CITY OF VAUGHAN

EXTRACT FROM COUNCIL MEETING MINUTES OF MARCH 19, 2013

Item 2, Report No. 12, of the Committee of the Whole (Working Session), which was adopted, as amended, by the Council of the City of Vaughan on March 19, 2013, as follows:

By approving the following in accordance with Communication C9, from the Commissioner of Planning, dated March 12, 2013:

1. That the following Recommendation No. 3, be added to Item No. 2 of Report No. 12 of Committee of the Whole (Working Session) March 5, 2013, "Steeles Avenue Corridor Urban Design Streetscape Plan Study":

That staff be directed to review the site specific policies in Volume 1 and Volume 2 of the Official Plan pertaining to the UPS operations located on the north side of Steeles Avenue with any changes to be addressed in the final report of the Steeles Avenue Corridor Urban Design Streetscape Plan Study; and

By receiving Communication C16, from T. W. Bermingham, Blake, Cassels & Graydon, Barristers & Solicitors, Bay Street, Toronto, dated March 15, 2013.

2 STEELES AVENUE CORRIDOR URBAN DESIGN STREETSCAPE PLAN STUDY FILE 15.42.2 WARD 4

The Committee of the Whole (Working Session) recommends approval of the recommendation contained in the following report of the Commissioner of Planning, dated March 5, 2013:

Recommendation

The Commissioner of Planning recommends:

1. THAT the staff report and consulting firm presentation on the Steeles Avenue Corridor Urban Design Streetscape Plan BE RECEIVED.

2. THAT staff be directed to refine the preliminary funding approach for the Steeles Avenue Corridor Streetscape Plan upon completion of the "Vaughan City-Wide Streetscape Implementation Manual and Financial Plan", and report back to a future Committee of the Whole meeting with respect to phasing and delivery options.

Contribution to Sustainability

The Steeles Avenue Corridor Urban Design Streetscape Plan contributes to the goals and objectives within "*Green Directions Vaughan"*, the City's "*Sustainability and Environmental Master Plan"*, specifically:

Goal 1: To significantly reduce our use of natural resources and the amount of waste we generate

- Objective 1.3 "To support enhanced standards of storm water management at the City and work with others to care for Vaughan's watersheds"

Goal 2: To ensure sustainable development and redevelopment

- Objective 2.2 "To develop Vaughan as a City with maximum green space and an urban form that supports our expected population growth"

Goal 3: To ensure that getting around in Vaughan is easy and has a low environmental impact

…/2

- Objective 3.1 "To develop and sustain a network of sidewalks, paths and trails that supports all modes of non-vehicular transportation"

- Objective 3.3 "Reduce single occupant vehicle (SOV) trips by supporting active transportation, carpooling and public transit"

Goal 4: To create a vibrant community for citizens, businesses and visitors

- Objective 4.1 "To foster a city with strong social cohesion, an engaging arts scene, and a clear sense of its culture and heritage"

- Objective 4.2 "To ensure that the City of Vaughan attracts businesses and investment that will result in well-paying jobs for Vaughan citizens, a sustainable tax base, and continuing prosperity into the 21st century"

Goal 5: To be a leader on sustainability issues

The Steeles Avenue Corridor Urban Design Streetscape Plan promotes the following goals, which directly relate to those of *Green Directions Vaughan*, specifically:

a) Promote a high quality design within the area including streetscape, open spaces, public parks, and private buildings and amenities in order to create a comfortable, sustainable and memorable urban centre;

b) Commence environmental sustainability by encouraging localized and integrated stormwater management strategies, native and drought resistant planting, heat island reduction, renewable energy usage, energy efficiency, district energy heating and cooling systems, as well as Black Creek Valley system protection and watershed management;

c) Facilitate comfortable and safe pedestrian and cyclist access to the subway station and its components;

d) Provide a balanced street network and layout that is convenient, comfortable and safe for pedestrians, cyclists, public transit users, and personal vehicle travelers; and,

e) Ensure that retail commercial development is planned to support a street-related, pedestrian-oriented and transit-supportive development.

Economic Impact

There are no immediate budgetary impacts resulting from this report and presentation. However, the implementation of streetscape plans can create a significant financial impact recognizing current revenue sources. Overall, the capital expenditure required to fully implement the streetscape enhancements in the Steeles Avenue Corridor Streetscape Plan is estimated at approximately $19.2 million over the life of the plan, not including public art. The implementation of the plan will be primarily triggered and funded by development, and municipal streets will involve coordination and contribution from private partners for both capital and maintenance costs.

The preliminary estimated capital cost of streetscape works for the Steeles Avenue Corridor Streetscape Plan is summarized in the table below. Costing includes boulevard hardscape, boulevard soft landscaping, furnishings, and budget allocations for gateway treatments.

Table 1
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Component	**Cost of Streetscape Improvements** (excluding HST)	**Project Partners**
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Jane Street (East Side Only)	$862,206	- York Region Capital Roads Project - York Region Municipal Streetscape Partnership Program
Keele Street (West Side Only)	$253,817	- York Region Capital Roads Project - York Region Municipal Streetscape Partnership Program
TOTAL Streetscape Enhancements	**$19,251,964**	

City-Wide Streetscape Implementation Manual and Financial Strategy Plan

The City of Vaughan currently does not have a long term financial strategy to support the additional operating and capital funding that will be required in future years to successfully implement and maintain the higher streetscape service levels associated with Vaughan's planned intensification areas, including the Steeles West District. However, the City is currently undertaking the Vaughan City-Wide Streetscape Implementation Manual and Financial Strategy Plan Study, which will provide an updated standardized, streamlined and improved process to guide the design, funding, construction and maintenance for streetscape projects within intensification areas in the City of Vaughan. This study is scheduled to be brought forward by staff to the City Committee of the Whole (Working Session) meeting on June 17, 2013, and will provide the necessary framework to inform and assist City Council and staff in managing and prioritizing limited resources for streetscaping, as the City sets its direction in the corporate planning process, department business plans and multi-year budgets.

Communications Plan

A stakeholder meeting was held on July 7, 2010, and a Public Meeting was held at City Hall in May, 2012. Notifications for the stakeholder and public meetings were communicated through invitations by mail and by email to stakeholders, surrounding ratepayer associations, and landowners located within the study area boundary. Meeting notifications and study progress documents were also posted on the City of Vaughan website.

In addition, City staff communicated with City of Toronto, York University, Toronto Transit Commission and York Region Transit throughout the study process to ensure coordination with their respective interests.

Purpose

The purpose of this report is to present the findings and recommendations of the Steeles Avenue Corridor Urban Design Streetscape Plan, and seek Council direction to proceed with the implementation strategy of the Steeles Avenue Corridor Urban Design Streetscape Plan upon the completion of the Vaughan City-Wide Streetscape Implementation Manual and Financial Strategy Plan.

Background - Analysis and Options

In June 2009, City Council approved the terms of reference for the Steeles Avenue Corridor Urban Design Streetscape Plan Study, and directed that the Development Planning Department initiate the process to retain the required consulting services to undertake the required work.

In February 2010, the City retained the services of Sweeny Sterling Finlayson & Co Architects Inc. to undertake the Steeles Avenue Corridor Urban Design Streetscape Plan Study.

Transit planning initiatives located within the study boundary area are a Toronto Transit Commission subway station, and the York Region Rapid Transit bus terminal - both with planned opening dates of 2016.

The Steeles Avenue Corridor Urban Design Streetscape Plan Study is in accordance with the structure, principles and objectives of the Steeles West Secondary Plan (OPA 620). The Steeles Corridor – Jane Street to Keele Street Plan, OPA 620, was approved by Council on February 29, 2008, with the general intent that the plan becomes the focus for higher order transit improvements and high-density land uses within the Steeles Corridor area. This intensification district has been planned to transform the area into a major transit and urban centre with a compact physical form that is sustainable, accessible, pedestrian-oriented and cyclist friendly. Considering the close proximity to York University and availability of higher order transit, a mixed-use urban form will provide opportunities for more intense commercial uses, office spaces and high-density residential forms of development.

The preferred alternative identified in the City of Vaughan OPA 620 Proposed East-West Collector Road Class Environmental Assessment has been included in the Study.

The preferred alternative identified in the City of Vaughan Steeles Corridor: Jane to Keele OPA 620 Municipal Servicing Master Plan Class Environmental Assessment Study (October 2011) has been included as information in the document.

Relationship to Vaughan Vision 2020/Strategic Plan

This report is consistent with the priorities set forth in Vaughan Vision 2020/Strategic Plan, through the following initiatives, specifically:

Service Excellence:

- Lead & Promote Environmental Sustainability
- Preserve Our Heritage & Support Diversity, Arts & Culture

Organizational Excellence:

- Manage Corporate Assets
- Ensure Financial Sustainability
- Manage Growth & Economic Well-being

Regional Implications

Jane Street is identified in the *Regional Official Plan (2010)* as a Regional Rapid Transit Corridor.

Keele Street is identified in the *Regional Official Plan (2010)* as a Regional Transit Priority Network. In 2006, the Regional Municipality of York initiated a Class Environmental Assessment study to determine existing and future road needs and improvements on Keele Street from Steeles Avenue to Rutherford Road in the City of Vaughan.

The Steeles Avenue Corridor Streetscape Plan will enable the City of Vaughan to apply to York Region's Municipal Streetscape Partnership Program for future partnership funding on streetscape enhancements on Keele Street and Jane Street.

Conclusion

As directed by Council, staff have collaborated and participated with the community, York University, York Region Rapid Transit, Toronto Transit Commission, and the City of Toronto on the Steeles Avenue Corridor Urban Design Streetscape Plan. This initiative demonstrates the City's commitment to provide leadership to coordinate the future public realm for the Steeles West Intensification District.

Attachments

1. Steeles Avenue Corridor Urban Design Streetscape Plan - Location Map
2. Steeles Avenue Corridor Urban Design Streetscape Plan (Under Separate Cover)

Report prepared by:

Rob Bayley, Manager of Urban Design, ext. 8254
Moira Wilson, Urban Designer, ext. 8017

(A copy of the attachments referred to in the foregoing have been forwarded to each Member of Council and a copy thereof is also on file in the office of the City Clerk.)

VAUGHAN

memorandum

C 9
Item # 2
Report # 12

TO: MAYOR AND MEMBERS OF COUNCIL

FROM: JOHN MACKENZIE, COMMISSIONER OF PLANNING

COUNCIL – March 19, 2013

DATE: MARCH 12, 2013

SUBJECT: COMMUNICATION – COUNCIL MEETING, MARCH 19, 2013

COMMITTEE OF THE WHOLE (WORKING SESSION) MARCH 5, 2013
STEELES AVENUE CORRIDOR URBAN DESIGN STREETSCAPE PLAN STUDY
ITEM NO. 2, REPORT NO. 12
FILE NO. 15.42.2
WARD 4

Recommendation:

The Commissioner of Planning recommends:

1. THAT the following Recommendation No. 3, be added to Item No. 2 of Report No. 12 of Committee of the Whole (Working Session) March 5, 2013, "Steeles Avenue Corridor Urban Design Streetscape Plan Study":

   THAT staff be directed to review the site specific policies in Volume 1 and Volume 2 of the Official Plan pertaining to the UPS operations located on the north side of Steeles Avenue with any changes to be addressed in the final report of the Steeles Avenue Corridor Urban Design Streetscape Plan Study.

Background:

Further to the adoption of the above report at the Committee of the Whole (Working Session) on March 5, 2013, discussions have occurred with UPS regarding their concerns with the report as it pertains to their holdings. UPS representatives in discussions with the Commissioner of Planning and Manager of Urban Design have requested that additional consideration be given to recognizing the inclusion of site specific policies into Volumes 1 and 2 of the VOP 2010 for the UPS site, which provides for the long-term operation of its facility at that location. UPS has also requested that additional research and analysis be undertaken on how the streetscaping policies might apply to potential future expansions of the UPS site.

This work will be undertaken in addition to the financial analysis work associated with the Committee of the Whole (Working Session) recommendation of March 5, 2013 and incorporated into the final report that is expected to be presented to Committee of the Whole in late 2013 or early 2014.

Respectfully submitted,

per:
JOHN MACKENZIE
Commissioner of Planning

Copy To: Clayton D. Harris, City Manager
Jeffrey A. Abrams, City Clerk
Grant Uyeyama, Director of Development Planning
Rob Bayley, Manager of Urban Design
Diana Birchall, Director of Policy Planning
Roy McQuillin, Manager of Policy Planning

C 16
Item # 2
Report # 12

COUNCIL – March 19, 2013

Blakes

Blake, Cassels & Graydon LLP
Barristers & Solicitors
Patent & Trade-mark Agents
199 Bay Street
Suite 4000, Commerce Court West
Toronto ON M5L 1A9 Canada
Tel: 416-863-2400 Fax: 416-863-2653

T. W. Bermingham
Partner
Dir: 416-863-2946
tim.bermingham@blakes.com

Reference: 24580/799

March 15, 2013

VIA E-MAIL

Clerks' Office
City Hall
2141 Major Mackenzie Drive
Vaughan, ON L6A 1T1

Attention: Mayor and Members of Council

Dear Mr. Mayor and Members of Council

Re: **Steeles Avenue Corridor Urban Design Streetscape Plan Study**
City File 15.42.2
Ward 4
2900 Steeles Avenue West
United Parcel Service Canada Ltd. ("UPS Canada")

On behalf of UPS Canada we have reviewed the above referenced study and as a result UPS believes it appropriate to advise Council of their perspective on the document. UPS Canada and its 2,100 employees at their facility in Vaughan are proud to be part of Vaughan's past and future success.

UPS Canada is the owner of a significant area of land within the Steeles Avenue Corridor Study area. UPS Canada has made a considerable investment in the development of this location and it forms the central hub of their Canadian operations.

UPS Canada recently completed an expansion to the facility and has every intention of remaining at this location for many more years, certainly beyond the time frame of the City's Official Plan for this area.

UPS Canada has worked closely with the City in the past through the development and approval of Official Plan Amendment 620 which establishes their entitlement to stay and to expand, as assured through its agreements with the Region, the City and through the OMB approved policies for the area.

UPS Canada was pleased to see Staff's recommendations endorsed by Council to bring forward modifications to the City's Volume 1 policies which reflected these same assurances and approvals and these same assurances will be reflected in the Volume 2 policies of the City's Official Plan.

While the streetscape study is intended to provide a guideline for future development within the study area, UPS Canada would want to be assured that any final approval of this streetscape study will be guided by the aforementioned UPS facts.

22357335.1

We understand that the streetscape study will be subject to further review and reporting by staff and we would respectfully request that staff be directed to dialogue with UPS Canada prior to bringing forward any further reporting on this matter.

We would ask that UPS Canada be provided with prior notice of any further reporting on this matter to Council or Committees as we may wish to make further submissions.

For convenience of providing notice to UPS Canada, we would ask that the notice requested herein be provided to the undersigned and:

Mr. James Lambis
Vice President, Plant Engineering
Americas and Asia Pacific Regions
2900 Steeles Avenue West
Concord, Ontario L4K 3S2

We trust this is of interest to Council and we look forward to dialogue with City Staff on this matter.

Yours very truly,

M. Gordon
per

T. W. Bermingham
TWB/mg

c: J. Lambis, UPS
R. Dragicevic, Walker Nott Dragicevic Associates Limited

22357335.1

COMMITTEE OF THE WHOLE (WORKING SESSION) MARCH 5, 2013

STEELES AVENUE CORRIDOR URBAN DESIGN STREETSCAPE PLAN STUDY
FILE 15.42.2
WARD 4

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Report prepared by:

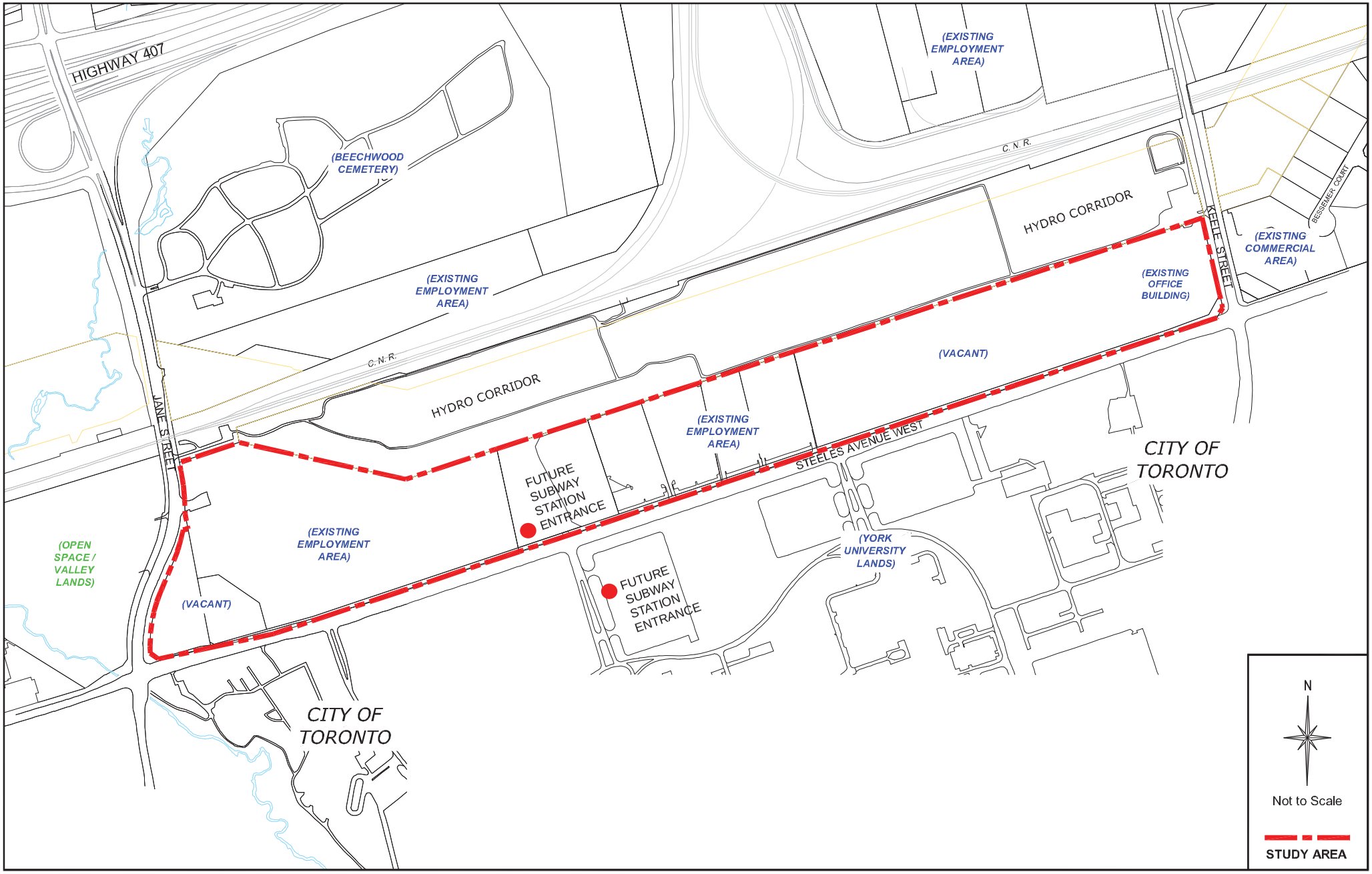
Rob Bayley, Manager of Urban Design, ext. 8254
Moira Wilson, Urban Designer, ext. 8017

Respectfully submitted,

JOHN MACKENZIE
Commissioner of Planning

GRANT UYEYAMA
Director of Development Planning

/CM



Steeles Avenue Corridor
Location Map

Applicant:
City of Vaughan

Location: Part of Lot 1, Concession 6

VAUGHAN

Development Planning Department

Attachment 1

File:
15.42.2

Date:
February 20, 2013

N:\DFT\1 ATTACHMENTS\15\15.42.2.dwg

ATTACHMENT NO. 2

City of Vaughan March 2013 Sweeny Sterling Finlayson &Co Architects Inc + Dillon Consulting

Steeles West

Urban Design & Streetscape Plan

March 2013

This document was created by:
Sweeny Sterling Finlayson &Co Architects Inc. ("&Co Architects") and Dillon Consulting:
Christian Huggett, &Co
Alan Ng, &Co
Mike Votruba, &Co
Kiran Chhiba, Dillon
DJ Lee, Dillon
Melissa Kosterman, Dillon

City of Vaughan:
Rob Bayley, Development Planning, Urban Design
Moira Wilson, Development Planning, Urban Design
Mauro Peverini, Development Planning
Andrew Pearce, Development/ Transportation Engineering
Michael Frieri, Development/ Transportation Engineering
Selma Hubjer, Development/ Transportation Engineering
Carlos Couto, Development/ Transportation Engineering
Geoffrey Haines, Development/ Transportation Engineering
Danny Woo, Development/ Transportation Engineering
Jack Graziosi, Engineering Services
Brian Anthony, Public Works
Diana Birchall, Policy Planning
Melanie Morris, Parks Development
Jeffrey Silcox-Childs, Parks Operations & Forestry
Joerg Hettmann, Parks Operations & Forestry

Other documents to consult:

City of Vaughan Design Criteria and Standard Drawings, *March 2004*

Land Use Review: Steeles Avenue Corridor - Jane Street to Keele Street, Final Report*, City of Vaughan, September 2004*

Official Plan Amendment 620, Steeles Corridor - Jane to Keele*, City of Vaughan, June 2006*

Vaughan Pedestrian and Cyclist Master Plan, *January 2007*

Community Improvement Plan for the Steeles Avenue Corridor, *Jane Street to Keele Street, City of Vaughan, June 11, 2007*

Vaughan Vision 2020 – The City of Vaughan Strategic Plan, *December 2007*

York Region Pedestrian & Cycling Master Plan Study, Towards a More Sustainable Region*, April 2008*

Active Together Master Plan, Parks, Recreation, Culture & Libraries Master Plan*, City of Vaughan, 2008*

Pedestrian and Bicycle Master Plan Study*, City of Vaughan, January 2007*

York University Secondary Plan Update, *City of Toronto, October 2009*

Green Directions Vaughan – Community Sustainability and Environmental Master Plan*, 2009*

OPA 620 Proposed East-West Collector Road Class Environmental Assessment, *City of Vaughan, May 2010*

Steeles Corridor: Jane to Keele OPA 620 Municipal Servicing Master Plan Class Environmental Assessment Study, *October 2011*

Steeles West Secondary Plan - City of Vaughan Official Plan *2010 Volume 2 (draft)*

Metrolinx Mobility Hub Guidelines for the Greater Toronto and Hamilton Area, *Final Draft for Board Approval, February 18, 2011*

Keele Street Class Environmental Assessment Study from Steeles Avenue to Rutherford Road, *York Region, 2012*

Spadina Subway Extension Project, *Toronto Transit Commission*

Table of Contents

Conceptual Rendering West Along Mid Block Greenway

Introduction

- Purpose
- Vision
- Study Area
- What is an Urban Design & Streetscape Plan?

Purpose

The Steeles West Urban Design and Streetscape Plan (the "Plan") provides specific design parameters to enact and enhance the existing planning framework. The construction of the northward extension of the Spadina Subway line to a new stop at the site (Steeles West Station) creates a catalyst for the development and redevelopment of the area. A primary objective of the Plan is to craft a plan that allows the City of Vaughan to evaluate and respond to development applications consistently, with a comprehensive set of overall design guidelines. This area is anticipated to develop over a long time frame (+25 years). This Plan is to catalogue and document the overall design thinking for the evolution of the area.

The Plan also highlights and demands placemaking and identity building within the Official Plan Amendment area to make it a unique and well identified community that will help connect the City of Vaughan, the City of Toronto, and York University.

Included within this Plan are an overall Development Concept, Urban Design Guidelines and a Streetscape Plan. These are all elements to be read in conjunction with each other in assessing the anticipated development potential of the Study Area. These do not replace pertinent planning documents, but instead provide further clarification of the intentions of those documents.

Vision

The new Steeles West district will be a multi-modal, mixed-use precinct, centred around pedestrian and transit-supportive development. A fine-grain and high quality network of streets, blocks and buildings will be created that will provide connectivity, sustainability and variety throughout.

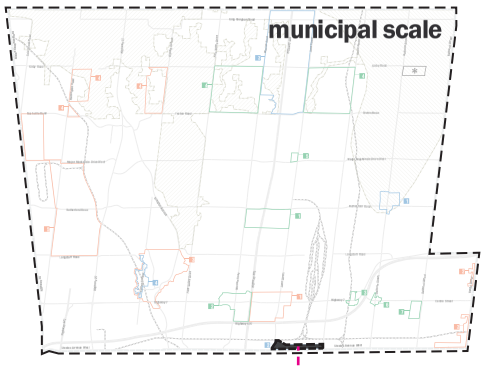
Introduction

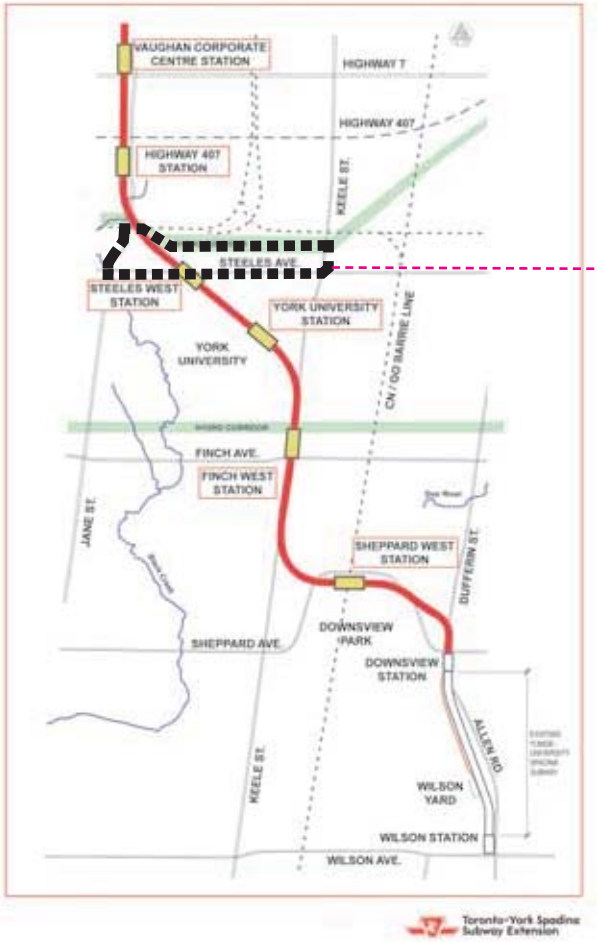
Study Area

The study area of the Steeles West Urban Design & Streetscape Plan (the "Plan") is located at the southern edge of the City of Vaughan, bordering on the City of Toronto. Steeles Avenue West is a City of Toronto road that borders the municipalities. As a result, this Plan only addresses lands on the north side of Steeles Avenue West, but plans and details have been coordinated wherever possible with the City of Toronto for plans on the south side.

Located on the north side of Steeles Avenue West, the study area is bounded by Jane Street to the west, Keele Street to the east, and an extensive hydro and rail corridor to the north. The total land area is approximately 47.8 hectares, (118 acres). This land is located within the Humber River watershed/Black Creek subwatershed.

The primary development driver will be the northward extension of the Spadina Subway, from its current terminus in Toronto at the Downsview Station, towards a new terminus station (Vaughan Metropolitan Centre) located at Highway 7 and Jane Street. The extension will directly connect the York University campus, while continuing directly through the study area, providing a stop at the intersection of Steeles Avenue West and Northwest Gate/Street "C", a location central to the overall study. The station will provide convenient, reliable, higher order mass transit service to new residents, workers, students and visitors, as well as a hub for connections to surface transit. Steeles West Station includes a large surface commuter parking lot to be provided in the hydro corridor.





Proposed Spadina Subway Extension Map : TTC.

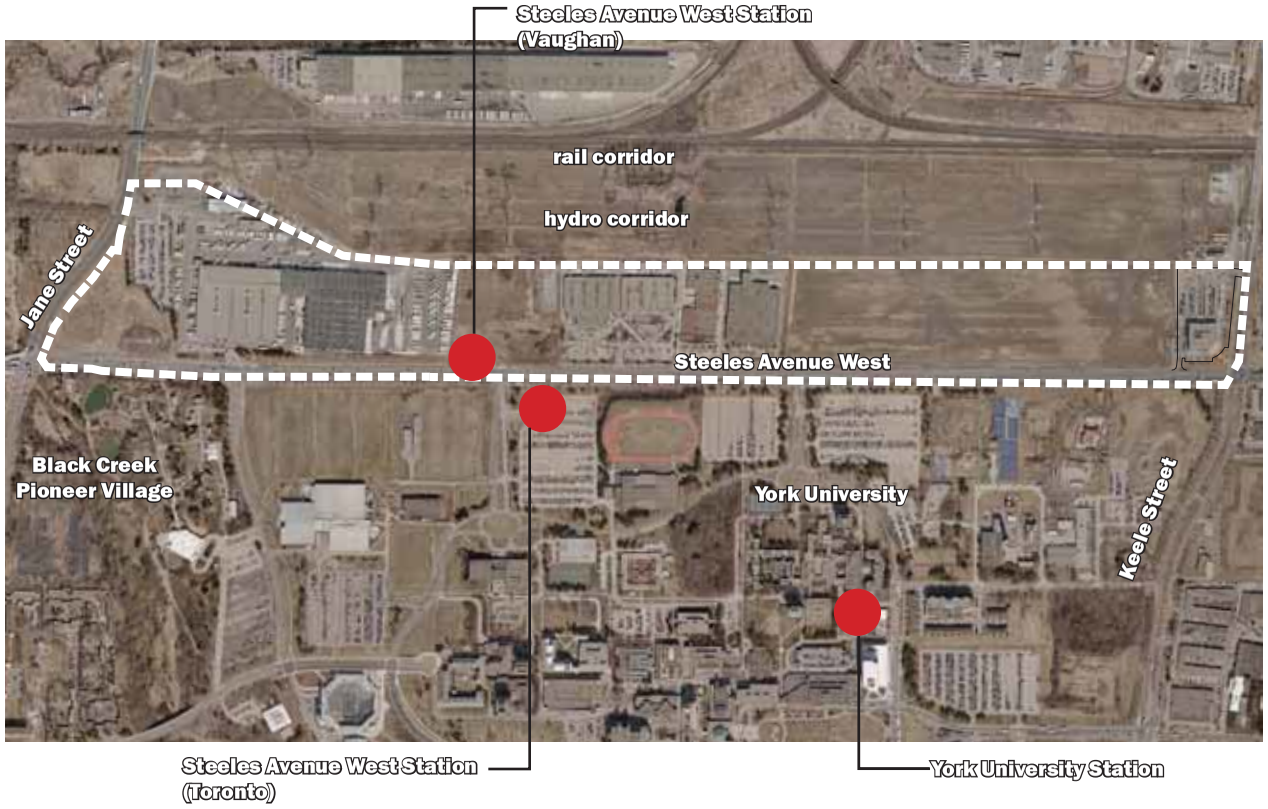
Introduction

What is an Urban Design & Streetscape Plan?

The study area is expected to change dramatically over the next 30 years, as (i) the Spadina Subway is built in the middle of the study area (2015), (ii) new bus terminals providing surface transit connections are completed, and (iii) as York University lands develop. In addition, the continued expansion and growth of the City of Vaughan will generate development pressure in this area as it transitions from suburban industrial land use towards a more intensive and urban mixed-use community. OPA 620/Steeles West Secondary Plan provides development principles and objectives, a public realm framework, and urban design policies for the study area.

This Plan provides a design framework to (i) direct growth and change, and (ii) to influence new development and redevelopment. This will include the location of future road alignments, proposed parks and open spaces, and transit station and infrastructure. The Plan will also detail road classifications, potential buildings types and configurations, and street and built form relationships.

This Plan is intended to represent the desired approach for growth over the long term, as the lands develop.



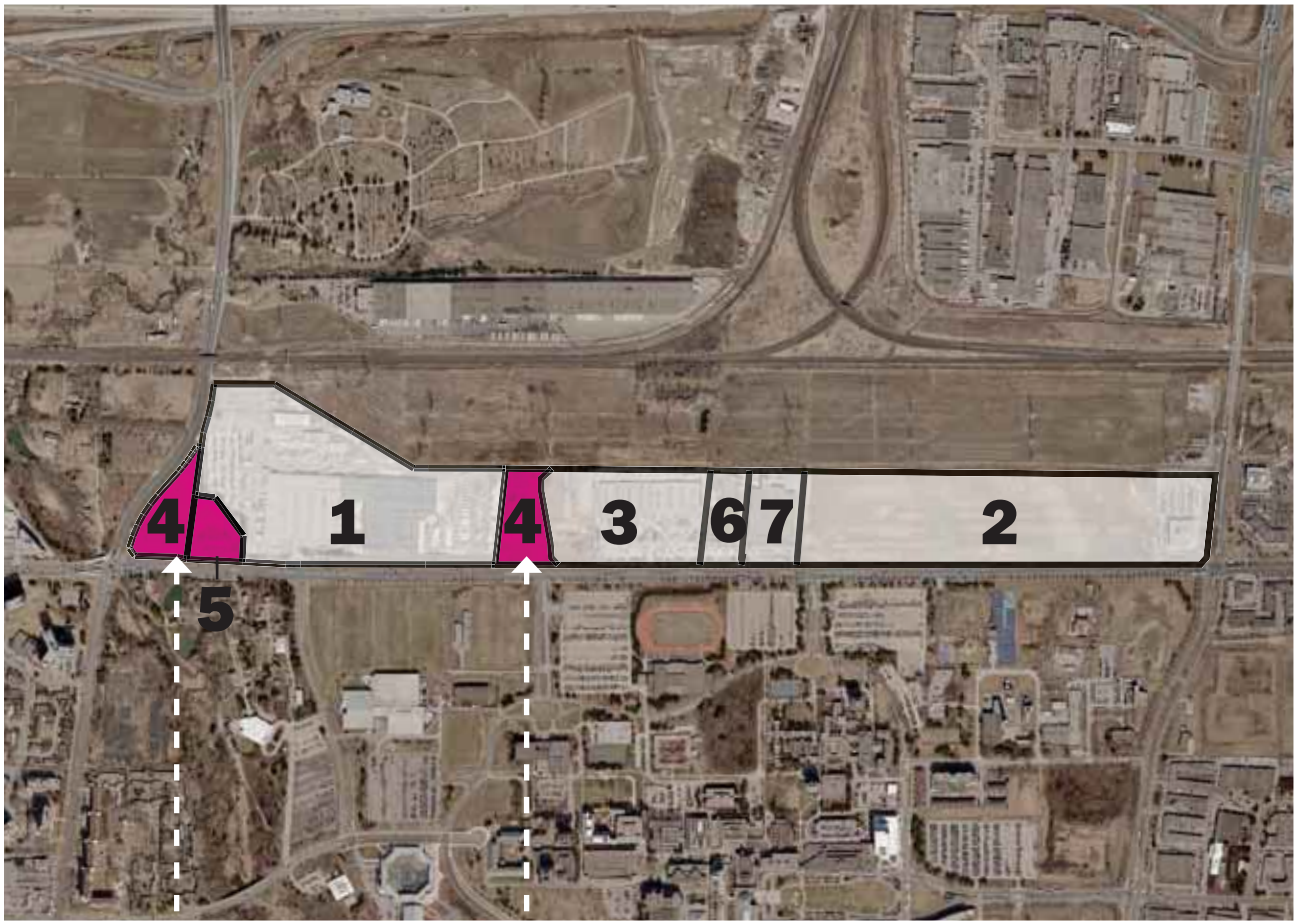
Existing Conditions

- Lot Fabric
- Open Spaces and Natural Features
- Circulation (Pedestrian, Cycling, Transit, Vehicular)
- Built Form
- Issues and Constraints
- Opportunities

An understanding of the existing Study Area and context is essential in the formulation of any good long-range planning document. This Plan assesses the existing elements of the site as a "baseline" from which the Plan can build.

While the Plan envisions a radically different future for the Study Area, there are also important current realities that must be accommodated.

Existing Conditions



Key site

Key site

Above: Overlay of the existing land ownership with air photo.

Lot Fabric

The overall study area, at approximately 47.8 ha (118 acres), is broken down into 8 parcels of land, with 7 landowners. Some of the most significant landholdings (in area) are:

1)	*UPS*	*16.3 ha*	*40.3 acres*
2)	*Milestone Group*	*16.2 ha*	*40.1 acres*
3)	*Glen Steeles E.*	*6.4 ha*	*15.9 acres*
4)	*York Region & TTC*	*3.7 ha*	*9.1 acres (2 lots)*
5)	*City of Vaughan*	*1.2 ha*	*3.0 acres*
6)	*1053364 Ontario Limited*		
7)	*653135 Ontario Limited*		

The majority of the land area is held by a small number of landholders. These large parcels can accommodate multiple buildings on each site along with the creation of associated road connections and parks. This arrangement ultimately provides flexibility in the deployment of density and in the arrangement of viable building types within each parcel. The benefit of large landholdings also included easier and more potentially efficient road and park layouts.

Two government organizations (City of Vaughan and York Region) control approximately 10% of the land area. Further, the Region controls one of the most strategic and intense sites (at the location of the new subway station), as well as a key "corner" parcel (at Jane). These key, publicly-owned parcels have the ability to "set the tone" for development quality and intensity in the Study Area.

Existing Conditions

Open Spaces and Natural Features

The lands were originally 19th century farmsteads. Portions of the study area are developed with several existing one and two-storey industrial buildings, complete with surface parking lots and some container storage. The remainder of the lands are undeveloped and exist as cultural meadows and agricultural fields (five vegetation community types of cultural meadows, cultural woodlands, shallow marsh, open aquatic, and agricultural).

The cultual meadows are uses as east-west travel corridors for mammals (coyotes, red fox and white-tailed deer) and breeding habitats for birds. Birds also use the agricultural fields. 17 of 25 species of birds listed on-site are protected by the Migratory Birds Convention Act (MBCA), and ten species are considered for conservation priority in York Region.

A cultural woodlot and cattail marsh (stormwater pond) is located at Jane Street and Steeles Avenue. Portions of the Hydro Corridor are leased for farming.

The land is relatively flat, and there are no watercourses within the study area. However, the ecologically and historically significant Black Creek Valley is a natural feature located adjacent to the study area, west of Jane Street. The entire study area is within the Black Creek sub watershed of the Humber River, and is designated a “Conservation Area/Regional Forest” in the York Region Regional Greenlands System. It is identified as a “highly sensitive” hydro geologically sensitive area.

The study corridor is situated within the Peel Plan physiographic region, characterized as a level of undulating tract of clay soils with imperfect drainage. Soils are Chinguacousey clay loan, a shaly calceareous clay till with slight potential for erosion, and low run-off and slow percolation.

Existing Conditions

Circulation

Pedestrian

There are no sidewalks internal to the Study Area. The only sidewalk on Steeles Avenue is located between Jane Street and Northwest Gate, or approximately 1/3 of the Steeles Avenue frontage along the length of the study area. There are sidewalks on Jane Street and Keele Street at the edges of the site. In addition, there is existing informal trail within the hydro corridor.

Cycling

There is no dedicated infrastructure for cycling (lanes or trails) internal to the Study Area or on the adjacent streets.

Overall, the Study Area is currently a harsh environment for pedestrians, cyclists and vehicles. The few existing streets, the absence of internal connections between properties, and arterial roads that primarily service vehicular movement all contribute to this situation.

Transit

The boundaries of the study area are currently serviced by VIVA, York Region Transit, Brampton Transit, Go Transit and TTC. The transit routes that service the arterial road network which borders the study area include:

- VIVA Orange (full along Jane).
- VIVA Purple (full along Keele)
- YRT Route 20 (full along Jane and Steeles)
- YRT Route 10 (full along Steeles)
- YRT Route 77A (peak along Keele and Steeles)
- Brampton Route 77 (along Keele and Steeles)
- GO Transit (along Keele, Steeles, Jane)
- TTC Route 35D (limited along Jane)
- TTC Route 107 B/C/F (full along Keele)
- TTC Route 60 (Steeles)
- TTC Route 35E (express on Steeles)

Vehicular

All vehicles travel along the main arterial roads, Steeles Avenue, Jane Street and Keele Street. There are no internal streets in the Study Area. Individual properties are serviced by individual driveways with access from curb cuts, generally from Steeles Avenue (although UPS has access on Jane Street, and Milestones has access on Keele Street). These main arterial roads carry significant volumes of traffic, particularly in rush hour, when they are often very congested and slow moving.

North of Steeles Avenue, Jane Street and Keele Street are major north-south arterial roads in the City of Vaughan, under the jurisdiction of the Regional Municipality of York. South of Steeles Avenue, Jane Street and Keele Street are major north-south arterial roads under the jurisdiction of the City of Toronto. Steeles Avenue is a major east-west arterial road under the jurisdiction of the City of Toronto.

Rail

The CN Rail line crosses over Jane Street and under Keele Street. The rail lines north of the site are currently used by freight trains (CN Rail).

Existing Conditions

Built Form

Within the Study Area, there are 6 existing buildings. More specifically, they are:

1) 2900 Steeles Avenue West
UPS distribution centre, a large, single storey industrial warehouse, recently expanded and doubled in size and occupying many acres. This large building is setback from the road, and surrounded by shipping container parking and driveway aisles.

2) 2720 & 2740 Steeles Avenue West:
Two identically shaped, concrete and glass, office and light industrial two-storey buildings, well set back from Steeles, and surrounded by surface parking.

3) 2700 Steeles Avenue West
One concrete and glass, two-storey office building, surrounded by surface parking.

4) 2600 Steeles West
One red brick, two-storey office building, surrounded by surface parking.

5) 2300 Steeles West
One four-storey office building, surrounded by surface parking (located at Keele Street).

Existing Conditions

Planned Transit Network

The transit network within the Steeles West District will provide opportunities for regional and inter-regional transit routes including connections to the TTC subway and bus network, the Vaughan Metropolitan Centre and the York Region Rapid Transit corridor along Highway 7 to the north, the proposed transitway stations within the Highway 407 corridor, existing, proposed and potential GO rail station sites and GO bus stops and the local transit system along Steeles Avenue, Keele Street and Jane Street.

Existing Land Uses

York University and Black Creek Pioneer Village are located immediately south of the study area, and have entrances onto Steeles Avenue.

Low-rise industrial and commercial buildings front onto the north side of Steeles Avenue, along with large tracts of undeveloped land and altered landscapes. A large UPS distribution facility and expansion building is located near Jane Street and Steeles Avenue, on the north side of Steeles Avenue.

The Hydro One transmission corridor is to the north of the Study Area.

Built Heritage and Cultural Landscapes

The roadscapes bounding the study area and farmsteads once located within the Study area are identified to have 19th century survey and settlement origins. However, no features in the study area are designated under the Ontario Heritage Act or are identified as being of heritage interest. There are some heritage buildings and cutural heritage elements on the south side of Steeles, within York University lands.

Fixed Elements

There are a number of “fixed” elements to the development of this Master Plan area:

1. Portions associated with the subway station.

1a Transit infrastructure construction timelines - already underway, and intended to be operational by 2015.

1b Subway Station Main entrances - already designed and under construction, these locations are set and will provide at-grade connections to the new subway station.

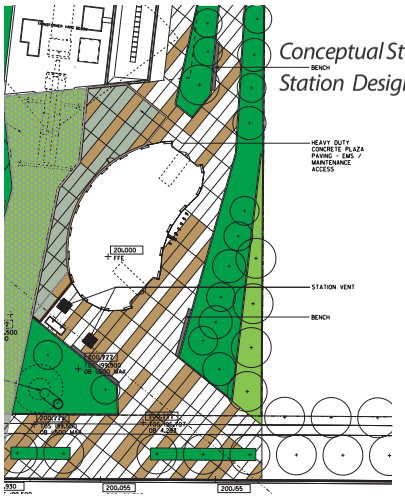
1c Transformer Station - will be developed as part of the subway station construction as an integral part of the power for the station’s operation. It will exist as a surface building north of the Vaughan-side Steeles West subway entrance.

1d Bus Terminal - developed in concert with the subway, this will provide surface connections with various bus routes servicing the surrounding area.

1e Commuter Parking within Hydro Corridor - A large commuter parking lot (+/- 1,900 spaces) will be constructed within the corridor by YRT/TTC to provide parking for commuters.

2. Hydro Corridor - will continue to function as an integral servicing element to the power distribution of surrounding areas.

3. Street network - the major streets are already allocated within the Official Plan (through OPA 620), and the East-West Collector Road Environmental Assessment.



Conceptual Steeles West North Station Design

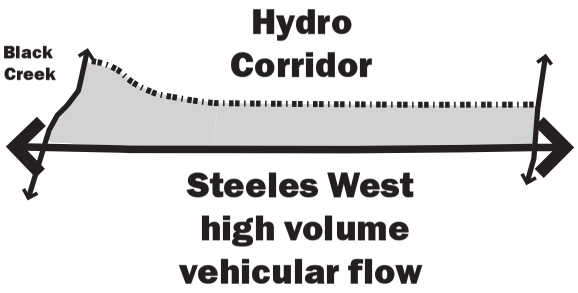
Existing Conditions

Issues and Constraints

As part of the analysis for the study area, various design issues and constraints were identified:

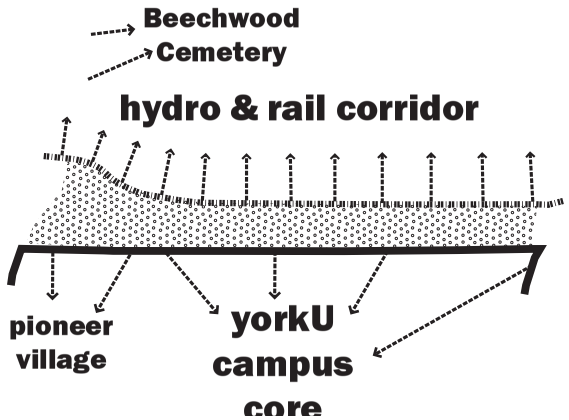
Edges

Physical constraints create rigid "edges" to the area due to the large ROW widths and traffic flows, and utility corridors/railway.



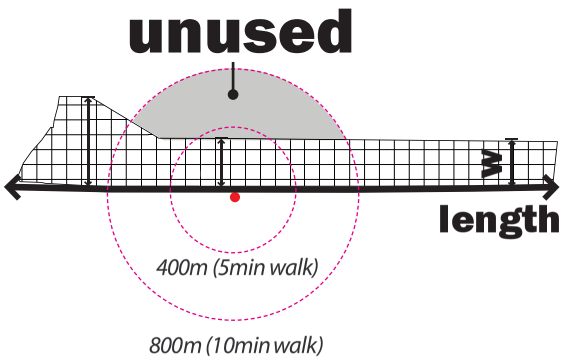
Inward nature of surrounding uses

York University, employment lands, Beechwood Cemetery, Pioneer Village and the hydro corridor contain specific uses that all function inwardly.



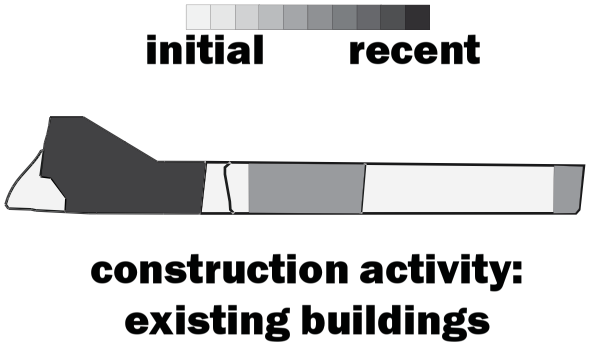
Linear arrangement of study area

The area is constrained in terms of overall depth in the north-south dimension due to the existing 'edges' of Steeles Avenue and the hydro corridor. This narrow configuration creates challenges in the ability to connect, as well as the traditional "transit access", which is usually measured in a concentric ring surrounding the transit station within walking distance (400m and 800m, or 5 and 10min)

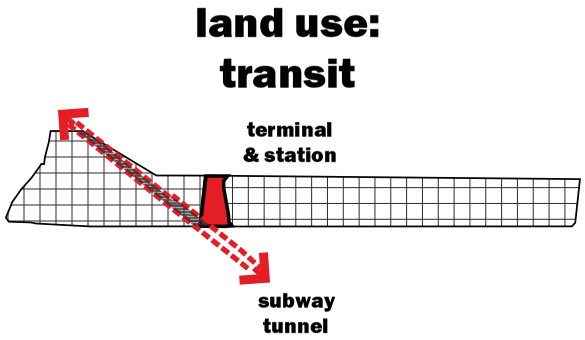


Existing Conditions

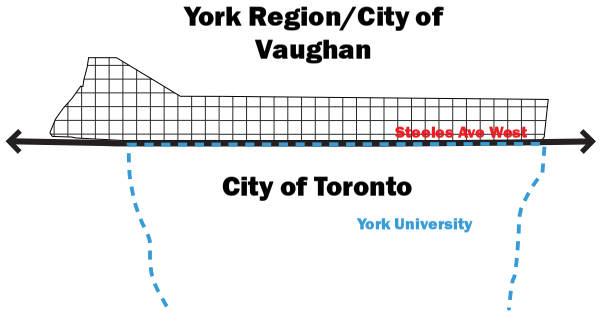
Recent Investment of some landholders - including UPS, which has a very large distribution centre that they have recently upgraded and secured for the short-to-medium term.



Transit Priorities: TTC, Vaughan, YRT.
Valuable land will be occupied with the many "parts" that come with a new subway station: subway trench and cover, power (transformer), vent, access, station entrance design, bus terminal, transit demand management (parking) and safety requirements. These parts will all need to be coordinated and co-located where possible.



Coordination
Coordination must be coordinated between one Region (Region of York), two municipalities (Vaughan and Toronto) and one large single land-owner/ operator (York University.



Existing OPA 620 framework - maximum heights, densities, park locations, conceptual roads and linkages are found within the existing Secondary Plan, OPA 620. As discussed earlier, these initial parameters form the basis from which the study area will be developed for the Plan.

Existing Conditions

Stong Homestead, Black Creek Pioneer Village

York University Campus Sign

Opportunities

There are significant opportunities associated with the development of the study area. These include:

1. The land use and retail opportunities that come with transit-oriented development.

2. Large landholdings allow for collaborated and consolidated infrastructure systems, including sustainable water, waste and energy.

3. Proximity to York University and Black Creek Pioneer Village provide activity co-generators that can create an interesting mixture of visits and opportunities for new businesses.

4. A large amount of urban and pedestrian activity that will be generated by the combination of commuter parking, bus terminals, the subway itself, and surrounding neighbourhood.

Planning Framework

- Mobility Hub Guidelines
- Land Use Review - Steeles Ave Corridor
- OPA 620 Secondary Plan
- New Official Plan
- Steeles West Secondary Plan
- York University Secondary Plan

The Urban Design and Streetscape Plan incorporates and is informed by the various planning documents that are in-force at the Provincial, Regional or Municipal level and applicable to the Study Area. These form the basis for the recommendations contained in the Urban Design Development Concept, Urban Design Guidelines and Streetscape Plan.

Planning Framework

Mobility Hub Guidelines For The Greater Toronto And Hamilton Area

"Mobility hubs have great potential to help transform the region and reinforce progressive provincial land use policies as laid out by the landmark Green Belt Plan and Growth Plan for the Greater Golden Horseshoe. The hubs will be centres of activity and place, attracting opportunities for live, work, and play, all connected to the greater region through reliable, rapid transit. However, this will only happen with the successful integration of land use and transportation planning, committed private sector partners, and a common vision for the future." (page 3)

"Mobility hubs consist of major transit stations and the surrounding areas (approximately 10 minute/ 800 metre radius) with significant levels of transit service planned for them and high development potential."

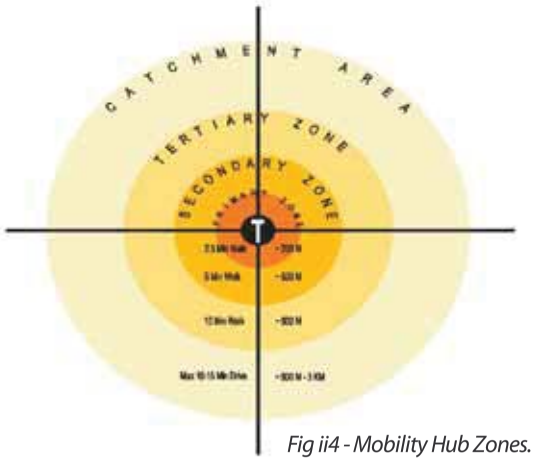


Fig ii4 - Mobility Hub Zones.

In 2010, Metrolinx released a full draft of the Mobility Hub Guidelines (for the GTHA) which guides planning and development at mobility hub locations identified within "The Big Move" Regional Transportation Plan. Major planned and existing transit station areas that are significant for the regional rapid transit system are recognized as mobility hubs in the Big Move.

York University–Steeles West is identified as a mobility hub and more specifically as a "Gateway Hub." Gateway hubs are understood to have an intersection of two rapid transit lines with significant ridership activity and a minimum density target of approximately 50 people + jobs per hectare.

The document specifies the York University–Steeles West location as a "u6" Unique Destination. This designation is important for the coordination of applicable design guidelines and appropriate strategies.

Fig i8 - Mobility Hubs in the "Big Move"

The organization of the document is arranged by Objectives, Themes, and then into Guidelines & Strategies. Some applicable and noteworthy guidelines are noted:

1.0 Seamless integration of modes at the rapid transit station.
- **Theme 1: Seamless Transfers Between Transit Modes, Networks, And Routes (1.1-2)**
- **Theme 2: Balancing Access To Transit Stations (1.3-6)**

2.0 Safe and efficient movement of people with high levels of pedestrian priority.
- **Theme 1: Clear Mode Share And Transportation Performance Targets (2.1-2)**
- **Theme 2: Complete And Safe Streets (2.3-6)**

Planning Framework

3.0 A well-designed transit station for a high quality user experience.
- **Theme 1: Creating Landmark Transit Stations (3.1)**
- **Theme 2: Value-Added Customer Amenities (3.2-3)**
- **Theme 3: Understandable Stations And Station Spaces (3.4-5)**

4.0 Strategic parking management.
- **Theme 1: Minimizing Need And Supply Of Commuter Parking (4.1-3)**
- **Theme 2: An Area-Based Approach To Parking Management And Reduction (4.4-5)**
- **Theme 3: Parking Designed To High Standards (4.6-7)**

5.0 A vibrant, mixed-use environment with higher land use intensity.
- **Theme 1: A Dynamic Vibrant And Compatible Mix Of Uses Within Walking Distance Of Transit (5.1-2)**

6.0 An attractive public realm.
- **Theme 1: A Strong Sense Of Place (6.1)**

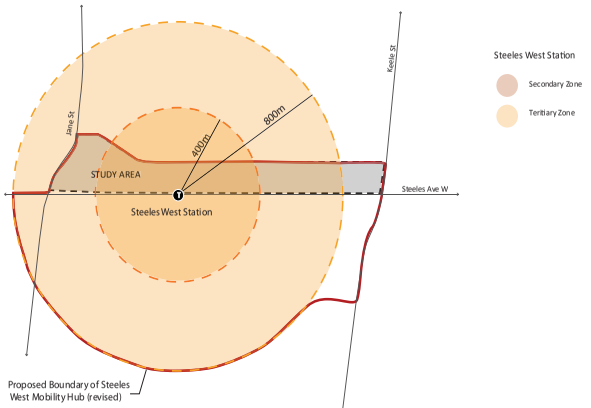
7.0 A minimized ecological footprint.
- **Theme 1: Minimized Ecological Footprint (7.1)**

8.0 Effective partnerships and incentives for increased public and private investment.
- **Theme 1: Enhancing Development Potential And Attracting Developers (8.1)**
- **Theme 2: Establishing Partnerships Between Stakeholders (8.2-3)**
- **Theme 3: Incentives For Design Innovation And Excellence (8.4-5)**

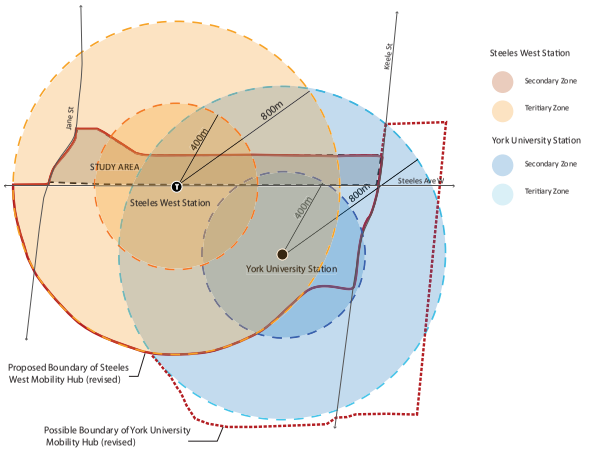
9.0 Flexible planning to accommodate growth and change.
- **Theme 1: Designing With Change In Mind (9.1)**
- **Theme 2: A Flexible And Responsive Planning Framework (9.2)**

The Mobility Hub Guidelines are regional in scale, with guidelines that are of relevance to the unique places within the entirety of the Greater Toronto Hamilton area transportation network.

The Steeles West Urban Design & Streetscape Masterplan has been developed to be supportive of the Mobility Hub Guidelines for the GTHA. However, it is intended that the guidelines found within this document specifically address the planning and development constraints and opportunities within the Steeles West study area that extends beyond the catchment area of the mobility hub within its centre.



Proposed Mobility Hub Boundary (Steeles West Station Only)



Proposed Mobility Hub Boundary (Steeles West and York U Stations)

Planning Framework

Land Use Review: Steeles Avenue Corridor

The full Study is entitled "Land Use Review: Steeles Avenue Corridor, Jame Street to Keele Street", which was conducted by Urban Strategies, MMM and urbanMetrics in September 2004. This study formed the basis for OPA 620.

This report studied the lands that became subject to both OPA 620, the new Secondary Plan, as well as the Steeles West Urban Design and Streetscape Master Plan (this document). The Land Use Review was conducted to build upon:

- proposed rapid transit improvements, including (the not-then funded) Spadina subway extension
- the adjacency to York University
- Steeles Avenue as a boundary and important transit corridor
- Highway 407 and visibility and accessibility created
- development potential from landowners

The main catalyst was the onset of multiple Environmental Assessments for transit, as well as OPA 529, which established a transit right-of-way between York University and Vaughan Corporate Centre.

The Land Use Review resulted from a long consultation process, including technical advisory committee from key stakeholders, interviews with key landowners, as well as two public open houses.

Twelve objectives were created to provide a foundation for new Official Plan policies. Upon review, these 12 objectives are very similar to the "Key development principles and objectives" found in OPA 620 (Policy 2.0).

The proposed road network included a continuous east-west road network, which would accommodate buses and commuters and reduce congestion on Steeles. A series of north-south streets were to complete the road network, coordinated with streets from York University south of Steeles.

Land Use and Density was influenced by the rapid transit improvements and proximity to York University. Recommendations of 1.0 - 3.0x the lot area were recommended, and that higher densities would be difficult to accommodate given existing traffic constraints on Steeles, Jane and Keele.

The "Urban Design Vision" (Figure 9) showed a potential mid-block connection throughout the site area, with a evenly spaced layout of "conceptual open spaces", connected through the mid-block connections.

Figure 8 - Land Use Vision and Density Targets

Figure 9 - Urban Design Vision.

Planning Framework

OPA 620 Secondary Plan

The Study Area is subject to an existing Secondary Plan, created under Official Plan Amendment 620 (OPA 620), approved in final form by the Ontario Municipal Board on August 20, 2008. This forms the basic framework for the planning of the Steeles West study area by setting out the structure, block divisions, context and overall design vision. More specifically, OPA 620 provides the approved building heights (in number of storeys), approved densities, conceptual locations of parks and open spaces, and their hierarchy of use, as well as the conceptual alignment of streets and linkages.

The secondary plan was created to "assess the potential additional land uses and increased density options in the context of York University and the availability of higher order transit, to determine required improvements to the road network and the public transit system, and urban design goals and objectives". Furthermore, the site is recognized as a convergence of inter-regional and regional transit service, between the Toronto Transit Commission, York Region Transit (YRT), and GO Transit.

The Plan also permits the original 1960's land use permissions for suburban-industrial employment area to continue, while also amended for this site specifically to provide an increased "range and mix of higher density urban land uses that integrate into an intensifying urban fabric".

OPA 620 is the fundamental background document that forms the basis for the development concept for this Plan.

OPA 620 characterized the Study Area as "one of the few areas in the GTA where there is a large confluence of transit providers, with two high order transit gateways (subway and potential LRT) between the City of Toronto and York Region. TTC, York Region Transit and GO Transit all meet." (p5). Accordingly, the area will function as a inter-regional and regional transit hub.

The OPA 620 area is expected to accommodate 5,000-5,500 units (10,000 - 11,000 people), and 100,000 - 120,000 sq.m of Office/Commercial, which will employ 4,000 - 5,000 workers. It will be a significant development area.

Some of the key development principles and objectives from the Plan:

2.1 A transit-supportive Plan: Support and capitalize on existing and planned transit investments.

2.2 A Plan to use infrastructure effectively: Manage development within the capacity of existing and committed transportation and servicing infrastructure.

2.3 Create a compact, mixed-use precinct, concentrating worker and resident population within a 10-minute walking distance of the future Steeles West Station.

2.4 Complement and reinforce the academic function and campus environment of York University.

2.5 Ensure early phases of new development establish the vision for the Corridor at the outset and provide the opportunity for further land use evolution.

2.6 Develop a consistent, attractive image and pedestrian environment along Steeles Avenue through landscaping and the placement and massing of buildings.

2.7 Provide a balanced transportation system convenient, safe and comfortable for pedestrians, cyclists, public transit and private vehicles.

2.8 Integrate transit facilities, roads and development as seamlessly as possible with surrounding development.

2.9 Ensure future residential neighbourhoods are adequately served by community services and amenities such as schools, urban squares and parks, libraries, emergency services and recreational facilities.

2.10 Maintain and support the primary function of the Hydro Corridor to transport electricity.

2.11 Encourage the urban design of future development to be of the highest quality.

2.12 Promote and demonstrate environmental sustainability.

For more detailed information on each principle, refer to the OMB-approved OPA 620.

Planning Framework

Land use and density

Density

OPA 620 established a radiating density structure centred on the proximity to the new subway station.

Blocks C & D ("Transit Core") were approved with density coverages of 4.00x, centred around the new subway and bus terminal location. This was based on a 250 metre radius (2.5 minute walk) from the subway. The minimum density on the blocks not parks is 2.0x FSI.

Blocks B & E1 ("Transit Transition") were approved with density coverages of 2.50x. This density was determined on a 500 metre radius (5 minute walk) from the subway. The minimum density on the blocks not parks is 1.5x FSI.

The remaining density coverage for Blocks A, E2, F and G ("Transit Corridor") is 1.60x. The minimum density on the blocks not parks is 0.8x. Greater density coverage can be achieved, up to 1.75x, provided that certain requirements and coordination occurs with the existing and anticipated prestige office development (*see policy 3.2.3.2 c + d)*.

Land Use

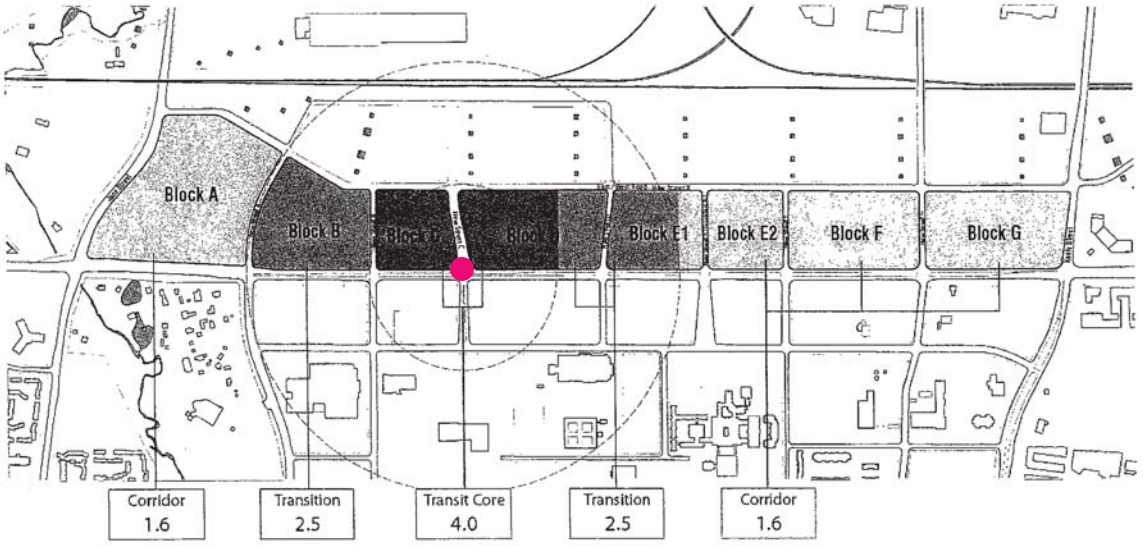
Lands within Transit Core and Transit Transition areas permit:

i) high density residential, including apartments and multi-use dwellings
ii) Prestige Office Employment, and
iii) Mixed Use Development, combining i) and ii), as well as commercial and/or public and institutional uses in the same building.
iv) Public and Institutional Uses.

Previous approved uses and existing uses are also permitted *(3.2.1.2 c)*.

Lands within "Transit Corridor" shall also permit medium density residential.

Commercial uses oriented to public streets and plazas should be provided on ground floors of buildings fronting onto Steeles Avenue and new Street "C" *(3.2.1.2d)*



Schedule A - Land Use and Density

Planning Framework

OPA 620 Secondary Plans

Conceptual Street Network

A primary and secondary street network provides structure to the Study Area, with consideration given for the location of preferred secondary streets and /or pedestrian & cyclist linkages.

There are several primary roads identified in the diagram. At the north edge of the study area, the "East-West Collector Road" forms a spine that travels from Keele to Jane Street. This road is critical for access to and from the study area, while providing an alternate east-west connection just north of Steeles Avenue.

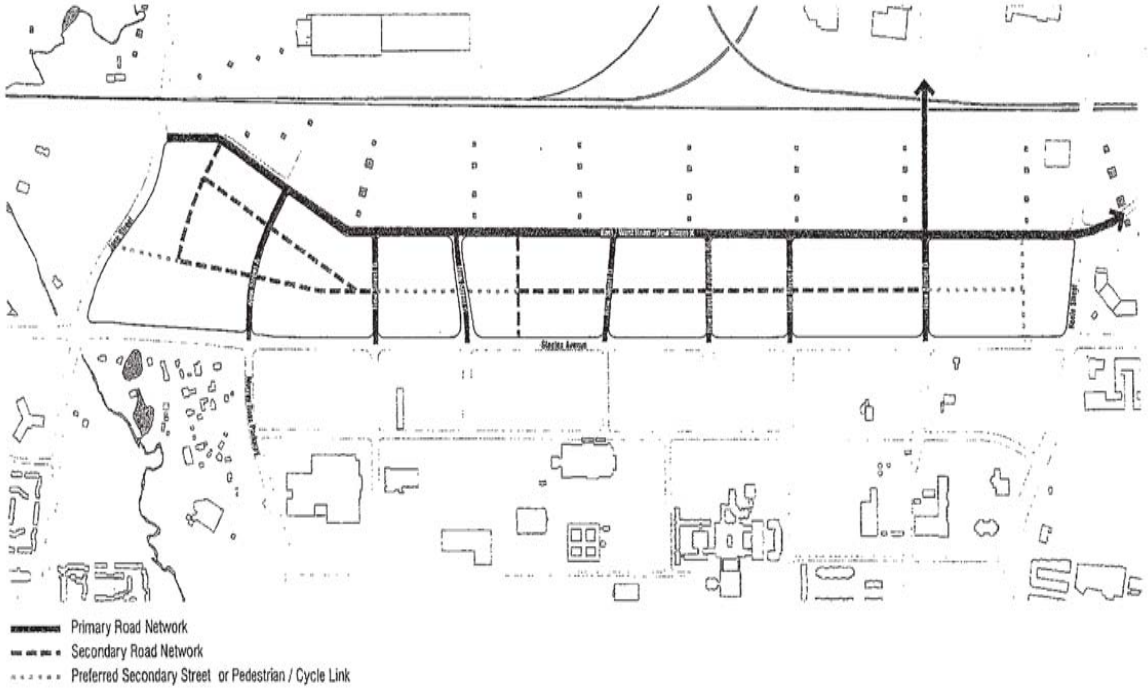
Street "C" intersects this collector road and will provide a primary connection to Steeles until a connection through to Jane Street can be obtained. For the near future, the collector west of Street "C" will be a bus link only, as UPS continues operations on their lands.

The north-south primary streets are configured as extensions from the East-West Collector road towards those alignments south of Steeles Avenue within the York University campus. While not all expected to be signalized, it provides a structured, and spaced layout of streets and integration of pedestrian connections. Street "G" is shown extending through the hydro corridor and over the rail corridor to communities north of the study area.

The secondary road network is arranged to split the larger blocks created by the primary network. Most notable is the mid-block east-west secondary street that divides the larger blocks between Steeles Avenue and the East-West Collector Road. This is shown as a collection of "Secondary Road Network" and "Preferred Secondary Street or Pedestrian/ Cycle Link".

Local and Primary road R.O.W. shall be identified in approved plans of subdivision and conveyed to the municipality as a condition *(5.3.1 i)*

The following roads are identified: *(5.3.1d)*
East-west collector road (primary) - 26.0m
Local Roads (with transit) - 23m
Local roads (without transit) - 20m
Mid-block local road - 17.5m
Laneways - 7.5-8m



Schedule B - Conceptual Street Network

Planning Framework

Conceptual Open Space Network and Public Amenities

OPA 620 conceptualizes a series of parks and open spaces located throughout the study area. The spaces are categorized as "Neighbourhood Parks, Neighbourhood Squares/Greens, Urban Plaza and Potential School Site/Open Space."

Additionally, the schedule overlays the conceptual street network (Schedule B) along with "Signed bicycle routes, Off-road bicycle routes and Existing Stormwater Management Ponds."

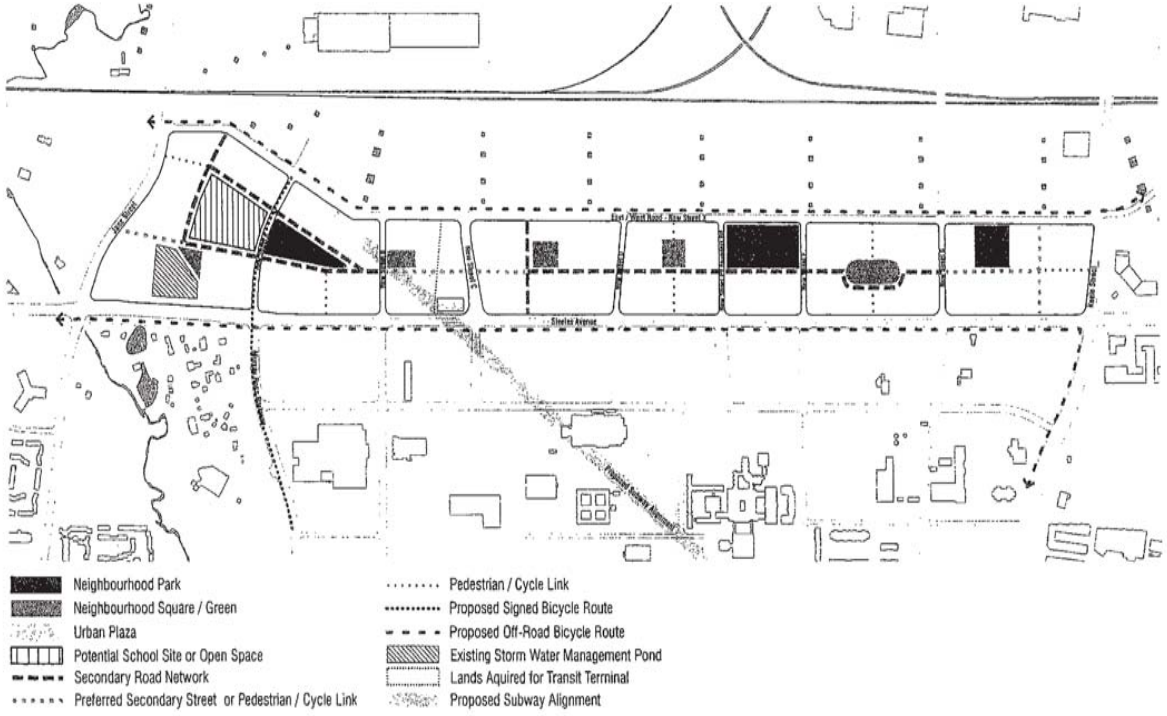
The open spaces are fairly evenly distributed throughout the plan, with a concentration of more open spaces (and potential school) located in the western area of the plan.

"The type, configuration, distribution and sizes of the spaces shown are conceptual and will be determined by the City of Vaughan staff within the Park's and Recreation Master Plan *"(OPA 620, Section 3.3.2*).

"A dedicated bicycle lane is to be located on Street 'C'" *(5.4c)*

"Parks and Neighbourhood Squares are to provide central common spaces and key social gathering spaces for citizens. Neighbourhood squares are smaller than typical Neighbourhood Parks and intended to address passive recreational needs of residents and employees of the Amendment Area" *(3.3.2a).*

"Suitable sized and located Parks and Neighbourhood Square sites shall be conveyed to the municipality as a condition of approval of draft plan of subdivision " *(3.3.2d)*



Schedule C - Conceptual Open Space Network and Public Amenities

Planning Framework

OPA 620 Secondary Plans

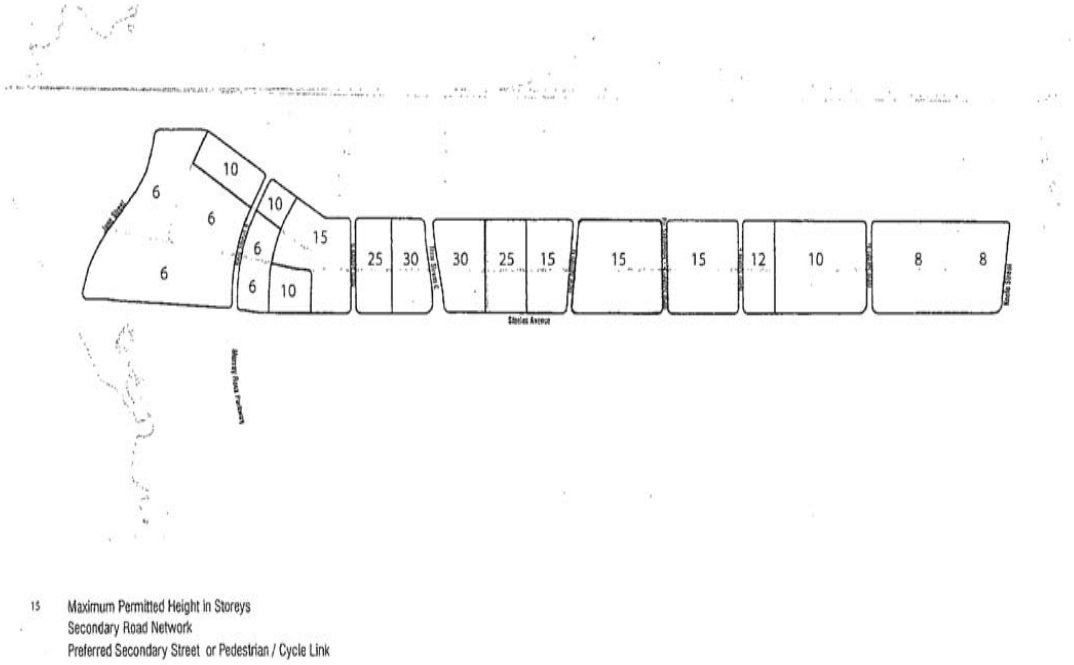
Maximum Height

Heights for built form are established in a radiating pattern surrounding the new subway station. Building height transitions from thirty storeys nearest the station to six storeys towards the west (opposite Black Creek Pioneer Village), and eight storeys towards the east (at Keele Street). The larger development blocks create some of the boundaries for the heights areas.

"Maximum heights above those provided are permitted for office uses with one storey additional for each level of underground parking" *(4.2.1 a ii)*.

Building on Steeles shall have a minimum of 13 metres (4 storeys).

Buildings over 8 storeys shall have a 3-6 storey podium *(4.2.1 a vi)*.



Schedule D - Maximum Height

Planning Framework

Other Pertinent Policies

"Minimum setback for residential buildings fronting on the East-West Collector Road is 5 metres, non-residential buildings is 3m." *(4.2.1 b v)*

"Buildings fronting onto Steeles (east of Murray Ross Parkway) and those fronting on north-south local roads shall have a build-to line of a minimum of 3 metres and maximum of 6m." *(4.2.1 c iv)*

"Buildings fronting on Steeles (west of Murray Ross Parkway) shall have a build-to line of a minimum of 9m and maximum of 12m." *(4.2.1 c v)*

"At least half (50%) of the property frontage along Steeles Avenue and the north south streets shall have a building set within the build-to zone." *(4.2.1 d iii).*

"The maximum building depths shall be 50m in either direction to encourage street-related development with open courtyards in the centre of the block, to reinforce pedestrian routes, mews and other forms of public open space, and to provide a fine grain of development. *(4.2.2c)*

"Floor to ceiling hieghts of ground floors for all buildings on Steeles and Street "C" in Transit Core locations and other main north-south streets should be 4-5m minimum." *(4.3.2 c))*

"A 3,000 car public parking facility is permitted within the hydro corridor." *(3.1m)*

Planning Framework

City of Vaughan Official Plan: A Plan for Transformation - 2010

The City has approved a new Official Plan that describes the future direction for the Study Area within the context of the entire City.

The study area in its entirety is designated as a "Primary Centre" Intensification Area, one of six within the City of Vaughan. "Primary Centres" are intended to be the most intensive of four types of intensification areas able to accommodate the Vaughan target of 45% residential intensification, as well as make efficient use of underutilized sites serviced by existing or planned high-level mass transit. Primary Centres will "accommodate a wide range of uses and will have tall buildings". Steeles West Primary Centre will be a transit-oriented development with significant opportunity for residential, office and institutional uses (due to York University). Primary Centres will have a fine grain of streets suitable for pedestrians and cyclists, with internal and surrounding connections in the form of sidewalks and greenways. Pedestrian-friendly built-form will encourage the location of active use at the ground floor.

As part of the "Future Transportation Network" (Schedule 9), Steeles Avenue, Keele and Jane Streets are all defined as "Major Arterials". A new east-west street is shown as a "Proposed Major Collector", in addition to a new north-south connection in the east portion of the study area.

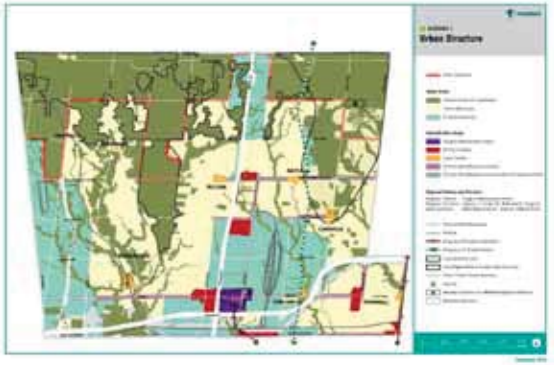
Steeles Avenue is also identified as a "Regional Rapid Transit Corridor", while the "Subway Extension" is shown overlaid on the study area, with a stop at Steeles.

The centre half of the site is designated as "High Rise Mixed Use", while the two ends (facing Jane and Keele) are "Mid-Rise Mixed-Use". Mid-rise buildings are up to twelve storeys in height, while those over six storeys will incorporate a minimum setback of 3 metres for taller portions. A 15 metre separation distance between buildings are required for privacy and daylight access. High-rise buildings are greater than twelve storeys, with a pedestrian scaled podium of three to six storeys, with taller elements setback a minimum of 3 metres. High-rise buildings shall not have floorplates larger than 850 square metres setback 15m from property lines, and separated at least 30m from other high-rise buildings.

Steeles West Secondary Plan

As part of the new Official Plan, OPA 620 was incorporated as a new Secondary Plan and called "Steeles West" Secondary Plan.

The detailed land use schedule shows the site with a range of heights and densities, where the heights range from 6 to 30 storeys, and the densities range from 1.6 to 4.00 times coverage.



Schedule 1 - Urban Structure

Secondary Plan - Map 11.3A.

Planning Framework

York University Secondary Plan

The City of Toronto created a Secondary Plan for York University in 2009 through Amendment 104 to the Official Plan (By-law 1239-2009) .

One of the most significant changes to the Secondary Plan (from the previous Plan) was the adoption of "Precincts" within the York University landholdings, which permitted a variety of additional uses (including Residential) located on the edges of the campus. Most applicable to the Steeles West Study area are Precincts called "Steeles West" and "Steeles East", located on the south side of Steeles Avenue across the from the Study Area in this Plan.

This Secondary Plan acknowledges that the Spadina Subway Extension will create three new subway stations within or proximate to the York University campus, as well as two "Transit City" rapid transit routes would also provide service to the area (north-south on Jane Street terminating at Steeles West Station, and east-west on Finch Avenue and connecting with Finch West Station). The Secondary Plan was to preserve unique elements of the original York University Master Plan (including the ring road, ceremonial entrances and key natural landscapes) while creating an evolution of the University campus to allow people to live, work, learn and play.

As noted, in particular, Steeles West Precinct is to be developed as a "high-density, transit supportive mixed-use corridor" that is "complementary to and compatible with development on the north side of Steeles Avenue in Vaughan" (*2.2.2*). Steeles Avenue West is to have a "pedestrian friendly streetscape with active ground floor uses and building entrances, the existing row of trees on Steeles will be preserved, and a new pedestrian-friendly gateway entrance to the University will be created at NorthWest Gate" (*2.2.2*).

The Steeles East Precinct will be a mixed-use corridor having primarily office and/or research uses. This precinct will also support Steeles West Station and development should be "complementary to and compatible with development on the north side of Steeles in Vaughan" (*2.2.2*). A gateway will also be created at Founders Road, while historically significant Stong House and Barn will be conserved, as well as associated cultural heritage landscapes.
All non-university land uses, densities and building heights provided in this Secondary Plan will be permitted in the Edge Precincts (including Steeles West and East) subject to the preparation of Precinct Plans in accordance with section 5.1 (*4.1.2*). Map 10-13 shows "prime retail frontages" along Steeles at the main intersections of Northwest Gate and Founders Road.

The majority of lands on the south side of Steeles are designated as "Mixed Use Areas - A", with some lands at the east end of the precinct and the corner at Keele as "Mixed Use Area B". Mixed Use Areas - A will provide street-related development that includes a variety of uses in mixed-use buildings, provide street-related commercial, service, office and public uses along the majority of street frontages, buildings built at or close to the streetline, and building bases developed at pedestrian scale height (*4.2.2*).

Mixed Use Area - B permits research, technology, office and accessory commercial uses (retail and service), with street-related uses along the majority of street frontages, buildings built at or close to the streetline and building bases developed at pedestrian scale height (*4.2.5*).

Density

Minimum and maximum gross densities have been established, while net densities will be determined at the Precinct planning stage.

The two blocks facing Steeles, on either side of the Steeles West station (Northwest Gate/Street "C"), are within 250m and shown at 4.0x FSI, with Mixed Uses Areas (typically retail at-grade, residential or office above). Office is encouraged for the sites adjacent to the station.

Density calculations will be based on gross development block area including land for buildings, lands dedicated for secondary streets, parkland, community services/facilities, open spaces, transit facilities, landscaping, parking, driveway areas and servicing (*4.3.1.2*).

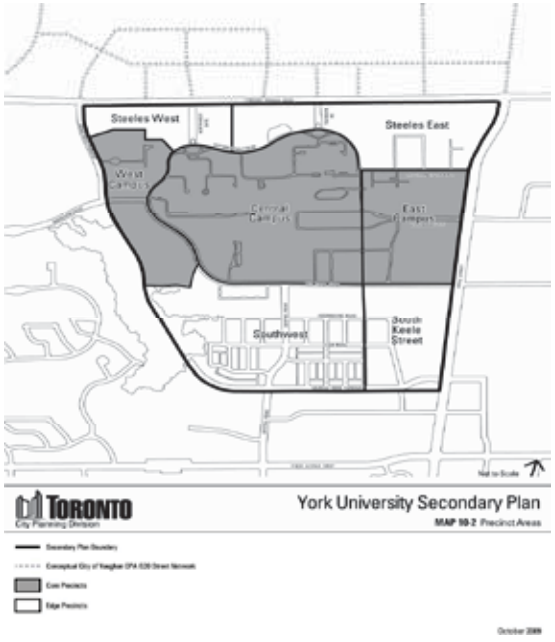
Planning Framework

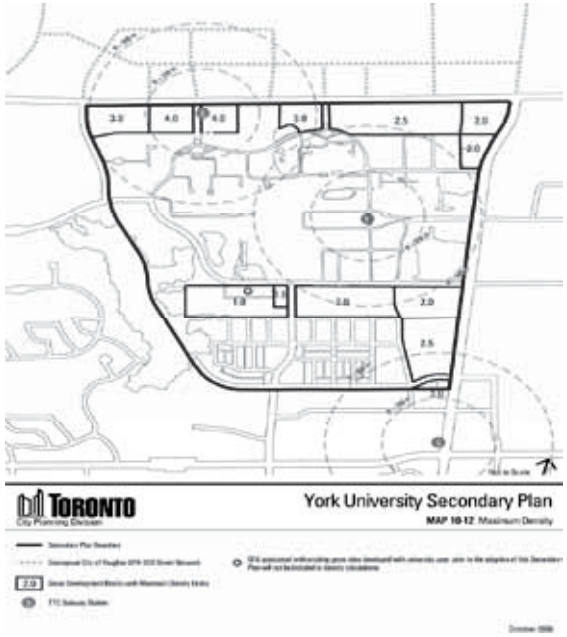
There are certain density exemptions where floor space is dedicated to specific uses, and density transfers are allowed generally relating to existing to preservation of heritage and archaelogical resources *(4.3.3)*.

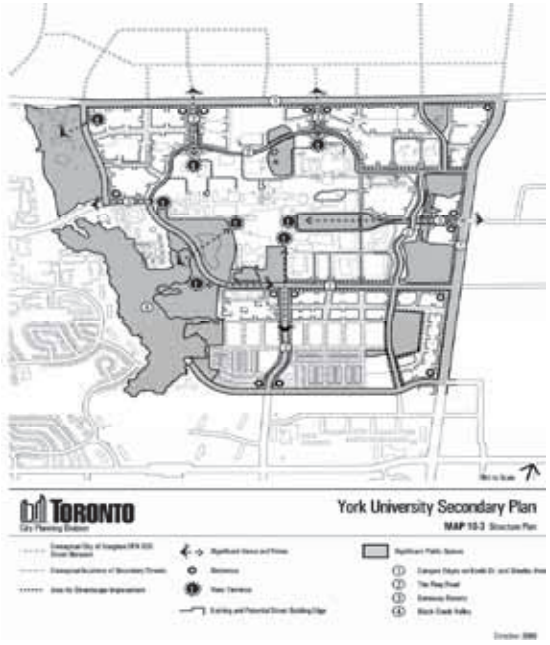
Building Heights

Minimum building height for buildings fronting Keele Street or Steeles Avenue is 4 storeys (13.5m). Minimum building height for buildings fronting a primary street is 3 storeys (10.5m), and two storeys (6m) for a secondary street. Maximum buildng heights for Edge Precincts are governed by the Zoning By-law Airport Hazard Map, but the tallest buildings are located within 250m of the subway station fronting a major street. (*4.4***).**

For more details, consult the York University Secondary Plan.







Consultation

Consultation

- Consultation

Extensive consultation has occurred in setting the development framework in place. This includes consultation that was conducted as part of the original 2004 Land Use Review, the adoption of OPA 620 (and tested at the OMB), and the new 2010 Official Plan. In addition, the east-west collector road (Street "X") was also subject to a public Environmental Assessment process. The City of Vaughan also consulted on the Servicing Strategy for the area.

Within the Steeles West Urban Design and Streetscape Plan, the consultant team and City Staff held an initial Stakeholders Meeting in Summer 2010, and a public meeting in Spring 2012. Drafts of this document were circulated to York University, the City of Toronto, the TRCA, and York Region Rapid Transit for input.

Three urban design frameworks were developed, based on slightly different interpretations of the OPA 620 development framework in order to initiate the consultation process for this Plan. The preferred option was developed with stakeholder input and is found within.

Consultation

Consultation

The basic principles of the plan were created, approved and subject to a public process through the creation of Official Plan Amendment 620. This laid out the framework, as a Secondary Plan, for conceptual street locations, parks and open spaces, heights, densities, and the location of transit facilities.

The consulting team contacted all landowners and residents groups within the site area, as well as on the fringes of the site area with an invitation to participate in an stakeholder meeting. In addition, relevant internal Vaughan departments were consulted throughout the creation of the development concept.

On July 7, 2010, the City and &Co Architects held a workshop with interested landowners. Three options were presented to the group, and comments were received on the options presented as well as desires and concerns for the area's development.

At the same time, comments were invited from the public, and a website dedicated to the progress of the study was public on the City of Vaughan's website. Discussions and input were continued with Vaughan Staff. All comments from individual and workshop consultation were incorporated into the creation of the final development concept.

The preferred Development concept/UD Guidelines and Streetscape Plan was presented to key stakeholders in Spring 2012 as a follow up for comment. These comments were considered in this final document.

Above:
Excerpt from the July 7, 2010; Landowners, Ratepayers & Councillors Workshop.
Option A, Demonstration Plan.

Consultation

Option B Narrow Block & Alternating Parks

Above:
Excerpt from the July 7, 2010; Landowners, Ratepayers & Councillors Workshop.
Option B, Demonstration Plan.

Architecture& Reconnecting people to the significance of architecture. &Co

Option C Pocket Parks

Above:
Excerpt from the July 7, 2010; Landowners, Ratepayers & Councillors Workshop.
Option C, Demonstration Plan.

Development Concept

- Vision
- Objectives
- Definitions
- Transit as catalyst
- Development Intensities
- Conceptual Plan
- Streets
- Urban Character
- Retail
- Blocks
- Built Form
- Parks and Open Space
- Phasing

The "development concept" resulted from the analysis of the planning framework, existing site conditions, input from key stakeholders (including City Staff and external agencies) and the application of best practices.

A governing vision and key objectives have been created for the concept, and then various components of the design itself are broken down and explained further.

Development Concept

Vision:

To create a walkable, pedestrian-friendly, transit-supportive mixed-use community that allows people to live, work and shop in their neighbourhood through a variety of modal options.

Study Objectives

1. To create a mix of land uses.
2. Promote compact built form.
3. To provide well distributed, well appointed and attractive open spaces.
4. To provide a building framework that engages the public realm.
5. To maximize the built potential for use of public transit.
6. To create beautiful, pedestrian-oriented streets.
7. To create connections across existing barriers.
8. To develop a strong public realm framework that supports a diverse program mix and vibrant urban life.

Definitions

For the purposes of this document:

Mid Rise Building
A building up to 8 storeys in height.

Tall Building
A building over 8 storeys in height.

Tower Floorplate
A Tall Building floorplate gross floor area, not including balcony floor area.

Development Concept

Transit as Catalyst

Throughout the 2004 Land Use Review, OPA 620, the new Vaughan Official Plan, as well as the Mobility Hub Guidelines, it is apparent that the extension of the subway to and through the study area provided the rationale for increased density in the Steeles West study area.

An analysis of these documents shows that the density permissions and height limits are at the highest surrounding the new subway station, located roughly mid point in the site. Density and height then gradually terrace down towards the edges (at Jane and Keele). The intent of this was to provide the greatest amount of residents and workers, in mixed uses, in close proximity to the subway station within walking distance. In addition, buses will connect with the subway station and will provide surface connections to intra-regional and regional transit.

As stated, one of the objectives of this Plan and the design guidelines is to maximize the ability to achieve those permitted densities and heights. This will provide the highest potential number of future riders and users of transit, and will provide mobility alternatives to the personal automobile.

Development Intensities

In the various reference documents mentioned above, there are different radii used surrounding the proposed Steeles West Station as indicators of development intensity.

This results in part from differences in the walking distances within the "two and a half","five" and "ten" minute window. They generally range from 200-250 metres for 2.5 minutes, 400-500 metres for 5 minutes, and 800 metres for 10 minutes. Within this Plan, we will reference the upper end of the range for development intensity limits, so that 250m means the distance travelled in 2.5 minutes, 500m is the distance travelled in 5 minutes, and 800m is distance travelled in 10 minutes.

Based on the Mobility Hub Guidelines, the "Primary Zone" (0-250m) is the area most influenced by the high level of accessibility to transit, where pedestrian activity should be most prioritized, and traveler amenities can be provided through development (ie. retail, pedestrian connections).

The "Secondary Zone" (250m-500m) provides opportunities for transit-oriented development, and safe and direct walking and cycling connections to the transit station through this zone are critical.

The "Tertiary Zone" (500m - 800m) is the transition of the mobility hub to the area outside of the hub, and direct and safe walking and cycling connections to the station are still very important, but also should connect to other transit and cycling systems outside the hub.

Above: Conceptual Renderings of Full-Site Build-out

Development Concept

Conceptual Plan

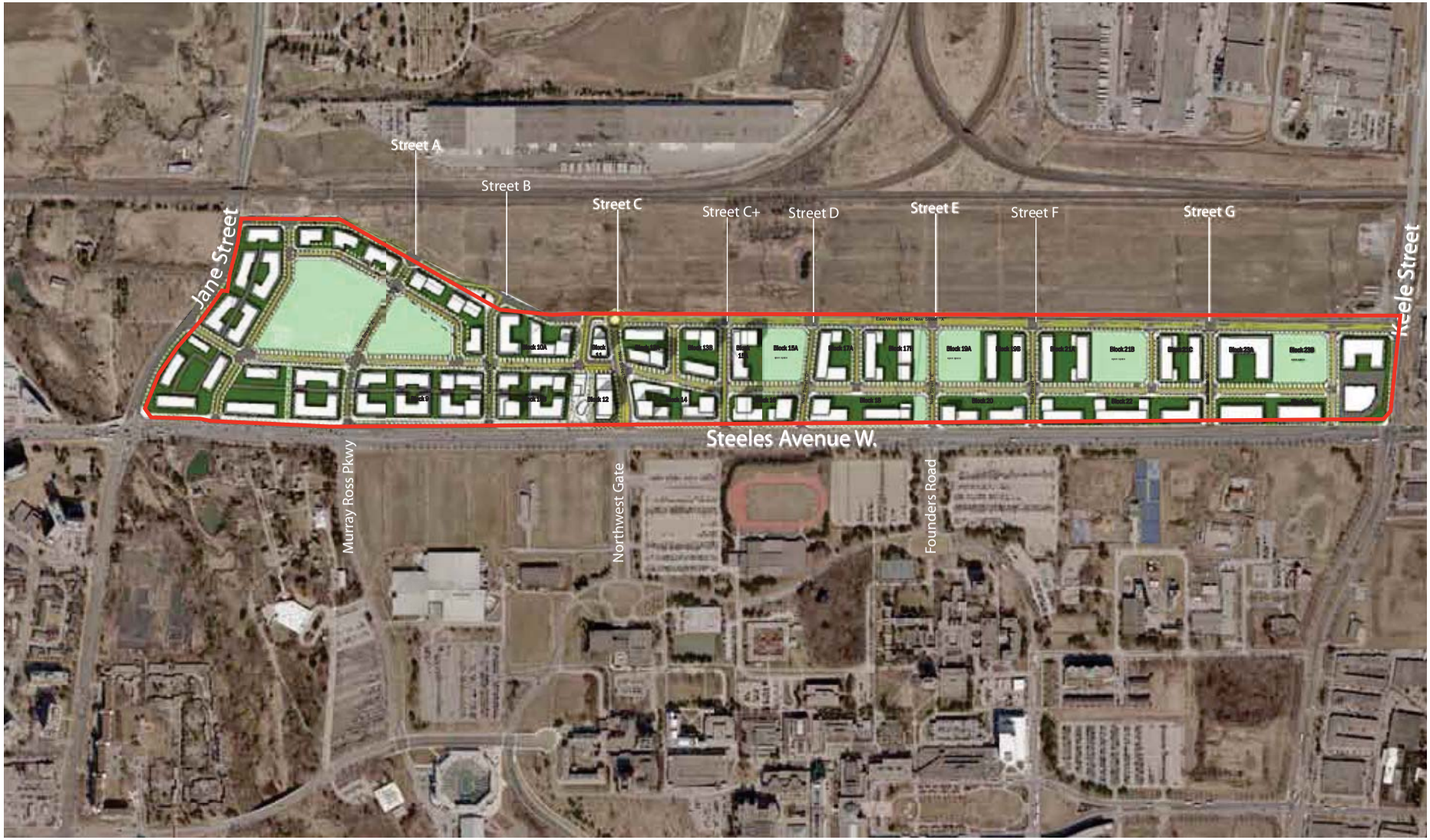
The Plan built on the three options presented in the July 2010 consultation and created a preferred "conceptual plan" for the overall full development of the lands.

This plan built-upon the existing OPA 620 framework of primary and secondary street network, allowable heights and densities, and the distribution of open spaces to imagine a full "build-out", as properties redevelop over time (25+ years)."

This option was selected as it provided the most equitable and even distribution of parks and open spaces that would act as focal points for each surrounding area, and provides more units fronting onto parks. The east-west mid-block road ("greenway") was offset to the south to create larger northern blocks that would allow for buildings oriented north-south. The blocks facing Steeles would be single-loaded and could allow for office or residential buildings. This mid-block greenway was is an essential element to the connection throughout the study area and its function would be more local than the street on the north (Street "X"), or Steeles Avenue.

Axonometric Conceptual Rendering

Development Concept



Overall Conceptual Rendering.

Development Concept

Streets

Streets are the primary public realm element in the Steeles West Urban Design & Streetscape Master Plan. Streets:

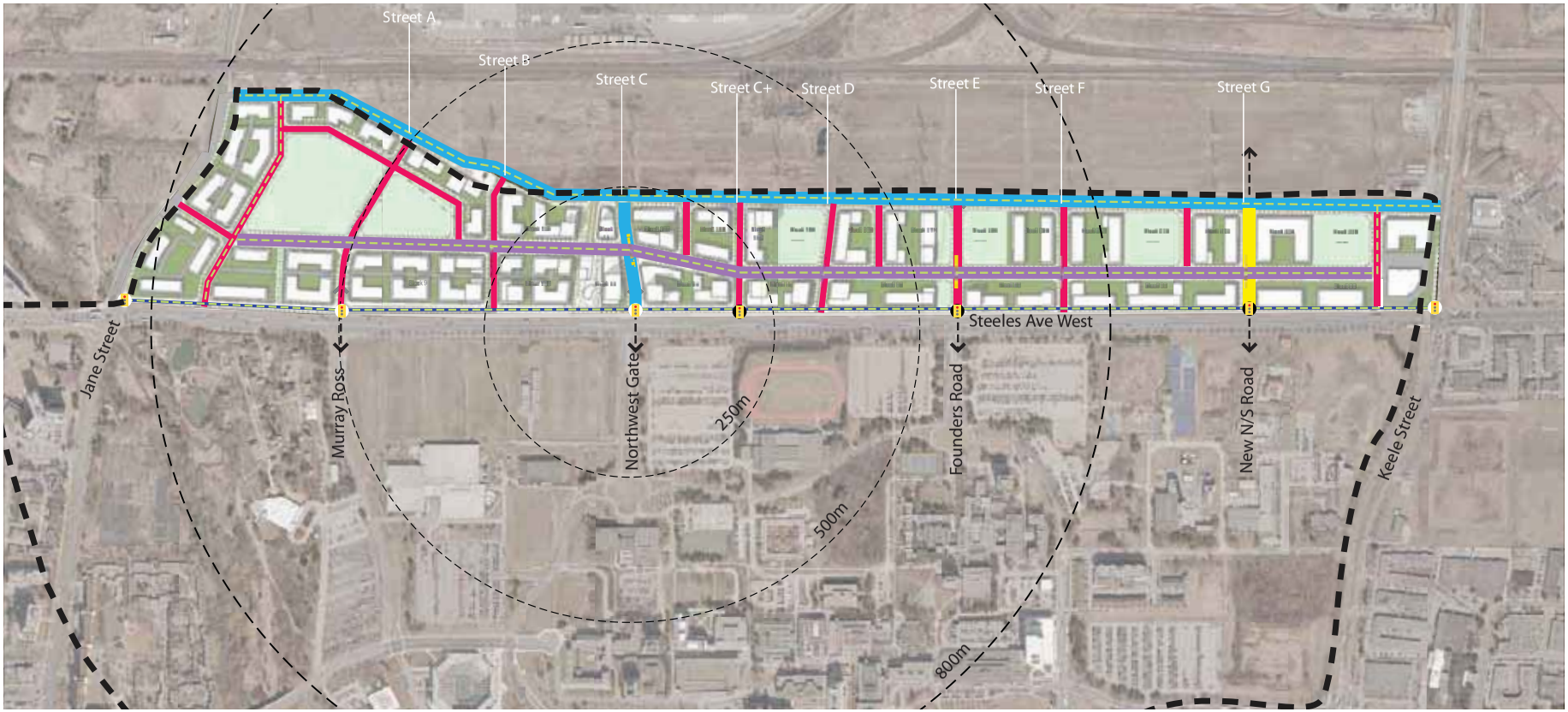
- divide up larger land holdings into blocks;
- provide connections through communities;
- provide connections to other communities;
- provide building address and access to individual developments;
- are public spaces and an important part of the public domain;
- are democratic environments;
- are green infrastructure

The existing large landholdings will be subdivided by public streets; not in a piecemeal fashion of individual roads serving inward developments, but within a larger grid which provides multiple functions and travel routes for vehicles, pedestrians and cyclists.

Streets found within OPA 620 are included within the overall concept street network, as well as a number of "local" streets that help create pedestrian-friendly block sizes.

Left: Conceptual Rendering of Street "G".

Development Concept



New blocks should be sized to create a pedestrian-friendly environment and provide dimensions that accommodate efficient underground parking layouts.

There are several specific street types that are important throughout the study area. These streets should be planned and constructed to the dimensions provided and further detailed within the conceptual master plan.

This plan also deliberately shows continuous streets that connect throughout the Study Area. In particular, the east-west midblock street is shown as a street intended, ultimately, to connect blocks from the east to the west. This "Greenway" road is an essential local connection between blocks and should prioritize pedestrian and cyclist mobility, The E-W collector road is designed to prioritize transit and vehicular movements.

Diagram

- 26.0m ROW with Transit
- 17.5m Greenway ROW
- 23.0m ROW with Transit
- 20.0m ROW no Transit
- Cycle Track
- Existing Traffic signals
- New Traffic signals
- Proposed Mobility Hub Boundary

Development Concept

Streetscape Character

Streetscape Character Areas have a distinct identities within the Steeles West study area. These areas will have common characteristics, features and functions that will help create identity. Compatible development and specific public realm design will enhance and support the identity of each Streetscape Character Area.

Retail Hub

This is the most concentrated Streetscape Character Area, centred around Street "C" and the location of the proposed Steeles West Subway Station. Street "C" also is the northward extension of Northwest Gate, a key ceremonial entrance into York University and the location of the Subway Station entrance south of Steeles Avenue.

The "Retail Hub" area will be the focus of the highest amounts of density and height, consistent with the location around the Station as prescribed in the Mobility Hub Guidelines and OPA 620. It will be the urban activity centre within the Steeles West District with local shopping, restaurants, and transit activating the streetscapes. This area will be a destination for commuters moving through the hub, but also people who live and work in the District. As a result, the highest concentration of residents and workers will be located around this street. In addition, the location of the commuter parking lot within the hydro corridor will bring a large number of commuters to and from the site, as they park and walk to the subway station.

The "Retail Hub" area will feature wider sidewalks, street-related service, commercial or public uses, encouraged to spill out into a sidewalk area, as well as main building entrances for buildings above. It will also provide for movements of pedestrians, buses, passenger vehicles, taxis, and dedicated bicycle lanes. The design of Street C should prioritize mobility based on the Metrolinx Mobility Hub Guidelines:

i) trip reduction, shortening or avoidance;
ii) walking;
iii) cycling;
iv) transit;
v) ridesharing and taxis;
vi) single-occupant vehicles.

Greenway

The east-west midblock road is otherwise known as the "Greenway" Streetscape Character area, which is the main internal connection of the entire Study Area. This neighbourhood street is intended to connect the various parks and open spaces proposed on the north side of the development blocks, and provide a linear "green" linkage throughout the district.

The design of the street incorporates street trees on both sides, as well as suitable building setbacks for landscaping. The north side will include room for a second row of trees and potential bioswales, and will directly connect and link the multiple open spaces proposed on the north side. Layby parking will also be provided on the north side where feasible.

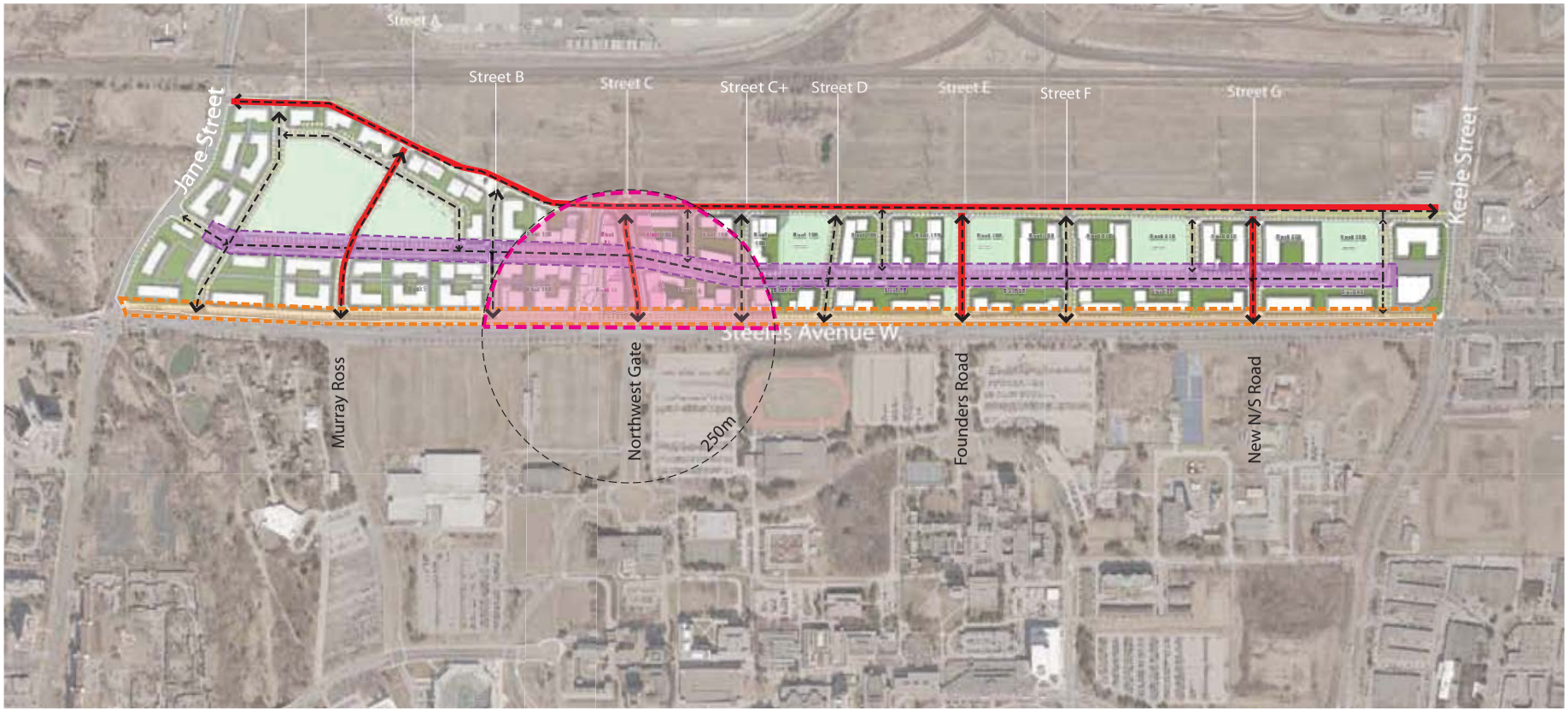
Ceremonial Edge

The "Ceremonial Edge" is the area facing Steeles Avenue. Steeles Avenue has a long, fairly straight frontage that will be framed by a number of mid-rise scaled buildings, with some taller buildings closer to the subway station at Street "C". In conjunction with the York University Secondary Plan's retention of the cultural heritage landscape feature of existing trees on the south side of Steeles Avenue, the north side will feature existing and new trees and a generous setback of buildings to continue the landscaped corridor and sensitivity to the cultural landscape of York University. A separate cycle track is proposed. Buildings will provide frontage (including entrances) on Steeles, while at-grade uses should be activated with multiple residential unit entrys/exits, and especially at key intersections for future service and retail commercial uses. As per both OPA 620 and York University Secondary Plan, buildings on both sides of Steeles are to be a minimum of 4 storeys in height.

Priority Connection

Five streets, Street "A", "C", "E" "G" and "X" are identified as "priority connections". They are arranged fairly evenly across the Study Area, and will account for the main entrances in from Steeles West, Keele and Jane Street. They also will align with connections south, across Steeles West into York University, connecting the two sides (also municipalities, Vaughan and Toronto) through signalized intersections. Three of the streets, "C", "G" and "X" will also feature transit routes.

Development Concept



Streetscape Character Diagram

- *Retail Hub*
- *Greenway*
- *Ceremonial Edge*
- *Priority Connection*

Retail

A key characteristic of the success of the Steeles West District is a consistent "streetwall", or building frontage, which draws the pedestrian along the street, provides a consistent edge to the street and maintains interest. In mixed use areas, the visual interest and comfort of pedestrians on the street and in public spaces hinges on how the buildings and their uses interface with these spaces. The character and scale of the street wall is important because it is the part of the building that is most intimately involved in shaping the image of a place and the quality of the pedestrian experience.

A high quality pedestrian experience is often associated with the provision of grade-related retail uses. Grade-related retail provides a variety of shopping activities and street animation that promotes energy at the street level. This is vital to enable workers, residents and visitors to shop for daily needs, including meals, close to where they live and work, without the need for car trips. This is opposite to the separation and spreading of single-use buildings common to suburbs that typically requires individual car trips between destinations. Including grade-related retail in key locations will concentrate retailers and create focal shopping areas within the overall study area.

There are three areas where retail is strategically identified within the overall study area, and each location factors into the creation of the "Character". All buildings in the three retail areas identified should be designed to provide for retail either immediately, or in the future. Accordingly, appropriate ground floor heights should be incorporated to protect for retail uses.

Primary Retail

"Primary" retail areas are where a mandatory provision of grade-related retail is recommended in the development of any new buildings. These areas are at major entry points into the area from Steeles, along Streets "A", "C", "E" and "G" ("Priority Connections"). The location of this ideal retail is premised on providing some retail within a 2.5 minute walking distance of almost the entire study area (250m). This will allow for convenient access for pedestrians who are living and working in the area.

The area along Street "C", which is the main cross street of the new Steeles West subway station and bus terminal(s), will have the greatest concentration of density and height, and therefore the largest number of potential users. It is anticipated as the primary initial provider of grade retail in new development, due to the activity generated around and at the subway station and bus terminals. The area at Street "G" is also anticipated as a key retail location that could be developed in the short-medium term.

The retail areas around Street "A" and "E" are expected to develop incrementally over the longer term.

Secondary & Tertiary Retail

Areas categorized as "Secondary" and "Tertiary" Retail are areas primarily facing the proposed east-west Greenway road. This Greenway is anticipated as the major interior connection for the whole study area. It will have a more local nature in vehicular, pedestrian and cyclist movements, which will lend itself to being a good secondary retail option that connects to the Primary retail.

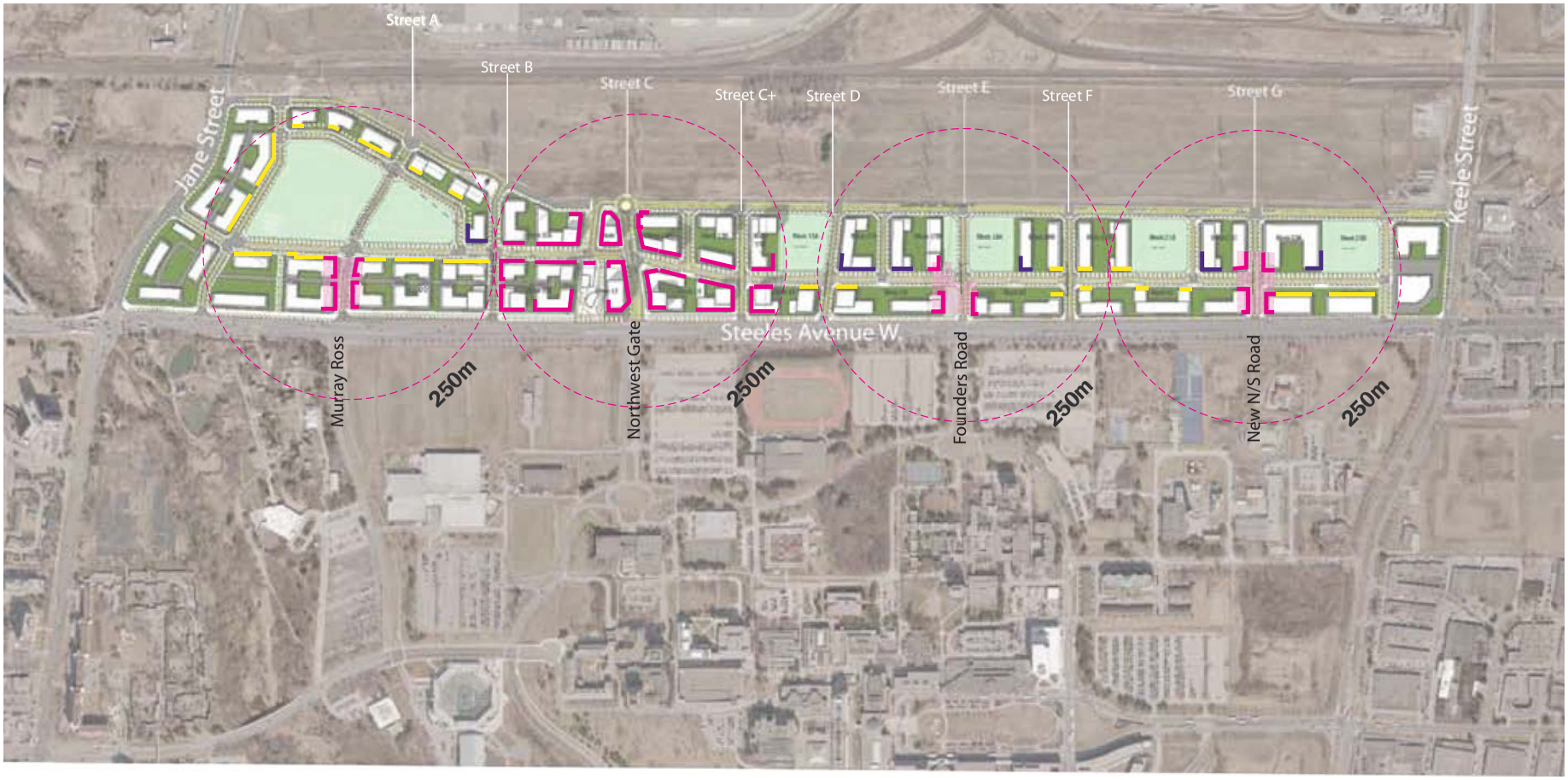
In particular, "Secondary" Retail is retail connected to "Primary" retail and that terminates adjacent to the parks within the overall plan. These locations opposite the parks will be good locations for restaurants, cafes, or retailers. It is located on the north side of the Greenway.

The "Tertiary" Retail is retail located along the south side of the Greenway that connects with the "Primary" retail areas. These areas would function well as residential or live-work units in the interim until retail is viable in these locations.

Retail fronting Steeles Avenue West

As noted, some retail is anticipated at key intersections with Steeles Avenue (on "Priority Connection Streets "A", "C", "E", and "G"). Retail will be permitted along the length of Steeles Avenue West..

Development Concept



Retail Frontage Diagram

- *Primary*
- *Secondary*
- *Tertiary*

Development Concept

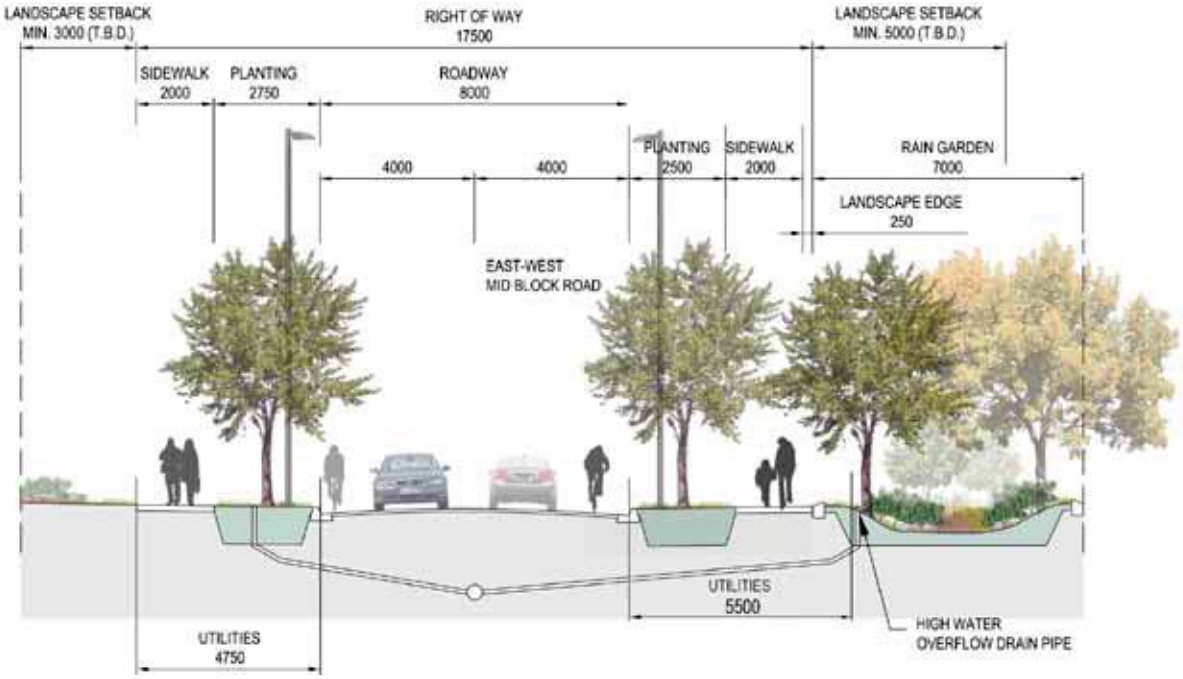
Street Type - Greenway (17.5m)

One of the most important streets to be created within the overall plan area is the east-west "greenway" which will connect through the entire study area; from east to west, in a mid-block configuration. This street is the primary internal connection between neighbourhoods in the Study Area and the central transit station. It is the primary local connection for pedestrians and cyclists across the district. The Greenway will also need to provide on-street parking to support the mobility hub pick-up and drop-off, and parks.

The Greenway has a 17.5m right-of-way ("ROW") street with an enhanced boulevard on the north and south side which will also connect the planned parks and open spaces spaced throughout the plan. Within the ROW, one travel lane will be provided in each direction. Boulevards on either side allow for utilities, trees, sidewalks and lighting. Traffic calming and enhanced public realm measures such as curb extensions and raised pedestrian crossings should be employed wherever possible. This street will also support Secondary and Tertiary Retail opporutunities.

The Greenway has been jogged at Street "C" to align with the TTC's location of the bus terminal driveway access. This has been coordinated so that this driveway will be protected for and upgradeable to allow for the continuation of Street "C" through and beyond in the future in response to the reconsideration of the configuration of surface transit. A larger intersection/pedestrian area at Street "C" and the Greenway is to be included to serve the large pedestrian volumes associated with the Mobility Hub.

See page 98 for more information.



Greenway Street,
17.5m (row width).

The expanded North boulevard shows a double row of street trees which structures greener connections throughout the overall plan.

Development Concept

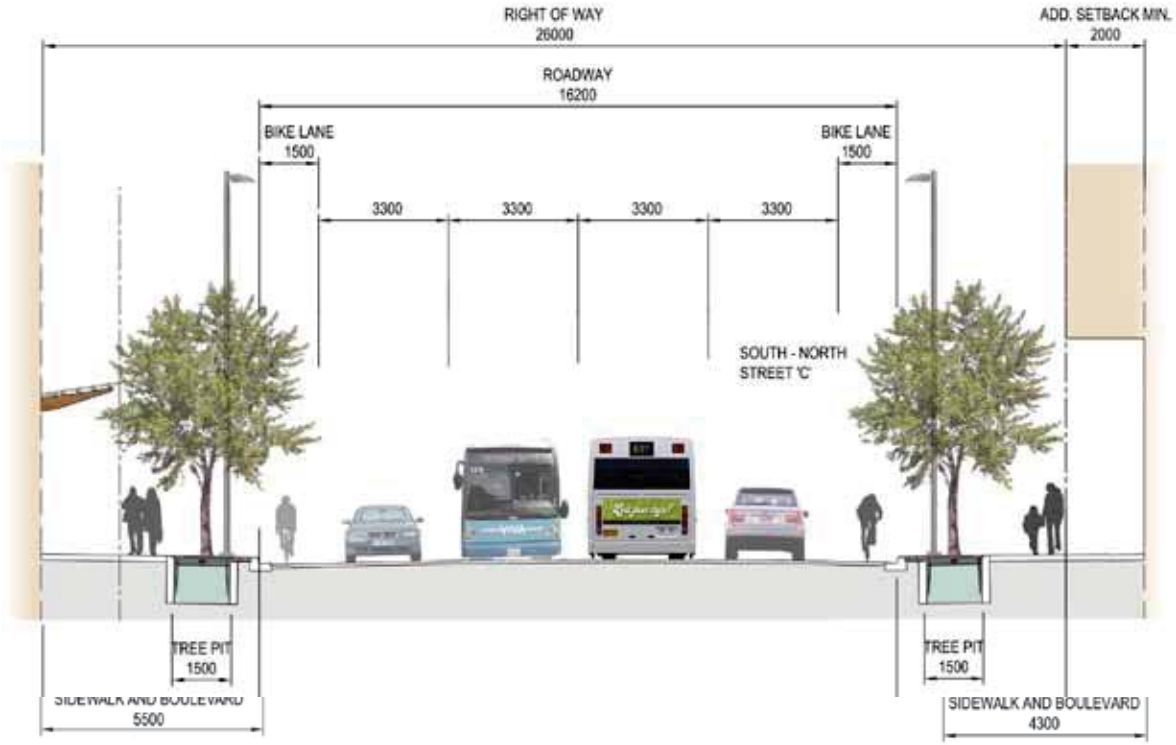
Street Type - Street "C" (26m)

Street "C", the northward extension and connection of Northwest Gate from the York University lands, will travel north-south between Steeles Avenue and the East-West Collector Road. This is one of the main "entrance" roads to the new site area, and will be the intersection of surface transit (in bus terminals both north and south of Steeles) and the new subway station, Steeles West Station. Accordingly, the built form surrounding Street "C" will be the most intense, as these lands carry the greatest height and density permissions for the area. The street will be designed as a 26.0m ROW with transit, which allows for two travel lanes each way, a dedicated bike lane, a turning lane, and a wide, enhanced pedestrian boulevard to each side.

This street will also be the focus of the main retail use for the Study Area, with the greatest amount of activity driven by the highest population density, as well as proximity to transit access (subway station and bus terminal).

In the short term, Street "C" will be the primary connection to the new subway station as well as the main traffic artery serving the planned 1,900 space commuter parking lot planned for the hydro corridor. It will also service the north bus transit terminal. This will make the initial function heavily weighted towards passenger and bus traffic, but once the adjacent streets and blocks are developed, they will provide some traffic relief.

See page 100 for further information.



Street C, North @ East-West Collector Road. (26.0m)

Flanking boulevards are critical pedestrian connections between York University, Steeles Avenue West, commuter parking lots within the hydro corridor. Built form along the street will have active frontages with retail use and setbacks for patios and display.

Development Concept

Street Type - Public Laneway

Public local and private laneway design shall conform to the City of Vaughan Design Standards, from 7.5 to 8.0m. *(Secondary Plan - 11.3.12.15).*

Street Type - Private Driveways

Private driveways will be built primarily to locally service buildings internal to blocks. All roads denoted within the Secondary Plan corridor are required to be built and maintained to a City operational standard and shall provide permanent public access for traffic (*Secondary Plan - 11.3.12.19***).**

The City may permit private driveways designed and built to City standards with public easements that convey the road to the City at no cost, any time in the future that the City deems necessary. (*Secondary Plan - 11.3.12.20***)**

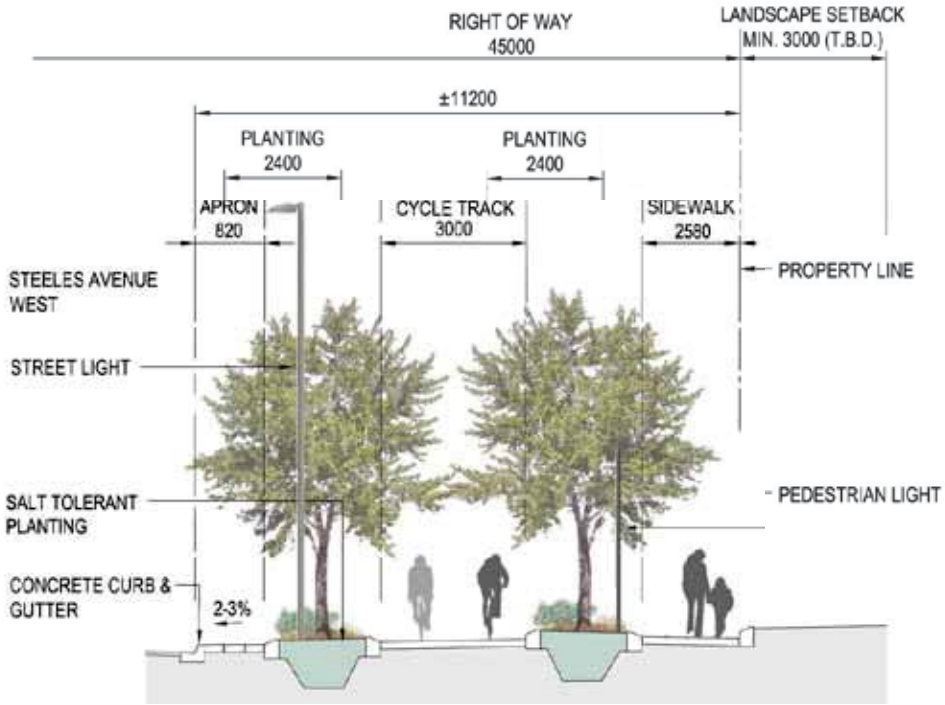
Steeles West - North Boulevard

The North boulevard of Steeles Avenue West will be characterized by a double allee of trees framing an enhanced 3.0 metre wide cycle track for cyclists, and a 2.0 metre wide sidewalk for pedestrians. While the width of the North boulevard on Steeles Avenue West varies along its length across the study area, it is anticipated that the dimensions demonstrated will be adjusted to suit local conditions.

See page 102 for further information.

Proposed North Boulevard, +/- 11.2m (width).

This boulevard features a continuous multi-use path and double allee of trees.



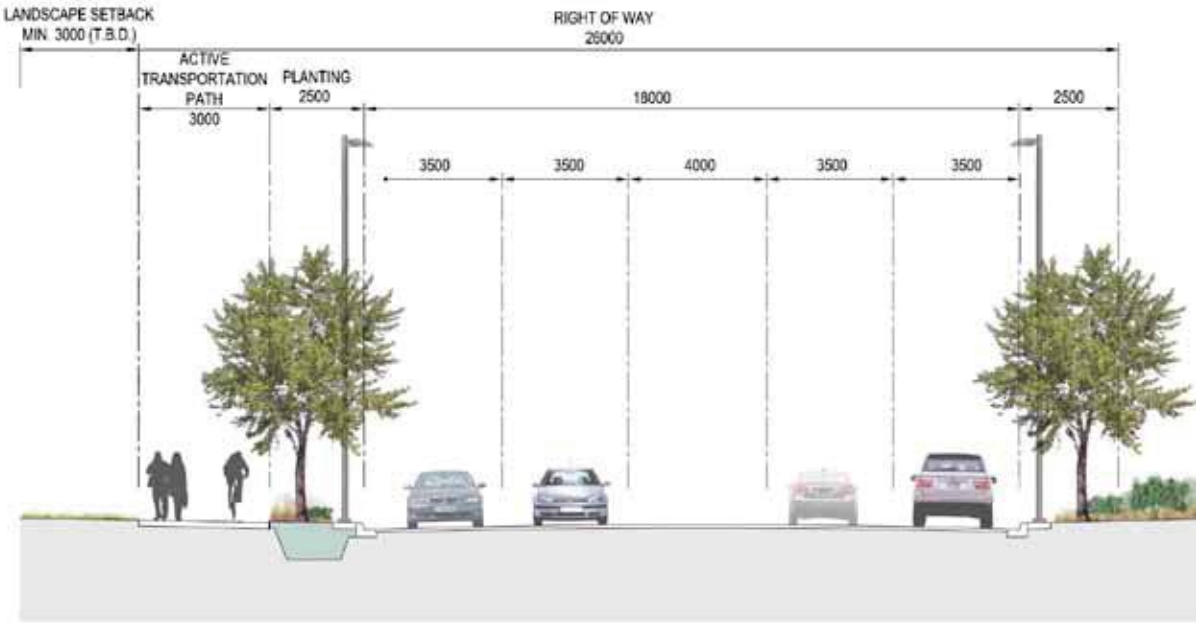
Development Concept

Street Type - Street "X"/East -West Collector (26m)

The East-west Collector road design and location is the result of an Environmental Assessment completed in 2012, which creates a 26.0m collector road on the northern edge of the study area, adjacent to the existing hydro corridor. This road features an asymmetrical cross section, with two travel lanes each direction, along with a centre turning lane with additional width which will be used by the various buses travelling to the new bus terminal located at Street "C". Street "X" will be a transit priority. The collector road is also aligned to the southern boundary of the hydro corridor. A larger boulevard will be provided on the south edge of the ROW for pedestrian sidewalks and planting. The E-W Collector Road will relieve traffic congestion from Steeles Avenue, as it will connect to Keele Street. Through detailed design, lane and boulevard widths should be optimized to include a cycling facility on the north side of Street "X". Refer to Section 5.4 "Bicycle Network" in the Steeles West Secondary Plan.

Eventually this road is proposed to connect to Jane Street and provide an alternate route between Jane Street and Keele Street.

See page 103 for further information.



East-West Collector Road, 26.0m (row width).

The South boulevard shows a boulevard with a sidewalk and planting, while the North supports space for streetlighting.

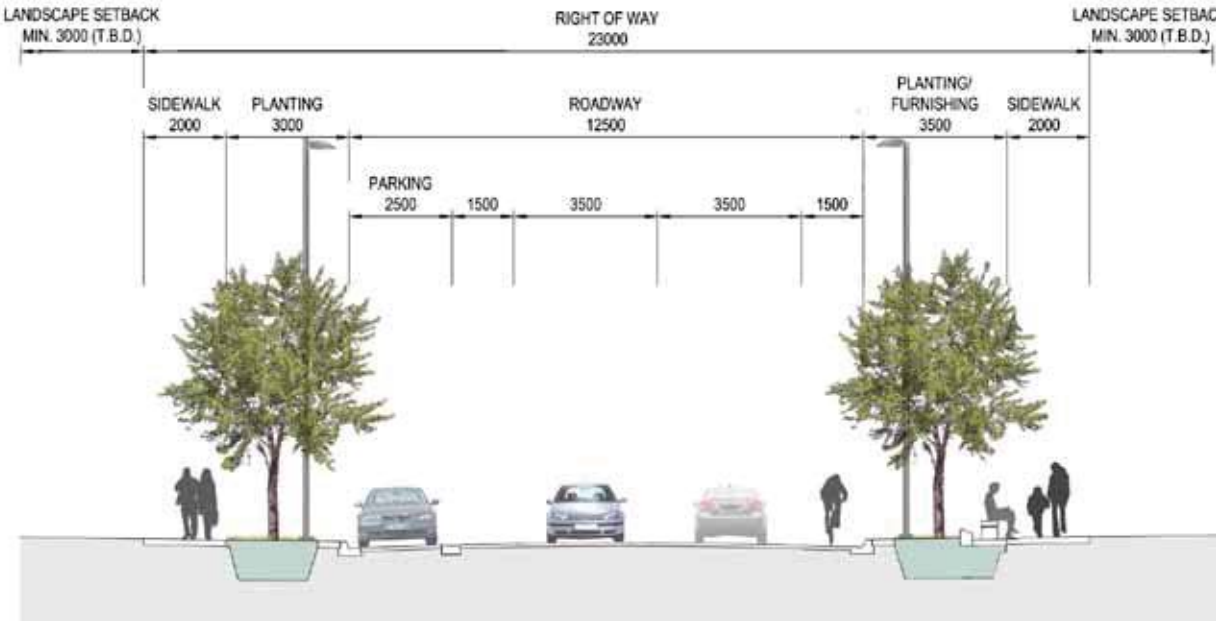
Development Concept

Street Type - Street "G" (23m)

Street "G" will have a 23.0m overall ROW width with travel lanes supportive of bus transit and dedicated bike lanes. Street "G" is the northward extension of Founders Road from the York University lands, north of Steeles Avenue. It may continue through the Hydro Corridor in the future, and also provide vehicular traffic relief from Keele Street.

Lay-by parking is to be provided, where feasible, on the west side of the street (on north block).

See page 104 for further information.



Proposed Street G,
w = 23.0m (overall width).

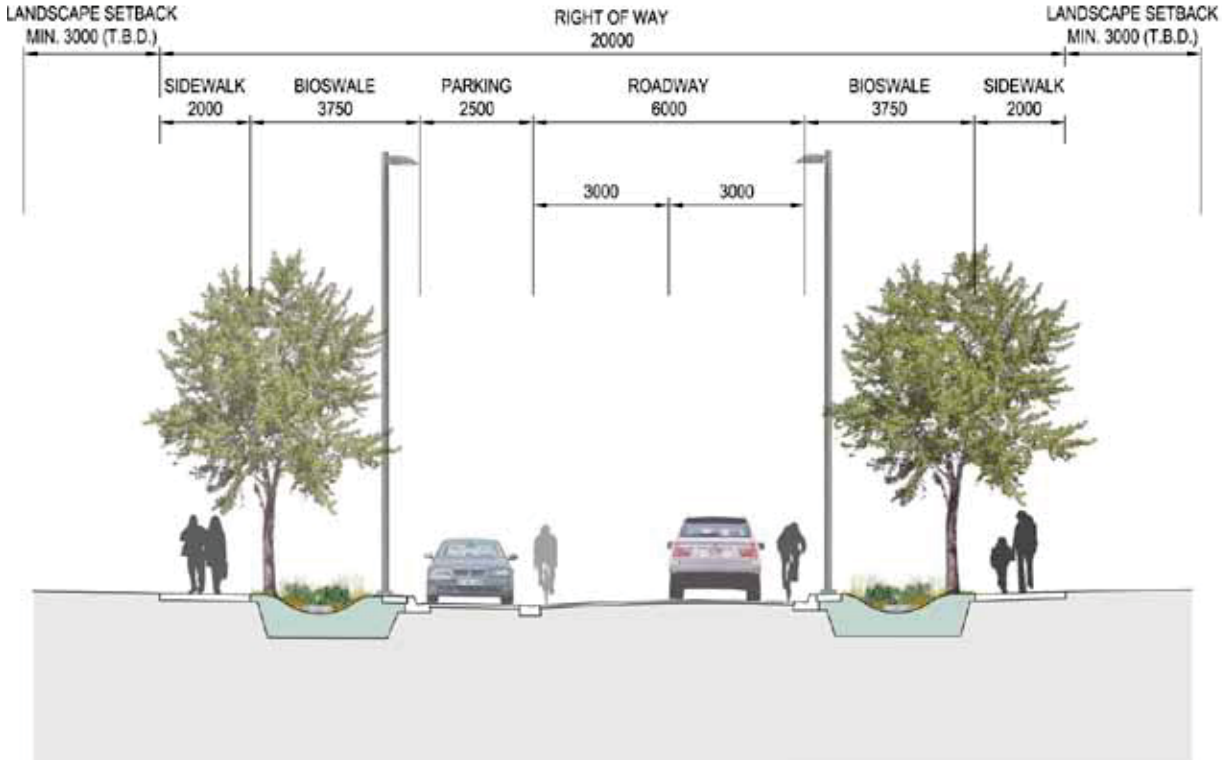
On-street, off-peak parking is provided on one side of the right-of-way.

Development Concept

Street Type -Local Streets (20m)

The majority of the remaining new streets will be classified as Local Streets, with a 20.0m ROW. This will allow for one travel lane in each direction, and either parking on one side or sharrow lane widths to provide safe cycling. Bump-outs or curb extensions are traffic calming measures. These extensions will also provide enhanced pedestrian crossings. A 5.75m boulevard on each side will be provided to support bio-swales, utilities, plantings, sidewalks and lighting. These streets will be found in the north-south direction between Steeles and the E-W Collector road.

See page 105 for further information.



Proposed Local Street, w = 20.0m (overall width).

On-street parking is provided to one side of the right-of-way.

Development Concept

Blocks

Blocks come in different sizes, but certain dimensions provide for the ability to unlock the potential for multiple building types, which is important in a mixed-use, higher density community like the Steeles West study area. Blocks that are too big, either overall, or in one dimension, create fragmented, undevelopable blocks, or blocks that rely on excessive private driveways and private streets to service buildings. Private driveways do not extend the public realm or connect parts of communities. They are typically confusing for visitors to navigate and embody the disconnection between ownership of the area. They are not naturally surveilled, since pedestrian and/or vehicular travel is missing from their structure. Blocks that are too small only allow for traditional, less intensive building types and will remain problematic for future flexibility and uses as they limit traditional building types.

For example, low density residential building types can fit within block depths up to, and less than 35 metres, while mid-rise and tower buildings typically need 40 to 50 metres or more.

Generally, the blocks have been laid out at 90 to 110m in width, which allows for two mid-rise or tower buildings with adequate separation between buildings, and sufficient width to make efficient parking garages, provide on-site amenity, and servicing.

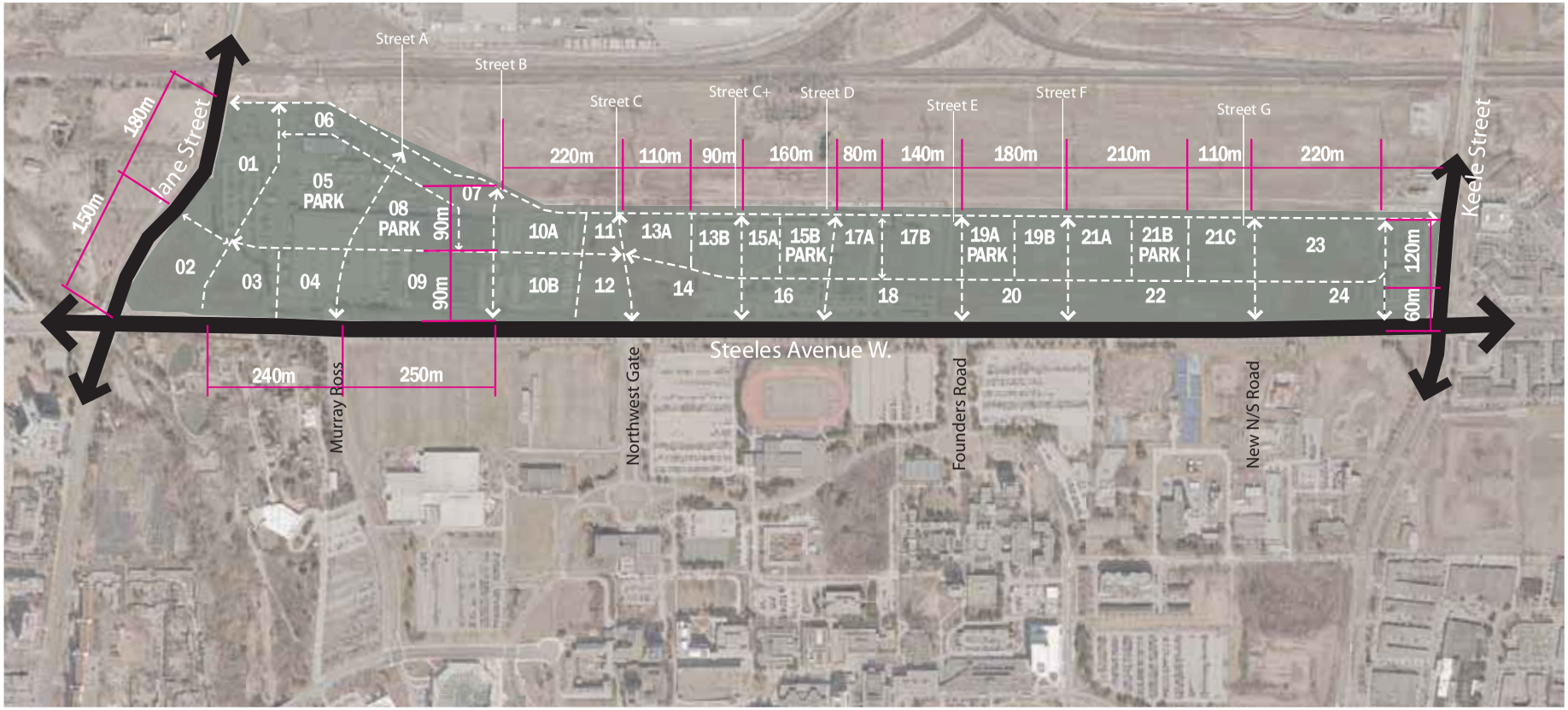
Design Implications

The geometry of the site, particularly between the hydro corridor and Steeles Avenue, provides limited options in terms of the numbers of blocks that can be created. The east-west street depicted mid-block throughout the site suggests at least two blocks one north and one south. The preferred development option utilizes this configuration. The southern blocks are suited primarily to buildings facing Steeles Avenue West (as well as on on the Greenway Street), which when paired, create significant private amenity spaces with courtyard shapes. The northern blocks are slightly deeper, and allow for north-south buildings addressing the local north-south streets and parks.

There are a number of north-south streets also depicted in OPA 620. This breaks up the blocks created by the intersections of the conceptual streets. The only streets added outside of OPA 620 are shown; three small streeets that improve connectivity and break up larger blocks in accordance with the principles in OPA 620.

The blocks have been laid out to allow for double-loaded blocks (two series of buildings), other than the blocks facing Steeles West, which has depth more suited to one building.

Development Concept



Above:
Conceptual block plan with preliminary block dimensions.

Development Concept

Built Form

Built Form is an encompassing term that collectively describes all buildings and structures and how they relate to the adjacent streets and community. Managing the ways that buildings interface with streets and open spaces is important in the creation of beautiful and high-functioning communities. Cohesive, coordinated built form can generate beautiful and successful communities, while disparate, fragmented built form often leads to less beautiful, enjoyable and ultimately less successful places to live and work.

Conceptual Built Form west from Subway Station

OPA 620 provides "built form" policies that provide a baseline for this Plan:

(4.2) Buildings are to:

- **i** define street edges, public spaces and intersections;
- **ii** face and have their main entrances onto a public street and sidewalk;
- **iii** have their main entrance facing Steeles (where the buildings are located on Steeles Avenue);
- **iv** be massed at an appropriate scale to ensure good sunlight, sky views, and wind conditions in streets, parks and open spaces, providing stepbacks as appropriate;
- **v** be sited and organized to achieve a harmonious relationship to the planned built form context through building massing and setbacks, roofline, profile and scale;
- **vi** be designed, where through-lots are provided, so that all elevations facing a street present active front elevations and fenestration;
- **vii** address the street such that a continuous building faced along the street frontage and at corners is created;
- **viii** be generally sited parallel to the public street and along the edges of parks and open spaces;
- **ix.** maximize ground floor coverage;
- **x** be sited and organized at-grade to enhance the public nature of streets, open spaces, and pedestrian routes, and so provide convenient access for pedestrians to public transit;
- **xi** have grade-oriented main entrances connected directly to the public sidewalk and, where possible, located close to on-street parking; this applies in particular to each commercial use located at grade;
- **xii** each building shall have its own lobby and entrance adjacent to the street;
- **xiii** be sited and organized so that principal windows and walls are separated to ensure adequate light, view and privacy; light view and privacy setbacks should be proposed, to regulate the design of building facing conditions; and
- **xiv** overlook all streets, parks and publicly accessible open spaces with active building faces, in order to provide "eyes on the street".

Development Concept

Building typologies

The expected building typologies (derived from the permitted uses found within OPA 620) are high density residential, prestige office employment, commercial uses in mixed use development, and public and institutional uses. These types, in combination with the permitted densities (from 1.6x to 4.0x of the lot area), are expected to generate higher-intensity multiple-storey building forms throughout the lands, including mid-rise and tower buildings.

There are no height minimums within OPA 620, except on Steeles Avenue (4 storeys or 13m).

In addition, existing and already approved industrial uses are allowed.

Streetwall and Frontages

The creation of a consistent streetwall through the coordination of the scale and position of adjacent building frontages is important to creating a consistent street "look" and "feel". Generally, when multiple buildings line up, they create a seamless and reinforced street edge, thereby defining the public environment, which creates a more comfortable pedestrian "feel", or experience.

OPA 620 currently describes specific urban design policies relating to the creation of strong streetwall and frontages through discussion of setback areas *(4.2.1 b)*, build-to-lines (*4.2.1.c*), and minimum built frontage (*4.2.1.d)*.

The Urban Design Guidelines included in this Plan demonstrate and describe how to coordinate and control these elements to achieve consistency. The conceptual design of the study area provides consistent streetwall/frontages, generally with a suitable minimum building setback (3-5m) to allow for landscaping, and appropriate distinction between the public realm (on the street) and the private function of the buildings. It will also allow for coordinated grade-related retail and building lobbies.

Development Concept

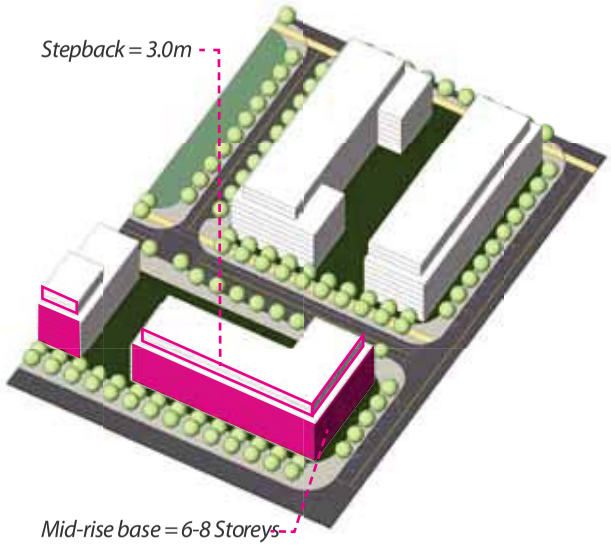
Built Form

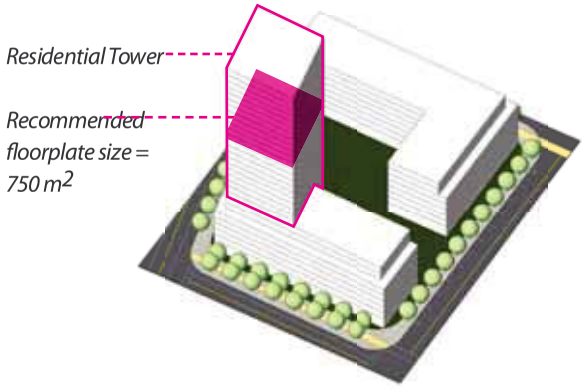
Design

The built form of the preferred concept is primarily mid-rise, where buildings are generally massed at 6-8 storeys at the streetwall , and any further building mass is setback from that base building. Any elements taller than 8 storeys are setback from the streetwall by 3 metres in an effort to break down the mass and provide distinction between the base building.

All towers (other than Blocks 11 and 12) are shown as residential point tower floorplates, at a size of 750 square metres maximum. Towers should generally be setback a minimum of 3m from mid-rise streetwalls to break up the overall heights, provide a human-scaled street wall, and to provide microclimate wind protection on the surrounding streets.

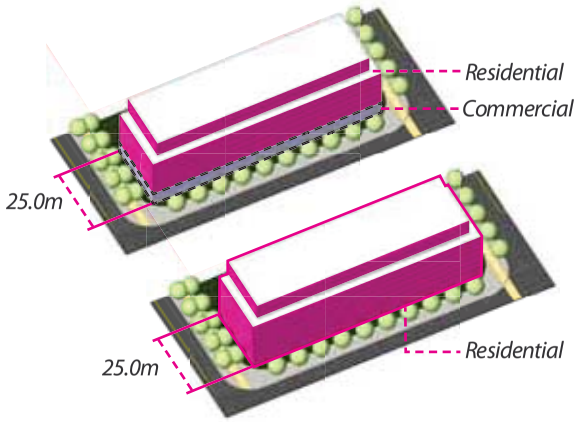
The buildings found within Blocks 23 and 24 (at the easternmost part of the land area, between Street "G" and Keele Street), are shown as typical prestige office building types (with building depths for double-loaded corridors at 33 metres wide). The existing 4-storey office building found at the intersection of Keele and Steeles, being recently built is expected to remain. These buildings were shown specifically as Prestige Office building types to maximize the density potential available under OPA 620.





Development Concept

The remaining mid-rise buildings are shown as residential typology, with building depths with double-loaded corridors at 25 metres wide. This assumption is not meant to be prescriptive, as OPA 620 permits a number of mixed uses, but demonstrates the application of the streetwall and frontages at a block scale. The street blocks are designed to accommodate a variety of building types, as their individual application will demonstrate as lands are developed over time.



Parks and Open Spaces

A variety of parks and open spaces are located conceptually within OPA 620, distributed throughout the developable area. They are located mostly one per block as defined in OPA 620 (for larger blocks), with the exception of the western block at Jane, and the western block at Street "C".

Parks and Open Space blocks are categorized as either "Neighbourhood Parks" (3), "Neighbourhood Square/Green" (5), "Urban Plaza" (1), "Potential School Site or Open Space" (1), and "Existing Stormwater Management Pond" (1).

Based on OPA 620, Parks and Neighbourhood Squares will:

> "provide central common spaces and key social gathering spaces for citizens. Neighbourhood Squares are smaller than typical neighbourhood parks, and are intended to address the passive recreation needs of residents and employees."

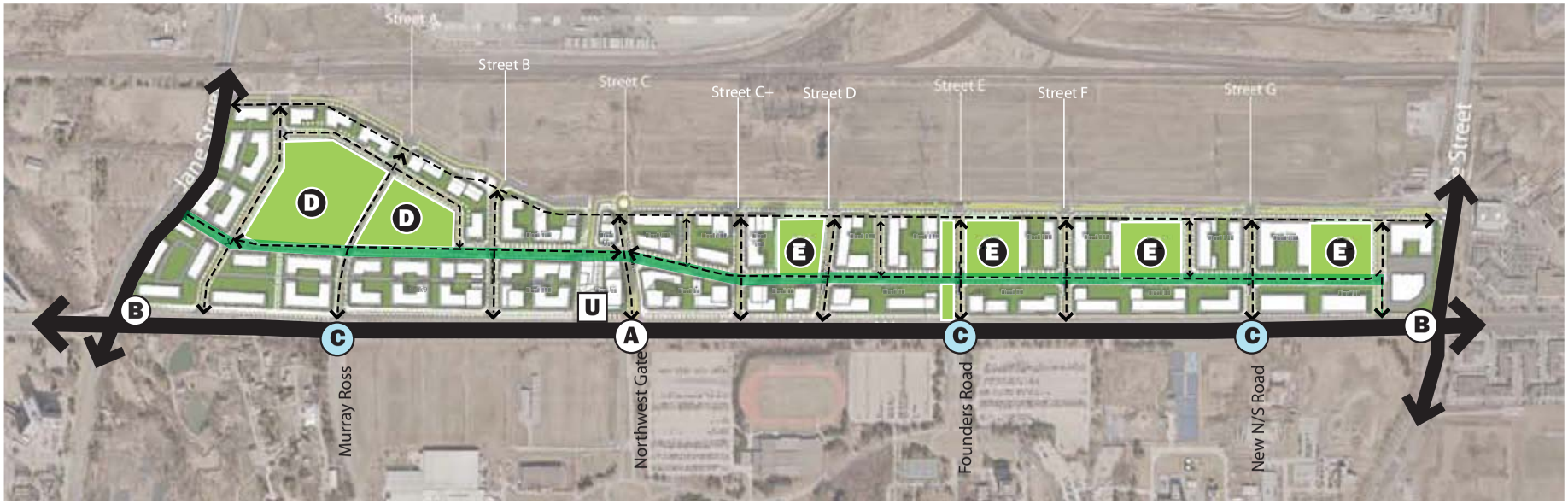
Parks and Neighbourhood Squares will be designed based on the following design guidelines:

i planned as focal points
ii a minimum of 50% of park frontage shall abut public streets
iii streetscapes abutting a park should be designed to reinforce a high-quality, formalized relationship between the open space and adjacent land uses
iv buildings with active faces should front onto the park to create built form edges to the public space
v landscape along street frontage should include high canopy street trees and be complementary on both sides of the street
vi entry/access points should be located conveniently
vii hard and soft landscape elements should articulate activity areas, circulation, entry point, seating and gathering areas
viii should be designed with a minimum of two street or lane frontages
ix neighbourhood parks should be 0.8 - 2.5 ha in size, neighbourhood squares from 0.4 - 0.8 ha. An urban square shall be provided and located in conjunction with the Steeles West subway station.

Design Implications

Working together with City of Vaughan Staff, a plan has emerged which supplies all the parks and open spaces found within OPA 620. They are provided in a variety of a shapes and sizes, and situated in the same approximate locations as per OPA 620.

Development Concept



Gateways

The most significant gateways and key sites are located at the following major intersections.

Major Gateways:

Ⓐ Northwest Gate/Street "C" & Steeles Ave. W. (Block 12 and Block 14)

Ⓑ Jane Street and Steeles Ave. W. (Block 2)
Keele Street and Steeles Ave. W (Block 24)

These three locations are significant in that most means of surface traffic will pass these main intersections, arriving by personal vehicle or surface transit. Those arriving via subway will emerge at Gateway "A".

Minor Gateways:

Ⓒ Street "A" and Steeles Ave. W. (Block 4 and 9)
Street "E" and Steeles Ave. W. (Block 18 and 20)
Street "G" and Steeles Ave. W. (Block 22 and 24)

More detail on Gateways - Page 129 and York University Secondary Plan - Gateways.

Urban Square U

The Urban Square is being created as part of the Steeles West subway station redevelopment. It features an iconic station entrance (designed by ALSOP Architects), with a large square in front that provides visibility and address onto Steeles Avenue West. the Square will be 0.4 - 0.8ha in size. *(Secondary Plan - 11.3.1.12)*

Park blocks

Ⓓ Block 5 and 8
Ⓔ Block 15A, 19A, 21B and 23B

The park blocks are meant to act as large attractors of residents and visitors in acting as focal points for the community. They will provide large and convenient respites from the significant density and larger buildings that will surround them. Parks are located to provided orientation and larger common amenity areas.

The block labelled "D" is conceptually planned as a potential school site (OPA 620). Their integration and design as a school will be reflected at the appropriate trigger point (approximately 10,000 residents).

Development Concept

Phasing: Initial, Interim and Continuing

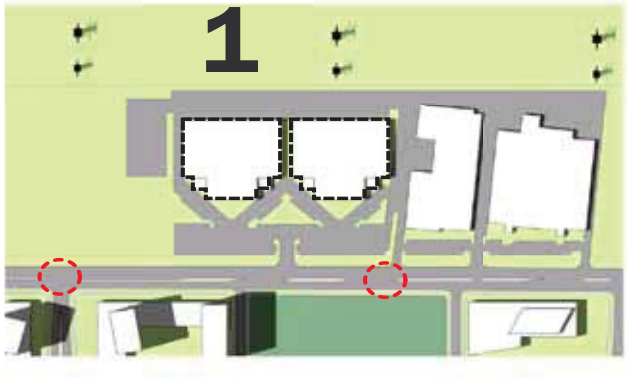
The full build-out of the entire land area is expected to require several decades. As a result, the lands will develop in parts, as individual landowners construct new buildings or applications for developments are filed and received.

One expected short and medium term holdout is the UPS land parcel. UPS owns the largest parcel within the planned area, and has recently built an addition to the distribution centre, doubling the warehousing capabilities on-site. It appears that UPS considered it advantageous to maintain the facility in its current form, due to its proximity and accessibility to the GTA and the recent facility investments, and intends to remain at this current location. The intent of the Master Plan is not to force landowners to move or redevelop. But in the event that UPS does want to redevelop, sell or subdivide the property, the Master Plan concept provides the framework to evaluate eventual applications.

The remaining OPA 620 lands can be developed in accordance with the Master Plan development concept. It is recognized that these lands may also remain as-is, with existing buildings and site plan configurations for the near term.

Phasing is an important concept for the infill or redevelopment of existing sites. Market demand and financing may restrict the ability to provide too many buildings in short spans of time. Accordingly, portions of an existing site can be infilled incrementally to support overall site redevelopment.

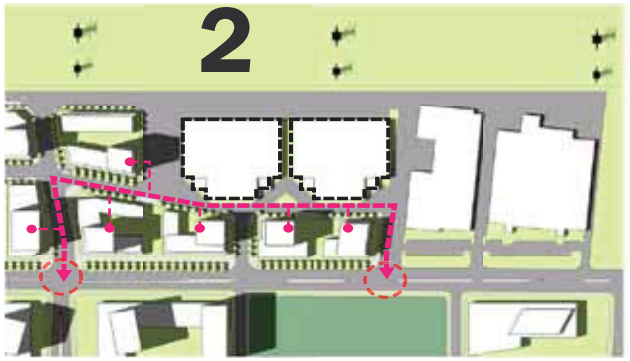
Attached are a series of images which demonstrate how a potential phased redevelopment of a sample of the study area lands might occur.



Existing Site (Vacant/Light Industrial)

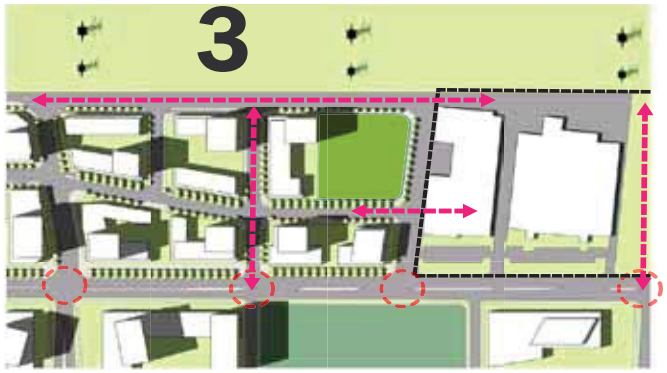
Identify and utilize (where possible) existing intersections.

Development Concept



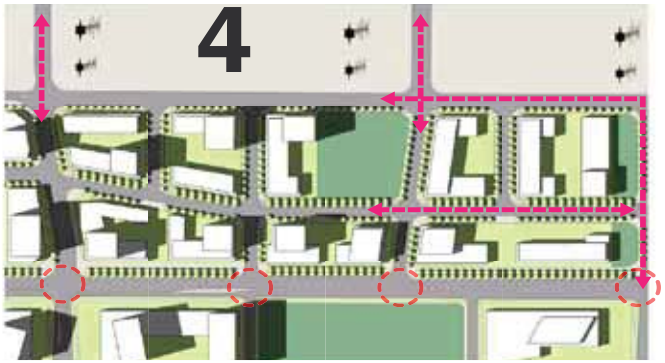
Initial Phase

Develop the street edges with new buildings. Establish internal through roads within the existing lot. Parking demand can be maintained with a combination of remaining existing surface and new underground or structured parking spaces.



Interim Phase

Internal infill of buildings and allocation of parks and open spaces should be structured in anticipation of connections between new and existing streets.



Continuing Phase

Extend street connections to existing and new neighbourhoods where possible. Re-configure new blocks to coincide with the development concept.

Urban Design Guidelines

- Streets & Blocks
- Built Form
- Tall Buildings
- Public Realm
- Site Plan
- Sustainability
- Lighting

The following guidelines have been created to illustrate the types of built form control recommended to achieve the objectives of OPA 620 and the development concept. Guidelines, while not statutory planning instruments, remain useful tools in the creation and delivery of new communities and the infill of existing ones. They demonstrate the desired outcome and recommendations for the layout, look and function for Steeles West as development occurs. They provide the City, the public and the development community with a clear understanding of the benchmarks for review of design proposals.

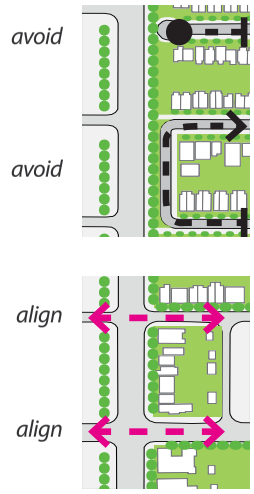


Figure S.1

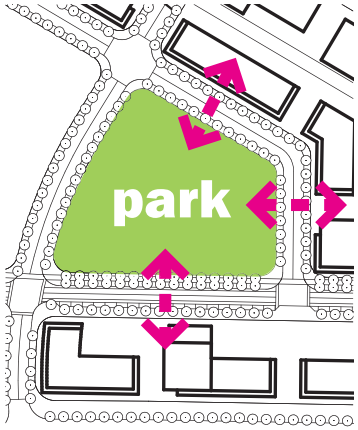


Figure S.3

S.1 - Align Streets

Align local streets on either side of major arterials to allow for future crossing points and connectivity between neighbourhoods. Avoid dead-end streets and cul-de-sacs, which isolate parts of the neigbourhood and fragment pedestrian movement.

S.2 - Define Open Spaces

Define parks and public open space with public streets. This stimulates public access and promotes security within the park. Buildings with primary frontage also help define public open spaces and ground level active uses.

S.3 - Park Edges

Parks should have a minimum of two street frontages and 50% frontage abutting public streets. Avoid creating parks adjacent to the rear yards of existing or proposed development.

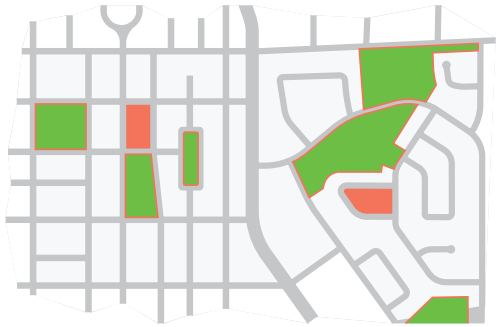
S.4 - Create a Fine Grained Grid

Develop a fine-grain street grid, which offers choices for pedestrians, cyclists, and vehicular movements, and creates more intersections for passive traffic control. "Fine grain" means that a variety of ways of travel are available due to the number of street intersections and smaller blocks make a community more walkable.

S.5 - Street Types

Design streets and street right-of-way (ROW) to reflect the desired adjacent land use, including the intensity of uses, heights, and provision of modal options. Utilize street types to support a variety of functions in the development area.

Figure S.2 & S.4



Develop a fine grain street grid.

Avoid the "loops and lollipops." (11.3.12.26)

Urban Design Guidelines

Streets and Blocks

S.6 - Parking Near Activity

Where feasible, allocate lay-by and street parking on-street near activity generators such as community facilities, large open spaces, parks, grade-related retail or on important streets.

S.7 - Tree and Soil Volume

Provide sufficient soil volumes in street ROW design for street trees to properly mature (minimum of 16 cubic metres). Street trees require large soil volumes to survive and grow. Provide permeable tree bases to allow for rainwater and infiltration to nourish tree growth. Where insufficient volumes can be provided, provide soil cells or other devices to ensure adequate soil volumes required to reach maturity.

S.8 - Co-locate Utilities

Coordinate, locate and consolidate utilities and services in underground tunnels, duct banks or other technologies wherever possible. *(11.3.11.18, 11.3.13.15)*

S.9 - Green Streets

Create "green streets" along right-of-ways that connect major parks and on-street commercial spaces (Mid-block road, Steeles Avenue). "Green streets" are streets with enhanced plantings and tree canopy, stormwater management, and that create beautiful and comfortable walking environments.

Figure S.9 & S.10

On-street cycling is provided in a shared-use lane.

Figure S.8

Figure S.7 & S.9

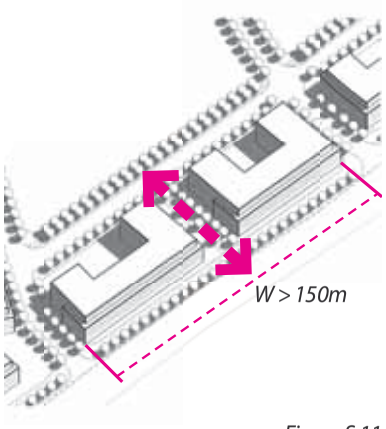


Figure S.11

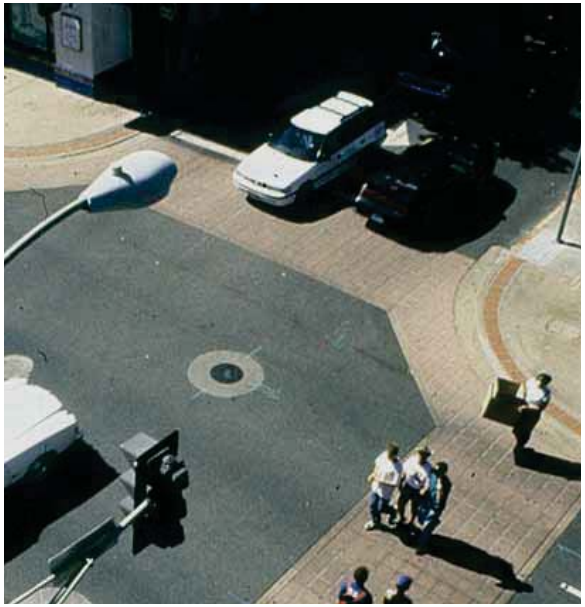


Figure S.12

S.11 - Mid-Block Connection

Provide a high quality mid-block pedestrian connection, street, or lane for blocks over 150m in length. Mid-block connections should be wide enough to allow for safe cyclist and pedestrian passage, well lit and be naturally surveilled from adjacent buildings *(11.3.11.14 - 11.3.11.16)*.

S.12 - Emphasize Crossings

Emphasize important pedestrian street crossing areas through a combination of tactile warnings, changes in materials, contrasting colours and appropriate vehicle signals (crosswalks, etc) to provide greater visibility to motorists, cyclists and encourage pedestrian use.

S.13 - Shorten Pedestrian Crossing Distances

Curb extensions or "bump-outs" are effective in calming traffic and shorten the roadway crossing distance for pedestrians. Curb extensions should be used on appropriate streets for crosswalks and intersections wherever possible.

S.14 - Access to Transit

Create clear, direct and enjoyable pedestrian and cycling routes for access to transit facilities.

Urban Design Guidelines

BF.1 - Intensify near Transit

Locate higher levels of intensity and height surrounding the new Steeles West Station. These highly transit-supportive development sites are located within a five minute walk from the subway station (a 5 minute walk corresponds to a 500 metre radius).

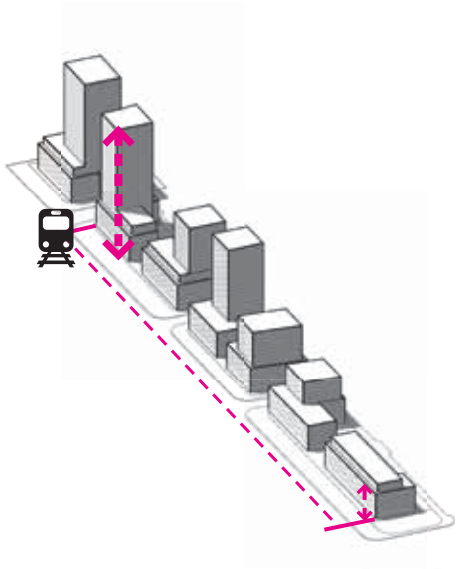


Figure BF.1

BF.2 - Mid-Rise Street Scale

"Mid-rise" scale creates a comfortable pedestrian environment in an urban neighbourhood, and allows for sunlight access on the opposite sidewalk. Blocks primarily within the 250m radius to the subway station can have heights in excess of this scale *(11.3.10.8 f)*

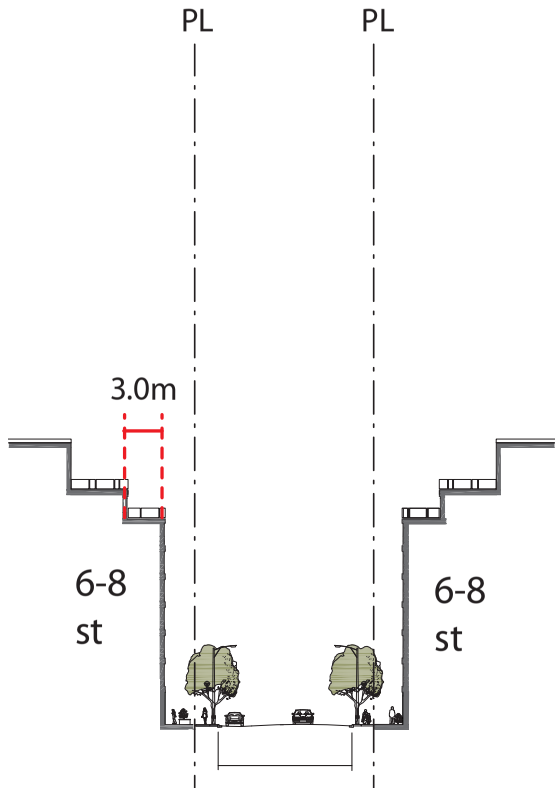


Figure BF.2

BF.3 - Build-To Lines

Establish build-to requirements for buildings facing important streets in applicable and site specific zoning by-laws. Build-to lines help create a cohesive streetscape *(11.3.10.10)*..

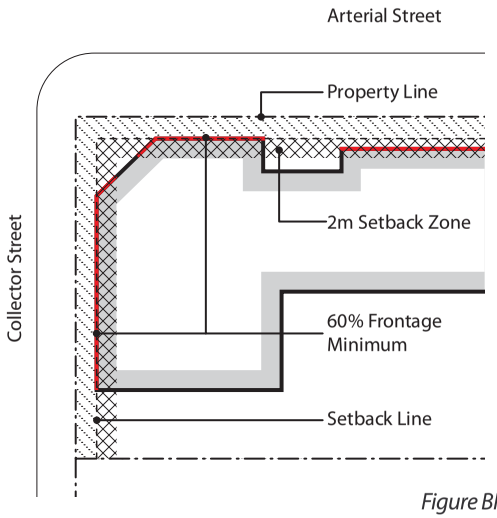


Figure BF.3

Figure BF.4 & BF.5

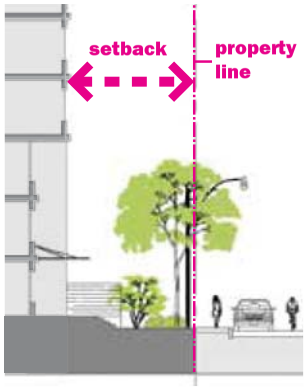


Figure BF.6

BF.4 - Design Variety

Consider a variety of architectural designs and facades to create variety in built form within developments that occupy large or multiple blocks. Continuous repetitive architectural styles, building design and materials produce sterile and ostrasizing streetscapes. Design diversity is encouraged.

BF.5 - Building Finish

Strong, pedestrian friendly streetscapes require building facades to be designed with durable materials, and aesthetic qualities appropriate to the character and scale of the public realm.

BF.6 - Defining Private Space

Define the threshold between private residential uses at grade and the public realm through measures such as screening, setbacks, planting, and elevation changes.

BF.7 - Pedestrian Shelter

Incorporate weather protection along Primary Retail sidewalks to protect from sun, wind and rain. Buildings with components such as canopies, or awnings provide relief, cover and definition of space while complementing at-grade use.

BF.8 - Create Street Rhythm

Design building facades and streetscape elements to create a consistent rhythm with visual interest and vitality. Rhythm can be achieved through changes of materials, fenestration, building articulation and spacing of streetscape elements (ie. trees, planters, etc).

Figure BF.4 -BF.8

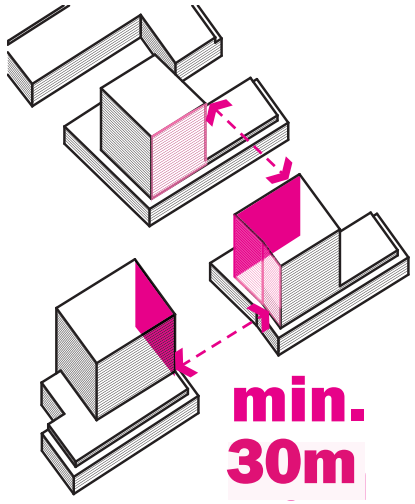
Urban Design Guidelines

Tall Buildings

TB.1 - Minimum Tower Spacing

Tall buildings (taller than 8 storeys) should be spaced sufficiently far apart to prevent overcrowding of skyviews and skylines, as well as reduce wind tunnelling and create comfortable microclimates. The separation distance between towers should be a minimum of 30m. A similar separation should be considered where towers are located on adjacent blocks and/or across streets.

Figure TB.1



TB.2 - Maximum Floorplate

Design tall residential buildings above any podium with a maximum gross floor area of approximately 750 m² (exclusive of balconies) to minimize shadow impacts on surrounding streets, sidewalks neighbouring buildings and private amenities.

TB.3 - Street Edges

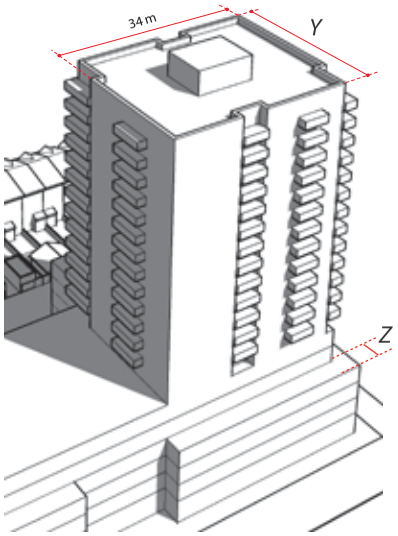
In residential developments, set back "tall buildings" from the podium street edge for at least 2/3 of the frontage. Locate the podium parallel to street edges.

TB.4 - Minimize Shadows

Minimize shadows cast by tall buildings on public open spaces/parks and private yards. Applications involving tall buildings should include shadow studies and analysis by the applicant, particularly where there is the potential for appreciable shadow impacts on public parks and private open spaces (including rooftop gardens) .

X

Figure TB.2 & TB.3



X x Y = 750m², max tower floorplate.

Z = Setback of tower from podium & street edge

Figure TB.2

Urban Design Guidelines

Public Realm

PR.1 - Protect Microclimate

New development can affect microclimate and have an impact on human comfort in the public realm. To ensure favourable shade and/or wind conditions, locate tall buildings a minimum of 30m apart, and avoid tall slab buildings. Similarly, provide weather protection along Primary and Secondary Retail streets. For cool months, maximize sun exposure by careful siting of architectural and site elements, and by providing weather protection from wind, rain and snow. For warm months, ensure opportunities for shade.

PR.2 - Connect Open Spaces

Connect new open spaces to create a network of parks, pathways, and gathering spaces to promote active transport (walk, cycle, etc) and healthy living.

PR.3 - Open Space Hierarchy

Create types and sizes of parks and open spaces to support a diversity of district, neighbourhood, and local activities that contribute to place-making and a legible public realm.

PR.4 - Focal Points

Create neighbourhood focal points with open and public spaces. Each open space can take on different functions or thematic qualities to provide identity for neighbouring inhabitants and workers.

PR.5 - Open Space Variety

Design new open spaces to provide a variety of options for residents and visitors: passive and active space; planted and paved areas; pathways and seating.

PR.6 - Space Flexibility

Provide flexible indoor and outdoor community spaces that can be programmed at hours in the day and evening.

PR.7 - Open & Urban

Create year-round pedestrian friendly urban environments: square, plaza, courtyard, promenades. These open spaces complement vibrant social spaces like recreation and cultural facilities, schools, commercial-retail areas and transit hubs.

Figures PR.2-7

Urban Design Guidelines

Figure PR.8

Figure PR.8 & PR.9

PR.8 - Park Views

Maximize the opportunity for views from buildings adjacent to parks and open spaces. Large windows, balconies, terraces or amenity areas provide a point of visual connection with the exterior.

PR.9 - School Open Space

Locate schools adjacent to public parks to encourage the shared use of open space and potential reduction in overall site area needed for school sites.

PR.10 - Park Edge Enhancements

Provide for enhanced planting, wider sidewalks, and bicycle lanes along streets that connect to and surround major parks and open spaces. This emphasizes the relationship of the park to the surrounding neighbourhood.

PR.11- Mid-Block Security

Maximize the opportunity for views from buildings adjacent to mid-block connections. Pedestrian safety and comfort can be enhanced with visibility, passive surveillance, lighting, access and direct interaction with large windows, balconies, terraces and amenity areas.

Figures PR.11

PR.13 - Consistent Street Treatment

Provide a consistent, solid, stable and durable pedestrian environment with continuous street edge treatments. Coordinate the streetscape with neighbouring properties.

PR.14 - Sidewalk Design

Sidewalks should be designed to be barrier-free. This should include intersections with curbs, connections to building entrances, and across private driveways. Entrances to retail should be flush with grade and the public sidewalk to allow for accessible entrance/exit.

PR.15 - Wide Sidewalks

Provide sidewalk widths wider than 2.0 metres on main streets, grade-related commercial areas and in higher density areas, which allows for greater volumes of pedestrian movement, street retail sales and a more comfortable pedestrian experience.

PR.16 - Double-Sided Sidewalks

Wherever possible, sidewalks should be on both sides of the street to facilitate convenient and safe pedestrian movement.

PR.17 - On-street cycling

All shared-use (vehicular & cycling) lanes will be designated with roadway markings and have a minimum width of 3.5 metres, whereas wider is encouraged. On-street cycling allows for connections between local and regional cycling network and to the mobility hub itself. Streets "C" and "G" have a dedicated cycling lane.

Figures PR.13-16

Figure PR.18

Figure PR.19 & PR.20

PR.18 - Off-street cycling

Off-street bicycle pathways will be a minimum of 3.0 metres in width. This minimum width allows for two-way movement along the network. Pathways should be accessible and finished with a solid, stable and smooth material. Visibility of the finished pathway should be provided with markings and/or colour contrast to minimize conflicts with pedestrians.

PR.19 - Street Furniture

Street furnishings should be co-ordinated to avoid conflict with building at-grade use, sidewalks, planting, utilities, lanes, driveways and crosswalks. Furnishings should be co-located with pedestrian and cyclist acitivities to contribute to a consistent and coherent public realm.

PR.20 - Bike Parking

Bike Parking (including short-term for visitors and commuters) should be considered both as streets and blocks are constructed. Convenient access to safe and visible bicycle parking will encourage visitors and commuters to utilize bicycles to get around.

PR.21 - Transit

Transit stops should include amenites like shelters (weather protection) and be co-ordinated with associated street furnishings (waste, recycling, wayfinding etc.), and the overall streetscape to minimize conflicts with vehicles, planting, lighting etc. Stops should be directly accessible to sidewalks.

PR.22 - Wayfinding

Incorporate wayfinding and visual cues into street and building design to direct pedestrian, bicycle, and vehicular movement. The ease to which a resident or visitor can move through a space will enhance their understanding and enjoyment of that space.

PR.23 - Tree/Utility Coordination

Coordinate street planting with utility location to minimize disruption and ensure adequate space and growing conditions for trees.

PR.24 - Public Art

Public art is a valuable public element to be considered for the Steeles West District. Art reinforces the urban design goals of the public realm and outlines consideration of site conditions, built form opportunities and context. Public art selections will help define a unique character for the evolving district, and can be integrated into the architecture, landscape and open space design of a place early in the design process. Public Art should consider the following:

Artistic Excellence - High aesthetic standards, with attention to design, materials, construction and location.
Image - Create important visual interest through focal points, meeting places or identifiers that enhance the area's image.
Authentic Sense of Place - Recognize local cultural significance or create new identity
Informative - Create interest and "clues" for navigation and to welcome visitors into a new area.
Timely Consideration - Art should be considered early on in site planning stages to integrate with the site.

A separate Public Art Plan should describe how this is implemented; in the interim, the above will function as criteria to base public art applications on. A full maintenance programme should be established during the commissioning.

This category in particular should be accessed during a site plan application, but also can be considered in rezonings.

Figure SP.1

Figure SP.2 & SP.3

SP.1 - Uniform Street Edge

Coordinate building setbacks with adjacent properties to help create a uniform street edge. "Build to" lines can be incorporated to ensure the desired proportion of the street frontage is created with building(s). Variety and articulation can still be incorporated into buildings to create interest and identity *(11.3.10.5)***.**

SP.2 - Entrances at Street

Locate functional primary building entrance(s) along street frontages to encourage security and public activity at street level. The number of entrances and spacing should be co-ordinated with the streetscape *(11.3.10.5 k)***.**

SP.3 - Corner Frontages

Design corner lot buildings with entries and articulation on both streets to maximize views and maintain an animated street edge *(11.3.10.15)***.**

SP.4 - Ground Floor Residential

Create entrances to ground floor residential units by providing setbacks, landscape, changes in grade, articulation or structures. Provide a threshold of semi-private space between an entrance and a street/sidewalk to allow for privacy and safety.

SP.5 - Ground Floor Height

Design multi-unit, multi-storey buildings on collector and arterial streets with a ground level floor-to-ceiling height to accommodate a mix of uses, including grade-related retail (where appropriate). A minimum height of 4.5m to the underside of ceiling is recommended.

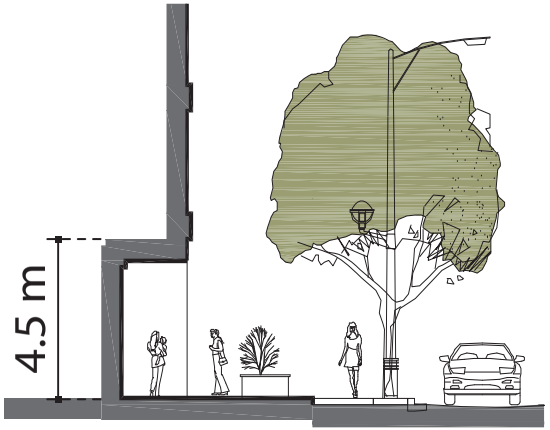


Figure SP.5

Figure SP.4, & SP.6

Figure SP.1, SP.2 & SP.5

SP.6- Private Open Spaces

Provide visibility to any private open space in order to increase the surveillance of the open space and improve views (CPTED). Private open spaces should be connected to public streets and parks, and eventually the Black Creek Ravine System *(11.3.8.15).* **Some neighbouring private open spaces have sensitivity to height** *(11.3.10.7).*

SP.7 - Barrier Free Access

Incorporate barrier-free access into the site plan design. Refer to the Accessibility for Ontarians with Disabilities Act for details and regulations.

SP.8 - Enclose Refuse and Loading

Provide loading, garbage, and recycling areas within multi-unit residential and mixed use buildings.

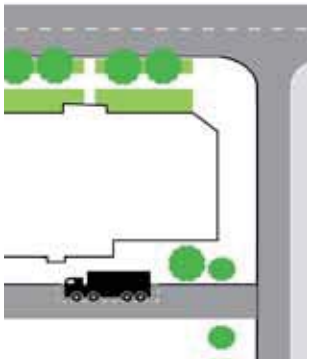
SP.9 - Sight Triangles and Driveway Radii

Driveway radii should be minimized and coordinated with site organization and built form to provide appropriate sight triangles.

Note: Refer to Steeles West Secondary Plan for more site plan policies.

Figures SP.9 & SP.10

Loading and Parking at the rear, away from primary street frontage.



Loading and Parking lane or driveway leading away from primary street frontage.

SP.9 - Loading Access

Wherever possible, locate servicing/ loading access from secondary streets, laneways or driveways *(11.3.11.17 r)*.

SP.10 - Surface Parking - Rear

Where surface parking is permitted, locate lots to the rear of buildings where possible to maintain consistent street frontage. Where not possible, locate to the side of street-facing buildings. Any surface parking lot design should provide a ratio of 1 tree to for every five parking spaces (1:5) *(11.3.11.17)*.

SP.11 - Screening from Side Streets

Screen parking and loading from any streets using planting, landscaping, decorative walls, and/or fencing *(11.3.11.17 i)*

Figure SP.11

Urban Design Guidelines

Figures SP.12-13

SP.12 - Threshold for Structured Parking

Provide all parking for buildings 4 storeys or taller in structured garages, preferably below grade. Some convenience/ accessible parking spaces may be considered at-grade. Ramps and entrances should be consolidated where possible to minimize sidewalk disruption and necessity for driveways *(11.13.11.17)*.

SP13 - Wrap Parking Structures

Above-grade parking structures should be wrapped or faced with primary facades facing primary or secondary streets at-grade. This ensures the animation of adjacent street frontages.

SP14 - Shared Parking

Reduce the total amount of parking provided by adopting shared parking practices in mixed-use areas. Combine parking requirements for different uses based on the intensities for each use at different times of the day. Consider street parking for visitor parking provisions *(11.3.12.56-57)*.

SP15 - Parking Under Driveways

Parking may be provided under private driveways where allowed), but should not be a deterrent for them to be publicly accessible or not built to public standards.

SP16- On-Street Parking

Maximize on-street parking opportunities. Encourage on-street parking on main streets and secondary streets wherever possible to supplement visitor parking requirements for developments or public facilities, including those found in parks. Allow for on-street parking on private lands to be counted towards parkland dedication *(11.3.12.56-57)*.

Figure SP.15

SP.17 - Signage & Bylaws

All residential and commercial signage within the study area is subject to an application and approval with the City of Vaughan's existing sign bylaws. A comprehensive sign plan may be submitted for review, and/or undertaken within an application for Site Plan Approval *(11.13.11.19)*.

SP.18 - Signage Coordination

Residential and commercial signage should be co-ordinated to be complementary with buildings, streetscape and landscape, while avoiding conflict with building at-grade use, sidewalks, planting, utilities, lanes, driveways and crosswalks. Where possible, signage can contribute to a consistent and coherent public realm, by integration with exterior architectural building components and landscape features.

SP.19 - Signage Design

Signage should be high quality design with minimal visual clutter; and complement the building(s) in terms of materials, scale and consistency in design. Pylon signs and back-lit box signs are prohibited (as per OPA 620). Lighting for signage should be top-lit.

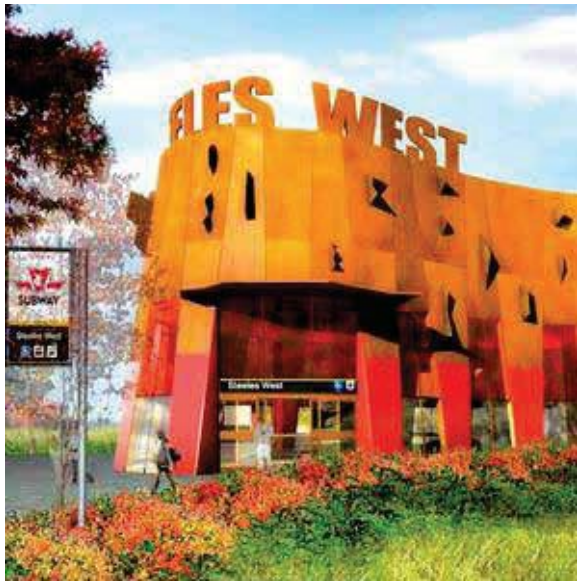


Figure SP.16

Figures SP.16

Urban Design Guidelines

Figures SS.1-3

SS.1 - Sustainability as a Feature

Develop environmentally sustainable measures such as energy conservation and storm water management into block and public realm design. Their creative incorporation can provide amenity for residents and neighbours *(11.3.13)*.

SS.2 - Mitigate Heat Islands

Local street sidewalks, surface parking areas and urban hardscapes should mitigate the heat island effect by minimizing the extent of paved surfaces and a co-ordinated integration of light coloured and/or porous paving materials, shading from large canopy trees and canopied structures.

SS.3 - Stormwater Management

The increase in stormwater run-off resulting from new development of the lands shall be controlled effectively by combining low impact development (L.I.D.) with standard stormwater management practices. L.I.D. designs shall encourage infiltration, evapotranspiration and water reuse, including such techniques as bio-retention areas and bio-swales. The Black Creek Valley System should be protected through good practices *(11.3.13.8-14)*.

SS.4 - Landscape Irrigation

Create landscapes that require little to no potable water for irrigation. Strategies include using drought-tolerant and resilient plant selections, using recycled water for irrigation and high efficiency irrigation technology (rainwater harvesting, greywater reclamation, drip-line systems) *(11.3.13.4)*.

SS.5 - Community Gardens

Consider opportunities for urban agriculture, community gardens and pocket parks between buildings and spaces. These can strengthen the local identity and community, and provide options for gardening for multi-unit residents.

Figures SS.1-3

Figure SS.8

Figure SS.9

SS.6 Light Pollution

Lighting levels should be co-ordinated and reduced to mitigate the effects of light pollution, trespass and energy efficiency while balancing the requirements for safety and visibility. Light standards should be shielded from illuminating the night sky. Consider all light sources when developing a lighting plan *(11.3.11.20-21)*.

SS.7 Green Energy

Renewable energy is encouraged to be produced on-site and incorporated into building and streetscape elements (roofs, street lights, transit shelters, parkland). Photovoltaic and ground source heating-cooling strategies should be considered and integrated into building and site design at an early stage of project development.

SS.8 Sensitive Flora & Fauna

Sensitive migratory birds and other fauna should be considered within the overall design of sites, parkland and structures to mitigate potential future conflicts and potentially provide wildlife habitat. Development should consider the Migratory Birds Convention Act (MBCA) in order to protect and consider areas for species to co-exist post-development.

SS.9 - Green Standards

New buildings and developments should strive to exceed or meet local, national and international environmental standards. “Integrated Design” is encouraged (water, energy and waste systems).

SS.10 - Building Practices

Developments should consider and incorporate renewable, local, recycled and/or sustainably harvested materials.

SS.11 - Green Roofs

Green (planted) or high-albedo roofs are strongly encouraged to reduce the heat island effect.

Urban Design Guidelines

The York University Astronomical Observatory is located south of the study area, but is impacted by the availability of a "dark sky" to effectively maintain their research. Light pollution from emerging development poses a real threat to their current facilities. In addition, impacts of lighting on Black Creek Pioneer Village should be minimized *(11.3.11.21)*

Figure L.1 - York University Astronomical Observatory

L.1 - Street Lighting

Local streetlights and commuter parking lots shall be designed to maintain dark sky lighting to minimize the ecological impact of artificial lighting and achieve desired light levels, uniformity and light spill control in accordance with dark-sky requirements by directing light downward and inward and maintain zero cut-off light level distribution around observatory locations. Light designs should comply with International Dark-Sky Association (IDA) standards.

L.2 - Building and Site Lighting

Lighting for site plans shall be designed to be directed downward and inward and maintain zero cut-off light level distribution at the property line.

L.3 - Efficient Lighting

Technological advancements in lights (ie. LED) allow for receptacles and bulbs to utilize significantly less energy and can last longer while still producing ample light levels for visibility and safety.

L.4 - Pedestrian-Scale Lighting

Areas of high activity ("priority connections/primary retail areas/ greenway street) should generally incorporate pedestrian-scale lighting as per City Standards.

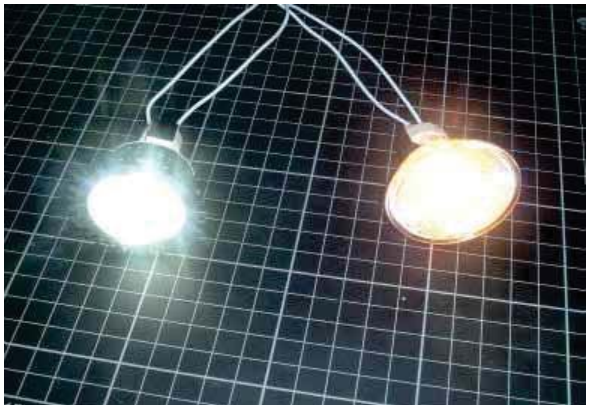


Figure L.3

Streetscape Plan

Streetscape Plan

- Community Context
- General Framework
- Character of Street Network
- Street Hierarchy
- Street Typologies & Design
- Green Infrastructure
- Streetscape and Open Space Details

Streets are essential elements of the overall framework of the study area. Streets structure the distribution of land, inherently defining the nature of the urban fabric. They are also connective devices for the community and adjacent neighbourhoods. Streets also give address and access to the parcelized development blocks. However, it is important also to recognize that streets play a critical role in defining the public realm. They give identity and character to a community and are seen as important "democratic" spaces in the city, which should be viewed as safe environments during all hours of the day and throughout the year.

OPA 620 established the framework of the overall street network. The Streetscape Plan builds on this framework and includes a more detailed street system with a hierarchy that supports both public and private sector interests. It is also important to note that the streetscape plan for the Steeles West District outlines sustainable measures and will be an example of implementing "Green Infrastructure" in the City of Vaughan.

Community Context

York University

As its most immediate and largest neighbour, York University plays a vital role in the development of the study area. The general urban fabric of the university extends roads and blocks to its northern edge. Despite the clear physical linkage with the University, there are also important socio-economic issues which will influence the future development of the Study Area. Clearly the Study Area will be related to York University as a key commercial and residential partner. It is vital to understand that a unique mix of users (residents, students, academics, service workers, etc.) will attract much more enthusiastic cycling and pedestrian activity, compared to most other parts of Vaughan. Transit users will also contribute a mixed mobility culture, thereby reducing the influence of the automobile throughout this new community. The urban design and streetscape measures used within the Study Area must recognize this reality in order to meet the needs of these primary users.

It is also important to recognize the sensitivity of the Steeles West community to the existing operations at York University. One notable measure is the pursuit of "dark skies" and the reduction of light pollution to help ensure the continual work of the observatory on campus.

Employment Lands & Highway 407/Hydro Corridor

The Study Area is unique in that it is bounded by land uses that are in tension with the residential and commercial focus proposed by OPA 620. The employment lands to the east and west, and the Highway 407/hydro corridor to the north, provide an unusual context for a high density, mixed-use community. It is for this reason that emphasis needs to be placed upon making the Study Area a "complete" community. Its isolation from other residential areas in Vaughan and Toronto means that adequate open space, commercial/retail and opportunities for institutional uses need to be planned for the sustained development of this high density, mixed-use community.

Black Creek

Black Creek is the most pronounced natural heritage feature to the Steeles West community, and is a major tributary to the Humber River watershed, managed by the TRCA. Similar to other watersheds in urban areas, both Black Creek and the Humber River are under continual stresses brought on by stormwater runoff, pollution, erosion and engineered constraints from past city building methods. It is for this reason that the Steeles West community strives to reduce its adverse impacts and lessen strain on the watershed, hoping to build a more sustainable example of urbanization than before.

Black Creek Pioneer Village

Black Creek Pioneer Village offers a significant cultural and natural heritage reference for the Steeles West community. With close proximity to the Spadina Subway Extension, Steeles West will offer a gateway to the visitors coming to Black Creek Pioneer Village. At the same time the village can provide a landmark and notable heritage influence to the built environment of Steeles West.

Mobility Hub

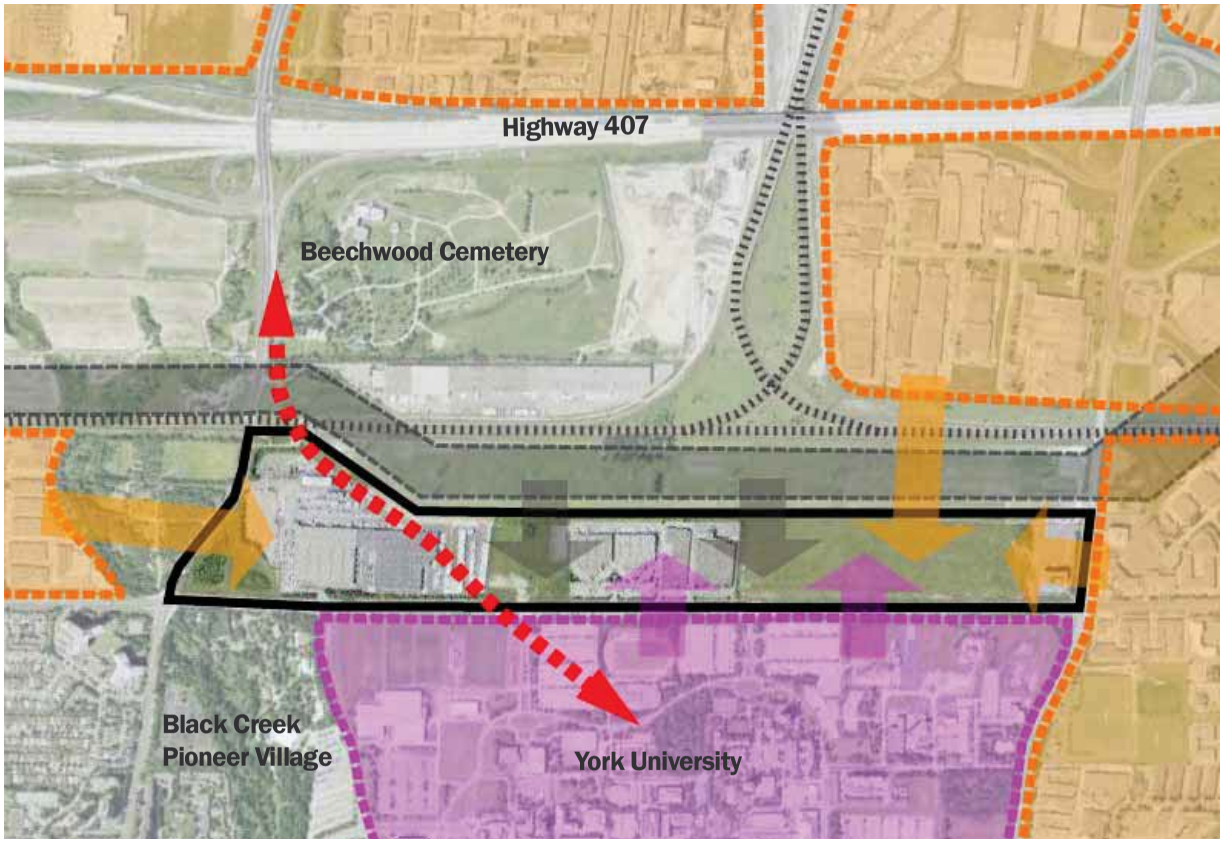
As demands for public transportation continue to grow regionally, so, too, will the need for Steeles West to integrate the various modes into a seamless multi-modal hub. As part of the Province's Growth Plan, and Metrolinx's "Big Move", the Steeles West community will be the home of a York University-Steeles West Mobility Hub, outfitted with a new TTC subway station. This subway station is part of an expansion of the Yonge-University-Spadina Line, connecting Downsview Station to the future Vaughan Metropolitan Centre. Although in the City of Vaughan, the Steeles West

Streetscape Plan

community directly borders the City of Toronto and will, therefore, be an important transit hub for not just the TTC but also York Region Transit, GO Transit and possibly other regional transit agencies. With such a transit focus Steeles West will also be an important place for pedestrians, cyclists and vehicular users and function as a transition point among commuters. The streetscape will have an ever important role in helping to accommodate safe and efficient access to all these services.

Separated yet Connected

Despite being physically isolated, the Study Area will be connected to neighbourhoods both north and south by the Spadina Subway Extension. The mobility hub at the centre of the Study Area will serve the needs of a much wider community and allow for Steeles West to be connected to a broader urban area. It is for this reason that the Study Area must address varying expectations of a more complex urban condition. The area must integrate the needs of residents, commuting workers, visitors, shoppers, students, and transit users.



Context Diagram

- *Study Boundary*
- *York University*
- *Employment Lands*
- *Hydro Corridor*
- *Future Spadina Subway Extension*
- *Rail Corridor*

Streetscape Plan

General Framework

Streets found within OPA 620 are included within the overall concept street network, as well as a number of additional "local" streets that help divide up the landholdings into suitable block areas. New blocks should be sized to provide generous dimensions that accommodate efficient building and parking garage layouts (and/or underground parking structures). Internal circulation of these blocks should be designed to work with the street network by providing appropriate access for drop-off, pick-up, parking and loading. Consolidation of these entries are encouraged to reduce the number of breaks in the streetscape.

Several streetscape types have been identified throughout the Study Area. The Steeles West Urban Design & Streetscape Plan will clearly outline this hierarchy.

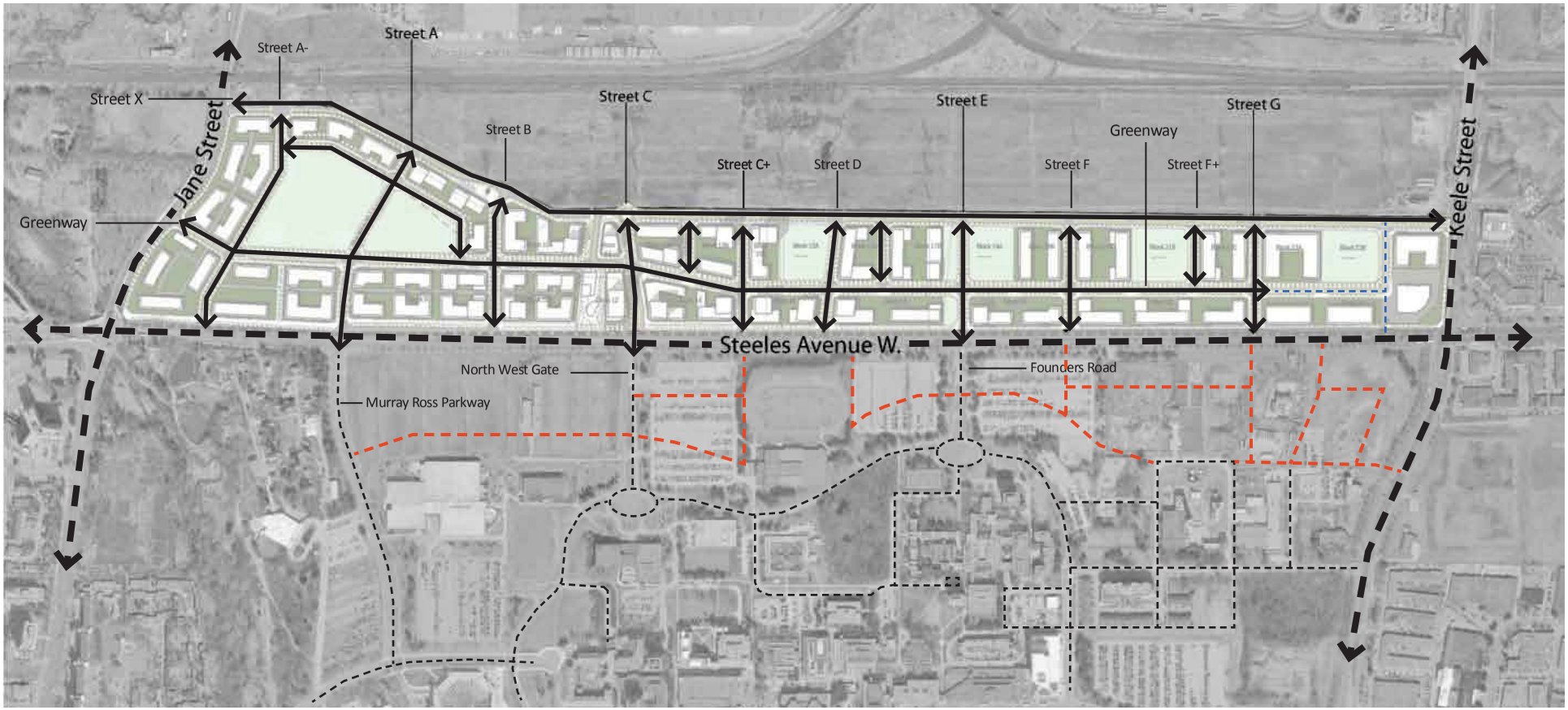
North Promenade (Vaughan, ON)


Loading Bay (York University, Toronto, ON)


Steeles Ave view of York University


On-street Parking (York University, Toronto, ON)

Streetscape Plan



Street Framework

- *Bounding Arterial Roads*
- *Internal Street Network*
- *Internal Roads to Milestones Properties*
- *Existing Road Network through York University*
- *Proposed Road Network expansion through York University*

NOTE: Proposed Road Network is provided by recommended plan as outlined in York University Secondary Plan Update and Transportation Master Plan (October 2009)

Overall Character of Street Network

In defining the character of the street network it is important to understand a multitude of user expectations. It is also critical to note that the Steeles West community will need to balance differing spatial scale and levels of activity, with some areas being more neighbourhood-oriented and other areas bustling with urban activity. The street network will play a vital role in defining these spaces and how they are perceived.

Queens Quay (West 8 Competition, Toronto, ON)

Exchange of the Multi-Modal System

The Steeles West District is envisioned as a sustainable urban community with an emphasis on diverse mobility opportunities. A significant portion of OPA 620 is recognized as a "Mobility Hub" by Metrolinx. With the advancement of the Spadina Subway Extension the study area anticipates a variety of modes, which will facilitate a more holistic transportation system. Historically, this has resulted in conflict between automobile users, cyclists, incoming transit systems, pedestrians and supporting facilities. Through the Streetscape Plan, Steeles West will have appropriate spatial requirements which meet the needs of each transportation user and ensure that provisions are made for comfortable exchanges between each mode, thereby avoiding conflicts.

Within the 2011 Metrolinx Mobility Hub Guidelines, the York University – Steeles West Station will be designated as a "Unique Destination", a typology within the urban context. As part of a transportation focal point it is recognized that this mobility hub will be centred upon the distinctive nature of York University which is anticipated to be a "large trip generator". As a unique destination, a wide variety of transportation needs will need to be met through the design of the overall streetscape, thereby further reinforcing the advancement of a multi-modal streetscape throughout the Steeles West District.

Safe Streetscapes

Just like any other space in the city, streetscapes have a responsibility to contribute to a safe environment. The City of Vaughan has actively incorporated Crime Prevention through Environmental Design (CPTED) principles into their planning process for reviewing development applications; however, it is important to note that many of these same principles need to be applied to streetscapes and the exchange between the public and private realm. Carefully planning for continual views along streetscape corridors can help to improve natural surveillance. This can be achieved through defining the right type of street furnishings, planting and pedestrian scale lighting (particularly in places of high pedestrian activity), as well as avoiding rear-lotting against public streets. In limiting access points into development parcels, we can also ensure that a clear exchange exists between the public and private realms and can help to define a system of natural access control upon private property. This measure can also help in reducing breaks in the streetscape. Maintaining a quality environment is also important in giving residents and commercial owners a sense of ownership of their community.

Streetscape Plan

Apart from personal safety and security the overall streetscape designs for Steeles West will also need to offer safe functional use on a day to day basis. As a result streetscape details should include durable site furnishings, low maintenance street tree and plant selections, and "non-trip" paving solutions. In order to further reinforce "safe streets", barrier–free design should be supported through the public and private realms. The entire pedestrian network must also be designed to be accessible. As being a focus of multi-modal movement, streetscapes need to take into account a safe exchange between users including pedestrians, cyclists, automobiles and modes of public transit. Such measures can help to promote streetscapes as comfortable and safe environments at all times of the day, which will be of particular importance to Steeles West residents and users.

St. George Street (Toronto, ON)

A Part of the Larger Public Realm System

The street network is a vital component of the public realm experience. In order to achieve this, a fundamental understanding of the role streets play in the community must be established. Streets are more than functional pieces of infrastructure; they are also places of social and cultural importance. They are seen as essential components to successful retail and commerce in the urban environment. They are places of movement as well as places of social interaction which give rise to a sense of place. Outdoor patios, wide sidewalks, large pedestrian queuing pads, site furnishings and seating walls can all help to reinforce streets as a place of gathering and community importance. Therefore, issues of microclimate should also be taken into consideration, thereby designing streets which are hospitable for all 12 months of the year.

This approach informs the character of the streets within the Study Area, despite their dimensions or role within the street hierarchy. The character of each street will be inviting, safe and multi-functional, which builds the basis of the urban fabric.

Place Making

Streets are seen as much more than just devices of circulation; they are places that harbour social activity in the community. Their design is critical in giving sense of place and definition to how the Steeles West District will be perceived by residents and visitors alike. Utilizing streetscapes as a measure of place making is achieved through understanding the role of the street and designing it to serve the purposes of its users, while invoking a noticeable character. It is through the use of paved materials, site furnishings, lighting, physical arrangement of vehicular vs. pedestrian movement, defining areas of static activity, street trees, at-grade planting, the street wall, and iconic elements that place making can take shape. This section establishes a clear strategy for each of these items which helps the street network become a vital part of the community's identity.

Cherry Blossom (Chicago, IL)

Streetscape Plan

Sustainable Streets

In an effort to reduce adverse impacts from the overall development of Steeles West, the district will look to employ a series of "sustainable" measures. Two (2) of these measures will be part of the overall development of road infrastructure throughout the Steeles West District and will outline how sustainable streetscape design/engineering can help to reduce adverse impacts at both the human and urban scale.

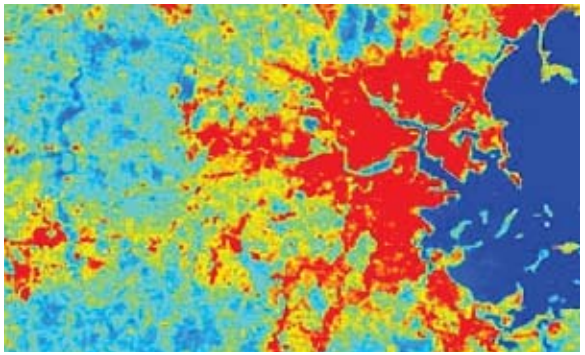
Advancing Urban Forestry

Robust and sustained street tree allocation will be advocated through the streetscape plan. This includes street tree planting along every street typology and the use of generous soil volumes to ensure survival of trees in the long term. In places under particular stress, heavy pedestrian use and large areas of hardscape, street trees will be planted using advancing technology. Use of structural soil or cell based root systems will be employed to maintain tree-lined streets in harsher urban conditions. These measures will provide at-grade improvements to micro-climate, while also advancing the urban forest canopy to the betterment of the wider context.

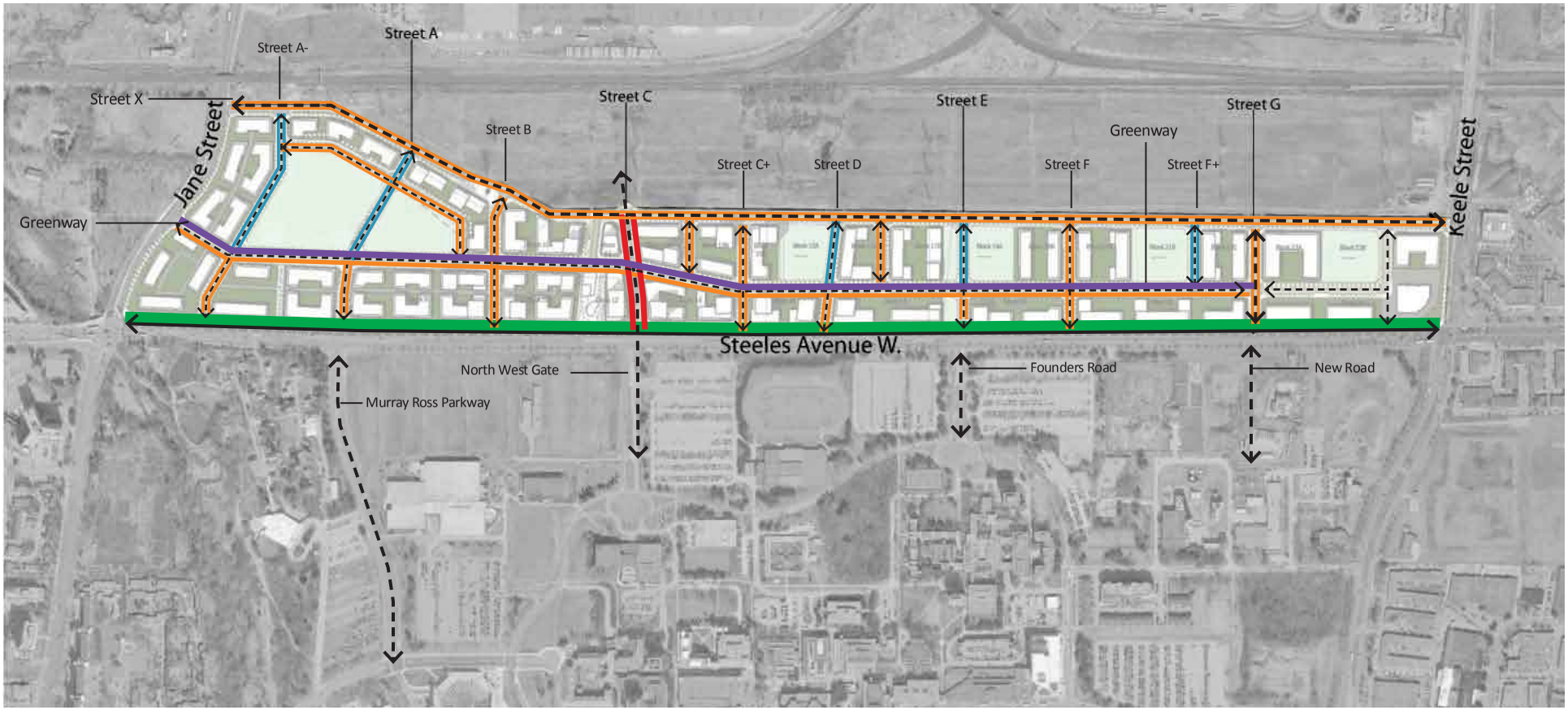
Streetscape Stormwater Management

Streetscapes offer a great opportunity to provide stormwater infiltration on site and reduce the need to redirect runoff to rearby ponds and watersheds. The streetscape plan outlines the development of bio-swales and rain gardens to help offer localized stormwater management. These facilities will provide localized infiltration and natural irrigation to specialized plantbeds providing both stormwater relief and aesthetic features to the streetscape.

Top Left: Bio-Swale (Seattle, WA)
Bottom Left: Rain Garden (Seattle, WA)
Top Right: Urban Heat Island Mapping (Boston, MA)
Bottom Right: Urban Forest Canopy



Streetscape Plan



Landscape Strategy & Stormwater Attenuation

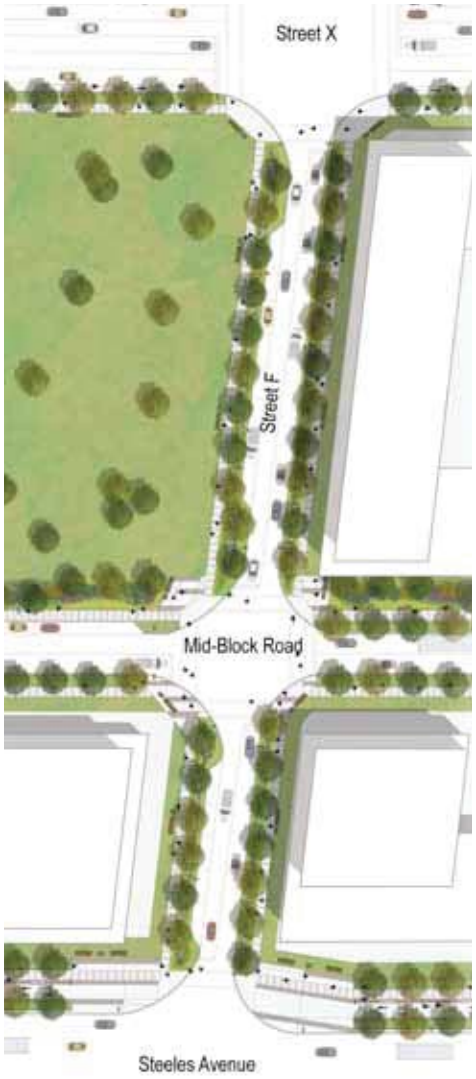
- *Street Trees in Urban Condition (use of advanced soil systems)*
- *Street Trees in Continuous Plant Bed*
- *Bioswales and Street Trees*
- *Rain Gardens and Street Trees*
- *Double Allee of Street Trees in Continuous Plant Bed*
- *York University Landscape of Cultural Significance*

Streetscape Plan

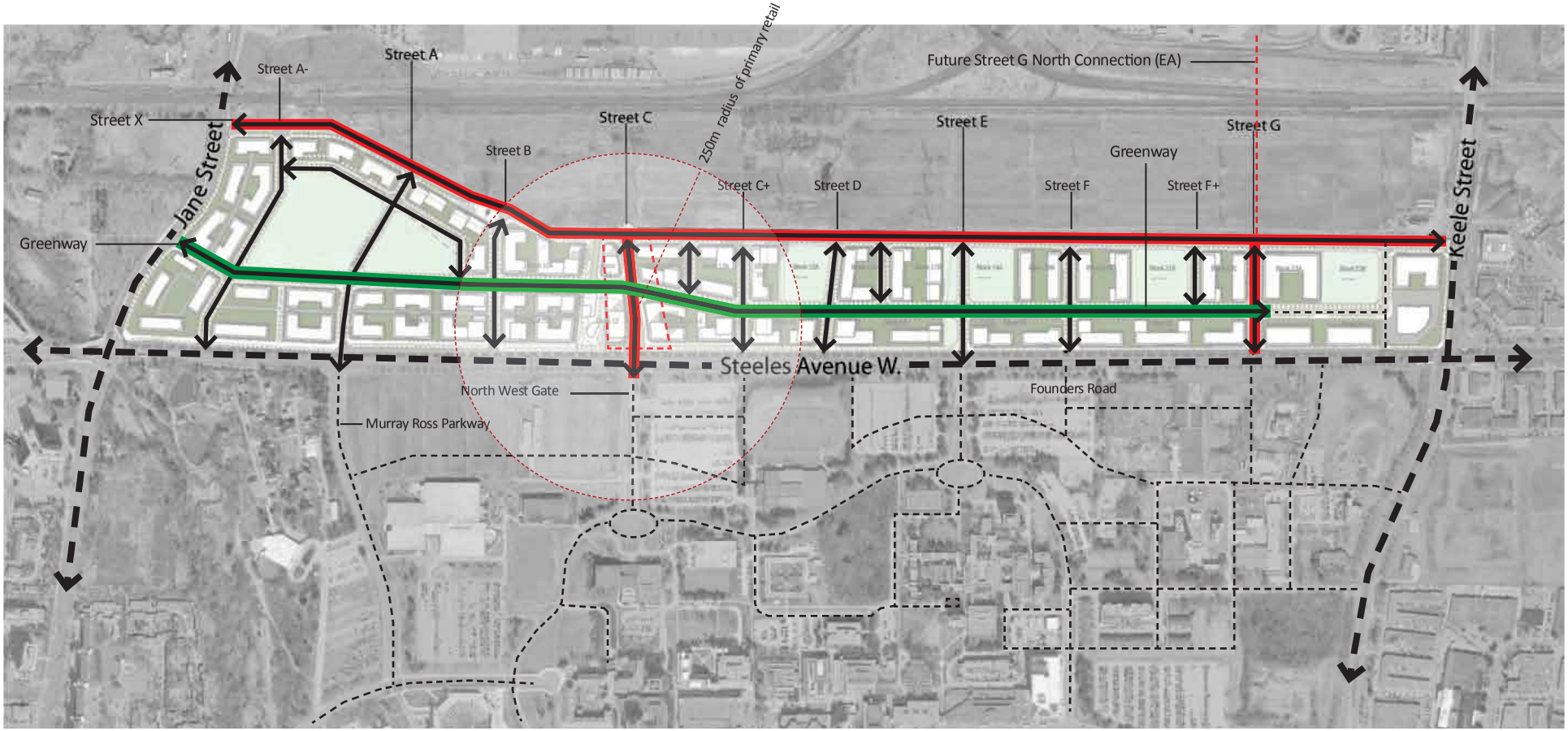
Street Hierarchy

The Steeles West District will be made up of a complex development strategy which will yield unique spatial conditions throughout the study area. Some areas will be more retail and commercial oriented, while others will be neighbourhood based. To appropriately address the needs of each within the Study Area, the streetscape plan must respond to the varying needs of the community. As a result, the Urban Design & Streetscape Plan identifies a street hierarchy and typologies which will address the multifaceted needs of residents, workers, visitors, and commuters.

Top: St. George Street (Toronto, ON); Mid Left: Humber Bay Shores Active Transportation (Toronto, ON); Mid Right: Sidewalk and Planted Edge (Brampton, ON); Double Allee (Brooklyn, NY)



Streetscape Plan



Streetscape Character Diagram

- *Primary Retail*
- *Priority Transit Connection*
- *Existing Transit Connections*
- *Greenway*
- *Ceremonial Edge*
- *Internal Minor Connections*
- *Contextual Connections*

Right of Way Dimensions:

17.5m ROW	*Greenway - Midblock Road*
26.0m ROW	*Street C*
11.2m ROW (+/-)	*Steeles Ave. (Northern Blvd)*
26.0m ROW	*Street X*
23.0m ROW	*Street G*
20.0m ROW	*Street A B D E F (inter block connections)*

Pedestrian and Cycling Focus

The streetscape network for the Steeles West District is modeled after an overall concept of "complete streets" and advancing of active transportation infrastructure. However, the unique nature and purpose each street presents against the hierarchy defines differing approaches to adequately accommodating pedestrians, cyclists, transit users and motorists. With a particular focus placed on walkability and cycling, the Steeles West District incorporates contextual linkages, proposed connections, commuter needs, passive pedestrian and cycling, as well as expected growth in demands of these facilities.

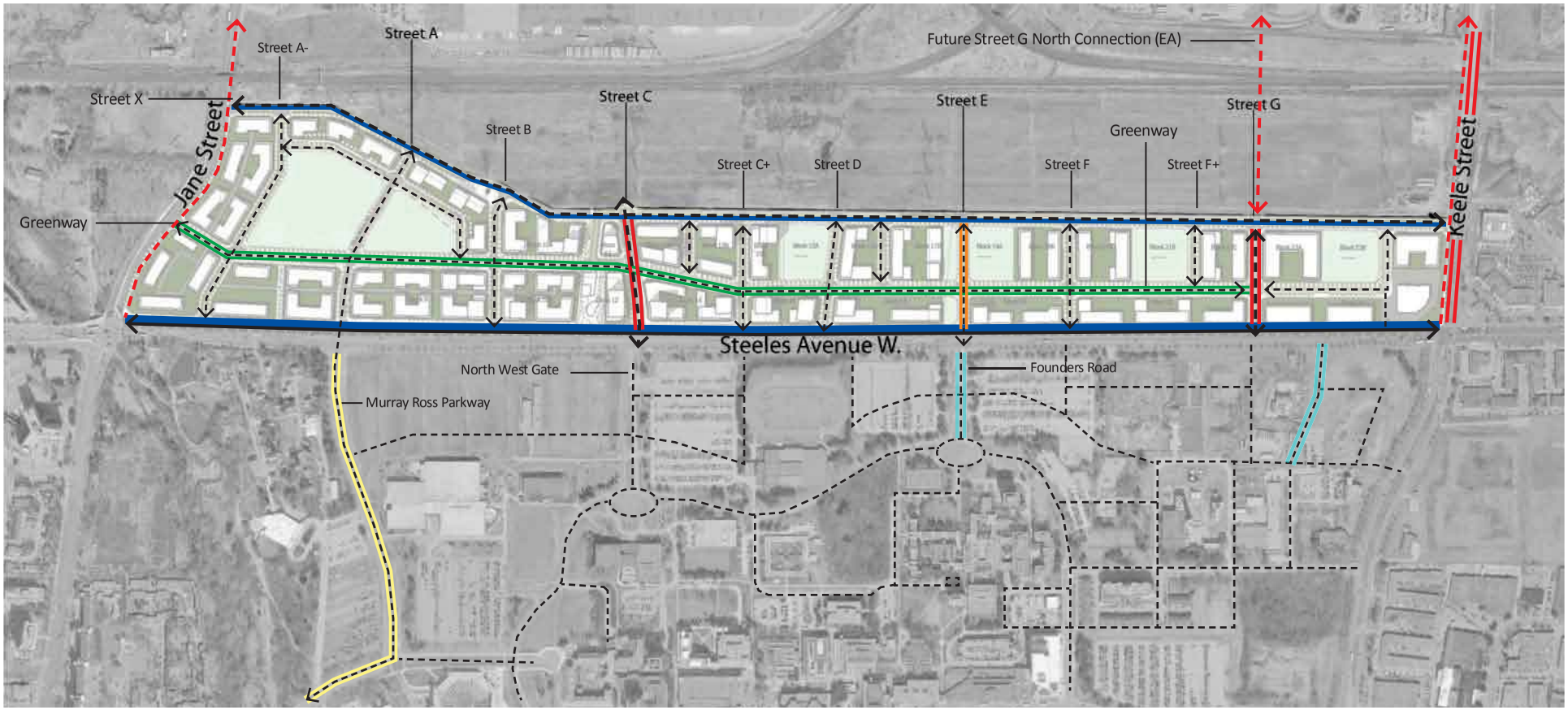
As a result the pedestrian and cycling network includes a variety of classifications to help define a formal approach to non-motorized movement throughout the community. Connections are based on providing options for moving east-west and north-south. These classifications are based upon the needs of commuters (fast moving, direct connections, high volumes at peak hours) and passive users (slower pace, indirect and meandering movement, consistent low volumes). The classifications assigned to each street are also tied to contextual relationships to transit amenities (including demands of the mobility hub), retail activity, association to open space, projected vehicular speeds/volumes, and linkages to existing and future connections within Vaughan, York University and the City of Toronto. Taking these variables into consideration impacts the widths of pedestrian sidewalks and character of cycling facilities upon each street. Varying widths of pedestrian sidewalks, dedicated cycling lanes, sharrow lanes, offroad cycling tracks and a mixed-use active transportation path are all utilized throughout the Steeles West District to promote choice to pedestrians and cyclists. It is through providing choice and options for users that we can help promote a uniquely inclusive active transportation network, rather than advocating for traditional universal approaches, which may not appeal to the wider community.

St. George Street - Road Distribution of Various Modes (Toronto, ON)

Separated Cycling Track along Road (Portland, OR)

Off Road Cycling Trail (Toronto, ON)

Streetscape Plan



Pedestrian and Cycling Network

- *Priority Transit - Pedestrian Sidewalk | Dedicated Cycling Lanes*
- *Street E - Pedestrian Sidewalk | Sharrow Lanes*
- *Greenway - Pedestrian Sidewalk | Sharrow Lanes*
- *Ceremonial - Pedestrian Path | Offroad Cycle Track(single sided)*
- *Street X - Active Transportation Path*
- *Local Roads - Pedestrian Sidewalk | informal Cycling Connection*
- *Future Connection to City of Vaughan Cycling Network*
- *Future Offroad Cycling Connection to City of Toronto Cycling Network*
- *Future Signed Routes to City of Toronto Cycling Network*
- *York University Proposed Cycling Lanes Network (Secondary Plan and Transportation Master Plan)*

NOTE:
The Keele Street Environmental Assessement has determined the overall profile of the future R.O.W. According to the EA, Keele Street will have a 1.5m (min.) sidewalk and a dedicated cycling lane.

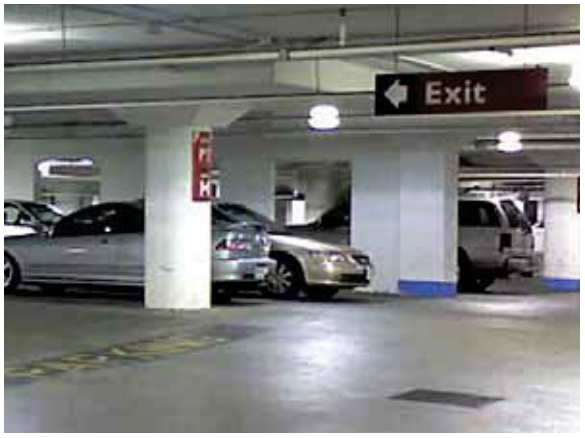
Public Parking Strategy

As a multi-modal community it is important for the Steeles West District to adequately accommodate the needs of car users. Appropriate parking stock accessible to the public will be assessed through a parking study; however, the overall streetscape plan also plays an important role in including parking at strategic locations. It is understood that a surface commuter parking lot will be located within the hydro corridor, north of Street X. In addition, underground parking will be allocated to buildings along Street C, and portions of these facilities should be made available for public use. These facilities will assist in providing primary parking stock to serve the needs of the mobility hub, including transitional mode users, and regional patrons of the retail, office and commercial amenities along Street C.

Beyond the Street C and the transit facilities, the Steeles West District will have more of a residential/commercial mixed-use focus. The community feel will be highlighted with on-street parking on selected streets, including most north south streets (north of the Greenway) as well as along the Greenway adjacent to open space and development blocks. It is anticipated that parking needs of residents will be located in underground parking facilities associated to each block. These public on-street parking facilities will then serve the needs of visitors to the Steeles West District. They will also act as overflow parking during times of peak use of transit facilities and events.

TTC Finch Station east parking lot

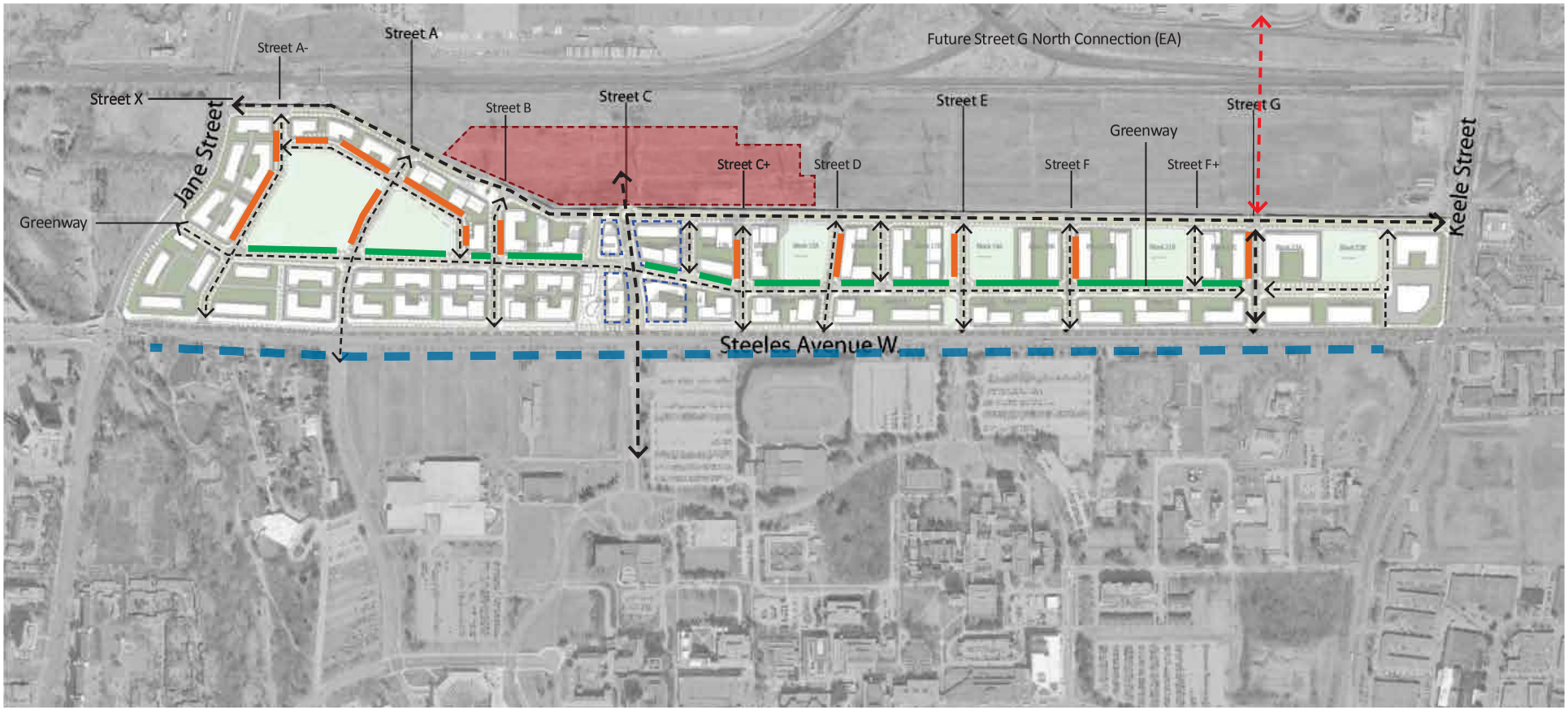
Public underground parking entry (Boston, MA)



Public underground parking

On-Street meter parking (Charlotte, NC)

Streetscape Plan



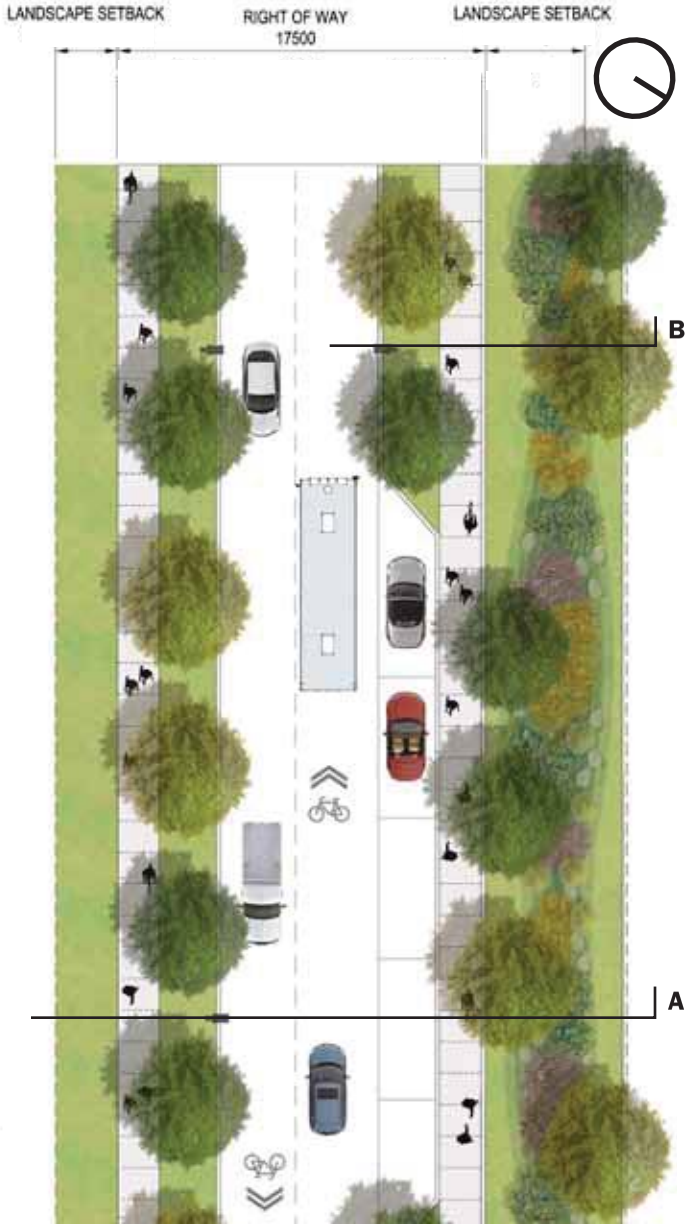
Public Parking Strategy

TTC Commuter Parking Lot (suggestive footprint)
Paid Underground Parking for Public Use
Greenway On-Street Parking
North-South Minor Road On-Street Parking
Future On-Street Parking (to be determined by the City of Toronto)

Mid-Block Road "Greenway" (17.5m)

The Mid-Block Road (Greenway) outlines a design for the central east-west spine of the Study Area (OPA 620). It is also seen as a critical neighbourhood linkage, which ties together the community's public places, civic spaces and the mobility hub. The Greenway is a 17.5m right-of-way (ROW) that works in conjunction with added setbacks on both the north and south sides. The southern setback will be mainly a landscape treatment and will be determined during site plan application. The southern setback is envisioned to be largely planted; however, in special conditions hardscape should be considered to support at-grade commercial activity, particularly when facing parkland. The northern setback is designed to facilitate a near-continuous rain garden along the Greenway. This rain garden will be tied directly to the bioswales along the north-south minor streets with a 20.0m ROW. The rain garden may be built by the developer and conveyed to the City. The section of the Greenway, from south to north, includes:

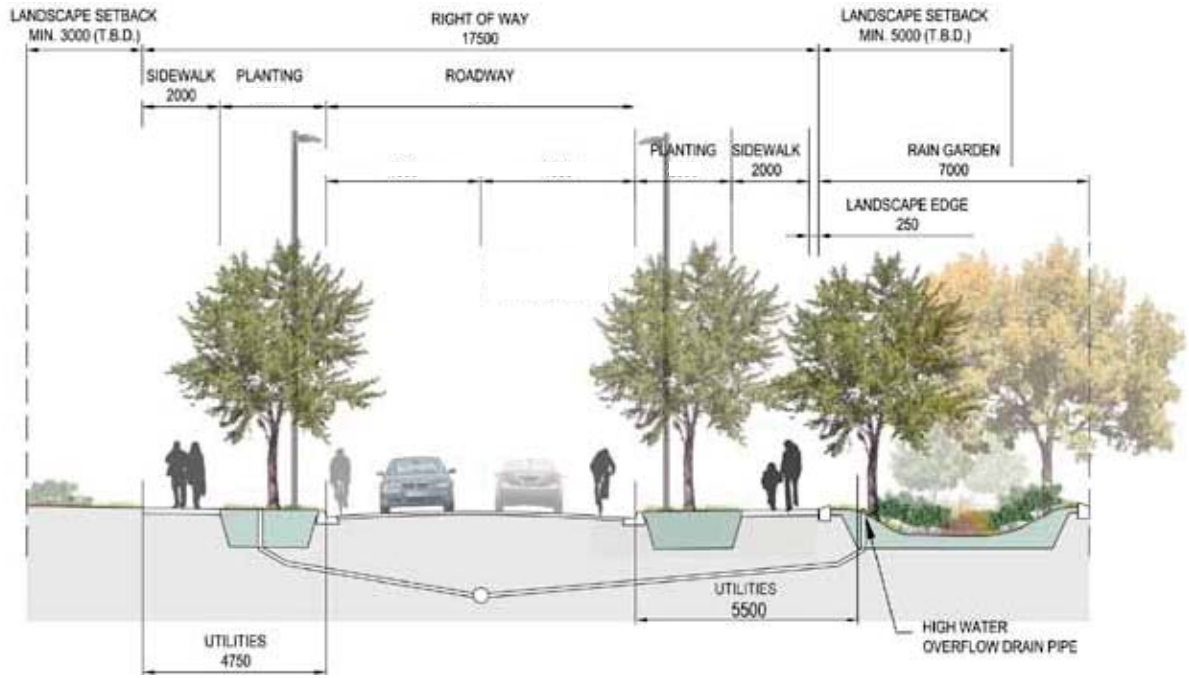
1. Minimum 3000mm landscape setback.
2. 2000mm concrete pedestrian sidewalk.
3. Planting zone, with street tree. Both planting zone and concrete sidewalk will house utilities. The planting zone will have street trees placed 8m on centre.
4. Asphalt roadway. Roadway will accommodate both cyclists and motorists.
5. Asphalt on-street parking. Parking will be largely allocated along park blocks. Where parking is not needed, the boulevard will revert to a planting zone, with street trees placed 8m on centre.
6. 2000mm concrete pedestrian sidewalk. Both planting zone and concrete sidewalk will house utilities.
7. Landscape edge treatment.
8. 7000mm rain garden designed with double allée of trees and overflow system.



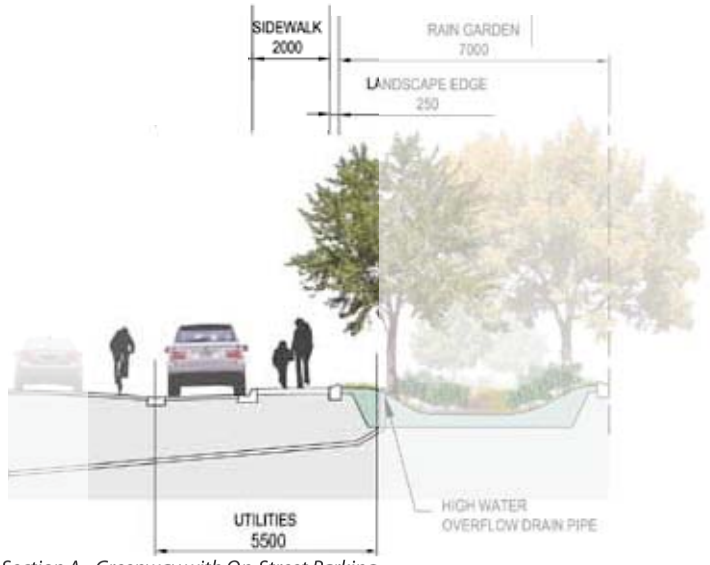
Plan - Sample Section of Greenway

Streetscape Plan

The design philosophy behind this section is to introduce an asymmetrical design emphasizing the public realm on the north side of the Greenway. This allows for clear pedestrian access to the community parks which are all located on the northern side of the road. As a result, the design also aligns the parking along the north side to further frame the park spaces with added roadside activity. Cyclists are to share the vehicular travel lanes, thereby encouraging more recreational riders to utilize the Greenway at lower speeds. On-street parking will be allocated where feasible to support the mobility hub and parkland. The intersection at Street C will accomodate wider paved areas to support high pedestrian volumes, further supporting the mobility hub. Traffic calming and enhanced public realm measures, such as curb extensions and pedestrian crossings, should be employed wherever possible.



Section B - Greenway with Street Trees



Section A - Greenway with On-Street Parking

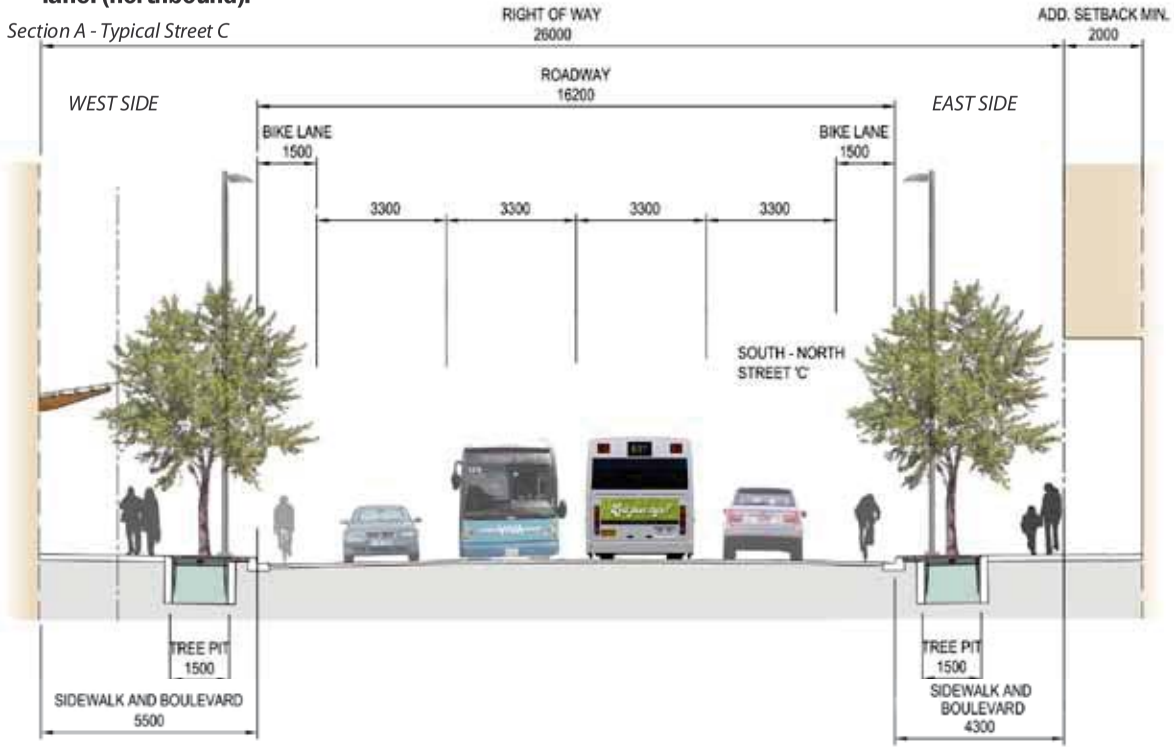
Street C (26.0m)

Street C, the northern extension of the Northwest Gate from York University, is one of the most important gateways into the Study Area. Street C is a direct link connecting varying transit facilities including the two bus terminals located north and south of the Steeles Avenue intersection, the new subway station (Steeles West Station), and the supporting parking facilities within the hydro corridor. Street C is seen as a critically active and multi-functional ROW. It is also important to note that Street C is designed to accomodate the greatest amount of activity driven by the highest population density within the study area. Boulevards must support retail commercial viability and take advantage of adjacency to the mobility hub. To further support the expected pedestrian activity, street trees will be planted in soil trenchs allowing for continuous hardscape throughout the sidewalk and boulevard, by way of decorative grates and unit paving. The street will be designed as a 26.0m ROW. The section, east to west, includes:

Outdoor Patios (Montreal, QC)

1. **Minimum 2000mm at-grade building setback. Setback must be constructed of hardscape materials. Setback must be built with at-grade shade/rain structure.**
2. **Minimum 4300mm sidewalk and boulevard treatment. Sidewalk and boulevard to be constructed of hardscape materials (combination of concrete and unit paving).**
3. **1500mm street tree pit to be planted in modular soil cells (within hardscape).**
4. **Minimum 1500mm asphalt dedicated bicycle lane. (northbound).**
5. **16200mm asphalt roadway. Roadway is made up of 3300mm x 4 travel lanes (2 lanes each way).**
6. **Minimum 1500mm asphalt dedicated bicycle lane (southbound).**
7. **Minimum 5500mm sidewalk and boulevard treatment. Sidewalk and boulevard to be constructed of hardscape materials (combination of concrete and unit paving).**
8. **1500mm street tree pit to be planted in modular soil cells (within hardscape).**

Section A - Typical Street C



Streetscape Plan

Plan - Conceptual Layout of Street C

The design philosophy behind Street C is to create a hospitable urban streetscape designed to maximize space for pedestrian movement and static activity, while allowing for cyclists and vehicles to travel through this connection. Street C is designed with a flexible framework to accomodate growth and change as the mobility hub develops. Street C is also an asymmetrical design and caters to indoor-outdoor spaces which are expected to emerge from the at-grade retail, restaurants and services located within the buildings fronting the street. Through a sun model we realize that the east side of the street will be more attractive for outdoor café/dining uses as the sun will be directly overhead after 12pm. It will continue to provide natural light to the east side until the western building's shadows cross the ROW.

As a result, Street C will require a larger setback along the east side of the street to achieve a wider sidewalk. There will be a maximum of 3m depth from the face of the building for semi-private commercial space.

The west side of the street is designed to a minimum width of 5.5m, which allows for commericial activity and commuter pedestrian movement to the YRT bus terminal and subway entry located along the west side of Street C. It is anticipated that the sidewalk and boulevard will function largely for commuters with associated retail. Street C will also be designed to accomodate short-term bike parking to address possible overflow of bike parking surrounding the subway station.

Street C is seen to have a broader commercial importance, compared to other parts of the study area which are catering to the neighbourhood scale. The street's connection to York University's North West Gate, as well as the TTC station, is expected to drive its wider retail appeal.

Streetscape Plan

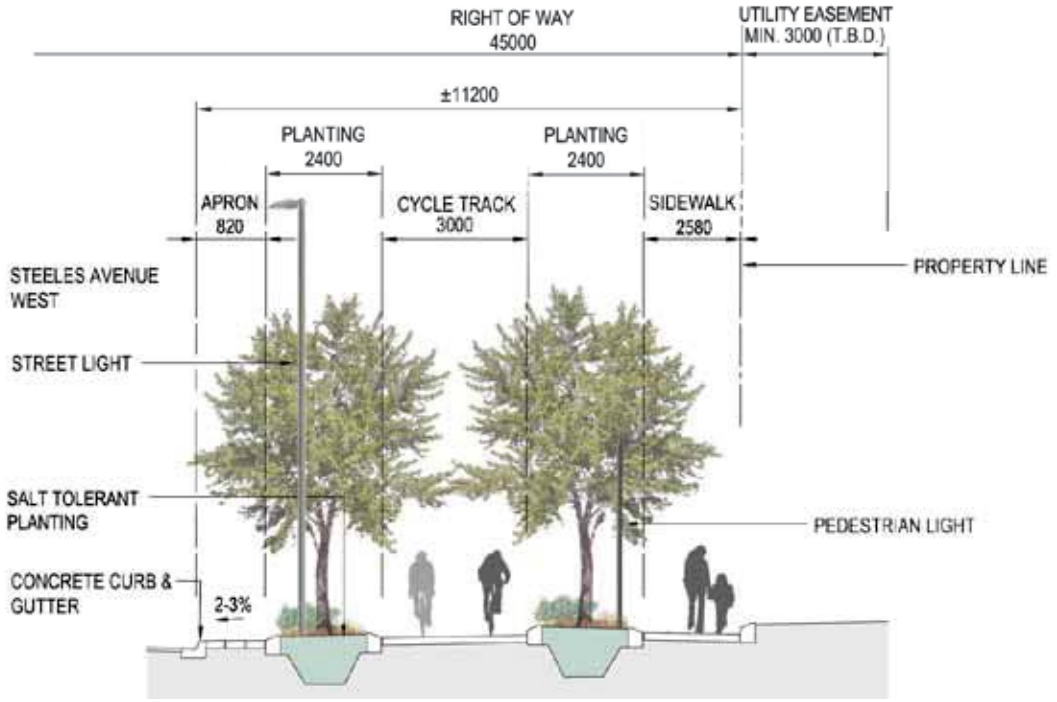
Steeles Avenue (North Side) (+/-11.2m)

The Steeles Avenue cross section and sample plan outlines the changes to only the north side of the street. This section has been developed from the curb line to the property line and outlines the proposed setback which includes from south to north:

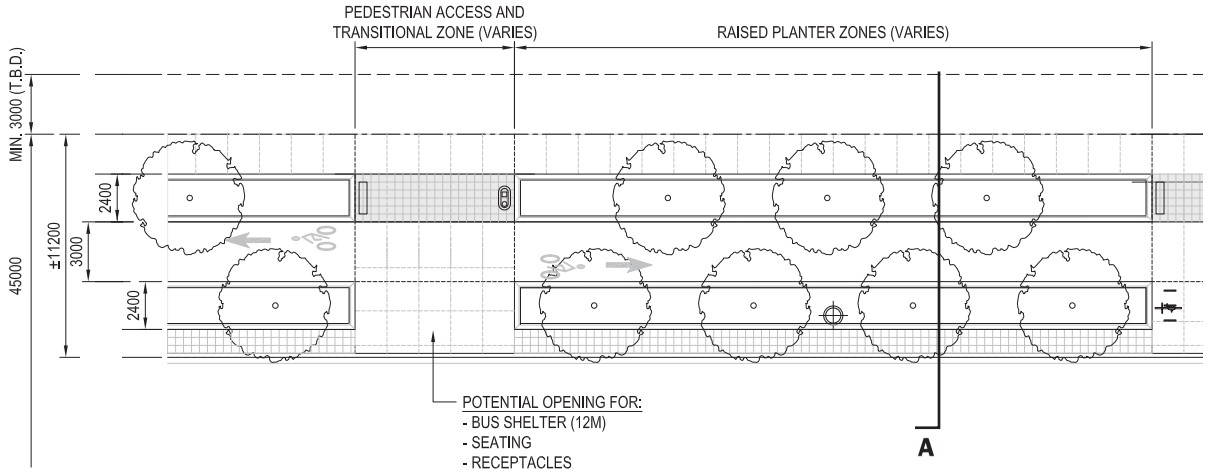
1. 820mm apron (splash guard) against the curb.
2. 2400mm planted boulevard with street trees (ability to allow street lighting), planted 8m on centre (in a continuous soil trench, as per City of Toronto Streetscape Manual Detail).
3. 3000mm asphalt bicycle path. Path to function as an east/west commuter cycle track.
4. 2400mm planting zone with street trees, planted 8m on centre (in a continuous soil trench).
5. 2580mm concrete pedestrian sidewalk.

NOTE:

Varying width unit paver access points and transitional zones will be introduced based upon site specific conditions. These zones will allow for periodic furnishings including seating, receptacles, pedestrian lighting and bus shelters. In locations where bus shelters are permitted these zone must be a minimum width of 12m. Fire hydrants and other utilities will be placed on the curbside apron.



Section A - North Side of Steeles Ave. Cycle Track & Pedestrian Sidewalk (Typical)



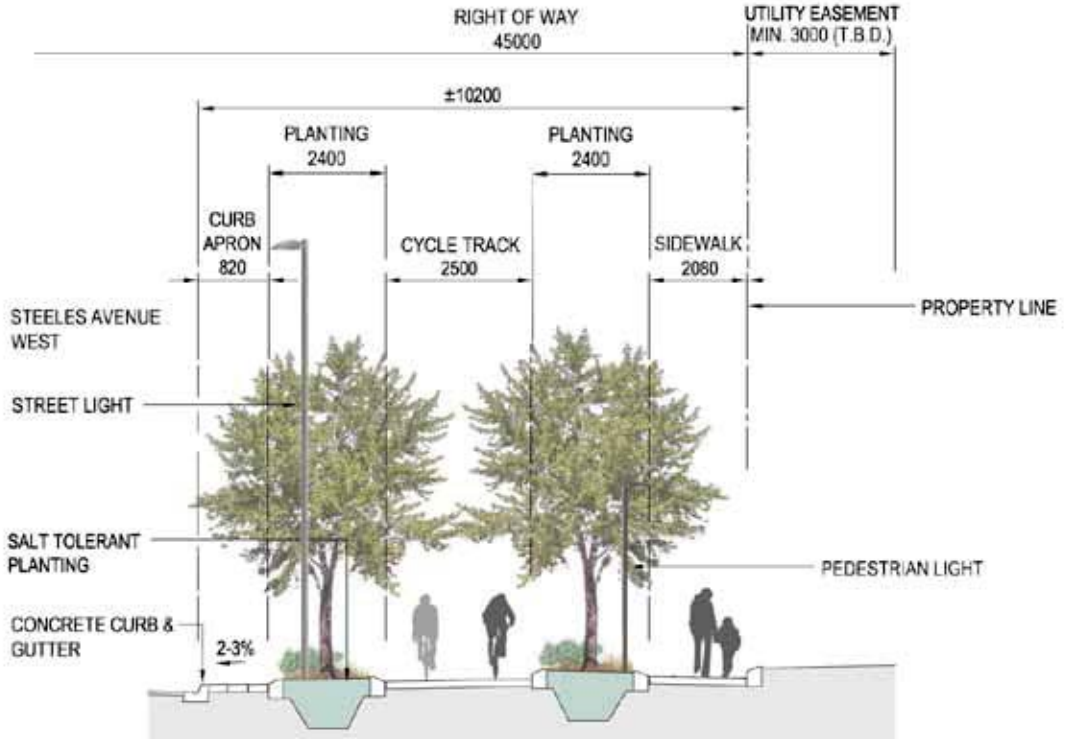
Plan - North Side of Steeles Ave. Cycle Track & Pedestrian Sidewalk (Typical)

Streetscape Plan

The design philosophy behind the Steeles Avenue condition is to create a comfortable commuter cycling and pedestrian environment. This is achieved through a double row of trees to soften the extent of hardscape throughout Steeles Avenue, while providing generous cycle lanes and sidewalks. It is expected that Steeles Avenue will be a commuter route for cyclists as it will have less interruptions than the Mid-Block Road. Therefore, a planting zone has been designed to avoid pedestrian/cyclist conflict. The concept is based on similar conditions where separation of cyclists and pedestrians is warranted, comparable to the Martin Goodman Trail along the Toronto waterfront.

Steeles Avenue (North Side) (+/- 10.2m)

Due to isolated constraints in the width of the boulevard, particularly outlined along the eastern end of the study area, the Streetscape Plan has offered an “atypical” condition of 10.2m in width. In order to keep with the same design philosophy of the typical condition, cycle track will be reduced to 2.5m, and reduce the width of the sidewalk to 2.08m. This condition will allow for a continuous double allee along the entire length of Steeles Ave West.



Section B - North Side of Steeles Ave. Cycle Track & Pedestrian Sidewalk (10.2m Condition)

City of Toronto Standards for Steeles Avenue

The City of Toronto will maintain only certain portions of the boulevard. Road Operations maintains grass cutting in summer on both sides of Steeles Avenue except business development areas. Road Operation does not, however, perform any winter maintenance on the North Side of Steeles Avenue except for bus stops. It also does not maintain or make repairs to the sidewalks but will make repairs to the cycle track. Should the City of Vaughan decide not to maintain the cycle track during the winter the City of Toronto will install "No Winter Maintenance" signs.

All tree planters and street tree pits will be constructed to the City of Toronto street tree standards (as outlined in Toronto Streetscape Manual, including Toronto Street Trees: Guide to Standard Planting Options). The T-1A Continous Soil Trench: Open Planting Bed and Concrete Sidewalk detail will be used for all planters along Steeles Ave West in this location. In addition, street furnishings, signage and markings will also be designed to meet the City of Toronto standards.

Refer to the Streetscape Components Matrix or the Toronto Streetscape Manual for more information.

T-1 Open Planting Bed - City of Toronto

Streetscape Plan

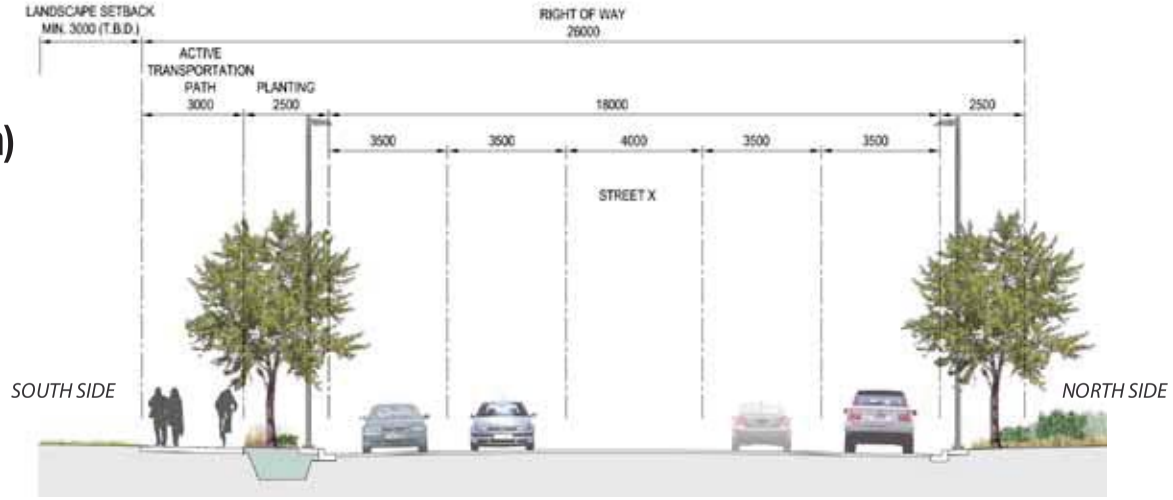
EAST - WEST STREETS

Street X – East-West Collector Road (26.0m)

Street X is part of the primary road network and is expected to be a street which can carry significant traffic volumes. It is designed and located through the result of an environmental assessment. Street X is made up of four (4) travel lanes and one left turning lane, designed within a 26m ROW. This section, from south to north, includes:

1. 3000mm asphalt Active Transportation Path – designed for pedestrians and cyclists.
2. 2500mm planting zone. Planting zone will also house utilities with street trees planted 8m on centre.
3. 18000mm asphalt roadway. Roadway is made up of 3500mm x 4 travel lanes (2 lanes each way) and a centre 4000mm left-turn lane.
4. 2500mm utility/landscape buffer. Buffer will be wide enough to accommodate proposed pedestal utilities and allow for planted strip to buffer against hydro corridor.

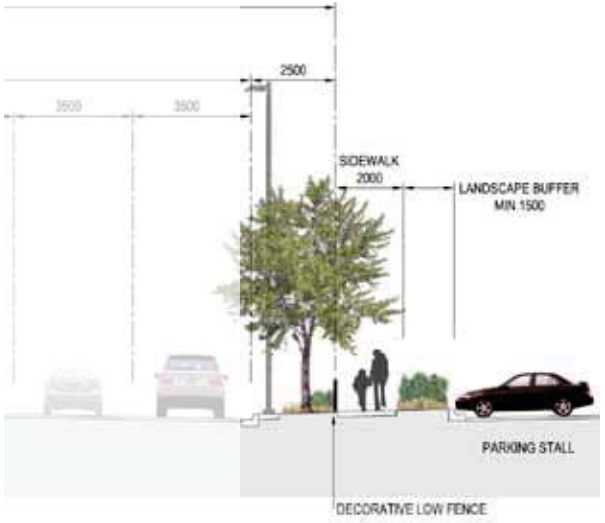
The design philosophy for Street X is to recognize its importance as a commuter road for both cyclists, transit users and motorists. This section is modelled after the preferred OPA 620 proposed east-west collector road EA of May 2012. Through detailed design, lane and boulevard widths should be optimized to include a cycling facility on the north side. It is encouraged that a slight alteration to the distribution of asphalt be further explored, in order to accommodate commuter cycling with pedestrians and motorists.



Section A - Street X (Typical)

The utility/landscape buffer also offers an opportunity to provide some barrier to the street from the windswept landscape of the hydro corridor, which will remain largely unaltered.

Street X will also interface with a large commuter parking lot, located within the hydro corridor, on the north side. Suggestive design treatment to allow for an appropriate interface between Street X and the commuter parking lot should include a decorative low fence (translucent), accompanied by a concrete sidewalk and landscape buffer. The landscape buffer can be designed to include a bioswale which can later connect to the overall stormwater management system. This adjacent treatment should occur outside of the 26m ROW in order to ensure a continuous row of street trees along the north side of Street X and to protect for the utility corridor.

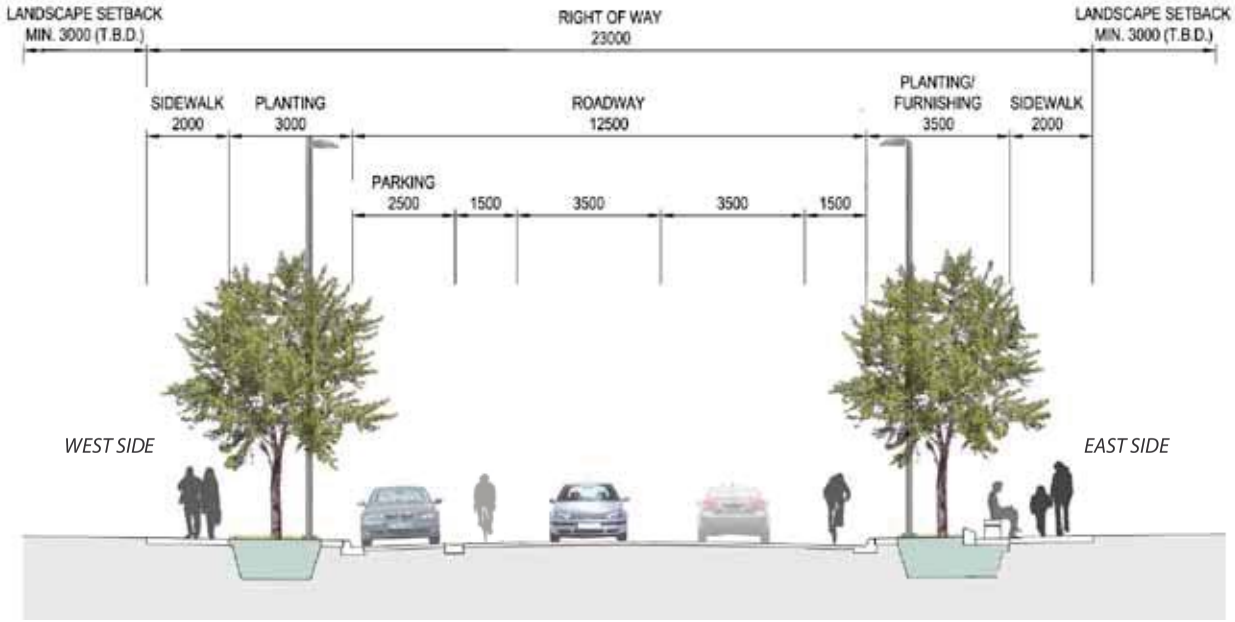


Section B - Street X against commuter parking

Street G | Local Street with Transit and Cycling Lanes (23.0m)

The composition of Street G is geared to be a wide neighbourhood street, designed to carry two (2) lanes of vehicular traffic. Street G is a local north-south street designed to support public transit and cycling, as well as on-street parking . This section, from west to east, includes:

1. **2000mm concrete pedestrian sidewalk.**
2. **3000mm planted boulevard with street trees. Street trees will be planted 8m on centre. The boulevard can also house utilities.**
3. **2500mm asphalt on-street parking. Parking will be broken at strategic points to allow for pedestrian crossings and intersections.**
4. **1500mm asphalt dedicated bicycle lane (southbound).**
5. **7000mm asphalt roadway. Roadway is made up of 3500mm x 2 travel lanes.**
6. **1500mm asphalt dedicated bicycle lane (northbound).**
7. **3500mm planted and furnished boulevard with street trees. Street trees will be planted 8m on centre. The boulevard will also house utilities and include bus stops, benches, receptacles and bike racks in appropriate areas.**
8. **2000mm concrete pedestrian sidewalk.**



Section A - Street G (Typical)

The design philosophy surrounding Street G is to allow for significant width for transit vehicles, while supporting dedicated lanes for cyclists. It is expected that both sides of the street will also be bounded by a landscape setback. On-street parking is assigned to support retail activity focused upon Street G.

Street G is also expected to be an important connection between York University and the Vaughan Metropolitan Centre. As road improvements on campus will connect York University to Street G, it is expected that Street G will extend northwards, through the hydro corridor, and connect with Highway 7 in the future.

Streetscape Plan

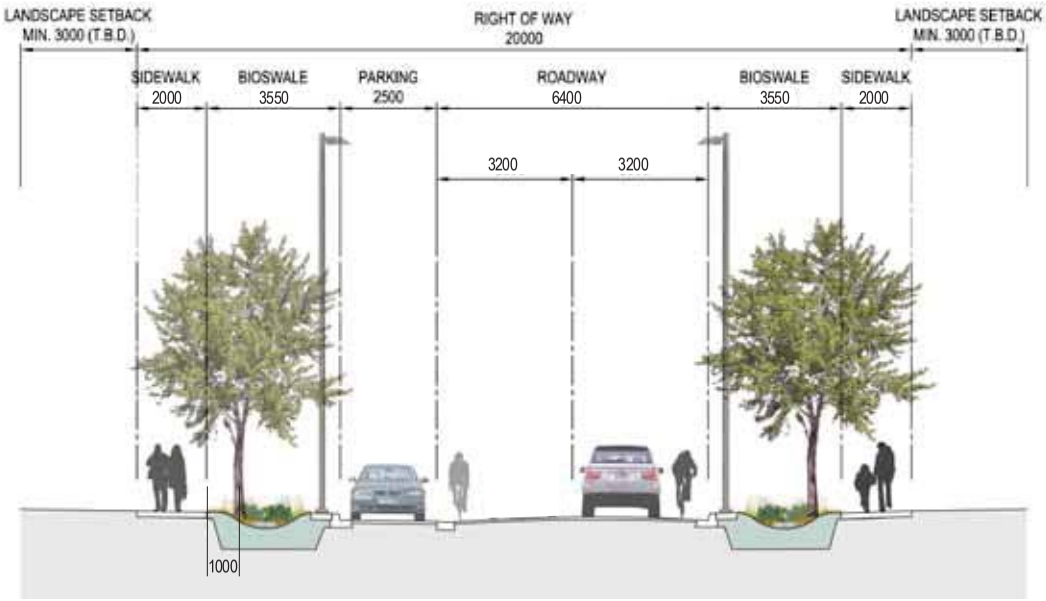
NORTH - SOUTH STREETS

Local Street without Transit (20.0m)

Street A-, A, B, C+, D, E, F, and F+

Street F is an example of the local north-south street that does not support transit. The composition of Street F is geared to be a local community connection and is not designed for major volumes of vehicular traffic. This section, from west to east, includes:

1. **2000mm concrete pedestrian sidewalk.**
2. **3550mm vegetated bioswale. Bioswale will be constructed to promote infiltration of stormwater run-off and will contain street trees and utilities, with street trees planted 8m on centre.**
3. **2500mm asphalt on-street parking. Parking will be broken at strategic points to allow for pedestrian crossings and intersections.**
4. **6400mm asphalt roadway. Roadway is made up of 3200mm x 2 vehicular lanes.**
5. **3550mm vegetated bioswale. Bioswale will be constructed to promote infiltration of stormwater run-off and will contain street trees and utilities, with street trees planted 8m on centre.**
6. **2000mm concrete pedestrian sidewalk.**



Section A - Local Street (Typical)

The design philosophy surrounding the local streets is to allow for a much narrower width which is more comfortable for passive cyclist compared to the Street C and G (other north-south streets), which are expected to be more commuter focused. The bioswales are designed to absorb stormwater run-off and also transport additional stormwater to rain gardens along the Greenway. Therefore, the bioswales are wider than typical planted zones and boulevard conditions. It is also expected that both sides of the street will be bounded by a landscape setback.

Jane Street

Although studied, the Jane Street Corridor is not part of the scope of this Streetscape Plan. Jane Street will be subject to its own environmental assessment (EA) in the future. Despite the projected results of the future EA, it is important to state that Jane Street is a visibly significant edge to the Steeles West District. The streetscape will be a focal point as it will demarcate a major gateway feature at the corner of Steeles Avenue, as well as a possible minor gateway feature at the intersection of the Greenway. It is recommended that a formal connection to the cycle track along Steeles Avenue should be accommodated and landscape treatments help buffer pedestrians from the significant traffic volumes along Jane Street. Where possible, a double allee of street trees should be implemented. Consistent site furnishings and lighting standards should be identified for Jane Street through the section adjacent to the Steeles West District.

Streetscape Plan

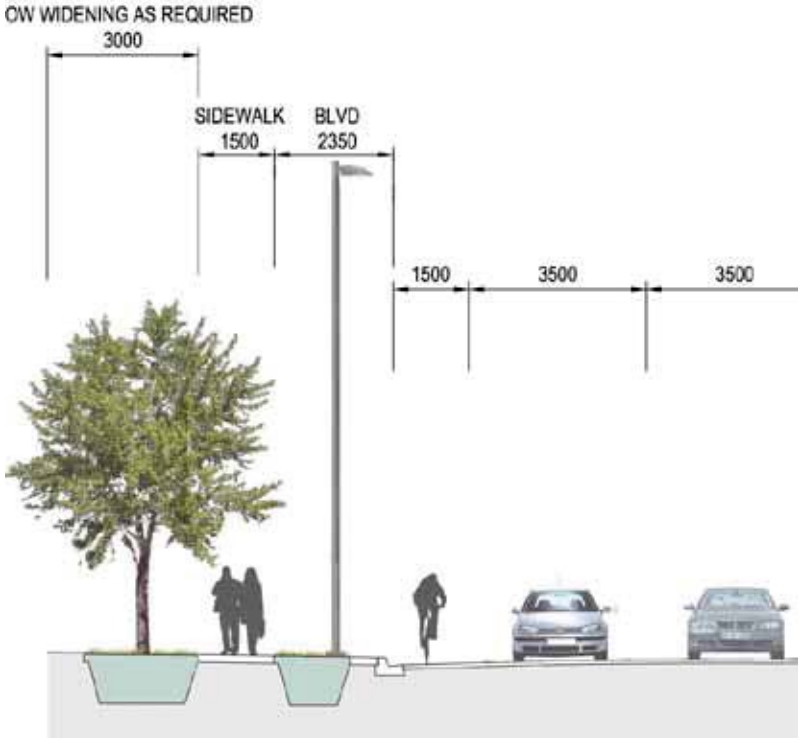
NORTH - SOUTH STREETS

Keele Street EA

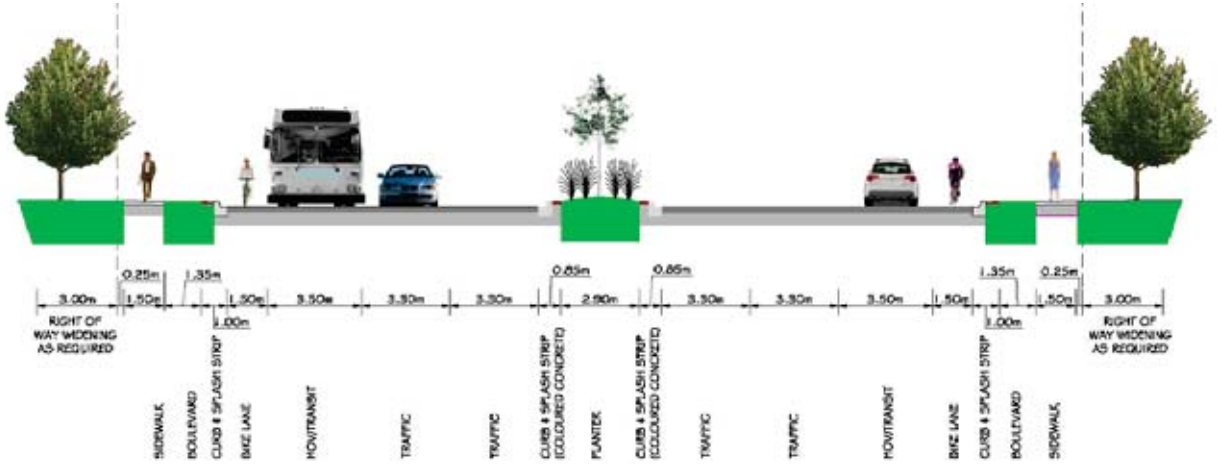
A parallel environmental assessment for the Keele Avenue Corridor is presently being conducted with detailed design by York Region. Its preferred option for the typical cross section is designed to include bike lanes along the roadway with vehicular traffic. There is a 2.35m boulevard, which will incorporate a splash strip and utilities. A 1.5m concrete sidewalk will be flanked by a ROW widening strip which will house street trees along the corridor.

Beyond the ROW widening strip, there will be a landscape setback through the Steeles West District section of Keele Street. This setback will incorporate more robust planting and insular pedestrian pathways, providing additional landscaping and circulation opportunities between buildings and Keele Street. These measures will help ease the impacts of Keele Street's heavy vehicular volumes, particularly during times of peak flows.

NOTE:
Keele Street is subject to change pending detailed design by York Region.



Section A - Keele Street West Side (Typical - as determined by the EA)



Section B - Keele Street (Typical) - provided by York Region

Streetscape Plan

Character of Retail Streets

Within the study area three (3) essential conditions have emerged which define streets that can support retail. These streets will act to support a variety of scales, and house both regional and community focused retail and services. The retail streets are critical in making Steeles West a complete community, encouraging walking and cycling as ways to move around within the study area. The streetscape master plan also calls for flexibility in areas to allow for adaptation, thereby promoting viability of business in active pockets of the community. Retail streets are designed to include spaces of transformation to allow for restaurant and commercial activity to spill into the public realm and further activate the streetscape. Appropriate setbacks of buildings and connection to public sidewalks is key in formulating a streetscape that can adapt to varying commercial needs.

Primary: Mobility Hub Retail Street

Metrolinx's Mobility Hub Design Guidelines outline a dynamic vision for transit oriented community. A clear benchmark for all planned mobility hubs is to include a measure of placemaking; Objective 5 outlines this measure as a "vibrant mixed-use environment with higher land use intensity".

Within the Steeles West Corridor, Street C is designed to take on the role of the active mixed-use environment, which supports the needs of the wider study area and community. Street C is designed as a retail street with wider sidewalks, generous street corners, street trees in paving, and site furnishings that allow for passive activity and support retailers. These measures will ultimately support a comfortable environment capable of handling high volumes of pedestrian flow, particularly at peak hours of transit exchange.

The built environment also responds to the needs of year-round pedestrian movement offering protection from the elements and a balance of sun and shade. Street C's retail focus also supports connectivity between moving from various modes of transportation. The introduction of unique paving materials, seating walls and lighting will enhance the experience of Street C.

Street C Concept Plan

Streetscape Plan

Magnificent Mile (Chicago, IL)

Magnificent Mile (Chicago, IL)

Secondary: Neighbourhood Retail Street

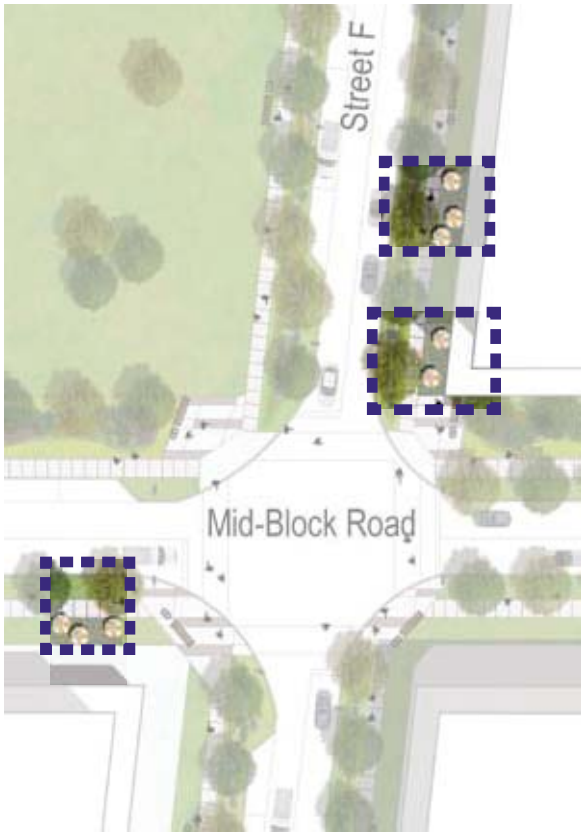
Neighbourhood retail opportunities will be designed to address the street and integrate with the urban mixed-use residential/commercial community. It is expected that these streets will have a more community related function, with retail businesses at street corners and intersections to maximize frontage and visibility. However, situations may arise where additional temporary attenuation is required to improve the business viability of particular commercial uses. In such an event, changes to the street will need to be discussed with City staff, bylaw controls and engineering to determine whether such adaptations should be permitted. This may include the need for temporary/ seasonal outdoor patios, special lighting or signage, and shade structures. These neighbourhood retail streets are focused along the southern portions and intersections of Street A, Street E and Street G. Combined with Street C, the distribution of retail will ensure that the study area supports the five-minute walking radius model, whereby retail will be no further than 500m-600m from any given place within the Steeles West District. It is expected that the combination of the Mobility Hub Retail and Neighbourhood Retail Streets, will provide the study area with a holistic commercial distribution, providing residents with access to vital goods and services. This will further reduce the need to drive for local trips, while promoting walking and cycling as an alternative means of movement.

Santana Row (San Jose, CA)

Rockville City Centre (Rockville, MD)

Streetscape Plan

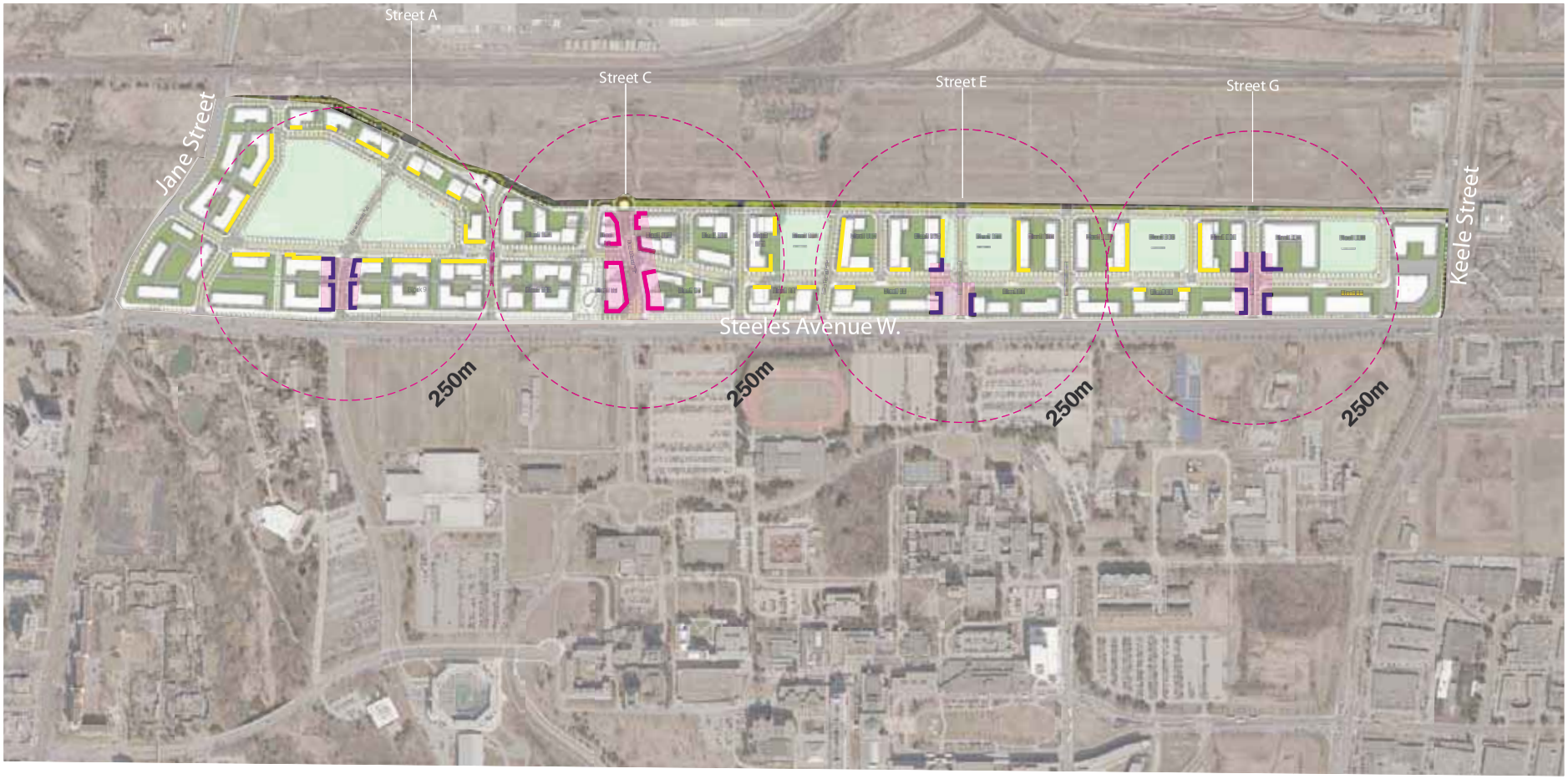
Rittenhouse Sq. (Philadelphia, PA)



Tertiary: Parkland Supportive Retail Street

As an extension of the neighbourhood retail street network, areas opposite to parkland should be treated with added sensitivity. In order to promote at-grade commercial and retail uses, the streetscape plan calls for more flexibility to adapt typical streetscape conditions beside parkland. Similar to Neighbourhood Retail Streets, temporary attenuation to improve viability of restaurants and business by temporary/seasonal outdoor uses should be encouraged, in strategic locations.
By creating more retail activity and sustained commercial uses around parkland we can ensure more active use of the parks while also creating more visibility of community open space, reinforcing CPTED principles. Parkland-supportive retail can be a unique opportunity which gives added value to the single loaded road condition.

Streetscape Plan



Retail Frontage Diagram

- *Primary*
- *Secondary*
- *Tertiary*

Green Infrastructure

The street network for Steeles West is seen as an opportunity to rethink the role of road infrastructure in the City. There are a number of measures that can be taken to reinvent the streets and reduce their environmental impacts throughout the study area and in the wider context. Steeles West is not part of an existing natural heritage system and, therefore, streets will play a particularly important role in "greening" the overall District.

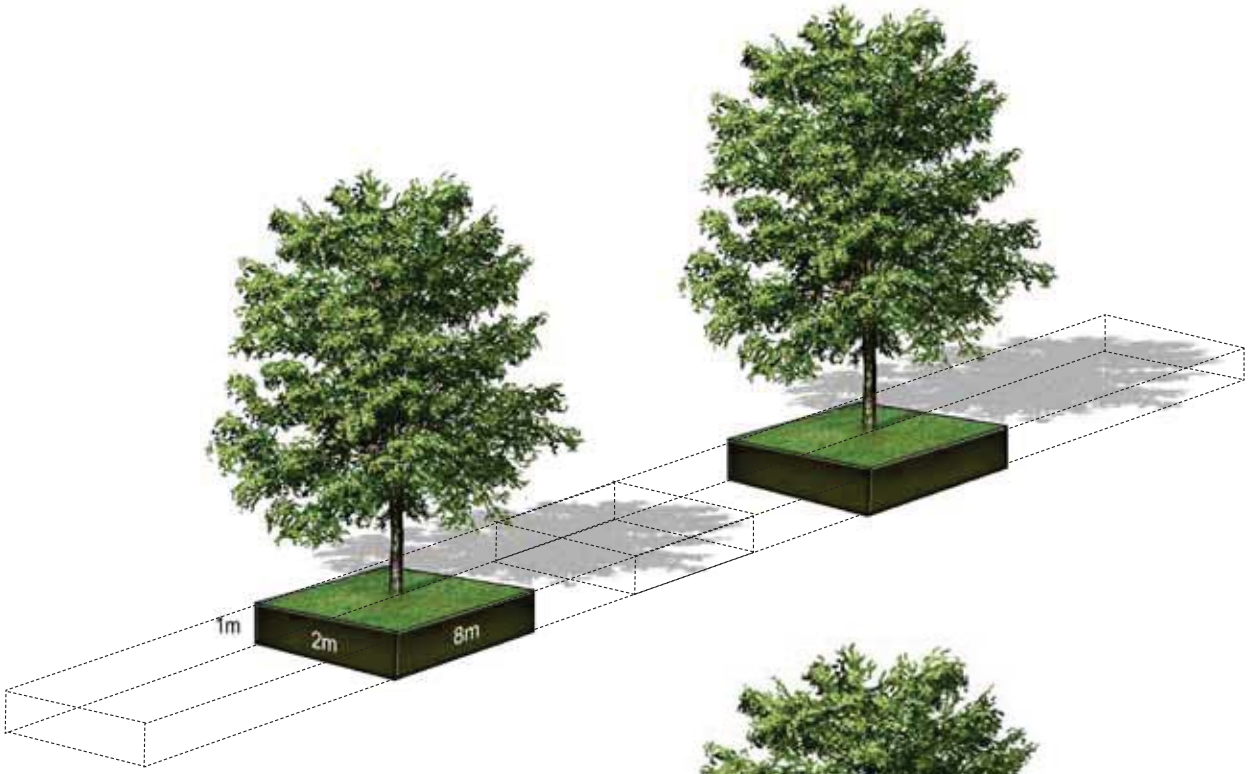
The Steeles West District is proposed to be a "Green Streets" area, incorporating rain gardens and bioswales into the ROW as an added layer to improve the quality of stormwater and reduce the quantity of stormwater entering the muncipal system and the Black Creek watershed.

Urban Forestry

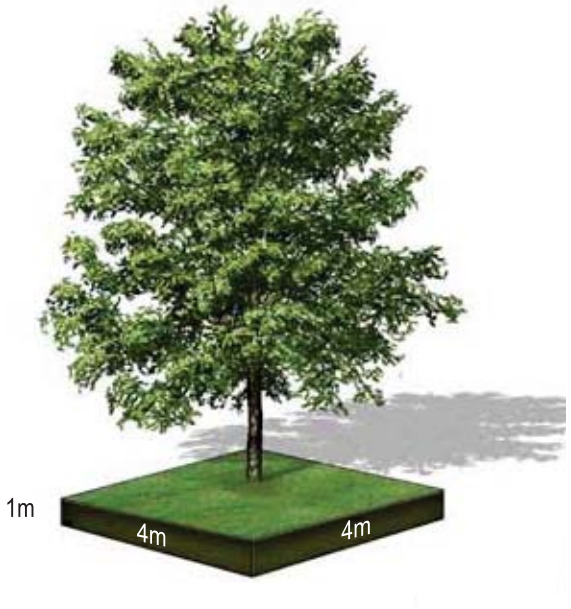
One of the most important aspects of streets is that they can provide much needed relief through the provision of trees. Tree planting along streets can account for approximately 70% of all trees in some urban areas. They provide protection from the elements in winter and shade from the sun in summer. Street trees also assist in creating microclimatic conditions and cool the environment during days of extreme heat. This can have wide ranging effects on reducing the urban heat island effect and making the overall urban environment a much more comfortable place. Therefore, it is important to recognize the importance of street trees to the overall urban forestry strategy. Urban forestry also works to sequester carbon from the environment which helps reduce air pollution. It is for this reason that every effort be made to introduce viable street trees as part of the streetscape strategy for each street. Trees within the boulevard should always be planted with optimal growing conditions in mind. Street trees should be seen as an investment and, therefore, their sustained growth is greatly valued.

It is important to note that the "Urban Forestry Management Plan" is in development by the Parks and Forestry Department.

Streetscape Plan



overlapping soil volumes within soil trench ensuring each tree has 16 cubic meters of soil



stand alone tree with 16 cubic metres of soil

Tree Guidelines

Growing conditions should be engineered to ensure growth and this should include a minimum of 16 cubic metres of soil in boulevard conditions with a minimum width of 2.0m. Soil trenches should be designed with the least amount of breaks to ensure continuous trenches and overlap of soil volumes for each tree. Trees should be placed with a minimum of 1.0m away from sidewalks and curbs. This offset will improve growing conditions and help to accomodate snow storage. Street trees should be selected for durability within the local climate and should vary in order to avoid a monoculture.

In conditions of intense urban activity and limitations to "soft" boulevard treatment, the use of alternative planting methods must be taken into consideration. This would include the use of enhanced planting strategies such as soil cells, at present only identified for Street C and constrained sections of Steeles Avenue. Use of this system should be considered for private streets and drives constructed over structured parking.

Stormwater Management

Bioswales & Rain Gardens

The reduction of stormwater runoff is a strategic goal of the Steeles West Urban Design & Streetscape Plan.

> *"The integration of stormwater management and water recycling facilities in the design of building, open spaces and parking areas is encouraged."*
> 6.2 Secondary Plan

Although a servicing plan has been completed, the Steeles West District proposes the implementation of "green streets" on selected streets. The street network can generate a tremendous amount of stormwater runoff and, depending upon grading of adjacent surfaces, the stormwater management system is expected to take added volumes that subsequently drain on to them. Traditionally this water would be moved through drains to another location, adding with it a collection of residue from the paved surfaces, creating higher velocity to the movement of water, and increased potential for flooding. As a result, the streetscape plan has recommended the use of bioswales and rain gardens to help reduce the impacts of stormwater generated from the municipal rights-of-way and their immediate context. It is important to note that the use of these measures requires different approaches to maintenance as compared to sod boulevards, which will require further discussion with city staff prior to implementation.

How it Would Work

Onsite stormwater management can help reduce these impacts by providing immediate collection and infiltration. The collection of onsite stormwater can also be used to irrigate plant beds, boulevards and gardens. Both bioswales and rain gardens are designed to work with the natural grade of the study area. As the overall grading is lower along Steeles Avenue (to the south) and higher to Street X (to the north), the system simply works by collecting and moving water through the bioswales along the local streets (20m ROW) which run north-south. The gradual grade towards the south will allow for infiltration and irrigation of the street trees and terrestrial planting along these streets. At times of higher volumes the water within the bioswales will migrate south into the Greenway rain garden. The rain garden will be a wider and more aesthetically diverse stormwater attenuation system designed to collect and infiltrate more water, while supporting the irrigation of a wider array of plants. Both the bioswales and rain gardens will be subject to pedestrian access and amenities. These will include sidewalk connections from the curb edge (including on-steet parking) to the sidewalk and development sites. In order to accommodate the continued function of the bioswales and rain gardens, strategic points of access will be made providing pedestrian access over these facilities, thereby minimizing the number of crossings. The bioswales and rain gardens will be directed under these access points by way of a culvert. Appropriate signage and lighting will help identify the access points to reduce pedestrian disruption to the bioswales and rain gardens.

rain garden (Kitchener ON)

rain garden (Portland OR)

Streetscape Plan

Guidelines

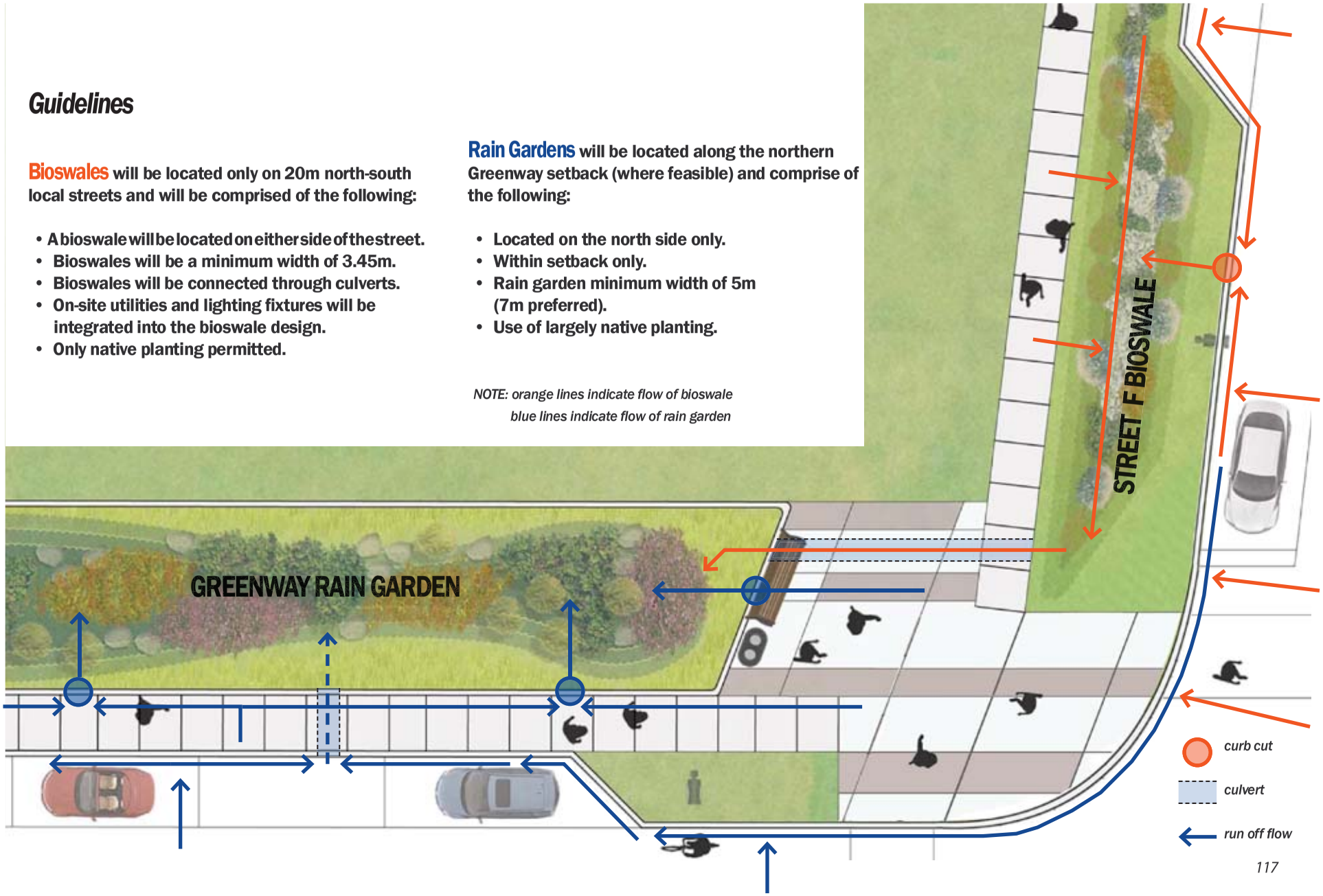
Bioswales will be located only on 20m north-south local streets and will be comprised of the following:

- A bioswale will be located on either side of the street.
- Bioswales will be a minimum width of 3.45m.
- Bioswales will be connected through culverts.
- On-site utilities and lighting fixtures will be integrated into the bioswale design.
- Only native planting permitted.

Rain Gardens will be located along the northern Greenway setback (where feasible) and comprise of the following:

- Located on the north side only.
- Within setback only.
- Rain garden minimum width of 5m (7m preferred).
- Use of largely native planting.

NOTE: orange lines indicate flow of bioswale
blue lines indicate flow of rain garden

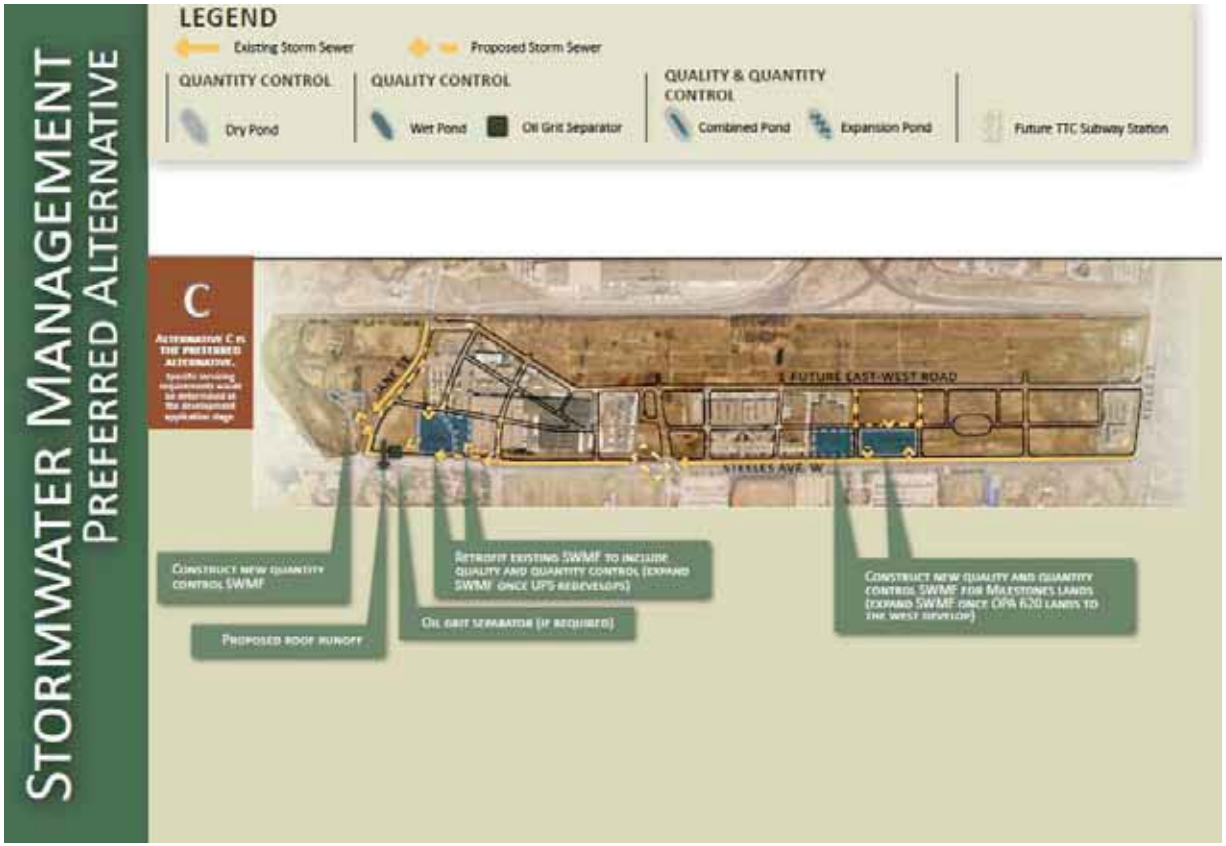


Streetscape Plan

Stormwater Ponds

The draft Municipal Servicing Master Plan Class Environmental Assessment Study – Steeles Corridor: Jane to Keele OPA 620 Report, dated October 2011, has identified several locations for stormwater management ponds within the study area. The preferred alternative "C" shows several ponds located along Steeles Avenue, located both in the west and east precincts of the plan. This draft report was completed after the submission of the "Steeles West Urban Design and Streetscape Plan" in August 2011, and therefore the conceptual plan does not include the preferred pond locations.

These preferred locations are meant to be conceptual and to be determined through site plan approvals for each development/land parcel. The ponds are presently in a schematic design phase, and therefore it is important to recognize that as they evolve into detailed design, these ponds are expected to change. Also, the preferred locations will affect the density distribution across individual blocks and land parcels, and may result in a configuration of buildings different than the conceptual plan. Proposed building configurations, resulting densities and final locations of stormwater ponds should be evaluated against the policies of OPA 620, the resulting Secondary Plan, and the guidelines found within this Urban Design and Streetscape Plan.



Municipal Servicing Master plan Class Environmental Assessment Study - Alternative "C"

Streetscape Plan

South Pond - UIOT Durham Campus (Oshawa, ON)

Stormwater Pond - Western Waterfront (Toronto, ON)

Recommendations and guidelines should take into account the following when determining the final locations for ponds:

- **Ponds should be combined with parks and open space blocks wherever possible**
- **Avoid for pond location at "Primary Retail" corners (p44-45 of UD & Streetscape Plan) unless located within parks and open space**
- **Ponds should be designed as amenity features and are highly encouraged to integrate into the landscape design approach**
- **The strategic use of cisterns or underground storage is to be considered where optimal pond location coincides with strong urban edges at "Priority Connections" and "Greenways" or "Ceremonial Edges" (p 42-43 of UD & Streetscape Plan)**
- **Locations internal to blocks away from "Priority Connections" are encouraged (other than in parks)**
- **Detailed design should also take into account measures from added stormwater mitigation measures, such as the introduction of rain gardens, bio swales, advanced site plan infiltration features, use of L.I.D.S. and climate change to help ensure that stormwater ponds are sized appropriately**

Street Trees

The allocation of trees is very important in defining the composition of the streetscape. As discussed in earlier sections of the master plan, trees offer a relief from climatic changes throughout the year. They also contribute to an overall well being in the environment by reducing carbon and decreasing the urban heat island. However, street trees can also help to define space and hierarchy. The Steeles West Streetscape Plan looks to use street tree species as an identifiable measure. Each street type has a selection of trees geared to offer diversity and interest when traveling through the study area. It is important to note that the study area falls under the Asian Longhorned Beetle Regulated Area, thereby restricting the use of some common species. The following species have been selected for the Streetscape Plan:

Street Tree Species

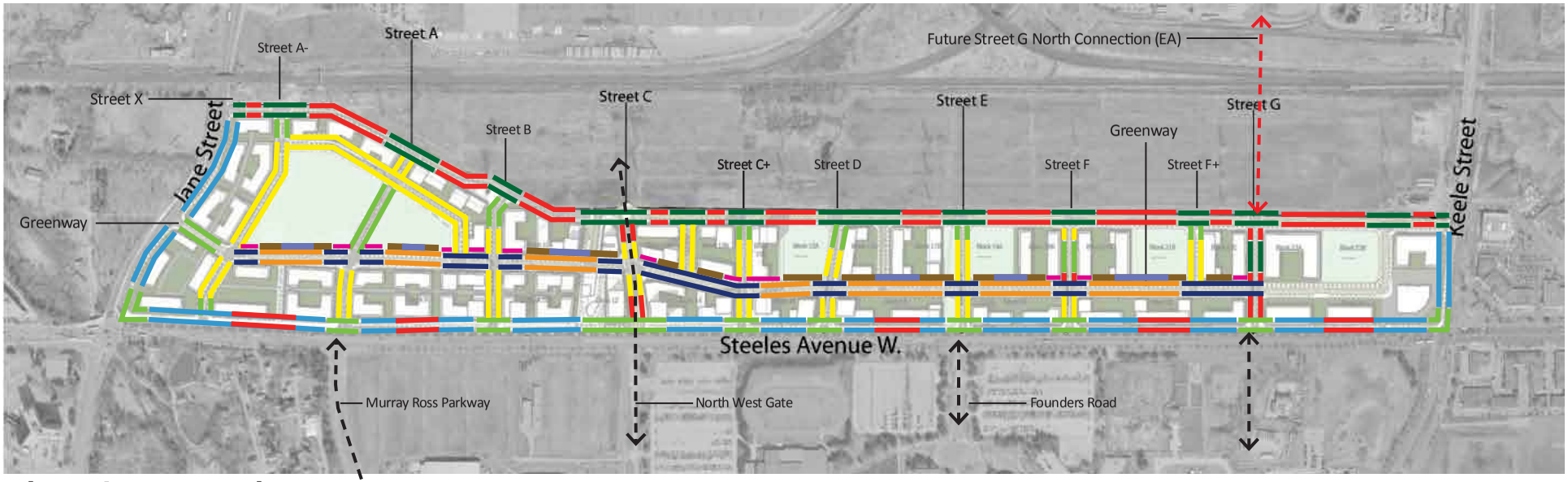
NAME	*COMMON NAME*	*HEIGHT*	*NOTES*
Capinus betulus 'Fastigiata'	Hornbeam	12m	fall colour
Quercus rubra	Red Oak	28m	fall colour
Ginko biloba	Ginko	17m	fall colour
Gleditsia var. inermis	Honey Locust	17m	fall colour
Acer saccharum	Green Mountain Maple	22m	fall colour
Tilia cordata	Basswood	16m	fall colour
Acer saccharinum	Silver Maple	18m	partial fall colour

Rain Garden Tree Species

NAME	*COMMON NAME*	*HEIGHT*	*NOTES*
Prunus serrulata	Cherry Blossom	8m	spring bloom
Quercus bicolor	Swamp White Oak	20m	fall colour
Fagus grandifolia	American Beech	25m	fall colour

street tree species

Streetscape Plan



rain garden tree species






Street and Rain Garden Trees

- *Red Oak*
- *Gingko*
- *Silver Maple*
- *Honey Locust*
- *Green Mountain Maple*
- *Basswood*
- *Hornbeam*
- *Cherry*
- *Swamp White Oak*
- *American Beech*

NOTE:

The City of Toronto has identified that some species of Acer (Maple) will be permitted despite the study area falling under the Asian Longhorned Beetle Regulated Area

Street Tree Allocation Method

Trees will be clustered; however each block should include a minimum of two tree species. This measure is to ensure that if a particular species becomes prone to an emerging disease or outbreak, removal of that species will not leave the entire streetscape without maturing street trees. The following is the description of tree selection according to street type:

Local Street | 20.0m ROW

combination of Silver Maple and Honey Locust

Streets A-, A, B, C+, D, E, F and F+ are included in this typology. Silver Maple were chosen for the intersections to create visual interest as well as a subtle neighbourhood aesthetic. Honey locust trees will be allocated to the central stretches of the street. The wider canopy of the honey locust will provide significantly more shade and also are relatively fast growing and attain their leaves quickly.

Street G | 23.0m ROW

combination of Red Oak and Gingko

This tree selection applies to Street G. Since this street can accommodate a larger volume of traffic and have a wider ROW, the streetscape plan identifies larger species of trees which can provide more substantial shade. The corners will be identified by red oak trees and gingko trees along the middle of the corridor for visual distinction.

Street C | 26.0m ROW

combination of Red Oak and Honey Locust

Street C will consist of trees with the largest canopies. A particular emphasis is placed on the shade provided by these trees throughout varying times of the day and year. Street C is also the widest street within the study area and therefore can benefit from the added mass these trees offer. Both tree species are to be planted rows within a structural soil cell system that has proven success in urban conditions. Red oak species will be planted at the corners, while honey locust will be planted in the middle of the block.

26.0m ROW Street X Collector

combination of Gingko and Red Oak

Street X is characterised as a collector road and it has the widest area of the paved lanes, therefore the master plan looks to use Red oak trees along the corridor since they grow to be tall and offer a more substantial canopy, which will provide a large amount of shade for both the pedestrian and the vehicular environment. Ginkgo trees will be concentrated at the intersections, which are shorter and narrower, in order to not obstruct sightlines from the road.

Streetscape Plan

Street C - Street Tree Demonstration Plan

17.5m ROW / Greenway

combination of Basswood and Hornbeam (street) and Cherry, Swamp White Oak and American Beech (rain gardens)

The Midblock Road or 'Greenway' has the most variety in its composition. This particular road will have two rows of trees within the right of way, supported by trees within the rain garden which runs parallel to the street. For the Greenway it is essential to maintain the format used throughout the plan along the street and have a separate palette of trees within the rain garden. Basswood trees are used at street corners and visual intersections, and hornbeam trees along the inner corridor.

Within the rain garden, cherry trees will be used at the corner for visual interest; swamp white oak and american beech along the corridor. This will help to bolster the edges of the park and provide a great deal of shade.

Steeles Avenue West (City of Toronto)

combination of Green Mountain Maple, Silver Maple and Red Oak

The Steeles Avenue tree selection is part of the 'Active Transportation' corridor which runs the length of the project boundary. In order to differentiate this street, the Streetscape Plan has identified three (3) types of trees within the double allée which also joins with Jane Street and Keele. A large stature green mountain maple will be used at the corners to create visual distinction, while silver maple and red oak will break up the inner corridor. Jane Street and Keele Street both play off this layout for consistency, minus the red oak trees. Presently hydro lines do exist along the north side of Steeles Avenue. All efforts will be made to coordinate tree planting in alignment with these utilities.

Despite using a different set of tree species, the north side does look to complement the south side of Steeles Avenue West, by introducing large scale trees that have similar form and height to those existing trees on the south side. In addition, the tree planting will maintain a double allée throughout its length, further reinforcing the strong tree line along York University's northern edge.

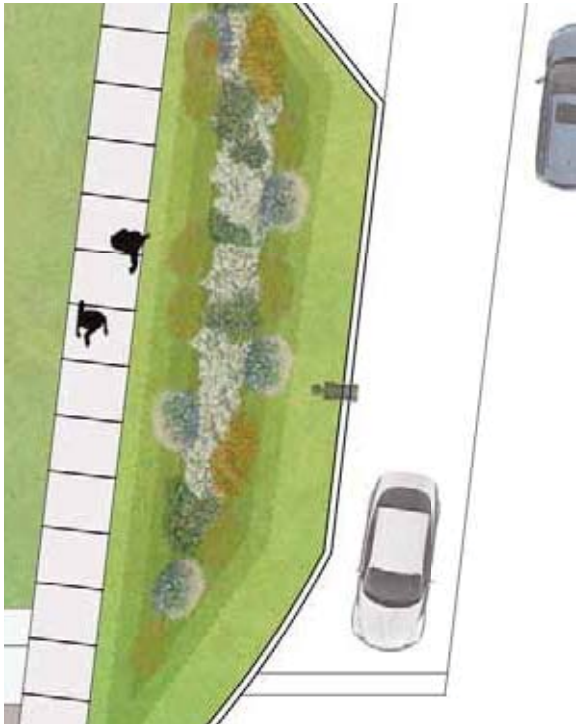
Streetscape Plan

Greenway & Street F - Street Tree Demonstration Plan

- *Red Oak*
- *Gingko*
- *Silver Maple*
- *Honey Locust*
- *Green Mountain Maple*
- *Basswood*
- *Hornbeam*
- *Cherry*
- *Swamp White Oak*
- *American Beech*

Bioswale Planting
(seleced north-south local roads)

Bioswales will be composed of terrestrial planting. Each will work to stabilize the grading designed to facilitate infiltration and movement of water. They will support other measures of stormwater management including municipal storm sewers and ponds. The composition of the bioswale should be made up of river stone and the following plant materials:



BIOSWALE PLANT LIST

Perennials

NAME	*COMMON NAME*
Eutrochium maculatum	Spotted Joe-Pyeweeds

Grasses

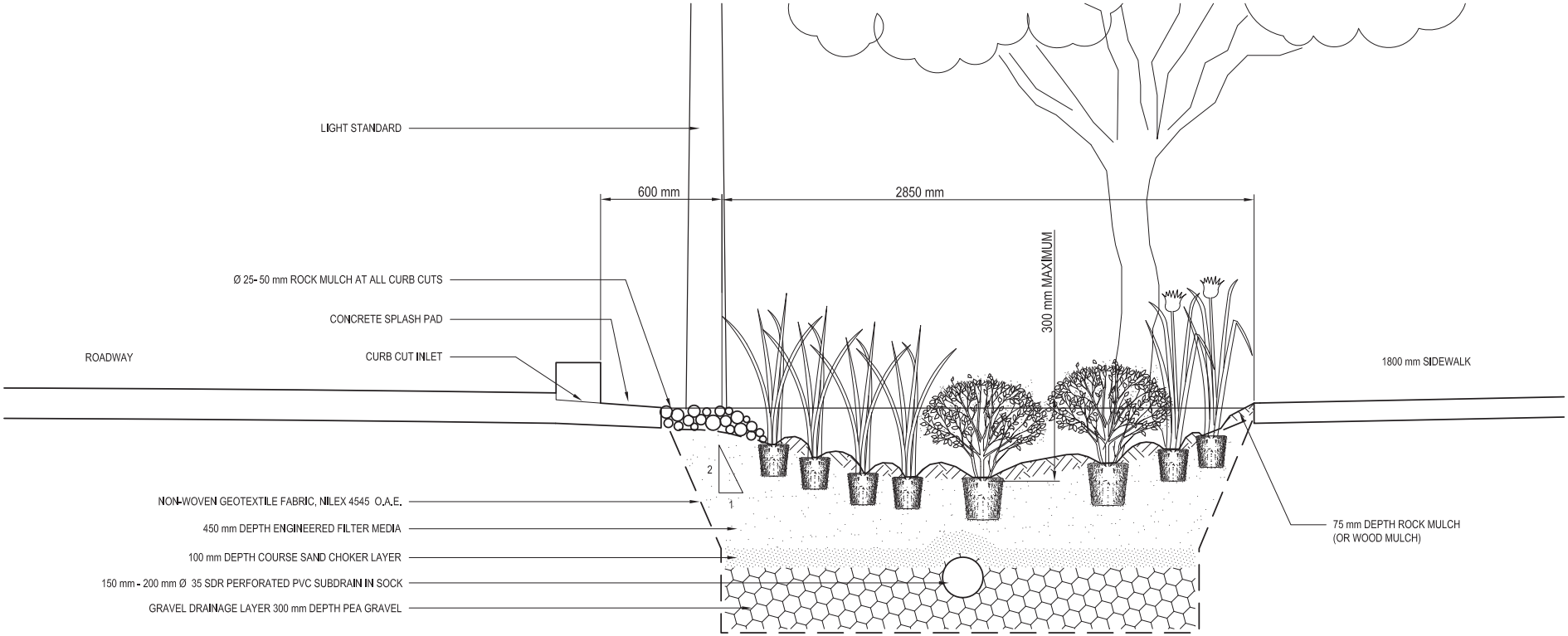
NAME	*COMMON NAME*
Carex bebbii	Bebb's Sedge
Spartina pectinata	Prairie Cordgrass

Spotted Joe-Pyeweeds

Bebb's Sedge

Prairie Cordgrass

Streetscape Plan



NOTES:
1. THE ENGINEERED FILTER MEDIA SHALL BE COMPRISED OF 20 - 30% COMPOST AND 70 - 80% SANDY LOAM TOPSOIL, BY VOLUME.
2. THE TOPSOIL SHALL HAVE BE:
   - 0% PARTICLES OVER 75 mm;
   - 0% - 10% PARTICLES FROM 2 - 75 mm;
   - 50% - 70% PARTICLES FROM 0.05 - 2 mm (SAND);
   - 15% - 48% PARTICLES FROM 0.002 - 0.05 (SILT);
   - 2% - 5% PARTICLES LESS THAN 0.002 mm (CLAY)
2. THE COMPOST SHALL HAVE AN ORGANIC CONTENT OF 50-60% AND BE WELL AGED. PEAT MOSS IS RECOMMENDED.
3. THE COMBINED ENGINEERED FILTER MEDIA SHALL HAVE THE FOLLOWING PARAMETERS:
   - THE pH BETWEEN 5.5 AND 7.5;
   - SOLUBLE SALTS LESS THAN 500 PPM;
   - NITROGEN 20-40 PPM;
   - MAGNESIUM 60-480 PPM;
   - PHOSPHORUS 80-120 PPM POTASH;
   - ORGANIC CONTENT MINIMUM 4%.
4. THE ENGINEERED FILTER MEDIA SHALL ALSO HAVE OTHER NUTRIENTS IN SUFFICIENT QUANTITY TO SUPPORT PLANT GROWTH.
5. THE FILTER MEDIA SHALL BE PLACED IN 200 mm LIFTS AND SHALL BE WATERED TO ENSURE THERE ARE NO VOIDS.
6. THE ENGINEERED FILTER MEDIA SHALL HAVE A HYDRAULIC CONDUCTIVITY GREATER THAN 13 mm/ HR.
7. THE CHOKER LAYER SHALL BE WASHED CONCRETE SAND 0.05 - 5 mm IN DIAMETER.
8. THE PEA GRAVEL SHALL CONTAIN PARTICLES FROM 3 - 10 mm IN DIAMETER.

DILLON CONSULTING	PROJECT: STEELES WEST URBAN DESIGN & STREETSCAPE MASTER PLAN	PROJECT NO.
DATE: APRIL, 2012	TITLE: BIOSWALE SECTION	FIGURE NO.

Rain Garden Planting
(Greenway)

The composition of the rain gardens will build on the plant types of the bioswales and have additional planting that will consist of flowering plants, grasses and shrubs. The variety of plants will create a distinct vibrancy that will be an identifiable marker of the Greenway. The Greenway rain garden should be made up of river stone and the following plant materials:

RAIN GARDEN PLANT LIST

Shrubs

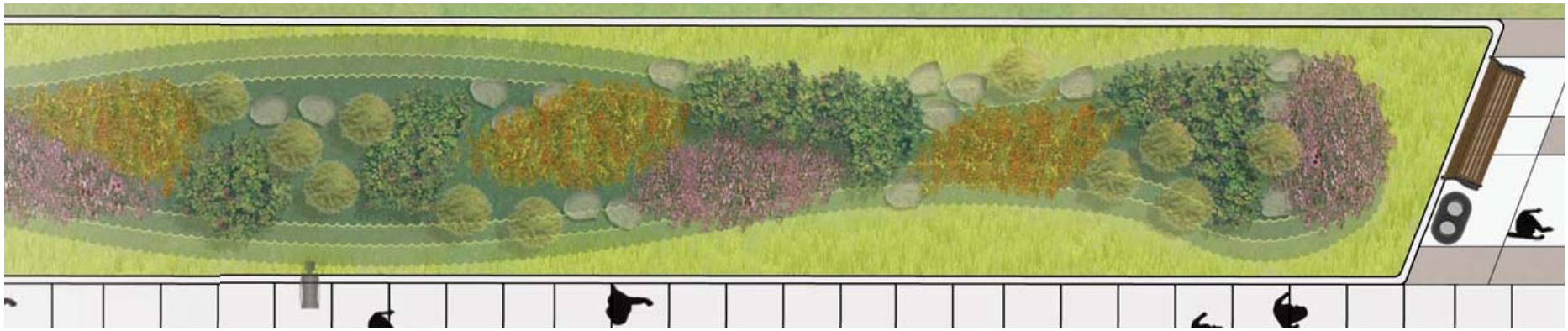
NAME	*COMMON NAME*
Salix discolor	Pussy Willow
Comus stonlonifera/C. sericea	Red Osier Dogwood

Perennials

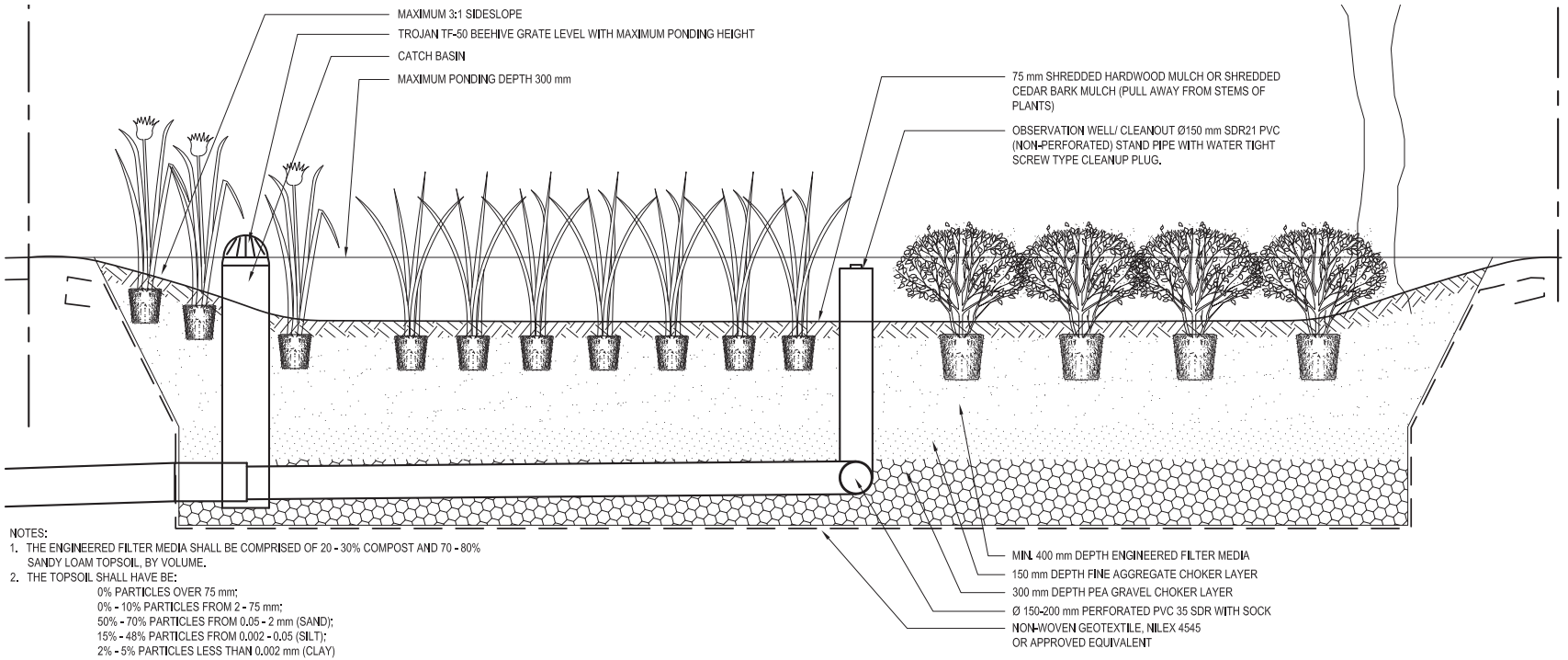
NAME	*COMMON NAME*
Echinacea purpurea	Purple Coneflower
Rudbekia hirta	Black-Eyed Susan
Salvia nemerosa 'May Night'	May Night Sage
Lobelia cardinalis	Red Cardinal Flower

Grasses

NAME	*COMMON NAME*
Carex bebbii	Bebb's Sedge
Arrhenatherum elatum 'Variegatum'	Bulbous Oat Grass
Carex vulpinoidea	Fox Sedge
Spartina pectinata	Prairie Cordgrass
Juncus effusus	Soft Rush



Streetscape Plan



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   - 50% - 70% PARTICLES FROM 0.05 - 2 mm (SAND);
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   - THE pH BETWEEN 5.5 AND 7.5;
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   - PHOSPHORUS 80-120 PPM POTASH;
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DILLON CONSULTING	PROJECT: STEELES WEST URBAN DESIGN & STREETSCAPE MASTER PLAN	PROJECT NO.
DATE: APRIL, 2012	TITLE: RAIN GARDEN SECTION	FIGURE NO.

Red Osier Dogwood

Pussy Willow

Purple Coneflower

Black-Eyed Susan

May Night Sage

Red Cardinal Flower

Bebb's Sedge

Bolbous Oat Grass

Fox Sedge

Prairie Cordgrass

Soft Rush

Streetscape and Open Space Details

An array of elements has been selected in order to help provide identity to each street type within the Study Area. Although there is variation in the selection of certain elements, it is important to note that all items work towards creating an overall family of details. The consistent use of this family of elements within the Study Area will reinforce the community identity and overall sense of place. It is important to note that significant deviation from these furnishings will contribute to an inconsistent streetscape.

Paving

Overall the paving palette is made up of simple materials. Accents materials are used in strategic locations to highlight street hierarchy. Essentially much of the pedestrian movement zones have been designed with the use of cast-in-place concrete. Coloured concrete accents are used to provide additional impact at certain intersections. Precast pavers are also utilized to demarcate edge treatment on higher order roads. The use of pavers will help to accent planting and street trees particularly in high traffic areas and retail hubs.

Lighting Fixtures and Furnishings

The overall selection of lighting and furnishings are designed to complement each other. They are contemporary in style and designed with a soft colour palette in order to not draw significant visual impact. The City of Toronto has stipulated that Steeles Ave West be constructed using the City's standards for site furnishings. Although identified in the matrix, all efforts should be made to further coordinate these standards with the rest of the Study Area.

Planting

Street planting is an important part of what makes up the Streetscape Plan for the Study Area. Although already identified for the Greenway and for streets designed with bioswales, it is important to introduce at grade planting throughout all boulevard conditions, where possible. Ornamental grasses and terrestrial wildflowers should be applied.

Lumec SoleCity Lighting Standard

Maglin SCRC 1604 - Waste Receptacle

Maglin SCB 1600B - Backless Bench

Streetscape Plan

Streetscape Components Matrix

	intersection corner paving	sidewalk paving	lighting fixtures	street benches	waste receptacles	bicycle racks	planting bed vegetation	tree grates	street banners	additional notes
mid-block road "greenway" (17.5m)	 CIP Concrete with Coloured Accents	 CIP Concrete	 Lumec SoleCity	 Maglin SCB 1600B	 Maglin SCRC 1604	 Maglin MBR 600	 Rain Garden			
street C (26.0m)	 CIPConcrete with Coloured Accents	 CIP Concrete and Precast Pavers	 Lumec SoleCity	 Maglin SCB 1600B	 Maglin SCRC 1604	 Maglin MBR 600		 Cast Iron Grate	 Community Identity Banners	Businesses should be encouraged to introduce temporary planters in summer months to help reduce the overall impact of the hardscape along Street C.
steeles ave (north side) (11.2m/10.2m)	 CIP Concrete with Coloured Accents	 CIP Concrete and Precast Pavers	 Lumec Roadstar	 City of Toronto Standard Benches	 City of Toronto Standard Receptacles	 City of Toronto Standard Bike Racks	 Ornamental Grasses and Wildflower	 Cast Iron Grate	 Community Identity Banners	All efforts should be made to further coordinate City of Toronto Standards to the Streetscape Details selected for the wider Study Area.
street X (26.0m)	 CIP Concrete	 CIP Concrete	 Lumec Roadstar	 Maglin MLB 1050BW	 Maglin SCRC 1604	 Maglin MBR 600	 Ornamental Grasses			
street G (23.0m)	 CIP Concrete	 CIP Concrete and Precast Pavers	 Lumec SoleCity	 Maglin SCB 1600B	 Maglin SCRC 1604	 Maglin MBR 600	 Wildflowers (recommended)		 Community Identity Banners	
street A-, A, B, C+, D, E, F, and F+ (20.0m)	 CIP Concrete	 CIP Concrete	 Lumec Roadstar		 Maglin SCRC 1604	 Maglin MBR 600	 Bioswale			

Streetscape Plan

Gateway Treatments

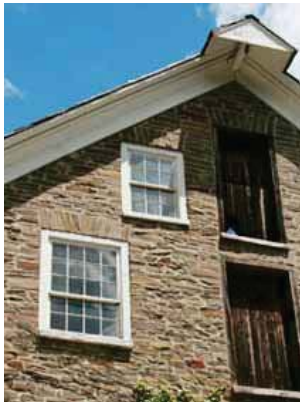
Similar to the use of site furnishings and paving materials, gateways are also used to help define sense of place; however, gateways constitute a much more distinct and obvious opportunity to express entry into a community or neighbourhood. Gateways are places which can foster civic pride, public art and key spaces in the city, as well as landscape and architectural expression. Gateways can exist in a multitude of conditions based on site visibility, building constraints and community needs. They can also be places of gathering or visual expression or a combination of both.

The Streetscape Plan also provides a hierarchy to gateway treatments, identifying major and minor locations. The location of each gateway relates to the immediate context, and therefore references gateway locations along the northern edge of York University. It is also important to note that the Steeles West Mobility Hub is identified as a "Gateway Hub" and "Unique Destination" through the Mobility Hub Guidelines. Gateways should always be designed to a high level of finish and construction, while paying special attention to materials and details. Consistency in elements, such as signage, lighting and materials should be encouraged; however, it is also important to note that the gateway locations outlined will have differing spatial constraints and should address the immediate site in each application. The allocation of public art should also be strategically allocated in places of high traffic and public focus, including the Mobility Hub as well as community parks.
The design of these gateway features presents a unique opportunity to project an overall image of the Steeles West District and entry into the City of Vaughan. Thematic responses for gateways can include, but should not be limited to:

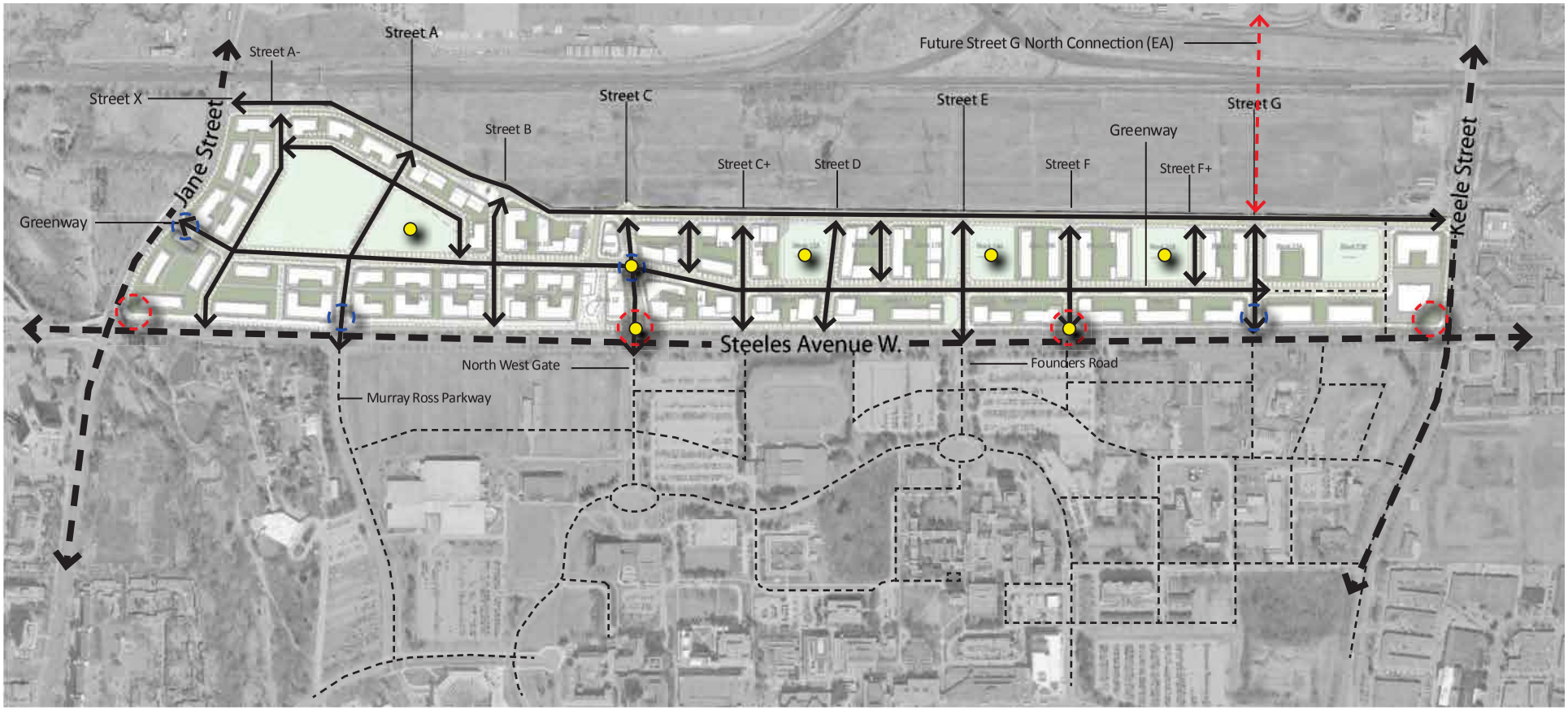
1. Vaughan Blooms
2. Historic Architecture
3. Contemporary Architecture








Streetscape Plan



Gateway Locations

- *Major Gateway Locations*
- *Minor Gateway Locations*
- *Locations for Public Art*

Appendix

While developing the preferred Development Concept, each block, street and open space was created and tracked with specific calculations for each existing landowner and as a whole for the entire study area. Built form tests were carried out for each block based upon the height, density and setback requirements of the Secondary Plan. This was to ensure that the preferred Development Concept was suitable to allow each landowner, as well as the collective study area, the ability to achieve the densities permitted while maintaining the preferred street, block and open space layout.

I: Phase 1 Test, Block & Demonstration Plans, 3D Views
II: Phase 2 Test, Block & Demonstration Plans, 3D Views
III: Streetscape Cost Estimates

Streetscape Cost Estimates

Steeles West - Urban Design & Streetscape Plan

	Elements of the Streetscape	Mid-Block Road " Greenway"					Street 'C' - City Capital Project					Steeles Avenue (North Side)					Street 'X' - City Capital Project				
	Elements of the Streetscape include general components which make up the surface articulation only, including hardscape and softscape	EST. QTY (@ 10m intervals)	UNIT	UNIT PRICE	AMOUNT	TOTALS (approx. 2100m)	EST. QTY (@ 10m intervals)	UNIT	UNIT PRICE	AMOUNT	TOTALS (approx. 200m)	EST. QTY (@ 10m intervals)	UNIT	UNIT PRICE	AMOUNT	TOTALS (approx. 2100m)	EST. QTY (@ 10m intervals)	UNIT	UNIT PRICE	AMOUNT	TOTALS (approx. 2100m)
NOTES	**BOULEVARD HARDSCAPE**																				
	Precast Unit Paver Rest Areas and Pedestrian Accents	10	sq.m.	$150	$1,500	$315,000	50	sq.m.	$150	$7,500	$150,000	8	sq.m.	$150	$1,200	$252,000	n/a	sq.m.	$150		
	BOULEVARD SOFT LANDSCAPING																				
	Street Trees	2.5	each	$600	$1,500	$315,000	n/a	each	$600			2.5	each	$600	$1,500	$315,000	2.5	each	$600	$1,500	$315,000
	Street Trees in Structural Soil	n/a	each	$3,200			2.5	each	$3,200	$8,000	$160,000	n/a	each	$3,200			n/a	each	$3,200		
	Sodded Boulevard	27.5	sq.m.	$6	$165	$34,650	n/a	sq.m.	$6			24	sq.m.	$6	$144	$30,240	n/a	sq.m.	$6		
	Planted Boulevard	n/a	sq.m.	$100			n/a	sq.m.	$100			24	sq.m.	$100	$2,400	$504,000	24	sq.m.	$100	$2,400	$504,000
1	Rain Garden Engineering	10	l.m.	$1,500	$15,000	$3,150,000	n/a	l.m.	$1,500			n/a	l.m.	$1,500			n/a	l.m.	$1,500		
2	Bioswale Engineering	n/a	l.m.	$400			n/a	l.m.	$400			n/a	l.m.	$400			n/a	l.m.	$400		
	FURNISHINGS																				
	Benches (1 bench every 40m)	0.25	each	$2,000	$500	$105,000	0.25	each	$2,000	$500	$10,000	0.25	each	$2,000	$500	$105,000	n/a	each	$2,000		
	Garbage & Recycling Recepticals (1 receptical every 40m)	0.25	each	$2,500	$625	$131,250	0.25	each	$2,500	$625	$12,500	0.25	each	$2,500	$625	$131,250	n/a	each	$2,500		
	Roadway Lighting Standard	0.66	each	$7,000	$4,620	$970,200	0.66	each	$7,000	$4,620	$92,400	0.66	each	$7,000	$4,620	$970,200	0.66	each	$7,000	$4,620	$970,200
	Pedestrian Lighting Standard	n/a	each	$5,000			n/a	each	$5,000			0.5	each	$5,000	$2,500	$525,000	n/a	each	$5,000		
3	Wayfinding Signage	0.01	each	$3,000	$30	$6,300	0.01	each	$3,000	$30	$600	0.01	each	$3,000	$30	$6,300	n/a	each	$3,000		
	Bicycle Racks (3 racks every 40m)	0.75	each	$550	$413	$86,625	0.75	each	$550	$413	$8,250	0.75	each	$550	$413	$86,625	n/a	each	$550		
	OTHER																				
	Major Gateway Treatment											4	each	$100,000	$400,000						
	Minor Gateway Treatment	2	each	$50,000	$100,000							2	each	$50,000	$100,000						
	Public Art						1	each	$100,000	$100,000		1	each	$100,000	$100,000						
	OVERALL STREET TYPE TOTAL					**$5,114,025**					**$433,750**					**$2,925,615**					**$1,789,200**
	Contingency (15%)					$767,104					$65,063					$438,842					$268,380
	TOTALS					$5,881,129					$498,813					$3,364,457					$2,057,580

PROJECT TOTAL	**$18,651,964**

NOTES

1. **Rain Garden Engineering** includes Planting, Drainage, Earthworks, and 2 years of Maintenanc
2. **Bioswale Engineering** includes Planting, Drainage, Earthworks, and 2 years of Maintenanc
3. **Wayfinding Signage** located upon throughout based on streets and gateway locations. Distribution of cost per 10m intervals and varies based on streets that have wayfinding signage o

Minor A - Higher Order Street (23m) 'Street G'					Minor B - Lower Order Street (20m)					Jane Street (East Side Only)					Keele Street (West Side Only)				
EST. QTY (@ 10m intervals)	UNIT	UNIT PRICE	AMOUNT	TOTALS (approx. 1800m)	EST. QTY (@ 10m intervals)	UNIT	UNIT PRICE	AMOUNT	TOTALS (approx. 2300m)	EST. QTY (@ 10m intervals)	UNIT	UNIT PRICE	AMOUNT	TOTALS (approx. 440m)	EST. QTY (@ 10m intervals)	UNIT	UNIT PRICE	AMOUNT	TOTALS (approx. 200m)
n/a	sq.m.	$150			n/a	sq.m.	$150			2	sq.m.	$150	$300	$19,200	2	sq.m.	$150	$300	
2.5	each	$600	$1,500	$270,000	2.5	each	$600	$1,500	$345,000	2.5	each	$600	$1,500	$66,000	2.5	each	$600	$1,500	$30,000
n/a	each	$3,200			n/a	each	$3,200			n/a	each	$3,200			n/a	each	$3,200		
6	sq.m.	$6	$36	$6,480	n/a	sq.m.	$6			16	sq.m.	$6	$96	$6,144	8	sq.m.	$6	$48	$960
n/a	sq.m.	$100			n/a	sq.m.	$100			16	sq.m.	$100	$1,600	$102,400	8	sq.m.	$100	$800	$16,000
n/a	l.m.	$1,500			n/a	l.m.	$1,500			n/a	l.m.	$1,500			n/a	l.m.	$1,500		
n/a	l.m.	$400			20	l.m.	$400	$8,000	$1,840,000	n/a	l.m.	$400			n/a	l.m.	$400		
0.25	each	$2,000	$500	$90,000	0.25	each	$2,000	$500	$115,000	0.25	each	$2,000	$500	$32,000	0.25	each	$2,000	$500	$10,000
0.25	each	$2,500	$625	$112,500	0.25	each	$2,500	$625	$143,750	0.25	each	$2,500	$625	$40,000	0.25	each	$2,500	$625	$12,500
0.66	each	$7,000	$4,620	$831,600	0.66	each	$7,000	$4,620	$1,062,600	0.66	each	$7,000	$4,620	$295,680	0.66	each	$7,000	$4,620	$92,400
n/a	each	$5,000			n/a	each	$5,000			0.5	each	$5,000	$2,500	$160,000	0.5	each	$5,000	$2,500	$50,000
n/a	each	$3,000			n/a	each	$3,000			0.01	each	$3,000	$30	$1,920	0.01	each	$3,000	$30	$600
0.75	each	$550	$413	$74,250	0.75	each	$550	$413	$94,875	0.75	each	$550	$413	$26,400	0.75	each	$550	$413	$8,250

				$1,384,830					**$3,601,225**					**$749,744**					**$ 220,710**
				$207,725					$540,184					$112,462					$ 33,107
				$1,592,555					$4,141,409					$862,206					$ 253,817