

Addendum to The Neighbourhoods of Greensborough
Community Design Plan

Town of Markham

UPPER GREENSBOROUGH NEIGHBOURHOOD URBAN DESIGN GUIDELINES



Date: June 2010

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Figure 1.1 - Site Location

I.0 INTRODUCTION

'Upper Greensborough' is a proposed residential neighbourhood located within the Town of Markham's Greensborough Community planning area. The proposed neighbourhood, consisting of approximately 24.6 hectares (60.7 acres) of land, completes the northeast quadrant of the community as originally envisioned in The Neighbourhoods of Greensborough Community Design Plan and as approved by the Town of Markham on March 10, 2000.

I.1 SITE LOCATION

The subject lands form a somewhat triangular area that is defined by Major Mackenzie Drive East to the north, 9th Line to the east and Donald Cousens Parkway (formerly the Markham By-Pass) to the south. These lands are also situated along portions of the Little Rouge Creek system - a significant natural feature which plays an important role in how the structure of the community has been developed in terms of the parks locations and the view corridors enhanced through the street and block pattern (refer to Section 2.0).



1.2 COMMUNITY DESIGN PLAN

The Neighbourhoods of Greensborough Community Design Plan (January 2000) provides an illustrative plan and design framework for the area of the community up to the Donald Cousens Parkway with the expectation that these lands, north of the Donald Cousens Parkway, Upper Greensborough, would be later subject to the same general principles and guidelines.

The purpose of this document is to provide an addendum to the Community Design Plan and to describe and demonstrate how Upper Greensborough conforms to the principles and guidelines originally envisioned in the Community Design Plan. In general the proposed neighbourhood conforms to the principles and objectives of the CDP with respect to land use, community structure, the open space system and streetscape design. The document will also address a number of minor changes that have been incorporated to the overall Community Plan since the original CDP was approved in 2000.

Figure 1.2 - Community Design Plan (Updated May 2010)

I.3 VISION

Upper Greensborough is envisioned to be a well organized, walkable, safe and attractive community that supports pedestrian-scaled streets and public spaces, has an inter-connected open space system, enhances the presence of natural features and offers a range of housing and community amenities to residents.

Since the approval of the CDP in 2000 sustainable design principles have become fundamental to the development of new communities. This document will include a section that addresses sustainability – outlining the principles that have influenced the development of the neighbourhood plan and providing specific guidelines to guide later stages of detail design and implementation.

It is also envisioned that the Upper Greensborough neighbourhood, although coordinated with the overall community, will have the opportunity to develop a distinct character and visual image quite apart from the rest of the community due to its separation via the Donald Cousens Parkway.



Pedestrian Scaled Walkable Community



Presence of Natural Features



Range of Housing Types



Connected Open Space System



2.0 COMMUNITY STRUCTURE

The CDP identifies a number of objectives for neighbourhoods, these are:

- To design neighbourhoods that have a focus
- To create neighbourhoods with distinct centres and edges
- To provide a variety and range of residential unit types and accommodate other uses where appropriate

The primary focus of this neighbourhood will be the village square located west of Delray Drive (Refer to Section 5.6). The central location of this public space, within the primary residential area, its formal design and the organization of built form and streets defining its edges, make this space a natural gathering place for the neighbourhood. As a secondary focus, and community amenity, a neighbourhood park has been provided and located along Donald Cousens Parkway. The neighbourhood park will act as a 'green' gateway to the valley and visually terminate the pedestrian walkway located immediately south of the Donald Cousens Parkway.

The proposed neighbourhood will also have clearly defined edges along Major Mackenzie Drive and Donald Cousens Parkway that will be distinguished through a combination of the built form and coordinated streetscapes.

A range of residential unit types have been provided and include: Street Townhouses, Lane-based Townhouses and Condominium Blocks. Other uses that complete the community include: a Commercial/Retail site that is located at the westerly portion of the site and a Place of Worship site that is located at the apex of 9th Line and the Donald Cousens Parkway.

Figure 2.0 - Community Structure

2.1 LAND USE MIX AND DISTRIBUTION

The proposed uses within the neighbourhood include:

- Medium Density Residential in the form of Street and Lane-based Townhouses
...Located internally within the neighbourhood and along portions abutting the Little Rouge Creek
- Medium Density Residential in the form of Condominium Blocks
...Located to define and reinforce neighbourhood edges - Donald Cousens Parkway and Major Mackenzie Drive
...Located to provide an appropriate transition to the commercial / retail site
...Located between Donald Cousens Parkway and the Little Rouge Creek
- Stormwater Management Facilities
...Located to act as a 'green' gateway at Major Mackenzie Drive and as a 'green' terminus at the eastern extent of Castlemore Avenue
- Parks
...Located to provide focal points for the neighbourhood and the community
- Commercial / Retail
...Located in a prominent community location at the apex of Major Mackenzie Drive and Donald Cousens Parkway that enhances visibility and accessibility for all residents
- Place of Worship / Community Facility
...Located at Donald Cousens Parkway and 9th Line which incorporates the James D. Harrington Heritage Building



Medium Density Housing



Neighbourhood Park



Neighbourhood Commercial



Naturalized Stormwater Management

2.2 STREET AND BLOCK PATTERN

The CDP identifies a number of objectives for the street and block pattern, these are:

- To achieve a pedestrian scale and ease of orientation through the size, configuration and orientation of development blocks
- To facilitate direct pedestrian access to schools, transit stops, shopping and other destinations

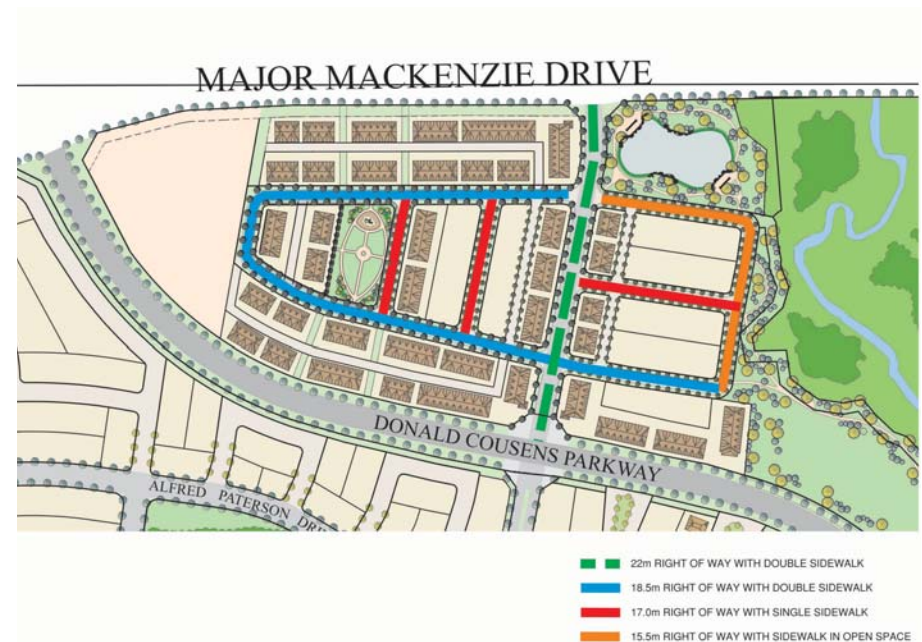
The proposed road network for the Upper Greensborough neighbourhood consists of a number of local roads (18.5m, 17.0m and 15.5m) that are organized in a grid-like pattern between Major Mackenzie Drive and Donald Cousens Parkway.

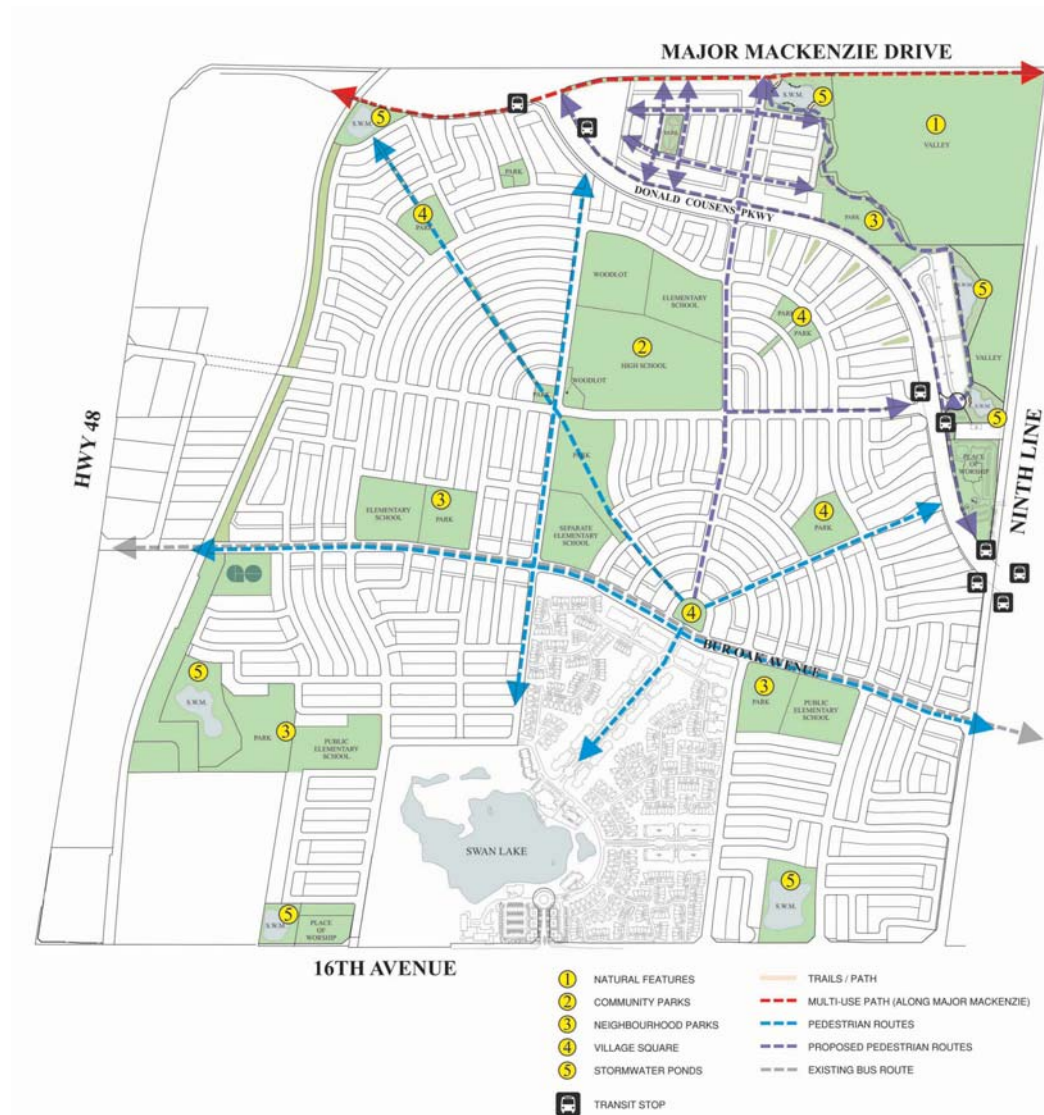
Access to the neighbourhood will be from either Major Mackenzie Drive at the north or Donald Cousens Parkway at the south, via the northern extension of Delray Drive - an important local road that connects to the central community focus – the Village Square along Bur Oak Avenue. The remainder of the local roads within the neighbourhood have been configured and oriented to create pedestrian-scaled blocks, enhance view corridors and facilitate ease of orientation (refer to Figure 2.0).

2.3 GATEWAYS

The CDP identifies a major gateway located at the intersection of Donald Cousens Parkway and Delray Drive. In this location built form and landscape design will be provided on the north side to complement the elements on the south side to achieve a coordinated intersection treatment.

A second, minor gateway is identified at the intersection of Donald Cousens Parkway and Castlemore Avenue. In this location the Upper Greensborough neighbourhood proposes a stormwater management facility that terminates the major east-west street and provides an opportunity to connect residents to the Little Rouge Creek natural feature (refer to Figure 2.0).





2.4 PEDESTRIAN NETWORK

The CDP identifies a pedestrian system that is intended to link the open space system as well as provide connections to community destinations such as schools and the community centre. The major pedestrian routes identified in that document radiate from the Village Square at Bur Oak Avenue to a number of parks, stormwater management facilities and schools within the various neighbourhoods comprising the community.

There is also a multi-use pathway that is planned along Major Mackenzie Drive which will accommodate pedestrian and cyclist connections to the commercial site, residential areas and the open space system.

Through the completion of the proposed Upper Greensborough neighbourhood a number of additional pedestrian routes have been identified (refer to Figure 2.4) and provide connections to the Little Rouge Creek system and the proposed commercial / retail site via a combination of the public sidewalk and walkways and designated intersection crossings.

Figure 2.4 - Pedestrian Network

3.0 ARCHITECTURE AND SITE PLANNING

Built form will be consistent in style with the rest of the Greensborough Community. Opportunities for enhancements, variations and/or distinctive elements to distinguish important areas within the neighbourhood exist around the village square and along Delray Drive. With respect to site planning and design general principles for development include:

- Promoting a safe and animated neighbourhood through 'eyes-on-the-street' and the provision of private amenity areas such as porches
- Promoting a strong relationship between public and private realms through minimizing grade changes between the front door and the finished grade
- Creating an attractive and pedestrian scaled streetscape through coordination between the street elements and the built form

3.1 BUILT FORM TYPE I - STREET TOWNHOUSES

Street Townhouses which consist of four, six and eight unit building forms.

GUIDELINES for Street Townhouses:

- Street townhouses should be located to help define street edges, public spaces and gateway locations where appropriate
- End units of street townhouses that are located in visually prominent locations such as gateway intersections or adjacent to an open space feature should be treated with enhanced architectural design / elements
- Garages are permitted to face the flanking lot line for Street Townhouses located at a corner lot
- In principle, garage doors should not occupy more than 50% of the front façade of a dwelling unit
- Garages may be paired
- Garages should be set back further from the front lot line than the rest of the dwelling unit or porch
- A variation in garage setbacks is encouraged



Example of a street townhouse

3.2 BUILT FORM TYPE 2 - LANE-BASED TOWNHOUSES

Lane-based Townhouses have been located fronting onto the village square and along Delray Drive where driveway access is either prohibited or discouraged in order to create a more pedestrian-friendly and attractive streetscape.

GUIDELINES for Lane-based Townhouses:

- Lane-based townhouses should be located to help define street edges, public spaces and gateway locations where appropriate
- Lane-based garages may be detached or attached to the dwelling unit
- End units of lane-based townhouses that are located in visually prominent locations such as gateway intersections or adjacent to an open space feature should be treated with enhanced architectural design / elements
- Coach Houses are encouraged on top of detached garages, particularly at block end units (see examples to the right)
- For corner conditions, detached garages and Coach Houses should have appropriate exterior side yard setbacks to address the street
- Lane-based dwelling units should have porches that address the street to provide 'eyes-on-the-street' and animate the streetscape.
- Wrap-around porches should be provided for corner units
- Lane-based dwelling units should have a maximum front yard setback of 4.5 metres to provide for pedestrian-scaled streetscapes
- On-street parking lay-bys may be provided in front of lane-based townhouses



Examples of lane-based townhouses



Examples of a coach house above a detached garage

3.3 BUILT FORM TYPE 3 - CONDOMINIUM BLOCK

Condominium blocks will be located along Donald Cousens Parkway and Major Mackenzie Drive.

GUIDELINES for Condominium Blocks:

- Condominium blocks should permit a variety of housing types, such as stacked townhouses and low-rise apartments accessed by a private driveway and/or laneway
- Special end-unit conditions should be considered for buildings addressing street intersections and subject to architectural control
- The built-form and streetscape treatment should be consistent with the general character of the Greensborough community while allowing for some distinguishing design components unique to this neighbourhood
- Buildings located adjacent to the Multi-Use Pathway and Park (refer to Section 3.0) should address these elements through building orientation, upgraded elevations facing the open space and appropriate landscape treatment
- Buildings located along the street should generally not be more than 60 metres in length to discourage a 'wall' effect along the street
- Where buildings along the street are more than 60 metres in length a combination of enhanced architectural features, recessed and protruding elements, porches, porticoes, protruding windows and balconies should be employed to articulate a high degree of visual relief along the facade / elevation
- Where buildings along the street are more than 60 metres in length a combination of enhanced architectural features, recessed and protruding elements, porches, porticoes, protruding windows and balconies should be employed to articulate a high degree of visual relief along the facade / elevation
- Along Donald Cousens Parkway minimum setbacks to the main building should be 4.5m and the minimum setback to a porch should be 2.5m. Steps may be located within the 2.5m porch setback.



Examples of condominium blocks

3.4 COMMERCIAL / RETAIL SITE

The commercial / retail site has been located at the apex of Major Mackenzie Drive and Donald Cousens Parkway within a triangular portion of land. As a local commercial / retail destination situated in a prominent location within the plan this site should be designed as a landmark within the community. This should involve careful consideration of site planning and design that balances functional criteria with urban design objectives.

GUIDELINES for the Commercial / Retail Site:

- Buildings should be located to support a pedestrian-scaled environment
- The majority of parking should be located internally within the site
- Appropriate landscaping should be provided within the parking area(s)
- Appropriate buffering should be provided where a residential interface occurs
- Landscape buffers should be coordinated with the public streetscape
- Architectural design of the buildings (massing, scale, materials, details) shall be coordinated as much as possible
- Architectural style(s) should be coordinated within the site and with the community
- A pedestrian connection should be provided along the interface with residential areas
- Consider implementation of sustainable measures such as bioswales, rain gardens, etc.

Note: These guidelines, as well as the requirements set out in the Town of Markham's Streetscape Manual, will be addressed at the site plan stage of development.



Examples of commercial design

4.0 STREETSCAPE DESIGN

Streetscape design for the Upper Greensborough neighbourhood is envisioned to enhance the overall character and identity of the community while supporting a pedestrian-friendly environment. Coordination of the various elements that comprise the streetscape shall convey continuity with the overall community and landscaping theme while allowing for the development of a distinct character for this neighbourhood.

The various elements within the streetscape include street trees, street lights, street furniture and utilities, transit stops and community mailboxes.

4.1 TRAFFIC CALMING

To enhance the pedestrian-oriented community traffic calming measures are encouraged along major streets, including Delray Drive. These design measures may be incorporated in part or in whole within the public realm and may include:

- On-street parking
- Increased boulevard widths
- Tighter street tree spacing
- Coloured and/or textured paving
- Landscaped medians within the roadway
- Traffic buttons or mini-roundabouts within the roadway



Streetscape Design - decorative street lights



Streetscape Design - pedestrian tree canopy



Streetscape Design - street furniture



Paved mini-roundabout



Lay-by parking



Coloured and textured paving

Around the Village Square:
Honeylocust



Within the Park: Japanese
Katsura, Weeping Willow



Within Parking Areas:
Narrow form trees such
as Ginkgo, Columnar
Maple, Chanticleer Pear



Along Delray Drive: Sugar
Maple



Along Donald Cousens
Parkway: Plane Tree



4.2 STREET TREES

Street trees within a community serve a number of functions within a community; these are:

- Street trees enhance the look and feel of a community
- Street trees provide shade for pedestrians
- Street trees help to define the public and private realm
- Street trees provide the opportunity to enhance the urban canopy and contribute to biodiversity

GUIDELINES for Street Trees:

- Street trees shall be located in accordance with Town of Markham standards; these locations should be coordinated with other utilities within the right-of-way, sideyard fencing within private lots and landscaping within adjacent open spaces or commercial sites
- The selection of street tree species should also conform to the Town of Markham standards
- The selection of street tree species should consider their location within the neighbourhood, their ability to create visual distinction in prominent locations, their compatibility with adjacent uses and their ability to create shaded avenues along the streets
- The selection of street tree species should also consider a balance of colour, texture and form with hardiness, salt and drought tolerance and maintenance requirements
- Street trees species should be used to create visual distinctiveness within the neighbourhood. For example:
 - Delray Drive - Sugar Maples
 - Donald Cousens Parkway - Plane Tree
 - Around Village Square - Honeylocust
 - Within the Commercial Site - Narrow Form Trees
 - Within the Park incorporate Weeping Willow and other distinct trees such as Japanese Katsura

4.3 STREET LIGHTS

Street lights, their placement within the public right-of-way and their design, contribute to enhancing the character and identity of any community. Coordination and consistency shall determine the placement and design of street lights within the neighbourhood.

GUIDELINES for Street Lights:

- Street lights should be located in accordance with the utility company's standards (Power Stream); these locations should be coordinated with the placement of street trees
- Street lights should be dark sky friendly
- Street lights should consist of a decorative pole and decorative fixture
- Decorative telecommunication poles should be considered to minimize the visual impact of utilities within the streetscape; selection of these poles should be considered within the context of the scale of the street
- In highly travelled pedestrian areas pedestrian-scale light fixtures should be added to the street pole, both within the commercial site and along key streets within the neighbourhood
- Lighting within adjacent open space, parks, trails and commercial areas should be coordinated with street lighting to minimize duplication, over lighting and visual clutter
- Pedestrian lights should be incorporated on key streets as well as within the commercial site

4.4 STREET FURNITURE AND UTILITIES

Guidelines for Street Furniture and Utilities:

- Street furniture, including street signage, benches, waste/recycling receptacles, publication boxes should be coordinated to minimize the visual clutter within the public realm
- Above-ground utilities should be located to minimize conflict with corner lot fencing, walkways and transit stops
- For Lane-based Townhouses air conditioning units, hydro and gas should be located in the lane, wherever possible

4.5 TRANSIT STOPS

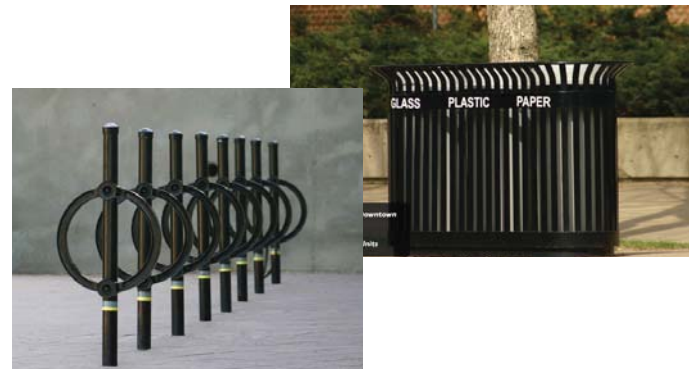
GUIDELINES for Transit Stops:

- The locations of transit stop locations should be determined by York Region Transit / Viva / GO Transit
- The organization of transit stops and the elements provided in these locations should also be determined by the transit authorities (i.e. transit shelters, benches, waste/recycling units, bicycle lock-ups, etc)
- Design adjacent to transit stops should consider pedestrian accessibility, sight lines, coordination of landscaping (if provided), coordination of paving

4.6 COMMUNITY MAILBOXES

GUIDELINES for Community Mailboxes:

- Community mailbox locations shall be determined by Canada Post
- In special locations community mailboxes may be enhanced by the provision of upgraded bases, decorative paving, landscaping and overhead structures



Coordinated street furniture



Typical Viva transit stop

5.0 OPEN SPACE SYSTEM

The policy framework and guiding principles that have shaped the development of the open space system derive from the Town of Markham's Parks, Recreation, Culture and Library Master Plan, The Greensborough Community Design Plan, the Rouge River Watershed Plan and Toronto and Region Conservation Authority Planning and Development Guidelines. The proposed open space system is consistent with the general principles of connectivity, accessibility and sustainability that is common to these policies.

5.1 ROUGE RIVER WATERSHED PLAN

The policies of the Rouge River Watershed Plan support the implementation of sustainable urban form such as that of the neighbourhood proposed, the development of the multi-use pathway system along the Little Rouge Creek towards a linked regional open space system, the development of naturalized stormwater management facilities towards improved water management and the provision of trails and 'peek through streets' towards a balance of public access and resource protection.

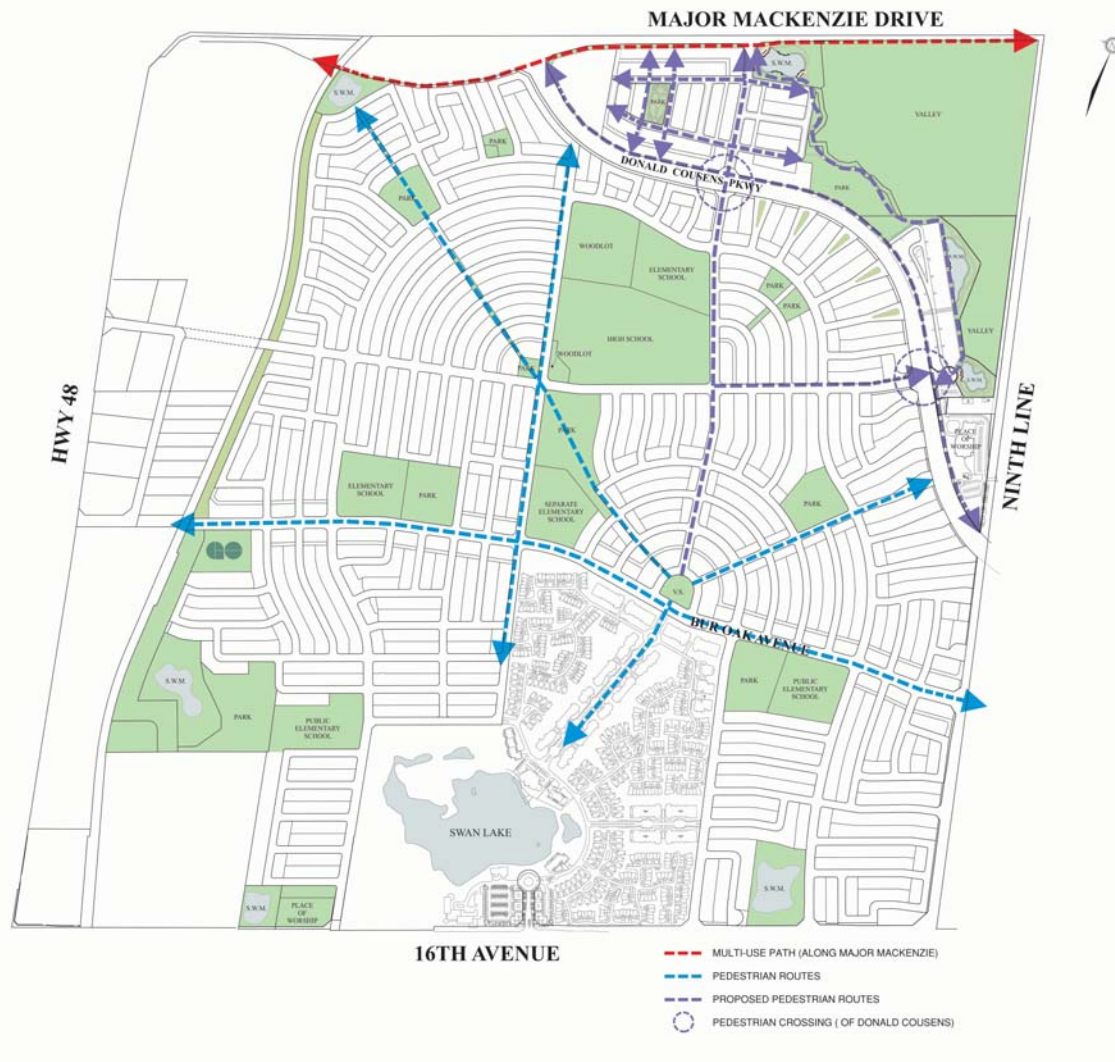


Figure 5.0 - Open Space System

5.2 NATURAL HERITAGE PRESERVATION

The Little Rouge Creek valley is a significant natural feature that has been preserved within the community through the provision of appropriate setbacks and buffers and enhanced within the community through the development of a block and street pattern that allows access and views. Additionally the location of a neighbourhood park and stormwater management facilities provides further opportunity for access as well as enhancement of the natural feature.

5.3 LINKS TO NATURAL HERITAGE ELEMENTS

Numerous links, both visual and physical, have been provided to the Little Rouge Creek feature from the proposed neighbourhood as well as from the rest of the community south of the Donald Cousens Parkway. These links include streets and associated sidewalks, stormwater management facilities, the neighbourhood park and pedestrian links (between buildings).

These links continue south of Donald Cousens Parkway through 'peek through streets', other pedestrian links, and pedestrian routes along the public streets.

5.4 REGENERATION AND ENHANCEMENT

Regeneration and enhancement of areas disturbed by development, buffers and stormwater management facilities shall conform to TRCA and the Town of Markham's requirements and design guidelines.

5.5 PATHWAYS AND TRAILS MASTER PLAN

The Town of Markham's Pathways and Trails Master Plan identifies a Type I Primary Multi-Use Town Wide Pathway along Major Mackenzie Drive. The proposed pedestrian system provides linkages to this via Delray Drive, Donald Cousens Parkway and a potential recreational trail within the buffer and open space blocks along the Little Rouge Creek valley.



Natural heritage



Link to natural heritage via the road pattern



Link to natural heritage

5.6 COMMUNITY FACILITIES / PARKS

The planned open space system consists of a neighbourhood park, a parkette, a number of open space blocks and a system of pedestrian pathways that connect these to one another and to natural features.

GUIDELINES for Parks:

- Parks should be located as focal points within the community
- Parks should be connected to the community and to other open space elements through a connected pedestrian system
- The street pattern and adjacent built form siting should reinforce parks as community focal points
- Park edges should be designed to create an urban 'green' edge



Examples of ornamental planting

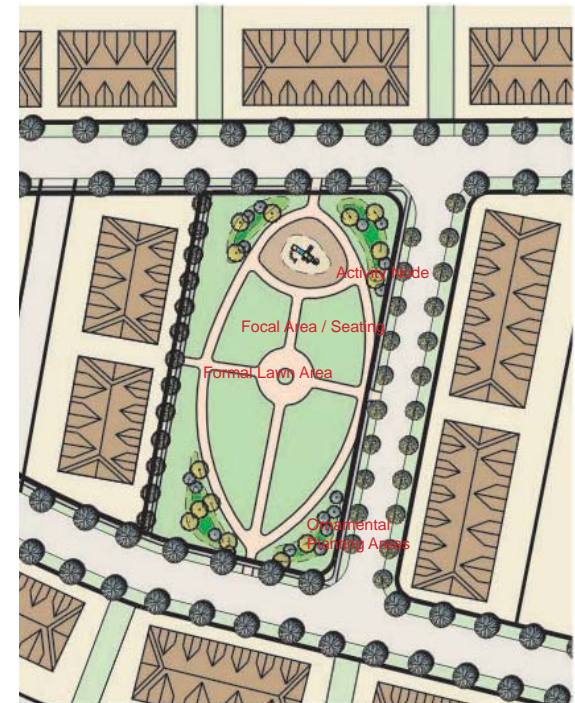


Figure 5.6a - Village Square Concept



Example of seating area



Example of Activity / Gathering Node



Examples of Open Play Activities



Example of a Trail / Walking Path



Figure 5.6b - Neighbourhood Park Concept



Examples of ornamental planting



Example of an Allee



5.7 LINKS TO GREENSBOROUGH NEIGHBOURHOOD

Links to the Greensborough Neighbourhood will be by way of walkway, pathways and view corridors. The public sidewalk system will be connected to the existing neighbourhood and pedestrian crossings of the Donald Cousens Parkway identified where signalized intersections exist or are planned.

GUIDELINES for Neighbourhood Links:

- Neighbourhood Links should be accessible, safe and coordinated in design
- Enhancement and continuity of Neighbourhood Links should be reinforced through consistency in paving, planting, details

5.8 LINKS FROM GREENSBOROUGH TO NATURAL HERITAGE ELEMENTS

Links to the Natural Heritage Elements will be similarly accommodated. In addition views from The Neighbourhoods of Greensborough will be enhanced through the design of the street pattern and peek through streets that allow vistas into the either green space or the valley.

GUIDELINES for Natural Heritage Links

- Views should be reinforced through planting and siting of buildings
- Pedestrian nodes should be provided in areas where significant views may be experienced
- Pedestrian nodes should provide seating and interpretive signage where appropriate



Figure 5.7 - Links to and from Greensborough



Example of a peek through street



Existing view from The Neighbourhoods of Greensborough



Example of a pedestrian node for viewing

6.0 SUSTAINABLE DEVELOPMENT GUIDELINES

The objectives of sustainable development is to balance the economic, environmental and social needs, of a community while allowing for the prosperity of present and future generations. It consists of a '*long-term, integrated approach to developing and achieving a healthy community by jointly addressing economic, environmental, and social issues, whilst avoiding the over consumption of key natural resources*'. Upper Greensborough incorporates a number of planning, development and design measures that are aimed at achieving a realistic and implementable balance of these principles. For the most part these principles are all interrelated and overlap but essentially are collectively aimed at creating new communities that conserve land through developing densities and built form that promotes livability, walkability and alternative forms of travel. The following principles / criteria define the sustainability of this community:

6.1 Preserve the Natural Heritage System

The Little Rouge Creek, as a natural heritage feature plays a prominent role in determining the proposed street pattern and location of parks, open space elements and trails / pathways. Through these configurations, connections, both from a physical as well as a visual standpoint, have been enhanced and ultimately serve to heighten community awareness, appreciation and respect for this valuable natural resource. Preservation and enhancement of this natural feature is furthered through the provision of naturalized buffers, and the location of parks and stormwater management facilities.

6.1.1 Provide Appropriate Buffers

A landscape buffer has been provided along the top of bank to create an appropriate transition to development. Within the buffer a pedestrian trail may be located to allow residents to experience the Little Rouge Creek feature. The buffer will be planted to the standards and specifications for regeneration and enhancement.

6.1.2 Plan Compatible Adjacent Uses

More than 50% of the uses proposed along the Little Rouge Creek valley is open space, including parks, open space blocks, trails and stormwater management facilities. Within these planned areas design should relate to the natural feature through planting schemes, layout and naturalization.

6.1.3 Community Presence

Through the street and block pattern of this community the presence and importance of the Little Rouge Creek valley is maintained and enhanced. This serves to create a stronger relationship between residents and their natural environment fostering an appreciation and responsibility for this feature.

6.2 Reduce Automobile Dependence

The reduction of automobile dependence is encouraged through a combination of different design elements. These include:

- The modified-grid pattern of streets which allows for ease of pedestrian permeability through the community and multiple access routes
- Relatively short development blocks which should not exceed 300 metres in length
- A commercial / retail development located within a 5 to 10 minute walk for most residents
- Parks and other open space amenities located within a 5 to 10 minute walk for most residents
- Pedestrian connections to the commercial / retail development
- Access to public transit system (see 6.2.1)

6.2.1 Provide Accessible / Convenient Public Transit

A full service York Region Transit (YRT) bus route has been identified along Donald Cousens Parkway, which is approximately a 5 to 10 minute walk from most areas within the neighbourhood. A GO bus stop is located at Hwy. 48 and Bur Oak Avenue and the Mount Joy GO Transit station is approximately a 5 minute drive from the neighbourhood.

Promote a Pedestrian Community (see 6.3)

Develop in a Smart Location (see 6.4)

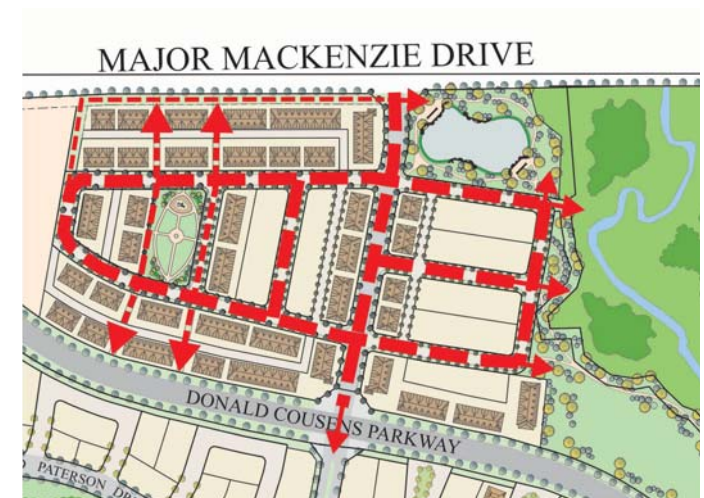


Figure 6.2 - Modified grid street pattern

6.3 Promote a Pedestrian Community

In addition to the measures identified for the earlier section on 'Reduction of Automobile Dependence', there are many other design measures that may be implemented at the detailed stage of design to promote a pedestrian community. These measures also contribute to reducing dependence on the automobile and include:

6.3.1 Compact Development

A maximum of 300 metres for most residential blocks has been suggested. This, together with smaller lots sizes, higher densities and the strategic location of community amenities result in a compact form of development that is conducive to walking and facilitates connections to amenities in The Neighbourhoods of Greensborough such as schools, parks and the GO Station.

6.3.2 Walkable Street Network

In order to encourage a pedestrian-oriented community the primary avenues of movement, namely the street, should be designed based on the following criteria:

- Separation between the pedestrian walkway and the vehicular roadway in the form of a treed boulevard
- Trees planted to create a continuous canopy at maturity
- Delineation of pedestrian crosswalks and nodes
- Street furniture placed to encourage gathering in key locations
- Coordination between all elements found within the street to create an attractive environment

6.3.3 Linked Pedestrian and Bicycle Network

A connected, accessible and safe pedestrian and bicycle network which consists of a variety of routes including the public sidewalk within the street right-of-way, the multi-use path planned along Major Mackenzie Drive, and pathways within park, stormwater management facilities and open space blocks, (refer to 2.4, 5.7, and 5.8).

6.3.4 Trails System

The backbone of the trail system is the multi-use path that is planned along Major Mackenzie Drive. Building from this a continuous pathway is proposed within the buffer along the Little Rouge Creek valley. This pathway will meander into adjacent open space elements, such as the park, stormwater management facilities and open space blocks, where they occur.

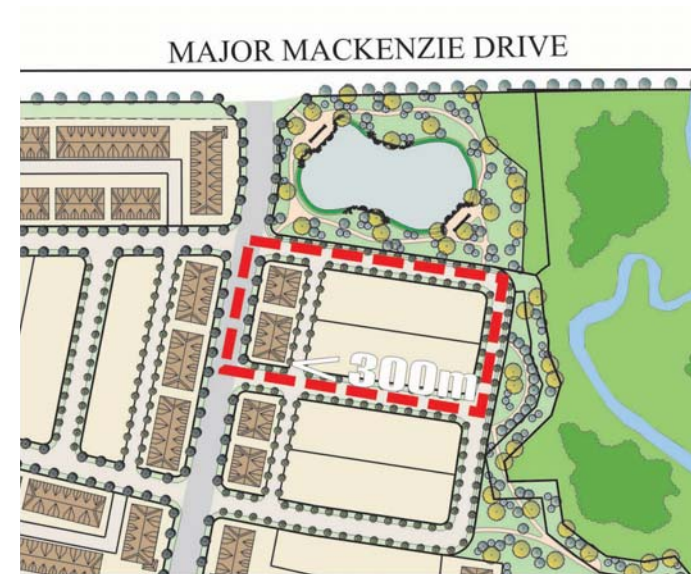


Figure 6.3.1 - Block length maximum

6.4 Develop in a Smart Location

Upper Greensborough is located to take advantage of a number of community amenities including public transit, mentioned earlier, and the following:

6.4.1 Proximity to Commercial / Retail

In addition to the 'walk to' neighbourhood commercial / retail site proposed in Upper Greensborough, this community is conveniently located in close proximity to the future commercial / mixed-use corridor planned along Hwy 48 between 16th Avenue and Major Mackenzie Drive.

6.4.2 Access to Recreation Facilities

Within the Greensborough community an extensive and connected open space system is planned. This includes an active community park and community centre, a number of active neighbourhood parks that are campused with schools and a series of smaller neighbourhood parks that act as focal points within the community for passive and social recreation. These are distributed throughout the plan to optimize accessibility for residents. The pedestrian system and trails system serve to provide connections to and between these facilities.

6.4.3 Connection to Open Space and Community

Through the distribution of open space elements and the provision of a linked pedestrian and bicycle path system the open space will be easily accessible for all residents within the community. The prominent location of each of these elements, their exposure along important streets and the design of the block pattern and built form surrounding them, enhance their presence within the community.

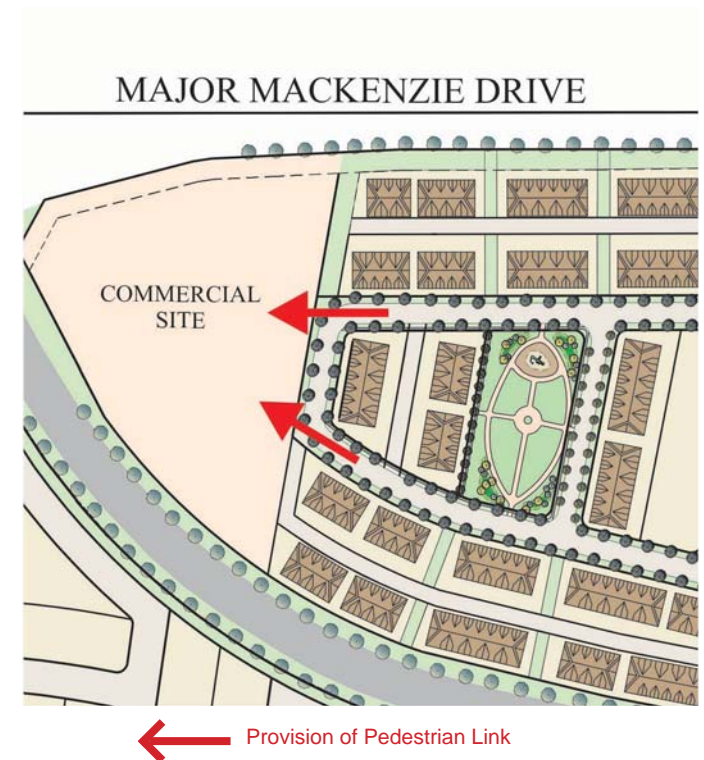


Figure 6.4.1 - Proximity to Retail

6.5 Incorporate Sustainable / Green Development Principles and Guidelines

6.5.1 Energy Star Requirements

Most builders have already incorporated Energy Star requirements into their building practices in recognition that these will be incorporated into the OBC in 2012. Some of these requirements address for example insulation, draftproofing, heating & air conditioning systems, and energy efficient appliances.

With specific reference to medium density site the following criteria would be considered:

Sustainable Site

- Bicycle storage
- Stormwater management and/or treatment for reuse on site
- Reduce heat island effect (accumulation of heat in a concentrated area)
- Light pollution reduction (dark sky friendly)

Water Efficiency

- Native, drought tolerant landscaping
- High efficiency irrigation systems, Rainwater harvesting
- CFC reduction in HVAC equipment
- Hire energy modeller to optimize energy performance
- Low-e glazing

Materials and Resources

- Construction waste management
- Regional materials: brick, precast, concrete, etc.
- Materials with recycled content

Indoor Environment

- Carbon dioxide monitoring - provide alarms
- Ventilation effectiveness - design ventilation systems to provide outside air ducted directly to all occupied areas
- Low-emitting adhesives and sealants, paints and coatings and carpets and wood flooring

6.5.2 LEED Neighbourhood Development Principles

Solar Orientation

The majority of streets have been oriented in an east-west alignment to create optimum conditions for the use of passive and active solar energy gains which would ultimately encourage energy efficiency.

Compact / Walkable / Pedestrian and Bicycle Environment

- Parks and Commercial / Retail located within a 5 - 10 minute walk for most residents
- Provision of a connected pedestrian system and access to the Town's multi-use pathway

Visible and Accessible to Green Space Network

- Parks are located in prominent locations
- Through the street pattern and location of parks and open space the valley feature figures prominently in the neighbourhood

Transit Supportive

- Pedestrian system, including streets provide connections to the transit stops

Connected

- The pattern of streets combined with the trails and walkway system provide access and connections to all areas of the plan

Ecological Stormwater Management

- Naturalized ponds are provided and designed as contiguous components of the open space system

Vibrant Public Realm

- The combination of compact housing forms, together with co-ordinated and attractive streetscapes throughout will encourage people to use these and other public spaces as an extension of their homes

6.5.3 Sustainable Home Incentive Program

S.H.I.P. is aimed at promoting healthy communities through 'servicing allocation' incentives which focus on water conservation as a primary criteria. The S.H.I.P. requirements build on the Region's Sustainable Development through LEED program, the LEED for Homes Program and the GreenHouse Certified Construction Program.

The program offers two levels of achieving a sustainable home. These are;

Level One

- Low flow (4.8 LPF) single flush toilets
- Low flow showerheads, faucets, aerators
- Water efficient clothes washers
- Water efficient dishwashers
- Hot water re-circulating systems
- Water efficient whole home furnace humidifiers
- Installation of Smart Metres
- Home Owner education
- Minimum 6 inches topsoil throughout the development for better root growth and reduce need for irrigation
- Water efficient, drought-resistant sod throughout the development
- Prohibition of irrigations systems connected to the municipal water supply

Level Two

- Rainwater harvesting and storage systems for indoor and outdoor water use; or greywater re-use
- Permeable driveway surfaces (other than sod)

6.6 Promote a Safe Community

A safe community is one in which people move through and use its public spaces freely and without hesitation or trepidation. In the Upper Greensborough neighbourhood a number of design criteria have been considered; these include:

Eyes-on-the-Street

The block pattern / layout and housing forms are configured to provide front entrances and private amenity areas (in the form of porches) along the streets. Parks and public spaces have also been designed to have frontage along public streets so that both visual and physical access are convenient.

Lighting

Street lighting will be provided along all public streets. In addition to these, pedestrian lighting will be provided in key areas of the neighbourhood, including parks and some trails.

CPTED

The Principles of Crime Prevention Through Environmental Design including those related to sight lines, visibility, access and circulation should be addressed at the site planning stage.

6.7 Heritage Conservation

James D. Harrington House

The James D. Harrington House, located at 9642 Ninth Line, has been recommended by the Heritage Markham Committee for preservation. The house is c1874 building designed in the style representative of 19th Century Rural Ontario vernacular. The house will be restored and incorporated with the Cornerstone Community Church development proposed within the place of worship site. As a heritage building this feature will contribute significantly to the character of the neighbourhood and provide a link to this community's historic past.

7.0 IMPLEMENTATION

The Community Design Plan (CDP) for The Neighbourhoods of Greensborough outlines a detailed strategy for implementation of the vision and principles described therein.

This Urban Design Brief has been prepared as an Addendum to the original CDP and represents one of the requirements for Draft Plan of Subdivision Approval and Site Plan Approval for the residential developments in the Upper Greensborough Neighbourhood. The principles and design guidelines put forth in this document should be used to guide subsequent stage of design development and detailed design.