The Urban Design Guidelines emphasizes and describes those elements that are fundamental in creating an attractive, compact, pedestrian-friendly urban environment situated within the City of Cambridge.

1.2 STUDY AREA & CONTEXT

The River Mill Community is situated north of Equestrian Way, east of Speedsville Road, south of Maple Grove Road, and west of a future mixed use residential and employment block. The existing topographical character of the development is that of gently sloping agricultural lands with a NHS that includes a small woodland area and intermittent wetlands. There is currently one internal road running through the development that provides access into the subject lands from Speedsville Road.

The River Mill Community is intended to be a complete community consisting of low, medium and high density residential land use, some of which will also include mixed uses and other community facilities such as a neighbourhood park, SWMP and connections to the NHS.

The River Mill Community will be bounded by:

To the North: The land north of Maple Grove Road is predominantly vacant and has few rural single family detached homes and small businesses such as childcare centre, situated along Speedsville Road.

To the East: Existing low-rise and mid-rise residential areas consisting of mostly large estate dwellings and accessory buildings at the southeast corner of Maple Grove Road and Briardean Road.

To the South: An industrial establishment used for masonry manufacturing and sales. With the main access from Speedsville Road, the area includes a storage yard, a single storey office building and a production facility building.

To the West: Clusters of residential dwellings intermingled with employment and industrial lands that sit along the west side of Speedsville Road. Larger employment and industrial lands can be found further westward, and include a FedEx Ground Terminal and Armour Alloys facility.



Figure 1: Future River Mill Community Site Context



1 View of a childcare centre located at the north-east corner of Maple Grove Road and Speedsville Road.



2 View of single detached dwellings from a neighbouring new communities looking north-east along Briardean Road.



3 View into an executive neighbourhood looking north-east from Burnham Crescent showing varied architectural styles within a single streetscape.



4 View of bungalow loft style single detached home on estate sized lot located along Briardean Road.



5 View of rear lane townhouse block from a neighbouring new community along Hunt Club Road.



6 Views of River Mill Community lands looking east at the intersection of Speedsville Road and Heroux Devtek Drive.



7 View into existing employment lands located west of River Mill Community along Goddard Crescent.



8 Views of existing single detached residential homes which line the western edge of Speedsville Road.

1.3 COMMUNITY VISION

The River Mill Community is part of a larger community development, whose design principles date back to 2017. These design elements set the framework for the River Mill Community goals and vision, including the preservation and enhancement of the wetlands, woodlots and the Middle Creek corridor, as well as the resolution of compatibility matters with the neighbouring manufacturing facility.

Aligning with the broader development framework, as well as the goals of the Growth Plan for the Greater Golden Horseshoe and the Regional and City Official Plans:



The River Mill Community is envisioned to be a resilient, sustainable, complete, and compact community, with connections to a thriving Natural Heritage System. Capitalizing on its close proximity to both Natural Heritage System and the broader community of Cambridge, the River Mill Community will honour the rich heritage of the City and the Region. Through careful urban design and planning, this new community will be distinctive in the way it looks and functions, fostering healthy lifestyles, neighbourliness, economic prosperity and local pride.

In conjunction with the planning and urban design policy goals and objectives, this document will be used to provide a set of high-level guidelines to guide the planning process to help achieve the vision for the River Mill Community.





1.4 GOALS & OBJECTIVES

The River Mill Community is intended to supply new residential housing within the City of Cambridge with the goal to promote, facilitate and participate in the development of affordable, welcoming and vibrant neighbourhoods.

The following goals and objectives will be adopted in support of the community vision:

- To design a community that is connected internally and integrated with the rest of Cambridge, and other surrounding communities, through a network of roads, paths and trails;
- To provide a range of mixed uses in a manner that helps reduce the need for the use of automobiles to meet the daily needs of life;
- To encourage protection of existing topographical and natural heritage features and areas, and their associated ecological functions, and to identify a linked natural heritage and open space system;
- To create a distinct neighbourhood that features community focal points and brings people and activities together;
- To provide a range and mix of housing that is available to all ages, abilities, incomes and household sizes;
- To encourage a high standard of design that reflects the existing heritage character of the City and Region, and creates a sense of place, and contributes to civic pride; and
- To ensure convenient access to a range of active and passive public spaces, which provide opportunities for recreation, neighbourliness, and cultural activities.

1.5 PLANNING & URBAN DESIGN POLICIES

River Mill Community provides an opportunity to develop a complete mixed use community within the City of Cambridge. The proposed development is therefore subject to several planning and urban design policies, which have been discussed in further detail within this section of the Urban Design Guidelines.

1.5.1 Provincial Policy Statement (2020)

The Provincial Policy Statement (PPS) came into effect on May 01, 2020, and establishes a comprehensive vision and direction for land use planning in Ontario. One of the key policy directions expressed in the PPS sets out to build strong communities by promoting efficient development and land use patterns. To that end, the PPS contains a number of policies that promote intensification, redevelopment and compact form, particularly in areas well served by public transit.

In support of the PPS, the design of the River Mill Community will:

- Promote efficient development and land use patterns which sustain the financial well-being of the Province and municipalities over the long term (Policy 1.1.1(a));
- Accommodate an appropriate affordable and market-based range and mix of residential types to meet long-term needs (Policy 1.1.1 (b));
- Promote the integration of land use planning, growth management, transit-supportive development, intensification and infrastructure planning to achieve cost-effective development patterns, optimization of transit investments, and standards to minimize land consumption and servicing costs (Policy 1.1.1 (e)); and
- Promote development and land use patterns that conserve biodiversity (Policy 1.1.1 (h)).

1.5.2 A Place To Grow: Growth Plan For The Greater Golden Horseshoe (2019)

The Growth Plan for the Greater Golden Horseshoe (GGH) has been prepared under the Places to Grow Act (2005), to provide an overall vision and direction for residential and employment related development within one of the fastest growing regions in North America.

The Growth Plan establishes a long-term vision for growth in the area, and advocates for the development of vibrant, compact and complete communities that support a strong economy through intensification of the existing built-up areas.

The design of the River Mill Community supports the following guiding principles, as outlined in the Provincial Growth Plan and the Places to Grow Act:

- Flexibility to capitalize on new economic and employment opportunities;
- Implementation of environmentally sustainable practices to minimize negative impacts to air quality and climate change;
- Achievement of complete communities that are designed to promote healthy and active living and that also meet resident's needs throughout various points of their lifetime;
- Intensification and introduction of higher densities in strategic growth areas to make efficient use of land and infrastructure;
- Conservation of cultural heritage resources to support the social, economic, and cultural well-being of all communities; and
- Consideration of climate changes and management of growth through planning for more resilient communities and infrastructure.

1.5.3 Region of Waterloo Official Plan (2015)

The Region of Waterloo Official Plan, adopted by City Council in 2015, sets out a comprehensive growth management strategy for the next 20 years, which focuses on providing policies to guide land use and transportation planning with a continued commitment of promoting sustainable growth, liveable communities and environmental awareness.

Consistent with the direction originally established in the first Regional Official Policies Plan in 1976, the updated growth management strategy is structured around six key goals which identify long-term framework to further enhance the high quality of life present in the region.

The six goals of the Regional Growth Management Strategy include:

- Building vibrant urban places;
- Fostering a strong economy;
- Providing greater transportation choice;
- Protecting our countryside;
- Enhancing our natural environment; and
- Ensuring coordination and communication.

In keeping with these six goals and the overall vision set out in Section 1.B of the Region of Waterloo Official Plan, the River Mill Community will be *“an inclusive, thriving, and sustainable community committed to maintaining harmony between rural and urban areas and fostering opportunities for current and future generations”*.

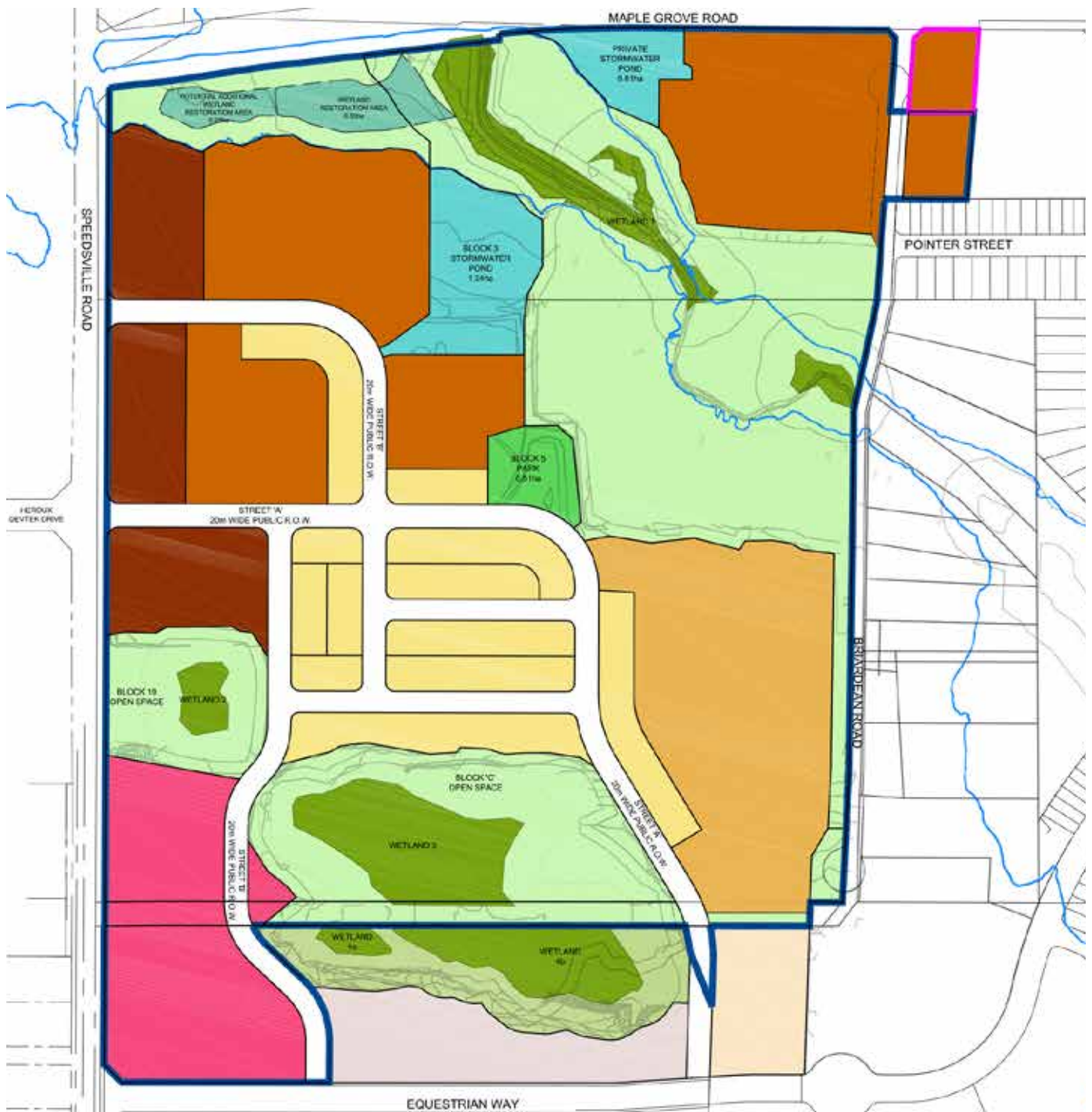
1.5.4 City of Cambridge Official Plan (2018)

The City of Cambridge Official Plan adopted by City Council in 2018, provides detailed long-term land use strategies for areas located within the municipal boundaries of the city.

The policies and framework discussed in this document support Provincial and Regional policies, including Chapter 8 for site specific policies, and identify ways in which to protect, manage and enhance the natural environment and manage growth patterns within the City. The City of Cambridge Official Plan is therefore meant to guide more local land use decisions for all development and public works projects within the city for the next 20 years.

In support of the growth management policies set out in the City of Cambridge Official Plan, the River Mill Community will aim to:

- Encourage balanced growth between residential and employment uses;
- Facilitate new growth of complete communities within the designated greenfield areas;
- Plan for compact urban development that maintains a balanced land supply, including residential, employment and commercial uses, and promotes mixed use, transit oriented development;
- Design new neighbourhoods which are safe, attractive, pedestrian friendly, integrated with the NHS, existing built areas and supporting facilities and services;
- Support the urban structure with adequate infrastructure, including transportation routes, public transit, stormwater management and other public services and community facilities; and
- Promote the principles of conservation and sustainability.



LEGEND

- APPLICATION AREA NEW COMMUNITY
- POTENTIAL ADDITIONAL AREA FOR THE ANNEX
- LOW/MEDIUM DENSITY FREEHOLD
- MEDIUM DENSITY
- MEDIUM/HIGH DENSITY
- HIGH DENSITY
- HIGH DENSITY MIXED USE
- OPEN SPACE
- PARK
- WETLAND
- WETLAND RESTORATION AREA
- STORMWATER MANAGEMENT POND
- OPEN SPACE LANDS TO BE REGISTERED AND DEDICATED THROUGH PHASE 3 ARRISRAFT
- LANDS TO BE DEVELOPED APART FROM NEW COMMUNITY (REGISTERED THROUGH PHASE 2)
- LANDS TO BE DEVELOPED APART FROM NEW COMMUNITY (REGISTERED THROUGH PHASE 3 ARRISRAFT)

Figure 2: Proposed River Mill Community Land Use Plan

COMMUNITY DESIGN PLAN

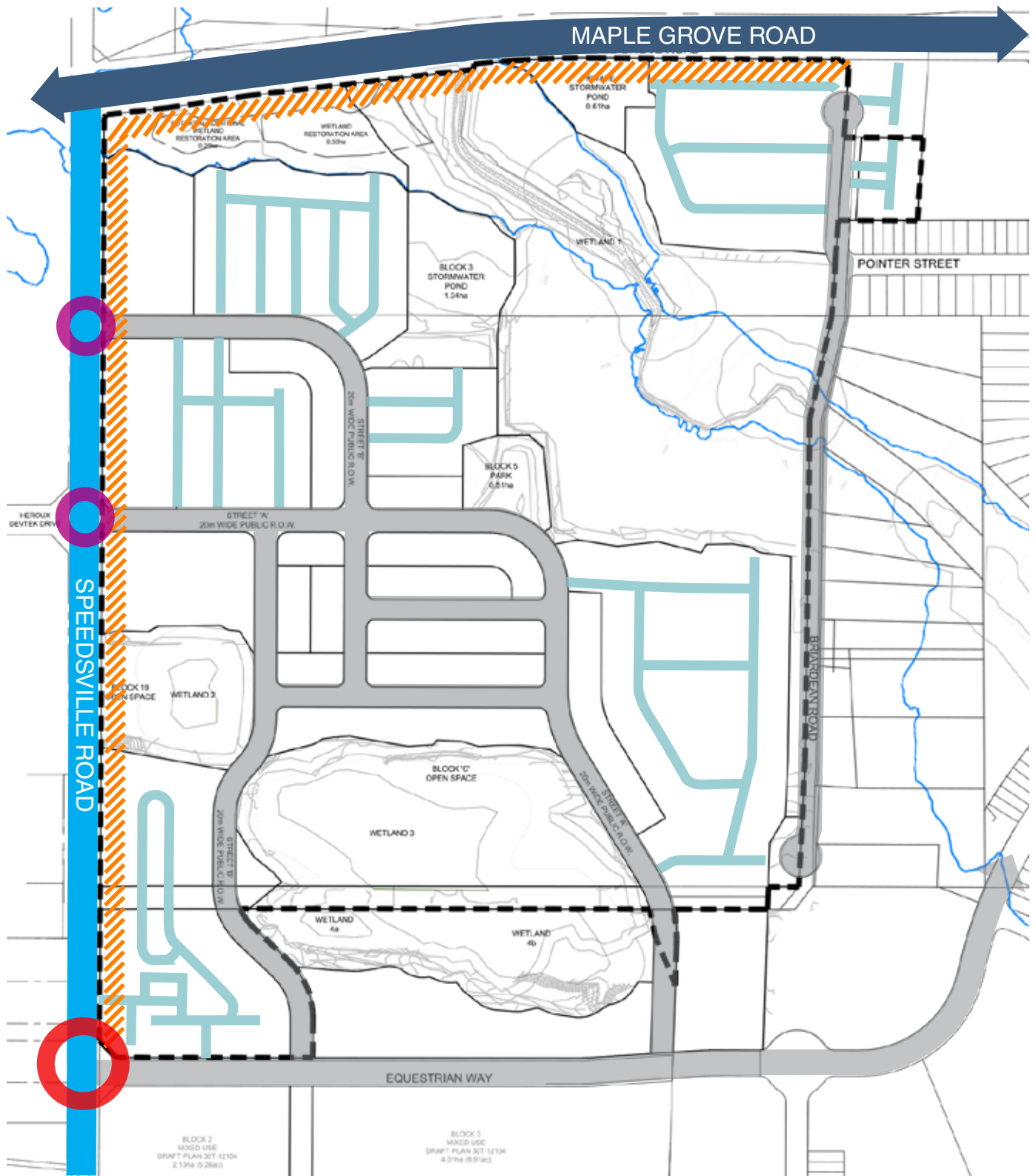
2.1 LAND USES

The River Mill Community will incorporate a mix of land uses that will define the character and function of the neighbourhood.

These uses include:

- Low/medium freehold density residential uses located at the centre of the community plan, which will consist of single detached dwellings with opportunity for front-loaded townhouse dwellings;
- Medium density residential uses focused along the western edge of Briardean Road which will comprise of 1.5 to 2 storey townhouse dwellings;
- Medium/High density residential blocks comprised of 2 and 3 storey on-street and back-to-back townhomes that are located along the southern edge of Maple Grove Road and along Street 'A' and Street 'B';
- High density built form consisting of 4-8 storey mid-rise apartment buildings that have been strategically placed along Maple Grove Road and Speedsville Road community edge;
- High density mixed use blocks which include a mix of apartment and commercial buildings that will form a community node at the intersection of Equestrian Way and Speedsville Road; and
- Hierarchy of open spaces, two (2) SWMP, and the NHS throughout the development area.

Beyond the proposed low-density residential core, the medium/high density and mixed use areas will largely define the identity of the community and, along with the neighbourhood park, SWMP and NHS, will support the evolving character of the immediate area.



LEGEND

- RIVER MILL COMMUNITY BOUNDARY
- ARTERIAL ROAD
- COLLECTOR ROAD
- LOCAL ROAD
- PRIVATE STREET (CONDOMINIUM ROAD)

- COMMUNITY EDGE
- PRIMARY COMMUNITY GATEWAY
- SECONDARY COMMUNITY GATEWAY



Figure 3: Proposed River Mill Community Street Hierarchy Plan

2.2 STREET NETWORK & HIERARCHY

A well-defined and connected hierarchy of streets forms the main structure of the community. It provides for the safe and convenient movement of pedestrians, cyclists and vehicles, serves as a common space for social interaction and establishes the initial visible impression of the community.

Designed as a modified grid pattern, the road network established for River Mill Community responds to the site's topography, natural features, and future uses planned along the community's edges. The proposed road layout is intended to facilitate movement and circulation, support accessibility and transit ridership, and promote a safe pedestrian and cycling oriented lifestyle.

The roads are designed to minimize block lengths for easier navigation and create terminating views, vistas and other focal points to achieve an attractive public realm.

The proposed road network discussed in the following sections will consist of:

- Arterial Roads;
- Collector Roads;
- Local Roads; and
- Private Streets (Condominium Roads).

2.2.1 Arterial Roads

Arterial roads are designed to carry larger volumes of traffic and bus transit service at moderate to high speeds over long distances. Their character varies according to land uses. The River Mill Community is bounded by Maple Grove Road to the north which character is described as follows.

- The character along the north side of Maple Grove Road is predominantly existing agricultural lands;
- At the northeast corner of Maple Grove Road and Speedsville Road, the character is defined by the presence of a single storey traditional building that is currently being used as a childcare centre and long expanses of open space;
- The roadway cross-section has two lanes, with one lane in each direction, a left turn lane at intersections; and
- The R.O.W. width allows for future expansion of the roadway and the proposed streetscape treatment reflects this potential.

2.2.2 Collector Roads

Collector roads provide important connections between residential neighbourhoods and community functions and largely define the community structure, serving as the primary inter-neighbourhood circulation route. Speedsville Road is considered a collector road whose R.O.W. width is 28.0m. The streetscape character of this collector road varies according to land uses, which ranges from mixed use areas, high density residential and the NHS.

Collector Roads such as Speedsville Road, should be designed to be attractive urban boulevards, with high quality streetscapes, coordinated built form and engaging public realm. For this reason, the River Mill Community layout has been designed to support the collector road layout which will facilitate movement for all modes of transportation, maximize views of the NHS and provide opportunities for social interaction.

- Typical roadway cross-section will include one lane in each direction, 1.5m sidewalks on both sides, 1.5m bike lanes or pavement widening in each direction;
- Widening is provided to accommodate a left turn lane and centre median at arterial intersections; and
- Planting of the street trees to be coordinated by the City of Cambridge.

2.2.3 Local Roads

Local roads serve residential neighbourhoods and are intended to provide a comfortable pedestrian experience with relatively low levels of local vehicular traffic. Their character varies according to adjacent built form, which may include low and medium density residential built form, parks, SWMP facilities, and NHS frontage.

As a standard, the proposed local roads will range between 18.5m and 20.0m R.O.W., with one lane in each direction, possible bike lanes and parking on one side or both sides according to parking needs as determined by adjacent land uses, and sidewalks on one or both sides. Should the City of Cambridge conclude that the maintenance requirements associated with sidewalks on both sides is cost prohibitive or otherwise unwarranted based on the configuration and/or extent of adjacent land uses, then consideration may be given to a single sidewalk configuration.

The local road network shall facilitate logical, direct, permeable, and safe neighbourhood connections through a modified-grid configuration. The use of cul-de-sacs shall be minimized throughout the River Mill Community.

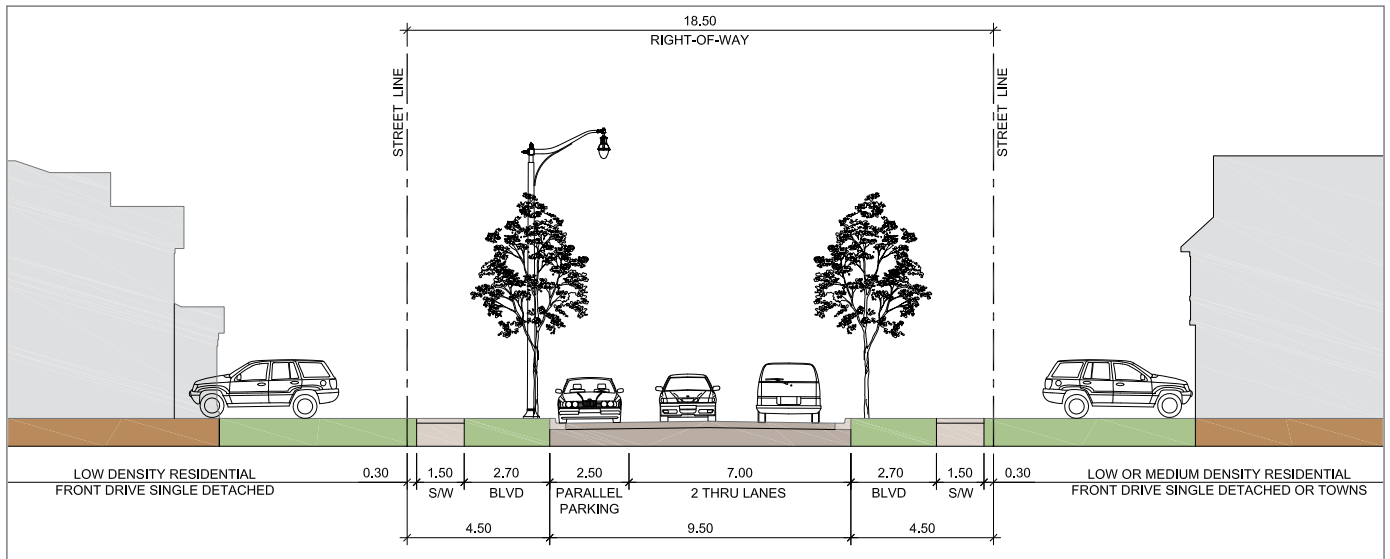


Figure 4: Local Road with Parking - 18.5m R.O.W. Cross-section

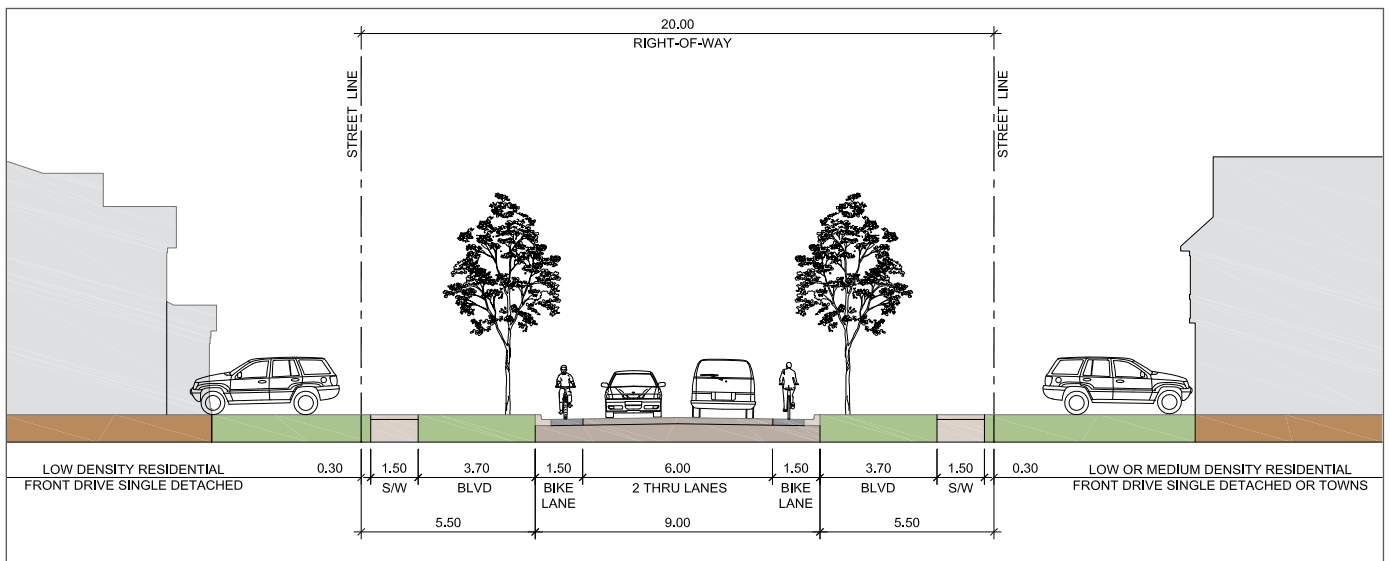


Figure 5: Local Road with Bike Lanes - 20.0m R.O.W. Cross-section

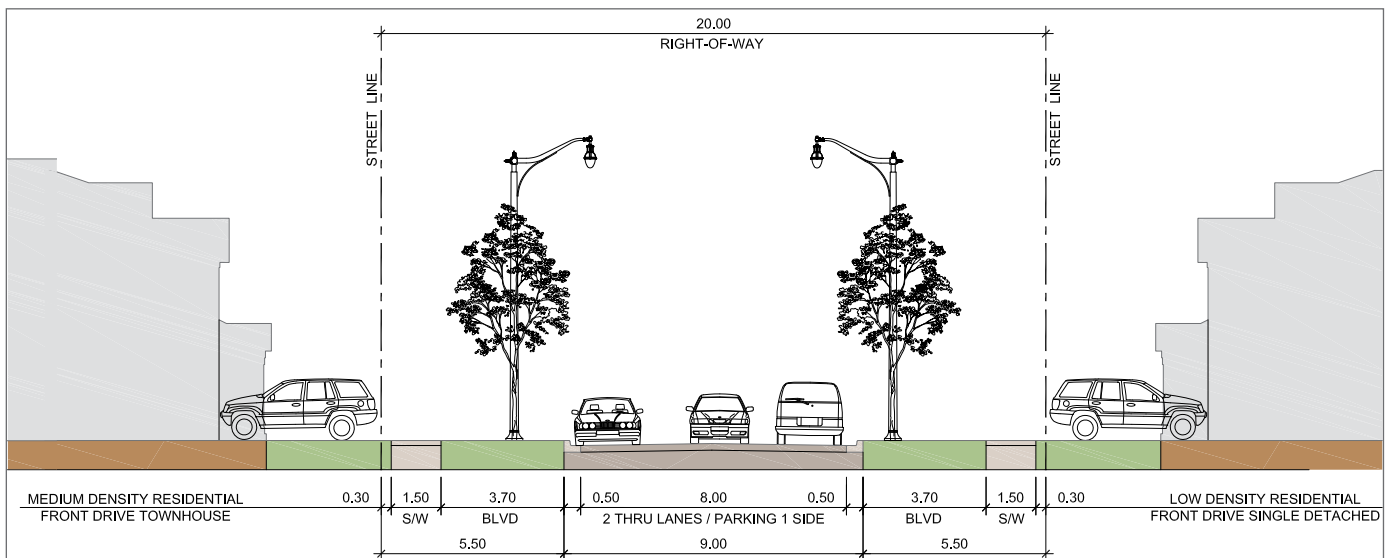


Figure 6: Local Road with Parking - 20.0m R.O.W. Cross-section

2.2.4 Private Streets (Condominium Roads)

Private streets reflect a traditional urban form that benefits the parallel roadway in several ways. They provide an urban front door interface with the adjoining street, allow variation in the built form product and enable some efficiencies in block layout to achieve a more compact urban village environment. As well, private streets reduce interruption to the parallel street curb edge, resulting in the removal of driveways and allowing for continuous rows of street trees with a greater rooting area.

The following describes some of the proposed streetscape elements:

- Shall allow for 2-way vehicular travel with a paved apron or concrete sidewalk on one or both sides of the street. A paved apron is associated with rear garage frontage, which facilitates vehicular access into each garage;
- May have rear garage frontage, front-yard frontage or a combination of both;
- Dwellings that front onto the private streets will typically have a front yard area alternating with a driveway access to a front-facing garage. The front yard shall be used for street tree planting;
- A sidewalk on one or both sides shall also be integrated where there are predominantly front-yard conditions;
- The appearance of the lane should be enhanced through thoughtful design and selection of the garage location, garage door and any fencing details; and
- The entry to the private streets should be landscaped with grass and trees where appropriate to enhance the streetscape perpendicular to it. As well, to improve the visual impact of the block for residents, opportunities for additional planting shall be considered for any open space areas adjacent to the private streets, with consideration for area requirements related to utilities, snow storage, etc.

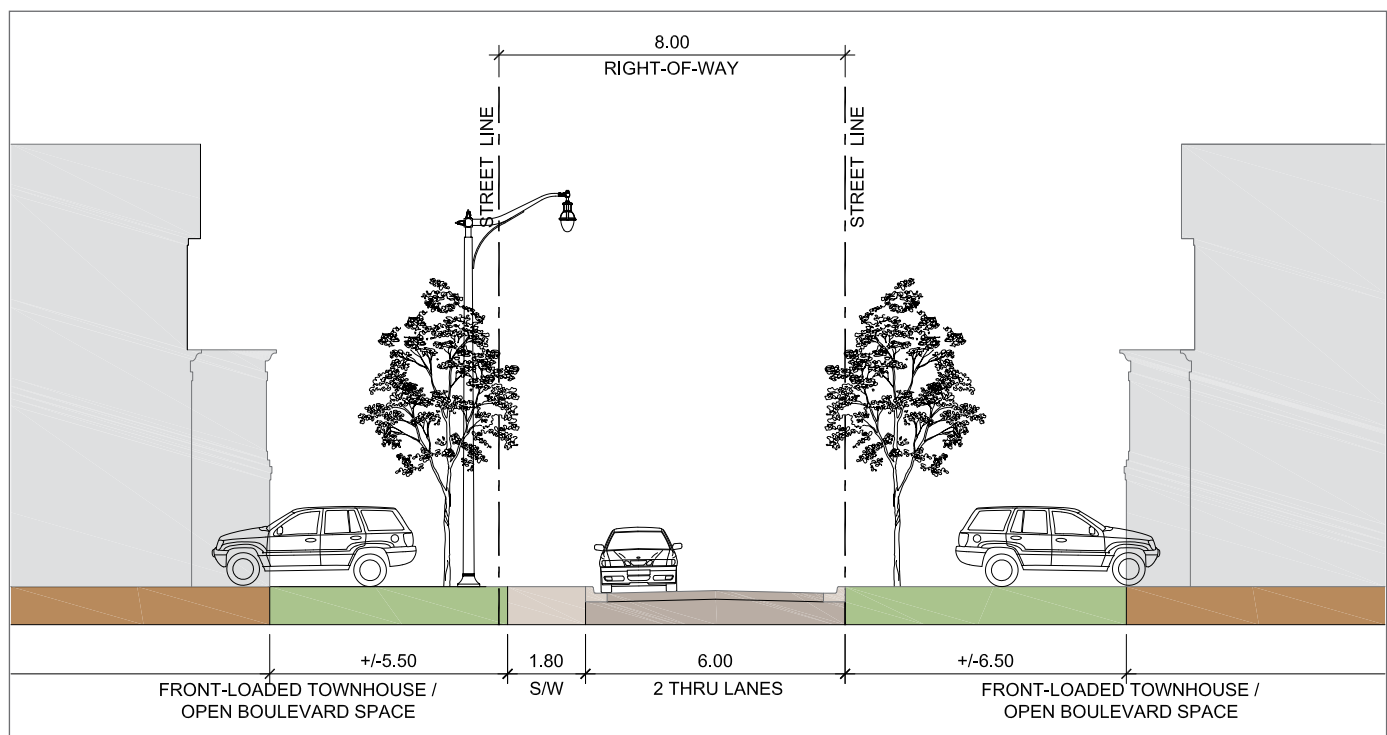


Figure 7: Private Street (Medium/High Density Block) - 8.0m R.O.W. Cross-section

2.3 GATEWAYS & COMMUNITY EDGES

2.3.1 Community Gateways

Gateways are an effective means of consolidating expansive development areas into one discernible, connected community. They are important identifiers that provide the opportunity to communicate the character and theme of the community, contribute to placemaking and enhance civic pride. They also serve as landmarks that facilitate orientation and wayfinding.

Community gateways will be located at the main vehicular and pedestrian entrances along Maple Grove Road and Speedsville Road. Gateways will be identified through increased architectural detailing and enhanced landscape architecture features.

Figure 3 indicates the preliminary proposed location for primary and secondary gateways within the River Mill Community.

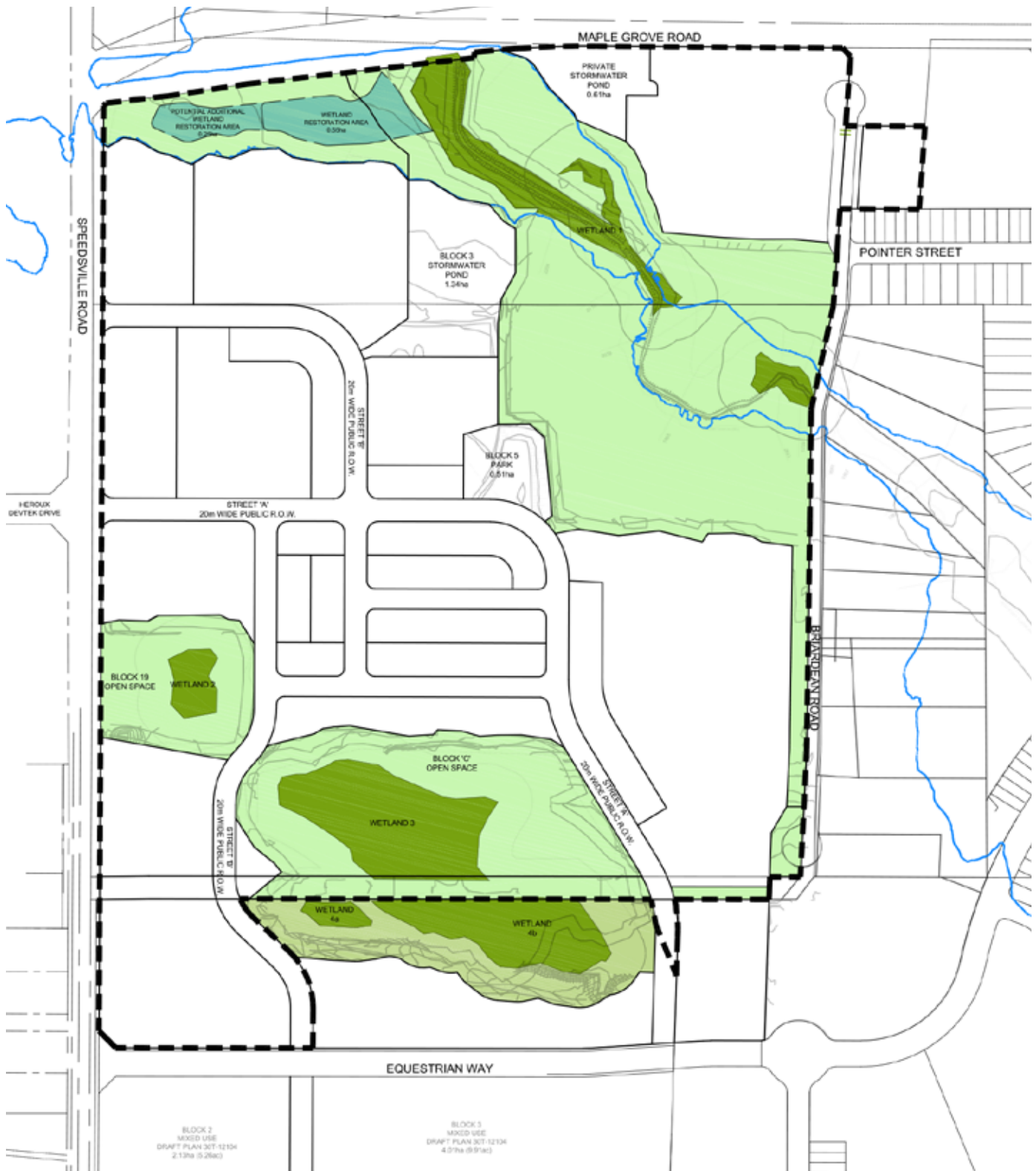
2.3.2 Community Edges

The edges of the River Mill Community include the arterial roads of Maple Grove Road and Speedsville Road, which will be reinforced by higher densities and a strong building edge to provide high quality urban environments on these transit corridors.

Proposed built form along the Maple Grove Road edge will therefore include an 8 storey apartment building with 3 storey on-street townhomes. Along Speedsville Road, 4 and 8 storey apartment buildings will line the street, together with a high density mixed use block at the intersection of Equestrian Way.



Image examples of well designed community edges that provide a significant contribution to the character and definition of each community.



LEGEND

-  RIVER MILL COMMUNITY BOUNDARY
-  OPEN SPACE
-  WETLAND
-  WETLAND RESTORATION AREA



Figure 8: Proposed River Mill Community Natural Heritage System

2.4 NATURAL HERITAGE SYSTEM (NHS)

The proposed NHS, consists of a natural corridor along Middle Creek in the northeast portion of the community, including Middle Creek's riparian areas, surrounding wetlands and woodlands, as well as two additional areas of wetland and woodland in the southwest and south portion of the community. The Middle Creek NHS corridor is contiguous with the Speed River Valley southeast of the community.

This corridor of natural lands integrated into the design of the River Mill Community has been designed to ensure an ecologically diverse, healthy and sustainable NHS in an urbanized setting. The primary objective is to preserve the existing natural environment to achieve multiple objectives and targets related to wildlife habitat, connected natural areas and features, community diversity, water management, etc., that will be balanced and implementable.

The proposed land use fabric, including streets, residential, mixed-use, open space features and buffer elements, evolve from the prominent NHS lands and will provide important view opportunities within walking distance of the neighbourhoods. As well, the street grid pattern will allow convenient and logical access to the proposed trail system integrated into these features.

Land uses immediately adjacent to the NHS (woodlands, wetlands, watercourses) shall be designed to support the NHS features through careful integration of streets, public open spaces, trails, etc. and by establishing required setbacks and buffers.



Conceptual images showing examples of conventional NHS and how they can be incorporated to provide valuable community amenity features.



Conceptual image showing an example of built form that helps to frame a conventional NHS.

2.5 CHARACTER AREAS

2.5.1 Mixed Use Node

Fundamental to creating a transit-oriented, walkable urban community is the establishment of a mixed use node at the key intersection of Equestrian Way and Speedsville Road. This mixed use node is meant to strengthen the urban structure of the River Mill Community and bring a unique character to the surrounding area.

To create conditions that promote the success of this mixed use node, the following design considerations will be implemented:

- Establish a 'village character' for the commercial block with strong built form orientation toward the intersection and the street along Equestrian Way, minimum building setbacks, and access from the sidewalk;
- Encourage a courtyard or cluster configuration that integrates parking, servicing and loading internally, to reduce visual exposure of these functions from surrounding roads;
- Reinforce a walkable, urban village environment by establishing smaller block lengths;
- Provide strategically placed lay-by street parking, allowing convenient access to neighbourhood amenities (retail / service uses) and reduce the perceived scale and related vehicular traffic speed of the street;
- Ensure that convenient, accessible pedestrian connections are provided from street level to retail, service or residential uses, as required;
- Integrate transit stops with the streetscape treatment, and size transit shelters according to the boulevard width, anticipated user frequency and adjacent built form uses;
- Provide for a greater level of pedestrian safety by distinguishing crosswalks at major intersections using enhanced paving treatments; and
- Provide a streetscape treatment that respects City standards and promotes built form and landscape design to enhance the character of the mixed use node and its prominence within the higher-density urban context (refer to Section 4 - Streetscape Design Guidelines).



Example image of a store front that provides a convenient accessible pedestrian connection from street level to retail.



Example images of mixed-use built form that displays a 'village character' with strong orientation to the street and access from the sidewalk.



Image examples of drive-through lanes separated from parking areas and driving aisles through the use of raised curbs and landscaped islands.



Image example of drive-through facility which offers ample landscaping and whose drive-through lanes are oriented away from immediate public view.

2.5.2 Drive-Through Facilities

Given the key location at the intersection of Speedsville Road and Equestrian Way, any drive-through facility located in this area shall reinforce an urban character that contributes to the streetscape.

Design Guidelines:

- Noise-generating areas, including stacking lanes, loading/garbage areas and order boards/pick-up windows should be located away from residential areas;
- Drive-through lanes should be located away from immediate public view and designed to minimize interruptions by other vehicular traffic within the site;
- Drive-through lanes should be designed to be straight and minimize the number of curves, to the extent possible;
- Escape points should be provided, as appropriate;
- The number of vehicular access points should be minimized and located away from street intersections;
- Drive-through lanes should be defined through the use of a raised curb or landscaped island in order to separate it from the main parking areas and driving aisles;
- Multiple windows servicing a single drive-through lane (e.g. payment window, pickup window) should be considered to reduce idling;
- The use of multiple drive-through facilities on the same site should be avoided, where feasible;
- Parking stalls should be located away from access points to the drive-through lanes; and
- Directional signage should be clearly displayed at the entrance and exit points of the stacking lane.

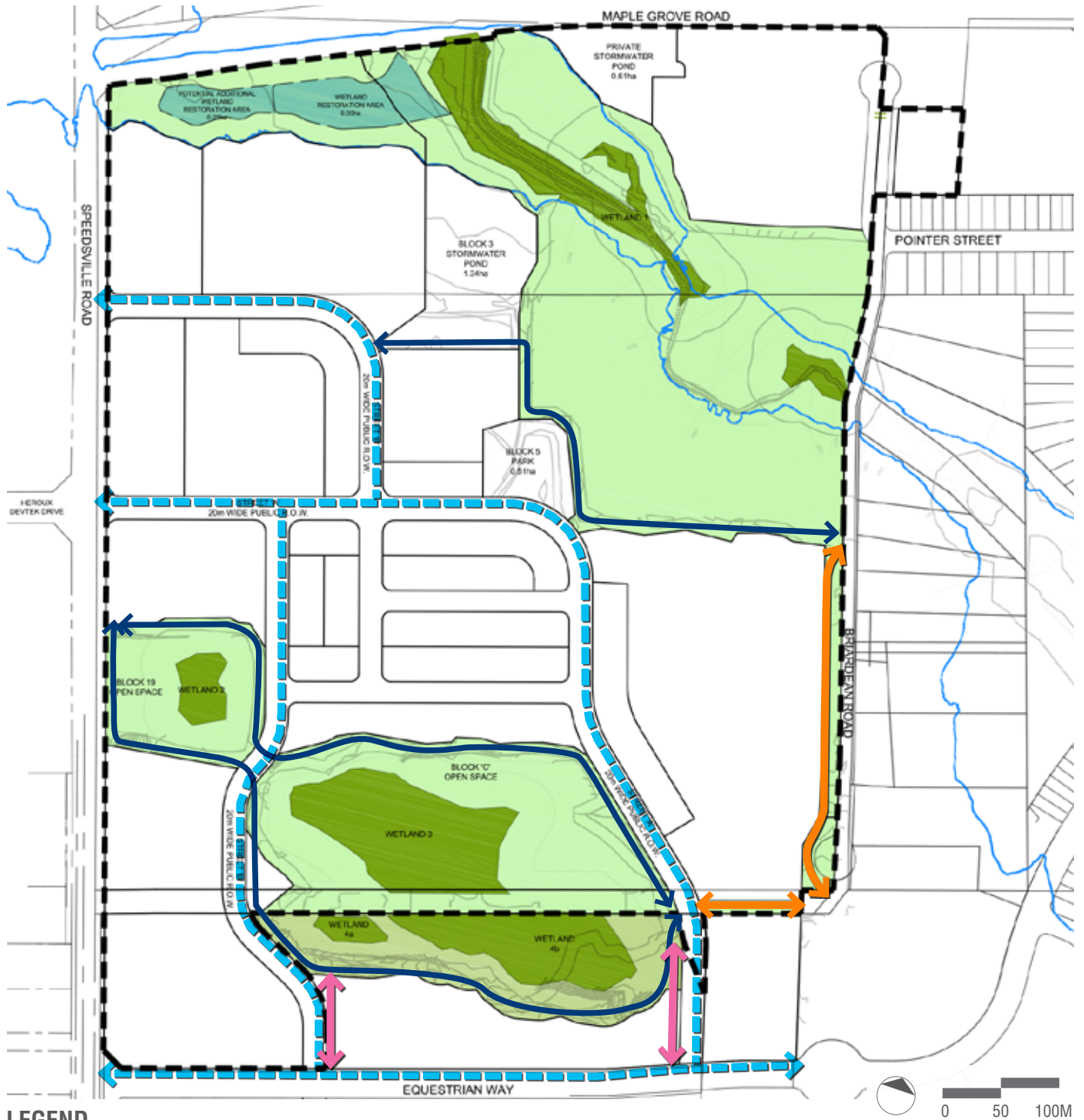


Figure 9: Proposed River Mill Community Open Space System

OPEN SPACE DESIGN GUIDELINES

3.1 NEIGHBOURHOOD PARK

Neighbourhood Parks have a neighbourhood focus and provide active and passive recreation opportunities within a reasonable walking distance of the majority of residents. One (1) Neighbourhood Park has been identified within the River Mill Community. This park will serve as a central common green space, reflecting the character of the community and providing a connection into the NHS and SWMP.

Design Guidelines:

- The Neighbourhood Park shall be predominantly soft landscaped to allow for a variety of active and passive uses, including programmed and unstructured uses;
- As a focal point within the community, the park shall be designed to offer clear views of, and access into, the NHS and SWMP;
- The design of hard and soft landscape elements and features, including points of entry, shall be consistent or complementary with established neighbourhood themes (including surrounding dwellings and other open space components);
- Playgrounds and / or shade structures (including play structures, swings, etc.) shall be designed as a major focal element of the Neighbourhood Park;
- Hard and soft landscape elements and features shall be designed to identify areas of activity, circulation, entry points, seating, and gathering;
- Reasonably level and functional open play areas shall be provided for passive recreation use;
- Safe pedestrian and cycling connections shall be provided between the Neighbourhood Park and other community open space elements, and accessible natural areas. These connections link to the higher level of pathways associated with main roads, as part of the hierarchy of trails and pathways;
- Planting (trees, shrubs, grasses) shall consist of species tolerant of urban conditions with an emphasis on native species; and
- Tree planting within open space areas shall reflect an informal layout with cluster groupings of trees contained within lawn areas to facilitate shaded passive use.

3.2 BUFFER BLOCK / NHS

The proposed River Mill Community interfaces with the designated NHS, consisting of a natural corridor along Middle Creek in the northeast portion of the community, including Middle Creek's riparian areas, surrounding wetlands and woodlands.

The buffer block area will be provided along the edge of the NHS in order to sustain these natural features and to protect them from potential adverse impacts caused by adjacent development. Considerations for species selection, erosion control, habitat creation, planting density, topsoil mix, etc. as related to terrestrial and aquatic ecosystems, will be critical to the long term success of these buffer blocks.

3.3 STORMWATER MANAGEMENT POND (SWMP)

In addition to its primary water quality and control function, a SWMP will be designed to maintain the environmental and ecological integrity of the NHS and to provide a net benefit to the environmental health of the development area, to the extent practical.

Two (2) SWMP have been identified in the plan and are situated along the northern NHS corridor of the River Mill Community. The SWMP (0.61ha) located along Maple Grove Road will provide attractive views from the arterial road into the residential pocket. The SWMP (1.34ha) located along Street 'B' will complement the neighbourhood park located further south through provisions for the extension of the trail network and the integration of community features, such as seating areas.

To encourage a strong connection with the community, the design of the SWMP shall have regard for the following:

- A regular spaced row of coarse-leaved canopy trees shall be provided along the street frontage in combination with areas of naturalized planting;
- The integration of viewpoint is encouraged to be provided at the pond entry as a public amenity that may provide seating and decorative features (decorative paving, information signage, shade structure, formal planting) at desirable view opportunities along the street interface;
- Naturalized planting throughout to consist of whips, multi-stem shrubs, ornamental grasses and riparian, aquatic and upland species appropriate for the pond condition, with an emphasis on native species, in accordance with conservation standards;
- Pedestrian trails shall be integrated to provide connections from the street pond entry to adjacent NHS trail networks;
- Trails around the pond shall be combined with maintenance access roads in common locations to minimize non-vegetative surfaces, while facilitating important pedestrian linkages;



Image example showing dwellings flanking onto a SWMP, emphasizing the pond as a key feature of the community.



Image example of a SWMP seating area that functions as a community amenity space.



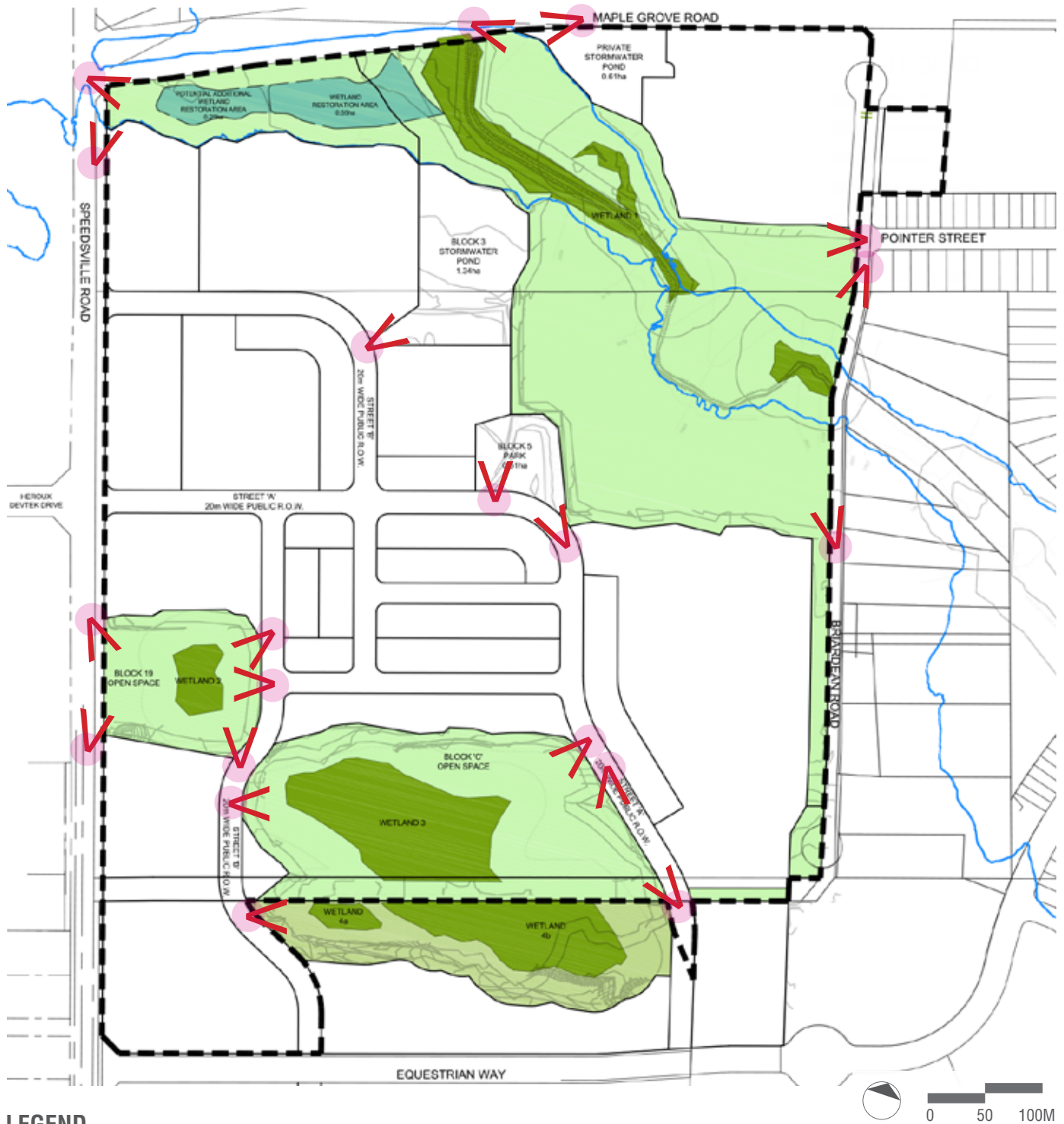
Image example showing trail system along a SWMP.

- Should utility structures be placed within the pond facility, they shall be screened from public view with planting and fencing or other built features, as necessary; and
- Provide information signage at the pond entry / viewpoint area to inform the public of the importance and treatment of the SWMP as a functioning natural open space feature.

The opportunity to design the SWMP with a more urban, compact layout may be considered. Compared to conventional ponds, urban SWMP are characterized by terraced retaining walls along a portion of the perimeter rather than earthen slopes. Urban SWMP have the advantage of reducing the overall area required for pond development, while enhancing the public realm.

In addition to guidelines for conventional SWMP, the following should be considered:

- Opportunities exist to substantially terrace plant in between rows of armourstone or other retaining wall system, effectively screening a large extent of the retaining wall, should that be desired, while providing a gradual and fully vegetated transition from water level to the street edge;
- Armourstone or its equivalent is an appropriate landscape treatment that provides an additional element and character to pond design. It can be laid out in a sinuous pattern to better integrate with the natural patterns of the landscape planting;
- Armourstone or other retaining wall system should be placed at an appropriate distance from adjacent street right-of-ways so that it has no impact on the design, safety and support of the roadway;
- Dense planting should serve as a barrier between multi-use paths and retained sloped edges on the low side of the path; and
- Armourstone or other retaining wall system should not be utilized below the regulatory storm event or in the path of the overland flow routes.



LEGEND

--- RIVER MILL COMMUNITY BOUNDARY

OPEN SPACE

PARK

WETLAND

WETLAND RESTORATION AREA

STORMWATER MANAGEMENT POND

OPEN SPACE LANDS TO BE REGISTERED AND DEDICATED THROUGH PHASE 3 ARRISCRAFT

VIEWS AND VIEWSHEDS

Figure 10: Potential River Mill Community Views and Viewsheds

3.4 VIEWS & VIEWSHEDS

Public access to NHS views and viewsheds is an integral component of an attractive, walkable and sustainable community. Within the River Mill Community, views will be dominated by the NHS. This natural feature will provide attractive views from various vantage points within the community and has significantly influenced the configuration of the proposed land uses and endorsed framework plan, including the layout of the road network and the block plan.

Viewsheds are defined as publicly accessible viewing opportunities either along a road right-of-way (R.O.W.), a trail network, or an open space block (Neighbourhood Park, SWMP). The quality and character of the resulting view opportunity can be described as either long / expansive views, which typically afford an extensive vista or longitudinal view over a large distance, or short views, which are usually framed by a woodland edge or have built community features (roads, built form, etc.) in the background.

Capitalizing on the presence of the NHS, strategic viewshed opportunities have been integrated into the River Mill Community through the adaptation of the following principles:

- Streets have been oriented to maximize views towards open space features, including the use of single-loaded roads;
- Emphasis has been placed on providing access points to natural features by locating pedestrian amenities such as seating areas; and
- Architectural built form shall be located, oriented, and designed to maintain or emphasize views.

Important views and viewsheds have been captured with the following land use components and are depicted in Figure 10.



Image examples showing opportunities for views between open spaces and the community.

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SECTION 4

STREETSCAPE DESIGN GUIDELINES



The streetscape plays a key role in promoting and enhancing the identity of a community. A carefully considered combination of elements within the right-of-way can create an inviting and unique public realm experience for residents and visitors. To reinforce the character and identity of the River Mill Community and ensure the safety, comfort and accessibility of pedestrians, cyclists and motorists, the design of streetscape elements shall be coordinated and consistent throughout the whole community.



Image examples showing streetscape elements which contribute to the character of the community and ensure safety and comfort of residents.

4.1 STREET TREES

Healthy street trees reduce air pollution, provide shade and cooling, furnish habitat for wildlife, increase property values, enhance community aesthetics and pride of place, make streets safer and more walkable, and contribute to quality of life. An effective planting strategy can help establish the character of the River Mill Community and should relate to the street type and adjacent land use.

The strategy may address 5 basic categories for street trees, including the following:

Category 1:

Native / Non-Invasive Trees (Medium or Coarse-Textured Species) typically located on streets adjacent to natural heritage features, stormwater management facilities and buffers.

Category 2:

Urban Tolerant Trees (Medium, Coarse or Fine-Textured Species) typically located within a commercial area predominantly characterized by a hardscape environment.

Category 3:

Ornamental or Flowering Trees (Medium or Coarse-Textured Species) typically located at significant community / neighbourhood entry points or alongside main gathering areas.

Category 4:

Medium or Coarse-Textured Trees typical to all street hierarchy types, including local, collector and arterial roads.

Category 5:

Fine-Textured Trees typically located along local streets.

Medium or coarse-textured species typically refers to deciduous trees with a single, simple leaf structure with one blade attached to a stalk or petiole (ex. Sugar Maple). Fine-textured species refers to trees with a compound leaf with secondary leaflets borne on a single stalk attached to a twig (ex. Honeylocust).

Design Guidelines:

- The use of native, non-invasive tree species is required for streets and areas adjacent to natural open spaces, including NHS features, buffers, and SWMP;
- Generally, preference shall be given to native species, particularly those tolerant of urban conditions (pollution, salt, drought, soil compaction);
- Avoid planting conditions inherent in many urban environments, which are characterized by minimal soil volumes, poor soil structure, lack of irrigation, and improper drainage;
- Ornamental or flowering trees shall be considered for key entry streets to help define or emphasize community and neighbourhood gateways;
- Unless otherwise stipulated, street trees shall be located within the grass boulevard between sidewalk and curb, with the intent of creating a prominent, continuous canopy on both sides of the street;
- Trees of the same species should be planted on both sides of the street and may extend the length of the block or street, with the objective of creating a uniform canopy;
- To foster greater biodiversity, avoid street tree monocultures that repeat the same species over large areas;
- Street tree sizes shall comply with City of Cambridge minimum caliper size standards. However, a larger caliper size (approx. 80-100mm cal.) should be considered to highlight character streets, focal areas or significant entry points; and
- Minimum distance separation between street trees and below and above-ground utilities shall be in accordance with City of Cambridge standards.

4.2 GATEWAY ELEMENTS

Community gateways serve to signify arrival into the community and reflect its unique character. For this reason, the design of gateways shall be of a high-quality, with adjacent built form and public realm uses supporting the important role of the gateway element. This means that gateways located at intersections shall be coordinated with the surrounding built form and include enhanced landscaping, special paving, signage, lighting, seating and/or coordinated fencing that frames the entry into the community.

Design Guidelines:

- Position primary building entrances and architectural features toward the gateway;
- Integrate visually prominent built form massing at the gateway, with well-articulated, high quality, and distinctive architectural treatment;
- Implement a coordinated palette of colours, materials, and textures for built form and landscape;
- Integrate unique streetscape elements such as gateway markers/entry features, signs, columns, or overhead structures; and
- A common palette of materials and design style should be reflected in all gateway components to emphasize a consistent theme and identity for the community.



Image examples of a hierarchy of components from the same family defining a primary community gateway and pedestrian entrances.



Image example of entry features used to reinforce the identity of the community through material selection and signage.

4.3 STREET FURNISHINGS

Attractive, sturdy, and accessible street furniture is fundamental to the visual appeal and use of streets and public spaces. It plays an important role in defining the streetscape and reinforces the community identity.

Design Guidelines:

- Street furniture shall be provided in high pedestrian traffic areas within mixed-use nodes and in key open space areas, such as neighbourhood park and SWMP;
- The colour, material, form, and style of street furniture shall be consistent with and complementary to the established design theme for the community;
- The placement and layout of furnishings shall encourage safe use, maintain all accessibility requirements and be appropriate to the adjacent built form type and function;
- As much as possible, furnishings shall be vandal-resistant and low-maintenance, with readily available componentry; and
- Furniture within the Neighbourhood Park, shall include benches, waste receptacles and rings or posts, and shall be complementary to the established design theme for the community.



Image examples of a waste receptacle, community mailbox and benches that are complementary to the established design theme for the community.



Image example of bench that is complementary to the established design theme for the community.



Lighting design shall be coordinated with the architectural design to promote a definable and consistent character for the community.



Image example of bollards consistent with lighting treatment found in the rest of the community.

4.4 STREET LIGHTING

Street lighting is an essential component of streetscape design. For this reason, the choice of lighting elements plays a key role in establishing the character of the public realm.

When selecting lighting for the River Mill Community, consideration should be given to the continuation of existing street lighting design found in the surrounding neighbourhoods, together with aesthetics, maintenance, cost effectiveness and energy efficiency.

Design Guidelines:

- Lighting design (pole and luminaire) shall be coordinated with the architectural design and other street furnishings to promote a consistent and definable character for the community;
- Select light poles and luminaires that are appropriate to the site and function to avoid underlit or excessively lit areas and light pollution; and
- Selection and placement of lighting fixtures shall be in compliance with established City of Cambridge standards.

4.5 FENCING

Fencing of varying types and materials will be required throughout the community to address barrier, privacy and acoustic requirements. In areas of high visibility, fencing shall be designed to enhance the streetscape appearance, with consideration for long-term maintenance requirements.

Locations for integrating fencing may include:

- Wood privacy fencing and/or wood acoustic fencing at residential flankage locations;
- Low decorative fencing (metal or wood) at gateway entries along arterial roads, potentially including 'Street A';
- Low decorative fencing (metal or wood) along window streets; and
- Chain link fencing for lots adjacent to SWMP, neighbourhood park perimeters and any other public open space feature.

Design Guidelines:

- Fencing design shall be coordinated and consistent throughout the community;
- Fencing design shall reinforce or complement the character and identity of the community;
- Fencing shall comprise only robust, sturdy components for long term durability; and
- Intricate design work using smaller components should be avoided for wood fencing due to the effects of weather over the long term.



Image example of a community mailbox with enhanced landscape treatment.



Image example of a Bell CUE unit partially screened within an easement adjacent to a SWMP facility.



Image example of metal fence, with planting to screen the utility meters from immediate public view.

4.6 COMMUNITY MAILBOXES

Community mailboxes are standard streetscape elements in most communities. Beyond their function as a location to pick up mail, they provide opportunities to integrate attractive streetscape features as focal points within neighbourhoods where social interaction may occur. To strengthen their role in promoting a walkable neighbourhood, consideration shall be given to location and associated landscape features.

Design Guidelines:

- Community mailboxes shall be supplied by Canada Post and located in easily accessible and highly visible locations in the community (i.e. key nodes and focal points), within walking distance for all residents;
- Preference is for mailboxes to be located within street boulevards in close proximity to the commercial area, parks, subject to catchment area requirements;
- Mailboxes may also be integrated into SWMP viewpoints or seating areas, if in close proximity to sidewalk and street; and
- At key locations, the importance of community mailboxes shall be enhanced through landscape features, and can include a combination of decorative paving, seating features, landscape structures (i.e. trellises) or planting.

4.7 UTILITIES

Any utilities and utility-related boxes or structures should be designed and sited to minimize their visual impact on the public and private realm, where feasible.

Design Guidelines:

- Along 'Street B' and within the medium density and commercial blocks, utilities shall be strategically located to mitigate visual impacts and avoid physical barriers to pedestrian flow;
- As much as possible, avoid locating above-ground utility plants on boulevards within the mixed-use node intersections and along the Spine Road. Rather, utilize side streets and rear lane or ganged end-wall service entrances;
- Utilities required for parks and open space areas will be located within these uses. All other utility boxes/structures are encouraged to be located away from immediate public view and within or in front of park or open space blocks; and
- Utility companies are encouraged to incorporate graffiti maintenance controls for applicable utility boxes.



LEGEND

- RIVER MILL COMMUNITY BOUNDARY
- SINGLE DETACHED DWELLINGS
- 1.5 TO 2 STOREY ON-STREET TOWNHOUSES
- 2 STOREY ON-STREET TOWNHOUSES
- 3 STOREY ON-STREET TOWNHOUSES
- BACK-TO-BACK TOWNHOUSES
- RESIDENTIAL MID RISE
- MIXED USE BUILDINGS



Figure 11: Potential River Mill Community Built Form

BUILT FORM GUIDELINES

5.1 GENERAL DESIGN OBJECTIVES

A high quality built form character shall be achieved for all built form types, delivering architecture that is rich and varied in its form and treatments, creating a distinctive community with visually appealing streetscapes.

The design of all dwellings within the River Mill Community shall offer a harmonious mix of architectural themes derived from either traditional or contemporary styles.

The use of distinctive and well-designed architecture employing high-quality materials (brick, cement board, siding, and stone, depending on architectural style) will be a consistent characteristic of all proposed development, linking various communities in the Cambridge region.

Stylistic influences may be borrowed from local architectural precedents, and may include:

- Ontario Country Traditional Style;
- Victorian Style;
- Georgian Style;
- English Manor Style;
- Craftsman Style;
- Tudor Style;
- Colonial Style;
- Gothic Revival Style; and
- Contemporary Style.

Distinguishing elements from each building design should reflect a single identifiable architectural style. Avoid combining discordant architectural elements in a single building design and ensure that a consistent level of design quality is achieved regardless of the chosen architectural style.

Residential uses will comprise the majority of built form within the River Mill Community. A variety of dwelling types, sizes, and tenures will be provided to offer housing choices that will contribute to a diverse community for residents of different incomes, household sizes, and lifestyles. This diversity of housing options will provide the flexibility for residents to remain within the community over time.

Outlined in the following section is a description of the planned residential dwelling types, together with general design guidelines and objectives.

5.2 LOW DENSITY RESIDENTIAL

5.2.1 Single Detached Dwellings

Single detached dwellings, typically in the form of 2 and 3 storey massing, are expected to encompass the majority of low density freehold dwellings within the River Mill Community.

Design Guidelines:

- Lot sizes for single detached dwellings may range from 9.0m to over 18.0m;
- Single-detached dwellings shall have one to two storey massing. Where a third storey is contemplated, it should be incorporated into the roof massing;
- Garages will typically be attached and accessed from the street. The use of alternative garage options (i.e. detached, rear yard, tandem or lane -accessed) may be explored, where feasible;
- Dwellings on lots with frontage less than 11.0m may have a single car or 1-1/2 car street facing garage. Two car street-facing garages will be permitted on lot frontages of 11.0m or greater;
- Attached street-facing garages shall be incorporated into the main massing of the building. Dwelling designs with garages projecting beyond the front façade of the dwelling or porch are discouraged;
- Porches and bay windows are permitted to encroach into the front, flankage, and rear yards as a prominent architectural feature;
- For corner units, the flanking side elevation shall be given a similar level of architectural detailing as the front elevation; and
- Main entries for corner dwellings are encouraged to be oriented to the flanking lot line.



Image examples of single detached dwellings with 2 storey massing and prominent porch entries, well articulated facade treatments, and attached street facing garages.



Image examples of on-street townhouse dwellings with 1.5 to 3 storey massing and detail articulation that is appropriate to the architectural style.

5.3 MEDIUM DENSITY RESIDENTIAL

5.3.1 On-Street Townhouses

Street-accessed or on-street townhouses will be situated in areas where increased density and pedestrian activity is desired. Townhouses, which may be freehold or condominium, and which may range from 1.5 to 3 storeys make efficient use of land, provide higher density in key locations, reduce energy consumption and increase the diversity of built form within a community.

Design Guidelines:

- The maximum number of street townhouse units permitted in a row shall be eight (8), and the minimum number of units shall be three (3). Mixing of townhouse block sizes within the street can help provide visual diversity in the streetscape;
- The minimum lot size for street townhouses is 5.5m;
- Street townhouses will have a single car, front-facing garage accessed from the street, accommodating two (2) cars per unit (1 in garage and 1 on driveway). As well, a minimum of 0.5 on-street parking spaces per unit shall be provided;
- Townhouse block composition shall display massing and design continuity, while achieving adequate elevation variety, where appropriate to a given architectural style;
- Facade articulation is encouraged to avoid large unbroken expanses of roof or wall planes. For some architectural styles (i.e. Georgian) simple massing and roof articulation is preferred;
- Townhouses shall have two to three storey building massing;
- The main front entry should be oriented to the front lot line for interior units and to the flanking lot line for corner units; and
- Utility meters and air conditioning units shall be carefully placed and concealed from public view subject to local utility company requirements and/or maintenance access requirements.

5.3.2 Back-to-Back Townhouses

Back-to-Back townhouses may be contemplated as a built form transition between residential mid rise and low rise. This townhouse form is typically a 3-storey freehold structure with front facing garages accessed from a public street. A common demising wall is located along the rear of the units, in addition to the traditional interior side walls. The outdoor amenity space is typically located above the garage as a terrace or in the form of a balcony or roof-top terrace.

In addition to applicable guidelines stipulated for street townhouses, the following criteria will apply:

Design Guidelines:

- Facades should be designed to incorporate architectural elements found on lower density residential forms, such as peaked roofs, gables, porches and roof overhangs.
- Flat roofs are permitted to allow for functional rooftop terraces.
- Garages shall not project beyond the front wall of the main building.
- The treatment of balconies facing the street is critical to the overall design quality of the facade. A well-articulated balcony and railing design shall be consistent with the architectural theme of the building and shall integrate high quality, durable and low maintenance materials.
- Privacy screens, coordinated with the design treatment of the townhouse, shall be considered between neighbouring units to provide privacy.
- Entrances to each unit shall be at-grade and accessed with minimal to no stairs, subject to grading constraints.



Image example of a back-to-back townhouse with amenity space provided by balconies.



Image example of a back-to-back townhouse with amenity space provided by balconies above the garage.



Image example of a back-to-back townhouses with amenity space provided by balconies above the garage and front entrance.

5.4 HIGH DENSITY RESIDENTIAL

5.4.1 Residential Mid Rise Buildings

Potential mid-rise residential buildings are proposed along the western edge of the River Mill Community, on the eastern edge of Speedsville Road. These higher density residential forms are appropriate in establishing an active urban character through an emphasis on building height and massing where intensity of use and a landmark form is desirable, such as is the case for Speedsville Road corridor.



Image example of high density mid-rise apartment building with varied exterior cladding colours to provide facade interest.



Image examples of high density mid-rise residential building that relate well to the adjacent roadway while allowing space for comfortable pedestrian and vehicular circulation.

Design Guidelines:

- Building heights from 4 to 8-storeys will be permitted;
- Buildings shall be designed to mitigate any negative impact upon surrounding lower density residential development;
- Ground level floor heights are encouraged to be taller than upper floor heights in order to create a strong street presence and provide opportunities for flexible space;
- Building set-backs shall be minimized to relate well to the adjacent roadway and/or open space areas, while allowing sufficient space for a comfortable pedestrian zone and landscaping opportunities;
- Building façades shall provide visual interest through use of materials, colours, ample fenestration, wall articulation and style-appropriate architectural detailing. All façades exposed to public view shall be well articulated and detailed;
- Corner buildings shall provide façades which appropriately address both street frontages;
- Main entrances shall be designed as a focal point of the building. They shall be recessed or covered and provide visibility to interior lobbies to allow for safe and convenient arrival and departure from the building. Main entrances shall also be ground-related and wheelchair accessible;

- Building materials and detailing shall be used to establish a base, middle and upper portion for the building:
 - The base portion shall reinforce a human scale environment at street level.
 - The middle portion shall contain the largest mass of the building and should reflect the architectural character of the community.
- The upper portion shall be emphasized through articulations of the exterior wall plane, accent materials or roofline to draw the eye skyward. Where flat-roofed buildings are contemplated, a strong cornice line should be provided;
- Apartment units shall include private open space amenity areas (i.e. balconies/ terraces) to enhance the private living environment of residents. Balconies must be well-detailed to suit the architectural style of the building and appropriately sized to comfortably accommodate seating;
- Underground parking is encouraged to avoid unsightly large expanses of parking typically associated with higher density buildings;
- Underground parking will enable a greater proportion of the site area to be utilized as outdoor amenity space for residents, which is particularly important for seniors-focused dwellings where residents benefit from a closer proximity to these outdoor features;
- Where surface parking is provided, it shall be done so in a non-obtrusive manner, away from areas of high visibility. Surface parking areas shall be screened from street views through the use of landscaping (including features such as metal fencing with masonry columns) or building siting to provide appropriate screening;
- Garbage facilities shall be incorporated into the overall design of the building and hidden from areas of high visibility;
- Mechanical equipment shall be screened from public view and integrated into the design of the building;
- Lighting shall be directed inward and downward to mitigate negative impacts on neighbouring uses; and
- Where a common open space or internal courtyard area occurs, a lot play facility shall be integrated within the site to complement the neighbourhood park amenities.



Figure 12: Tall buildings should be designed with stepped down built form that includes a base, middle and upper profiles to avoid overbearing massing



Image example of high density mid-rise apartment building with private open space amenity areas to enhance the private living environment.



Image example of high density mid-rise apartment building with ample fenestration at ground level to animate the pedestrian realm.



Image example of commercial building where ample glazing and display windows comprise most the ground floor portion of the retail building.



Image example of commercial building that has minimized set-backs to better relate to adjacent roadway.



Image example of signage and lighting appropriate to the architectural style of the building.

5.5 MIXED USE

5.5.1 Commercial Buildings

The main commercial area, located within the High Density Mixed Use Block (refer to Figure 11), is intended to take the form of few small scale buildings that shall be designed and sited appropriate to their prominence and function as community focal elements. A detailed site layout will be determined at the Site Plan Approval stage.

Design Guidelines:

- Buildings that have a strong relationship with the street frontage, with minimal setbacks from the street edge;
- Well-articulated, attractive street façades using high quality materials;
- A building scale that is appropriate to the street and reinforces comfortable pedestrian connections;
- Display windows and/or glazing shall comprise the majority of the ground/street level portion of a commercial building;
- Building entrances that strike a balance between direct access from the adjacent street and rear parking areas;
- Parking areas that do not dominate street frontages, substantially screened from views by built form and landscape features; and
- Signage design that is appropriate to the architectural style.

Design Guidelines:

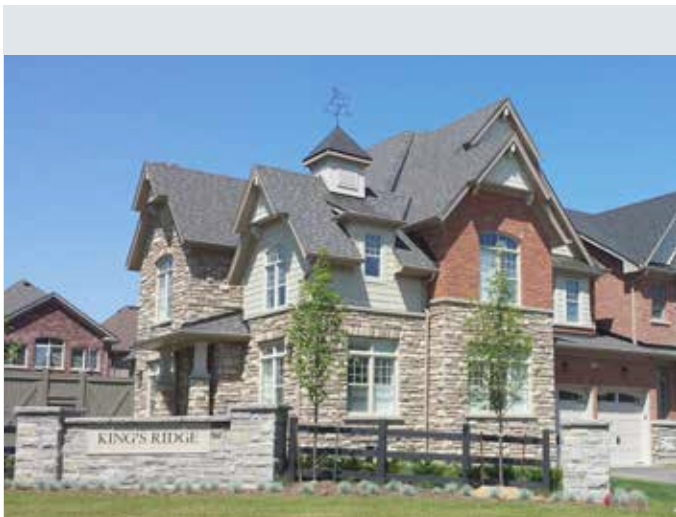
- Buildings shall have a positive relationship to the street, with the primary façade parallel and close to the roadway to appropriately address, define and relate to the adjacent street frontages and sidewalks;
- Corner buildings shall address both street frontages in a consistent manner and appropriately reinforce their landmark status in the streetscape;
- Buildings shall be located to ensure good sight lines for all vehicular access points and to create coherent on-site traffic circulation;
- Surface parking areas shall predominantly be located to the side or rear of the building to ensure a strong built edge along the surrounding streets and to minimize views of unsightly parking from adjacent neighbourhoods;
- Where visible from the street, parking areas shall be screened through the use of edge landscaping and/or architectural elements;
- Large parking areas shall be broken into smaller pedestrian-scale blocks defined by landscaping and walkways. Landscaped medians, appropriately sized for healthy tree growth, shall terminate parking aisles in key areas;
- Prominent building massing and high quality architectural design shall be provided at the street edges. Well articulated façades shall be provided for visual interest.
- The design of the built form and landscape shall achieve an identifiable theme and scale that is appropriate to the surrounding context and effectively relates at the pedestrian level;
- Architectural styles and materials for mixed use buildings shall be compatible and complementary to other buildings within the River Mill Community and reinforce the prevailing community character;
- The use of masonry brick as a main wall cladding material is preferred;
- Main entrances shall be grade-related, face the street/sidewalk where feasible, be accessible from the sidewalk adjacent to the street and be given design emphasis;
- Barrier-free access shall be provided at the ground level of all buildings and to public destinations;
- Glazed areas shall be maximized along street frontages and main parking areas to encourage comfortable and safe pedestrian use;
- Outdoor patios should be considered in the design of the building where appropriate to its commercial use;
- Pedestrian routes shall be well defined and provide direct connection to parking areas, building entrances, transit shelters and adjacent developments;
- Sidewalk depths shall be maximized along storefronts with consideration to the provision of an appropriate canopy or arcade treatment for pedestrian weather protection;
- Sidewalks, parking areas, driveways and walkways shall be adequately illuminated with low level, pedestrian-scaled lighting. Lighting shall be directed downward and inward to avoid light spill-over onto adjacent properties;
- A consistent and compatible approach to signage shall be provided throughout the commercial site as a means to establish a coordinated image. Signage shall be reflective of the architectural style of the node, while respecting the business community's desire for corporate logos. Signage shall be secondary to the architectural design and massing of the building. Signage may be internally or externally lit. Cut-out signage is preferred and backlit box-signage is discouraged;
- Provide high quality site furniture (benches, public art, community notice boards, mail boxes, trash cans, bicycle racks) to support the community character and function;
- Loading, service and garbage areas shall be integrated into the building design or located away from public view and screened to minimize negative impacts; and
- Utility meters, transformers and HVAC equipment should be located away from public views. Rooftop mechanical equipment shall be screened from ground level view by integration into the roof form or provision of a parapet. Utility pipes shall run internally for all commercial buildings.

5.6 PRIORITY LOTTING

Priority Lots are located within those areas of the River Mill Community that have a higher degree of public visibility. Their visual prominence within the streetscape and public open spaces requires that the siting, architectural design and landscape treatment for dwellings on these lots be of an exemplary quality to serve as landmarks within the community. Built form on priority lots identified in Figure 13, will require special design consideration to ensure an attractive built form character is achieved.

Priority Lots include:

- Gateway Lots;
- Corner Lots;
- View Terminus Lots;
- Lots fronting or flanking onto Parks and Open Spaces; and
- Lots requiring rear upgrades.



5.6.1 Gateway Lots

Gateway lot dwellings are characterized by a very high profile location within the community that results in a significant impact on the perception of the image, character and quality of the community from the outside.

Design Guidelines:

- Where possible, incorporate greater height or massing than is typical in the adjacent streetscapes;
- Feature strong and distinctive architectural elements, such as prominent gables and/or projecting bays;
- Incorporate consistent main cladding, architectural detail and treatment on the front, flankage and rear elevations;
- Associated landscape features, both hardscape and softscape, may be integrated with built form massing to emphasize the gateway function; and
- Although designed as a corner lot with facade treatment addressing both street frontages, the main entry, garage and porch should primarily address the short (front facing) street frontage, particularly where the flankage faces an arterial road.

Refer to 5.6.2 - Corner Lot Dwellings, for additional guidelines.

5.6.2 Corner Lots

Similarly to gateway lots, dwellings on corner lots and at community gateway entrances typically have the highest degree of public visibility within the streetscape and are important in portraying the image, character, and quality of the neighbourhood.

Design Guidelines:

- Street intersections shall be framed through built form that has a strong orientation to the corners;
- Dwelling designs must be appropriate for corner lot locations. Dwelling designs intended for internal lots will not be permitted unless modified to provide adequate enhanced flanking wall treatment;
- Both street frontages for corner lot dwellings shall have equivalent levels of architectural design and detail with particular attention given to the dwelling's massing, height, roof lines, apertures, materials, and details;
- Given the heightened exposure from the street, rear elevations shall also be treated with upgraded elements;
- Distinctive design elements, such as wraparound porches, porticos, bay windows, generous fenestration, wall articulation, or other features, appropriate to the architectural style of the building, shall be provided on the flanking side to create a positive pedestrian presence along the street and emphasize the corner dwelling's landmark qualities within the streetscape;
- The main entry to the dwelling is preferred to be located on the long elevation facing the flanking street (flanking main entry). However, main entries facing the front lot line or shorter side of the lot (front main entry) may be permitted;
- A privacy fence shall be provided to enclose the rear yard of corner lot dwellings;
- Rear lane garages on corner lots will require upgrades to the side elevations facing the street; and
- Dwellings and porches shall be sufficiently setback from any community gateway entry feature to avoid conflicts. The architecture and materials of dwellings at gateway locations shall be coordinated with the community gateway entry feature.

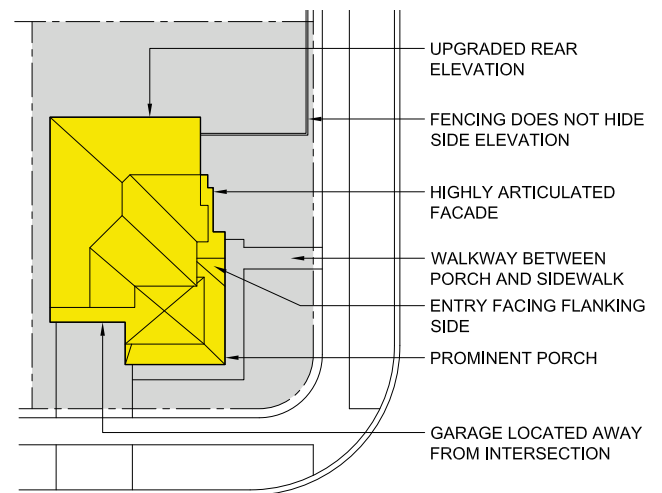


Figure 14: Conceptual plan view of a corner lot dwelling

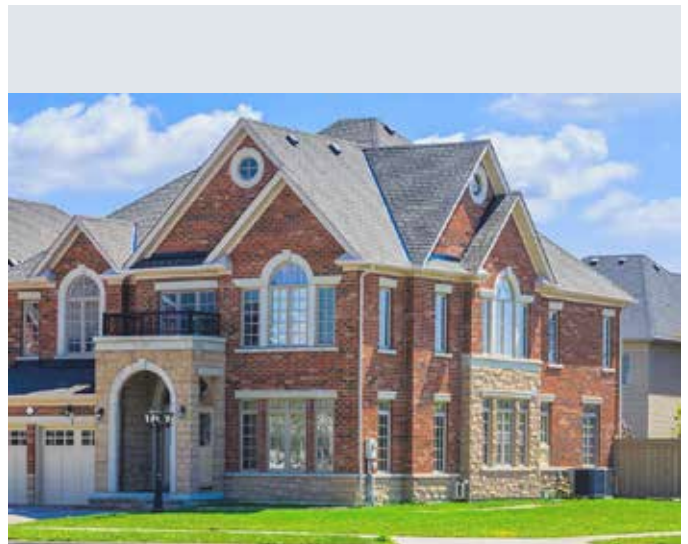


Image example of a corner lot dwelling with well-articulated architectural treatment and street orientation on all publicly exposed facades.



Image example of a corner lot dwelling with well-articulated architectural elements such as wrap-around porches.

5.6.3 View Terminus Lots

View terminus lots occur at the top of 'T' intersections, where one road terminates at a right angle to the other, and at street elbows. Dwellings in these locations play an important visual role within the streetscape by terminating long view corridors.

Design Guidelines:

- A prominent architectural element shall be provided to terminate the view;
- Select models that present visual interest with architectural treatment and de-emphasize the presence of the garage and driveway locations, favouring a larger area for landscaped treatment in the front yard; and
- Driveways shall be located to the outside of a pair of view terminus dwellings, where feasible, to increase landscaping opportunities and reduce the visibility of the garage.



Image examples of T-intersection dwellings with garages located away from the intersecting street.



Image example of park fronting dwellings, with a variety of architectural elements to help enhance built form interest.



Image example of dwelling with upgraded side elevation adjacent to open space.

5.6.4 Lots Fronting or Flanking onto Parks & Open Spaces

Due to the prominence of the NHS and its role as the focus and backdrop for the River Mill Community, dwellings that front or flank onto open spaces, as well as the neighbourhood park and SWMP identified in Figure 13, shall be designed in a manner that considers and complements the exposure to the public view.

Design Guidelines:

- Building facades exposed to public view due to exposure to open spaces will have an enhanced built form treatment that is consistent with the overall architectural style of the building. The treatments can include prominent front porches, well-proportioned windows, projecting bays, articulated wall treatments and other design elements that enhances the exposed elevations;
- The use of upgraded materials and detailing, such as stone or precast elements, dichromatic brick, quoining, etc. shall be integrated into the elevation design, consistent with the architectural style;
- Dwellings are encouraged to have wider and deeper porches that effectively allow for multiple seating and will promote ‘eyes on the street’, which results in an informal monitoring of the park and pond activities;
- Special attention shall be given to the variety of massing, colour and exterior cladding for dwellings fronting onto the neighbourhood park;
- Where a building’s side elevation is exposed to the public realm, both the front and exposed side elevations shall be of equal quality in terms of the architectural materials, amount and proportions of openings and attention to architectural detail; and
- Applicable enhancements on the exposed elevations include the following:
 - Bay windows or other additional fenestration, and enhancement of windows with shutters, muntin bars, frieze board, precast, or brick detailing.
 - Gables and dormers.
 - Wall articulations.

5.6.5 Lots Backing onto Parks & Open Spaces

The Neighbourhood Park and Open Spaces function as key community elements that provide a visual backdrop for the proposed built form development and offer trail connections throughout the River Mill Community (see Figure 9). Lots backing onto the Neighbourhood Park and/or Open Spaces are therefore visible to the public and should maintain similar quality and facade treatment as the front elevation with respect to window placement and architectural detailing (inclusion of window sills, frieze boards, etc.)

Design Guidelines:

- Publicly exposed rear elevations should integrate the same materials, colours, design treatments and style used for the front elevation, or provide reasonable alternatives that are well coordinated with the front facade;
- Wall articulation should be provided to avoid flat uninteresting rear facades; and
- Elevation detailing shall reflect the same architectural style as the front elevation.



Image examples of upgraded rear elevations that back onto parks and open spaces and that are highly visible to the public.

SUSTAINABILITY & LOW-IMPACT DESIGN

6.1 ABOUT SUSTAINABILITY & LOW-IMPACT DESIGN

In 2009 the Region of Waterloo Council adopted the *Region of Waterloo Environmental Sustainability Strategy (RWESS)* to lead the region towards a sustainable future with strategies for environmental protection and enhancement. A series of other initiatives by the Region of Waterloo have established intensification strategies and encouraged the development of “complete” communities.

As a tool to help achieve its sustainability goals, the RWESS sets of criteria for sustainable, high-performance and efficient developments. The purpose of these standards is to “institutionalize the Region’s environmental commitments with an integrated framework and organizational support structure enabling sustainability to be factored into the Region of Waterloo’s decision making.” (Page 5 of RWESS).

River Mill Community shall be designed with an emphasis on the integration of sustainable practices and techniques that will result in a community which is highly walkable and cyclist friendly, with a mix of uses (residential and commercial) and a diversity of housing types and densities.

The principles and objectives of sustainability have applications in all areas of the development. The community’s context and the NHS that is woven into its fabric makes sustainable development and low-impact design a key priority.

The development’s design and implementation will integrate several important sustainable measures related to:

- Transportation alternatives;
- Hardscaping;
- Softscaping;
- Water conservation and management;
- Lighting; and
- Materials.

6.2 SUSTAINABILITY & LOW-IMPACT APPROACHES

There are several techniques that may be considered for River Mill Community that will help mitigate the impacts of development and reduce the reliance on 'end of pipe' solutions.

Sustainability and Low-Impact Design Guidelines:

Transportation Alternatives

- To encourage a reduction in automobile usage, ensure pedestrian circulation is integrated into the design of the community;
- Consider LEED requirements as a key component in built form and open space design;
- The sizing of parking facilities shall be minimized to meet zoning requirements; and
- As an alternative to automobile use, encourage cycling by establishing safe, efficient cycling connections and integrating bicycle racks, rings, or posts, where appropriate.

Hardscaping

Objectives for hardscaping shall balance functional requirements of vehicular and pedestrian circulation with sustainability, accessibility, aesthetic considerations and maintenance. As a general rule, select paving alternatives that allow for increased permeability and infiltration, while accommodating circulation and maintenance requirements.

- Preference shall be given to the selection of porous paving materials, such as porous concrete or asphalt and/or precast turf-grid products;
- Where possible, utilize surface materials that contain recycled or sustainable materials;
- The use of light coloured surface materials, such as concrete or light asphalt is encouraged to decrease heat absorption and ambient surface temperatures (urban heat island effect); and
- All paving materials and installation to be selected and designed to withstand traffic impacts and maintenance requirements.

Softscaping

- Naturalized, low maintenance planting shall be specified where appropriate;
- A priority shall be placed on utilizing xeriscape planting techniques, selecting drought-tolerant species to conserve water;
- Landscape features, such as berms, tree and shrub groupings, and 'green' walls shall be utilized to screen undesirable views to adjacent or nearby uses (traffic, commercial buildings, parking);
- Strategically place dense deciduous canopy trees to let sunlight and warmth into buildings and public open spaces and sidewalks during winter, while in summer creating a canopy that shields people and buildings from sun, glare and heat, and allows breezes to flow through;



Image example of xeriscape planting in combination with light-coloured paving that reflects light and serves to reduce the urban heat island effect.



Image example of a landscaping feature that is used to screen undesirable views to adjacent or nearby uses.



Image example of xeriscape planting, which performs well in urban environments due to their drought-tolerant and low-maintenance characteristics.

- 'Green' screens and other landscape wall features may be situated on or near building façades to reduce ambient heat and minimize air conditioning requirements;
- To mitigate the impact of wind on a site, evergreens should be used as a windscreen for undesirable wind exposures; and
- Use only organic or biological fertilizers and weed and pest controls, free of potentially toxic contaminants.

Water Conservation and Management

- Utilize xeriscape planting techniques, selecting drought-tolerant plant species to conserve water and avoid the need for irrigation systems;
- Utilize rainwater harvesting techniques to use stormwater resources for irrigation;
- Depending on the type of built form, rain barrels or similar container system may also be considered to manage roof runoff;
- Where feasible, integrate soakaway pits and infiltration galleries as an effective technique for managing stormwater within expansive areas of runoff.
- Composition of soakaway pits and infiltration galleries shall be designed to ensure surface water is fully drained within 48 hours of the end of any rainfall event;
- Undertake soil amendments to increase topsoil depths and restructure compacted soils for improved infiltration; and
- The degradation of slopes leading to erosion and sedimentation control problems results from the effects of rain and wind on unprotected slopes, with potential negative impacts for water quality and stormwater management infrastructure. As such, developers and contractors shall be diligent in preventing erosion on site, both, during the construction phase and following construction completion.

Lighting

- Achieve a balance between safety and security and a reduction in energy consumption;
- Utilize energy efficient luminaires and bulbs to satisfy lighting requirements; and
- Select lighting poles, luminaires and light levels that are appropriate to the site and function to avoid excessive illumination and light pollution.

Materials

- Green roof technologies or reflective, light-coloured roofs should be encouraged in the commercial area, if feasible, in order to reduce solar heat absorption and building energy demand;
- Encourage the use of local materials to avoid unnecessary long distance transport of building materials; and
- Encourage the use of materials that have been sustainably harvested.



Image example of roof downspouts which help direct excess water into soakaway pits.



Image example of rain barrels which help manage roof run off.



Image example of solar paneling located on residential roofs which provides an alternative and sustainable energy source.

IMPLEMENTATION

7.1 APPROVAL PROCESS

The regulatory agencies that have jurisdiction over the River Mill Community are the Region of Waterloo, City of Cambridge and GRCA. In order to develop the future community, it is anticipated the following City applications will be required:

- Official Plan and Zoning By-law Amendments;
- Draft Plan of Subdivision;
- Site Plan Approval;
- Draft Plan of Condominium; and
- Part Lot Control and Building Permits.



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