THE CITY OF VAUGHAN

Carrville District Centre Urban Design Streetscape Master Plan Study

Council Approved June 2010

Giannone Petricone Associates

EDA Collaborative Inc.

City of Vaughan
The City Above Toronto

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Submitted by:

EDA Collaborative Inc.

Giannone Petricone Associates

Prepared for:

City of Vaughan
The City Above Toronto

ACKNOWLEDGEMENTS

The Urban Design Streetscape Master Plan for Carrville District Centre is the product of collaborative input from City of Vaughan staff, local land owners, and key stakeholders. These dedicated individuals addressed important concerns and issues surrounding the development of a streetscape master plan for this new urban centre within the City of Vaughan.

Those who made an effort to participate in the stakeholder meetings and workshops will have a greater sense of ownership and pride, as it is these individuals who have helped shape the Streetscape Master Plan design, guidelines and recommendations for Carrville District Centre. The future design of the Centre is the ideas of staff, land owners and stakeholders combined with the expertise of the consultants which has resulted in a practiced Streetscape Master Plan to be used to guide future development within Carrville District Centre.

Consultants

EDA Collaborative Inc. commenced work on this study in Spring 2008. This document summarizes the design framework and vision, community structure components, streetscape and built form guidelines, and sustainability measures for implementation. EDA provided the overall project management , stakeholder consultation, streetscape and open space design components.

Giannone Petricone Associates Inc. Architects provided the architectural expertise for this study paying particular attention to the built form and urban design elements.

Read, Voorhees & Associates Limited provided the transportation and traffic engineering assessment.

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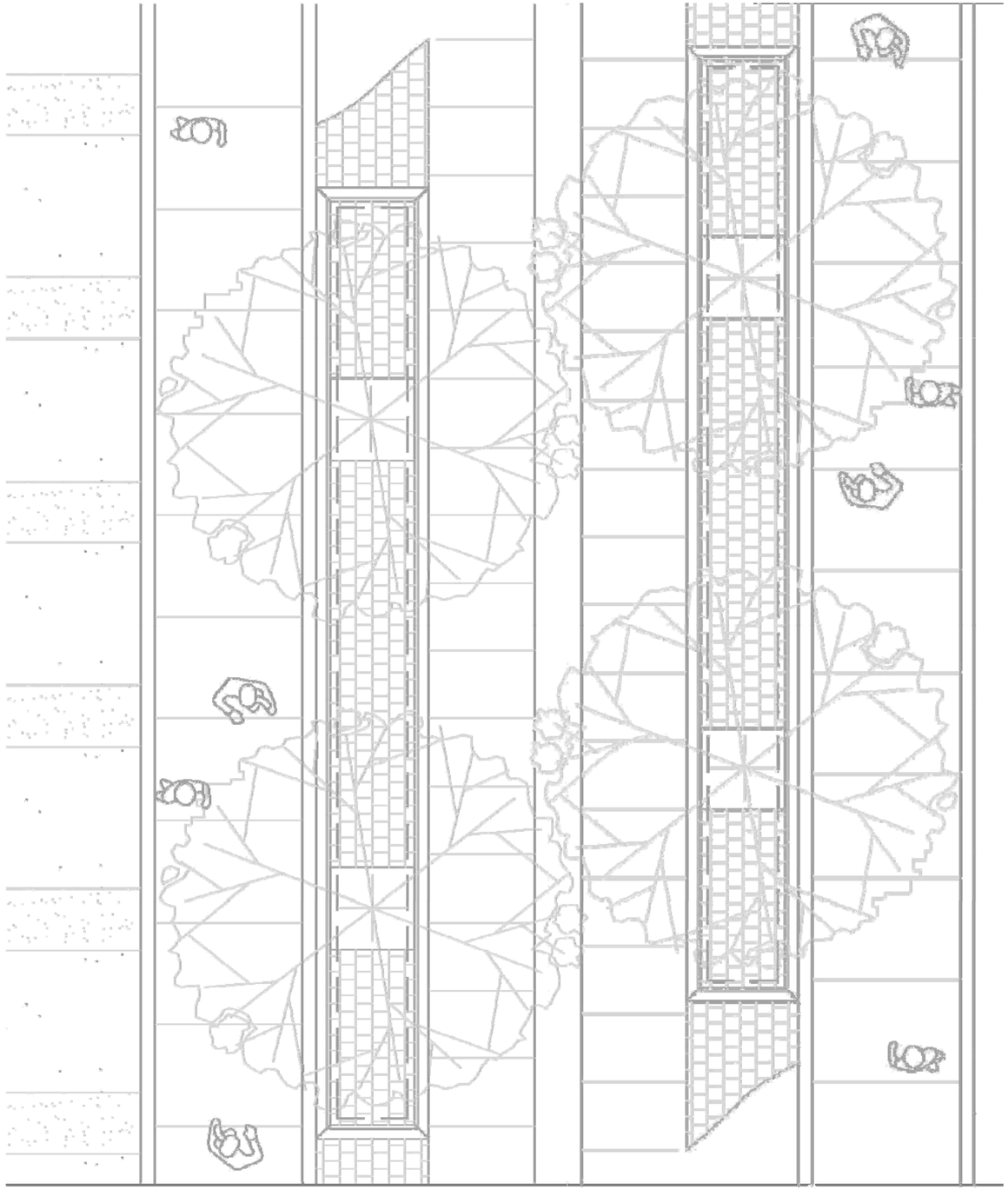
TABLE OF CONTENTS

LIST OF FIGURES AND TABLES



1.0 INTRODUCTION AND CONTEXT

1.1 Background and Purpose

The Carrville District Centre is a new and exciting urban centre with a compact physical form that is human in scale and designed to be 'pedestrian-friendly' and transit supportive. The District Centre provides opportunities for community scale commercial facilities, coupled with more intense residential forms of development, and encourages mixed-use development. The Carrville District Centre is expected to contain 11,000 to 12,000 people and approximately 5,400 dwelling units. It is envisioned to have a main street and central urban square and supportive land uses surrounding the centre.

Carrville's important distinction is recognized by the creation of an urban centre complete with commercial and retail uses, live work uses, institutional uses, residential uses, mixed residential uses and urban spaces.

The purpose of the Carrville District Centre Urban Design Streetscape Master Plan Study was to prepare Urban Design Guidelines and Detailed Streetscape Master Plans to guide future development in accordance with the Urban Design policies of the Carrville District Plan OPA 651. The final design concept for the community was developed with the City through extensive workshops and meeting with various stakeholders that commenced in the spring of 2008. This study establishes the layout and detailed design of the public and private streetscape spaces, pedestrian and bicycle connections, public amenities and open spaces, as well as criteria for building locations, forms, heights and massing in relation to the public realm.

A number of objectives for the District Centre were established by the City of Vaughan and have been addressed through the development of this study.

After thorough analysis of the site, background information and relevant policies, EDA Collaborative Inc., in association with Giannone Petricone Associates Inc. Architects, developed the Carrville District Centre Urban Design Streetscape Master Plan Study. This study provides the guidelines and standards to ensure the future development of Carrville District Centre will be successful as a vibrant and inspiring place to live, work and play within the City of Vaughan.

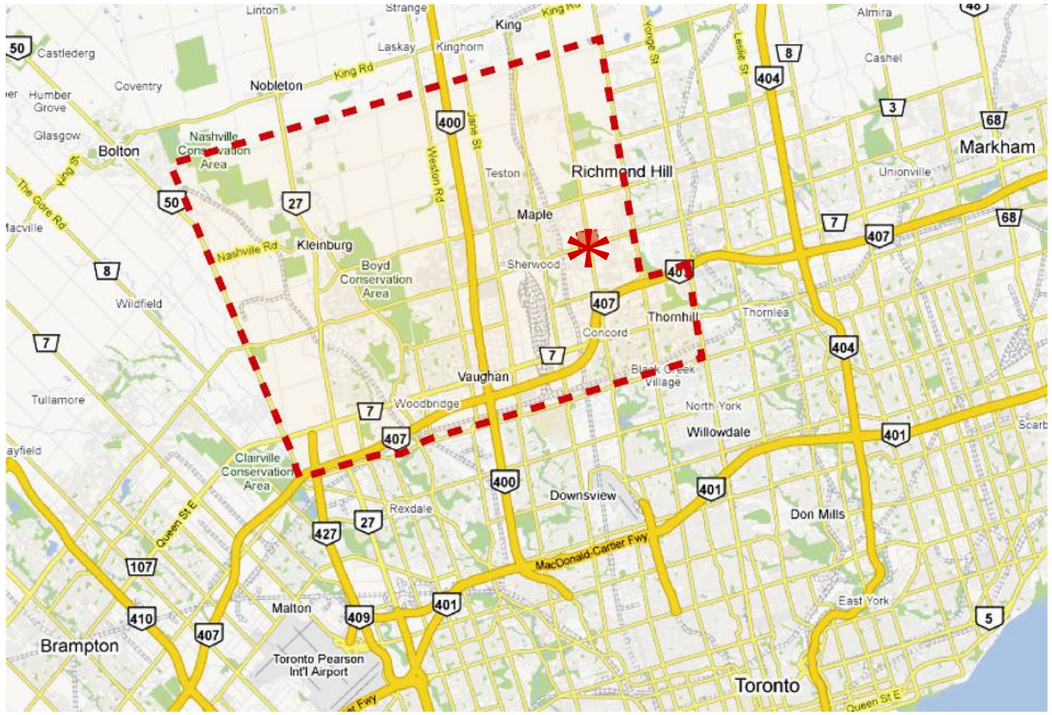


Figure 1: Carrville Context Plan

1.2 Policy Context

The City of Vaughan Council approved The Carrville District Centre Official Plan Amendment (OPA) #651 on May 23, 2006 with a general intent that the plan becomes the focus for higher order land uses within the Carrville community. OPA 651 sets out policies to ensure that the Carrville District Centre will evolve into an urban core, with a compact physical form that is human in scale and is designed to be a “pedestrian friendly” and transit supportive area. Within this Centre there will be the opportunity for community scale commercial uses coupled with more intense residential forms, encouraging mixed-use development.

The intent of the Urban Design Streetscape Master Plan Study is to expand upon the policies of OPA 651 by providing further urban design criteria and detail to assist in the preparation and evaluation of development plans within the District Centre.

The urban design objectives established by OPA 651 are to:

(a) Promote high quality urban design within the area including streetscapes, open spaces, and public and private buildings, to create a comfortable, usable and memorable neighbourhood;
(b) Create a strong community image by enhancing the character of the built environment including building design / massing, signage, planting and streetscapes;
(c) Provide a transition between the concentrated uses within the District Centre and the surrounding lower densities;
(d) Ensure neighbouring developments within the Centre and those adjoining it are compatible and complementary;
(e) Create a pedestrian-friendly environment through the street layout, lot configuration and siting of all buildings;
(f) Develop attractive streetscapes ensuring that development adjacent to the ‘Main Street” is a comfortable, human-scale for pedestrians; and,
(g) Support transit by coordinating land use, transportation infrastructure and urban design in a complementary manner and encourage pedestrian-oriented, transit-supportive development.

Figure 2: Land Use Plan, Official Plan Amendment 651

1.3 Site Analysis

1.3.1 Site Context

The Carrville District Centre is located in the east portion of the City of Vaughan, one of Canada's fastest growing urban centres. The site is comprised of approximately 57.0 hectares and is generally located at the intersection of Rutherford Road and Dufferin Street. The four quadrants surrounding the intersection are not equal in size and have extremely different environmental and existing development contexts, therefore the northwest quadrant of the site will be the primary focus of the District Centre.

There are residential developments to the south of the Carrville District Centre, while development is in the initial stages on the east and west sides of the site. However, to the north of the Centre there is relatively little development occurring at this time.

The District Centre is in proximity to the Upper Don River Valley and many smaller tributaries, as well as several woodlots and vast open spaces; this will provide access for an extensive parks and open space network within the community.

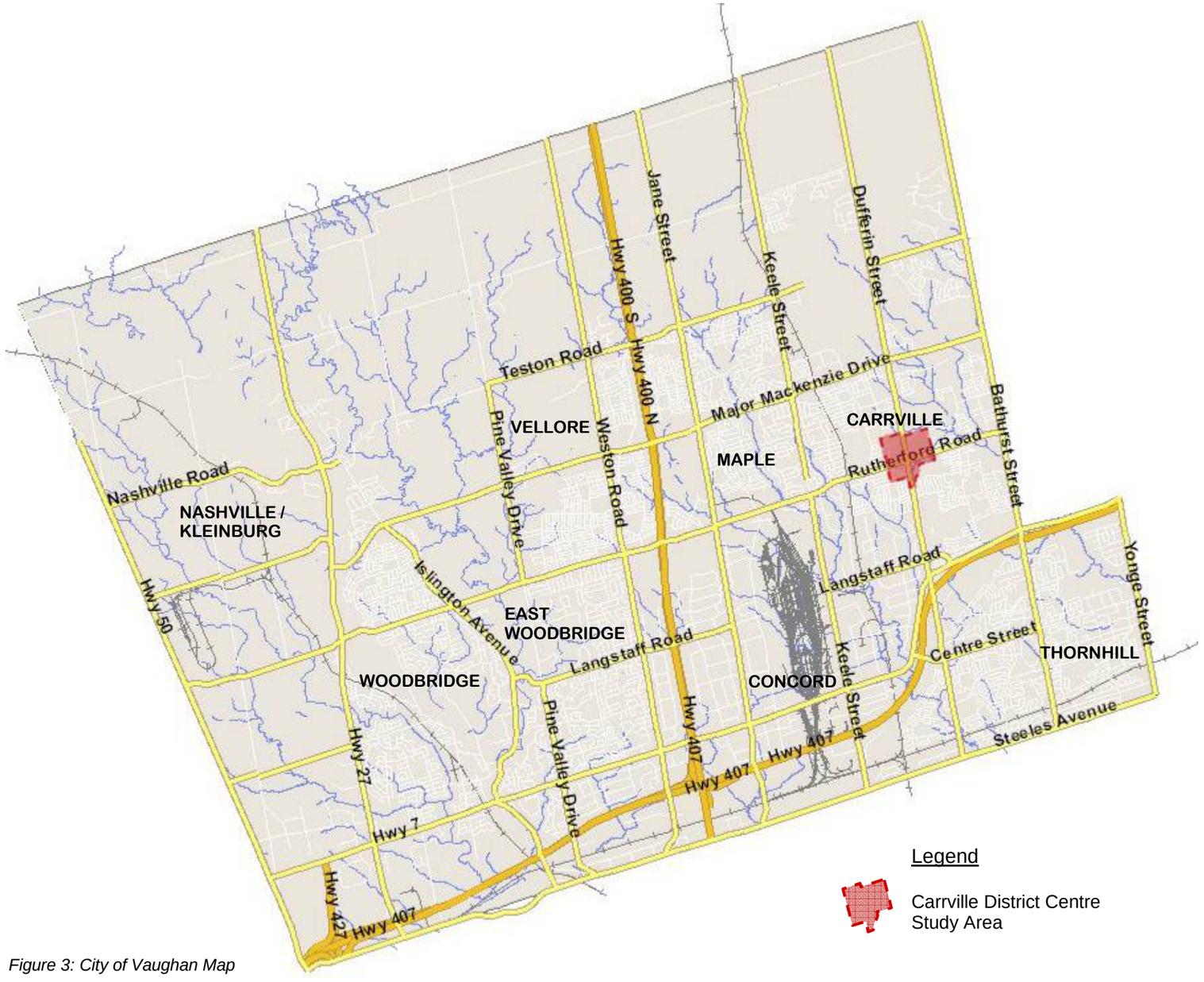


Figure 3: City of Vaughan Map

1.3.2 Topography

The natural character of the Carrville District Centre is that of an extensive, gently sloping plain with surface drainage via overland flow running generally from west to north and southeast. Low points exist in the north and northeast corner of the site, as well as in the south, where there is an extensive valleyland and woodlot natural heritage system. A third low point is located at the southwest end just outside of the site boundary, where a Storm Water Management Pond is proposed to be located. The highest point of the site is located in the northwest corner, with a secondary high point near the intersection of Dufferin Street and Marc Santi Boulevard. The northwest quadrant is generally the highest and flattest area within the Carrville District Centre, while the northeast quadrant is quite steep in some areas and possesses noticeable topographic variations.

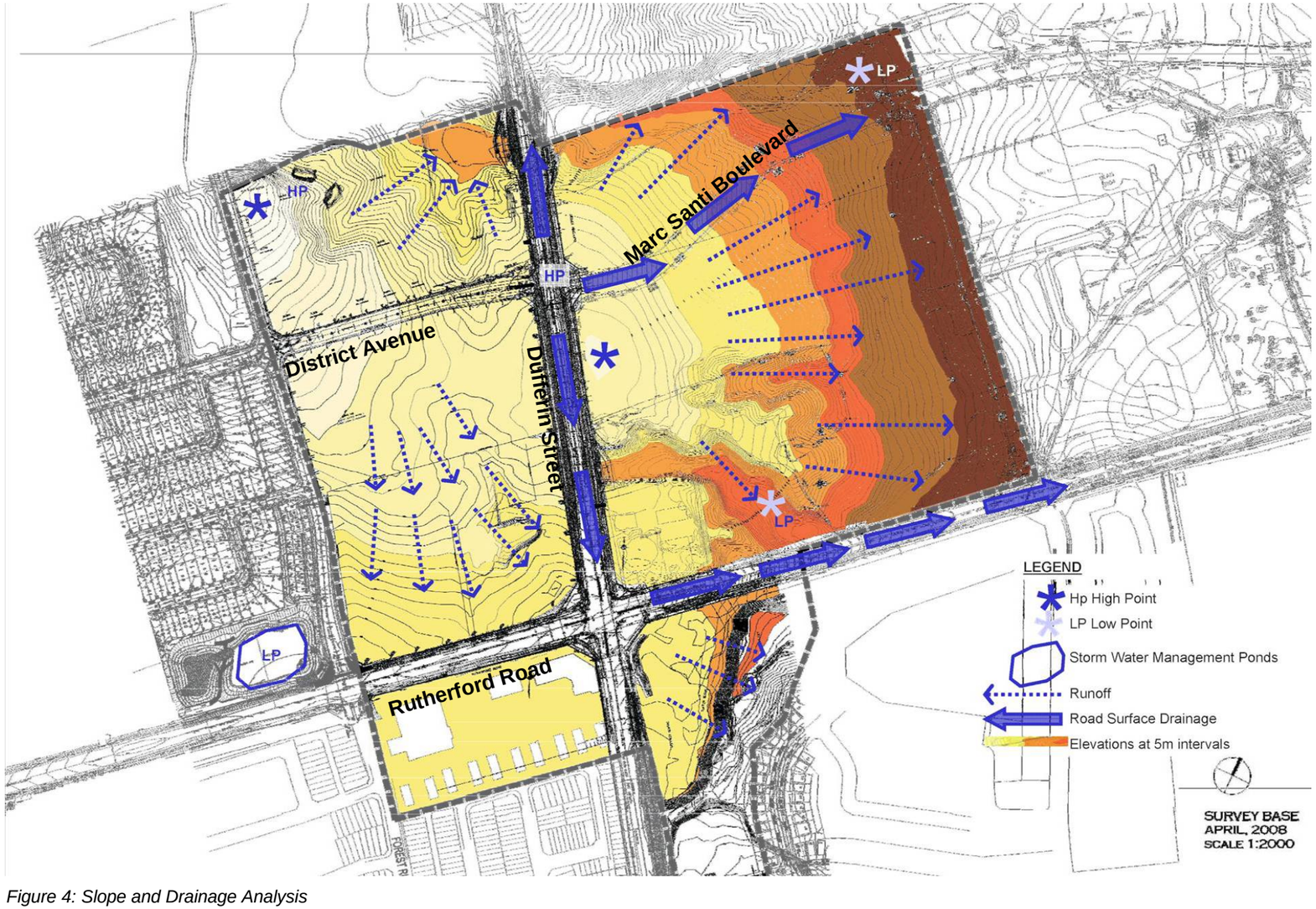


Figure 4: Slope and Drainage Analysis

1.3.3 Woodlots, Valleylands and Open Space

Within the Carrville District Centre there is one relatively large woodlot located in the northeast quadrant and a smaller area in the southeast quadrant of the site which are protected as Environmental Policy Areas. The northwest and southwest quadrants are generally clear of any woodlots, valleylands or natural open space features. There is a second woodlot located along the northern edge of the site which extends past the District Centre boundary. There are significant natural open spaces located directly to the north of the northern valley / woodlot as well as to the east of the site, creating a large interconnected system of woodlots and open space immediately surrounding the District Centre. Farther to the east are valleylands and the Upper Don River. These lands serve to protect and enhance the natural ecosystem and to maintain ecological diversity within Vaughan. Most of the lands within the Centre are identified as a "Settlement Area" within the Oak Ridges Moraine Conservation Plan, meaning that it will be developed in a manner consistent with all appropriate legislation.

LEGEND

- Woodlot
- Valley lands
- Natural Open Space
- Stormwater Management Ponds / Watercourses
- Site Boundary

Figure 5: Woodlots, Valleylands and Open Space Context

1.3.4 Circulation

Two regional arterial roads create the major traffic node within the Carrville District Centre. Rutherford Road is the main east-west arterial road, and Dufferin Street is the main arterial road in a north-south direction. These roads play an important role in the successful development of the Carrville District Centre. They provide access and allow opportunities for vehicular and pedestrian infiltration into the Carrville District Centre by means of minor collector roads perpendicular to these arterial roads.

A smaller, community traffic node is located at the intersection of Dufferin Street and Marc Santi Boulevard. This intersection currently provides vehicular access through the northern portion of the site, connecting the two local roads running north-south along the site's east and west boundary.

The northwest quadrant is the most accessible area within the site. The regional and minor collector roads that border this quadrant provide numerous potential access points into the District Centre. District Avenue runs directly through this quadrant, connecting the Carrville District Centre with other areas in the City of Vaughan and the Region of York.

LEGEND

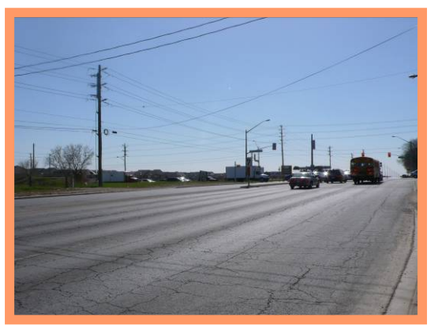
- Regional Arterial Road
- Existing Minor Collector Road
- Regional Traffic Node
- Community Traffic Node
- Site Photo Location (colour-coded with photographs on page 7)

Figure 6: Existing Circulation

Existing Roads Photos —
Marc Santi Boulevard
(West of Dufferin Street)

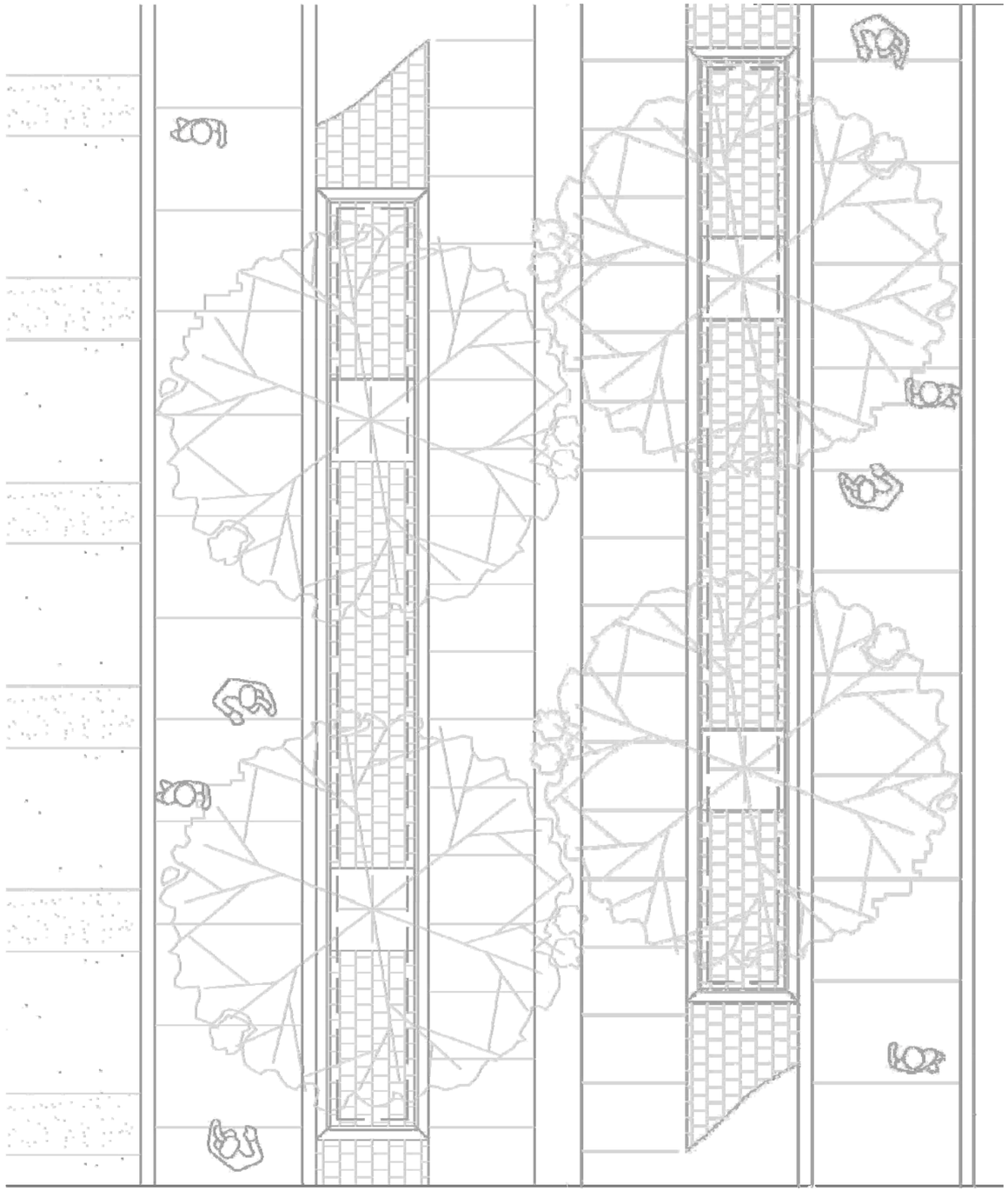
Existing Roads Photos —
Dufferin Street

Existing Roads Photos — Marc Santi Boulevard (East of Dufferin Street)



Existing Roads Photos —
Rutherford Road

Existing Roads Photos —
East Boundary of Site



2.0 VISION AND COMMUNITY STRUCTURE

2.1 Vision

The Carrville District Centre is envisioned to have a strong sense of place and establish a new Carrville identity via higher order land uses within diverse neighbourhoods. This area will evolve to become an urban centre within the district with a compact physical form that is human in scale, pedestrian friendly and transit supportive. Streets are generally a modified grid system with pedestrian friendly sidewalks and street trees. Development throughout the Centre will be characterized by high quality urban design scaled to the pedestrian. Traditional urban elements such as urban squares, main streets and parks are employed to embrace the future in the articulation of these enduring spaces. The District Centre is projected to contain approximately 5,400 housing units accommodating approximately 11,000 to 12,000 residents, and employing approximately 4,000 people when fully developed.

It is this vision for Carrville District Centre that will be realized through the following development objectives:

- A new focal point of commercial, residential and business activity within the Carrville community;
- A “hybrid” urban character District distinct from the surrounding community, but also linked to its surroundings;
- One district identity with three unique sub-characters;
- Create neighbourhoods of small blocks with a pedestrian emphasis;
- Develop Parks and Open Space within a five minute walk of all neighbourhoods:
  - Leverage the natural resources of the site to establish a cohesive park and open space network that highlights a distinctive district identity;
  - Integrate pedestrian land bicycle inks to park and open space areas;
- Urban public space is a key ingredient:
  - A “Main Street” spine that creates a variety of urban experiences;
  - The “Urban Square” magnetically collects public activities and offers a place to gather – an urban social hub defined by edges of mixed-use and porous landscape elements;
  - People friendly streetscapes;
  - Open Space to relieve the urban density of Carrville with a variety of natural pockets that encompass neighbourhood parks, natural areas, woodlots and green ways;
- Sustainable Development:
  - Complete and connected neighbourhoods with mixed use and compact urban form, active streets, a diversity of housing types, sizes and affordability, a connected network of streets, minimize the impacts due to parking and strong pedestrian and bicycle networks;
  - Streetscapes and development (density, land use and urban design) that supports public transit;
  - Incorporate site-level stormwater management techniques (i.e. curb extensions to absorb street runoff, planting strips, grass swales, bioretention areas, rain gardens) in addition to regional stormwater ponds, to prevent, treat and store runoff and associated pollutants;
  - Resource efficiency: integrate “green” technologies and the use of passive and active renewable energy sources into the design of new buildings and infrastructure; and
  - Environmental preservation: protect and restore native habitats, protect natural resources and features (woodlots, valleylands and watercourses).

Specific opportunities for place making / building identity include:

- Regional arterials treated as high quality streetscapes;
- Higher densities on key sites;
- Urban public space as a key ingredient;
- East-west greenway on the north side of the woodlot linking dedicated neighbourhood parks east of Dufferin Street;
- North-south main street linking dedicated neighbourhood parks west of Dufferin Street; and,
- Linking the east and west sides of Dufferin Street and the north and south sides of Rutherford Road.

Main Street

Urban Square

Urban Neighbourhood Parks

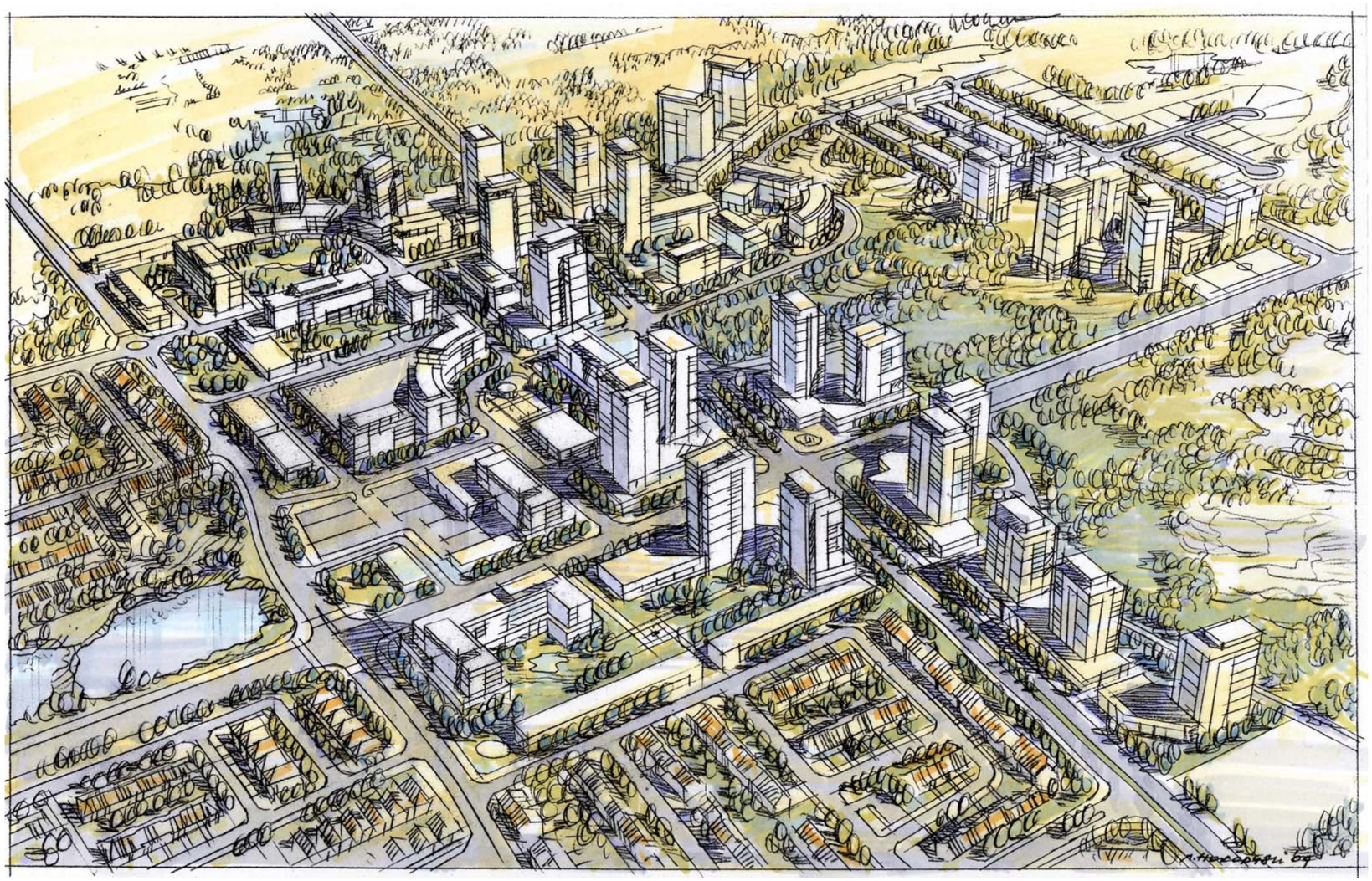


Figure 7: Proposed Master Plan - Aerial View

2.2 Community Structure Components

2.2.1 Proposed Enhancements to OPA 651

This Master Plan Study builds upon and enhances the principles established in Official Plan Amendment 651. After a thorough analysis of the site and relevant background information several proposed enhancements were established to create a more urban and distinct District Centre area. The vision established for the Carrville District Centre will enhance the OPA in a way that will only make the community design stronger and more cohesive.

The enhancements that have been proposed to strengthen the vision of the OPA are important to the development of the District Centre for it to become a great place to live, work and play. These enhancements are as follows:

- Modification to the street pattern to create a more permeable urban fabric with access from all surrounding streets, ensuring that the circulation within the District Centre is strong to create a vibrant core area.

- Changing the character and location of the proposed park on Rutherford Road west of Dufferin Street is important for the development of the District Centre. The OPA situates this open space with frontage onto Rutherford Road, a major arterial road. It is recommended to relocate the park to become more embedded in the community and to create an urban square fronting onto Main Street. The size of this open space was reduced somewhat to create an appropriately sized urban square area. However, an additional small parkette was added to the area northwest of the urban square in order to provide adequate open space to satisfy the parkland dedication requirement.

- Creating a concentration of retail and commercial uses on Main Street will ensure a vibrant community centre with a strong link between the urban square and the Urban Neighbourhood Park located at the north end of Main Street (see Page 13 for location).

- The amount of road was reduced on the east side of Dufferin Street in order to create a larger, more continuous open space. This includes a green pedestrian link connecting residential areas with the commercial centre on the west side.

- The Region of York standard of 36 metre right-of-way for arterial roads was maintained in order to accommodate anticipated levels of traffic as well as higher order transit facilities that may be necessary in the future.

- The demonstration plans in the OPA showing densities have been modified and configured in such a way that increases the height of some buildings (from 16 storeys to 25 storeys) but maintains the proposed densities. This enhancement will reduce the “wall effect” that would have occurred otherwise with more continuous 16-storey perimeter buildings along many of the streets. These taller buildings will have a 2 to 6-storey podium base with retail, commercial and office opportunities that relate to and articulate the street level. A residential tower rises above and behind the podium possessing a slimmer, more elegant profile, allowing for a smaller shadow effect on adjacent land uses.

- A clear streetscape hierarchy was established in order to ensure compatibility with adjacent land uses.

- A clear open space structure and hierarchy was established as a framework for pedestrian linkages and connections to surrounding open space and communities.

THIS: Point tower on podium

NOT THIS: Continuous street wall

Figure 8: Proposed Land Use Diagram

NOTE: Blocks 9, 17, 33, 34A and 34B are above the maximum FSI of 2.5.

2.2.2 Road Network

The successful achievement of the vision for the Carrville District Centre requires a modification to the image and function of the Regional roads (Dufferin Street and Rutherford Road) within the District Centre, from primarily high-speed vehicular routes to multi-purpose urban streets that are places for vehicles, transit and pedestrians.

The planned road network establishes a hierarchy of road functions and uses based upon connections to the broader arterial road system, responding to the needs of the District Centre, the residential neighbourhoods and the employment areas within Carrville.

Integrated with this road network is a pedestrian and bicycle network, established by the City of Vaughan and the Region of York. These routes are incorporated into the proposed road and open space networks for Carrville District Centre.

Multiple and continuous primary and local road connections support direct travel and reduce the reliance on individual road intersections. Dispersing traffic throughout the road network and keeping it flowing at a steady rate, through the implementation of round-a-bouts, will enable traffic volumes on the majority of roads in the community to potentially decrease.

The road network is based on a modified grid pattern, recognizing natural and built features as well as the site constraints. It allows for proper integration with the planned and built road network on surrounding lands bounding the District Centre.

Parking within the District Centre is intended to be primarily on-street where possible and underground or above-grade structured parking lots. However, surface parking may be required in the short or long term. These surface lots shall incorporate sustainable design principles to encourage the infiltration of stormwater, reduce the urban heat island effect and minimize potable water consumption for landscape irrigation.

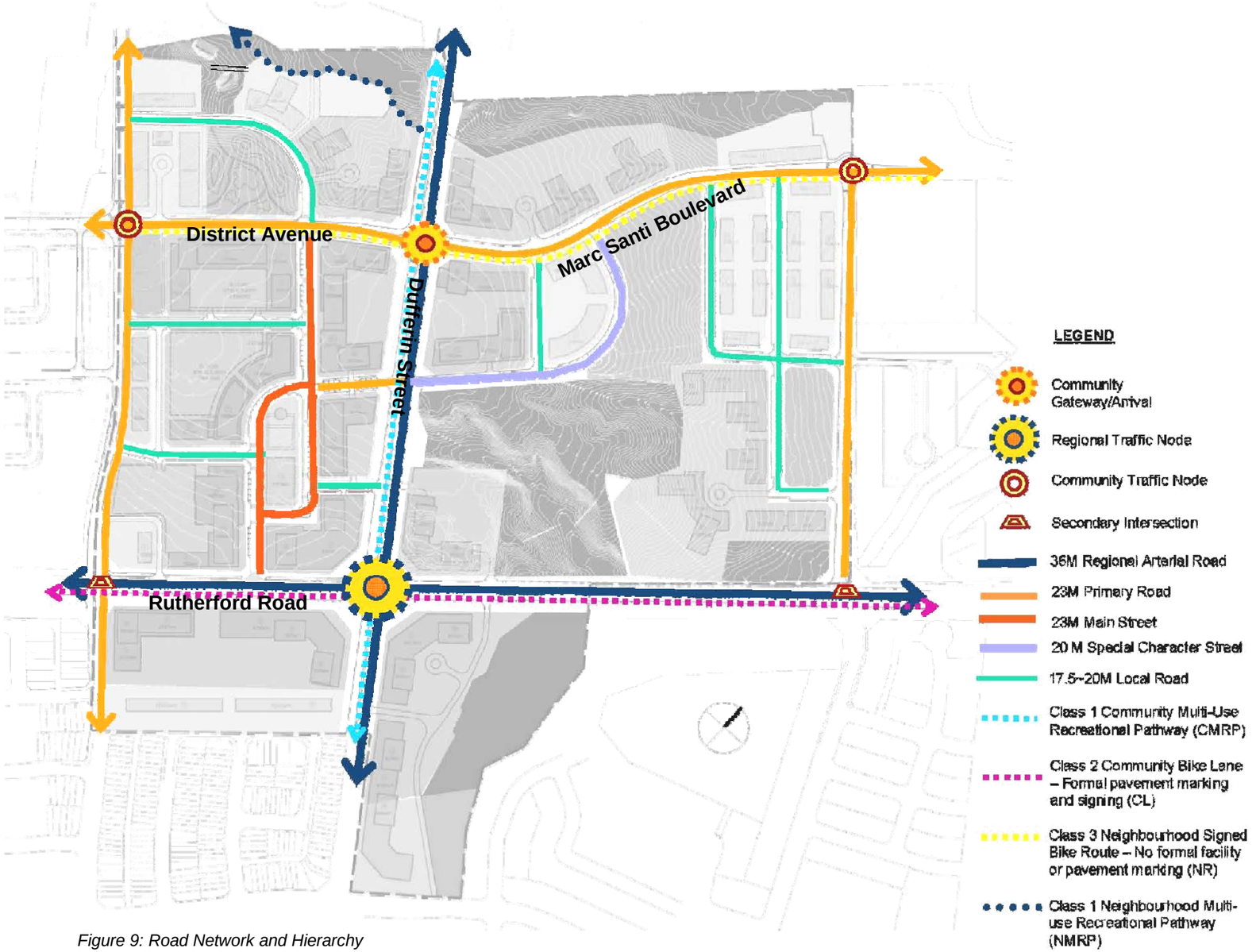


Figure 9: Road Network and Hierarchy

2.2.3 Transit Network

Carrville District Centre is proposed to be of relatively high density; therefore it can be expected that demand for transit in the area will increase. The planned transit network for the District Centre includes existing routes along Dufferin Street and Rutherford Road as well as potential future routes proposed by York Region Transit.

As specified in OPA 651, it is a major objective of the City to increase transit ridership. In order to accomplish this, the transit network within the District Centre should be an integral component of the local system, connecting with regional and inter-regional transit routes. Connecting routes to the local transit system that operates along arterial and primary roads, the TTC subway system and the GO rail system are important linkages that must be made for transit to be successful within the District Centre.

York Region Transit has specified potential YRT service within the Carrville District Centre, assuming full build-out. This service includes YRT Route 86 which travels through the District Centre from the west boundary road (Grand Truck Avenue) and along District Avenue / Marc Santi Boulevard. This potential route would provide adequate service to the District Centre, allowing most residents to have a transit stop located within a 5 minute walk.

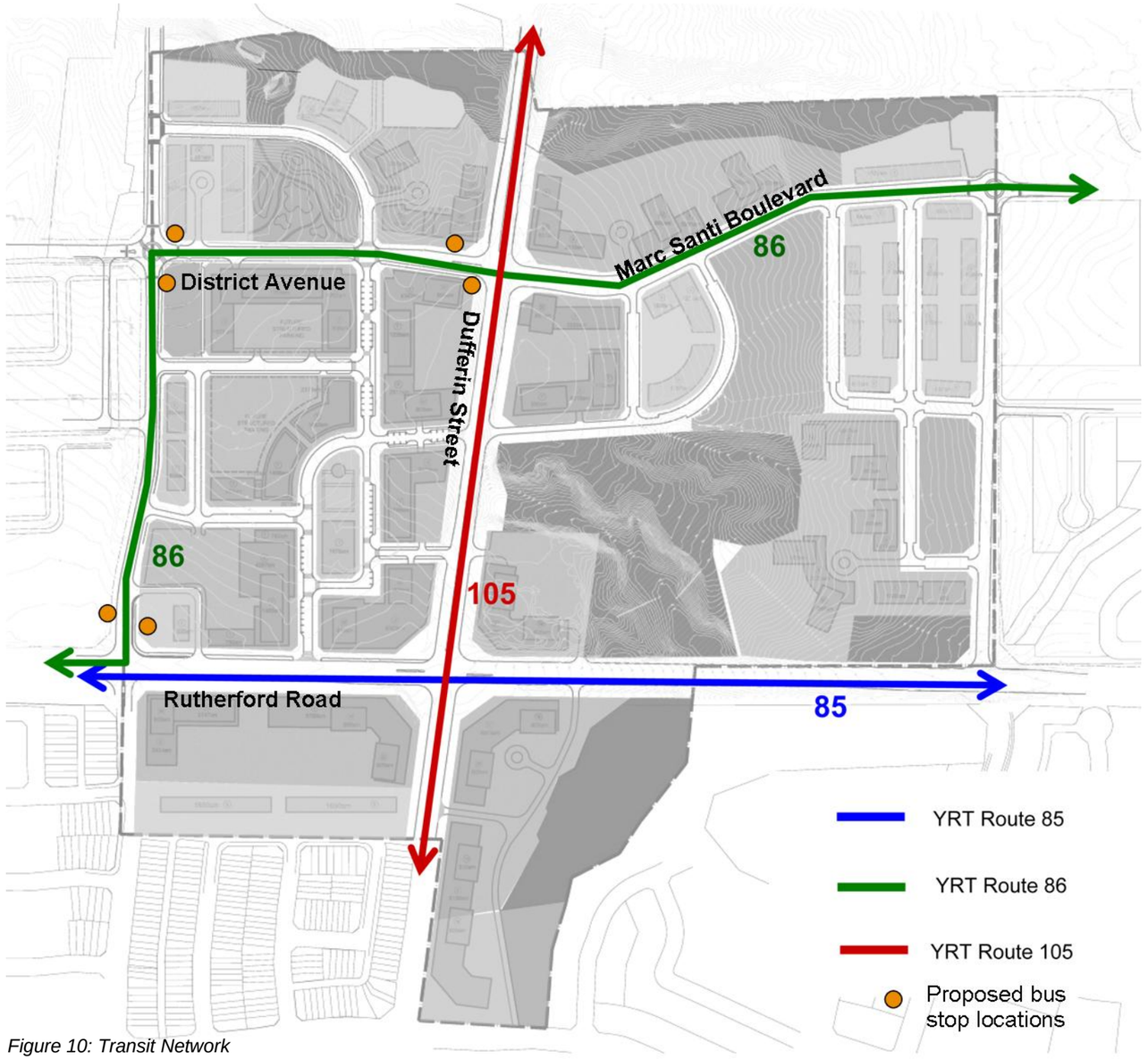


Figure 10: Transit Network

2.2.4 Parks and Open Space Network

The Carrville District Centre Master Plan establishes a hierarchy of parks and open space to respond to the community's passive and active recreational needs typical of an urban mixed-use centre as well as the statutory parkland dedication requirements.

This network will provide central common green spaces within the District Centre that meet the varying social and recreational needs of the residents, employees and visitors. It is planned to act as a greenway linkage open space system that facilitates continuous pedestrian and bicycle connectivity throughout the community and to adjacent communities.

The proposed variety of parkland and open space typologies are discussed in detail in Section Four (4.0) of this report.

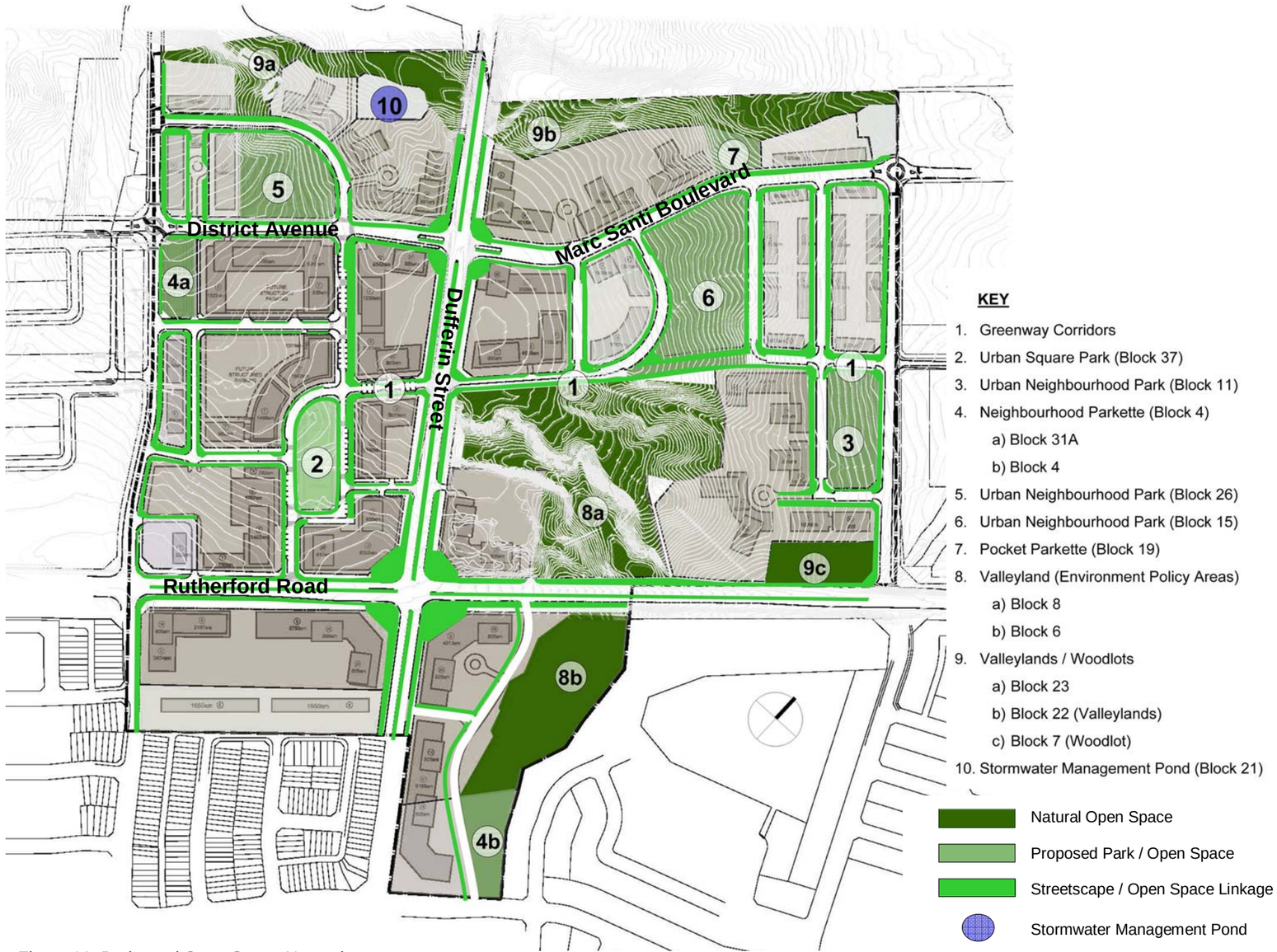


Figure 11: Parks and Open Space Network

2.2.5 Block Structure

The block structure of Carrville District Centre is appropriately scaled not only for efficient phasing of development, but also to create distinct neighbourhoods, defined by their responsive building typology. Each block is specific to its intended character and uniquely creates rich mixed-use, pedestrian experiences within strong urban spaces punctuated by open landscape pockets. Hierarchical urban links connect each block to the pockets of open space, and to each other, to create a strong pedestrian-oriented community fabric. In this way, it is cohesive internally while interconnected with the surrounding neighbourhoods.

Varying densities and building types will create these unique block neighbourhoods defined by distinct urban neighbourhood parks, main streets, urban corners, urban squares, townhouse typologies, tower in the landscape typologies and natural woodlots and valleylands.

The Block Structure Plan illustrated in Figure 12 demonstrates the proposed block configuration for the Carrville District Centre.

The block plan identifies the area (in hectares) of each development block in the District as well as the footprint area (in square metres) of each proposed building block.

Table 1: Block Structure Statistics summarizes the coverage and density information for each block as well as parkland dedication area for the OPA 651 and the proposed development plan.

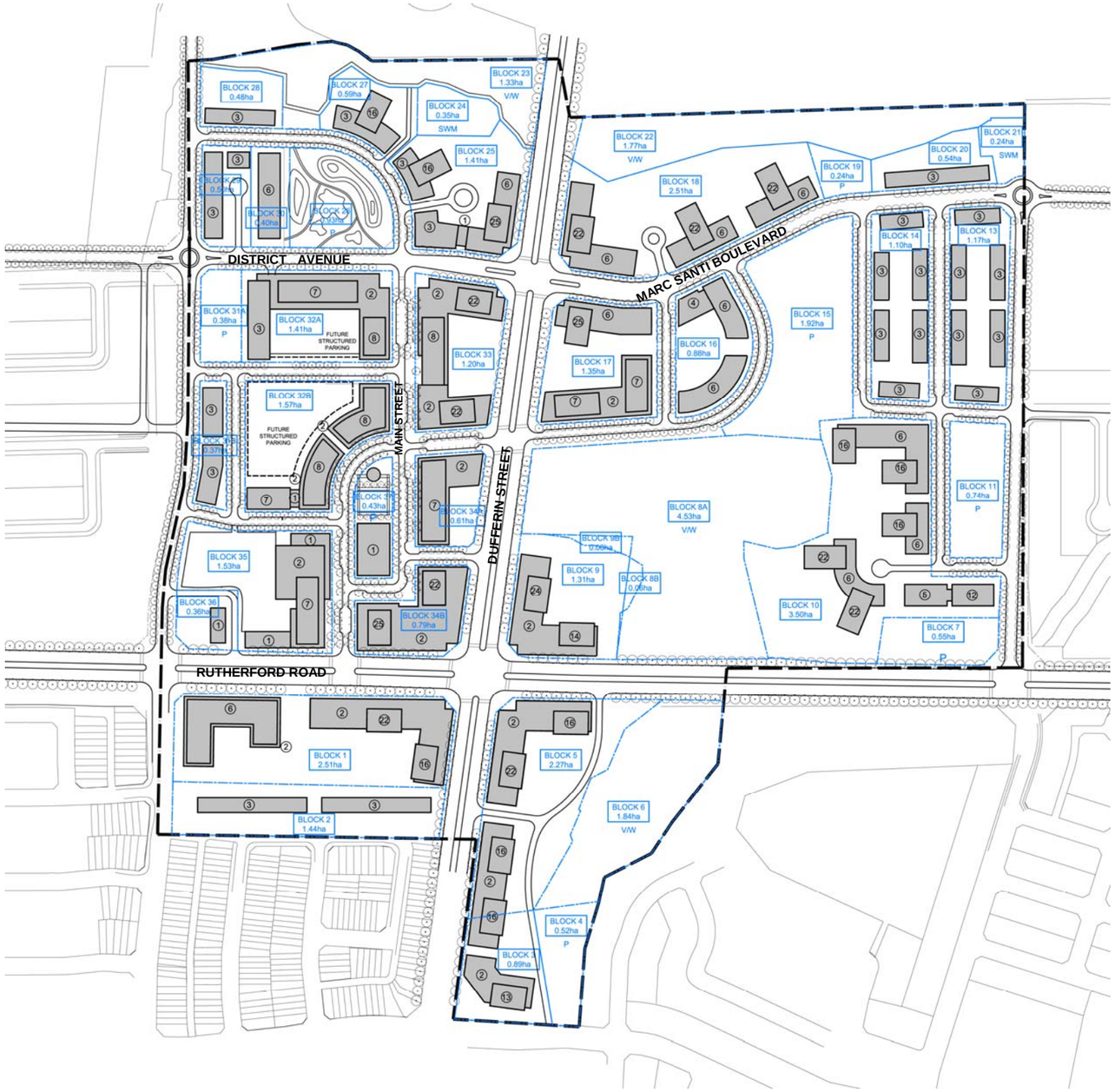
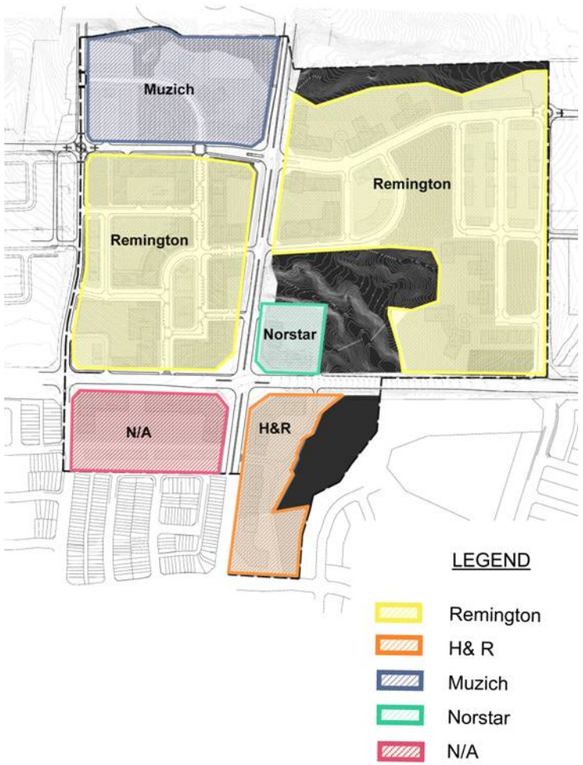


Figure 12: Block Structure Plan

2.2.6 Development Density Calculations

Key Map: Land Ownership



CARRVILLE DISTRICT CENTRE
CONCEPT PLAN STATISTICS

giannone petricone associates + EDA Collaborative Inc.

P = Park V/W = Valleylands / Woodlots SWM = Stormwater Management

OPA (All figures taken from OPA No. 651, May 16, 2006)

LAND OWNERSHIP	DEVELOPMENT BLOCK NO.	BLOCK NO.	AREA (ha)	MAX DENSITY (FSI)	GFA (m²)
H&R	10	3	0.78	2.00	15,600
		4	0.50	P	
		5	1.89	3.50	66,150
		6	1.77	V/W	
SUBTOTAL			**4.94**	**1.65**	**81,750**
NORSTAR	11	9	1.48	2.50	37,000
SUBTOTAL			**1.48**	**2.50**	**37,000**
REMINGTON	11	7	0.63	V/W	
		8	5.22	V/W	
		10	2.13	3.50	74,550
		11	0.67	3.50	23,450
		12	0.67	P	
		13	1.22	2.00	24,400
		14	1.15	2.00	23,000
		15	1.64	P	
		16	0.81	2.00	16,200
		17	1.29	2.50	32,250
		18	2.45	3.50	85,750
		19	0.24	P	
		20	0.65	2.00	13,000
		21	0.26	SWM	
		22	1.91	V/W	
	18	31	0.70	2.00	14,000
		32	2.91	2.50	72,750
		33	1.59	2.50	39,750
		34	1.84	2.50	46,000
		35	1.05	3.00	31,500
		36	0.91	2.50	22,750
		37	1.04	P	
SUBTOTAL			***30.98***	**1.68**	***519,350***
MUZICH	18	23	1.73	V/W	
		24	0.45	SWM	
		25	1.35	3.50	47,250
		26	0.93	P	
		27	0.34	2.00	6,800
		28	0.15	2.00	3,000
		29	0.88	2.00	17,600
		30	0.33	2.00	6,600
SUBTOTAL			**6.16**	**1.32**	**81,250**
N/A	17	1	2.45	2.50	61,250
		2	1.16	2.00	23,200
SUBTOTAL			**3.61**	**2.34**	**84,450**
TOTAL			**47.17**	**1.70**	**803,800**

** total areas do not include ROW areas*

PROPOSED (All figures are approximations based on available survey info)

LAND OWNERSHIP	DEVELOPMENT BLOCK NO.	BLOCK NO.	AREA (ha)	PROPOSED DENSITY (FSI)	BLDG FTPRINT (m²)	GFA (m²)
H&R	10	3	0.89	1.54	2,417	13,689
		4	0.52	P		
		5	2.27	3.00	9,060	68,030
		6	1.84	V/W		
SUBTOTAL			**5.52**	**1.48**	**11,477**	**81,719**
NORSTAR	11	9A	1.31	2.84	4,849	37,068
		9B	0.08	0.00	0	0
SUBTOTAL			**1.38**	**2.68**	**4,849**	**37,068**
REMINGTON	11	7	0.55	V/W		
		8A	4.53	V/W		
		8B	0.06			
		10	3.50	3.20	11,030	111,900
		11	0.74	P		
		12	*N/A*	P		
		13	1.17	1.20	4,689	14,067
		14	1.10	1.18	4,318	12,954
		15	1.92	P		
		16	0.88	2.52	3,961	22,154
		17	1.35	3.90	7,092	52,664
		18	2.51	3.64	7,823	91,434
		19	0.24	P		
		20	0.50	0.94	1,575	4,725
		21	0.24	SWM		
		22	1.77	V/W		
	18	31A	0.38	P		
		31B	0.37	1.79	2,189	6,567
		32A	1.41	2.17	7,539	30,642
		32B	1.56	2.08	5,596	32,424
		33	1.29	4.32	7,287	55,804
		34A	0.61	2.90	3,748	17,701
		34B	0.79	6.05	6,610	47,950
		35	1.53	1.14	5,798	17,490
		36	0.36	0.14	525	525
		37	0.17	1.01	1,712	1,712
			0.26	P		
SUBTOTAL			***29.79***	**1.75**	***81,492***	***520,713***
MUZICH	18	23	1.33	V/W		
		24	0.35	SWM		
		25	1.41	3.63	5,650	51,204
		26	0.93	P		
		27	0.59	2.94	2,069	17,270
		28	0.48	0.67	1,057	3,171
		29	0.50	1.16	1,928	5,784
		30	0.40	2.87	1,895	11,370
SUBTOTAL			**5.99**	**1.48**	**12,599**	**88,799**
N/A	17	1	2.51	2.48	10,171	62,301
		2	1.43	0.92	3,300	13,200
SUBTOTAL			**3.94**	**1.92**	**13,471**	**75,501**
TOTAL			**46.62**	**1.72**	**123,888**	**803,800**

** total areas do not include ROW areas*

Table 1: Block Structure Statistics

2.3 Demonstration Plan

2.3.1 3-D View

A Demonstration Plan was prepared as part of the study process in order to conceptualize potential building heights and densities within the Carrville District Centre. The demonstration plan realizes and illustrates the principles and overall objectives that have been established in the vision. The demonstration plan reflects areas of proposed mixed use, high density residential and open space land uses and maintains the densities contemplated in OPA 651. While this demonstration achieves these objectives, it represents only one way to deploy the densities and recognizes that other interpretations may be possible. Phasing of development will also create opportunities to fine-tune the plan in the future.

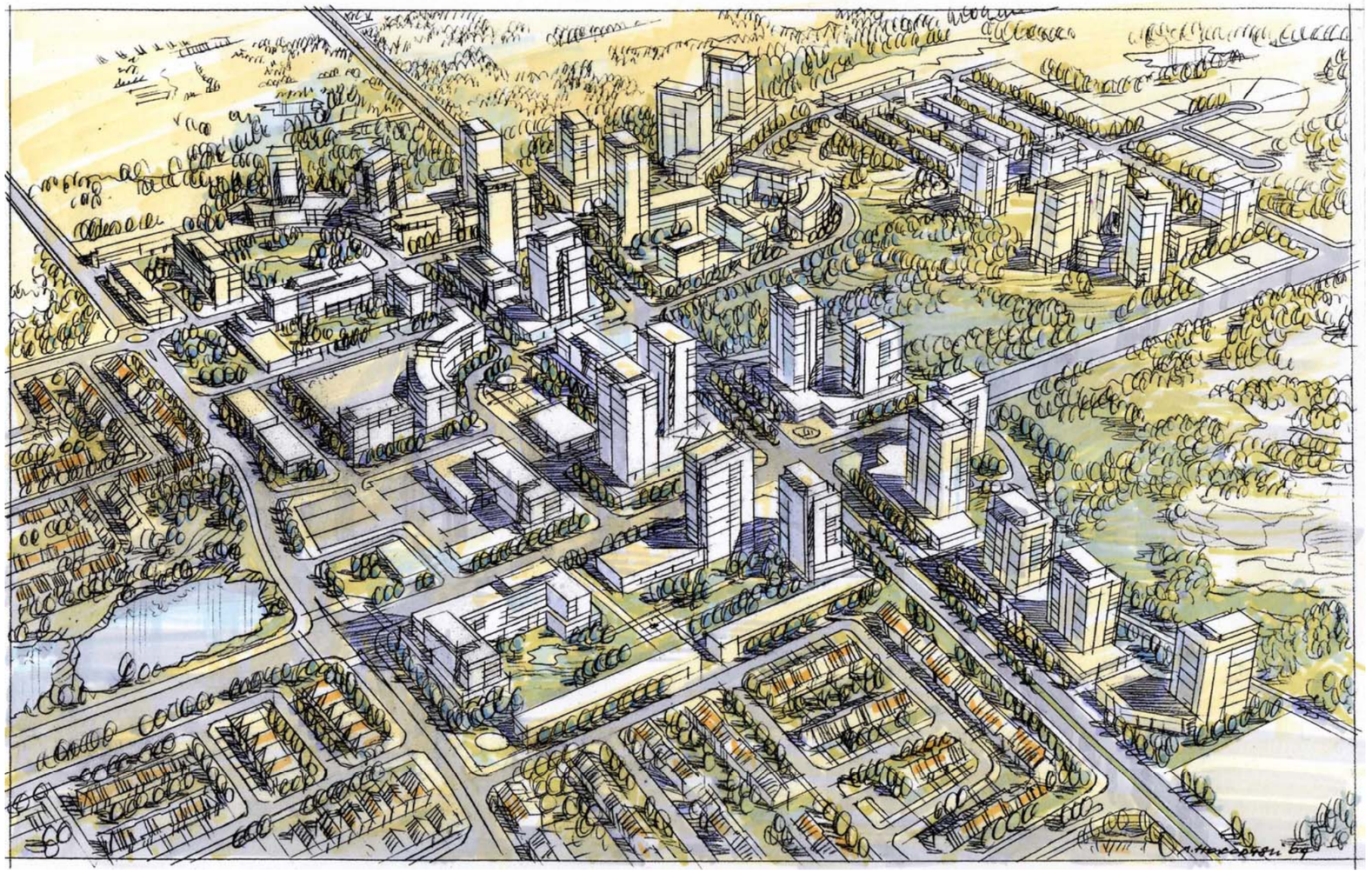


Figure 13: 3-D View of Carrville District Centre

2.3.2 Conceptual Landscape Plan

The Conceptual Landscape Plan assists in visualizing the parks, open space and streetscape systems which will provide overall landscape structure for the District Centre and surrounding land uses.

The Plan illustrates the locations of natural woodlots and valleylands as continuous open spaces, neighbourhood parks, landscape treatments on development sites and conceptual streetscape hierarchies as they relate to the various road types. Areas of special urban treatments are also identified at major and minor intersections, along Main Street and the District Square as well as pedestrian crossings and parking areas.

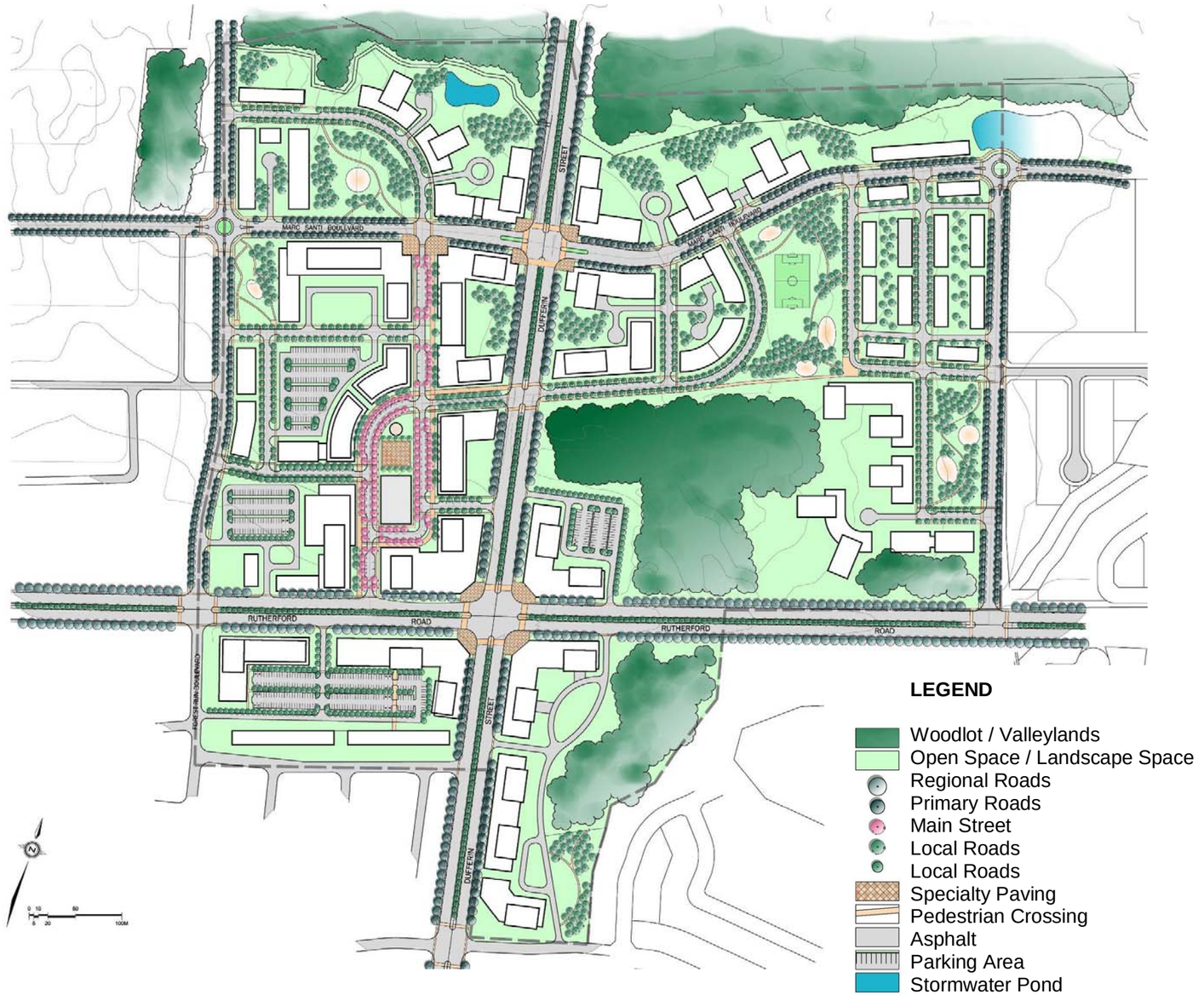
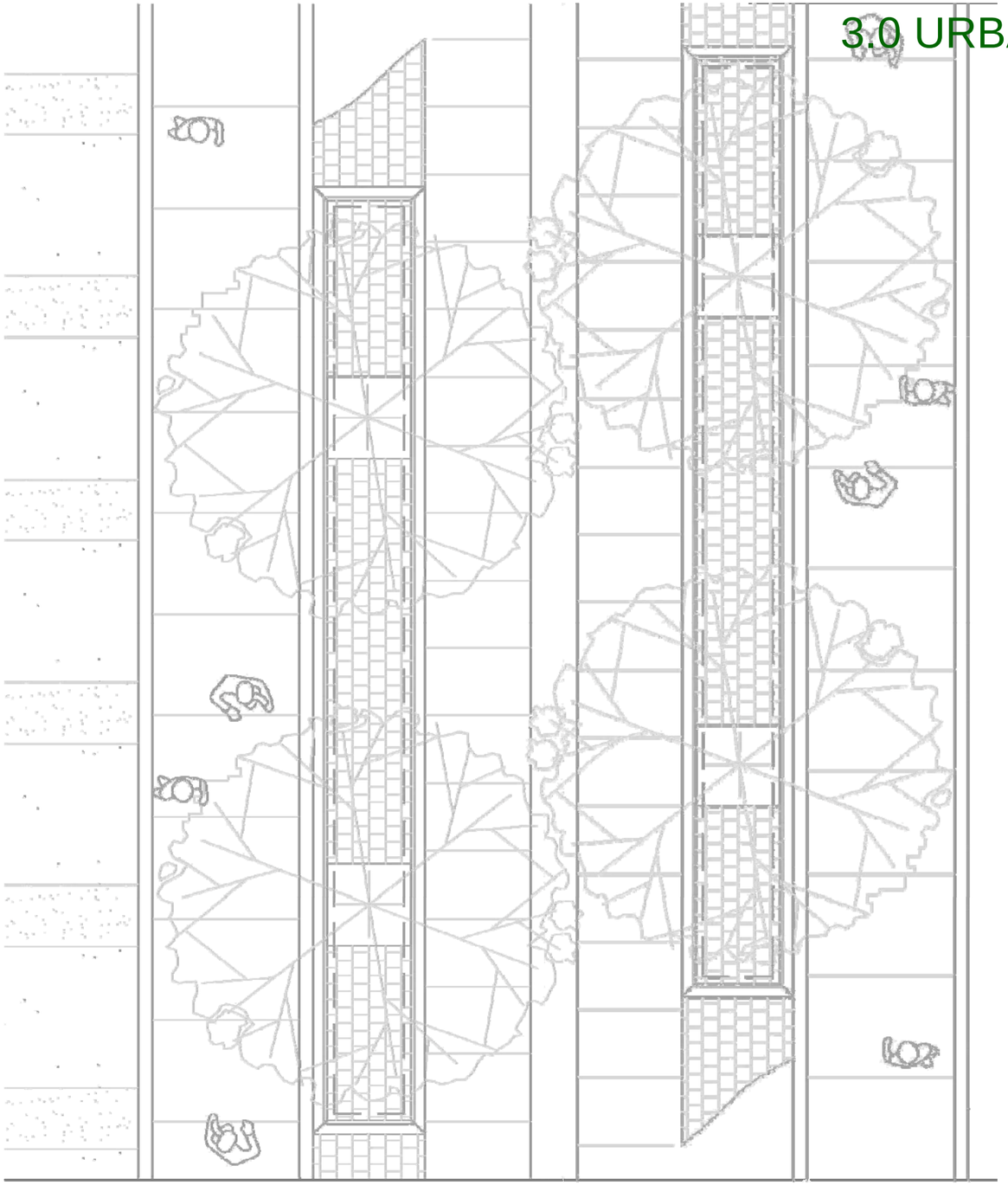


Figure 14: Conceptual Landscape Plan



3.1 Distinct Character Areas

There are a number of areas within the site that shall together differentiate Carrville District Centre from the surrounding community. These distinct character areas include gateways, cross roads, the Main Street, the Urban Square, urban neighbourhood parks, natural feature open spaces as well as the various residential neighbourhoods.

These distinct areas provide the District Centre with a unique character unlike any other neighbourhood within the City of Vaughan. It distinguishes itself from surrounding communities through exceptional architectural features, landscape design, landmark buildings and gateways and enabling people to live, work and play within the same community.

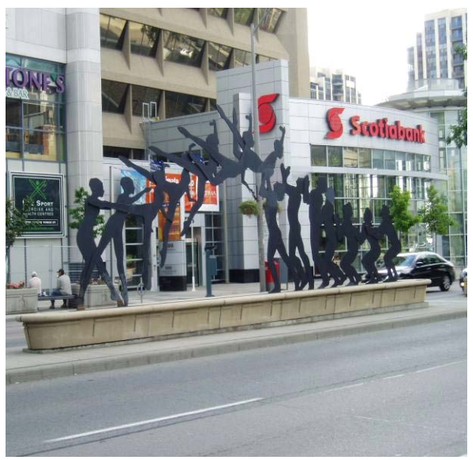
Figure 15: Distinct Character Areas

3.1.1 Gateways

The key gateways to the Carrville District Centre are designated at the main intersection of Dufferin Street and Rutherford Road and the intersection of Dufferin Street and Marc Santi Boulevard. These locations are of high visibility and profile as indicated on the key plan.

Entrance features at these locations will indicate to both pedestrians and vehicles that they are entering a distinct urban district within the City of Vaughan. Several techniques are identified to provide the expression of gateway and emphasize the urban character of the district including:

- Locate the tallest buildings at or close to these intersections
- Integrate special architectural and lighting features into the tops of these buildings
- Provide enhanced, high quality materials on the lower floor facades of the buildings surrounding the gateway intersections
- Provide enhanced site and landscape treatments including special paving, plant materials and landscape features
- Provide enhanced streetscape lighting of the intersections
- Provide special pedestrian paving on sidewalks, crosswalks and adjacent public and private spaces



Imagery of Gateways

Key Plan

3.1.2 Cross Roads

The major arterial roads running through the Carrville District Centre, Dufferin Street and Rutherford Road, shall be treated as distinct character areas. These roadways will be the initiation points for special treatments on roadways for the District. These treatments include an emphasis on street trees, paving treatments, streetscape furniture and elements unique to the District Centre.

These important cross roads require sensitive design treatments. Superior design qualities, such as increased massing, height and architectural interest, strong architectural focus on these roadways, and enhanced landscape and signage will respond to the context of these character areas.

In addition to the factors mentioned above, the streetscape of these regional rights-of-way will take into consideration the enhancement of sight triangles which are part of the public right-of-way at road intersection quadrants. These areas allow visibility at intersections for safe vehicular movement. All features located within the sight triangles will adhere to the York Regional Streetscape Policy, including:

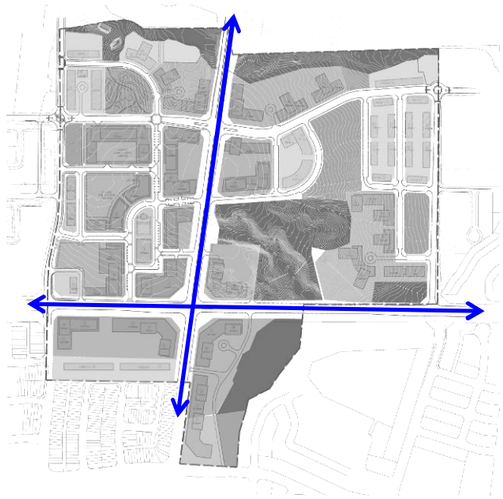
- Driver and pedestrian visibility is to be maintained within the sight triangle;
- Landscaping and architectural features may be permitted within the sight triangle if the proposed features do not block views of luminaires, traffic signals, traffic signs and directions intended for traffic view;
- Grading is not permitted within the sight triangle.

Specific goals relating to architectural features, paving and landscape and site elements are as follows:

- The design of architectural features should create interest, add variety and provide a focal point without competing with the Region's designated gateways and entryways;
- Paving shall provide barrier-free access and connections with existing sidewalks and complement surrounding context, materials and colours. Special paving is accepted within the sight triangle only in urban centres;
- Connecting the proposed development to the public street with a unified landscape treatment integrating York Region's streetscape elements into the design;
- Site furnishings shall complement the surrounding context, materials and colours; and,
- Site furniture, such as benches, trash receptacles or bollards may be strategically located at intersections, only if they do not obstruct views.

Refer to York Region's Sight Triangle Manual for detailed guidelines and standards.

Key Plan



Imagery of Cross Road Features

3.1.3 Main Street

The Main Street of Carrville District Centre shall be considered a distinct character area. The Main Street is intended to be mixed-use, with a commercial ground floor and residential above, critical for a truly vibrant urban experience. It will be a layered public realm that strings together many blocks in the Carrville District Centre with appropriately dimensioned sidewalks, canopies, landscape elements and entranceways.

It is strategically positioned on the west side of Dufferin Street and connects the urban square to the south with the neighbourhood park to the north. This area will be oriented towards the pedestrian, ensuring that all buildings and features are human in scale and accessible from the street. Important elements of this character area include:

- Containing and defining edge buildings will form a rich and varied urban wall;
- Building entrances will be appropriately scaled to animate the street
- Mid-block pedestrian bump-out crossings will intercept the experience and allow for spaces of pause articulated by pedestrian/stroller appropriate paving;
- A wide pedestrian promenade on the east side of main street will accommodate sidewalk cafes and commercial displays to promote spaces for leisure and social interaction;
- Lighting will be appropriately scaled and designed to privilege the pedestrian experience layered with street trees whose canopies become conducive to strolling; and,
- Consistent building signage, awnings and canopies will reinforce the requisite strong urban defining edge of Main Street.

Imagery of Main Street

Artist's Renderings of Main Street

Key Plan

3.1.4 Urban Square

The rich diversity of public spaces of the Carrville District Centre includes the unique Urban Square. The base of Main Street flanks the east side of the strategically positioned Urban Square which is fed by the pedestrian link to the north, and perpendicular local roads to the east and west.

The Urban Square is meant to become the community's social fulcrum. It will provide the appropriate space for collective programs, an urban "room" at the so called interior of the Carrville District Centre and will privilege the pedestrian infusing a sense of leisure within the active urban experience. The square is an integral component of the parkland dedication requirement for the District Centre. The design, programming and operations of the square, as part of a wider, integrated network of diverse public spaces, will be a vital component to its overall success. Important aspects of this character area include:

- The Urban Square will be defined by surrounding high-density buildings with an animated commercial podium at grade, and residential component above. The quality of the surrounding retail and commercial businesses will be fundamental to the vibrancy of the square. Types of establishments that are routinely patronized, such as bakeries, cafes, salons, etc., will greatly contribute to the life of the square and surrounding streetscape;

- Informal gathering and collective activities, such as markets and musical performances, are promoted by the square's proportion and position;

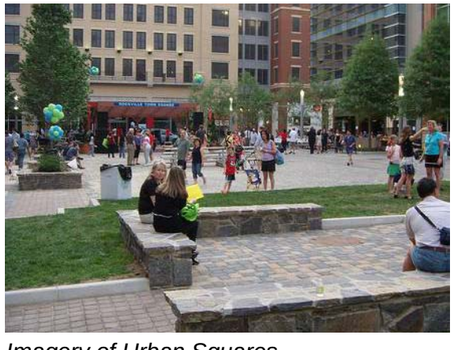
- A range of neighbourhood activities, including public events, street fairs and concerts are encouraged by the flexibility of its landscape surfacing and will contribute to the success of the adjacent shops:

- The maintenance program should be of the highest order to ensure the economic viability of surrounding shops and the overall programming and vitality of the square;

- The square will be accessible by all modes of transportation including public transit, pedestrian, bicycle and by automobile;

- The square experience will be enlivened by its lining of retail, restaurants, and services; and,

- Its tree-lined edge will buffer it from regular neighbourhood vehicular traffic and allow it to become the heart of the community with a generousity of socially active and collective space.



Imagery of Urban Squares

Key Plan

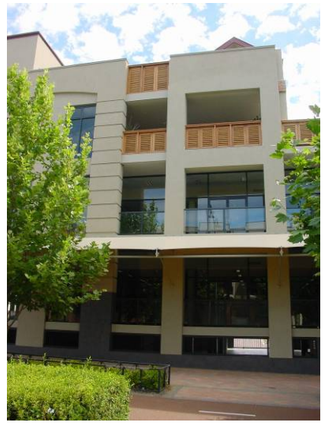
Artist's Rendering of Urban Square

3.1.5 Residential Neighbourhoods

The residential neighbourhoods within the Carrville District Centre will each have distinct identities differentiating them. Varying densities and building types will create these unique neighbourhoods. They will be defined by the characteristics of their distinct areas, adjacent conditions, and proximities to other building types, neighbourhood parks, and open natural landscapes.

Low to Medium Density (1- 6 storeys)
The Carrville District Centre includes lower density townhouse units and 6 storey mid-rise residential blocks as transitional buildings to adjacent lower density residential and parkland. This area is comprised of a complementary mix of attractive housing styles that are harmoniously integrated to accommodate singles, young families, move-up buyers and empty-nesters, creating a diverse, mixed community. They carry a strong relationship to grade and the residential tone of their streets become articulated by front gardens, porches, bay windows and entryways.

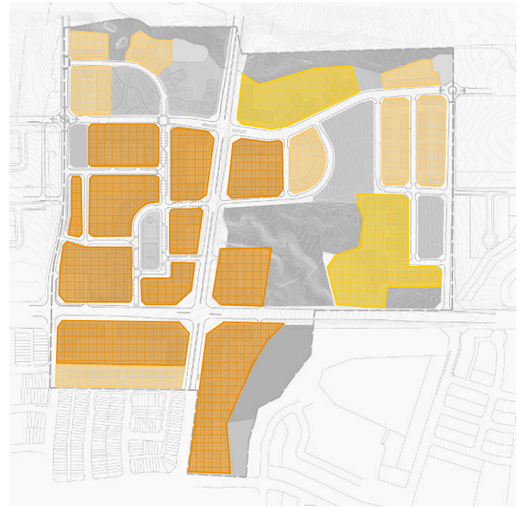
Medium to High Density (7 - 25 storeys)
The majority of Carrville District Centre residential buildings are medium to high density. Highest densities are located along major arterials, Dufferin Street and Rutherford Road, as well as along Main Street and surrounding the Urban Square. These building typologies are generally commercial retail/office podium with a residential tower above. These densities enable the Centre to be a concentrated area of people, thereby offering a wider variety of retail and service options, and a higher number of employment opportunities.



Imagery of Medium Density Development

Imagery of High Density Development

Key Plan



Key Plan Legend

- Mixed Use 1
- High Density Residential
- Medium Density Residential

3.2 Built Form Guidelines

These built form guidelines are intended to provide a framework for the development of a strong sense of place and identity for Carrville District Centre.

As a starting point, the built form guidelines illustrate the preferred massing and building typology for each block, based on the densities prescribed by OPA 651. Given that block sizes have been adjusted due to revisions to overall road layout and improved connectivity across Dufferin Street, individual blocks may vary from OPA 651, however an attempt was made to maintain overall block densities. In order to achieve this, and avoid long perimeter street-wall buildings of 16 storeys, we are proposing smaller footprint point towers ranging from 16 to 25 storeys and 2 to 6 storey podiums, in order to achieve the same densities outlined in OPA 651. (see Figure 16)

Principles

- Encourage taller and smaller point towers on podiums and avoid large street-wall buildings. The recommended maximum floor plate size is 805 s.m. (8,665 s.f.) GFA. Footprints larger than this are to be articulated to minimize shadow impacts, loss of skyview and adverse wind conditions on adjacent open spaces.

- On the demonstration plan, building heights indicated provide for appropriate transitions from high density to low density built form.

- Point towers are to be separated by a minimum of 25 m to allow for appropriate light and privacy.

- Buildings to adhere to minimum setbacks as indicated in the following pages.

- Corner conditions with 45° degree plan at street level are to be avoided. (See Figure 17)

- Weather protection to be considered along major street frontage and provide adequate coverage to main entry points. (See Figure 18)

- All service and parking access points to be located off side streets or from consolidated access driveways.

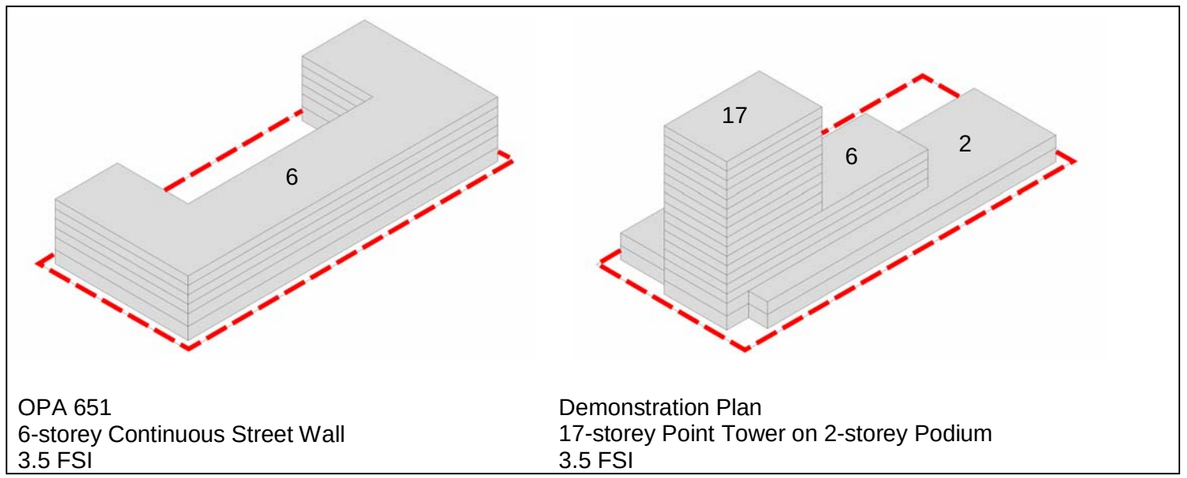


Figure 16: FSI Comparison of OPA 651 and Demonstration Plan

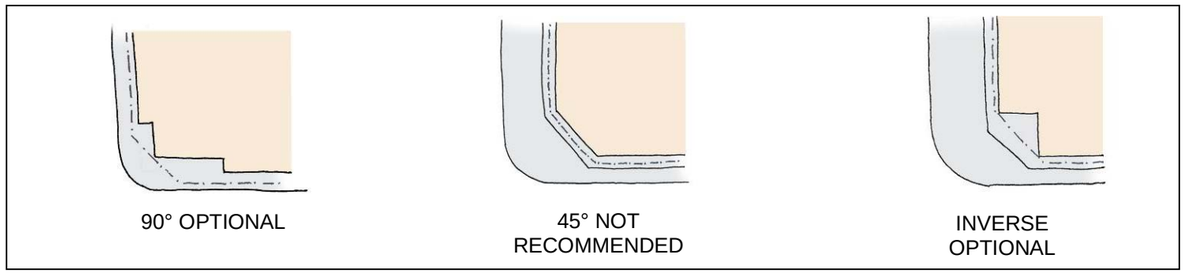


Figure 17: Corner Conditions

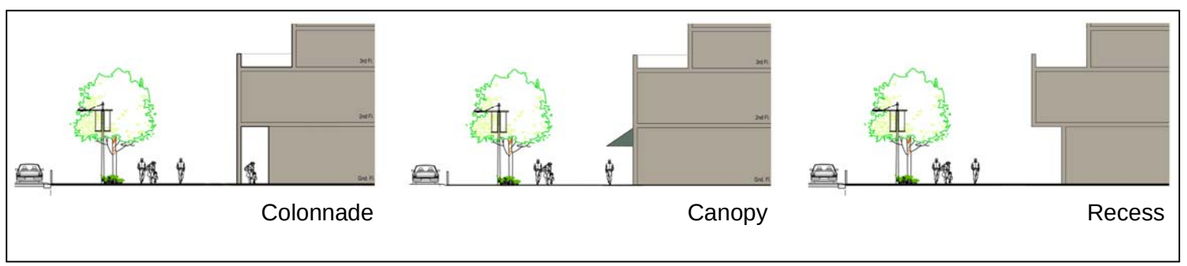


Figure 18: Street Weather Protection

3.2.1 Built Form and Ground Space

The proposed built form for the Carrville District Centre will achieve a higher percentage of ground space within the community. While maintaining the same proportions of built form density as those outlined in the OPA 651, the built form of the demonstration plan allows for more ground space, which promotes urban pedestrian circulation and recreation. The proposed built form footprint (**20.1%** Built Form footprint / **79.9%** Ground Space) is significantly lower than that achieved by the density and building height restrictions of OPA 651 (**25.7%** Built Form footprint / **74.3%** Ground Space). The decrease of building footprint and growth of ground space creates the opportunity for increase community amenity and open spaces.

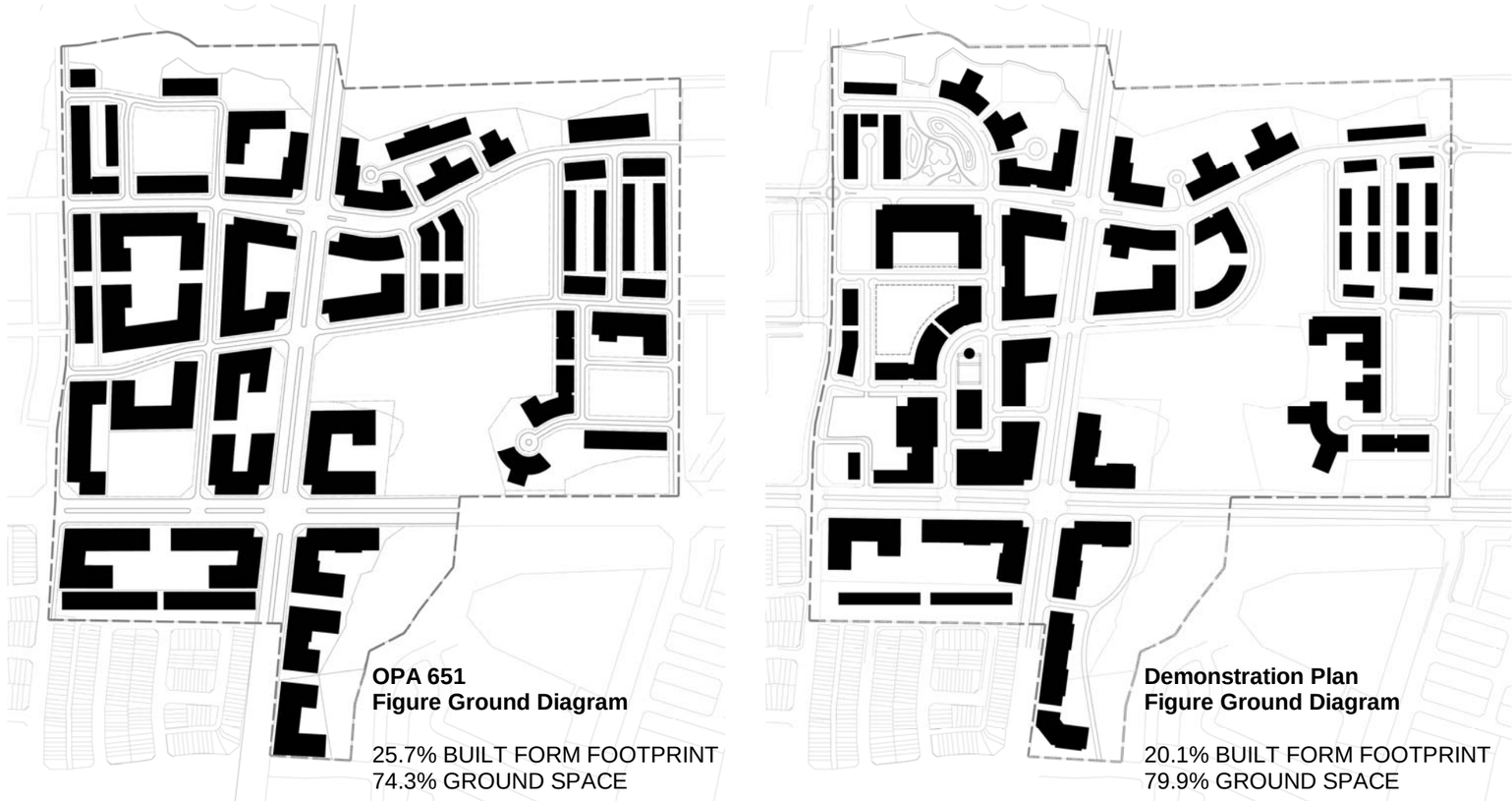


Figure 19: Figure Ground Comparison of OPA 651 and Demonstration Plan

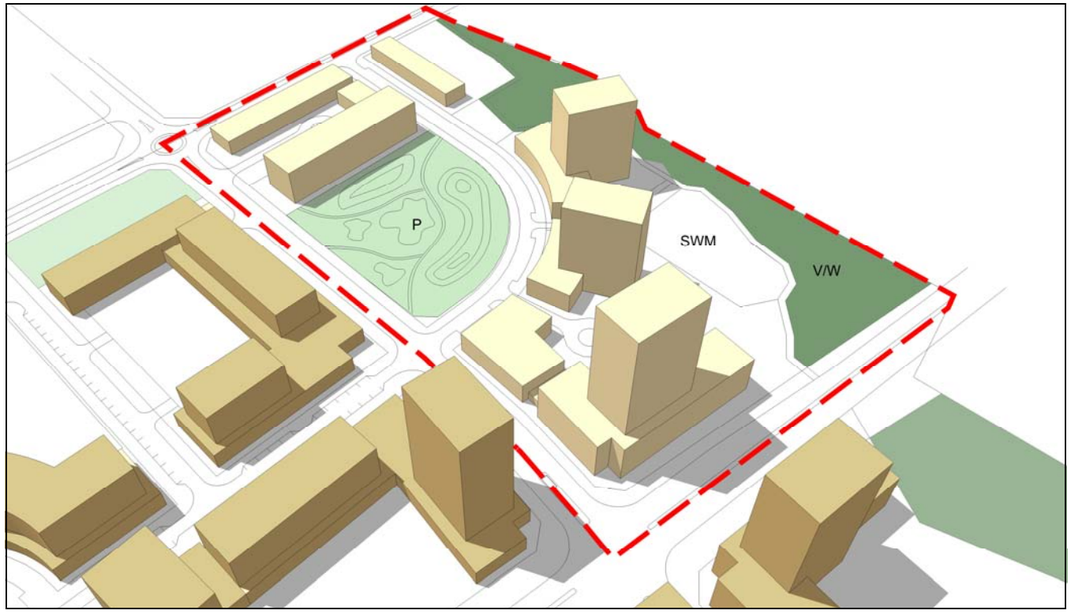


Figure 20: Block NW1 3-D Model

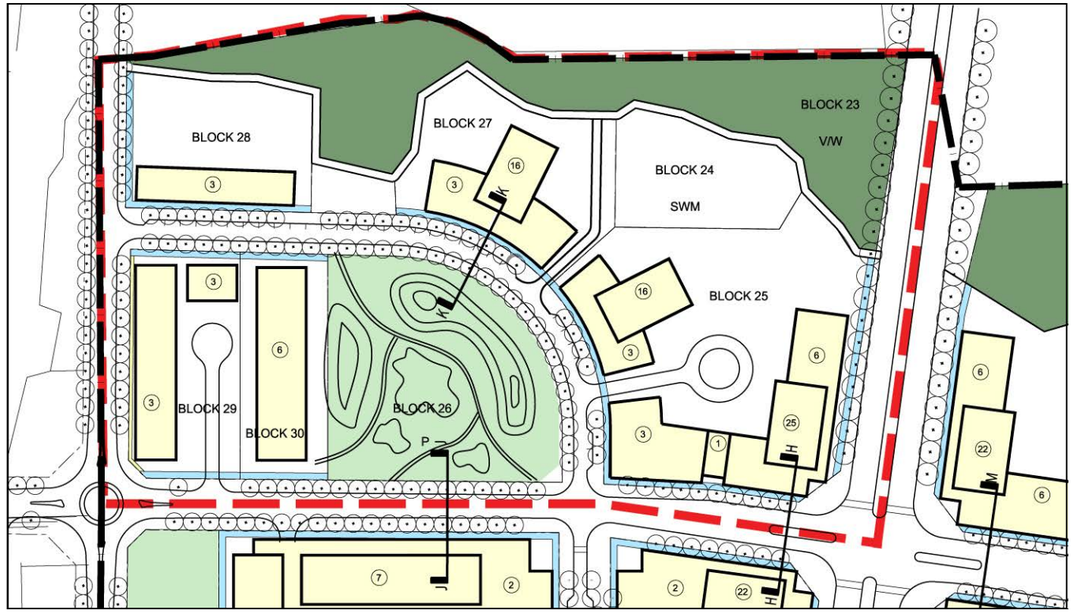


Figure 21: Block NW1 Detailed Block Plan

3.2.2 Block NW1

Urban Neighbourhood Park

Block NW1 is defined by a crescent-edged neighbourhood park which anchors the northern end of Main Street and forms part of the 'gateway' at Dufferin Street.

Key Plan

FRONTAGES

Higher density buildings front and line the crescent edge road of the park with a podium base and residential tower above oriented towards the northern natural woodlot. An iconic park building fully defines the western edge of the park and completes the NW1 Block.

HEIGHTS, SETBACKS, AND OPEN SPACE

Buildings on the crescent edge of the park will have a 3-storey base that echoes the crescent shape and a 16-storey tower set back a minimum of 4 metres from the podium. The iconic 'park building' will be a 6 storey articulated slab with no set back at the parkside. A 25 storey point tower at Dufferin Street is intended to complete the 'gateway' to the Carrville District Centre.

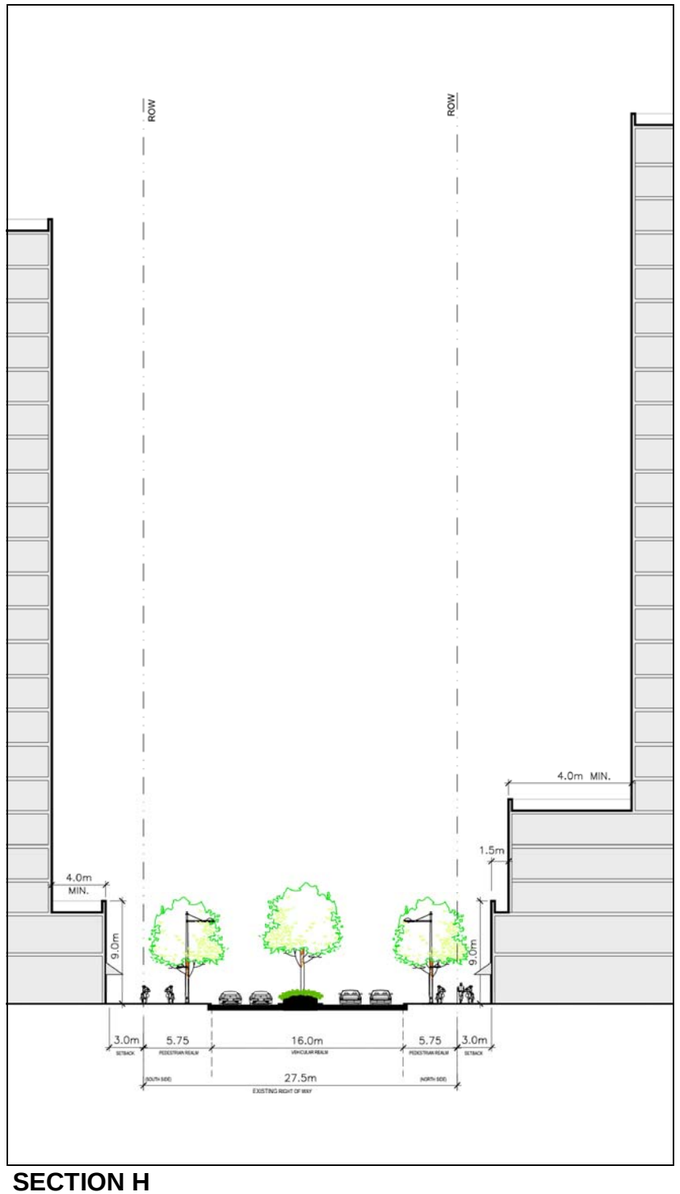
BUILDING TYPOLOGY

An iconic 6 storey slab building, appropriately scaled to the urban neighbourhood park, defines and sets the tone for the public qualities of this area. It defines the park as an urban "room" where its crescent edge is further contained by 3 storey crescent shaped podiums that support the 16 storey residential towers whose short end reach out toward the northern woodlot.

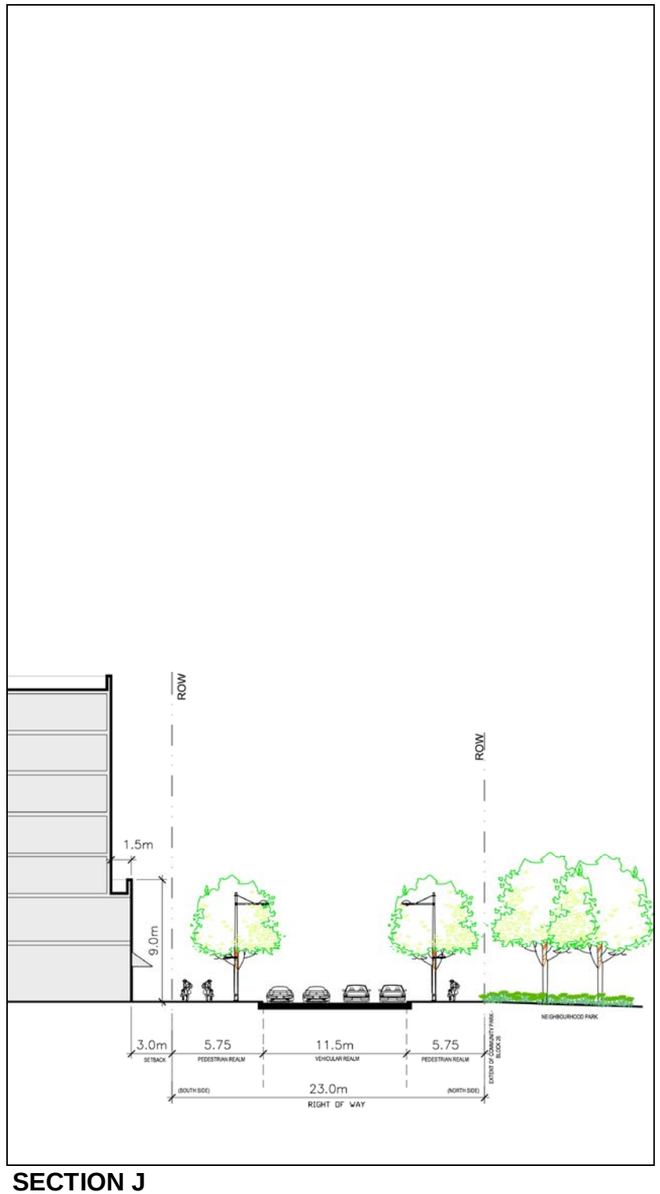
BUILDING SETBACKS (MIN)

- 2.0m
- 2.5m
- 3.0m
- 4.5m

(#) Recommended Building Height



SECTION H



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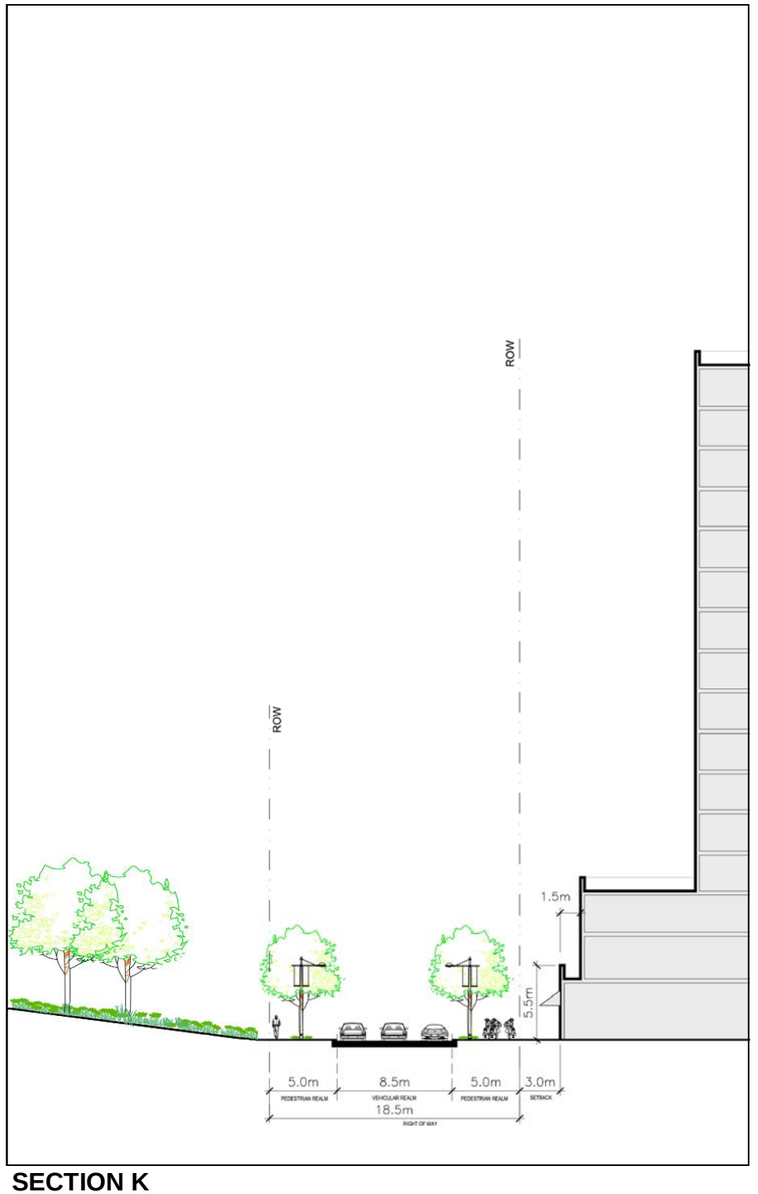


SECTION K

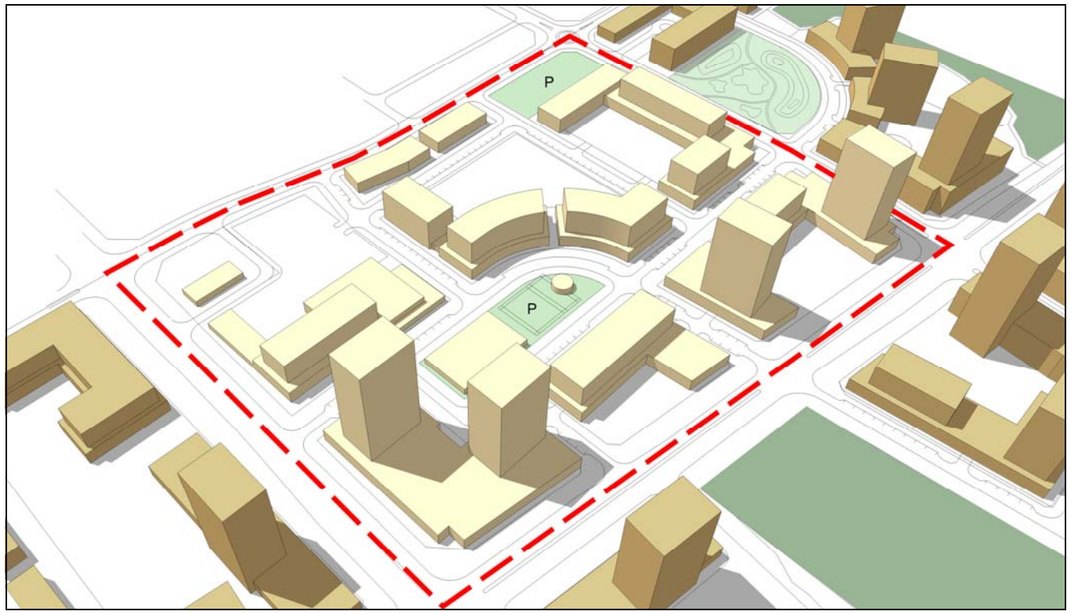


Figure 22: Block NW2 3-D Model

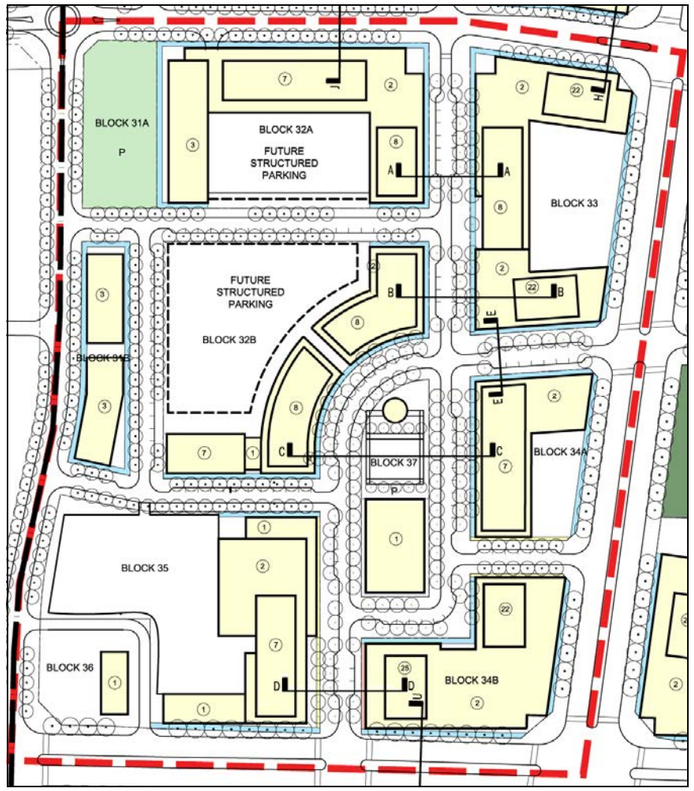


Figure 23: Block NW2 Detailed Block Plan

3.2.3 Block NW2

Main Street

Block NW2 is defined by the traditional urban Main Street running parallel to Dufferin Street and flanked at its base by a well proportioned Urban Square – both elements promote a pedestrian oriented environment with active commercial ground floor uses and residential uses above.

The Urban Square becomes an appropriately scaled space for markets, gathering and community events. It will be the community fulcrum which acts as one of many internal connecting parts of the Carrville District centre, together with local parkettes, urban neighbourhood parks, pedestrian links and natural feature areas of woodlots and valleylands.

Key Plan

FRONTAGES

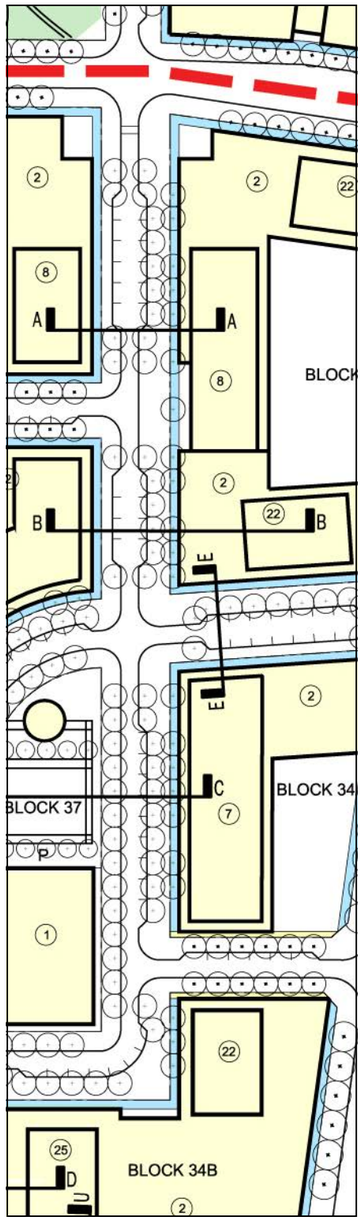
Both Main Street and the Urban Square are urban models that require strong building definition, a rich and varied urban wall at its perimeter. They are each lined with a 2 storey podium with retail which pull-back on the east side of Main Street to create an extra wide side-walk, privileging the pedestrian experience.

HEIGHTS, SETBACKS, AND OPEN SPACE

The consistency of the 2 storey urban base ‘wall’ allows for a range of building heights to rise from a 1.5m to 4.0m setback for 8-22 storey buildings. The typical 3.0m street-front setback maintains the consistency at grade, with corners and mid-block features set back to 4.5m.

BUILDING TYPOLOGY

Buildings of 8 storeys stepped back at the 2 storey base by a minimum of 1.5m, closely follow the geometry of Main Street and the Urban Square, including the crescent shaped building which curves along the edge of the square. Point towers of 22 and 25 storeys are setback a minimum of 4.0m from the Main Street base and complete the ‘gateway’ at Dufferin Street and Rutherford Road.



MAIN STREET

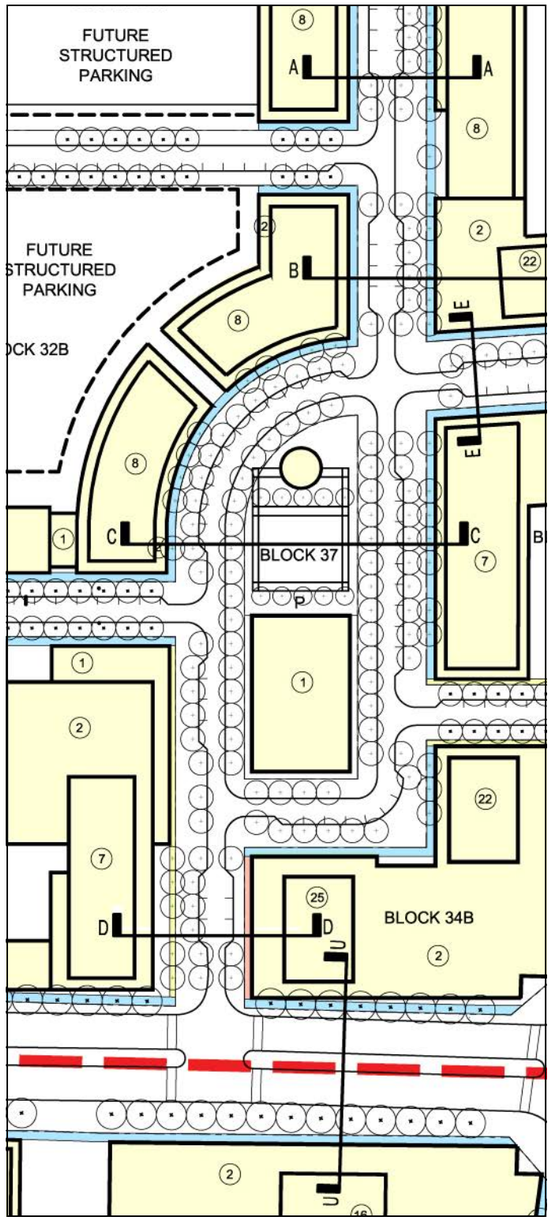
Greater setback along east side of main street

Larger sidewalk for patios

BUILDING SETBACKS (MIN)
2.0m
2.5m
3.0m
4.5m

(#) Recommended Building Height

Figure 24: Main Street Detailed Block Plan

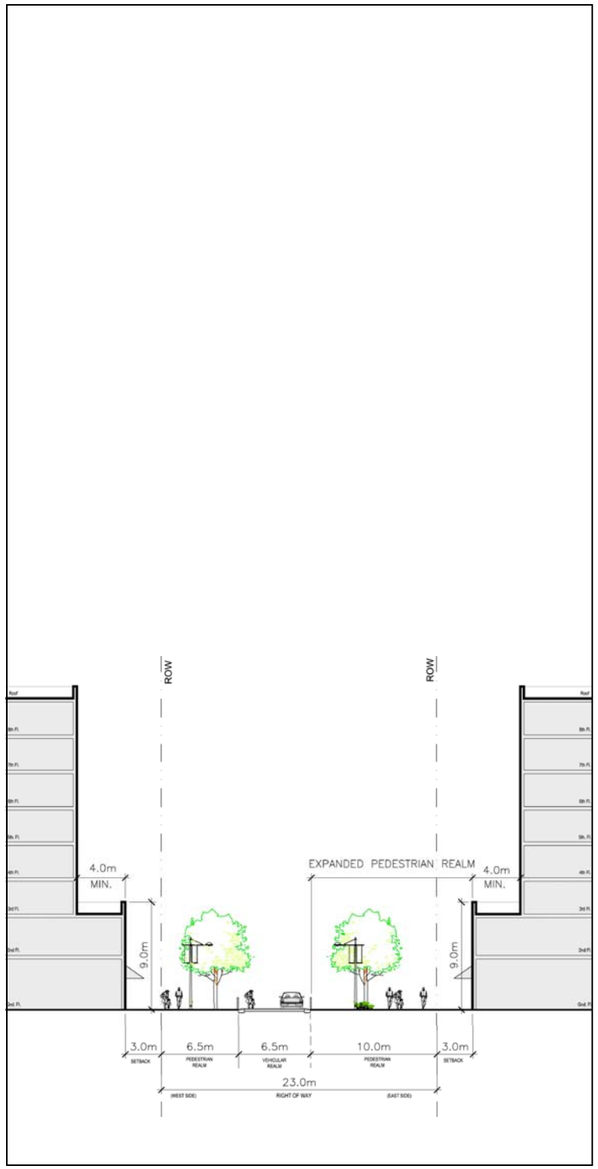


URBAN SQUARE

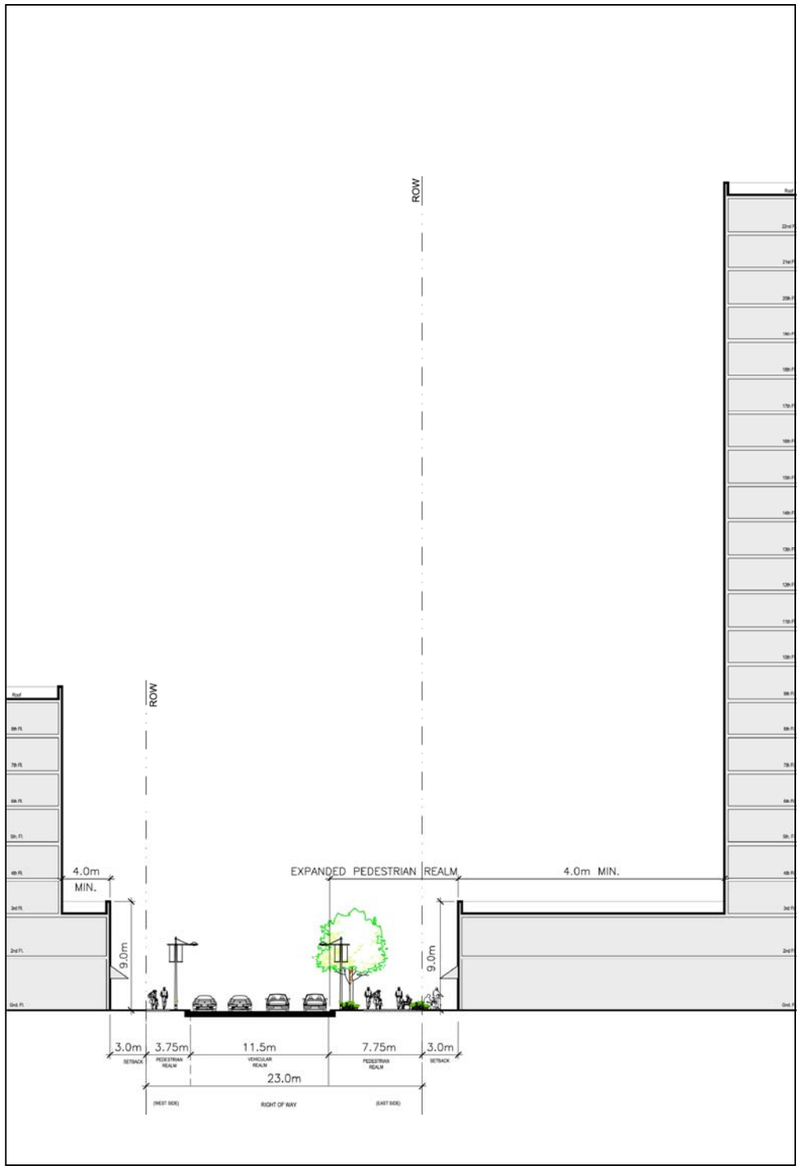
BUILDING SETBACKS (MIN)
2.0m
2.5m
3.0m
4.5m

(#) Recommended Building Height

Figure 25: Urban Square Detailed Block Plan



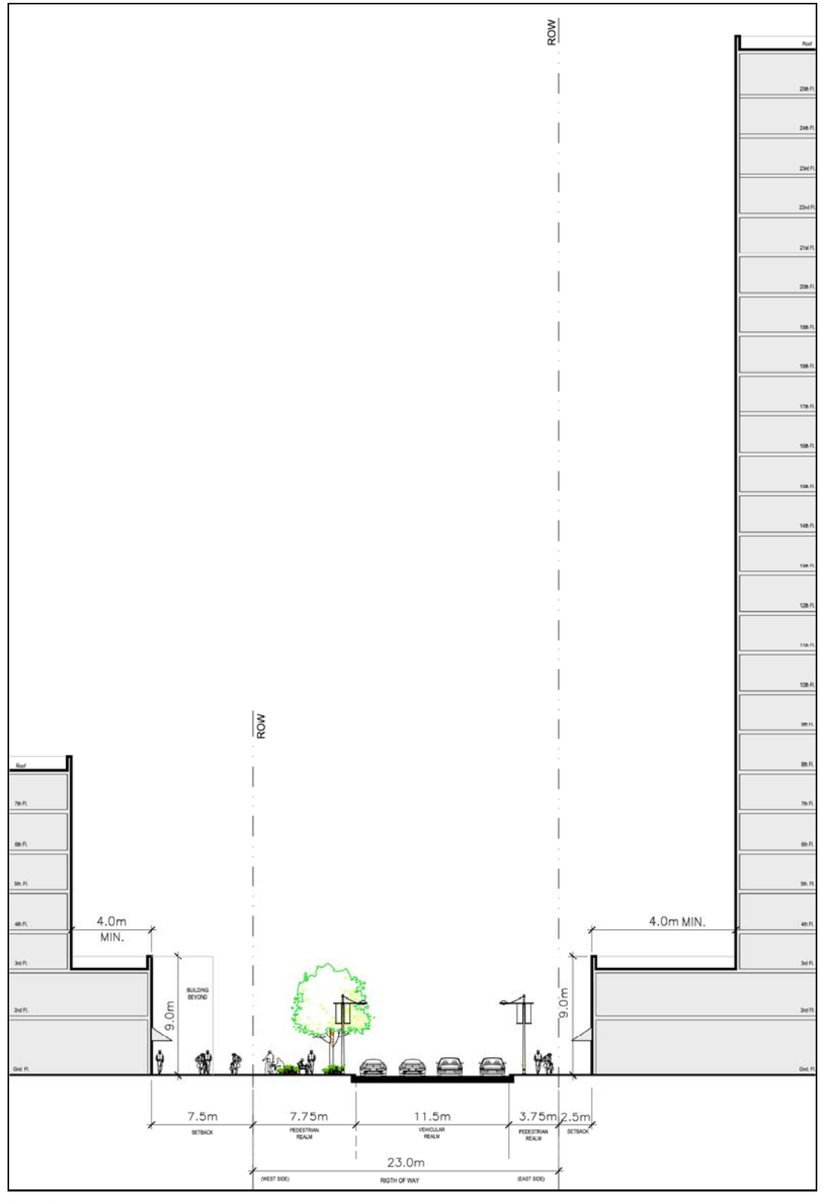
SECTION A



SECTION B


ROW
ROW
ROW
ROW
Roof
6th Fl.
7th Fl.
6th Fl.
5th. Fl.
4th Fl.
3rd Fl.
2nd Fl.
Gnd. Fl.
4.0m
MIN.
9.0m
3.0m
SETBACK
7.75m
PEDESTRIAN REALM
8.75m
VEHICULAR REALM
23.0m
(WEST SIDE)
RIGHT OF WAY
BLOCK 37
RECREATIONAL OPEN SPACE
8.75m
VEHICULAR REALM
7.75m
PEDESTRIAN REALM
3.0m
SETBACK
23.0m
RIGHT OF WAY
(EAST SIDE)

SECTION C



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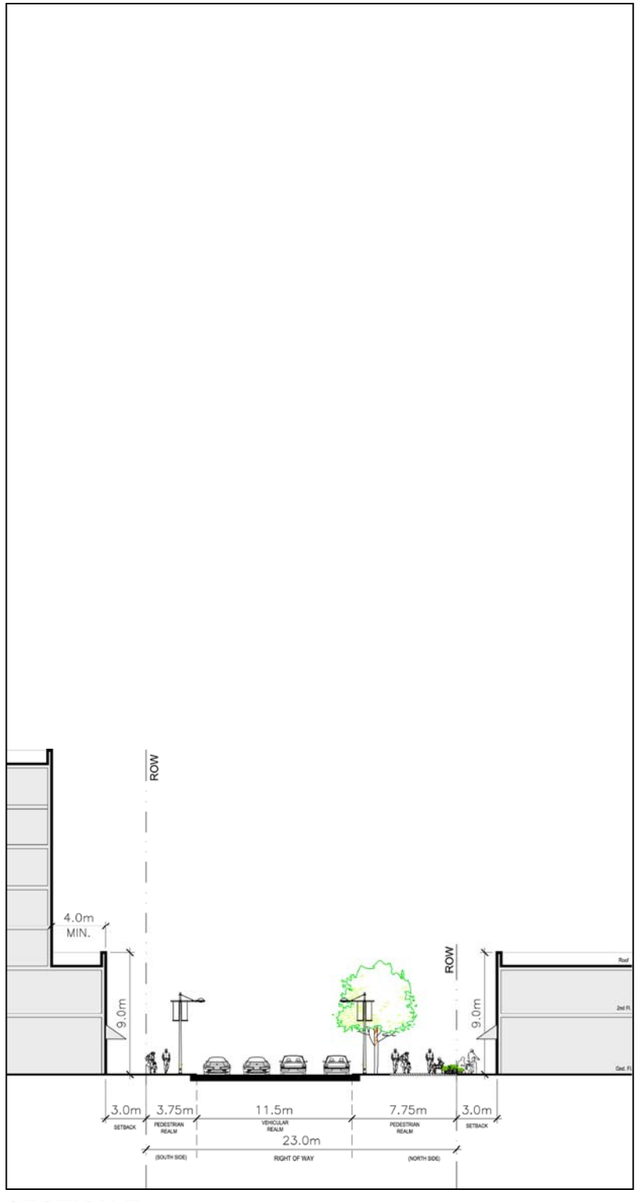

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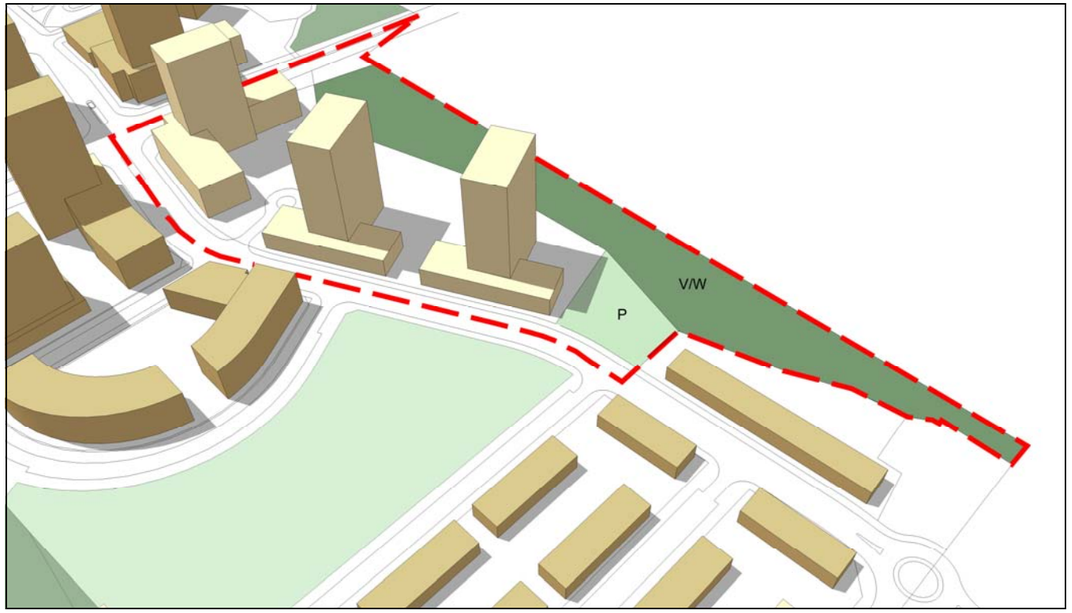


Figure 26: Block NE1 3-D Model

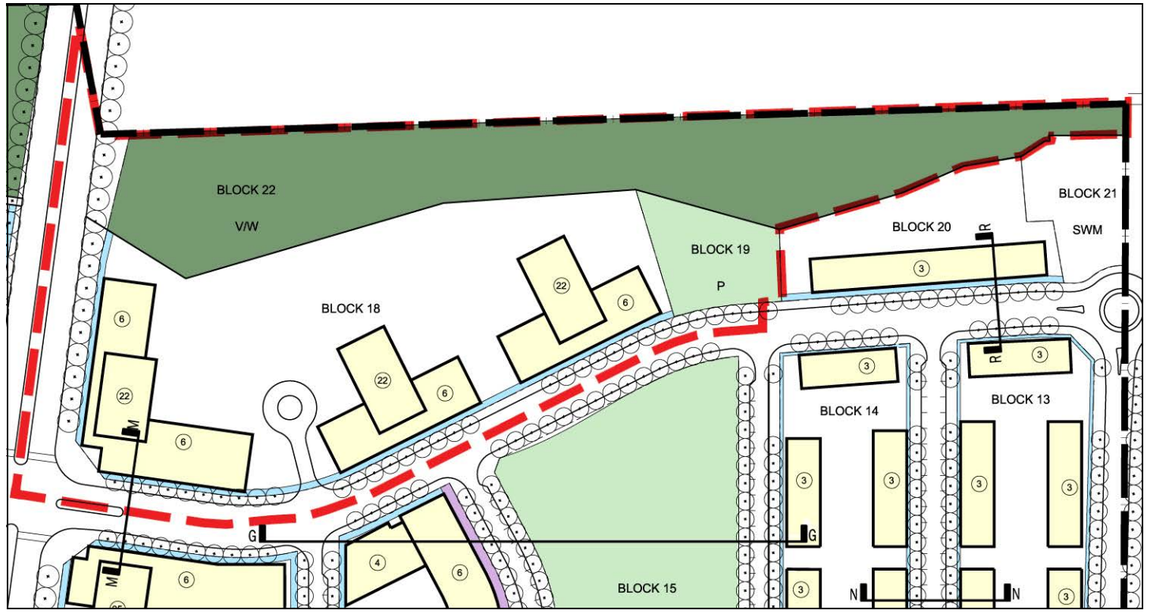


Figure 27: Block NE1 Detailed Block Plan

3.2.4 Block NE1

Towers in the Landscape

Block NE1 is defined by the natural edge of the woodlot which edges the larger conservation area to the north, and the primary road along its southern edge.

Key Plan

BUILDING SETBACKS (MIN)

- 2.0m
- 2.5m
- 3.0m
- 4.5m

(#) Recommended Building Height

FRONTAGES

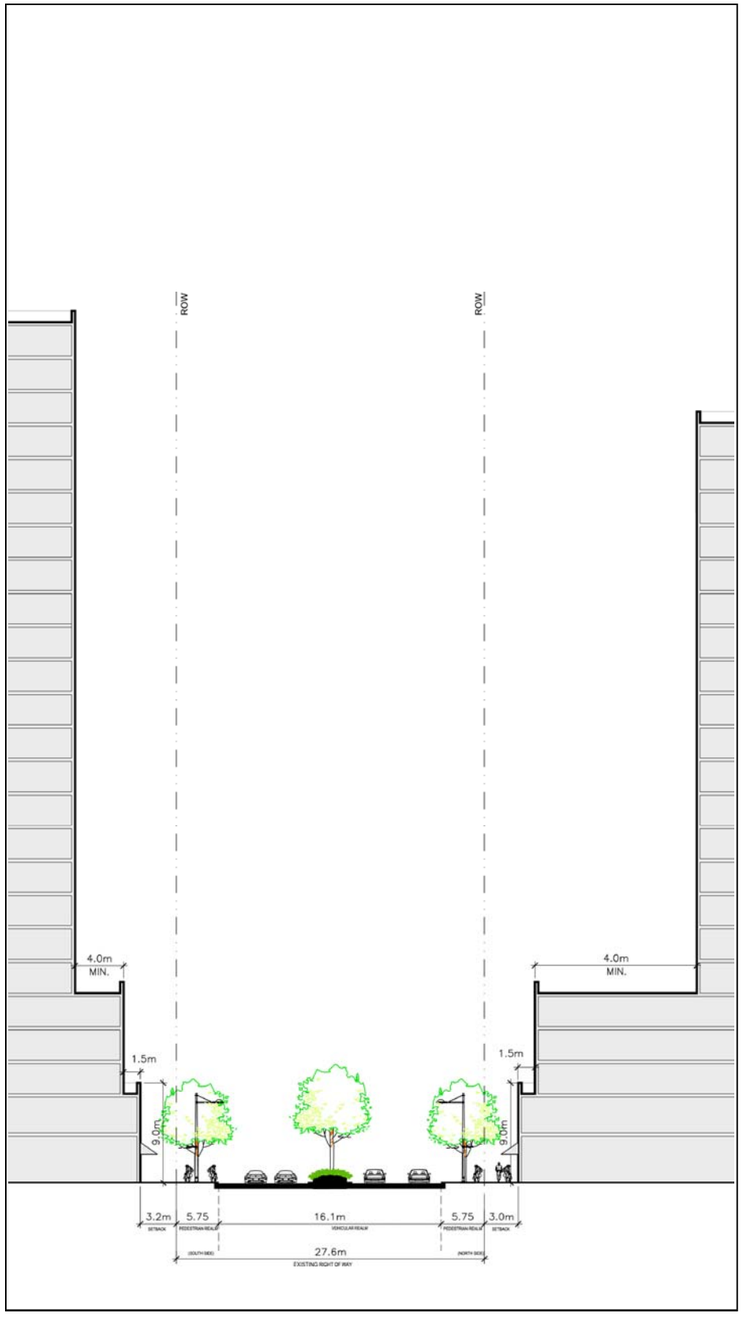
Base buildings of 6 storeys consistently front the primary road, while 22 storey point towers above consistently front the natural woodlot of the north-south arterial road, Dufferin Street. The 6 storey bases of the two woodlot oriented buildings also front the urban neighbourhood park on the south side of the collector road.

HEIGHTS, SETBACKS, AND OPEN SPACE

Buildings at the corner of the arterial road and local collector road respect a 3.0 m street-front setback and have 6 storey bases stepped back 1.5 m at 2 storeys. Residential towers of 22 storeys rise above the bases with a minimum 4.0 m setback.

BUILDING TYPOLOGY

Ultimately, the building type of Block NE1 must negotiate the urban corner condition, the neighbourhood park edge and the natural woodlot edge condition. The 22 storey point tower stepped back from its perpendicular 6 storey base allows two orientations to each building – the base defines the urban street edge while the tower addresses the natural landscape. Similarly, the corner building mirrors its counterpart across the street to create a gateway at both the scale of the primary road and that of Dufferin Street.



SECTION M

For Section G see page 40

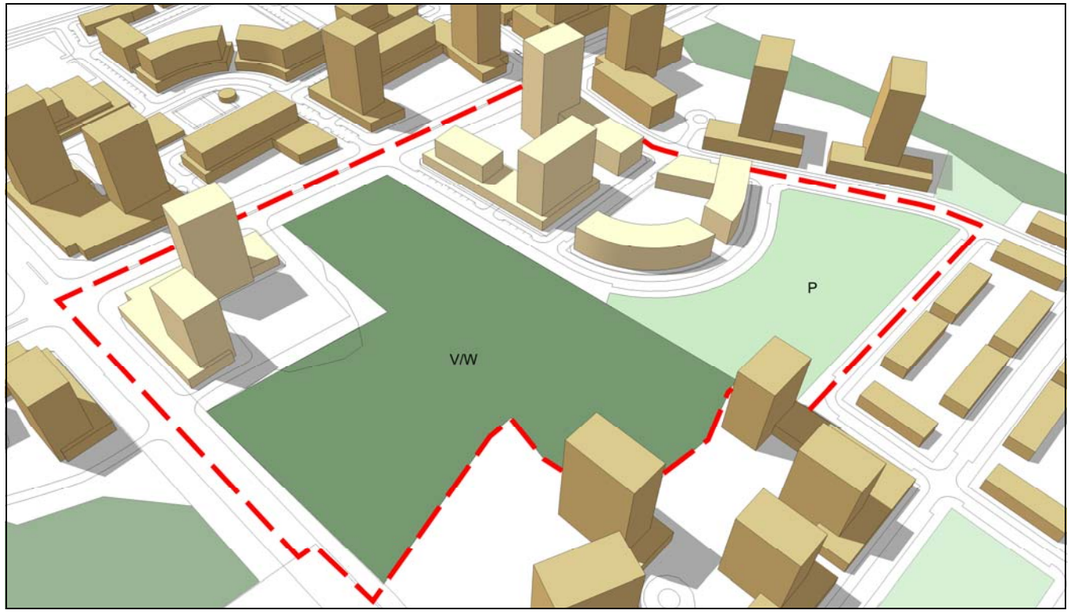


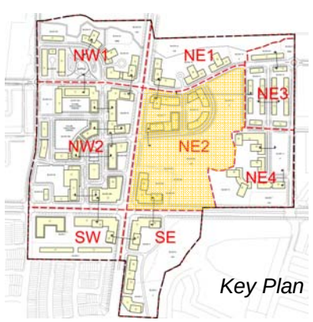
Figure 28: Block NE2 3-D Model

Figure 29: Block NE2 Detailed Block Plan

3.2.5 Block NE2

Woodlot and Neighbourhood Park

Block NE2 is defined by the large open space of the irregular woodlot and adjacent urban neighbourhood park divided by a strategic pedestrian walkway that links the neighbourhood park to the Main Street and Urban Square west of Dufferin Street.



Key Plan

FRONTAGES

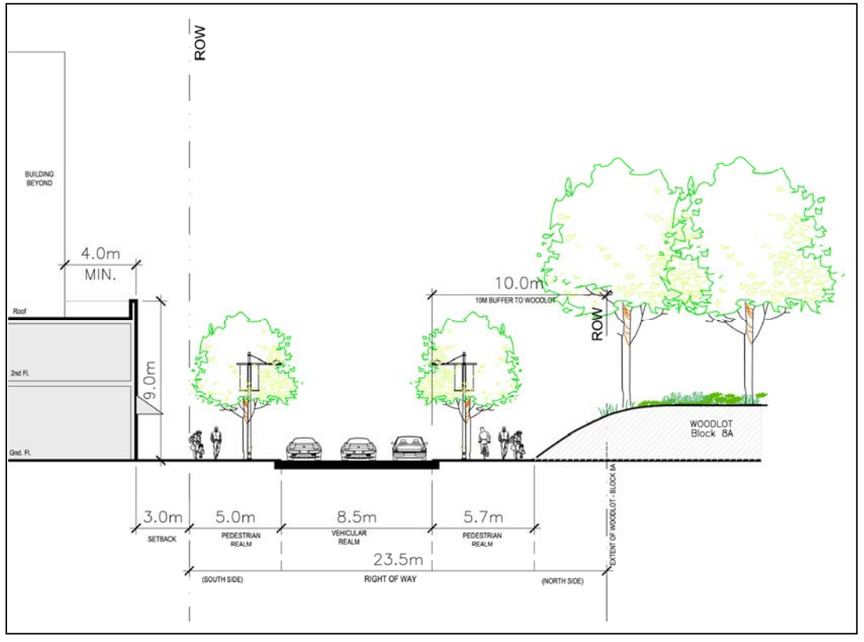
High-density corner buildings front onto the two main arterial roads, Rutherford Road and Dufferin Street; while addressing the natural landscape of the woodlot which ensconces them. Medium-density fabric buildings front and line the crescent edge road at the defining edge of the neighbourhood park.

HEIGHTS, SETBACKS, AND OPEN SPACE

The connecting pedestrian walkway will take advantage of the required 10 metre set back of the street to the woodlot. The corner buildings at wide arterial roads respect the 3 metre street-front setback with 2-storey bases that support 14/16 and 24/25 storey residential towers stepped back from the street side a minimum of 4.0 metres. Crescent shaped 6-storey buildings sit comfortably at a 4.5 metre setback from the park.

BUILDING TYPOLOGY

'Transition buildings' are created between higher-density mixed-use types along Dufferin Street and lower-density residential types along the neighbourhood park. An iconic 6-storey crescent slab building, appropriately scaled to the urban park, further makes the transition to the lower-density townhouse typology on the opposite side of the park.



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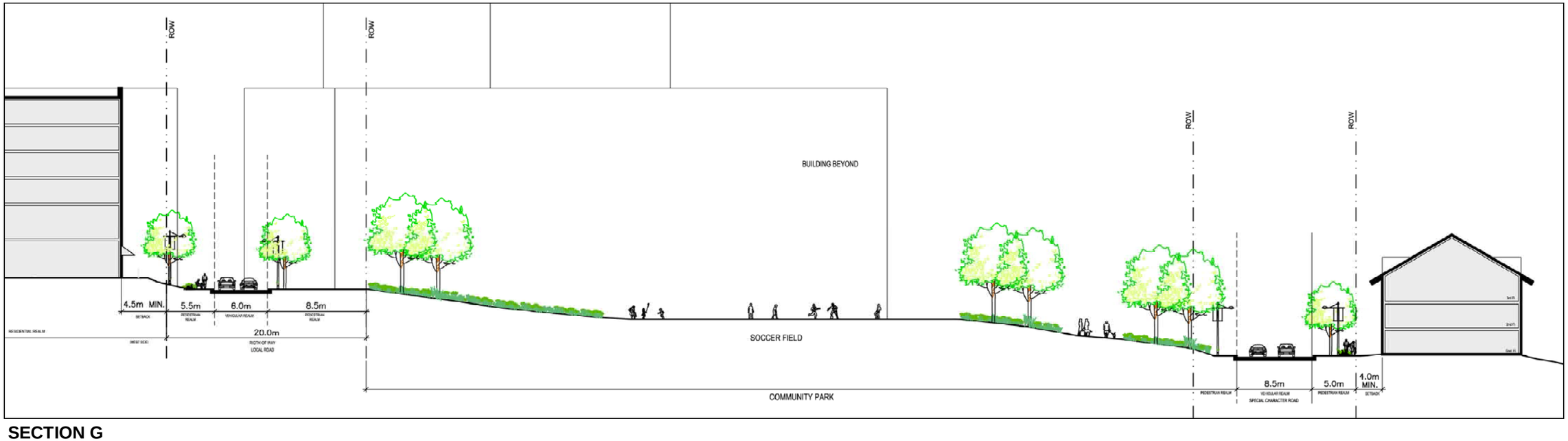


SECTION G

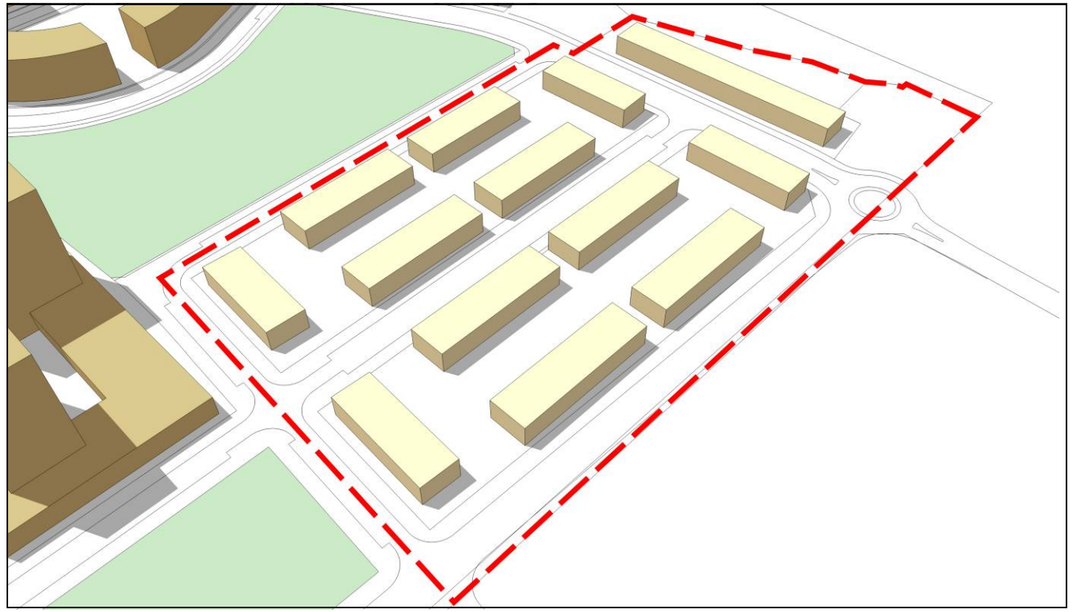


Figure 30: Block NE3 3-D Model

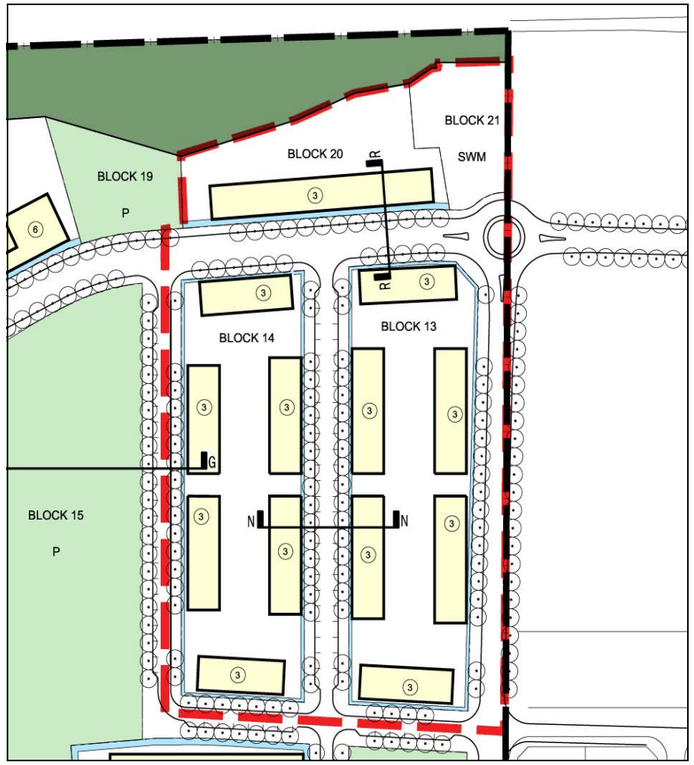
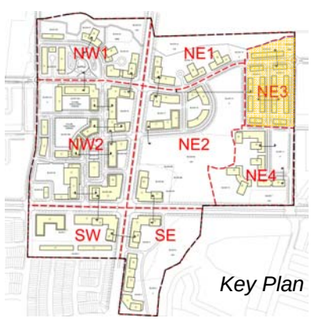


Figure 31: Block NE3 Detailed Block Plan

3.2.6 Block NE3

Townhouse

Block NE3 is defined by its consistent townhouse block type comprised of a complementary mix of housing styles that offer a variety of residential options.



Key Plan

FRONTAGES

Medium-density townhouse blocks generously line the local roads defining Block NE3 with porches, entranceways and bay windows, sometimes mirroring each other across the street.

HEIGHTS, SETBACKS, AND OPEN SPACE

At 3 stories high, the townhouses respect a 3.0 metre minimum street-front setback, given the relative proportion of the local street. Individual front gardens, help to negotiate the transition between the private domestic realm and public street at grade level. Mid-block access driveways and garages allow for raised amenities areas for each unit.

BUILDING TYPOLOGY

The intimate scale of the townhouse typology will be articulated by porches, stoops, entranceways, bay windows and front gardens. Its medium density creates a smooth transition to the low-density single-family development adjacent to this edge of the Carrville District Centre.


ROW
ROW
ROW
ROW
4.0m
MIN.
4.0m
MIN.
4.0m
MIN.
4.0m
MIN.
5.0m
8.5m
5.0m
18.5m
PUBLIC
7.5m
PRIVATE
5.0m
11.0m
5.0m
21.0m
PUBLIC
7.5m
PRIVATE
5.0m
10.4m

SECTION N

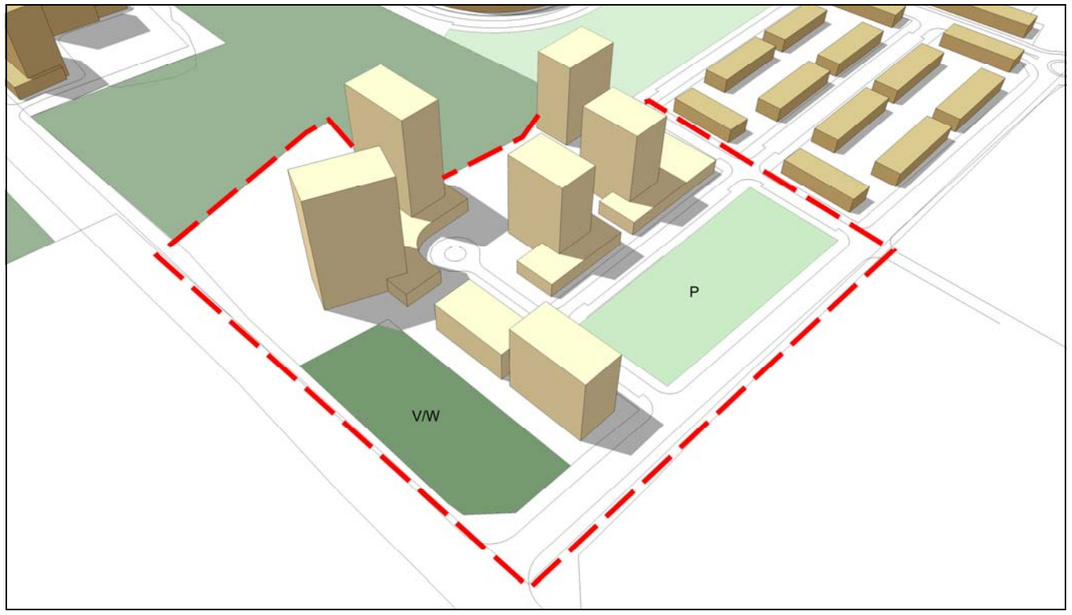


Figure 32: Block NE4 3-D Model

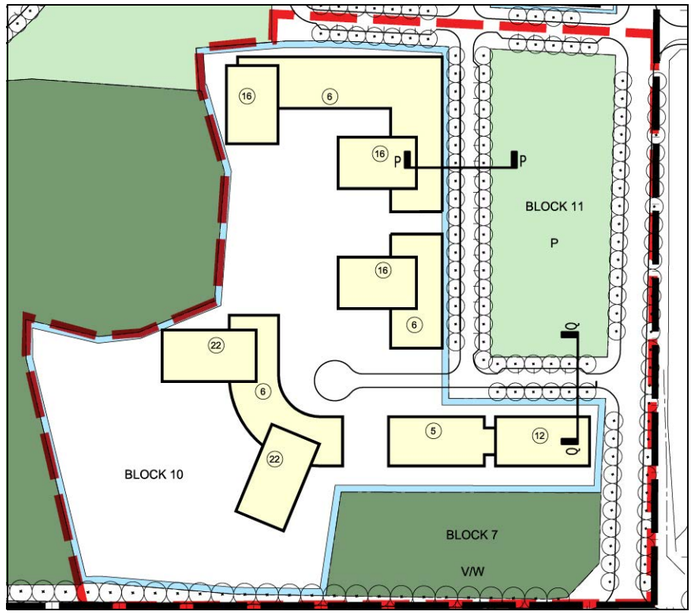


Figure 33: Block NE4 Detailed Block Plan

3.2.7 Block NE4

Towers in the Landscape

Block NE4 is defined by its linear urban neighbourhood park and affected by the adjacent natural valleyland and woodlot fronting onto the large scale Rutherford Road.

Key Plan

FRONTAGES

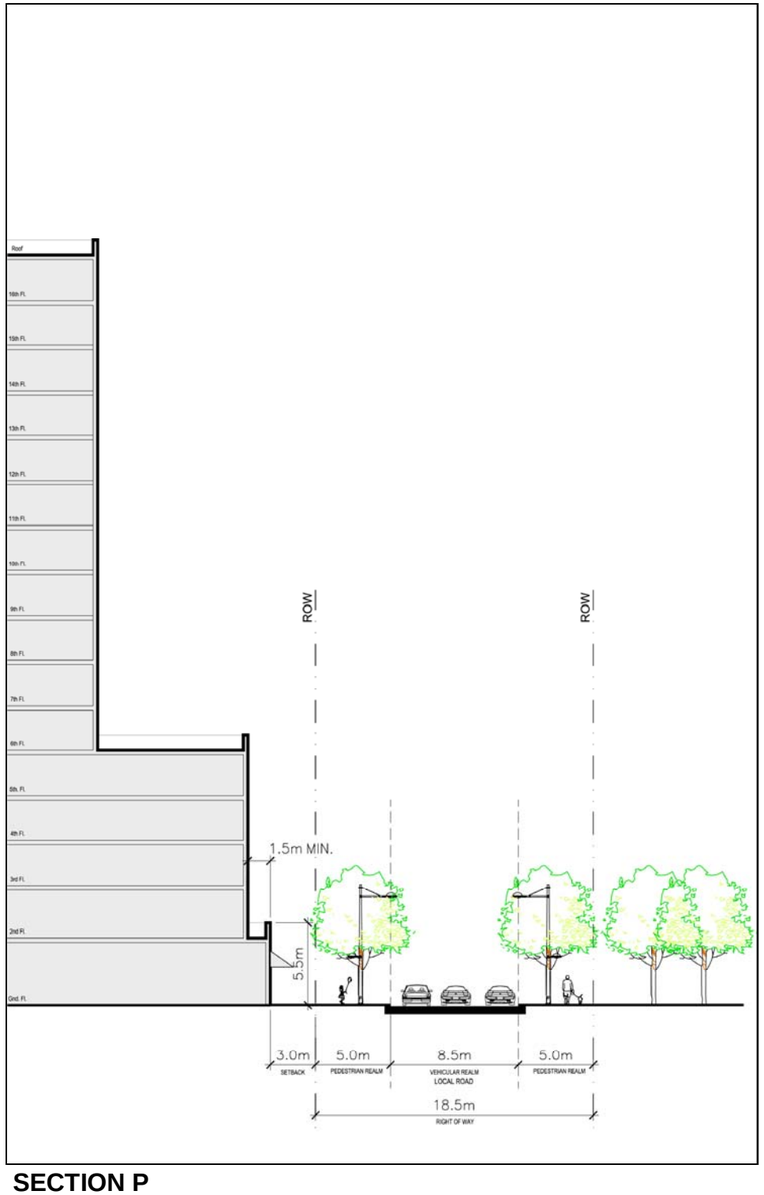
Higher density buildings front and line the urban neighbourhood park with a podium base and residential towers above oriented towards the natural woodlot. A stepped park building becomes double-sided to front both the neighbourhood parks and Rutherford Road.

HEIGHTS, SETBACKS, AND OPEN SPACE

Buildings along the park edge will have a 6-storey base with a setback of 3 metres and a 16-storey tower stepped back 4 metres minimum from the podium. The iconic 'park building' will range from 5 to 12-stories with a 3 metre set back at the park side. The 22-storey point towers sit back from the crescent face of their 6-storey base set entirely in the open space. Setbacks along the woodlot will need to be reviewed with local conservation authority.

BUILDING TYPOLOGY

Appropriately scaled 6-storey bases address and define the park, as well as create a transition to the lower-density residential neighbourhood across the street. The stepped back 16 and 22-story residential towers that rise up from their 6-storey bases reach out towards the natural woodlot as a 'tower in the landscape' typology also visible from the bounding Rutherford Road.



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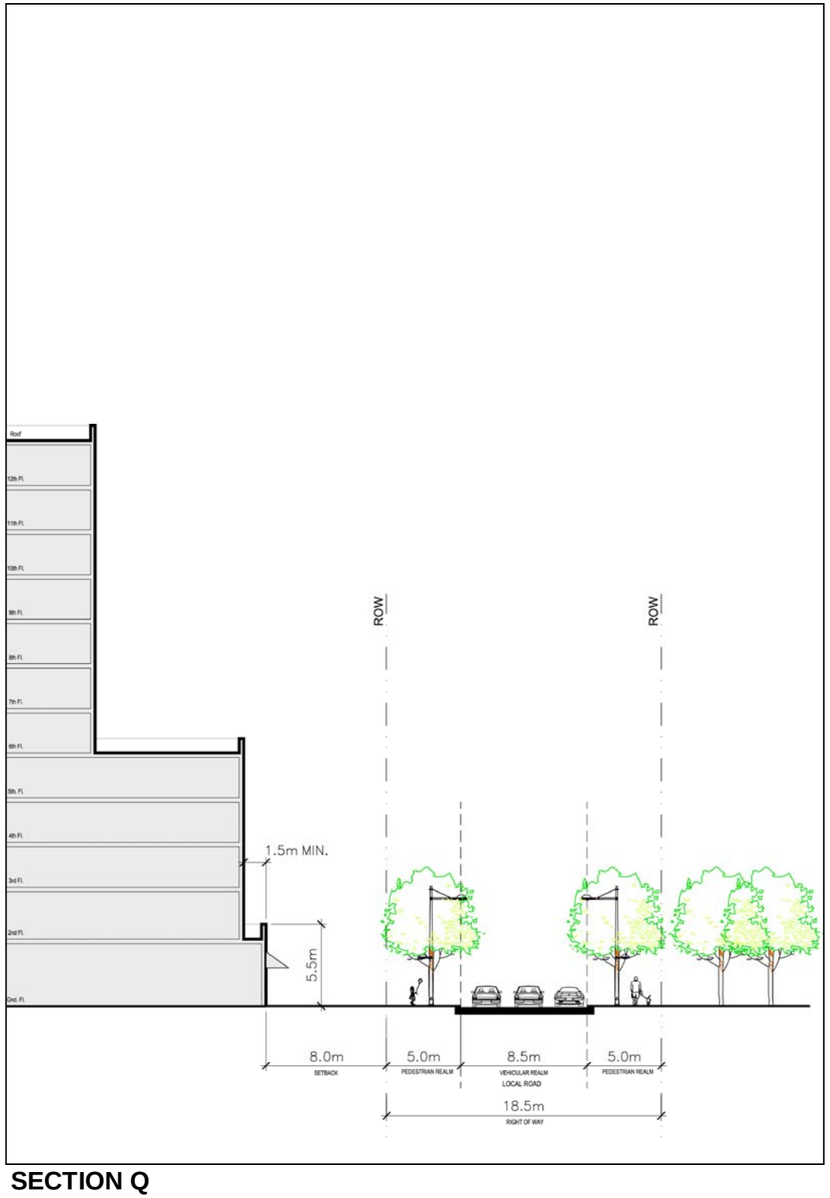

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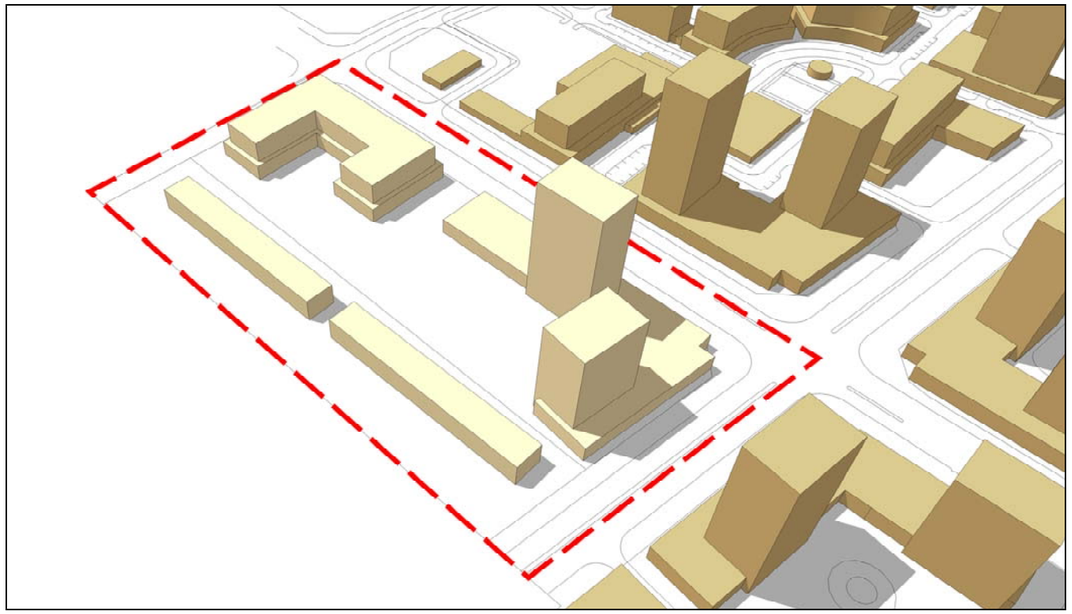


Figure 34: Block SW 3-D Model

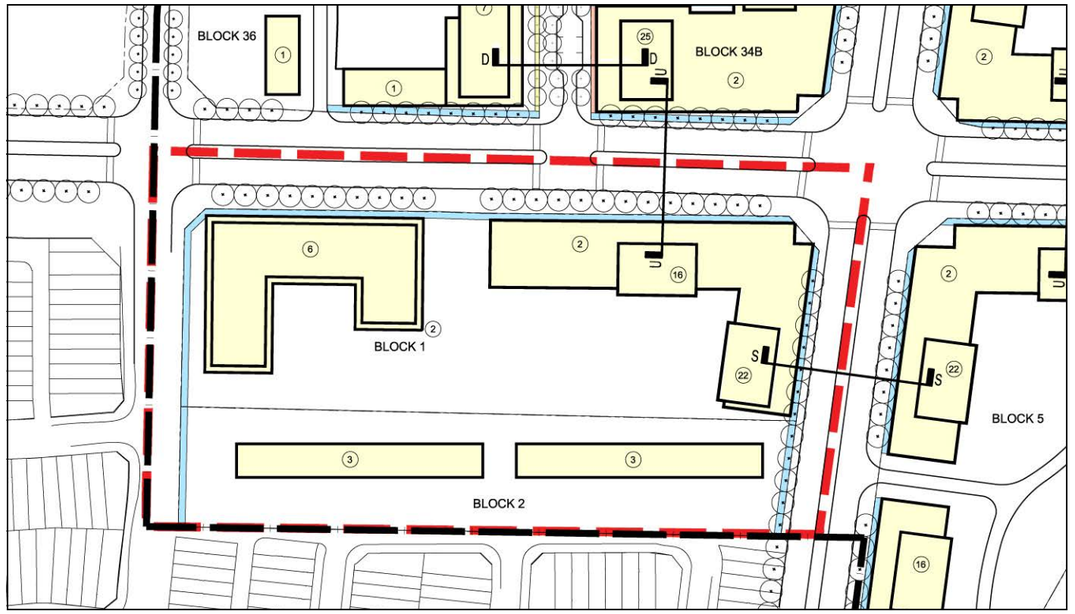
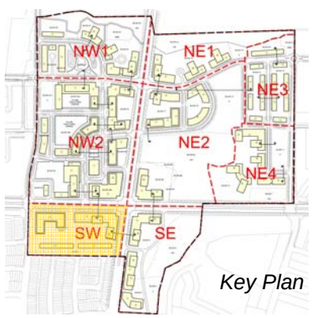


Figure 35: Block SW Detailed Block Plan

3.2.8 Block SW

Mixed Use Corner

Block SW is a gateway to Carrville District Centre from the single-family development to the south as well as from the major intersection at its north east corner. There is potential to build-on this existing block in order to reinforce the typology and building strategy for the District Centre. It is shaped ultimately by its adjacent conditions.



Key Plan

FRONTAGES

Higher density mixed-use buildings flank the major intersection with a 2-storey podium base setback 3 metres at the street and a residential tower setback considerably from the face of its podium to enjoy distant views and create an iconic gateway. Townhouses line and address the southern-most edge of the Block.

HEIGHTS, SETBACKS, AND OPEN SPACE

Buildings along the major street edges will have 2 and 6-storey bases with a setback of 3 metres and 16 and 22-storey towers, stepped back 10 metres from the podium. The two 3-storey high townhouse blocks sit well back from the existing low-density residential neighbourhood to the south.

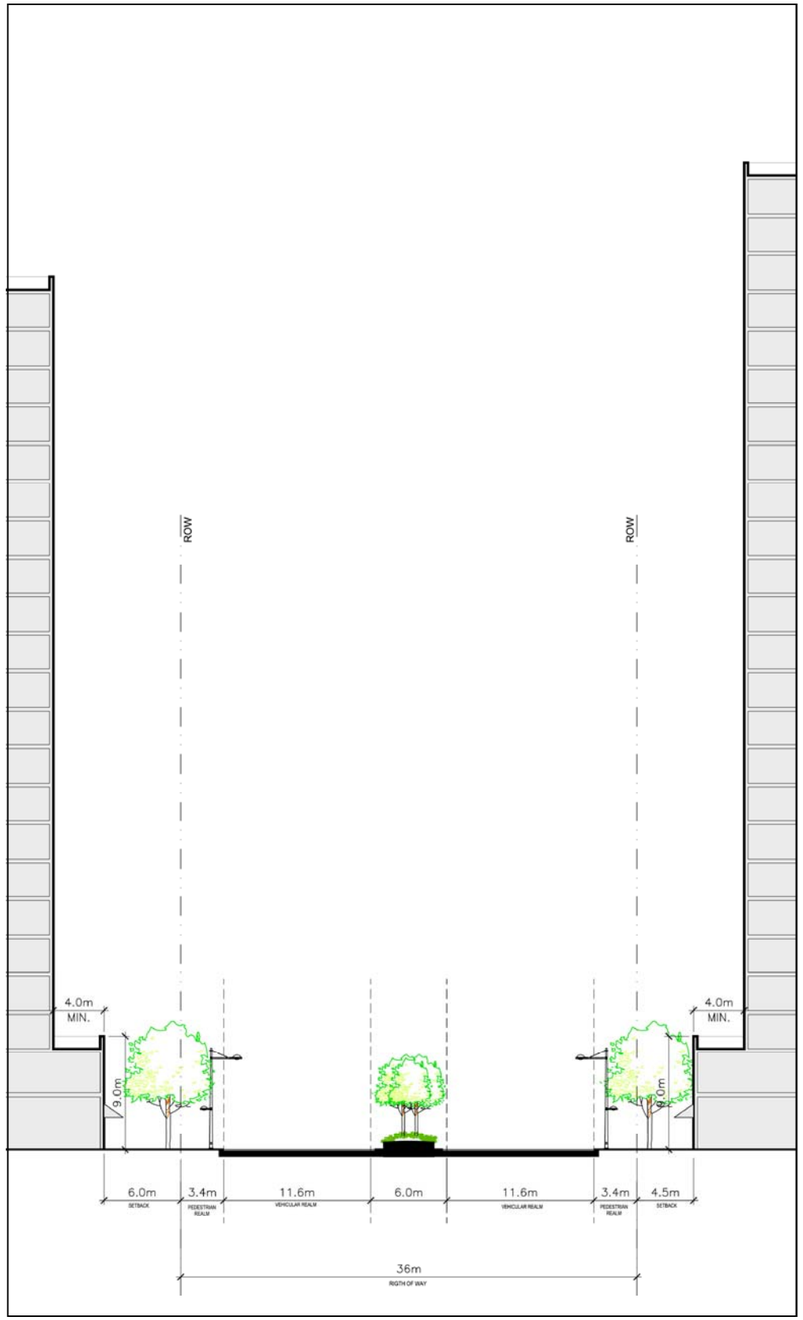
BUILDING TYPOLOGY

Appropriately scaled podium bases address and define the major streets, while their rising 16 and 22-story residential towers that rise up to create iconic gateways to the District Centre at the cross-roads. In addition, townhouse typologies line and address the southern-most edge of the Block SW to appropriately negotiate the transition to the opposite low-density existing single family housing.

BUILDING SETBACKS (MIN)

- 2.0m
- 2.5m
- 3.0m
- 4.5m

(#) Recommended Building Height



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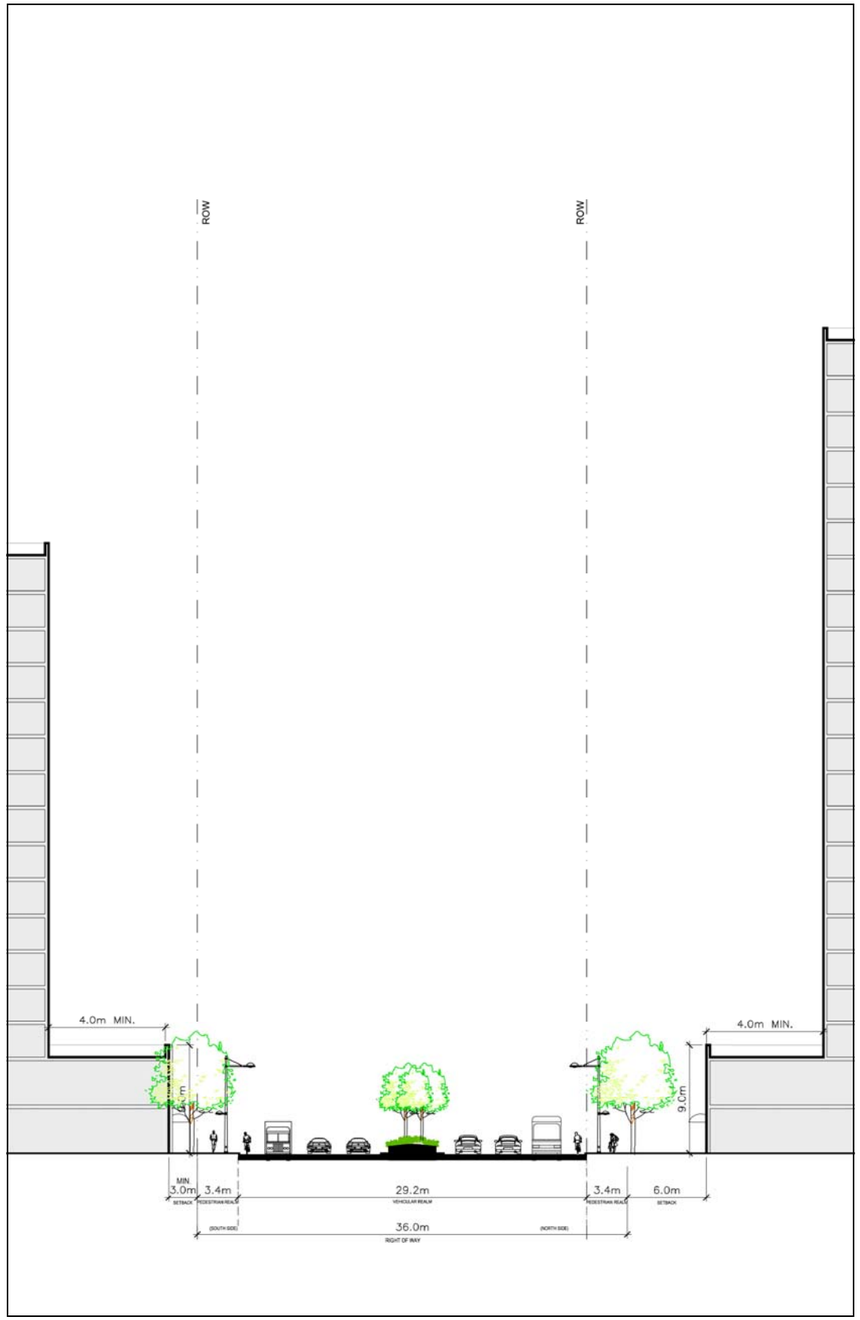

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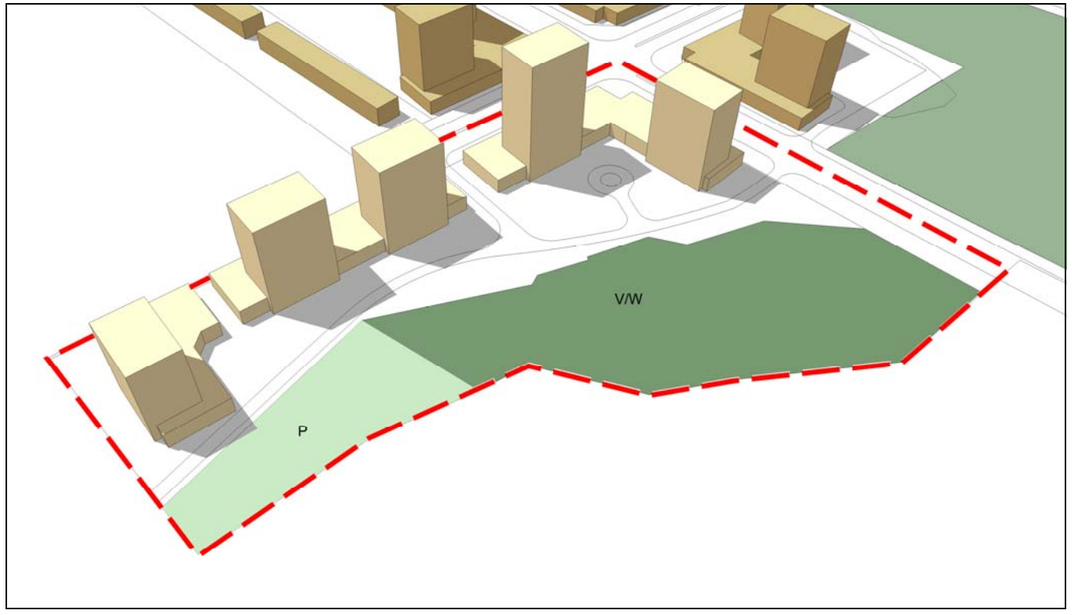
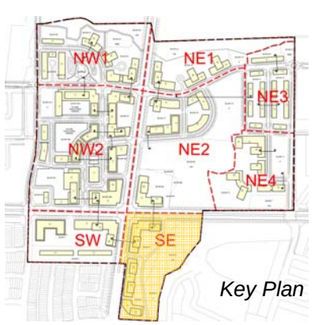


Figure 36: Block SE 3-D Model

3.2.9 Block SE

Valleylands Edge

Block SE is defined by the natural edge of the valleylands to the east, the major crossroads at its 'gateway' northwest corner, and the existing single-family housing block to the west.



Key Plan

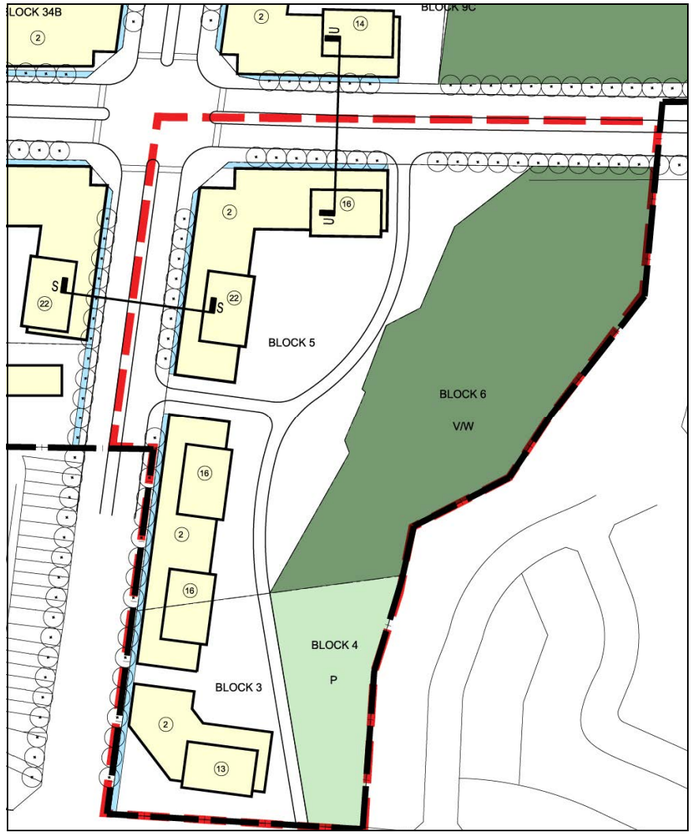


Figure 37: Block SE Detailed Block Plan

FRONTAGES

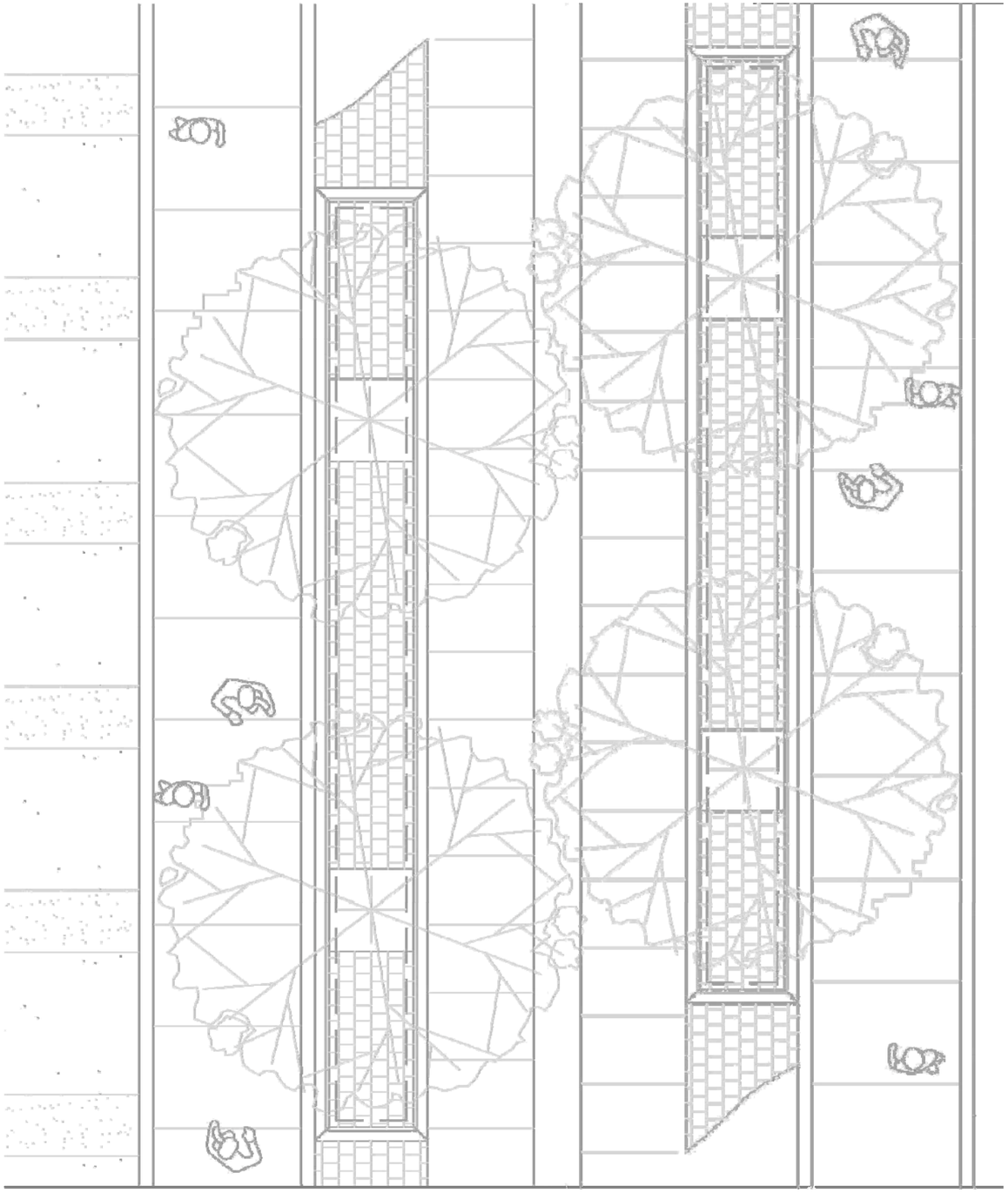
Base buildings of 2 storeys consistently front the regional arterial road, while 16 and 22 storey residential towers which rise above consistently front the natural valleylands and mirror each other, to create a gateway at Rutherford Road. The 2-storey bases of the two southernmost valleylands oriented buildings also front the existing low-density housing on the west side of Dufferin Street.

HEIGHTS, SETBACKS, AND OPEN SPACE

Buildings at the arterial road and local collector road respect a 3.0m street-front setback and have expansive 2 storey bases. The residential towers of 16 and 22-storeys rise above the bases with a consistent minimum 4.0m setback.

BUILDING TYPOLOGY

Ultimately, the building type of Block SE must negotiate the urban corner condition, the adjacent single-family housing and the natural valleylands edge condition. The 16 and 22 storey residential towers stepped back from their perpendicular 2 storey base allows two orientations to each building – the base defines the urban street edge while the tower addresses the natural landscape. Similarly, the corner building mirrors its counterpart across the street to create a gateway at both the scale of the Dufferin Street and Rutherford Road.



4.0 PARK AND OPEN SPACE SYSTEM

4.1 Conceptual Framework

4.1.1 Overall System Structure

A comprehensive and inter-connected park and open space system will be integrated into the design of Carrville District Centre in order to create a unique community character and identity within the City of Vaughan.

Parks within Carrville District Centre include an Urban Square, Urban Neighbourhood Parks, Neighbourhood Parkettes, Pocket Parkette, a Greenway Corridor and various Trail Links. This system includes a variety of public park features connecting to the broader greenway interface and the pedestrian and bicycle systems of the City.

Being that Carrville District Centre is considered an urban centre, it requires smaller parks, strategically distributed throughout to create a strong community and enhance neighbouring development. Park sizes are generally consistent with the standards recommended in the *2008 City of Vaughan Active Together Master Plan for Parks, Recreation, Culture and Libraries*. However, due to the densities envisioned for the District Centre, smaller urban parks will be developed and cash-in-lieu of land conveyances will be accepted. Park sizes and locations may be adjusted slightly at the Plan of Subdivision stage.

Parkland Summary

<u>North West Quadrant</u>	
Urban Square (2)	= 0.26 ha
Urban Neighbourhood Park (5)	= 0.93 ha
Neighbourhood Parkette (4a)	= 0.38 ha
<u>North East Quadrant</u>	
Urban Neighbourhood Park (6)	= 1.92 ha
Urban Neighbourhood Park (3)	= 0.74 ha
Pocket Parkette (7)	= 0.24 ha
<u>South East Quadrant</u>	
Neighbourhood Parkette (4b)	= 0.52 ha
Total Parkland Provided	**= 4.99 ha**

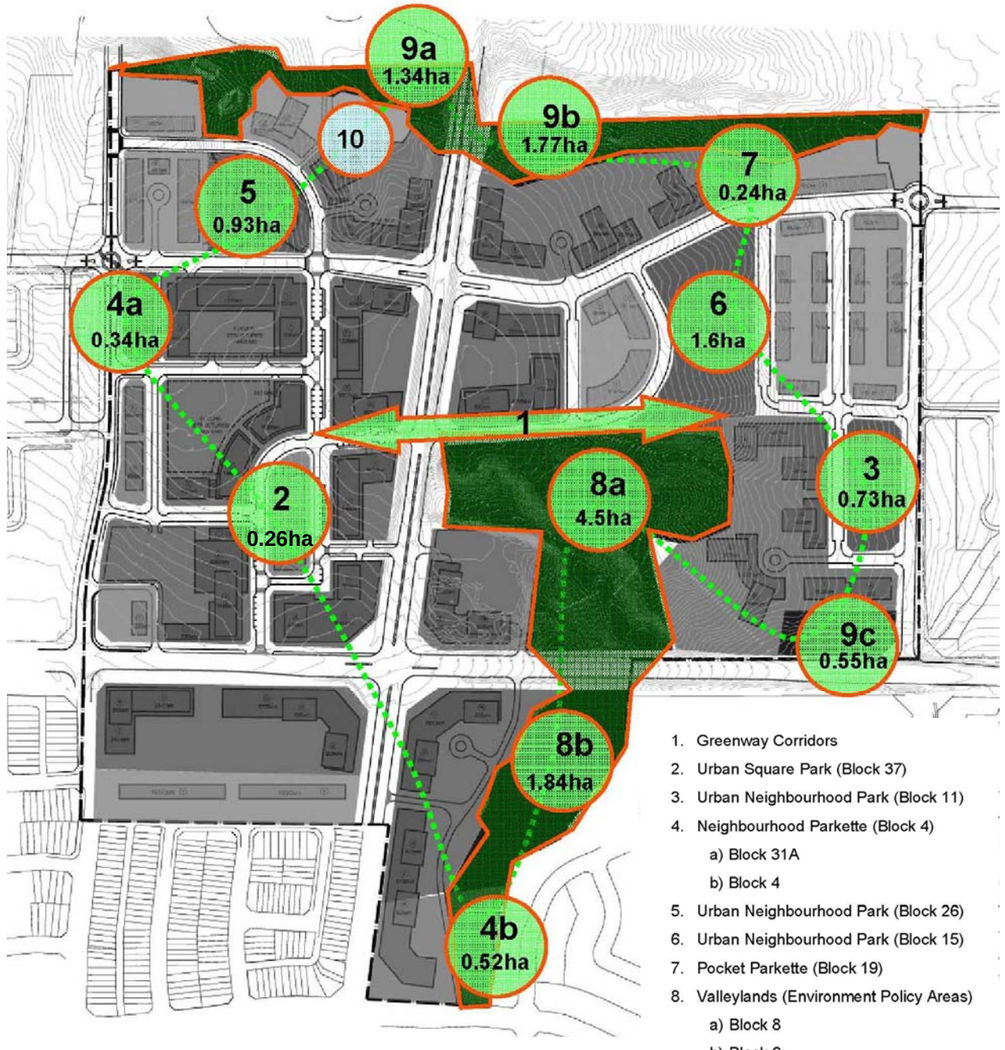


Figure 38: Park and Open Space System Structure

Carrville District Centre PARKS AND OPEN SPACE SYSTEM

Typology	1 **Greenway Corridors**	2 **Urban Square** *Block 37*	3 **Urban Neighbourhood Park** *Block 11*	4a **Neighbourhood Parkette** *Block 31A*	4b **Neighbourhood Parkette** *Block 4*	5 **Urban Neighbourhood Park** *Block 26*	6 **Urban Neighbourhood Park** *Block 15*	7 **Pocket Parkette** *Block 19*	8a **Valleylands** *Block 8* **(Env. Policy Areas)**	8b **Valleylands** *Block 6* **(Env. Policy Areas)**	9a **Valleylands** *Block 23*	9b **Valleylands** *Block 22*	9c **Woodlots** *Block 7*	10 **SWM Pond** *Block 21*
Size/Areas	Varies	0.26 ha	0.74 ha	0.38 ha	0.52 ha	0.93 ha	1.92 ha	0.24 ha	4.53 ha	1.84 ha	1.33 ha	1.77 ha	0.55 ha	0.24ha
Function	Continuous naturalized pedestrian links Trail system	Urban Community Square	Local neighbourhood park, junior and senior play, multi purpose trail connection	Local neighbourhood park with junior and senior play areas	Local neighbourhood park with junior and senior play areas	Soft landscaping, urban park square	Large multi-use open space	Green corridor	Protection of natural features Existing function to continue	Protection of natural features Existing function to continue	Protection of natural features Existing function to continue	Protection of natural features Existing function to continue	Protection of natural features Green corridor connection	Storm water quantity / erosion quality
Location Criteria	Adjacent to existing valleylands & neighbourhood development	Key anchor for Main Street focal point	Proximity to residential community and open space system	Road frontage at least 50% easy access to residential community	Road frontage at least 50% easy access to residential community	Direct linkage to main street and centre of residential community	Central location for community, adjacent valleylands to south, flexible recreation uses	Adjacent to private valley lands to the north and park to the south	Existing valleylands north of Rutherford Road	Existing valleylands south of Rutherford Road, 10m buffer to the valleyland	Existing valleylands	Existing valleylands, private property	Adjacent to natural water-course and Woodlot	Predetermined construction storm pond at low point of development site
Potential Features + Facilities	Open space linkage, passive recreation, pedestrian & bicycle trail, eco swales / boulevard planting, naturalized landscape planting / grading Multi-use trail	Formal open space, flexible urban uses – temporary market area, skating area, urban space, seasonal entertainment concerts, formal gardens	Flexible open space, structured play area, pedestrian trail connection to surrounding open spaces	Playground area, trail connection	Playground area, trail connection	Flexible open green space, picnic area, trail connection and look out to surrounding area, mini versatile skateboard park, mini waterplay, senior/junior playgrounds, mini soccer field	Multi use open space, themed areas, picnic area, trail connection and look out to surroundings, mini versatile skateboard park, mini waterplay, senior/junior playgrounds, mini soccer field	Rest node, trail connection	Natural visual connection/ backdrop for the community, pedestrian trail and naturalized landscaping within buffer area (Note: Extensive grading and the use of retaining wall systems not permitted within 10m buffer.)	Natural visual connection/ backdrop for the community, pedestrian trail and naturalized landscaping within buffer area (Note: Extensive grading and the use of retaining wall systems not permitted within 10m buffer.)	Natural visual connection/ backdrop for the community, possible informal trail connection (Note: Extensive grading and the use of retaining wall systems not permitted within 10m buffer.)	Natural visual connection/ backdrop for the community, possible informal trail connection (Note: Extensive grading and the use of retaining wall systems not permitted within 10m buffer.)	Potential partial perimeter fence, enhance and maintain natural features (Note: Extensive grading and the use of retaining wall systems not permitted within 10m buffer.)	SWM Pond / Service access Amenities may include trail, boardwalk, lookout, benches and educational and interpretive signage.
Landscape Themes / Character	Urban/ naturalized character Trail recreation (NOTE: Greenway Corridor is not included in the park dedication calculation because it is largely contained within the woodlot / valleyland 10m buffer zone)	Urban square, restaurant overlooking the square, gathering areas, central feature - skating/fountain, sculpture	Natural play structures, seating nodes, informal open space, natural material features, naturalized planting, educational interpretation	Structured formal park with formal play areas, seating nodes and picnic area	Structured formal park with formal play areas, seating nodes and picnic area	Urban structure framing park / common green formal and informal play areas, naturalized planting, educational interpretation	Urban structure framing park / common green formal and informal play areas, holds large events / festivals	Open, naturalized planting with seating and trail connection	Natural habitat protection	Natural habitat protection	Natural character Countryside community identity	Natural character Countryside community identity	Natural character Countryside community identity	Naturalized native character with habitat features (rock piles, standing dead logs, ground based logs, etc) Countryside community identity

Table 2: Parks and Open Space Hierarchy Chart

4.1.2 Park Dedication in an Urban Setting

The *Ontario Planning Act* specifies the amount of parkland that must be conveyed to the municipality when a subdivision of land or development occurs, based on the following criteria:

> ***Parkland***
> ***51.1****(1)The approval authority may impose as a condition to the approval of a plan of subdivision that land in an amount not exceeding …**5 per cent of the land included in the plan** shall be conveyed to the local municipality for park or other public recreational purposes…*
>
> ***Other criteria***
> *(2)… the municipality, in the case of a subdivision proposed for residential purposes, may, in lieu of such conveyance, require that land included in the plan be conveyed to the municipality for park or other public recreational purposes at a rate of **one hectare for each 300 dwelling units** proposed or at such lesser rate as may be determined by the municipality.*
>
> ***Payment in lieu***
> *(3)…the municipality may, in lieu of accepting the conveyance, require the **payment of money** by the owner of the land,*

The City of Vaughan is currently supplying parks in the amount of 4.19 hectares per 1000 residents, as stated in the *Active Together Master Plan* (2008). This rate of parkland dedication is currently being provided based on the prevailing low density, single family development. It is important to note that while this rate is appropriate for the low density areas, it is not appropriate in an area where an urban character with higher densities are prevalent such as those proposed in the Carrville District Centre.

Several factors are relevant in the discussion for a reduced level of parkland dedication requirement and the need for a more urban type, character and quality of park for the Carrville District Centre:

- A variety of small to medium sized neighbourhood parks are proposed within the development area that provide active recreational facilities for all age groups;
- There are strong pedestrian and cycling trail links that connect with the larger natural open space and parks system surrounding the Carrville District Centre;
- It is anticipated here that the medium and higher density residential development generally offer fewer large family development units with lower numbers of children and higher numbers of young adults, seniors and “empty-nesters”;
- The proposed “Urban Square” and “Main Street” are envisioned to have a range of appropriate amenities and multi-use social spaces that are an important part of the urban open space network and will contribute substantially to satisfying the recreational and social needs of the Carrville District Centre community.

It is also important to provide parks sized appropriately to the active urban lifestyle, but are of significantly higher quality within the Carrville District Centre. It is recommended that additional park development funds will be required to enrich the quality of these urban park spaces paying more attention to the pedestrian experience and including:

- Higher quality materials for paving, site furniture and amenities;
- Incorporate public art where possible;
- Ensure that year round uses and activities are addressed including provision of adequate areas of shade protection and multi-use surfaces for inclement weather as well as spaces for winter activities;
- Ensure that spaces are used both day and night with appropriate levels of environmentally sustainable lighting;

4.2 Natural System

4.2.1 Woodlots and Valleylands

Located within proximity to the Carrville District Centre lies the Upper Don River Valley and numerous woodlots and open spaces. These lands serve to protect and enhance the natural ecosystem and to maintain biological diversity within the City of Vaughan. Development is not permitted on lands adjacent to a woodlot designation if it significantly impacts the integrity of the feature or the ecological functions the feature is identified for.

A 10 metre ecological buffer has been established by the Toronto and Region Conservation Authority in the OPA for lands adjacent to all valley and stream corridors in order to ensure that these natural features and their associated functions are protected and eventually enhanced. Suitable uses within buffer areas include boulevard portion of street right-of-ways, stormwater / groundwater management facilities, naturalized landscaping and pedestrian trails. These features are only to be permitted provided minimal grading takes place and that a retaining wall system is not utilized. This buffer area is to be considered part of the open space system. It is important to provide continuous vegetative corridors connecting natural features to provide linkages between these key habitats.

Key Plan

4.3 Storm Water Management Facilities

The Carrville District Centre Master Plan establishes a new stormwater management pond west of Dufferin Street near northern boundary of the District Centre. This pond will be developed consistent with all City of Vaughan guidelines and will be integrated with the open space and trail system. Designed to maintain environmental and ecological integrity providing a net benefit to the environment, this pond will become attractive community amenities and will provide a functioning habitat for wildlife. Landscape treatments for the pond include naturalized edges and pedestrian access trails adjacent to the woodlots.

In addition to stormwater management ponds being implemented within the District Centre, site level stormwater management techniques should be incorporated to prevent, treat and store runoff and all associated pollutants. These can be in the form of curb extensions to absorb excess street runoff, grass swales, bioretention areas, rain gardens, planting strips, etc.

Guidelines

- The layout, organization and design features of the components of the stormwater management facilities should be of a natural character consistent with the natural landscape typical of the area including indigenous plant materials. Soft surface trails and viewing areas should be incorporated into the design of stormwater ponds;

- Stormwater management ponds shall be designed as low maintenance and / or maintenance free in order to decrease the amount of mowing required and maintain the natural character of the site;

- Engineered structures associated with the function of the stormwater management facility should be designed as attractive features. Fencing of storm water ponds is discouraged in order that they function as an integral part of the open space system;

- The zone adjacent to surrounding streets should be designed as transitions from naturalized areas to the urban streetscape character;

- The landscape treatments of the stormwater pond adjacent to the woodlots should merge with the natural landscape of the woodlot to maintain a cohesive environment;

- Stormwater management ponds are to be integrated into the trail system, and trail entrances should be provided at the street edge to provide access. Where appropriate, trails should lead to and incorporate vistas with seating facing the stormwater pond and provide opportunities for interpretive signage for ecological education.

4.4 Park and Open Space Hierarchy

4.4.1 Urban Square

- Size 0.26 Ha
- Located at the south end of Main Street in the north-west quadrant acting as a focal point within the community
- Formal space for passive recreation in support of adjacent higher density mixed use development
- Surrounding buildings to animate the urban square and provide a sense of intimacy and enclosure
- High priority to intensive pedestrian circulation allowing for more people per square foot with a high density of users
- Connections to buildings and other open spaces
- Minimum percentage of soft landscaping 30% for microclimate and comfort
- Public art and water features
- Opportunity for programmed events and festivals throughout the year for Carrville and the City of Vaughan.

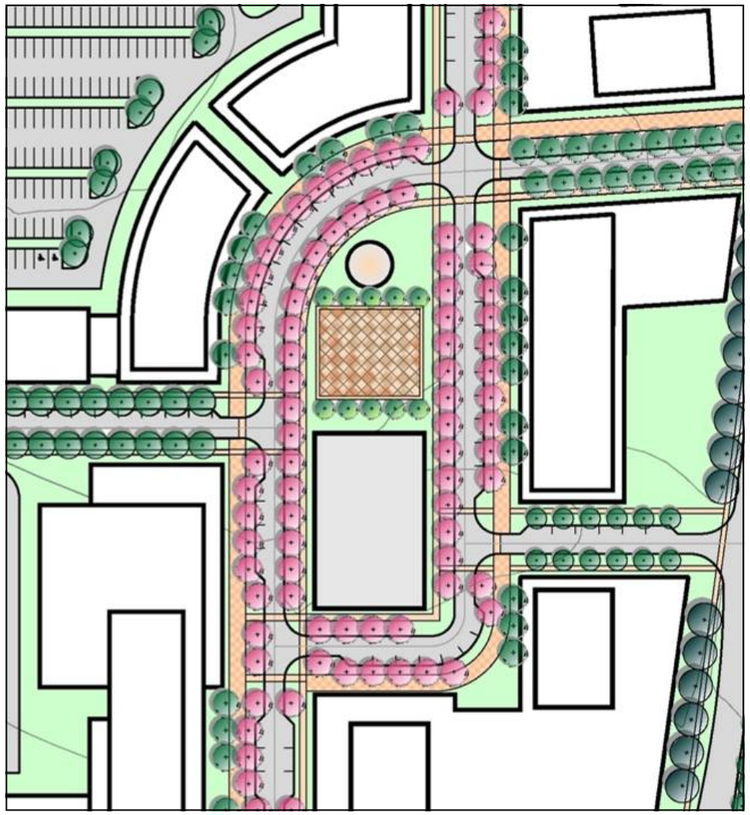
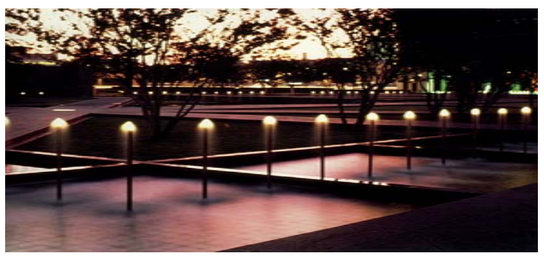
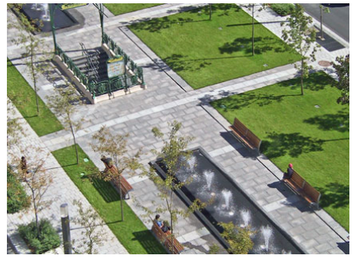


Figure 39: Urban Square Detail

Key Plan





4.4.2 Urban Neighbourhood Parks

- Size 0.73—1.92 Ha
- Typically located within a safe and convenient walking distance of residential neighbourhoods with extensive frontage (minimum 50%) on public streets to enhance the neighbourhood character and increase safety and security
- Both passive and active recreational opportunities: children's play, sitting areas, nature conservation, landscape development, and playing fields if large enough
- Strong landscape buffers between heavy traffic areas
- Topography of each individual park will be used to its full advantage, including creating terraced areas
- Ideally with a minimum coverage of 65% soft landscaping


Imagery of Urban Neighbourhood Parks

Key Plan

4.4.3 Neighbourhood and Pocket Parkettes

- Size 0.24—0.52 Ha
- May be located near mixed-use and residential neighbourhoods
- Ideally with minimum coverage of 65% soft landscaping
- Gardens, passive sitting areas, children's play areas, pedestrian paths and lighting
- Highly visible and accessible with good frontage on street
- Strong landscaped buffers between heavy traffic areas




Imagery of Parkettes

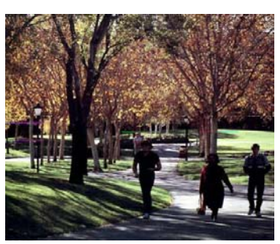
Key Plan

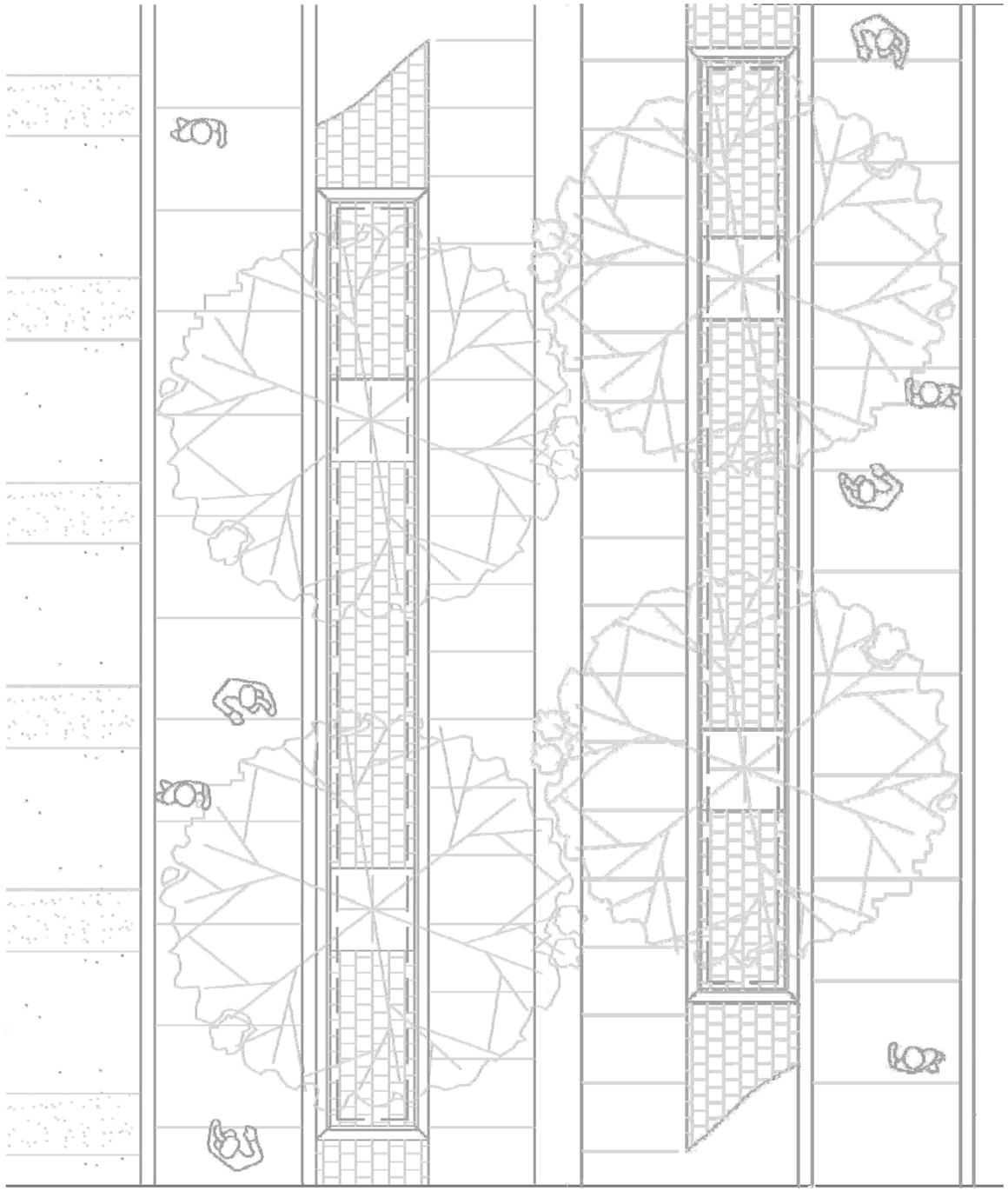
4.4.4 Greenway Corridor and Trail Links

The Greenway Corridor is a multi use naturalized pathway, largely within the woodlot buffer zone of 10m (to be designed with minimal grading changes). This pedestrian connection links Dufferin Street with the large Urban Neighbourhood Park to the east. An overall system of streets, trails and parks is provided to encourage walking, cycling and other non-motorized modes of transportation.

- Trails follow desirable routes within the District Centre and offer variation in scenery and safety in movement
- Trails should maintain curvilinear alignment following the contours of the site through park areas
- Trails should link with open space and right-of-ways that are immediately surrounding the District Centre
- Pedestrian and bicycle routes in road right-of-ways are preferred to be off-road in a multi-use boulevard pathway opposed to on-road (particularly on Dufferin Street)
- A pedestrian zone and pedestrian connections should be defined along the entire length of Main Street and the Special Character Road, providing special areas within the District Centre that are designed for all modes of active transportation
- Trail links are in accordance with the guidelines established in the *City of Vaughan Pedestrian and Bicycle Master Plan Study (2007)* and the *York Region Pedestrian and Cycling Master Plan (2008).*

Figure 40: Pedestrian Linkages



5.0 STREETSCAPE DESIGN

5.1 Conceptual Framework

5.1.1 Road Hierarchy

Carrville District Centre has a clear hierarchy of roads as described in Section 2.2.2 - Road Network. Well-defined and attractive streetscapes will reinforce the hierarchy of roads while enhancing the quality of community life by:

- Providing a multi-modal transportation system and connections to urban / open spaces and amenities;
- Enhancing movement, circulation, wayfinding and orientation;
- Providing places for community interaction and socializing;
- Including sustainable design practices (stormwater management techniques, etc.) into the design of streetscapes to establish a higher standard of sustainability for the District Centre;
- Promoting the image of Carrville District Centre as an attractive and vibrant urban community.

This section focuses on streetscape design and provides general guidelines for all streets and more specific guidelines for prominent roads within the community including:

- Dufferin Street – the primary north south arterial road through the community;
- Rutherford Road - the primary east west arterial road through the community;
- “Main Street” the primary north south collector road through the community; and,
- Primary Roads and Local Roads.

These streetscapes are intended to create consistently attractive, pedestrian oriented and coordinated designs that are complementary and compatible with adjacent land uses and built form.

While on-street parking has been included in these streetscapes, individual site plans will need to be reviewed to accurately determine where it should be located. Consideration shall be give to landscaping and planting treatments that continue to maintain sufficient sight lines at the proposed driveways and other problematic locations.

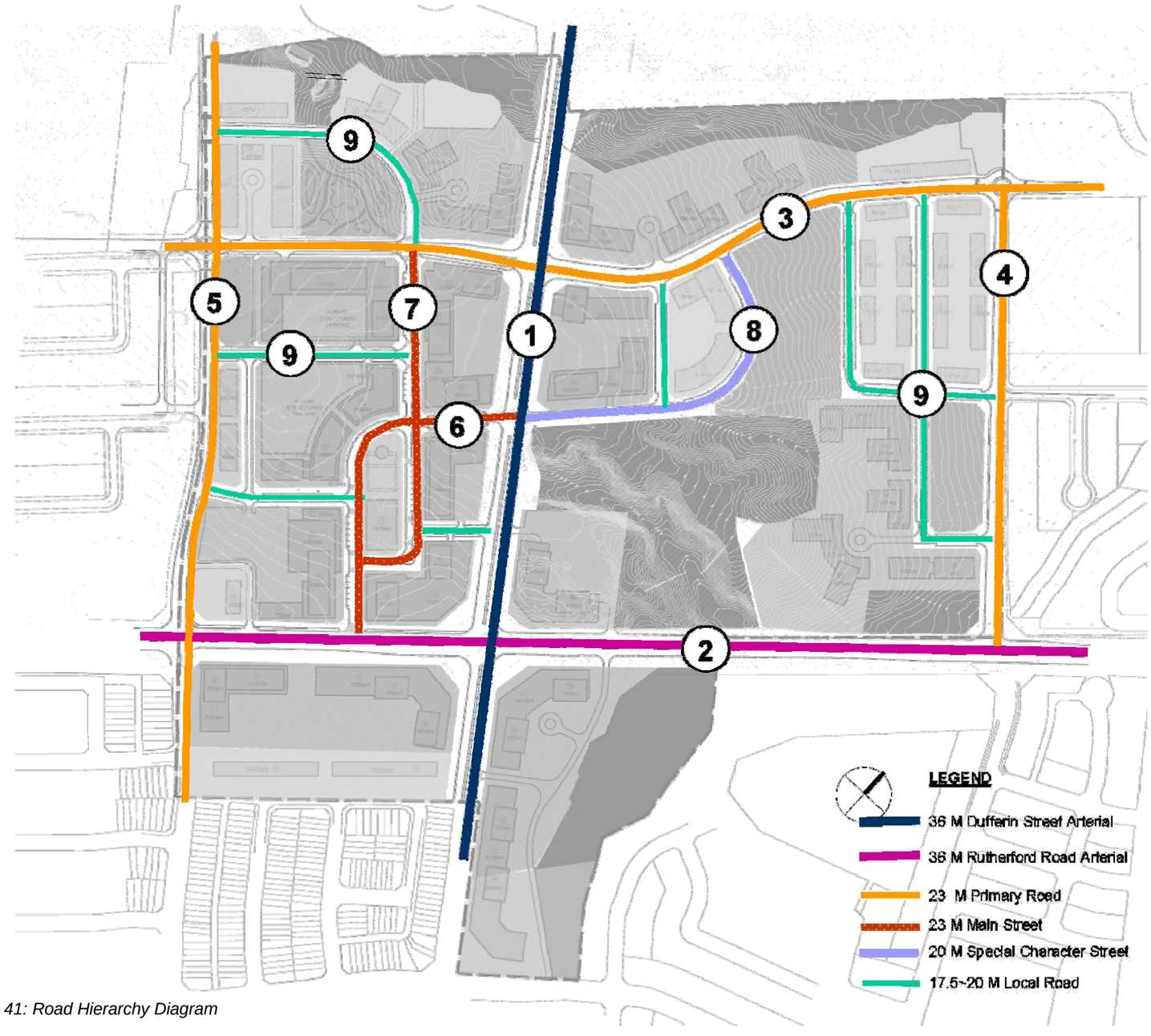


Figure 41: Road Hierarchy Diagram

Carrville District Centre - STREETSCAPE HIERARCHY

Typology	1 **Regional Road** Dufferin Street	2 **Regional Road** Rutherford Road	3 **Primary Road** Marc Santi Boulevard / District Avenue	4 **Primary Road** East site boundary	5 **Primary Road** West site boundary	6 **Main Street Link** East-west through Main Street	7 **Main Street**	8 **Special Character Road**	9 **Local Roads**
ROW	Minimum 36m ROW	Minimum 36m ROW	23m ROW	23m ROW	23m ROW	23m ROW	23m ROW	20 m ROW	17.5m to 20m ROW
Location	Existing arterial road running north-south, dissecting the site into two	Existing arterial road running east-west	Existing primary road running east-west near north end of site	East boundary of site	West boundary of site	West of Dufferin Street dissecting Main Street	West of Dufferin Street	West of Urban Neighbourhood Park (6) - Block 15	Various locations throughout site
Function	Landscaped centre median, 6 lanes of vehicular traffic, bike lanes and a pedestrian boulevard with sidewalk	Landscaped centre median, 6 lanes of vehicular traffic, bike lanes and a pedestrian boulevard with sidewalk	East-west connection to the north east district communities	Neighbourhood access to the community from Rutherford Road (major arterial road)	Neighbourhood access into community from Rutherford Road (major arterial road)	Neighbourhood access to Main Street from Dufferin Street and north west quadrant	District's main commercial corridor and pedestrian zone	Strong connection with urban neighbourhood park, local residential access	Local access to residential developments from primary and arterial roads
Location Criteria	Major regional arterial road connecting community centres	Major regional arterial road connecting community centres	Main primary road collector to neighbouring communities	Access to development within district and surrounding area	Access to development within district including Main Street and surrounding area	Central road dissecting Main Street to Dufferin Street, framing the urban square	Carrville District Centre – north/south commercial core	Access to residential development, neighbourhood park and open space network; Connection to Main Street and urban square across Dufferin Street	Access to residential developments and commercial service areas
Potential Features and Facilities	Off-road community multi-use boulevard pathway connecting to neighbourhood park and trail systems	On-street bike lanes connecting to neighbourhood park and trail system, lay-by parking acceptable according to policy	Includes a signed, informal, unmarked bicycle route, streetscape planting and pedestrian sidewalk; Proposed future YRT bus service	Primary vehicle, bicycle and pedestrian network, linking the community; Proposed future YRT bus service	Primary vehicle, bicycle and pedestrian network, linking the community	Pedestrian scale on street and lay-by parking, integrated lighting and planting	Pedestrian scale on street, lay-by parking, wide sidewalk on east side to allow for commercial patios	Crescent shaped road integrated with bicycle and pedestrian network, on street parking and access to local open space and park system	Bicycle and pedestrian network, on street parking
Landscape Themes and Character	Centre median – potential for public art, sculptures/ beacons, community identity Gateway feature at Dufferin Street and Rutherford Road	Centre median – potential for public art, sculptures/ beacons, community identity Gateway feature at Dufferin Street and Rutherford Road	Themed urban lighting, specialty pedestrian paving at intersections Gateway feature at Marc Santi Blvd. and Dufferin Street	Themed urban lighting, specialty pedestrian paving at intersection of Marc Santi Boulevard	Themed urban lighting, specialty pedestrian paving at intersection of District Avenue	Urban character, specialty lighting paving, streetscape furniture, framing the urban square and connecting Main Street	Pedestrian-scaled design with streetscape furniture, specialty paving at intersections and mid-block crossings	Natural character including a 10m buffer from woodlot on south side of road (Note: Extensive grading and use of retaining wall not permitted within 10m buffer)	Pedestrian-scaled design with curvilinear sidewalks, landscaping and street trees

Table 3: Streetscape Hierarchy Chart

5.2 General Guidelines

The streetscape consists of the zone from the building face to the curb and will be designed with equal consideration given for the elements within the right-of-way and the built form uses in the adjacent property. This section provides general guidelines for all streets in the Carrville District Centre.

Sidewalks
Pedestrian sidewalks of 1.5 metre minimum are required on both sides of all streets, forming a connected system within the District Centre and connecting to the surrounding community. Sidewalks may increase in width and change in texture or shape at pedestrian activity nodes, such as transit stops, intersections and public open spaces or commercial areas which encourage public activity. These pedestrian areas shall accommodate café patios and commercial displays on the arterial streets as well as Main Street, while taking on a more sheltered, curvilinear shape on smaller primary and local roads.

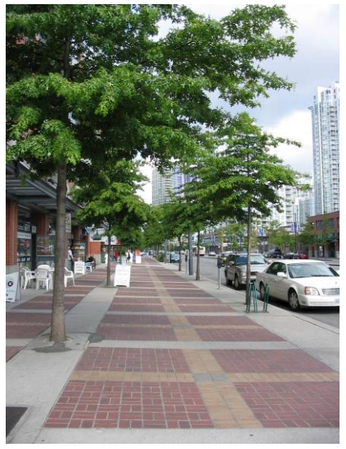
Streetscape Elements
Street furniture shall be consistent and coordinated in design throughout the public areas of the Centre. Materials, colours and styles will be complementary to the architectural style characterizing the Carrville District Centre. The placement and design of the elements should be coordinated to avoid visual clutter. These elements may include:

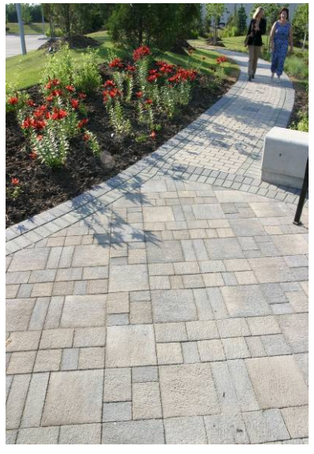
- Lighting Fixtures
- Site Furniture
- Waste Receptacles
- Recycling Bins
- Benches
- Signage
- Bicycle Racks
- Canopies, Awnings, etc.

Generally, barrier free design of all buildings, streets and publicly accessible open spaces shall be provided.

Utility Coordination
Utilities should be coordinated with landscape architects in the earliest possible stages of development in order to ensure that trees have the maximum soil volumes possible. Transformers and other above ground utilities shall be located within buildings or on private property located away and properly screened from public view. If it is necessary to place utility boxes in public view, they are to be in line with street trees to minimize their visual impact on the streetscape.

Parking
Principles of sustainability should be incorporated into the design of surface parking lots. These should include tree plantings to provide shade, walkways for pedestrian accessibility and safety, porous paving materials for infiltration of overland flow, bioswales, planting beds and appropriate lighting fixtures and levels.





Street Trees
Planting materials will play a unifying role in site development and reinforce distinctions amongst streets. Street trees provide both a functional and an aesthetic value; acting as a natural weather protection system as well as adding colour, visual interest and general appeal to streets.

A row of street trees should be located between the sidewalk and the curb in accordance with the City of Vaughan Standards or as deemed appropriate. Deviations from such standards may occur where there are varying adjacent land use, such as open space, urban square, etc. Plantings on regional roads (Dufferin Street and Rutherford Road) shall conform to York Region's Tree Planting Design Guidelines. The overall objective is to create a continuous green canopy on both sides of the street. Tree spacing is specified as follows:

- Arterial and Primary Roads— 8.0-10.0 m o/c. approximately
- Local Roads—10.0-12.0 m o/c. approximately

Generally, the use of species that require relatively low maintenance and those that are non-invasive, salt-tolerant and high-branching are recommended, please refer to Section 5.7 for a list of appropriate species. Local and native species are also encouraged to be used in groups rather than as single specimens. Species shall be selected to reinforce the street hierarchy within the District Centre as well as to visually distinguish streets from one another. Street trees of the same species should be planted on both sides of the street and extend for the length of the block or street. Using the same street tree species over large areas should be avoided. Street lighting fixtures and utility boxes should be placed in line with street trees, unless otherwise indicated.

For notes, technical details and suggested planting specifications regarding boulevard street tree plantings please refer to the Appendices.

5.3 Regional Roads

5.3.1 Dufferin Street

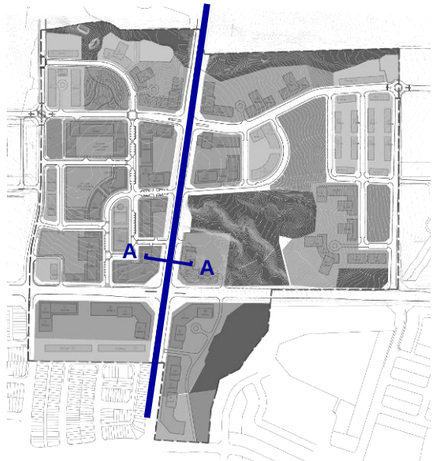
Purpose
Dufferin Street is the central north-south spine of the Carrville District Centre, providing links with Highway 7 and 407 to the south and Major Mackenzie Drive to the north. This street shall be a comfortable pedestrian environment, with appropriately scaled building entrances and landscaping and commercial uses on the ground floor of residential buildings. Gateways near the north and south boundaries will signify to visitors that they are entering a distinctive place within the City of Vaughan.

Features
- 36 m right-of-way;
- 4 centre lanes of 3.3 m width each;
- 2 outer lanes of 3.5 m width each;
- 6 m planted central median;
- 5.0 m boulevard pedestrian realm with 3.0 m multi-use pathway, lighting, street furniture and utilities on each side;
- Multi-use pathways accessible to all types of users.

Character
- Mixed-use interface;
- High density land uses;
- Urban arterial, strong street edge defined by planned building massing / facades;
- Strong gateway design expression—large street trees, paving features, etc;
- Specimen street trees, paved boulevards, comfortable furniture, pedestrian scale lighting;
- Comfortable for pedestrians—shade, wind protection and shelter.

Guidelines
- Coordinate streetscape elements within the right-of-way with adjacent private development sites to ensure that street tree requirements are achieved;
- Sidewalks located on both sides of the street;
- Street trees should be consistent in species and / or form along entire length of street;
- Sustainable growth environment for trees;
- Decorative paving, particularly at intersections, may be introduced to enhance the visual quality of the street;
- Locate transit stops in accordance with future transit needs;
- Decorative and pedestrian scale lighting integrated with street light poles;
- Design materials should be consistent with the architectural style and design of adjacent architecture;
- Emphasis on strong landscape development to balance the scale of the mixed-use interface;
- Reduce the scale of sight triangles at Regional Road intersections through the introduction of appropriate landscape features;
- Sensitive placement and visual screening of above ground utilities.

Key Plan



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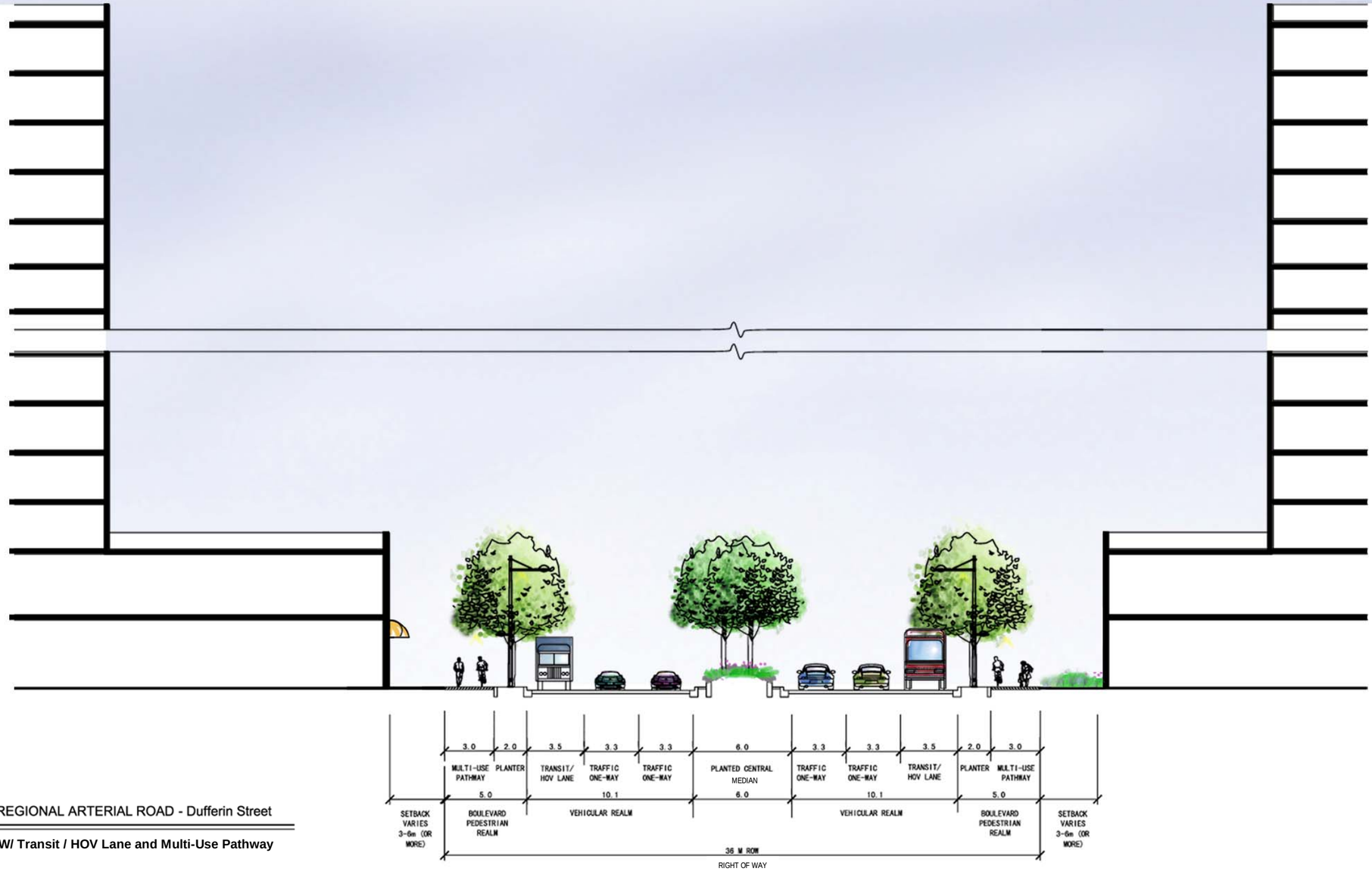


REGIONAL ARTERIAL ROAD - Dufferin Street

W/ Transit / HOV Lane and Multi-Use Pathway

5.3.2 Rutherford Road

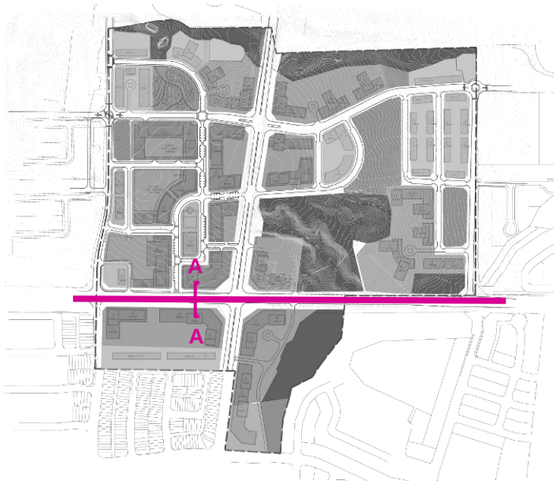
Purpose
Rutherford Road is the major east-west spine of the Carrville District Centre, providing links with Highway 400 to the west and Highway 404 to the east. This road will feature high density development with a comfortable pedestrian realm, complete with street trees, street furniture, lighting, enhanced paving at intersections and commercial uses at grade.

Features
- 36 m right-of-way;
- 4 vehicular lanes of 3.3 m width each;
- 2 vehicular lanes of 3.5 m width each;
- 2 bicycle lanes of 1.5 m width each;
- 6 m planted central median;
- 3.4 m pedestrian realm for sidewalk, lighting, street furniture, plantings and utilities on each side;
- Sidewalks accessible to all types of users.

Character
- Mixed-use interface;
- High density land uses;
- Urban arterial, strong street edge defined by planned building massing / facades;
- Strong design expression—large street trees, paving, etc;
- Specimen street trees, paved boulevard, comfortable furniture, pedestrian scale lighting;
- Comfortable for pedestrians—shade, wind protection and shelter.

Guidelines
- Coordinate streetscape elements within the right-of-way with adjacent private development sites to ensure that street tree requirements are achieved;
- Sidewalks located on both sides of the street;
- Street trees should be consistent in species and / or form along entire length of street;
- Sustainable growth environment for trees;
- Decorative paving, particularly at intersections, may be introduced to enhance the visual quality of the street;
- Locate transit stops in accordance with future transit needs;
- Decorative and pedestrian scale lighting integrated with street light poles;
- Design materials should be consistent with the architectural style and design of adjacent architecture;
- Emphasis on strong landscape development to balance the scale of the mixed-use interface;
- Reduce the scale of sight triangles at Regional Road intersections through the introduction of appropriate landscape features;
- Sensitive placement and visual screening of above ground utilities.

Key Plan



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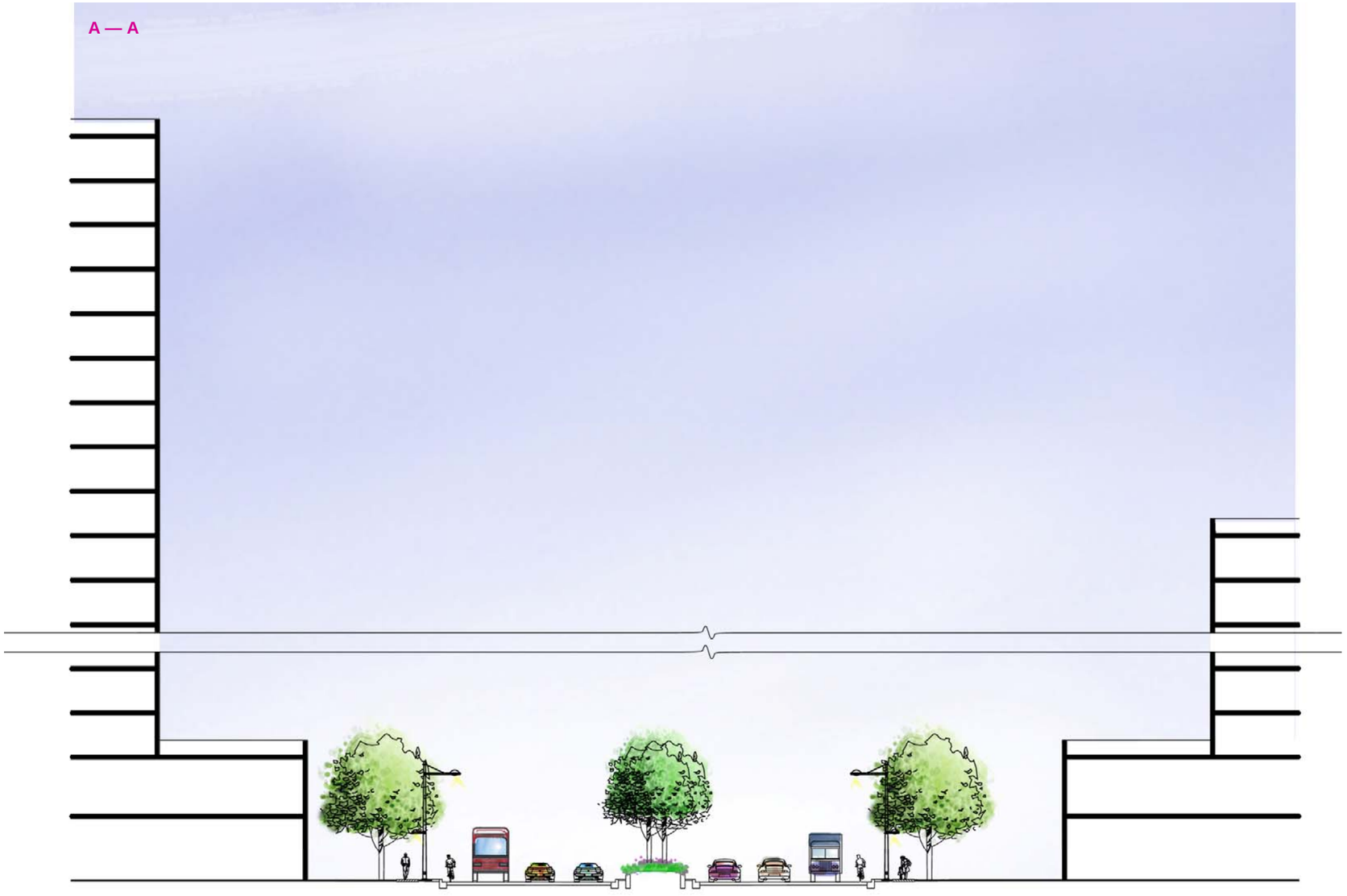


REGIONAL ARTERIAL ROAD - Rutherford Road

W/ Bike Lane no Parking
3 Lanes each direction

5.4 Main Street

5.4.1 Main Street—District Centre

Purpose
Main Street is envisioned as an active street with a strong retail environment and an emphasis on pedestrian comfort and circulation. Mid-block pedestrian crossing areas will promote this comfort level. The street will be characterized by a single lane of traffic in each direction with lay-by parking on both sides of the street. Streetscape design should support this vision.

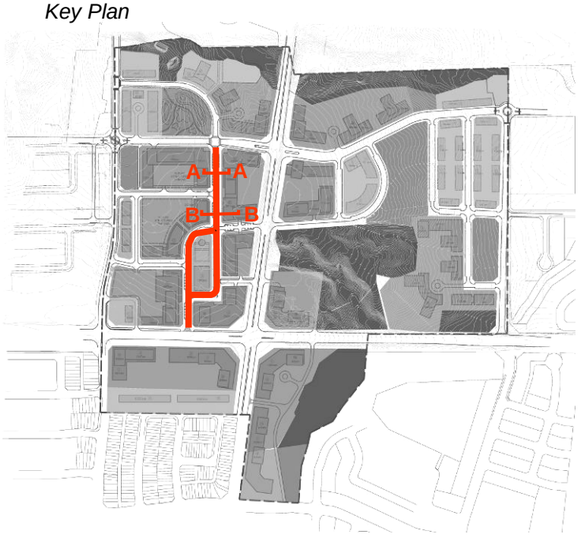
Features
- 23 m right-of-way;
- 2 vehicular lanes of 3.25 m width each;
- 2 lay-by parking lanes of 2.5 m width each;
- 5.35 m planting bed on east side of street at pedestrian crossing bump-out;
- 4.9 m sidewalk on east side, 3.75 m sidewalk on west side of street for street furniture, lighting and utilities;
- Sidewalks and crossings accessible to all types of users.

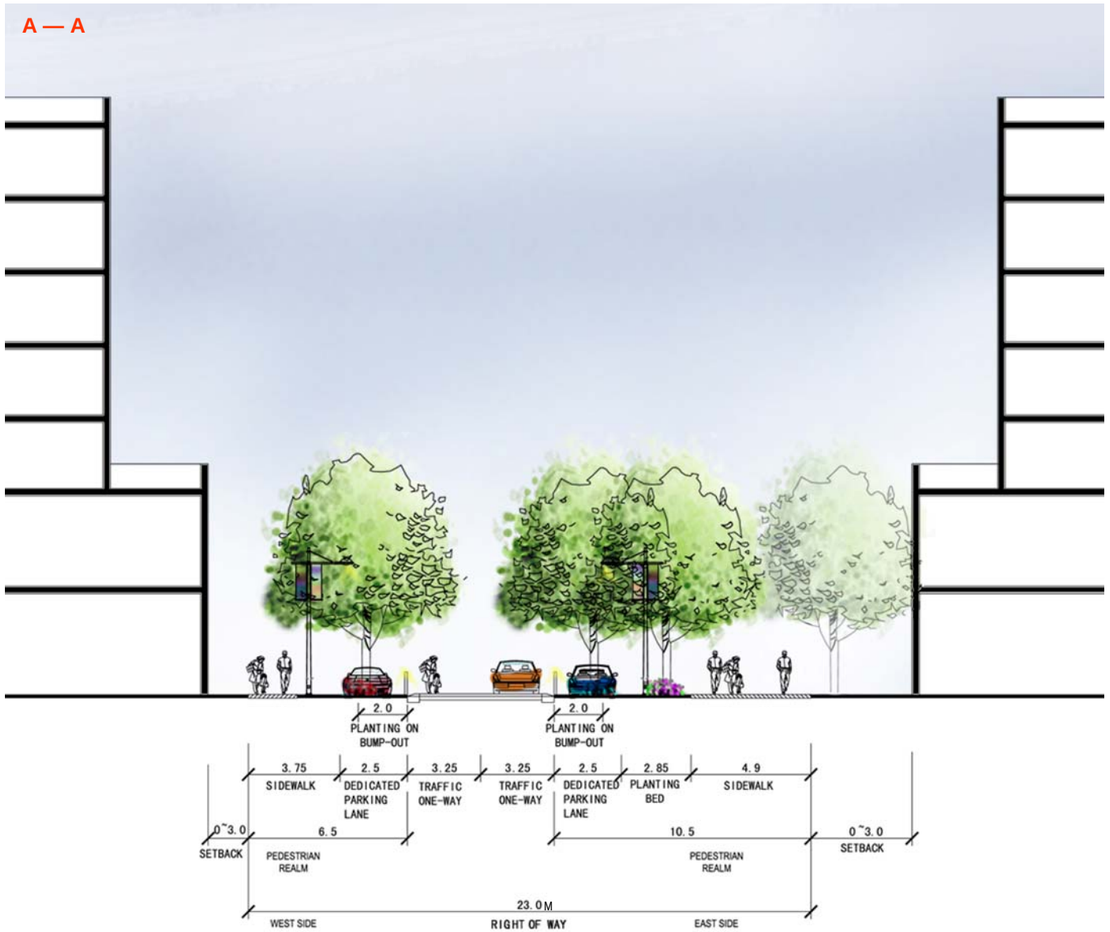
Character
- Mixed-use interface;
- High density development;
- A-symmetrical street configuration with a wider promenade on the east side providing for more flexible use and the provision of more trees;
- Strong integration of public and private landscape development — street trees, high quality pedestrian paving;
- Specimen street trees, high-quality street furnishings and amenities, pedestrian scale lighting;
- Sustainable growth environment for trees—large, high quality stock, ease of maintenance, sufficient rooting area;
- Strong indoor / outdoor relationship with retail facades, cafes, commercial displays, etc;
- Active pedestrian environment;
- Comfortable for pedestrians—shade, wind protection and shelter.

Guidelines
- Sidewalks located on both sides of the street and may include sidewalk cafes and commercial display areas;
- Decorative paving will be introduced, particularly at intersections and pedestrian crossings, to enhance the visual quality of the street and to distinguish Main Street as a focal area within the community;
- Street trees should be consistent in species and / or form along entire length of street;
- Sustainable growth environment for trees (see Appendix for suggested street tree planting details);
- Decorative and pedestrian scale lighting integrated with street light poles and coordinated with street trees in respect to placement and spacing;
- Design materials should be consistent with the architectural style and design of adjacent architecture and with the design of the District Centre;
- Consistent building signage;
- Sensitive placement of above ground utilities to enhance the visual appeal of the public realm;
- Tree / landscape development at property line in private realm on west side is encouraged to enhance pedestrian comfort.

Guidelines for Interface with Rutherford Road
- Appropriate transition of the scale of streetscape spaces between Rutherford Road and Main Street should be reflected in materials and dimensions of pedestrian areas, street trees, street lighting, sidewalk widths, etc.;
- Building setbacks should be adjusted to create a pedestrian scale along Main Street;
- Private landscape area treatments should reflect this pedestrian scale;
- This transition of scale shall occur on Main Street immediately north of the intersection with Rutherford Road.

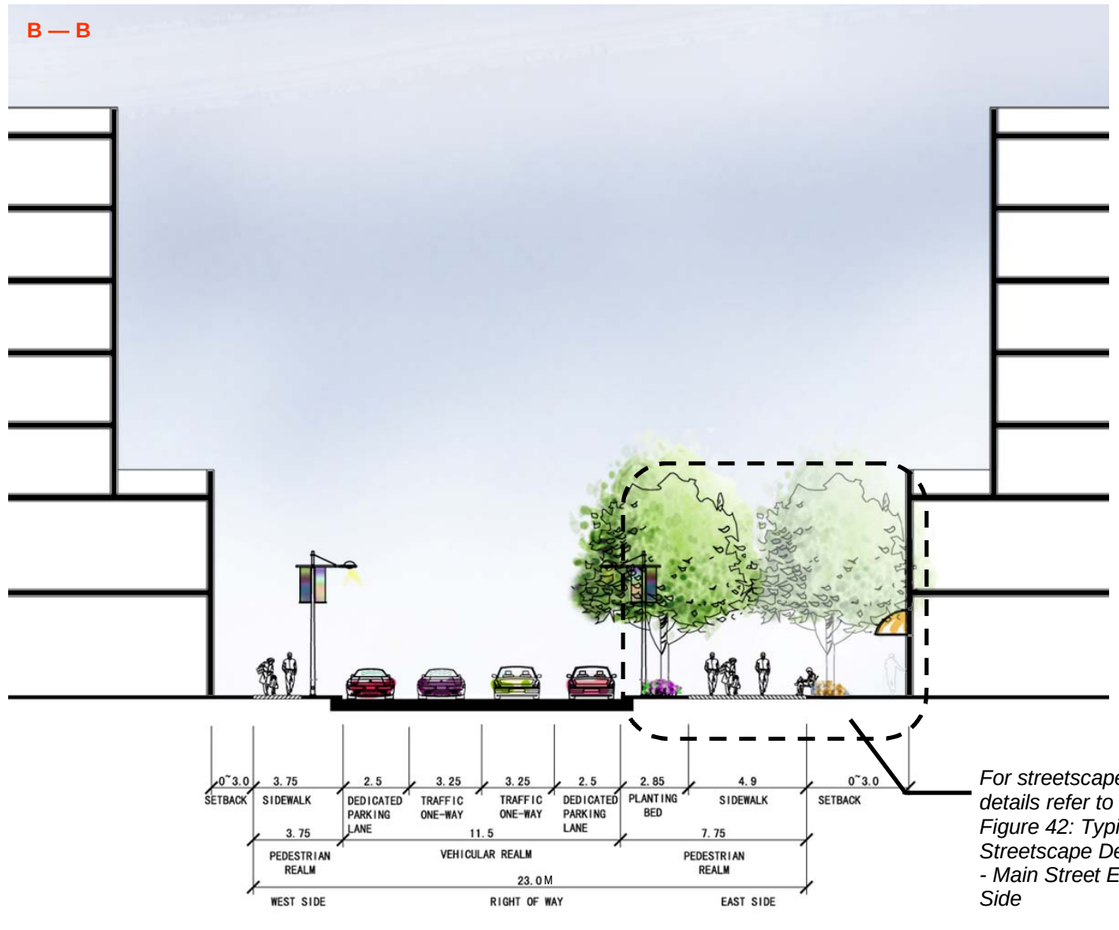
Key Plan





7 MAIN STREET--23M ROW

City Street - Main Street -Pedestrian Crossing



For streetscape details refer to Figure 42: Typical Streetscape Detail - Main Street East Side

7 MAIN STREET--23M ROW

City Street - Main Street - Patio

5.4.2 Main Street—Urban Square

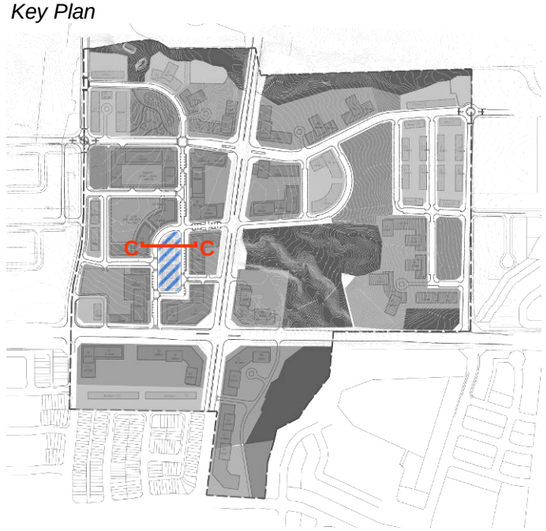
Purpose
This section of Main Street is envisioned as the urban village square of Carrville District Centre. It will provide a key gateway element for those entering the Centre from Rutherford Road to the south and Dufferin Street to the east; it will also link the intense retail, pedestrian oriented section of Main Street with the passive civic square.

Features
- 23 m right-of-way;
- 2 vehicular lanes of 3.25 m width each;
- 1 lay-by parking lane of 2.5 m width each;
- Asymmetrical right of way design with 4.9 m sidewalk next to the buildings to allow for street furniture, lighting and utilities, and 3.75 m sidewalk next to the square;
- Sidewalks and crossings accessible to all types of users.

Character
- Park / Commercial interface;
- High density land uses;
- Paving from square extends across the street on all sides to increase pedestrian-oriented atmosphere;
- Design of the square will inform the design of the street, seamlessly integrating the two elements;
- Strong integration of public / private landscape development — street trees, high quality pedestrian paving;
- Specimen street trees, high-quality street furnishings and amenities, pedestrian scale lighting;
- Sustainable growth environment for trees—large, high quality stock, ease of maintenance, sufficient rooting area;
- Strong indoor / outdoor relationship with retail facades, cafes, commercial displays, etc;
- Active pedestrian environment;
- High quality nightscape environment and year-round uses;
- Comfortable for pedestrians—shade, wind protection and shelter.

Guidelines
- Sidewalks located on both sides of the street and may include sidewalk cafes and commercial display areas;
- Decorative paving will be introduced, particularly at intersections and pedestrian crossings, to enhance the visual quality of the street and to distinguish Main Street as a focal area within the community;
- Street trees should be consistent in species and / or form along entire length of street;
- Sustainable growth environment for trees;
- Decorative and pedestrian scale lighting integrated with street light poles and coordinated with street trees in respect to placement and spacing;
- Design materials should be consistent with the architectural style and design of adjacent architecture and with the overall design of the District Centre;
- Consistent building signage;
- Safe and secure environment for pedestrians;
- Sensitive placement of above ground utilities to enhance the visual appeal of the public realm;
- Within the square itself, the buildings' commercial ground floor should contain uses that will inspire and stimulate the square, such as a café or restaurant with outdoor seating;
- Phasing of development will be required to respond to market needs (see Section 7.0 Implementation and Phasing for details).

Key Plan



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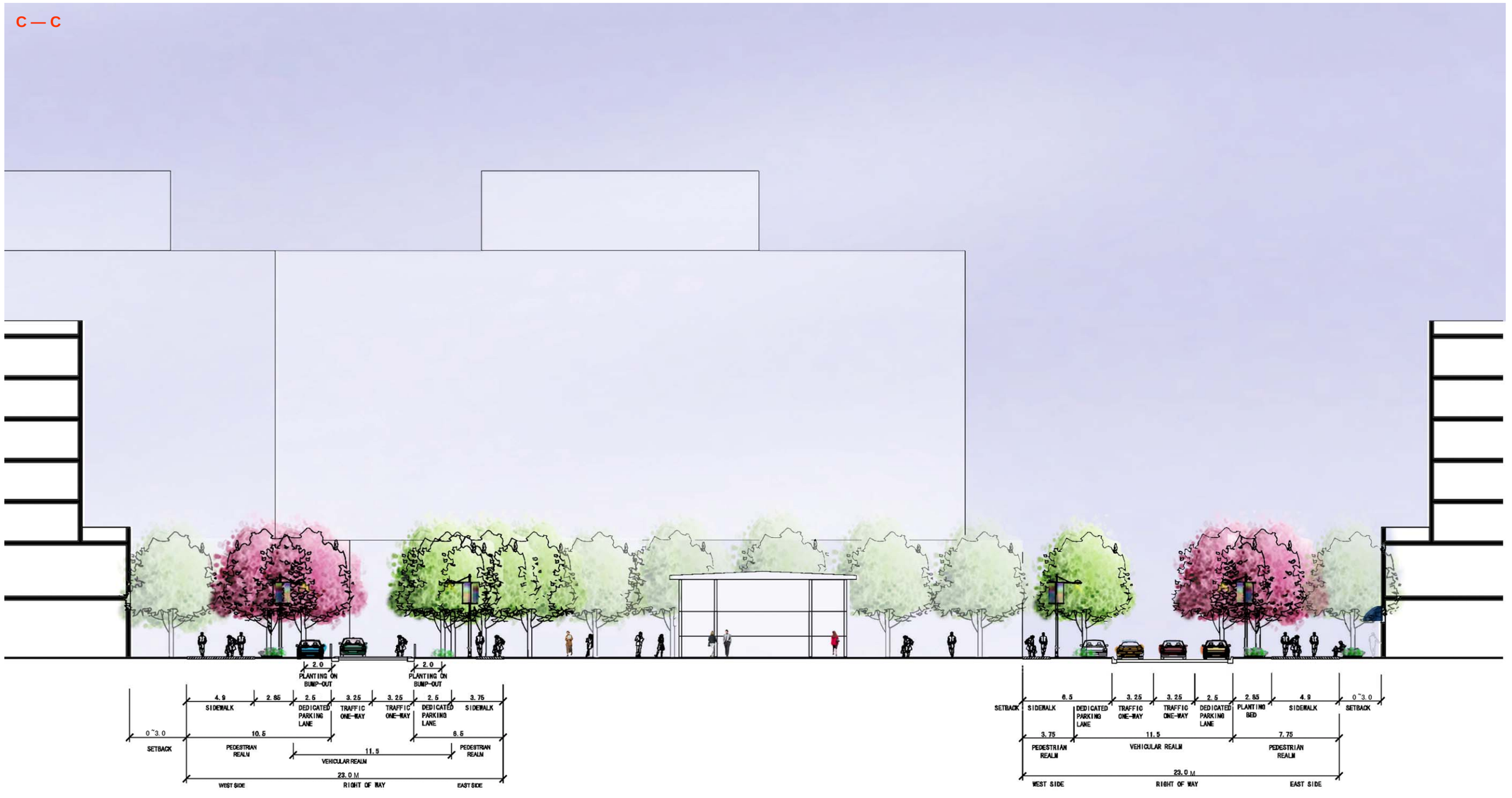


7 MAIN STREET--23M ROW

City Street - Main Street -Pedestrian Crossing

7 MAIN STREET--23M ROW

City Street - Main Street - Patio

5.4.3 Main Street Details

Main Street and the Urban Square will become the central focal point within the Carrville District Centre. Because it will be such an integral part of the community, there shall be elements within this area that set it apart from the other areas of the District Centre. These elements include specialty paving on sidewalks and at intersections to enhance the pedestrian realm, unique street furniture and lighting poles, distinctive variety of street trees, and mid-block pedestrian crossings to ensure a pedestrian focused environment.

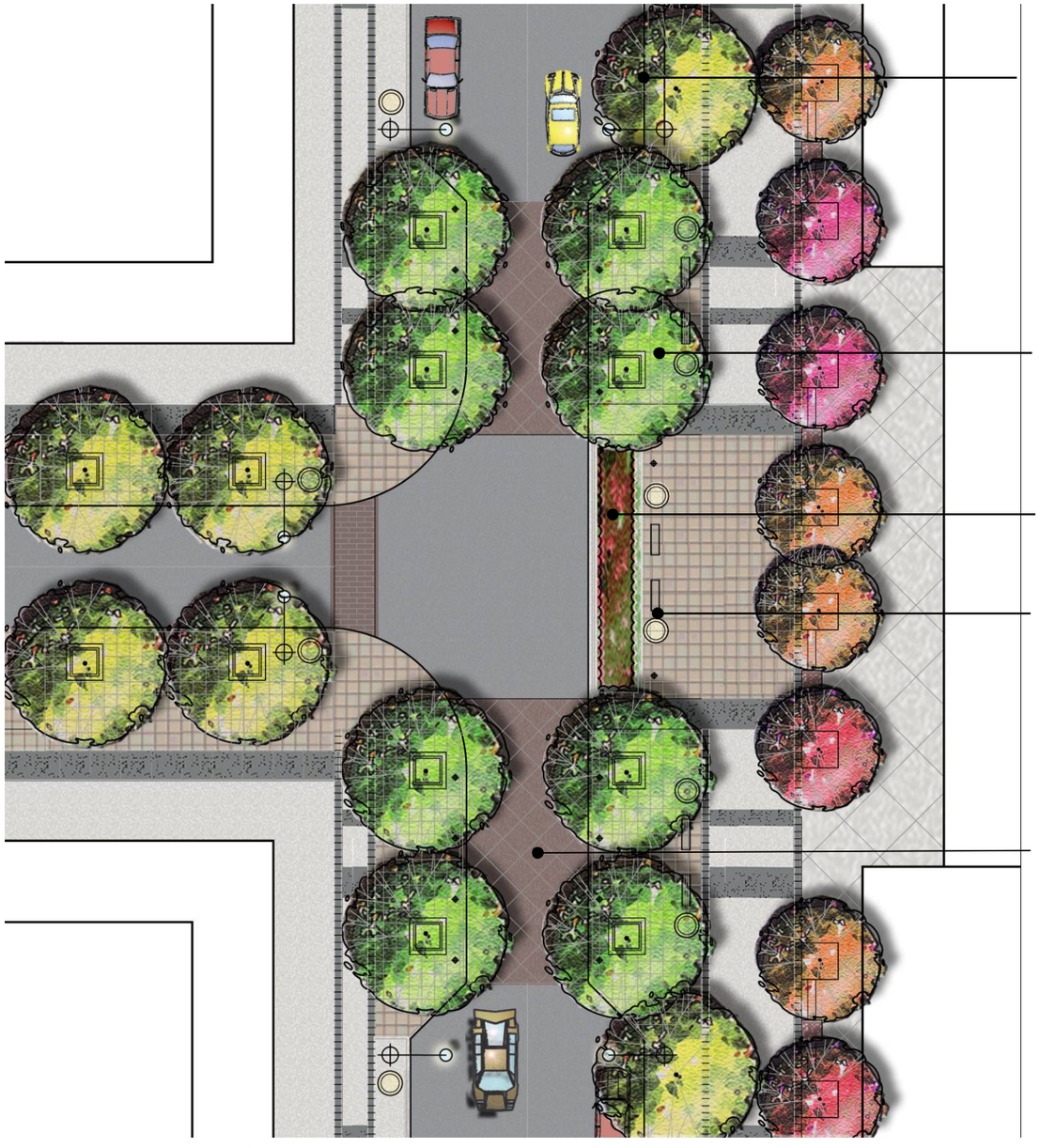
Specialty Paving

Specialty paving along Main Street signifies the distinction of a pedestrian environment. This paving shall be characteristic and complementary to the architectural style within the Carrville District Centre, and will indicate to vehicular traffic that it is mainly a pedestrian zone. Enhancements to the paving shall be found on the sidewalks, at the pedestrian bump-out crossing areas, as well as at intersections to clearly define the pedestrian realm.

The paving details shall be enhanced through the use of eco-friendly paving, providing for a more permeable surface, and incorporating colours and textures that complement the architectural style consistent with the development in Carrville.

Figure 42: Typical Streetscape Detail - Main Street East Side

* For specific planting details refer to Appendix 2.1 In-ground Planting



Street trees

Shade / street trees clustered at pedestrian crossings

Planter opposite 'T'' intersection with colourful shrubs, perennials and annuals

Street Furniture - Benches, trash receptacles, lighting and public art

Generous pedestrian crossings with special paving and rolled curbs

Key Plan

Figure 42: Detailed Plan of Main Street at Midblock 'T' Intersection

5.5 Primary Roads

Purpose
These roads will provide connection to major arterials and access to major focal points within the community such as Main Street and the Urban Square. Marc Santi Boulevard and both the east and west boundaries of the site will possess the following character features.

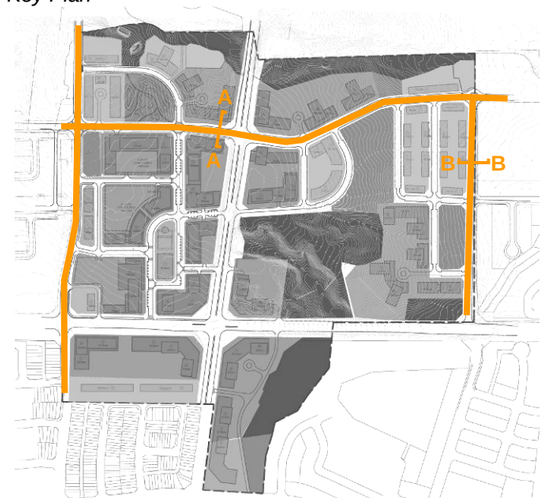
Features
- 23 m right-of-way;
- 2 vehicular lanes of 3.0 m width each;
- 2 dedicated parking lanes of 2.75 m width each;
- 5.75 m pedestrian realm with sidewalk, street trees, lighting and planting area on each side;
- Sidewalks accessible to all types of users.

Character
- Park / Residential interface;
- Medium to high density development;
- Sustainable growth environment for trees—large, high quality stock, ease of maintenance, sufficient rooting area;
- Active pedestrian environment;
- Comfortable for people — shade, wind protection and shelter.

Guidelines
- Sidewalks located on both sides of the street;
- Integrate pedestrian sidewalk and landscaping with landscape areas associated with adjacent open space and / or stormwater management ponds;
- Street trees should be consistent in species and / or form along entire length of street;
- Focal intersections should have special paving treatments;
- Curvilinear design to sidewalk where possible.

Guidelines for Interface with Regional Roads
- Appropriate transition of the scale of streetscape spaces between the Regional Roads and Primary Roads should be reflected in materials and dimensions of pedestrian areas, street trees, street lighting, sidewalk widths, etc.;
- Building setbacks should be adjusted to create a smaller scale along Primary Roads;
- Private landscape area treatments should reflect this smaller scale;
- This transition of scale shall occur on Marc Santi Boulevard / District Avenue immediately east and west of the intersection with Dufferin Street, and along the east and west boundaries immediately north of the intersections with Rutherford Road.

Key Plan



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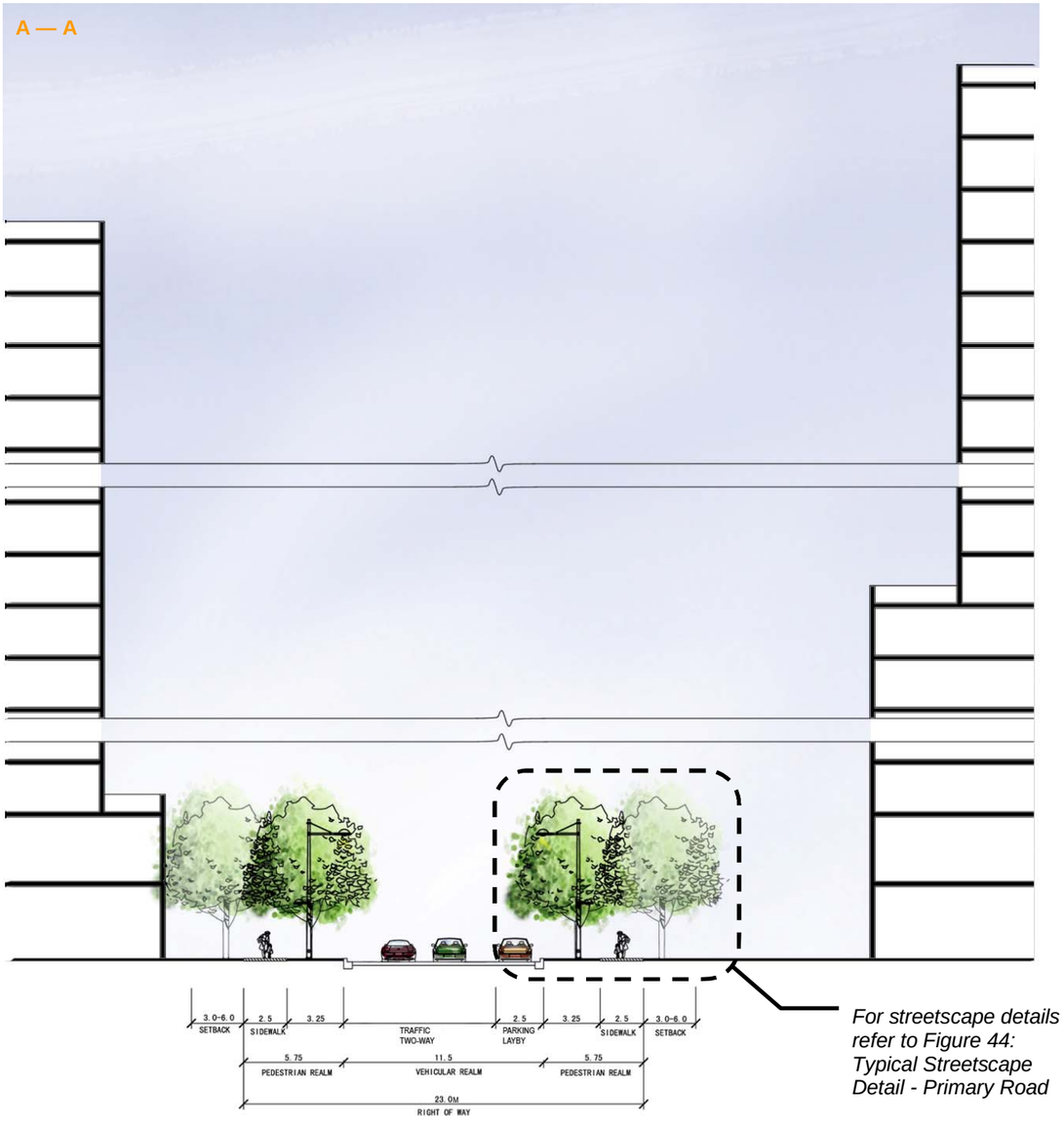
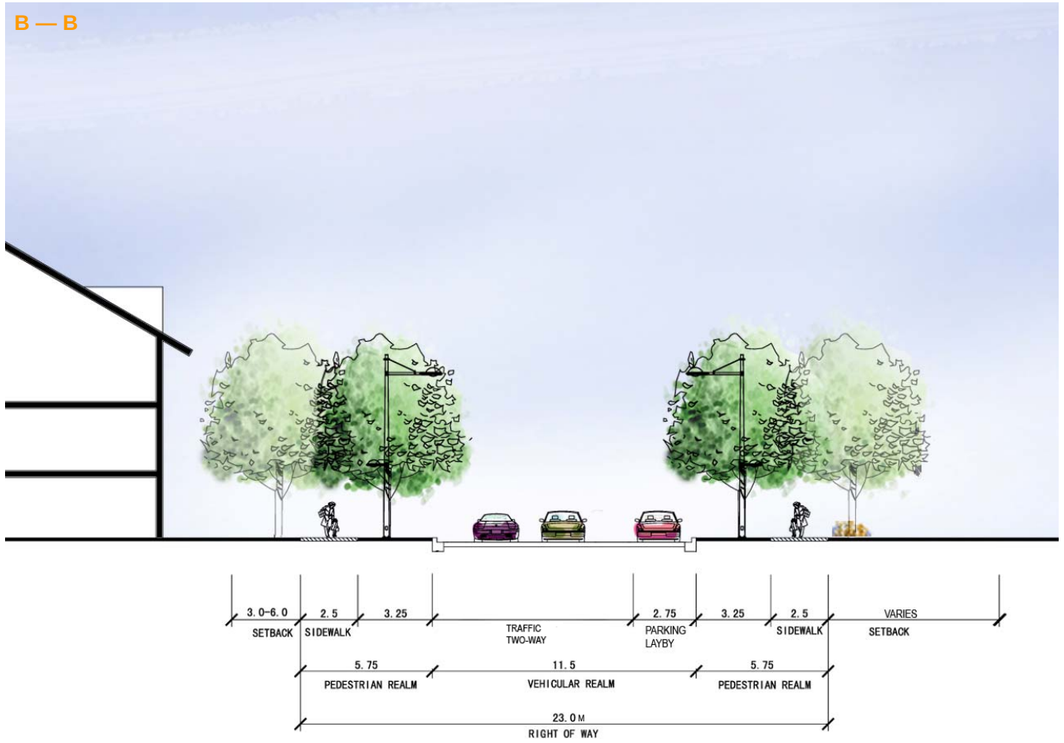


For streetscape details refer to Figure 44: Typical Streetscape Detail - Primary Road

PRIMARY ROAD ---23M ROW

City Street - Marc Santi Boulevard

B — B



PRIMARY ROAD ---23M ROW

City Street - East/West Boundary

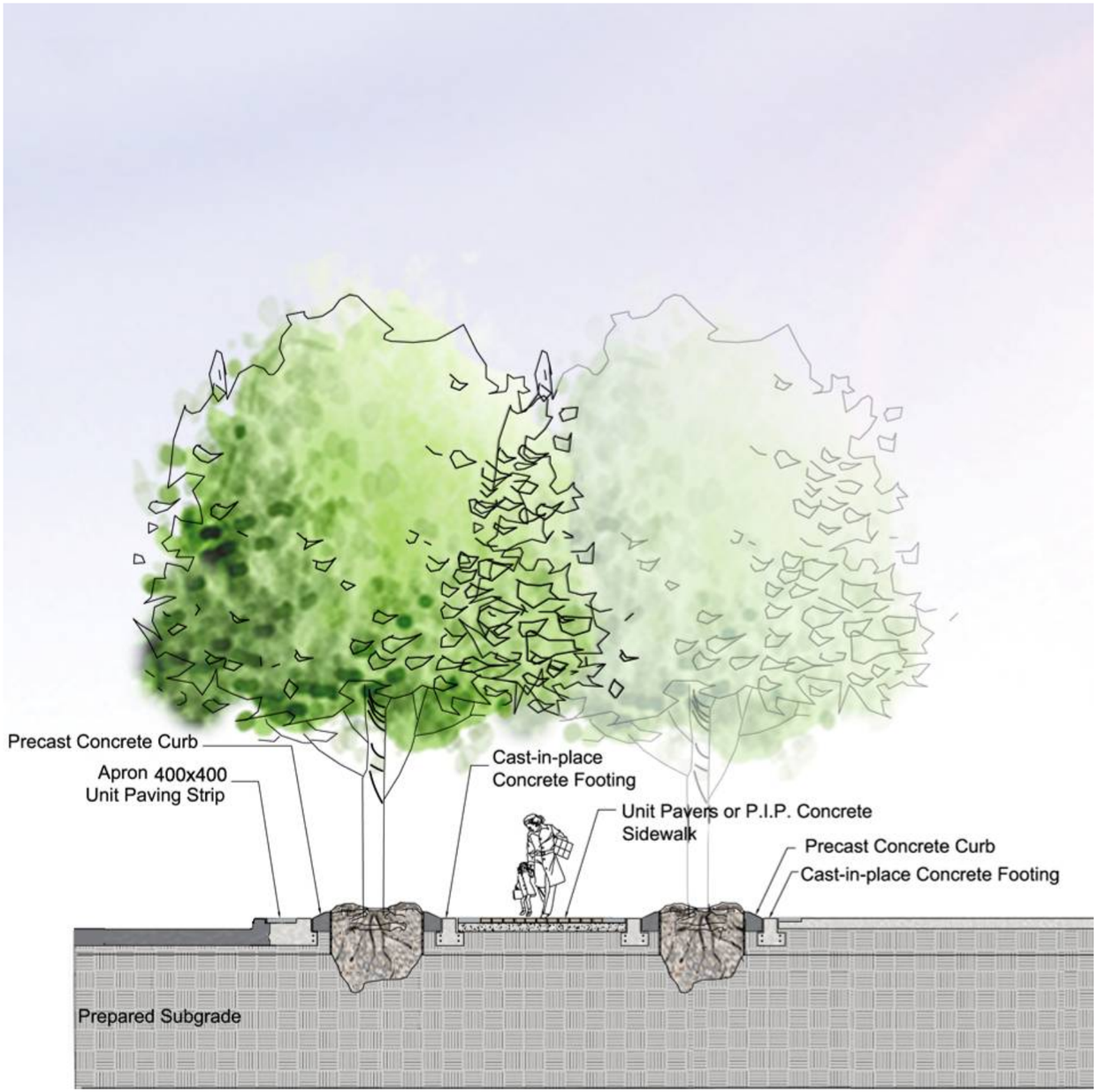


Figure 44: Typical Streetscape Detail - Primary Road, East & West Boundary, Marc Santi Blvd.

* For specific planting details refer to Appendix 2.1 In-ground Planting

5.6 Local Roads

5.6.1 All Local Roads

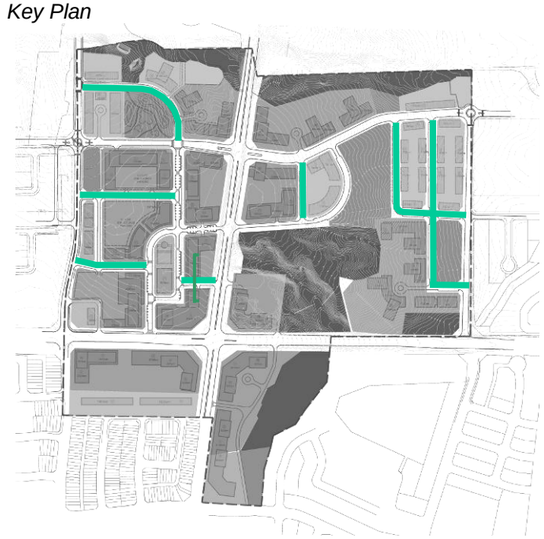
Purpose
Local roads will generally have 18.5 metre R.O.W. with tree-lined pedestrian zones having sidewalks on both sides of the street. These roads will typically have an 8.5 metre vehicular zone width consisting of a single lane of traffic in each direction with a dedicated parking lane on one side of the street.

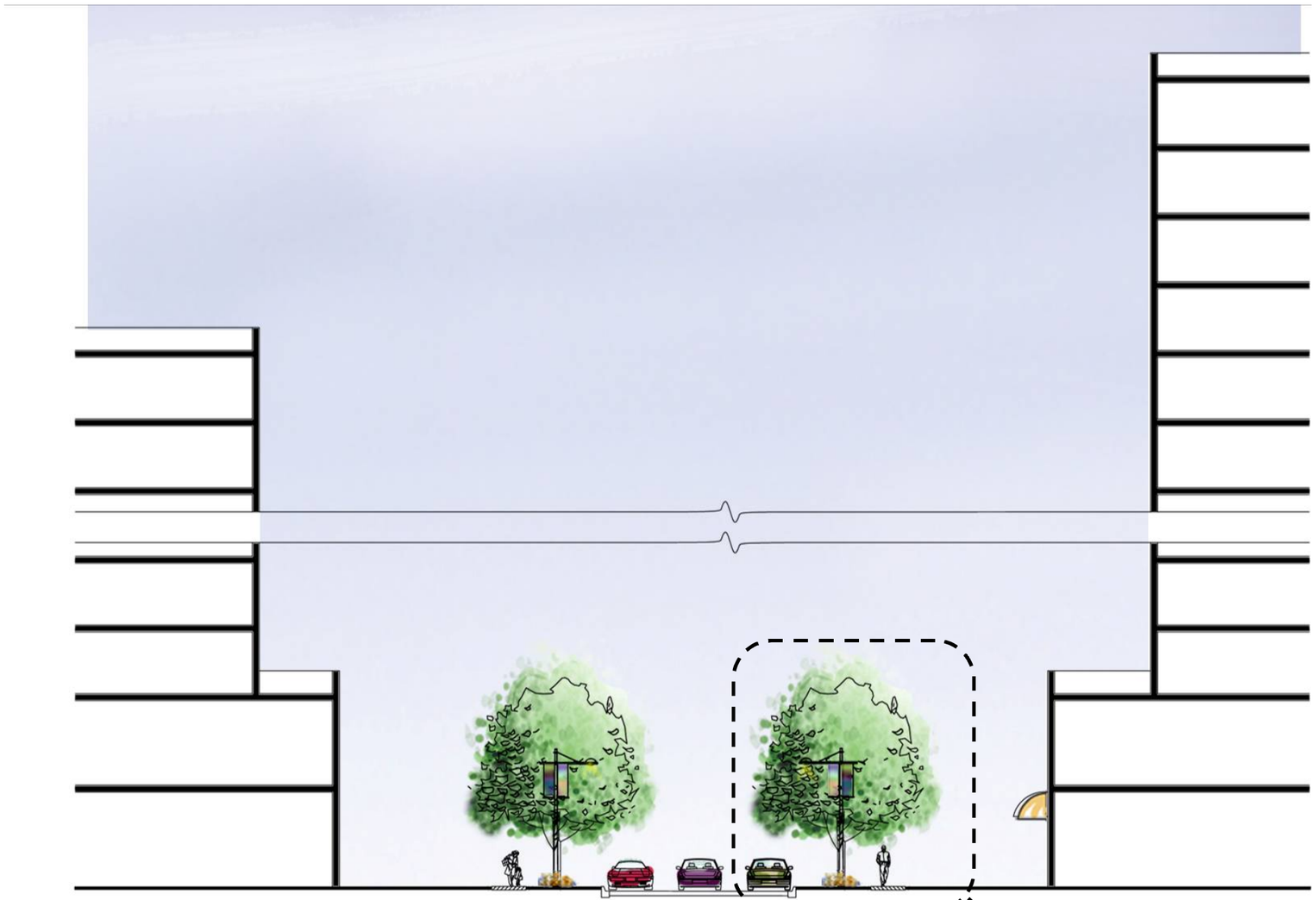
Features
- 17.5 - 20 m right-of-way;
- 2 vehicular lanes of 3.0 m width each;
- dedicated parking lane of 2.5 m width each;
- 5.0 m pedestrian realm including a 3.0 m sidewalk, street trees, lighting and planting bed on both sides of road;
- Sidewalk accessible for all users.

Character
- Residential interface with low, medium and high densities;
- Comfortable for people—shade and wind protection;
- Sustainable growth environment for trees—large, high quality stock, ease of maintenance, sufficient rooting area.

Guidelines
- Landscape buffers should be provided where parking and service loading areas are located along the street. These buffers shall be fully planted along their extent with a combination of trees and shrubs;
- Street trees should be planted approximately 10 m on centre;
- Curvilinear sidewalks should be implemented where possible;
- Integrate pedestrian sidewalk and landscaping with landscape areas associated with links to adjacent open space and / or stormwater management ponds.

Key Plan





For streetscape details refer to Figure 45: Typical Streetscape Detail - Local Roads

TYPICAL LOCAL ROAD--17.5~20M ROW

City Street/ Community Access/ Through Main Street

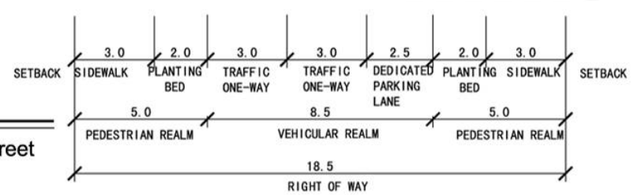


Figure 45: Typical Streetscape Detail - Local Road

* For specific planting details refer to Appendix 2.2 Elongated Bed Planting

5.6.2 Special Character Road

Purpose
The special character road, located on the east side of Block 15 park, will have a 20.0 metre R.O.W. for the crescent shaped section adjacent to the Urban Neighbourhood Park. This road is an important pedestrian connection to open spaces and environmental features.

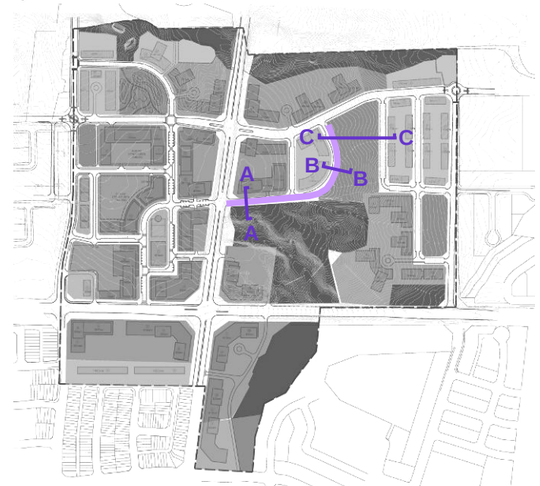
23.5 m R.O.W. Features
- 23.5 m right-of-way;
- 10 metre woodlot buffer on south side of street;
- 2 vehicular lanes of 3.0 m width each;
- 1 dedicated parking lane on north side of street of 2.5 m width;
- Pedestrian realm (widths vary) with multi-use trail and sidewalk, street trees, lighting and planting bed on both sides of street.

20.0 m R.O.W. Features
- 20.0 m right-of-way;
- 2 vehicular lanes of 3.0 m width each;
- 1 dedicated parking lane on east side of street of 2.5 m width;
- 5.75 m pedestrian realm with multi-use trail and sidewalk, street trees, lighting and planting bed on both sides of street.

Character
- Residential / open space interface;
- Medium to high residential density;
- Comfortable for people—shade and wind protection;
- Enhanced landscape treatment incorporated within the boulevard signifying the importance of the overall open space system;
- Sustainable growth environment for trees—large, high-quality stock, ease of maintenance, sufficient rooting area.

Guidelines
- 10 metre woodlot buffer / setback will be provided on south side of street. These buffers shall be fully planted along their extent with a combination of trees and shrubs;
- Street trees should be planted approximately 10 m on centre;
- Integrate pedestrian sidewalks, trails and landscaping with adjacent open space areas.

Key Plan



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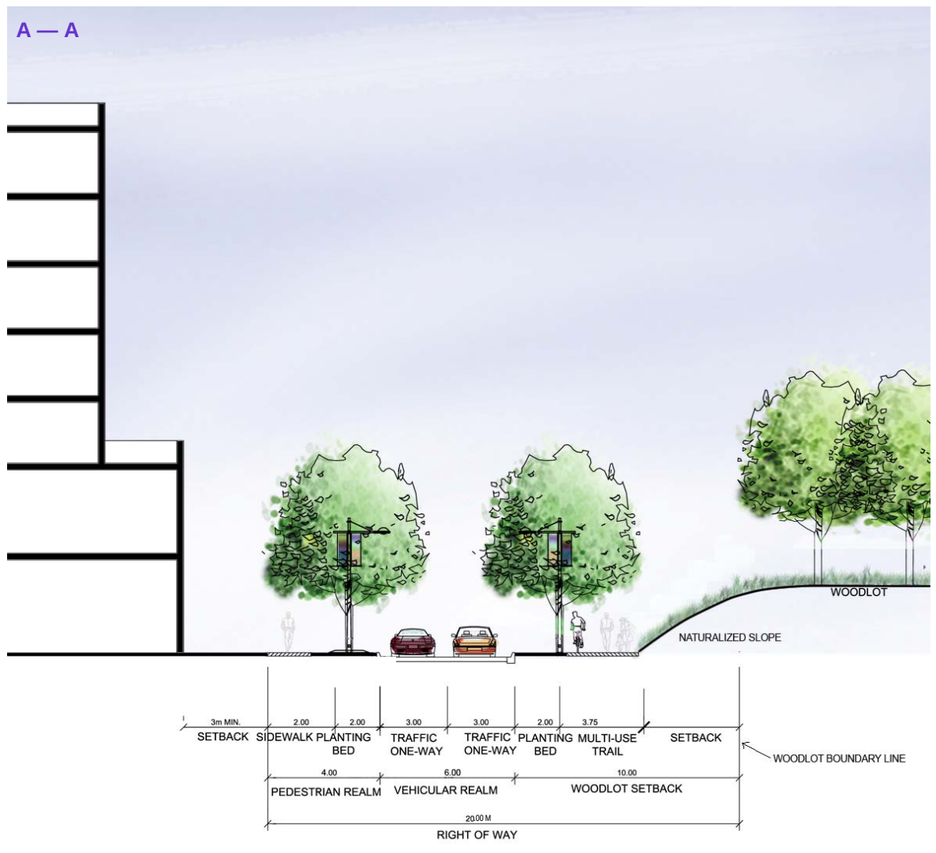
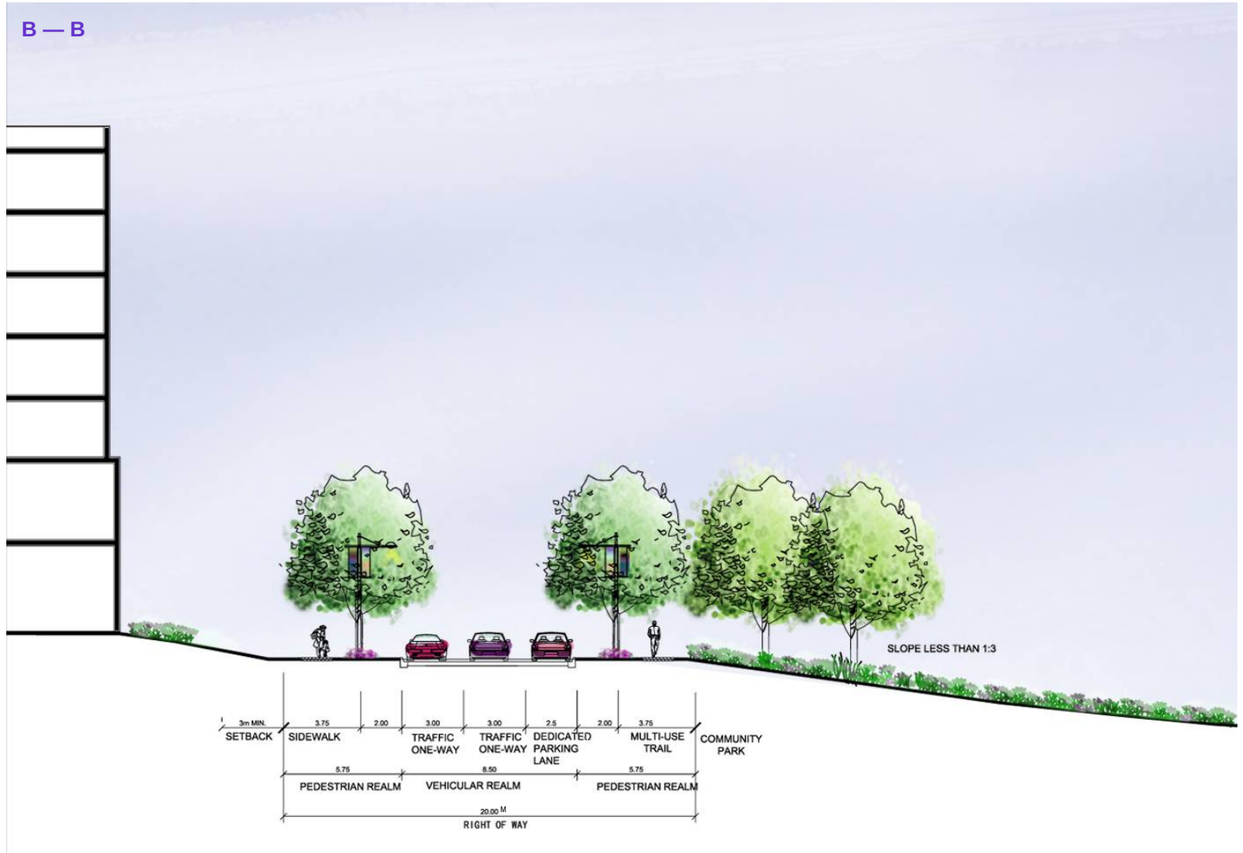


TYPICAL SPECIALTY CHARACTER ROAD---20 M ROW

City Street - East of Dufferin Park
Layby Parking on one SideW/ Multi-Use Trail

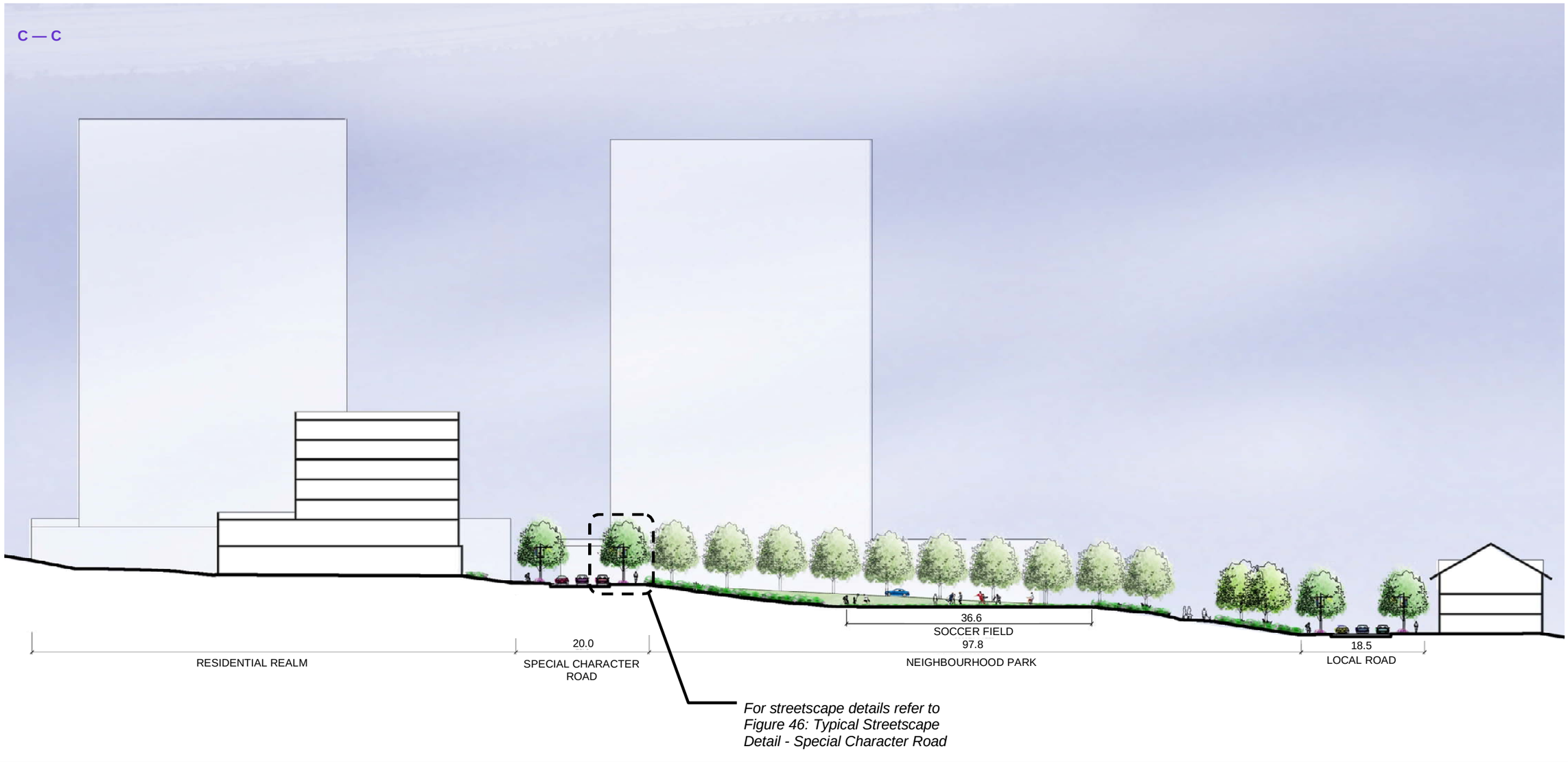
B — B



TYPICAL SPECIALTY CHARACTER ROAD--- 20M ROW

City Street - West of Park
Layby Parking on one SideW/ Multi-Use Trail

C — C


36.6
SOCCER FIELD
97.8
20.0
18.5
RESIDENTIAL REALM
SPECIAL CHARACTER ROAD
NEIGHBOURHOOD PARK
LOCAL ROAD
For streetscape details refer to Figure 46: Typical Streetscape Detail - Special Character Road

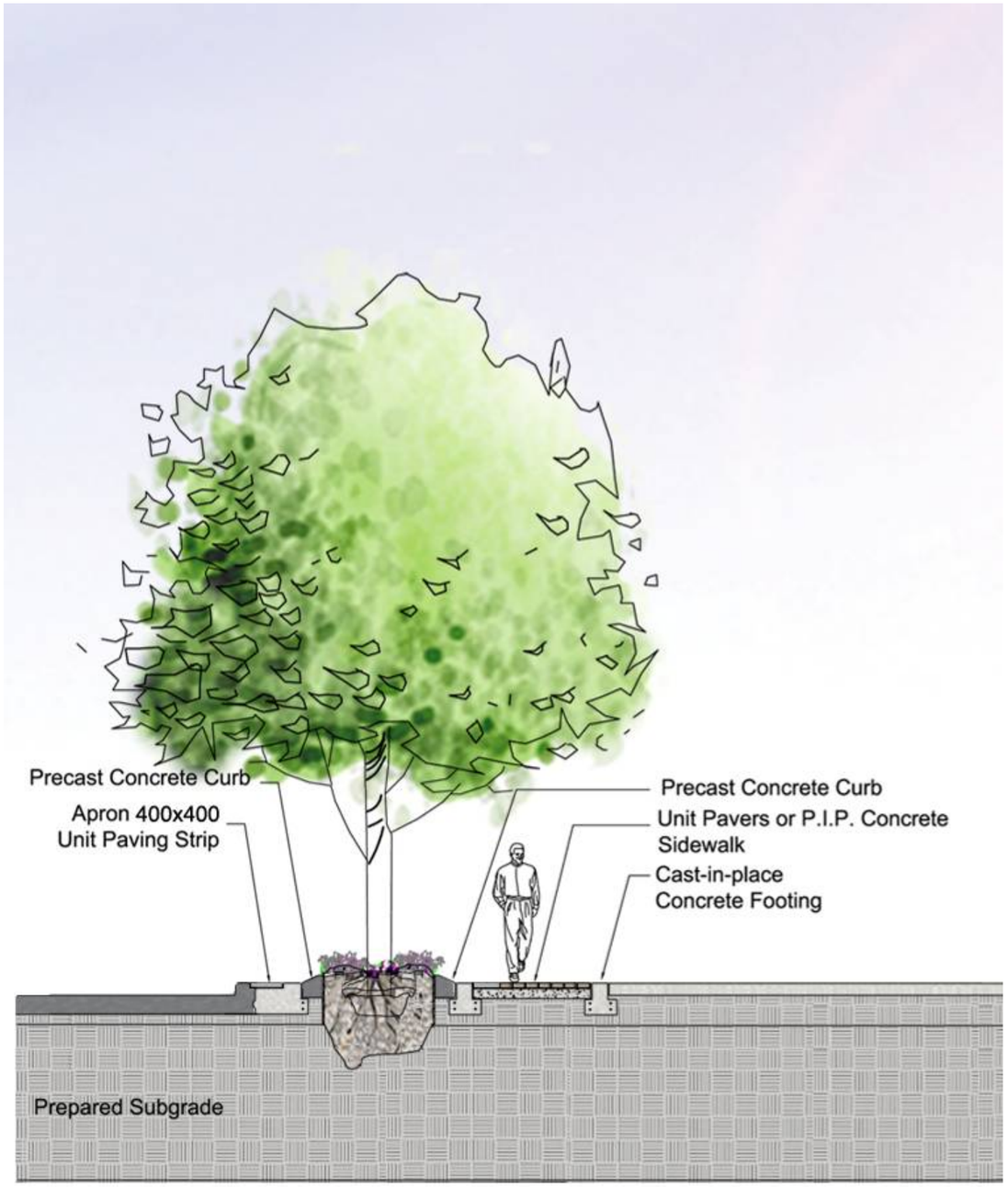


Figure 46: Typical Streetscape Detail - Special Character Road

* For specific planting details refer to Appendix 2.2 Elongated Bed Planting

5.7 Typical Intersections

5.7.1 Intersection Treatments

All Regional Road intersections within the Carrville District Centre will adhere to the guidelines set out in York Region's Sight Triangle Manual. Intersection treatments include:

- Street tree plantings, low plants and landscape features will be a suitable height and distance from the intersection as to not interfere with driver's sight lines through the intersection.
- Street tree and tall shrub plantings should maintain a minimum of 1.85 metres clearance from the ground and be planted a distance of 9 metres from the intersection curb face.
- At sight triangles, low shrubs and plants shall not exceed 0.80 metres in height at maturity.
- Low walls or plants and landscape features within the sight triangle will be a suitable height (below 300mm). These treatments can help to soften the intersection / sight triangle, providing a more pedestrian friendly area.
- Pedestrian crosswalks will be paved with special treatments to clarify the pedestrian zone and a pedestrian refuge is provided at the end of the central planted median of the arterial and primary roads.
- Pedestrian access is encouraged to adjacent ground level retail, recessed colonnades and covered walkways.
- Intersection gateways into the Carrville District Centre will be reinforced and enhanced through the use of architectural features, low plantings and walkways through to the main entrance of buildings.
- Private Realm Landscape Areas are the areas between the road right-of-way and the building face. These private areas shall be landscaped with a combination of shrubs, plants, trees and / or pavers.

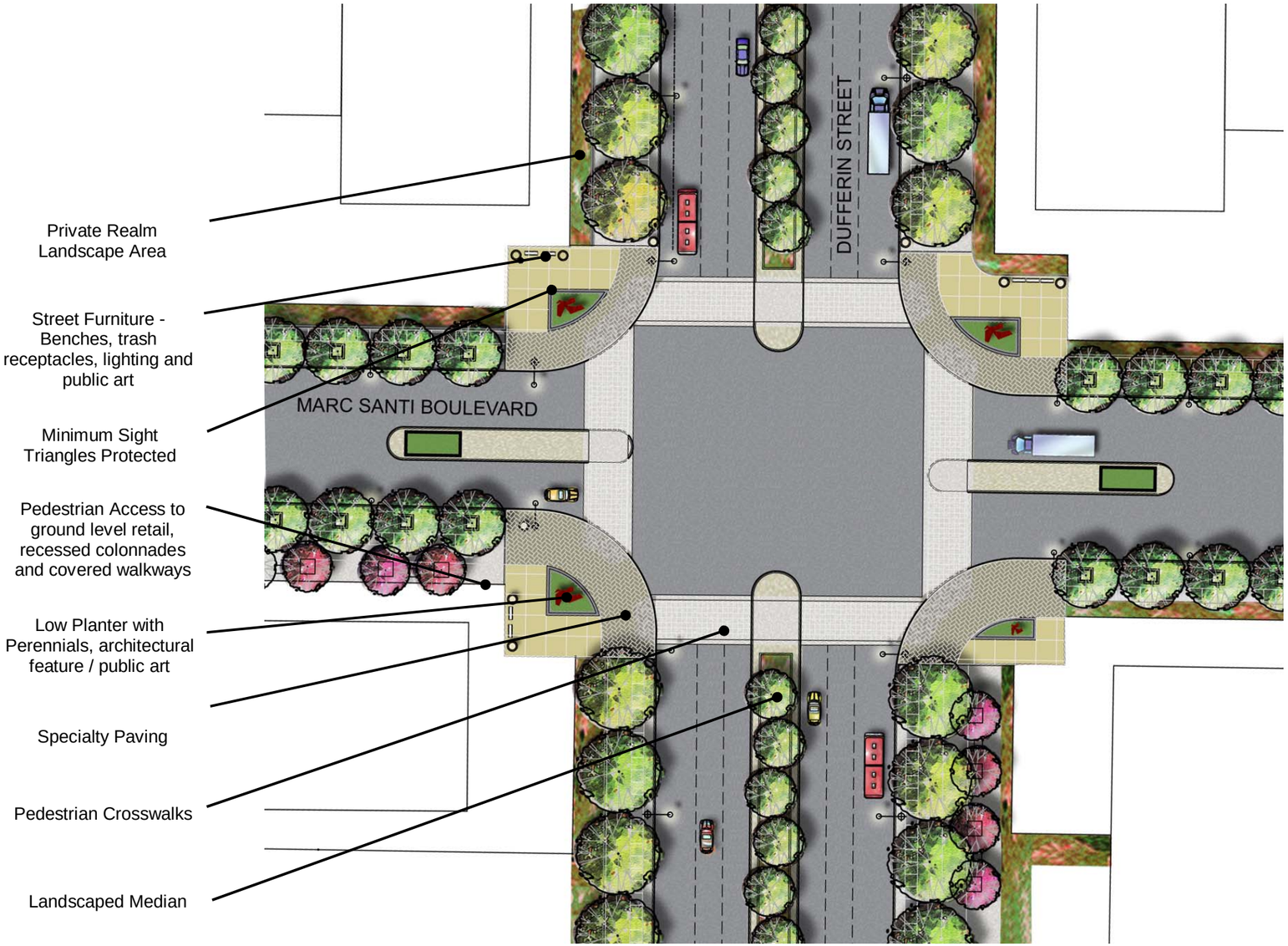


Figure 47: Typical Treatment for the Intersection of Dufferin Street and Marc Santi Boulevard

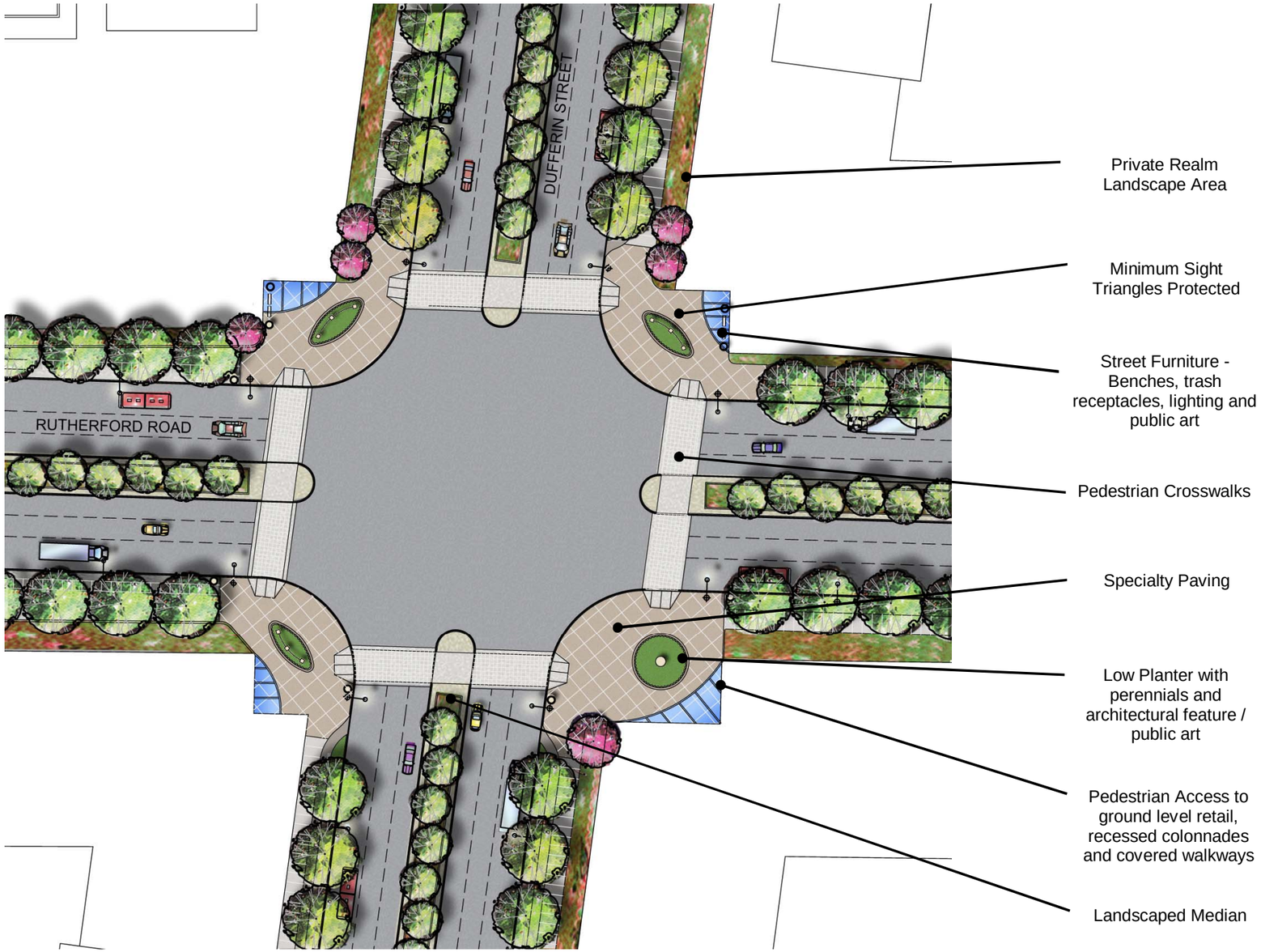
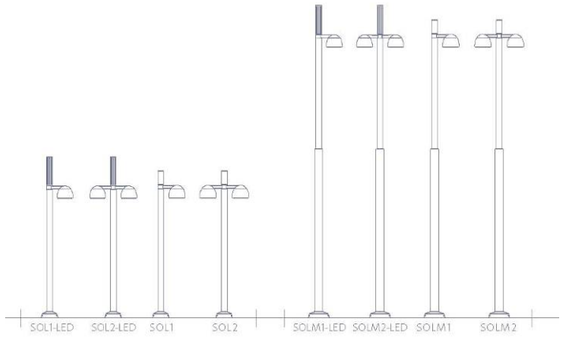


Figure 48: Typical Treatment for the Intersection of Dufferin Street and Rutherford Road

5.8 Streetscape Elements

Streetscape elements incorporated into the Carrville District Centre may include lighting and street furnishings which are generally to be located within the public realm of the street right-of-way. A coordinated system of streetscape elements is important in conveying the identity of the community, reinforcing the unique character and ensuring the safety, accessibility and comfort of pedestrians, cyclists and motorists. The general design of streetscape elements should complement one another as much as possible and be consistent with the overall design vision for Carrville District Centre.



Pedestrian light scale *Street light scale*

Imagery of street lighting

5.8.1 Street Lighting

Street lighting serves both a functional and an aesthetic purpose. Lighting standards should be chosen based on a balanced consideration for maintenance, cost effectiveness, energy efficiency and visual appearance. Placement of street lights within the R.O.W. should be consistent with City of Vaughan standards. Lighting on regional roads shall conform with York Region standards, as required lighting levels may be higher than local road requirements.

A comprehensive street lighting strategy identifying a hierarchy of light fixtures should be established prior to final subdivision approval. The street lighting strategy should respond to the following objectives:

Guidelines

- Street lighting should be placed in line with street trees;
- Pedestrian lighting should be incorporated through additional luminaries mounted at a lower level (4-5 m) on the sidewalk side of the lighting pole;
- Decorative light standards should be used on the primary roads;
- Specialty street light standards should be used on Main Street and near the Urban Square to highlight these areas;
- Light standards should be coordinated with other street furniture;
- All lighting fixtures and lighting levels shall meet City of Vaughan / York Region standards;
- All lighting fixtures should be energy efficient and provide minimal light emissions to prevent night sky pollution.
- Lighting adjacent to natural features should be downwards oriented, and directed to minimize light intrusion into the adjacent natural area.

5.8.2 Utilities

The siting and arrangement of utilities and utility-related structures and boxes should be designed to minimize the visual impact from both public and private domain or integrated with other infrastructure, e.g. Trafalgar Poles. Placement should be coordinated at the start of development between the respective utility companies, the City of Vaughan, York Region and the developers.

Guidelines

- Utility boxes should be placed in buildings or on private property where possible;
- Creative screening and / or fencing should be used in certain cases to ensure that utility boxes are out of the public view.

Imagery of utility box screening

5.8.3 Street Furnishings

Street furnishings include benches, bicycle racks, trash and recycling receptacles, newspaper boxes and the like. These elements complement the street by creating a comfortable pedestrian environment. These features shall be strategically placed within the pedestrian realm in a manner that enhances its function and convenience, and complements the needs of all types of pedestrians.

Guidelines

- Street furniture should be coordinated with street lighting;
- Colours, materials, forms and styles of furniture should be consistent and complementary with the overall theme of the community;
- Placement and arrangement of site furniture should encourage safe use and reinforce the streetscape design;
- Subtle design variations are acceptable to differentiate specific areas;
- All street furnishings shall conform to the Accessibility for Ontarians with Disabilities Act, ensuring barrier-free access is provided.
- Range of furnishings should be minimal to avoid visual clutter and create a unified theme and colour palette;
- Furnishings should be low maintenance, vandal resistant and easily replaceable and shall be consistent with the City of Vaughan standards.

1. Benches
- Durable;
- Should be at least 6 feet long to comfortably accommodate 2 to 3 people;
- Benches should have backs and arm rests.

2. Bicycle Racks
- Durable;
- Embedment mounting;
- Located strategically at entrances to parks and open space, including community facilities, as well as on Main Street.

3. Trash / Recycle Receptacles
- Durable;
- Similar design style as benches;
- Should be equipped with plastic liners, have rain proof tops and be easily accessible for emptying.

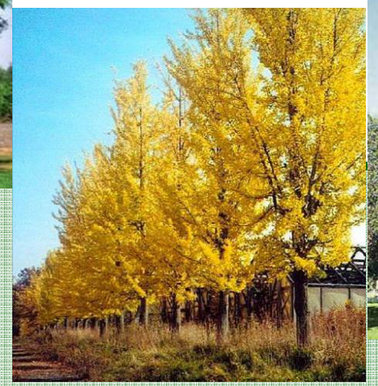
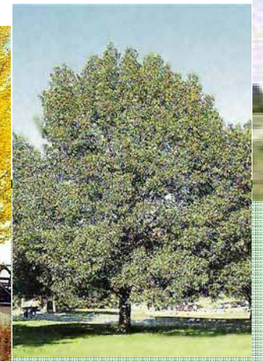
4. Newspaper Vending Machine Enclosures
- Locate in a convenient location to higher-volume pedestrian areas in order to attract users and provide service.

Imagery of street furnishings

5.9 Street Tree - List of Species

5.9.1 Street Trees

Street trees will act as a feature of the Carrville District Centre. Large urban street trees will balance the scale and width of the Regional and Primary Roads, while complementing tall luminaires. The smaller street trees will bring the streets and buildings into human scale. The grouping of several trees in boulevards, planters or at corners (outside of sight triangles) will give character to residential streets, important intersections and features within Carrville. For a complete list of acceptable street tree species as defined by York Region please refer to Appendix 3.

Large urban street tree options for the Carrville District Centre include:

- Gingko - *Gingko biloba*
- Oak - *Quercus borealis, rubra or macrocarpa*
- Linden - *Tilia cordata or platyphylla*
- Honey Locust - *Gleditsia triacanthos*
- Ohio Buckeye - *Aesculus glabra*
- Columnar Maple - *Acer platanoides 'fastigiata'*

Small street tree options:

- Serviceberry - *Amelanchier canadensis*
- Sargent's Plum - *Prunus sargentii*
- Flowering Cherry - *Prunus subhirtella*
- Japanese Tree Lilac - *Syringa reticulate*
- Bradford Pear - *Pyrus calleryana*



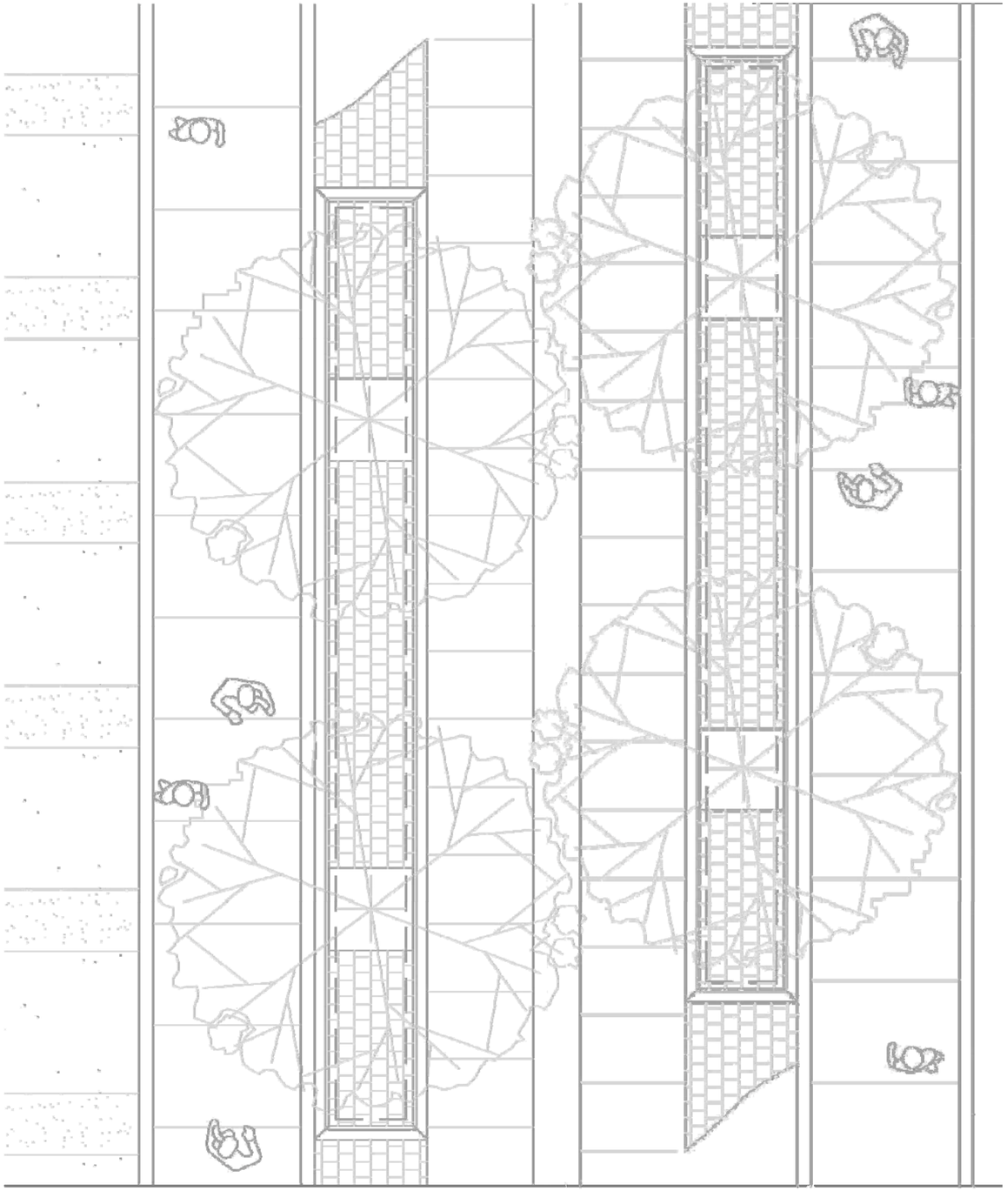


5.9.2 Shrubs and Perennials

Shrubs and perennials that are planted within Carrville District Centre should be salt and drought tolerant for ease of maintenance. These plants will soften hard edges and provide bold textures for year-round interest.

Shrubs and perennials suitable for use within Carrville District Centre include:

Green Carpet Juniper – *Juniperus squamata*
Black Mondo Grass – *Ophipogon planiscapus 'Nigrescens'*
Switch Grass – *Panicum virgatum 'Heavy Metal'*
Little Bluestem - *Schizachryium scoparium*
Smooth Aster - *Aster laevis*
Artemisia - *Artemisia stelleriana* 'Boughton Silver'
California Poppies - *Eschscholzia californica*
Cotoneaster – Cotoneaster dammeri 'Coral Beauty'
Autumn Magic Chokecherry – *Aronia melanocarpa*
Sunset Potentilla – *Potentilla fruitcosa*
Red Hot Poker - *Kniphofia*
Coralbells - *Heuchera*
Fragrant Sumac – *Rhus aromatica 'Gro-Lo'*



6.0 SUSTAINABILITY CONSIDERATIONS

6.1 Sustainability Criteria and Performance Measures

Carrville District Centre will become a vibrant place to live, work and recreate. Encouraging development that is environmentally sustainable is an important element to achieve this vision. There are a number of performance measures that can be utilized by the City of Vaughan to ensure that any future development in the District Centre adheres to the overall objective of sustainability.

The following guidelines and benchmarks serve as incremental steps to help transform traditional land development and management practices toward sustainability. These guidelines are meant to encourage site designers and developers to allow natural and built systems to work together to improve the long-term health of the environment and of socially and economically viable communities.

The measures listed below have been adapted from the criteria established by the American Society of Landscape Architects Sustainable Sites Initiative (2008) and are intended to supplement the U.S. Green Building Council's LEED Rating System. These measures are as follows:

Site Selection Considerations

- Preserve threatened or endangered species habitat;
- Protect and restore flood plain function of riparian zones;
- Limit disturbance of prime farmland soils, unique soils and soils of provincial importance;
- Select brownfields or greyfields for redevelopment;

Pre-Design Assessment and Planning Considerations

- Conduct a pre-design site assessment;
- Use an integrated design process;
- Develop a program plan with site performance goals; and,
- Engage users and other stakeholders in meaningful participation in site design process.

Ecological Considerations

- Control and manage invasive species to limit damage to local ecosystems;
- Use appropriate non-invasive plants in order to support biodiversity, reduce pesticide use and water conservation;
- Preserve special status trees, including those designated for tree size, age, species, ecological value, location;
- Minimize or eliminate potable water consumption for landscape irrigation;
- Encourage the use of materials and technologies to promote the infiltration of stormwater (i.e. permeable pavers / driveways) in order to reduce runoff and lessen the impacts to waterways and valley systems.
- Preserve and restore plant biomass to enhance ecosystem service benefits provided by vegetation;
- Preserve and restore native wildlife to promote biodiversity;
- Minimize building heating and cooling requirements with vegetation / vegetated structures in strategic locations around / on roof of buildings to reduce energy consumption;
- Reduce urban heat island effects on microclimate and human and wildlife habitat by strategically using vegetation and reflective materials. Ensure that reflective surfaces on the roof of buildings are sensitive to adjacent buildings and do not "blind" adjacent users;
- Promote a sense of place and regional identity with vegetation native to the ecosystem;
- Protect and restore riparian and wetland buffers to improve flood control and water quality services, stabilize soils and provide habitat function;
- Repair and restore damaged or lost streams and wetland habitats to enhance recreational opportunities;
- Preserve all existing healthy soils;
- Preserve existing topography by minimizing grading;
- Cleanse and manage water on-site by treating water run-off and replicating the natural hydrology (infiltration, run-off and evapo-transpiration); and,
- Eliminate potable water use in ornamental or stormwater features and minimize (no more than 50%) use of potable water in water features for full human contact.

Human Health Considerations

- Promote equitable site design, construction and use to ensure that surrounding communities share in the benefits of the development;
- Provide for best possible site accessibility, safety and wayfinding;
- Promote sustainable awareness and education by revealing processes that show the sustainability of the site;
- Provide views of natural environment to building occupants;
- Provide opportunities for outdoor physical activity, social interaction and mental restoration;
- Connect site to surrounding resources, amenities and services for pedestrians, cyclists and transit riders, increasing the opportunity for active living;
- Design stormwater management ponds to be a landscape features;
- Protect and promote unique cultural and historical site attributes; and,
- Prevent sensory stress, including excessive light, noxious odours, wind and noise to minimize negative effects on human health.

Material Selection Considerations

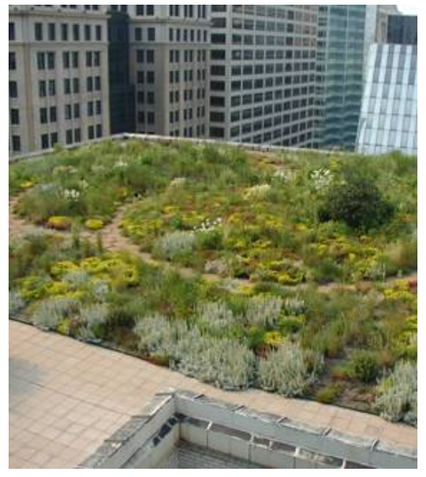
- Eliminate use of lumber from threatened tree species;
- Support sustainable practices in plant production;
- Support sustainable practices in materials manufacturing;
- Re-use all possible on-site structures, hardscape and landscape amenities;
- Integrate salvaged and recycled content materials into site design;
- Use certified wood to encourage exemplary forest management practices;
- Use products designed for reuse and recycling to minimize future energy consumption for deconstruction;
- Use adhesives, coatings, sealants and paints with reduced volatile organic compound (VOC) emissions; and,
- Conduct a life cycle assessment to reveal environmental and human effects throughout the life of the material;

Construction Considerations

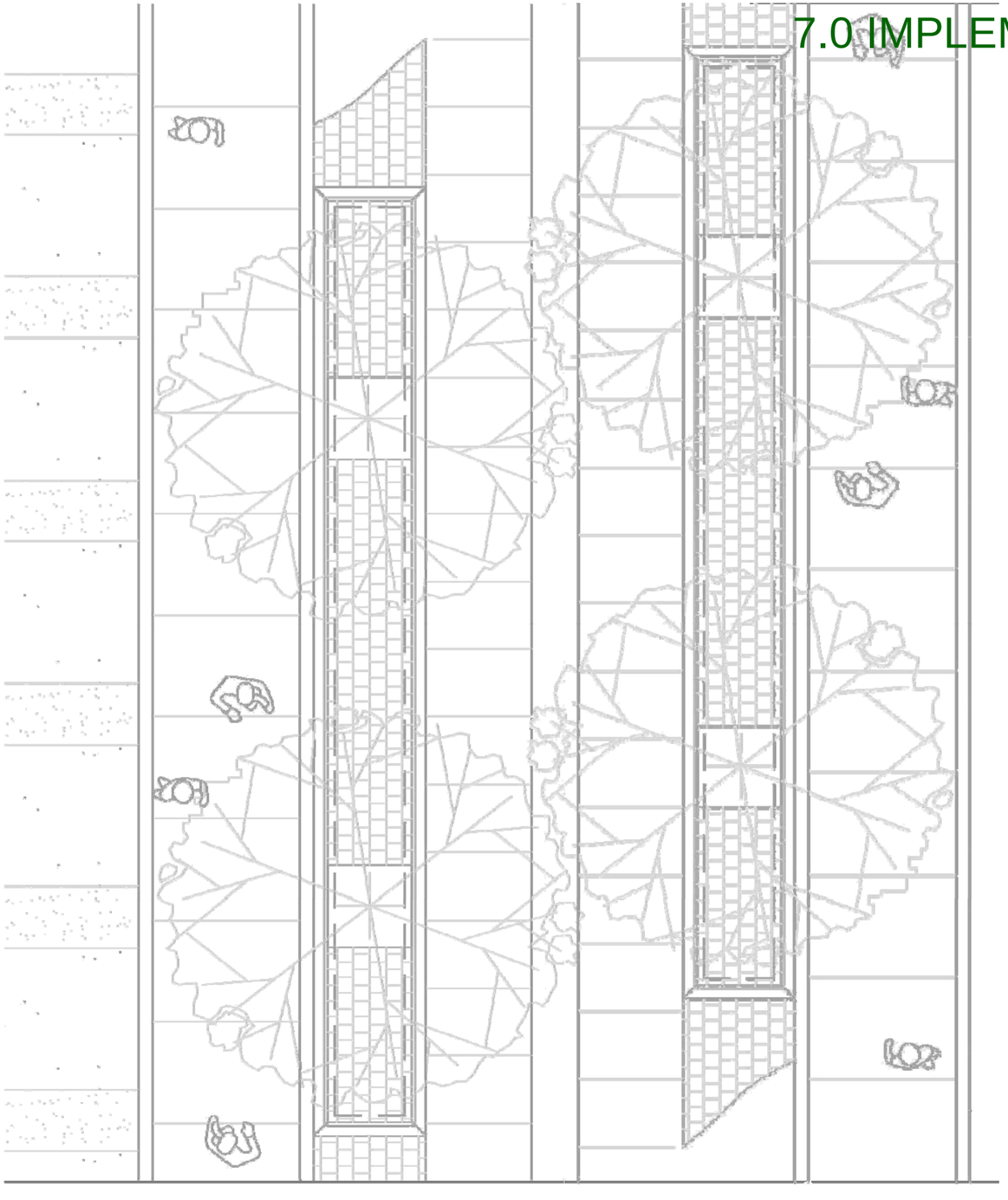
- Create a soils management plan to communicate grading, construction and landscape intentions;
- Restore soils disturbed by construction;
- Achieve a carbon-neutral site by decreasing energy consumption and provide carbon sinks to effectively offset the carbon balance of the site;
- Divert demolition and construction materials from disposal;
- Minimize the discharge of construction pollutants to water bodies during construction; and,
- Use excess vegetation, rocks and soils generated during construction to achieve a net zero-waste site.

Operation and Maintenance Considerations

- Plan for sustainable landscape maintenance;
- Minimize exposure to localized air pollutants;
- Recycle organic matter generated during site operation and maintenance;
- Provide for storage and collection of recyclables; and,
- Use renewable energy sources for outdoor electricity.



7.0 IMPLEMENTATION AND PHASING CONSIDERATIONS



7.1 Implementation and Phasing

Implementation and phasing of the Carrville District Centre plan depends on a variety of factors and related initiatives. Major infrastructure and public realm improvements such as roads, streetscapes, parks and open spaces are the responsibility of the Region of York and the City of Vaughan, while development of the blocks themselves will be the responsibility of the land owners and developers. The important factor is that these improvements are also inter-dependent. For example, the provision of transit into the site will depend on reaching a critical population threshold.

The considerations noted below are based on known factors at the time of report preparation. We have also included a range of variables that may affect timing and priorities moving forward.

7.1.1 Region of York Initiatives

Roads Implementation Schedule

- Rutherford Road improvements are included within York Region's 10 year capital forecast. The EA is currently underway with construction scheduled for initiation in the 2012 fiscal year.

- Dufferin Street improvements are not within York Region's 10 year capital forecast. However, the Region is undertaking an update of its transportation master plan and the analysis of the network requirements in the vicinity of the Carrville District including Dufferin Street and Rutherford Road may soon be completed. This analysis will likely include a review of the options for Dufferin Street to determine future transit needs.

York Region Transit

- Schedule for transit needs relative to development schedule and depend on reaching critical population thresholds. However, provision and allowance for transit stops, routes and other related infrastructure are anticipated in the road improvements contemplated for Rutherford Road and Dufferin Street as well as local roads.

Municipal Services / Infrastructure

- The availability and timing of water and sewer infrastructure required for urban development will be an important consideration relative to the ability to develop the lands within the study area.

7.1.2 City of Vaughan Initiatives

Parks Development

- The development of community and neighbourhood parks is also dependent on the development schedule of the community. However, given the requirement for and importance of the Village Square relative to the retail and streetscape character of the Main Street it should be considered as part of the infrastructure of the community. The square may also be considered as part of the outdoor activity / multi-use area associated with the surrounding retail and commercial uses and as such could be undertaken and coordinated with the development of the retail / commercial part of the development.

- There are no community facilities such as libraries or community centres contemplated within the study area. The facilities are located in relative proximity, but not within the boundary of the Carrville District Centre.

7.1.3 Owner's Schedule

The Owners of the lands also have a range of considerations relative to the phasing of development within the District Centre.

District Square Precinct as Destination

- The development of the District Square is a crucial element relative to the successful implementation of the retail area. Owners will have to identify the market threshold required to establish the "critical mass" necessary to sustain the required level of commercial retail activity, community participation and interest.

- Phasing of development will be required to respond to market needs. Phase 1 may include retail pads that create the spatial form necessary for the Square and Main Street corridors and allow for future intensification options as demand for the related mixed use develops moving forward. While not been illustrated in this report, the Owners and the City may have to negotiate the built form of Phase 1 to enable the initial phase to proceed.

- In order to fully support the opportunity to successfully develop the square, a partnership may be considered between the City and the Owners to create a fully functional district square and streetscape development within the "Main Street" precinct with strong programming initiatives that will help to create the vibrant destination that is required.

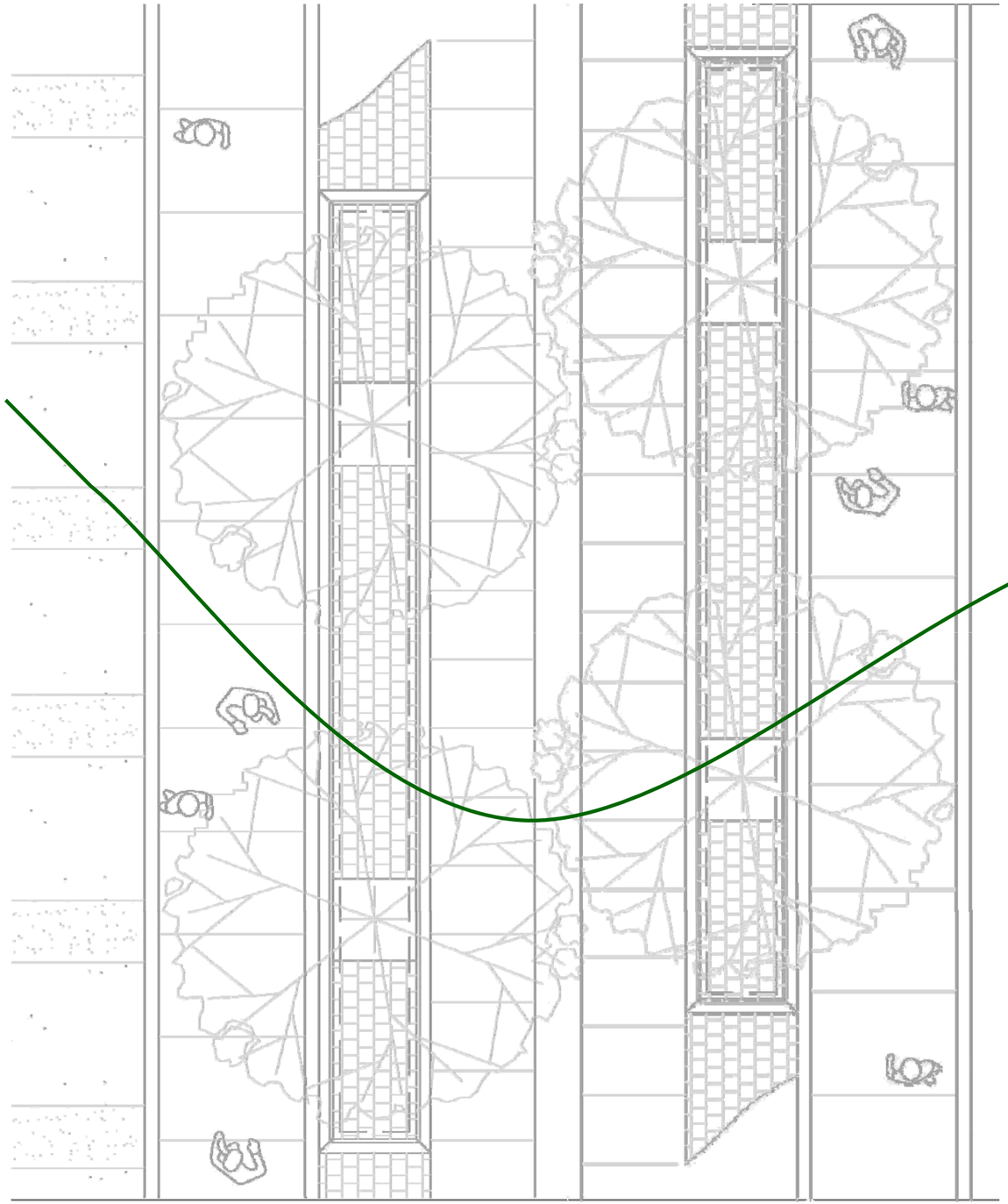
Mixed Use / Residential Community Development

- Low to medium density residential development opportunities exist in the adjacent areas east of Dufferin Street. Future medium to high density intensification opportunities will exist along the Regional Roads and in the area surrounding the square that will "fill-out" the balance of the district. Development of the surrounding streetscape and parks system in parallel with residential and mixed use development will be required as part of the planned community infrastructure.

7.1.4 Variables

There are a range of variables that will affect the implementation of the Carrville District Plan. Many of these variables are inter-dependent and mutually supportive including:

- Development market demand conditions
- Development approvals, processes and timing requirements
- Economic activity and growth supporting demand for development
- Regional road and transit phasing
- Infrastructure availability and timing
- Development costs
- Other considerations relative to each owner and site specific conditions.



APPENDICES

APPENDIX 1
Street Tree Technical Details

BOULEVARD PLANTING GENERAL NOTES
(City of Vaughan, 2007)

1. Provide sample of shredded bark chip mulch prior to construction.
2. Provide topsoil testing results prior to construction.
3. Orient trees for best appearance.
4. No tree pits shall be left open overnight.
5. Any tree replaced during maintenance period requires 2" x 2" wooden stakes (6'0") as opposed to 'T' bars.
6. All trees not meeting City of Vaughan standards will be removed and replaced at no expense to the city.
7. All stakes and accessories shall be removed prior to the inspection for subdivision maintenance.
8. Straighten all leaning trees prior to inspection for subdivision maintenance.
9. Corrective pruning shall be completed prior to inspection for subdivision maintenance in accordance of industry standards, including the removal of:
   -One whorl of branches from the lower crown
   -Dead or broken branches
   -Trunk suckers
   -Co-dominant leaders
10. Top dress any settlement area with topsoil and sod prior to subdivision assumption.

BOULEVARD TREE PLANTING SPECIFICATIONS
(City of Vaughan, 2007)

1. General
The specifications are to be read in conjunction with the standard City boulevard tree planting details and the Canadian Nursery Trades Association Standards for Nursery Stock manual. Trees, topsoil and planting methods must meet the standards and specifications of the CNTA to be accepted by the City.

2. Topsoil Requirements
The City requires the entire planting area, outside the sidewalk, curb and driveway materials, will be filled with topsoil to a depth of 450mm. Prior to provision of the topsoil the Owner must provide a soils report which confirms the topsoil, to be utilized on the site, meets the horticultural standards noted herein. Submissions are to include the name of the development project, 19T or 65M number, streets to be planted in and the location of the topsoil source for viewing by City staff. Two copies of the written report, results and recommendations are to be provided to the City for review and approval.

2.1 All topsoil must be screened, fertile, friable, natural loam containing 4% minimum organic matter for clay loams and 2% minimum organic matter for sandy loams. Acidity of topsoil shall range from 6.0pH to 7.5pH (levels of NPK an Mg are to be noted). It shall be free of any mixture of subsoil, clay lumps, stones and roots over 50mm in diameter as well as any foreign objects, and shall be reasonably free of weeds and weed seeds.

2.2 Test topsoil from source providing 0.5kg samples to an approved testing laboratory, and indicate present use, type of subsoil and quality of drainage. Prepare and ship the samples in accordance with Provincial regulations and testing laboratory requirements.

2.3 The testing must identify if the following are present in harmful levels; atrazene, salts, pre-emergent herbicides growth inhibitors or soil sterilants and heavy metals.

2.4 Should the test results indicate the topsoil is not satisfactory the report shall include recommendations to improve the soil. The City reserves the right to reject topsoil that does not meet the standards.

2.5 In soils with low moisture holding capacities the City may direct the owner to apply Urea based polymers or Hydrogel to the planting soils.

2.6 When excavating the planting area, to install the topsoil, a continuous trench will be created. These trenches and/or planting pits shall not be left open overnight.

3. Stakeout of Boulevard Tree Locations (Forestry Department)
City of Vaughan Forestry Department is to be given 24 hours notice of tree planting stakeout meeting with consultant. Prior to the installation, a stakeout of boulevard tree locations is to be undertaken by the owner, to the approval of the City. The owner shall ensure all underground utilities (existing and proposed) are staked out prior to the boulevard tree stake out. The landscape consultant and the City may, at their discretion, redistribute tree locations, prior to planting, in order to minimize conflicts with utilities, driveways, and intersection visibility. The following distances are to be ensured in the location of trees within the boulevard:

- Not less than 1.0 metre from underground utilities, driveways, sidewalks, curbs, and utility pedestals.
- Not less than 3.0 metres from hydro transformers and fire hydrants.
- Not less than 0.9 metres from underground gas utilities.
- Not less than 3.0 metres from light poles for smaller ornamental/ flowering and columnar street tree species. Not less than 5.0 metres from light poles for regular-sized street tree species.
- Not less than 10.0 metres from stop signs, subject to the approval of the City's Engineering Dept.

4. Tree Conditions
4.1 All trees must meet the highest standard of the Canadian Nursery Trades Associations Standard for Nursery Stock.

4.2 All trees shall have only one un-pruned and undamaged central leader. The branching shall be evenly spaced. Minimum Height to first branch 1.8m.

4.3 Trees shall not exhibit any mechanical damage (straight trunk clear of any defects).

4.4 All trees must contain the tags regarding species, variety and source of the plant material by the Nursery.

4.6 All root balls must be firm and securely wrapped in natural fibre and tied with biodegradable twine.

4.7 Trees which adapt only to Spring planting will not be accepted for Fall plantings.

4.8 Trees exhibiting weak graft unions will not be accepted.

4.9 Previous two years twig or shoot elongation must be present as typical for any species.
4.10 All plant material must be wrapped for transport, and must be removed prior to inspection on site.

4.11 Only stock which has been certified, by the Nursery, as having been root pruned within the previous 36 months shall be accepted.

5. Implementation
5.1 All trees to be inspected upon delivery to subdivision by the Forestry Department and acceptability is at their discretion. Request for inspection should be made through Parks Development Department.
5.2 No planting holes will be deeper than the overall soil ball and the tree shall be planted with the rootball 75mm to 100mm above grade. Trees will be places so that main lateral branches are oriented away from the road.

5.3 All trees must be thoroughly watered(15 to 20 gallons) at planting and on a monthly basis between the 15th of May and the 30th of November each year, until assumption. The water should be applied slowly to prevent erosion and runoff. This shall be certified by the Consultant at the time of request for the commencement of the Guarantee Maintenance period and again at Assumption.

5.4 Deciduous trees are to be wrapped for the first year with burlap strip wrapping. Coniferous trees are to be wrapped for the first year with burlap wrapping. The City may require the wrap to be removed and replaced, by the Owner, during inspection periods.

5.5 All trees are to receive an appropriate Spring and Fall application of slow release granular balanced (18-18-18) fertilizer (25% SCU). Application rate 170 grams per 50mm cal. Tree. This shall be certified by the consulting landscape architect at the time of request for the commencement of the Guarantee Maintenance period and again at Assumption.

5.6 The City may direct the Owner to apply a Chlorosis treatment. This shall be certified by the consulting landscape architect at the time of request for the commencement of the Guarantee Maintenance period and again at Assumption.

5.7 All trees must be covered and kept in a moist condition if delivery and installation exceeds three hours.

5.8 No wound dressing shall be applied to pruning cuts.

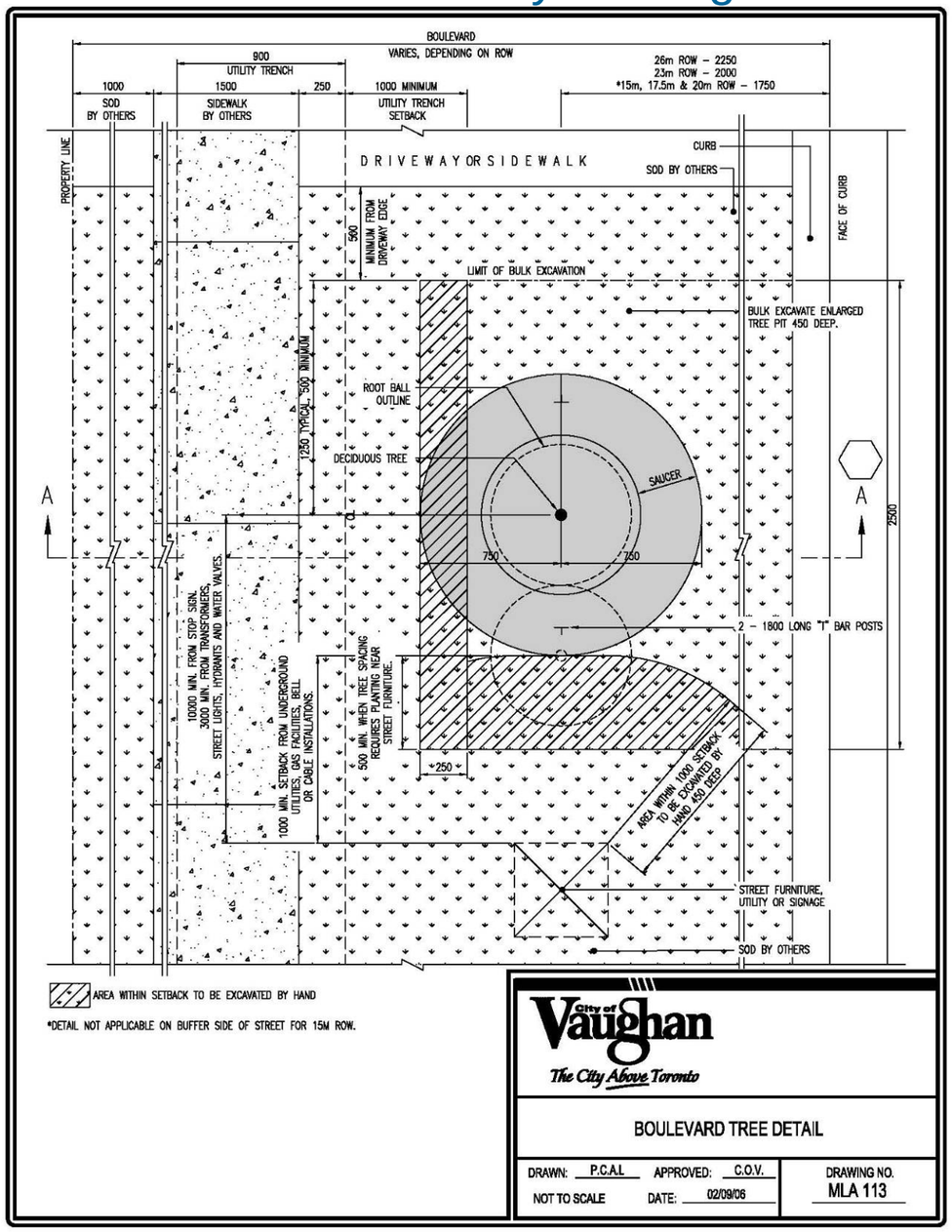
5.9 No alteration to planting sites by third parties shall be accepted by the City.

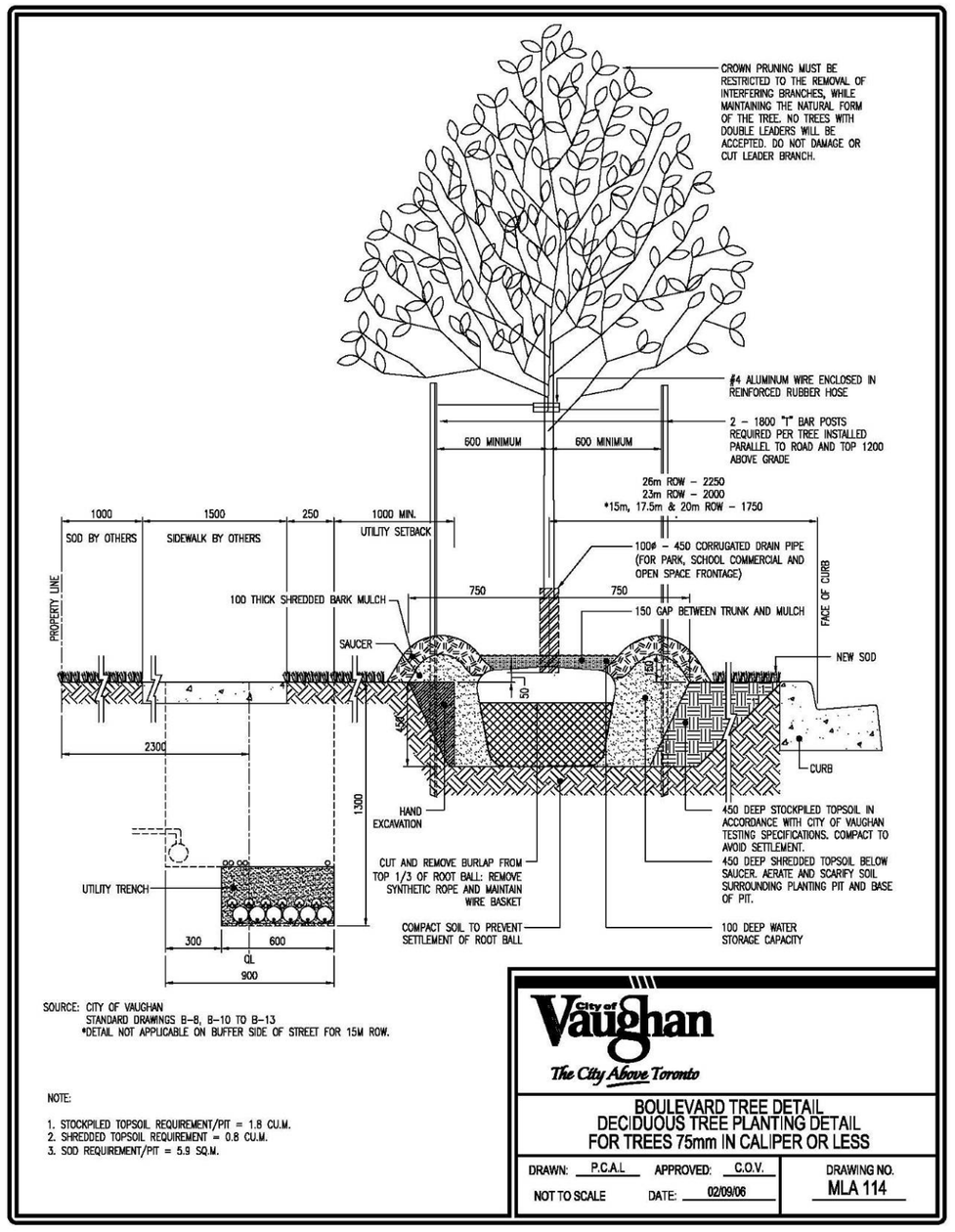
6. Certification Guarantee Maintenance Certification
The consultant is to certify that all:
- plant material was installed as per the details and specifications;
- plant material is healthy condition for acceptance and in the ground 12 months;
- landscape elements have been installed as per the details and specifications; and
- As-builts are supplied (4 sets).

Assumption Certification
Drawings should be certified as previously required at Guarantee Maintenance but the plant material should be in an additional 13 months. Exceptions should be noted.

Note: The date of the last consultant inspection will be current within 2 months of the request from engineering to be considered valid.

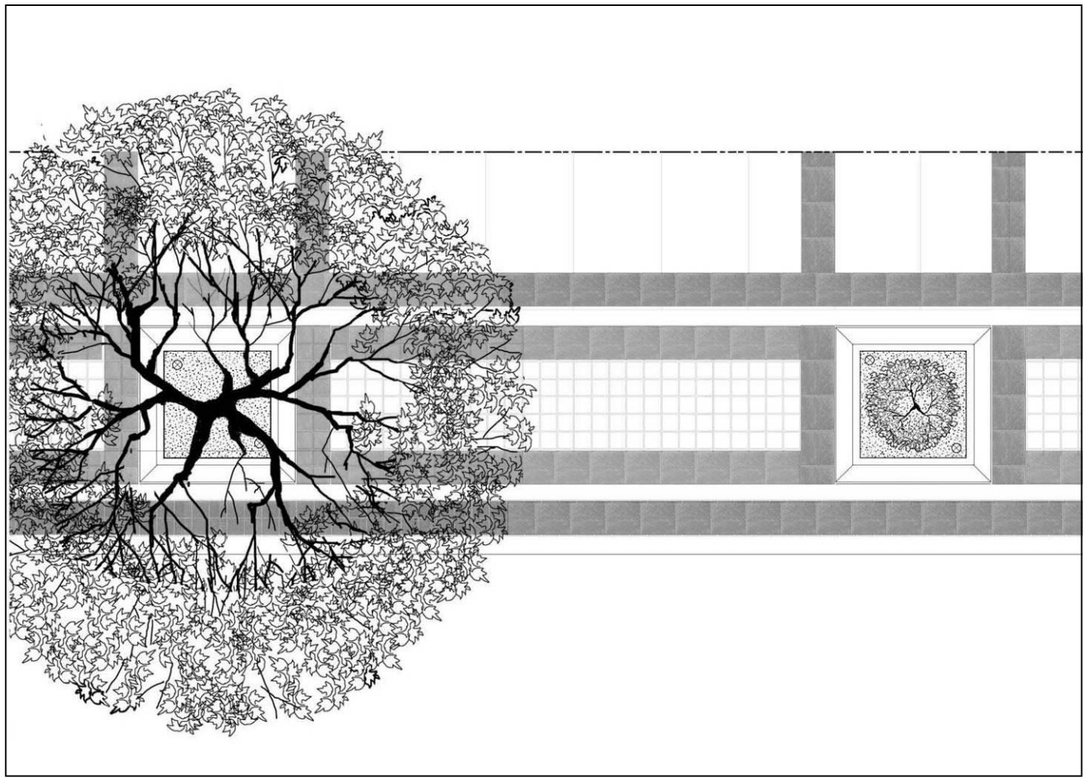
Street Tree Technical Details - City of Vaughan Standards



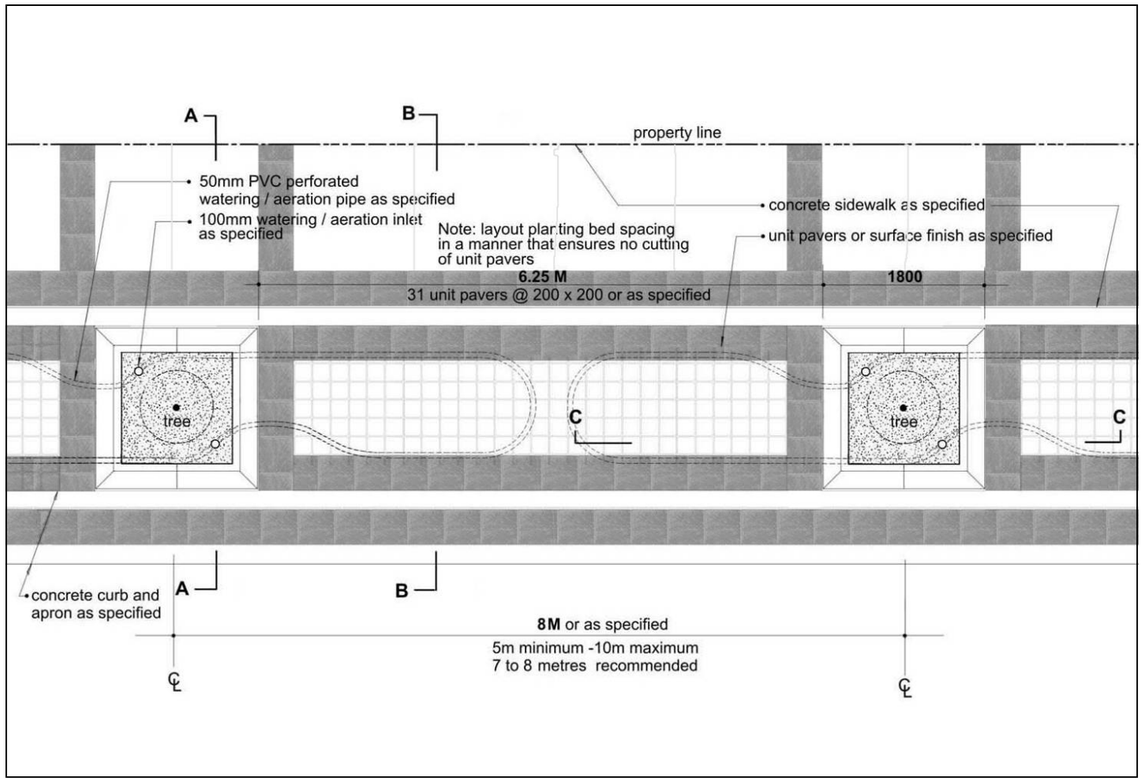


APPENDIX 2
Street Tree Planting Details

2.1 In-ground Planting

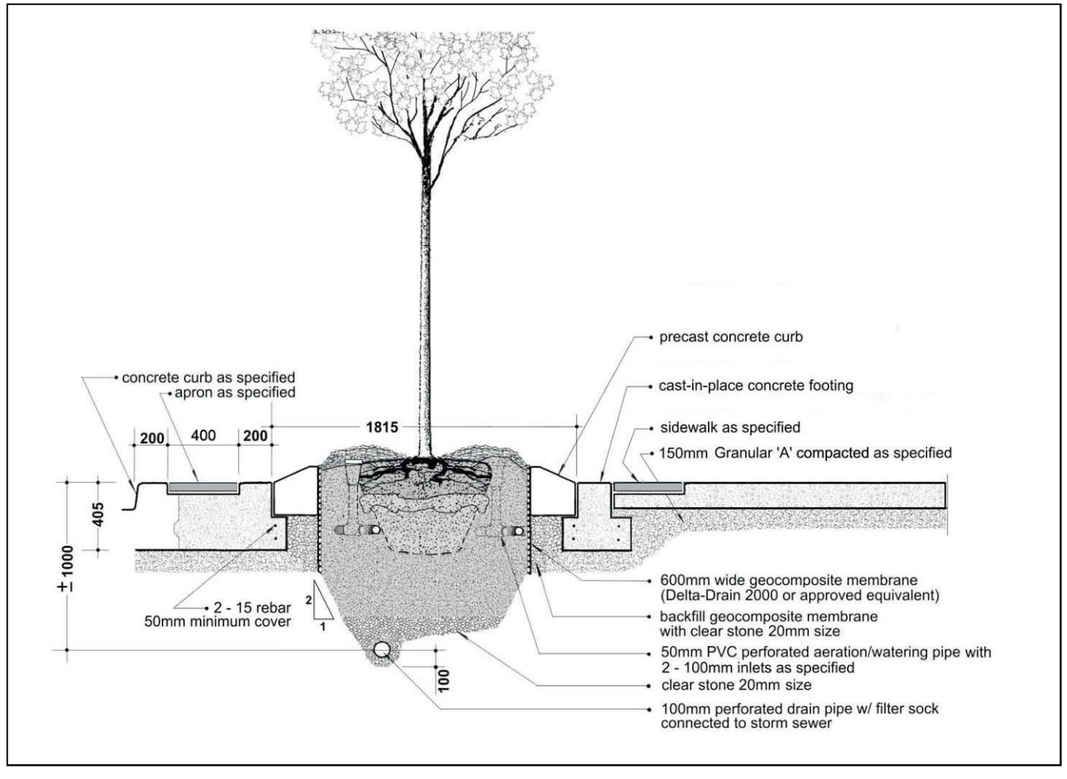


In-Ground Planting—Continuous Soil Trench with In-Ground Tree Planter and Concrete Sidewalk

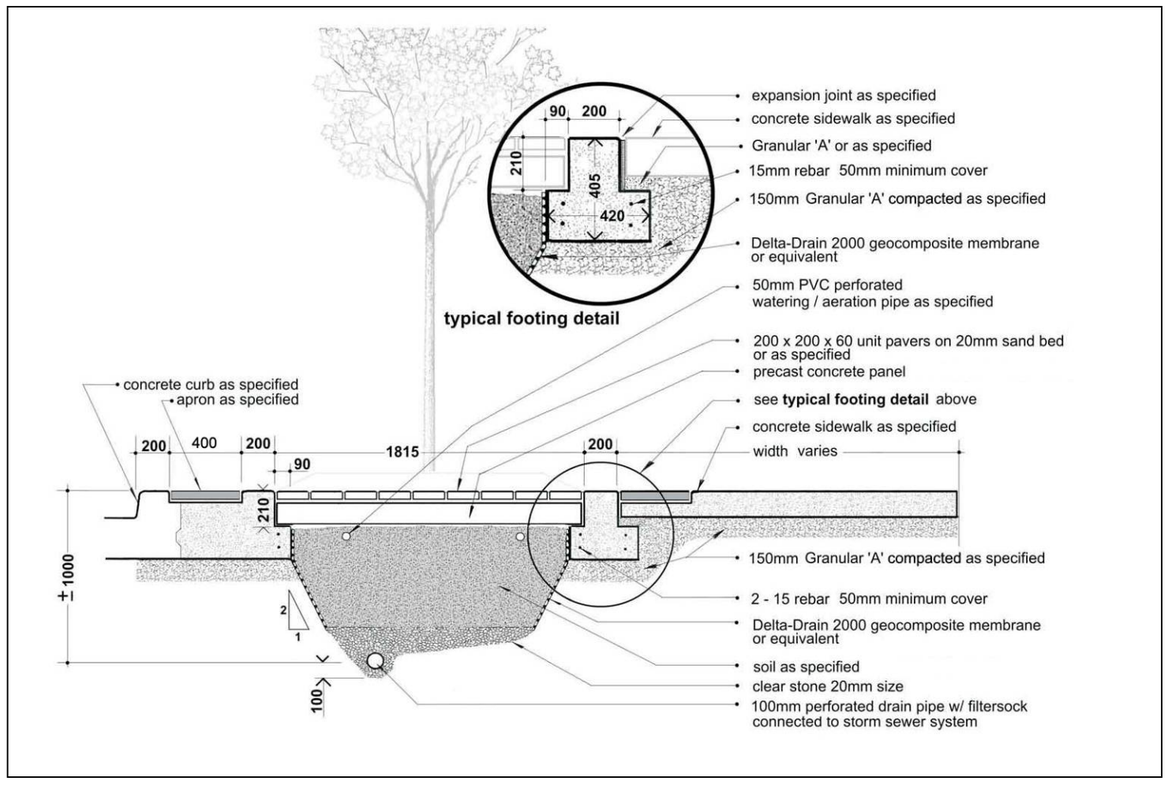


In-Ground Planting—Continuous Soil Trench with In-Ground Tree Planting and Concrete Sidewalk: Plan

NOTE: Adapted from City of Toronto Urban Forestry Streetscape Manual (July 2007);
Streetscape Planting Details proposed on the following pages are beyond the Region of York's current standards.

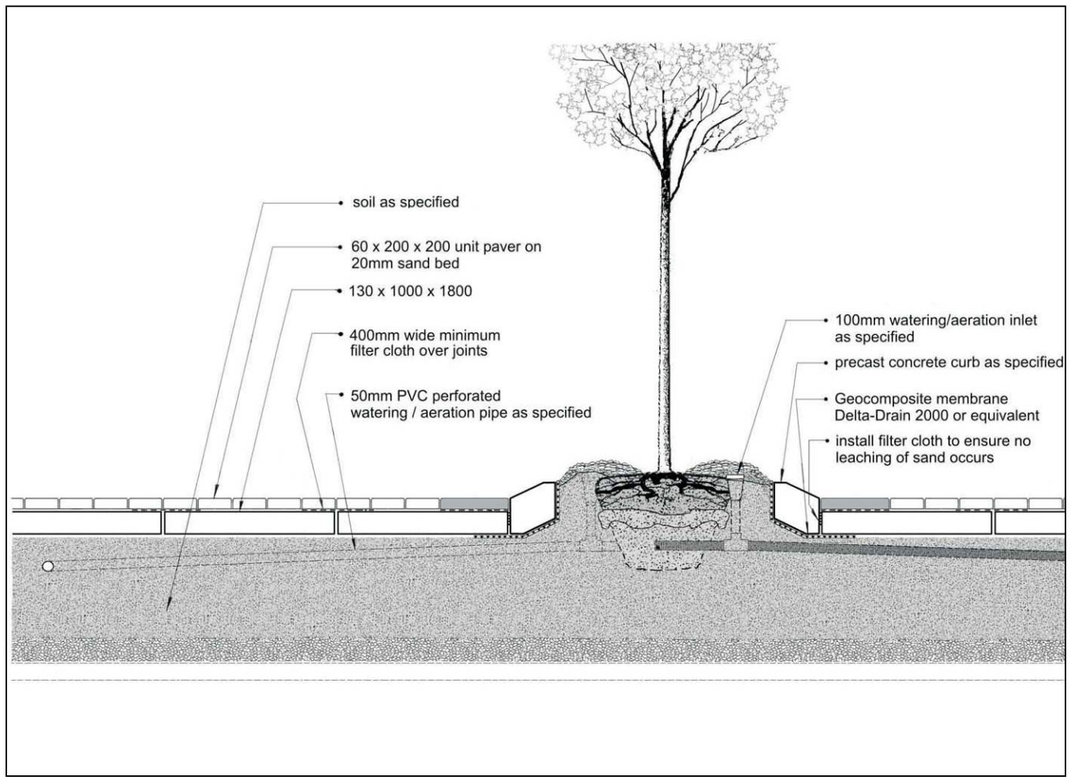


In-Ground Planting—Continuous Soil Trench with In-Ground Tree Planter and Concrete Sidewalk: Section A - A

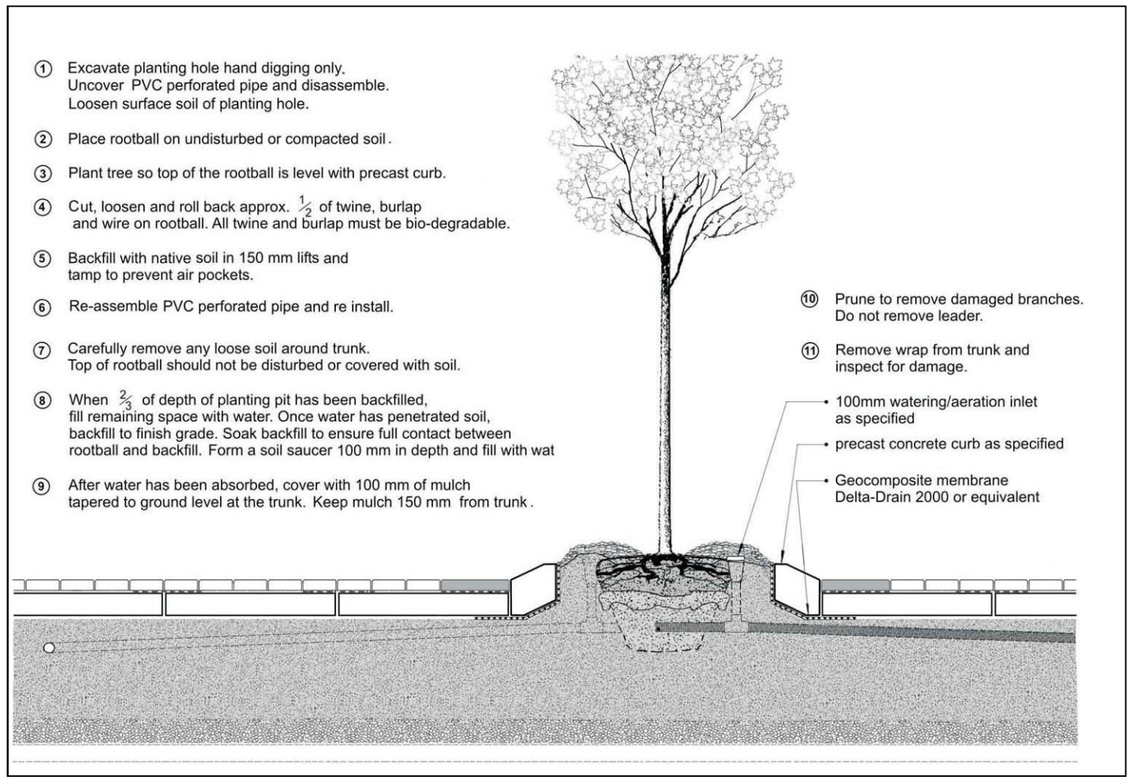


In-Ground Planting—Continuous Soil Trench with In-Ground Tree Planting and Concrete Sidewalk: Section B - B

NOTE: Adapted from City of Toronto Urban Forestry Streetscape Manual (July 2007);
Streetscape Planting Details proposed on the following pages are beyond the Region of York's current standards.



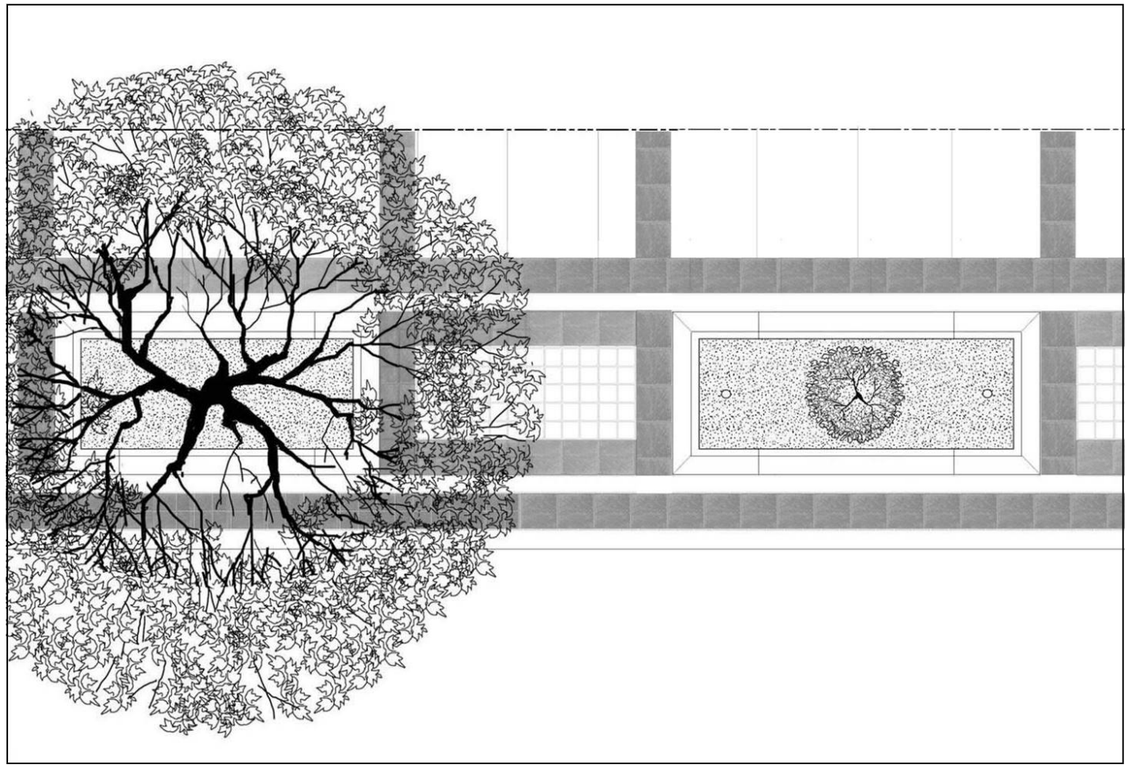
In-Ground Planting—Continuous Soil Trench with In-Ground Tree Planter and Concrete Sidewalk: Section C - C



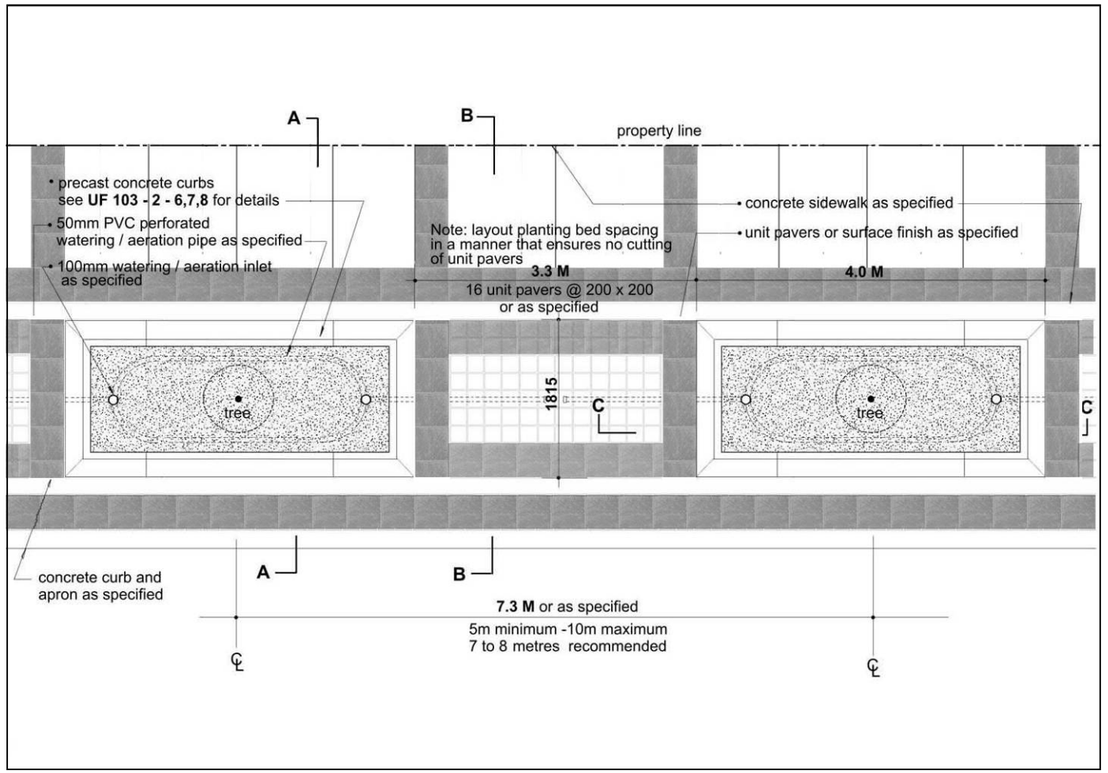
In-Ground Planting—Continuous Soil Trench with In-Ground Tree Planting and Concrete Sidewalk: Tree Planting Specifications

NOTE: Adapted from City of Toronto Urban Forestry Streetscape Manual (July 2007);
Streetscape Planting Details proposed on the following pages are beyond the Region of York's current standards.

2.2 Elongated Bed Planting

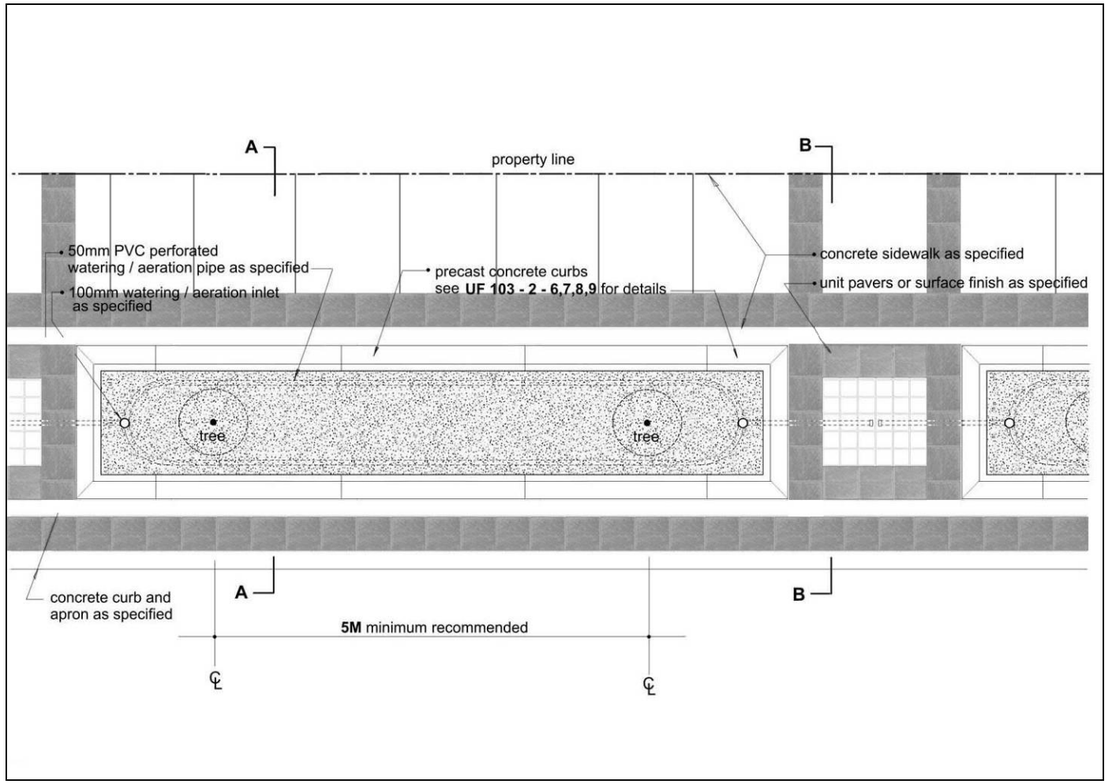


Elongated Bed Planting—Continuous Soil Trench with Planting bed and Concrete Sidewalk

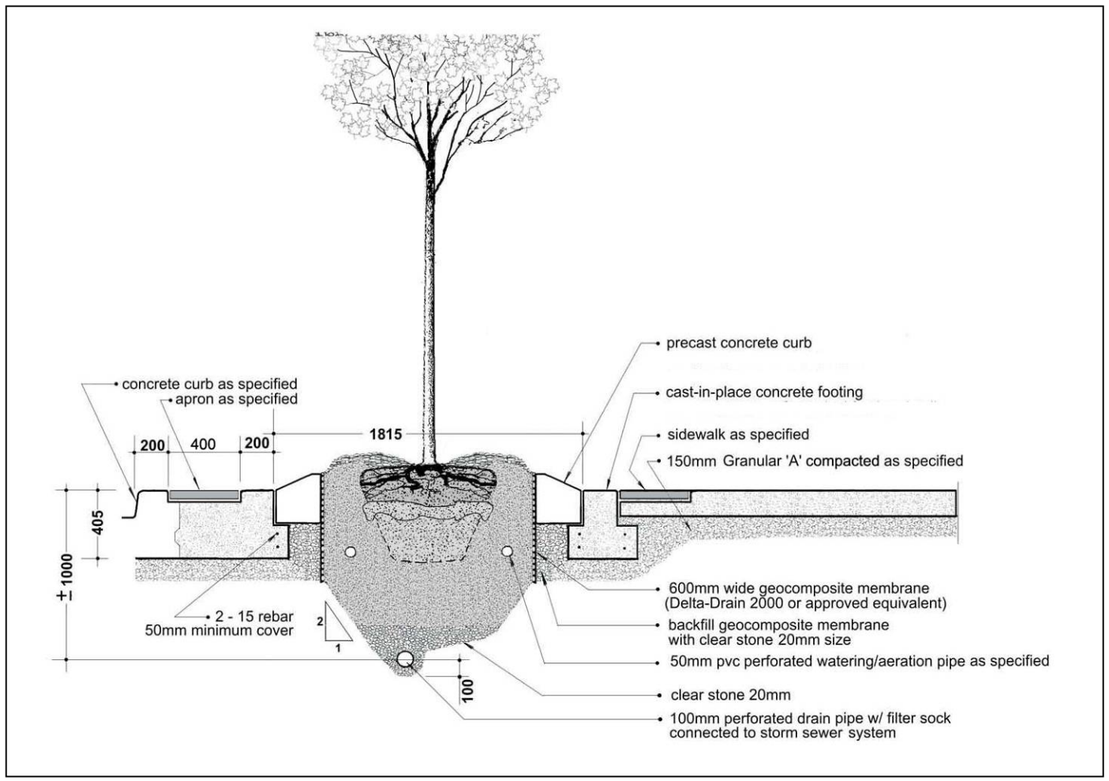


Elongated Bed Planting—Continuous Soil Trench with Planting bed and Concrete Sidewalk: Plan

NOTE: Adapted from City of Toronto Urban Forestry Streetscape Manual (July 2007);
Streetscape Planting Details proposed on the following pages are beyond the Region of York's current standards.

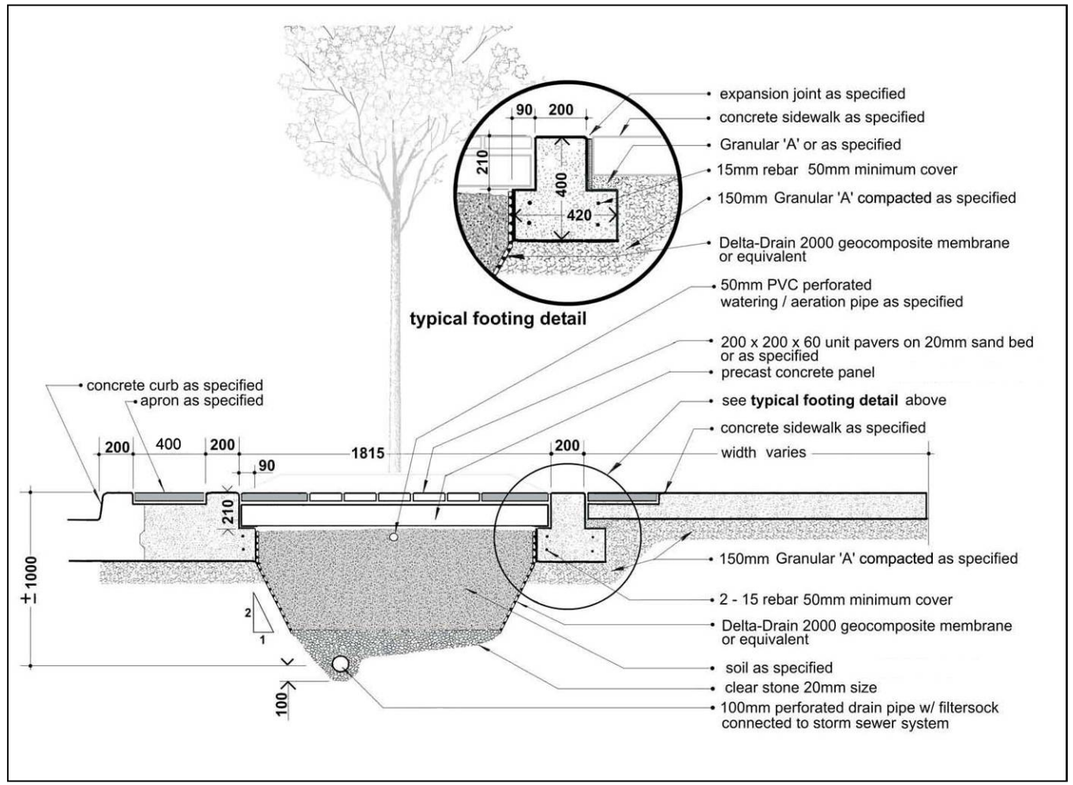


Elongated Bed Planting—Continuous Soil Trench with Extended Planting bed and Concrete Sidewalk: Plan

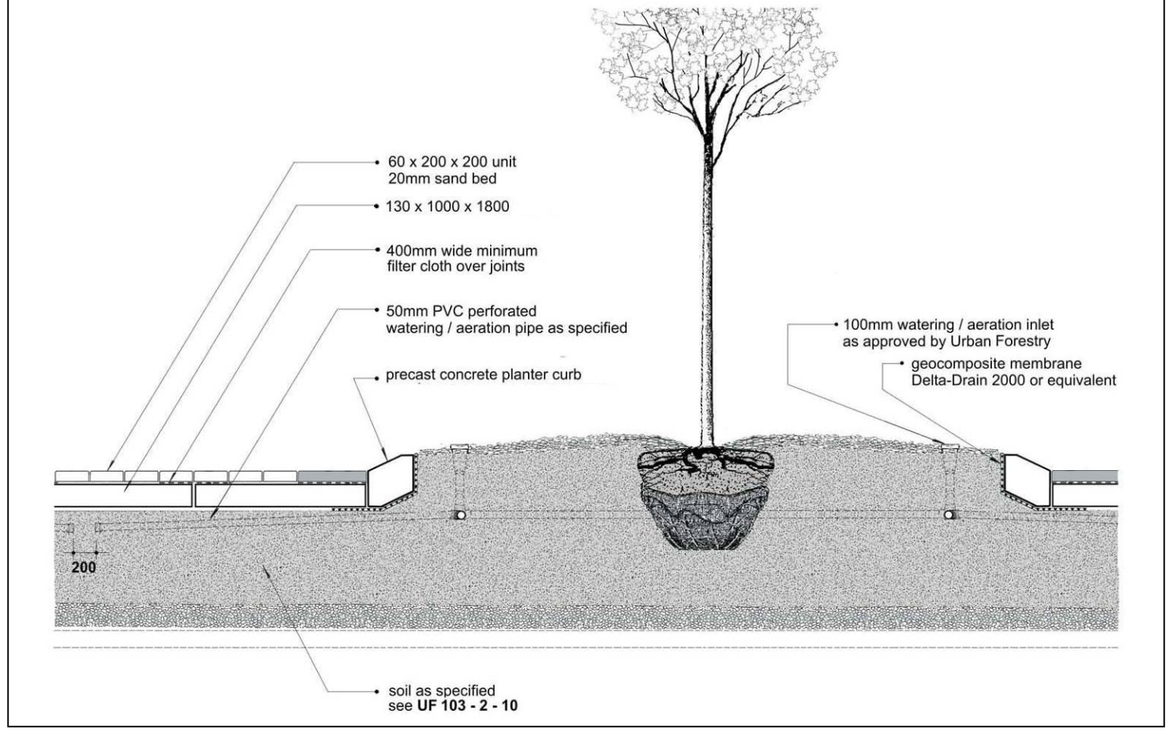


Elongated Bed Planting—Continuous Soil Trench with Planting bed and Concrete Sidewalk: Section A - A

NOTE: Adapted from City of Toronto Urban Forestry Streetscape Manual (July 2007);
Streetscape Planting Details proposed on the following pages are beyond the Region of York's current standards.

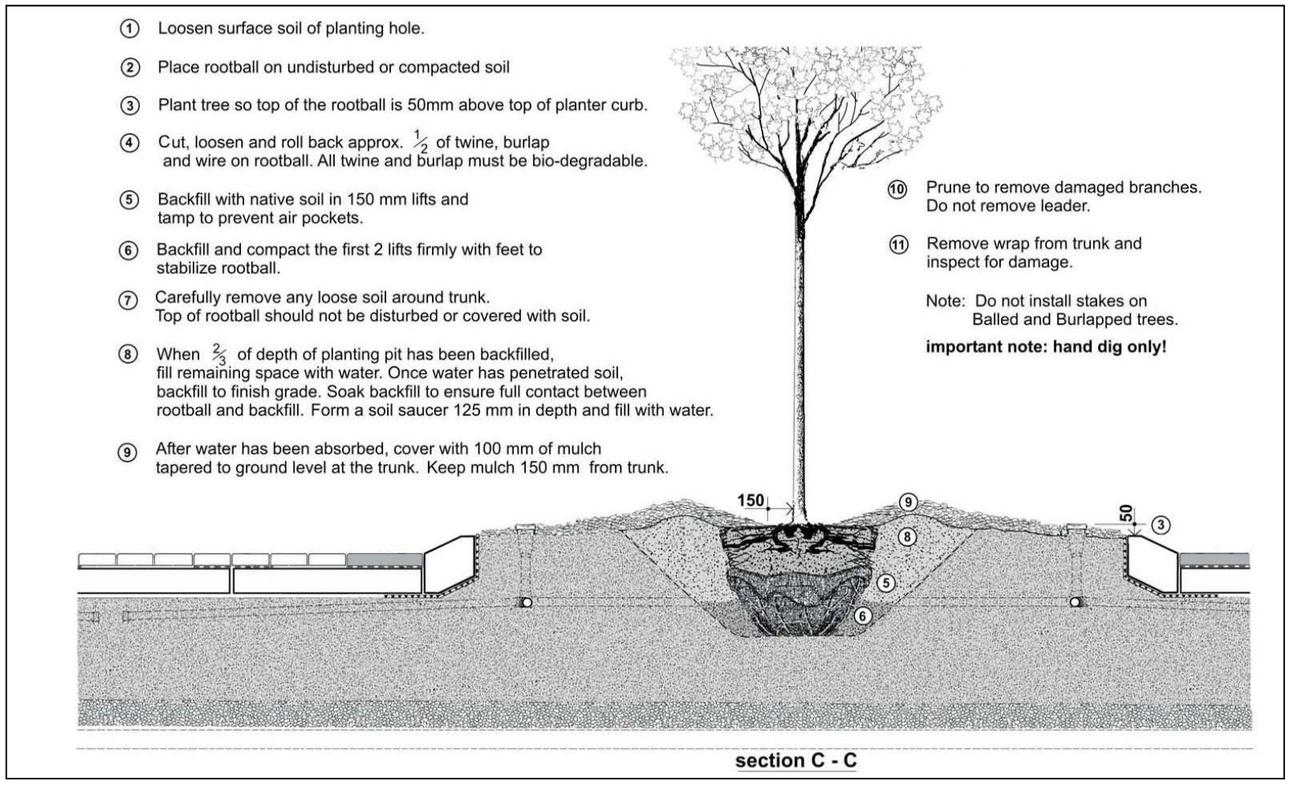


Elongated Bed Planting—Continuous Soil Trench with Planting bed and Concrete Sidewalk: Section B - B



Elongated Bed Planting—Continuous Soil Trench with Planting bed and Concrete Sidewalk: Section C - C

NOTE: Adapted from City of Toronto Urban Forestry Streetscape Manual (July 2007);
Streetscape Planting Details proposed on the following pages are beyond the Region of York's current standards.



Elongated Bed Planting—Continuous Soil Trench with Planting bed and Concrete Sidewalk: Tree Planting Specifications

NOTE: Adapted from City of Toronto Urban Forestry Streetscape Manual (July 2007);
Streetscape Planting Details proposed on the following pages are beyond the Region of York's current standards.

APPENDIX 3

York Region Acceptable Street Tree Species List

3.1 Full Sized Trees

Full Sized Trees

Common Name	Scientific Name	Time	Native	General Comments
Ohio Buckeye	*Aesculus glabra*			prefers moist soils
Horse Chestnut	*Aesculus hippocastanum*	Sp		good spring flower with no seeds/rare/disease susceptible
Black Maple	*Acer nigrum*	Sp	🍁	lots of seed for winter interest/rare/needs moist soil
Norway Maple	*Acer platanoides*		I	invades native areas/surface roots conflict with turf/girdling routs/aphid problems/dense shade
	'Columnar, Olmsted, Superform'		I	narrow form (height about twice its width)
	'Crimson King, Schwedler, Royal Red'		I	dark red to green susceptible to reflected heat
	'Deborah, Emerald Queen'		I	excellent upright form
Sycamore Maple	*Acer pseudoplatanus*	Sp		very pollution tolerant/rare
Red Maple	*Acer rubrum*	Sp	🍁	green summer foliage & yellow/red fall colour/tolerates wet soil/some cultivars do not
Silver Maple	*Acer saccharinum*	Sp	🍁	aggressive root system/increased liability with age
Sugar Maple	*Acer saccharum*		🍁	upright form/fall colour varies/prefers good drainage
	'Green Mountain'		🍁	upright form/fall colour is a golden yellow/prefers good drainage/forms thick leathery scorch resistant leaves
Bitternut Hickory	*Carya cordiformis*		🍁	Adaptable to wide variety of soils/ might be better as a park tree or could be used in naturalization project/ messy tree
Northern Catalpa	*Catalpa speciosa*			useful in park planting
Ginko 'Maidenhair tree'	*Ginkgo biloba*	Sp		good yellow fall colour/thin bark/male variety only
Honey Locust	*Gleditsis triacanthos*		🍁	small leaves are difficult for home maintenance/provides a filtered shade/susceptible to defoliation
Kentucky Coffee tree	*Gymnocladus dioicus*	Sp	🍁	interesting winter texture/open lawn setting/large leaves/male variety only
Butternut	*Juglans cinerea*		🍁	large tree/prefers moist rich soils/ good for naturalizing or park situations
Black Walnut	*Juglans nigra*		🍁	large tree/prefers moist rich soils/ good for naturalizing or park situations
Tulip Tree	*Liriodendron tulipifera*	Sp		good flowers & yellow fall color/ moist well drained soil/very large tree
Saucer Magnolia	*Magnolia x soulangiana*	Sp		good flowers low branching & spreading/scale problems
London Plane Tree	*Platanus x acerifolia*			frost cracks on trunk/attractive peeling bark/witch's broom is a problem
Ironwood	*Ostrya virginiana*	Sp	🍁	sudden mortality problem/trunk suckers heavy wood/borer problems
Bur Oak	*Quercus macrocarpa*	Sp	🍁	needs acidic soil/fruit maintenance difficult to transplant

Full Sized Trees

Common Name	Scientific Name	Time	Native	General Comments
White Oak	*Quercus alba*		🍁	highly sensitive to disturbance/ slow growing tree/ dead wood sometimes needs to be trimmed
Swamp White Oak	*Quercus bicolor*		🍁	tolerant of wet soils/ difficult to transplant/ slow growing
Pin Oak	*Quercus palustris*		🍁	difficult to transplant/ slow growing
English Oak	*Quercus robur*	Sp		needs acid soil/fruit maintenance/difficult to transplant
	Quercus robur "Fastigiata'	Sp		Collumnar form, needs acid soil/holds leaves through the winter/difficult to transplant/very upright in form
Red Oak	*Quercus rubra*	Sp	🍁	needs acid soil/fruit maintenance/difficult to transplant/no tap root
Littleleaf Linden	*Tilia cordata*			showy & fragrant flowers/ Greenglobe may be used under hydro lines/aphid & borer problems/suckers from base/ messy species
Basswood, American Linden	*Tilia americana*		🍁	showy & fragrant light yellow flowers/suckers from base/ messy species
White Elm	*Ulmus americana*		🍁	susceptible to dutch elm and many other disease / problems when planted close to sidewalks/ susceptible to storm breakage
Homestead Elm	*Ulmus carpinifolia*		I	aggressive species & self-pruning/ can cause root problems/ resistant to Dutch Elm Disease
Balsam Fir	*Abies balsamea*		🍁	little maintenance required
Silver Fir	*Abies concolor*			little maintenance required
Eastern redcedar	*Juniperus virginiana*		🍁	insect problems with mites and others/ also suseptible to blights and is an alternate host for cedar apple rust
European Larch	*Larix decidua*			larch case-bearer insect occasionally can seriously disfigure the tree form
Tamarack	*Larix laricina*		🍁	smaller cones than *Larix decidua* resulting in less debris
Norway Spruce	*Peciea abies*			In hot dry areas mites can be a problem/ little maintenance
White Spruce	*Peciea glauca*		🍁	fine-textured juvenile needles, promotes winter dehydration within this species of *Picea*
Colorado Blue Spruce	*Peciea pungens*			insect and mite may be a serious problem, which can destroy the formal proportion of the tree
Austrian Pine	*Pinus nigra*			tolerates urban settings better than most *Pinus* / can be susceptible to disease and insects/ litter can be a problem
Red Pine	*Pinus resinosa*		🍁	little maintenance required

Legend

🍁 species native to York

I Invasive species not to be within 100 m of natural areas

Sp Species which are sensitive to fall transplanting & should only be planted in the spring

The York Region Tree Planting Design Guide specifies certain parameters regarding trees being planted where overhead energized wires are present. In these locations, tree species whose mature form is relatively small should be selected. Planting trees that will grow to full size within 3.0 metres of overhead wires should be avoided.

Hydro

Common Name	Scientific Name	Time	Native	General Comments
Hedge Maple	*Acer campestre*			compact form/trunk suckers require extra maintenance/ yellow fall colour
Amur Maple	*Acer ginnala*			compact form/red & yellow fall colour/lots of seeds/tends to sucker/specify single stem
Globe Maple	*Acer platanoides'* globosum'			dense canopy, formal globe shape
Tatarian Maple	*Acer tataricum*			good red & yellow fall color/tends to sucker/lots of seeds
Purpleblow Maple	*Acer truncatum*		I	this species of maple has similar characteristics as *Acer platanoides* , yet this tree is smaller in size
European Alder	*Alnus glutinosa*	Sp		showy flower & fruit/tolerant of wet & dry soil/common to pure stands
Shadblow or Serviceberry	*Amelanchier canadensis*	Sp	🍁	difficult to maintain singlestem/4 season interest/tolerates moist soil
Globe Catalpa	*Catalpa bignonioides* 'Nanna'			tends to be messy
Sugar Hackberry	*Celtis laevigata*	Sp		compact form/good in moist soils
Hackberry	*Celtis occidentalis*	Sp	🍁	requires pruning for witches broom and general form/good substitute for Elms/good in container situations
Eastern Redbud	*Cercis canadensis*		🍁	good flower/shade/tolerant/ weak crotches
Flowering Dogwood	*Cornus florida*		🍁	good flower/specimen tree/red fall colour/source trees locally
Turkish Hazel	*Corylus colurna*	Sp		good form/difficult to transplant/winter interest
Hawthorns	*Crataegus* spp.	Sp		thornless & disease resistant varieties only. Do not plant near stands of apples or pears
Flowering & Domestic Apple	*Malus* (most)			good flowers/fruit usually maintenance problems/disease & insect problems/tolerates most soils
Weeping Mulberry	*Morus alba* 'Pendula'		I	adaptable to different environments, Invasive, small tree
Amur Cork Tree	*Phellodendron amurense*		I	lots of black berries
Purple Sand Cherry	*Prunus cistena*		🍁	recommended for street tree use/ nice white flowers and purple foliage
Bird Cherry	*Prunus padus*			highly susceptible to black knot disease/ also subject to insects/low maintenance
Shubert Cherry	*Prunus virginiana* 'Shubert'	Sp	🍁	green spring foliage & red in summer/black knot problems/ upright form/bark tends to split
Cherries	*Prunus spp.* 'Ornamental Cherry/ Columnar/ Sargent/ Kwanzan'	Sp		excellent flowers with no fruit/ single stem to be specified/ weeping cankers
Ornamental Pear	*Pyrus* 'Aristocrat/ Capital/ Chantieleer/ Redspire'	Sp		good flowers/may have good fall colour/lush shiny leaves/ Fireblight problems
European Mountain Ash	*Sorbus aucuparia*			small flower & orange fruit/ disease & insect problems/ weak bark/good in clay soils
Ivory Silk Liliac	*Syringa reticulata*			good white summer flower/ excellent small specimen
Mugo Pine	*Pinus mugo*			insect problems (pine shoot moth, mugho pine scale)/ slow growth/ this tree is expected to stay low and compact

Legend

🍁 species native to York

I Invasive species not to be within 100 m of natural areas

Sp Species which are sensitive to fall transplanting & should only be planted in the spring