

Richmond Hill **Regional Centre**  
**Preferred Concept Report**

Urban Strategies Inc | iTrans | Morrison Hershfield

September 9, 2009

# Executive Summary

This report is the second of what will ultimately be three reports created as part of the Richmond Hill Regional Centre Land Use and Urban Design Strategy. The Preferred Concept Report is intended to explain the process of developing the Concept and communicate the basic principles that have been created to guide the future growth of the Richmond Hill Regional Centre into a robust, transit-oriented community that is a desired location for new residential and commercial development.

The Preferred Concept is the result of an extensive process of consultation with members of relevant transportation agencies, the Town of Richmond Hill, members of the public and key stakeholders. It expresses a development strategy for the Regional Centre that balances a range of stakeholder's needs while also taking a bold step into the urban future of the Town of Richmond Hill.

This report describes the following key topics:

- the methodology used to develop the concept;
- the underlying development framework;
- land use directions described in Character Areas;
- an approach to open space development;
- supportive transportation and servicing directions; and
- a conceptual build out of the Regional Centre.

The Preferred Concept achieves the density targets assigned to the Regional Centre in Places to Grow and the Metrolinx Regional Transportation Plan while at the same time creating a place that makes positive contributions to the character and identity of Richmond Hill as a town.

The following are highlights of the Preferred Concept:

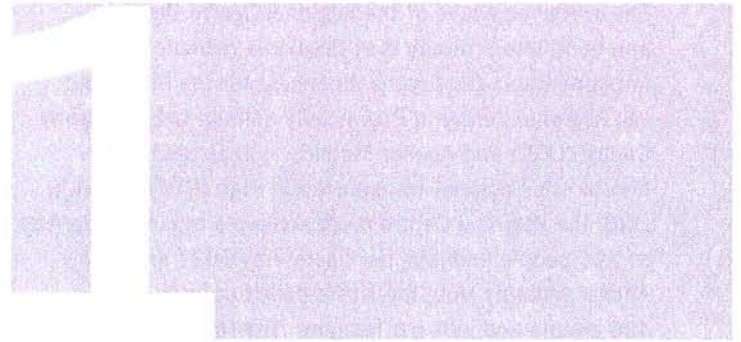
- A transit-oriented community able to accommodate approximately:
  - 15,800 people and 15,700 jobs within six distinct Character Areas having differing built forms and uses;
  - 8,370 peak period transit trips by 2031 at a transit modal split of 50 %;
  - 390 peak period walking and cycling trips
  - Integration of the built environment with access to the five transit lines that will converge at the Richmond Hill Regional Centre;
  - 710,000 m<sup>2</sup> of residential gross floor area and 7,900 residential units;
  - 433,000 m<sup>2</sup> of non residential gross floor area; and
  - A density of 450 people and jobs per hectare.

Upon Council confirmation, the Preferred Concept will be translated into a final report to include detailed policy recommendations, including refined land uses, urban design, transportation and servicing direction for the Town's new official plan and subsequent secondary plan. The final report will be presented to the Town in late fall of 2009.

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# Introduction

- 1.1 Objective of the Report
- 1.2 Reporting Structure
- 1.3 Major Assumptions
- 1.4 Study Boundaries

## 1.1 Objective of the Report

The overall objective of the Regional Centre Design and Land Use Strategy is to develop a realistic and implementable development concept for the Richmond Hill Regional Centre, a Provincially defined Urban Growth Centre (UGC) and Anchor Mobility Hub as defined in Metrolinx's Regional Transportation Plan (RTP). As an UGC, the Regional Centre must achieve a minimum density of 200 people and jobs per hectare by 2031 and as an Anchor Mobility Hub, the site is called upon to achieve 400 people and jobs per hectare. The Regional Centre has the benefit of being the nexus of major public transit investment, a quality that will help achieve the Centre's growth targets in a sustainable, mixed-use transit-oriented fashion. Five major public transportation modes will converge at the Centre including: York Regional Transit (YRT), VIVA, the Yonge Street Subway extension, GO Transit trains and busses as well as the Highway 407 Transitway. Second only to Union Station in Toronto in terms of intersecting modes of travel, the Richmond Hill Regional Centre is envisioned to become a major transit

hub and growth node in the northern part of the Greater Toronto Area, an urban-scaled transit-oriented place and a desirable location for new residential, commercial and office development.

This report details the Preferred Concept for the Regional Centre that was developed by the Urban Strategies team in consultation with the Town of Richmond Hill, transit agencies, members of the public, neighbouring municipalities and key stakeholders. Reflecting the input of these parties, this report is intended to communicate the basic principles that have been developed to guide the future growth of the Regional Centre including:

- Streets, open space, development parcels and built form principles;
- Land use directions;
- Transportation vision and strategy to accommodate new growth in the Centre;
- Stormwater management and servicing strategy; and
- Development and Phasing



THE RICHMOND HILL REGIONAL CENTRE STATION



OFFICE DEVELOPMENT IN THE CENTRE TODAY

## 1.2 Reporting Structure

The Preferred Concept is the most refined thinking about the future of the Regional Centre to date and is the second of three deliverables resulting from the Regional Centre Land Use and Urban Design Strategy study. Previous to this report, the Richmond Hill Regional Centre Investigative Research Report was developed. The Investigative Research Report described the existing conditions of the Centre, the planning and transportation policy context affecting the study area and illustrated early conceptual thinking about how to approach a land use and urban design strategy.

Upon Council confirmation, the Preferred Concept detailed in this report will be revised to include policy recommendations, including refined land uses, urban design, transportation and servicing recommendations for the Town's new official plan and subsequent secondary plan. The third and final report will be presented to the Town in late fall of 2009.



VARYING TOPOGRAPHY AND GRADE CHANGES

## 1.3 Major Assumptions

The Preferred Concept has emerged from an understanding of the local, regional and Provincial policy context, the density targets applied to the site by virtue of its Urban Growth Centre and Anchor Mobility Hub designations and the planned enhancement of public transportation in the area. It is important to note that the level of development illustrated in the Preferred Concept depends largely on the realization of a number of assumptions, the most important of which is the confirmation of the Yonge Street Subway line extension. At the date of publication of this report, a funding announcement for the Yonge Street Subway extension has not yet been made. If the Yonge Street Subway extension were not to come forward, the scale and intensity of development that could be expected at the Richmond Hill Regional Centre would likely change but the basic land use and urban design framework and directions upon which the concept is based should stay the same.

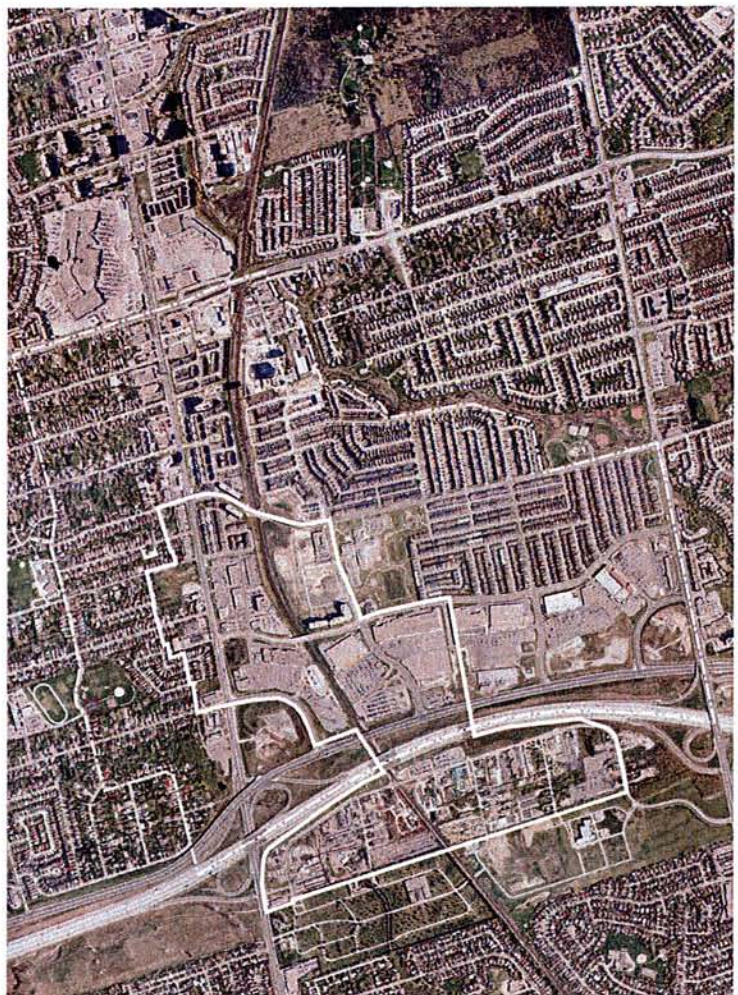


RESIDENTIAL DEVELOPMENT IN THE CENTRE TODAY

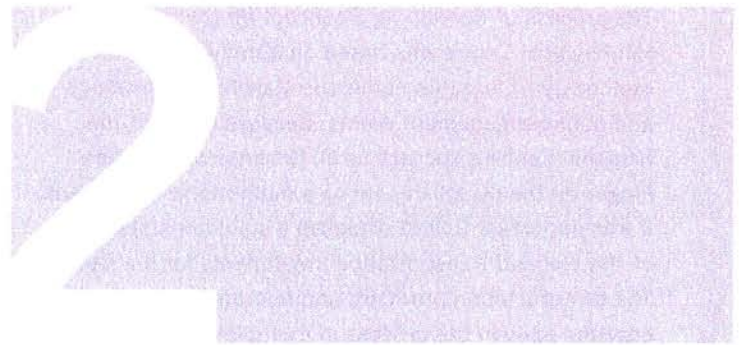
## 1.4 Study Boundaries

For the purposes of the study, the Regional Centre has been analyzed in the context of two boundaries: the Urban Growth Centre boundary and the study area boundary, referred to as the Area of Influence. The Urban Growth Centre boundary of the Richmond Hill Regional Centre has been defined by the Province in the Growth Plan for the Greater Golden Horseshoe. It is within this boundary that the Provincial growth target of 200 people and jobs per hectare and the Metrolinx target for Anchor Mobility Hubs of 400 people and jobs per hectare must be achieved. To fully understand the context of the Regional Centre and how it should integrate into the Town, the study also considers a wider area of influence. The Preferred Concept has been informed by the area of influence, but the scope of the land use and design strategy for the Regional Centre is limited to the Urban Growth Centre boundary of the site. The maps and diagrams in this report show the Preferred Concept for the Regional Centre within the context of the Urban Growth Centre boundary.

The Preferred Concept has focused on the land within the Urban Growth Centre boundary that is north of Highway 407. The Town has within its municipal jurisdiction a small sliver of land south of Highway 407 and north of Langstaff Road East, adjacent to the Town of Markham's portion of the UGC. This study recommends that those lands, due to their intimate relationship with the Langstaff Gateway lands, should be planned in cooperation with the Town of Markham as part of their UGC planning and design processes.



URBAN GROWTH CENTRE BOUNDARY (——) AND AREA OF INFLUENCE (---) IN THE VICINITY OF THE RICHMOND HILL REGIONAL CENTRE.



## **Developing the Preferred Concept: Method and Assumptions**

- 2.1 Consultation Process
- 2.2 Testing Concepts
- 2.3 Assumptions

## 2.1 Consultation Process

The process of developing a concept for the Richmond Hill Regional Centre was based on iterative consultative methods that featured numerous stakeholder meetings and public engagement events. Because much of the Regional Centre's success as an Urban Growth Centre hinges on the establishment of a multi-modal transit hub, it was important to first establish a solid understanding of the planned transportation investments for the site. The transportation providers and relevant agencies were engaged early in the process in multiple sessions where emerging transit alignments and plans for integration of services were shared and a conceptual arrangement of transportation elements was agreed upon.

The team's understanding of the transportation provider's needs informed the creation of a subsequent set of development principles and a basic urban design framework that was brought to the public. Through a public meeting in April 2009, the early framework upon which the Preferred Concept is based was shared and concerns about the Growth Centre's future trajectory were heard. Working with the public's comments and ongoing input from Town staff, key stakeholders and relevant agencies, the team began to develop and test different approaches to the deployment of density and development around the site. The result of the process was the creation of the Preferred Concept, presented at a public open house in May of 2009.



RICHMOND HILL REGIONAL CENTRE OPEN HOUSE  
April 2009

## 2.2 Testing Concepts

The Preferred Concept can be thought of in two main layers, first, the underlying development framework that defines a basis for how reurbanization at the Richmond Hill Regional Centre would be organized and; second, the creation of a development scheme that responds appropriately to Provincial growth targets and density recommendations for Mobility Hubs.

The underlying development framework is based on four core components identified by the study team: streets, open space, development parcels and built form. Using this basic framework as a guide, the study team developed a flexible grounding upon which development concepts for the study area could be worked out. The development framework, described in Section 3.2 of this report, is the structure from which a new Regional Centre will grow over time.

On top of the development framework is the second layer, the physical deployment of density and built form. To visualize how the development framework and the density concepts would work in conjunction with one and other, a 3D model of the Regional Centre was created. The model allowed the study team to see the physical outcomes of different density arrangements and provided the opportunity to test different densities across the site.

Our study team worked with the density targets assigned to the Regional Centre and tested them atop the development framework. The objective of the study process was to create a Preferred Concept that achieved growth targets and was balanced and responsive to the surrounding context. Working with the unique attributes of the site, its planned transit investments and central position in the Region of York, our study team ultimately developed the Preferred Concept that is detailed in this report. The numerical details of the Concept are provided in Section 3.5. The qualitative details of the physical deployment of density and built form are provided with Section 3.3, Character Areas.

## 2.3 Assumptions

As a Provincially identified Urban Growth Centre, the Regional Centre is required to achieve a minimum density of 200 people and jobs per hectare. The Regional Centre is also identified as an Anchor Mobility Hub in the Metrolinx Regional Transportation Plan. In the RTP, anchor mobility hubs are recommended to achieve a minimum density of 400 people and jobs per hectare. To understand, project and test arrangements of people and jobs over the geography of the Regional Centre a number of assumptions were established and a comprehensive model of development parcels and building footprints were created.



RICHMOND HILL/LANGSTAFF GATEWAY UGC  
Places to Grow - Growth Plan for the Greater Golden Horseshoe 2006

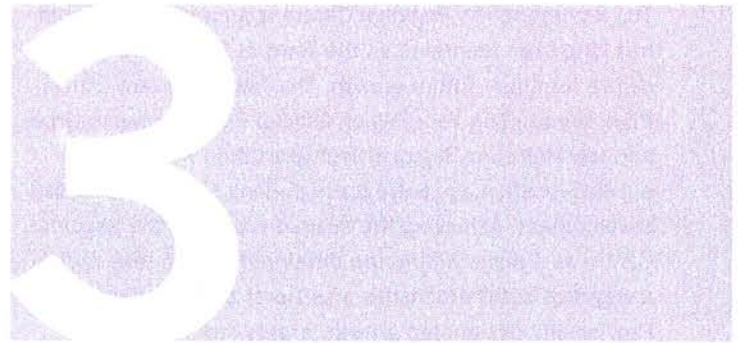
The assumptions used in the calculations of people and jobs for the Richmond Hill Regional Centre study area were as follows:

- People per unit - 2.0
- Average residential unit size - 90 m<sup>2</sup>
- Average space per employee urban office - 27 m<sup>2</sup>
- Average space per employee retail - 30 m<sup>2</sup>
- Floor height for residential building - 3 meters
- Floor height for office building - 4 meters

To calculate people and jobs the following method was used:

- Development parcels were defined in the 3D computer model and grouped into Character Areas;
- A conceptual building was created on each parcel based on the physical qualities of each Character Area;
- A theoretical split of people and jobs based on the assumptions for that Character Area was applied and a resulting residential and employment gross floor area figure was defined.

This method was repeated for each of the six Character Areas. Total projections of people and jobs for the study area were achieved by adding each of the resulting residential and employment GFA figures together and applying the assumptions for people per unit, average unit size and average space per employee.



## **Preferred Concept**

- 3.1 Major Moves at the Regional Centre
- 3.2 Development Framework
- 3.3 Character Areas
- 3.4 Open Space
- 3.5 Details of the Preferred Concept

### 3.1 Major Moves at the Regional Centre

The Richmond Hill Regional Centre is an area of land that has long been identified as the Town of Richmond Hill's centre for major future growth. The Town's current Official Plan, the existing York Region Official Plan, Places to Grow and the Metrolinx Regional Transportation Plan all call out this location as centre for high density transit-oriented development. Achieving the desired vision for the Regional Centre as a place where new development can take root in a way that both establishes a sense of place and achieves Provincially designated growth targets requires special attention to a number of issues. The following describes the major issues in the study area and how the Preferred Concept has addressed them to create a Richmond Hill Regional Centre that appropriately responds to its unique physical context.

#### 3.1.1 Hydro Corridor

A large swath of land, the Hydro Corridor currently occupies about 16% of the designated Urban Growth Centre site. The Corridor is a well-established Provincially significant transmittal route for energy and has strict limitations on development within or adjacent to it. Through consultations with relevant agencies the study team came to understand the importance of limiting the collective impacts on this land. Reflecting this understanding, the Proposed Concept restricts additional perpendicular crossing of the Hydro Corridor to the Red Cedar Avenue mixed traffic connection spanning into the Langstaff lands and the Multi-Use Corridor parallel to the rail line, a pedestrian, cyclist and transit-only connection that links the transit hub in the Regional Centre into the Langstaff lands to the south. Any new development adjacent to the Hydro Corridor will need to maintain appropriate setbacks and incorporate building materials that will to minimize the potential impact of Electric and Magnetic (EMF) emissions.



TRANSIT AND COMMERCIAL PARKING IN THE CENTRE TODAY



HYDRO CORRIDOR

### 3.1.2 Rail Corridor

A major defining feature of the study area today, the rail corridor has two major effects on the physical landscape. First, it constrains the permeability of the site from east to west, physically separating the study area and limiting access to two existing crossings south of 16th Avenue. Second, its presence has precipitated the creation of grade separated crossings at high elevations that effectively create a second 'at grade' level on bridges, ten or more meters from the true grade level below. The Preferred Concept has addressed the connectivity and permeability issue by introducing an additional mixed traffic crossing south of High Tech Road, the Garden Avenue Extension, and a pedestrian and cyclist crossing between High Tech Road and Bantry Avenue. To address the varied grade level, the Preferred Concept has proposed raising new development to meet the elevation of the bridges, establishing the ground level of the existing infrastructure as grade.



CN RAIL CORRIDOR

### 3.1.3 Langstaff Gateway

The Urban Growth Centre in Richmond Hill is unique amongst the UGC's identified in Places to Grow as the boundary of the Centre spans across municipal lines into the Town of Markham, south of Highway 407. Langstaff Gateway, the name of the Markham portion of the UGC, like the Richmond Hill Regional Centre, is subject to achieving Provincially designated growth targets and as an Urban Growth Centre it is positioned to absorb a significant amount Markham's future growth. Unlike the Richmond Hill Regional Centre, the Langstaff Gateway does not benefit from a pre-established network of streets nor has it been identified as the convergence spot for the level of public transit investment that the Regional Centre is anticipating. To ensure that the future residents and workers that will be traveling to and from the Langstaff Gateway have access to the street network and the transit hub with in Richmond Hill Regional Centre, the Preferred



LANGSTAFF LANDS SOUTH OF 407

Concept recommends the creation of two linkages: one mixed traffic bridge at Red Cedar Avenue to provide a road-based connection and one Multi-Use Corridor (transit, pedestrian and cyclist use only) to link the Langstaff lands directly into the transit hub at the Regional Centre Station.

#### 3.1.4 Station-Centred Development

Unlike other stations on the Yonge Street subway line, the proposed alignment of the Yonge Street Subway extension illustrates the Richmond Hill Station off of Yonge Street itself, roughly half way between Yonge Street and the rail corridor, south of High Tech Road. The decision by the York Region Rapid Transportation Corporation following a substantial consultation process to locate the station at this inboard site has created a great opportunity to achieve two important qualities at the Regional Centre that are illustrated in the Preferred Concept. First, an inboard station location maximizes the potential of commercial and residential overbuild of the actual station area as more development parcels can be created on top of and adjacent to the station. Second, an off- Yonge Street location of the station effectively shifts the area where highest density development is most desirable further in towards the rail corridor. The interior positioning of the Richmond Hill Regional Centre Station will mitigate the 'canyon effect' that has been expressed by the public as an undesirable quality often seen in other areas of Yonge Street subway-based development.

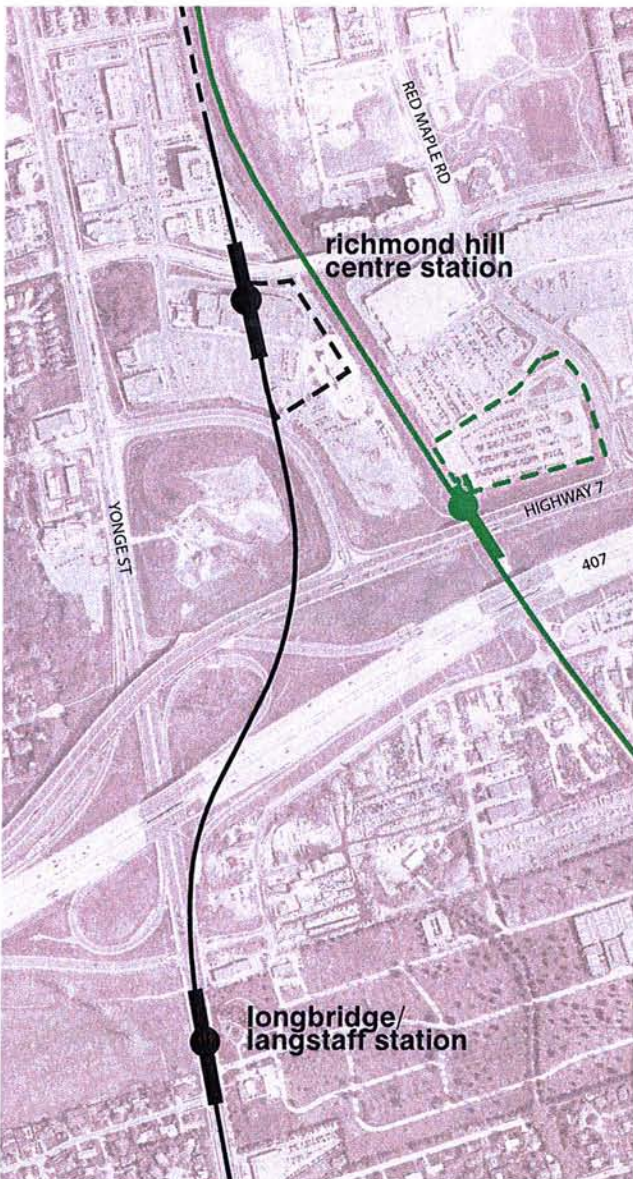
The ways in which the Preferred Concept addresses these and other issues is illustrated and described within the following section, Development Framework. Each facet of the Development Framework: Streets, Open Space, Development Parcels and Built Form, is described in terms of existing conditions and in terms of how the Preferred Concept enhances and improves those conditions through the introduction of new patterns of development. The Development Framework is the lattice upon which the Preferred Concept grows, taking shape over time as new infrastructure and public transit investment is introduced to the Regional Centre.



CONNECTION BETWEEN LANGSTAFF AND RICHMOND HILL CENTRE

LEGEND

- yonge street subway alignment
- subway station
- go rail corridor
- ◆ go station



ALIGNMENT 'C' - YONGE STREET SUBWAY EXTENSION EA

### 3.2 Development Framework

The Preferred Concept is based upon a Development Framework that establishes the underpinnings for a flexible, urban approach to growth. The development framework is broken down into four components:

- Streets
- Open Space
- Development Parcels and
- Built Form

Each of these elements is an important layer in understanding how the Regional Centre will grow over time into a diverse and vibrant community supported by rapid, transit-oriented development.

#### 3.2.1. Streets

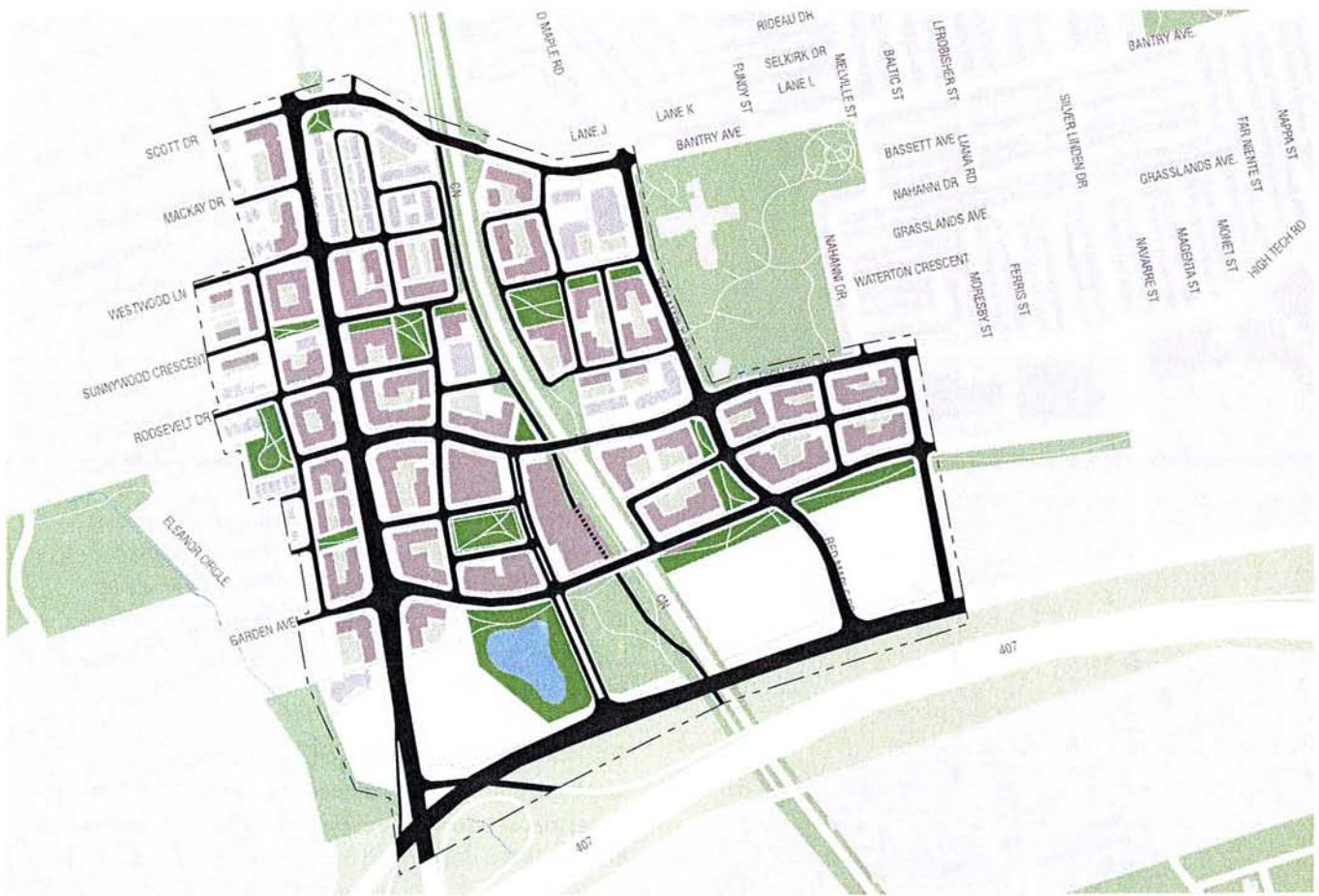
The road network of the Preferred Concept occurs on a fine grained street grid, a significant change from the existing block structure in the study area. The Proposed Concept introduces small urban blocks as the underpinning to a compact and well-designed intensification strategy for the Centre. The grid will improve east west connections, mitigating the existing barrier of the rail corridor, and will also improve north-south connections.

The refined street grid will feature a variety of street functions that create a balanced system of movement for pedestrians, transit users, cyclists and private vehicles. A more detailed description of road functions can be found in the discussion of transportation, Section 4.3 of this

report.

### 3.2.1. Streets (continued)

Major changes in the street structure include the regularization of the Highway 7 jug handle into a normalized intersection; the addition of an additional east-west road intended to relieve traffic pressure from High Tech Road; a new mixed traffic connection south into the Langstaff Gateway; a new Multi-Use Corridor –accessible only to pedestrians, cyclists and transit vehicles to connect the Langstaff Gateway lands; and the introduction of a north-south local road west of Yonge Street introduced to control lot depth and provide rear-lane access to service businesses and residents.

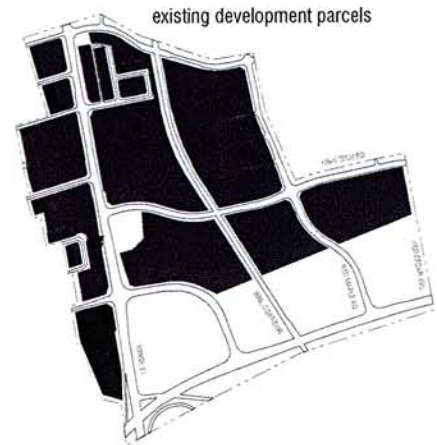


PROPOSED ROAD NETWORK



### 3.2.3. Development Parcels

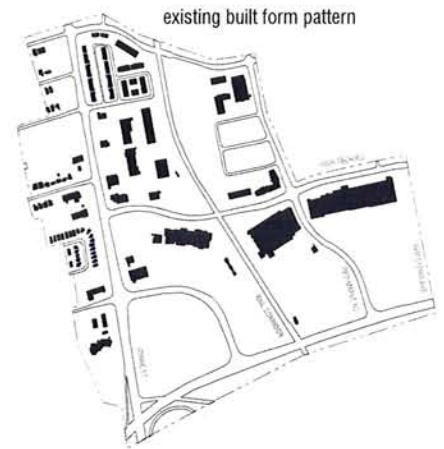
The Preferred Concept introduces small development parcels in the Centre that are intended to create a flexible framework of land with clear relationships to transit. Smaller building foot prints on shorter blocks will lead to walkability and a more diverse urban environment. The development parcels illustrated in the Preferred Concept are grouped into Character Areas described in Section 3.3 illustrating the building typologies and mix of uses needed to make each area a vibrant, active element of the Centre as a whole. The parcels outlined in the Preferred Concept are defined as the pieces of developable land remaining after the introduction of the new, refined street grid.



PROPOSED DEVELOPMENT PARCELS

### 3.2.4. Built Form

The built form in the Preferred Concept has a focus on controlled massing of buildings so that an appropriate transition to the existing neighbourhoods surrounding the site can be achieved. As an Urban Growth Centre and Mobility Hub, the site will respond to growth targets that will inform the height and density of the resulting built form. By establishing massing controls in the Regional Centre, the area will be defined by buildings that make a positive contribution to the emerging urban environment and respect the context of the area around it. Specific policy recommendations for urban design controls are currently under development and will be incorporated into the final recommendations report.



PROPOSED BUILT FORM PATTERN

- LEGEND
- 01 Mobility Hub
  - 02 Yonge Street
  - 03 Yonge West
  - 04 Bantry
  - 05 Red Maple
  - 06 High Tech

### 3.3 The Character Areas

The Preferred Concept can be further described in terms of Character Areas. Six Character Areas have been defined during the course of study of the Regional Centre. A Character Area is a grouping of parcels within the Regional Centre that have a similar role and function.

A number of different types of neighbourhoods and scales of development are anticipated to contribute to realizing the vision for the Regional Centre as a mobility hub and Urban Growth Centre. The identification of Character Areas help to better conceptualize the vision



CHARACTER AREAS WITHIN THE CENTRE

“Character areas with different mixes of uses are needed to make a vibrant, liveable community and to support the Centre as a whole”

for the Regional Centre, providing more specific detail and illustrations of what different elements of the community could look like in the future. While these areas will be different from one another and contribute to a diversity of land uses, they will all have a meaningful connection to the transportation investment in the Regional Centre-- a key element in serving the vision of creating the Richmond Hill Regional Centre as a true mixed use and transit-oriented community.

As new development occurs and the population grows, new public amenities including community centres, libraries and schools will be needed to support the population. At this point in the study process, specific locations for such public land uses have not been identified within the Character Areas, although a strategy for ensuring the identification of these sites is currently under development. Schools and other public uses that are developed in the Regional Centre will need to break the established suburban model of development and adapt to the scale of an urban community. Smaller, mixed use and integrated sites will need to be considered as innovative solutions to accommodating amenity space in the Regional Centre.

Specific recommendations for land use mix within the Character Areas are included within the description of each area.

The following are the Character Areas within the Preferred Concept for the Centre:

**01 Mobility Hub** – A site with excellent transit access, the Mobility Hub area will be a very attractive place for employment and the highest density residential development.

**02 Yonge Street** – A preeminent regional corridor with a mix of employment space and residential development potential.

**03 Yonge West** – A lower-scale residential area that will transition into the existing neighbourhood.

**04 Bantry** – A pre-existing intensification site with potential for further urbanization.

**05 Red Maple** – A site well connected to new transit lines and an ideal location for higher density residential development.

**06 High Tech** – A mix of employment uses and residential uses that will transition into the existing neighbourhood.



CONCEPTUAL RENDERING OF THE PREFERRED CONCEPT

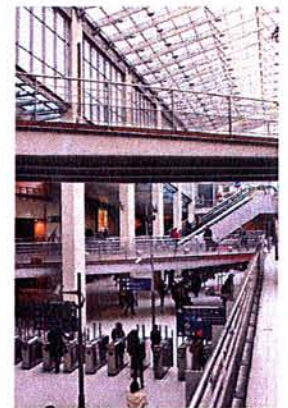


“The signature of the Mobility Hub area will be a layered, compact transit station.”

### 01 Mobility Hub

The Mobility Hub Character Area is central to the success of the Richmond Hill Regional Centre as an Urban Growth Centre and plays a significant role in the Preferred Concept. This Character Area is where all five public transit modes, the Yonge Street subway, VIVA, GO, the 407 Transitway and YRT will converge. The Mobility Hub area is a triangle shape extending along the rail corridor north to a proposed linear park. The signature of the Mobility Hub area will be a layered, compact transit station seamlessly integrated with business and residential uses above.

Below ground, the Mobility Hub will be focused on transit while above ground, the Mobility Hub Character Area will be focused on a strong public realm. A key element of this Character Area is the Transit Square, an urban square and the preeminent civic space in the Regional Centre. Framing the activity that takes place within the Mobility Hub, the Transit Square will define the Richmond Hill Regional Centre as more than the intersection of transit lines, but as place of regional significance. The buildings in the Mobility Hub area will be predominately employment-focused, roughly 60% of the land use, with some residential uses to the north, approximately 40% of the land use. This mix would reflect the Mobility Hubs's prominence as an emerging Regional office location. Within the Preferred Concept, the Mobility Hub features the most intense development located atop the elements of the transit station to allow for maximum convenience and connectivity. The details of how the Preferred Concept envisions the layout of the transportation infrastructure is illustrated in Section 4.4



THE MOBILITY HUB



“A walkable, vibrant street that defines the Richmond Hill Regional Centre as a place.”

## 02 Yonge Street

Yonge Street is the backbone of York Region and has played an historic role in the development of Richmond Hill as a Town. The Yonge Street Character Area spans the length of the study area from Highway 7 in the south to Bantry Avenue at the north. Yonge Street today is a mix of small scale commercial uses as well as some new ground-related residences. There are many opportunities along this piece of Yonge Street to transform it into a walkable, vibrant street that defines the Richmond Hill Regional Centre as a significant and attractive place. The Preferred Concept envisions new streets crossing Yonge Street from east to west creating smaller, more walkable blocks and resulting in a more interesting environment for pedestrians. Buildings along Yonge Street will be scaled to match the role of the street, which will provide spaces for both living and working. Because the subway alignment has identified the Richmond Hill Regional Centre station to be developed away from Yonge Street at a more inboard location, the Preferred Concept envisions Yonge Street itself as an area of modest midrise buildings. Such a building typology also lends itself well to establishing a sensitive transition into the residential neighbourhood to the west. Yonge street is envisioned as predominantly residential in character, roughly 70% of the land use, with the remaining 30% of the gross floor area serving an employment function.

The notion of transition in the neighbourhood is further supported by the introduction of a rear north-south local street, which creates physical space between the Yonge Street Character Area and the neighbourhood to the west as well as a frontage that will provide an compatible face to existing or new development.

The Yonge Street Character Area will be connected to the transit network of the Regional Centre through access to the Yonge VIVA line and by virtue of its walkability to the Mobiliy Hub.



YONGE STREET



“A park will provide an amenity to both existing and new residents alike.”

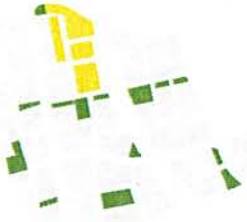
### 03 Yonge West

When defining the Urban Growth Centre for the Town of Richmond Hill the Town recognized that both the neighbourhoods on the east and west sides of Yonge Street are key to the success of the Growth Centre as a whole. While a part of the UGC, the Yonge West Character Area requires special attention as it relates very intimately to the existing neighbourhood to the west.

In the Preferred Concept, the land use envisioned in the Yonge West Character Area is comprised of entirely residential uses with scaled building heights compatible with adjacent buildings. The residential fabric that makes up this area will play an important supportive role to the businesses and street life on Yonge Street. A park will provide an amenity to both existing and new residents. Similar to the communities around Yonge Street in Toronto near St. Clair and Eglinton stations, Yonge West will be a strong neighbourhood that is connected to and valued because of its proximity to transit.



YONGE WEST



“A strengthened neighbourhood, well served by physical and social infrastructure ”

**04 Bantry**

The Bantry Character Area consists of one new development parcel and four parcels of land that are already developed. This area is bounded by the rail corridor to the east, Bantry Avenue to the north, Baffin Court to the west and a new road to the south. This part of the Urban Growth Centre is unique as it has recently undergone an intensification process on its own. Row homes and an apartment building currently define this Character Area.

The Preferred Concept envisions the Bantry Character Area to continue to urbanize in the future, becoming a moderately dense residential community, with a very small proportion of supportive retail uses. With its proximity to the Mobility Hub, the linear park running at its southern boundary and its proximity to Yonge Street, Bantry will be strengthened as a neighbourhood well served by physical and community infrastructure.



BANTRY



“The defining feature of Red Maple will be a new linear park.”

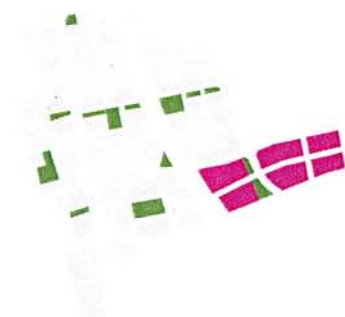
**05 Red Maple**

Located between the rail corridor to the west, Bantry Avenue to the north, Red Maple Road to the east and High Tech Road to the south, the Preferred Concept envisions the Red Maple Character Area as consisting of predominantly residential uses with some employment in the form of neighbourhood retail and commercial services. Red Maple is unique in the Richmond Hill Regional Centre as it is largely undeveloped today.

The Red Maple Character Area will benefit from a new street grid including a pedestrian connection over the rail corridor. The defining feature of Red Maple will be a new linear park connecting east to the Dr. James Langstaff Park and west to Yonge Street. The Preferred Concept envisions Red Maple having a mix of ground-related units facing the park and higher density development toward the rail corridor where shadow impacts will be minimized. With its proximity to the Mobility Hub and large amount of underdeveloped land, Red Maple is in an excellent position to become one of Richmond Hill's signature areas for transit-oriented development.



RED MAPLE



“A pleasant environment that compliments existing surrounding neighbourhoods.”

**06 High Tech**

The High Tech Character Area extends east from the rail corridor to Red Cedar Avenue. The High Tech area holds significant opportunity for redevelopment as today, the site is currently dominated by shorter term land uses including big box stores and surface parking lots. A new collector road to the south of the area will help to circulate people, cars and the Highway 7 VIVA line which can connect to the Richmond Hill Regional Centre station along this route.

In the Preferred Concept, the High Tech area is split roughly in half between employment and residential uses, with employment uses at the southern tier of the site and residential uses on the northern side, framing the Dr. James Langstaff Park. The new street at the south of the area will help to divert traffic from High Tech Road, allowing the High Tech Character Area to evolve as a pleasant environment that compliments the existing residential neighbourhood to the north and east.



HIGH TECH



### 3.4 Open Space

The Preferred Concept for the Richmond Hill Regional Centre recognizes that one of the most important elements in making the Regional Centre a vibrant, welcoming community will be its network of open spaces. Open space will be well located and proportioned appropriately to maximize use. Public spaces in the Centre can include plazas, courtyards, sidewalks, trails, public squares and parks. Pedestrian access and mobility to and within these open spaces should be paramount. A coordinated system of signage, lighting and street furniture would contribute to a sense of continuity and comfort in the public realm in the Centre.

At present, the Regional Centre has a limited range of open spaces. Aside from the heritage woodlot at Yonge Street and High Tech Road and a small parkette off of Bantry Avenue, the Regional Centre is devoid of public open space. In the future, the Centre will require a new system of connected open spaces and parks that vary in scale and function. The Preferred Concept envisions this system to include a new pedestrian bridge and well-landscaped streets. Such amenities would support the needs of existing and future residents in the area. Each

element of the open space system in the Centre has the potential to contribute positively to its identity and to the quality of life found within it.

The existing open spaces in the Centre today, including the heritage woodlot, are expected to change. The existing woodlot in the Regional Centre is envisioned to be part of the open space program in the Regional Centre for the early part of its reurbanization. As the Centre intensifies and time passes, it is anticipated that the condition and contribution of the woodlot could change and that it may therefore be developed for another public use.

The following section describes eight key elements of the Open Space network that are featured in the Preferred Concept.

“Each element of the open space system in the Centre is planned to contribute positively to the Centre’s identity and to the quality of life found within it”

LEGEND

- 01 Garden Extension Greenway
- 02 High Tech Pond and Stormwater Facilities
- 03 Maple Parkette
- 04 Transit Square
- 05 Beresford Linear Green
- 06 Yonge Street Parkettes
- 07 Yonge West Park
- 08 Multi Use Corridor



OPEN SPACE IN THE PREFERRED CONCEPT

### 01 Garden Extension Greenway

The Garden Extension Greenway will feature significant new landscaping and pathways along the northern edge of the Hydro Corridor that will transform this otherwise unpleasant space into a place that encourages activity and provides an important east west connection across the Regional Centre. This feature also has the potential to act in a stormwater management capacity through naturalization and environmental improvements to the landscape.



### 02 High Tech Pond and Stormwater Facilities

In the future, the current stormwater pond in the Richmond Hill Regional Centre will be transformed from an isolated, inaccessible feature into a more active piece of the open space network. The stormwater pond will be beautified and enhanced, maximizing its value as a natural feature. As a man made feature, the stormwater pond has the ability to evolve and the opportunity to become an active use of space. It can become an illustration of best practices and innovation in urban stormwater management.



### 03 Maple Parkette

This Parkette, located in the middle of the High Tech district will provide an important amenity for the employees and residents that will inhabit this space. Connecting to the Dr. James Langstaff Park and an extension of the well landscaped environment along High Tech Road, the Maple Parkette will be an active, neighbourhood-scaled space.



### 04 Transit Square

The Transit Square will be a unique placemaking feature of the Regional Centre that will play a variety of roles in the life of the Centre. This main public space will anchor the major transit station area, creating a natural meeting place, area of activity and vibrancy in the Centre. Because of its size, shape and location the Transit Square would also be an ideal place to hold public events, farmers markets, festivals or celebrations.



### 05 Beresford Linear Green

Stretching from the Yonge West area into Bantry, the Beresford Linear Green will help to unite the two sides of the Richmond Hill Regional Centre over the barrier of the rail corridor. The Beresford Linear Green will feature a pedestrian bridge located at the end of Beresford Drive crossing over the rail corridor into the Red Maple Character Area. This bridge will make access to Yonge Street and the Mobility Hub easy for people on the east side of the Centre and access to a major community asset, Dr. James Langstaff Park, equally simple for people on the west side of the Centre.



### 06 Yonge Street Parkettes

Providing variation in the Yonge Street landscape, the Yonge Street Parkettes will provide small spaces for rest and experience of the environment. These spaces will help contribute to the identity and character of the street as a whole.



### 07 Yonge West Park

The Yonge West neighbourhood park is a significant green space that acts as a gateway into the established residential neighbourhood to the west. This park will be an important element in the transition between old and new development.



### 08 Multi Use Corridor

Running parallel to the rail corridor, the Multi Use Corridor will be a wide, well landscaped open space that provides a trail for the exclusive use of active transportation including pedestrians and cyclists and other self-propelled modes of movement. This path will be adjacent to a dedicated transit-only roadway. The Multi Use Corridor will extend into the Mobility Hub and south to the Langstaff Gateway lands, providing a connection to the Town of Markham's portion of the Urban Growth Centre south of Highway 407. Activities on the Multi-Use Corridor will have to account for setback and other development requirements of the adjacent CN rail corridor.





OFFICE BUILDING (RED) MIXED USE BUILDING (YELLOW)

### 3.5 Details of the Preferred Concept

As illustrated in the conceptual rendering of the Preferred Concept, the Richmond Hill Regional Centre could accommodate approximately 7,900 residential units, 15,800 people and 15,700 jobs for an estimated 450 people and jobs per hectare. This level of development is expected to evolve over at least a 25 year time frame, growing along with increasing levels of transit service.

The density figure of 450 people and jobs per hectare that this concept contemplates is an appropriate target considering the extraordinary amount of investment in public transportation that will be converging at this location. The confluence of transit and many opportunities for re-urbanization of underutilized land mean that in order for the Richmond Hill Regional Centre to embody the characteristics of both an Urban Growth Centre and an Anchor Hub and become a desirable destination to live and work in the Greater Toronto Area, a larger amount of development and redevelopment would be necessary.

#### Assumptions

- 2.0 people per unit
- 90 m<sup>2</sup> average residential unit size
- 27 m<sup>2</sup> per employee (urban office)
- 30 m<sup>2</sup> per employee (urban retail)
- 3m floor height for residential
- 4m floor height for employment

Figures at the right are approximate and have been rounded.

#### Total Site Area

700,000 m<sup>2</sup> / 70 ha (including utility corridor, exclusive of Langstaff lands)

#### Development Area

Total Parcel Area 254,000 m<sup>2</sup>  
Total Gross GFA 1,160,000 m<sup>2</sup>

#### Potential Land Use Mix

Residential GFA 710,000 m<sup>2</sup>  
Non Residential GFA 433,000 m<sup>2</sup>

#### Residential Development Area

Residential GFA 710,000 m<sup>2</sup>  
units 7,900 (90 m<sup>2</sup> per unit)  
people 15,800 (2.0 people per unit)

#### Non-residential Development Area

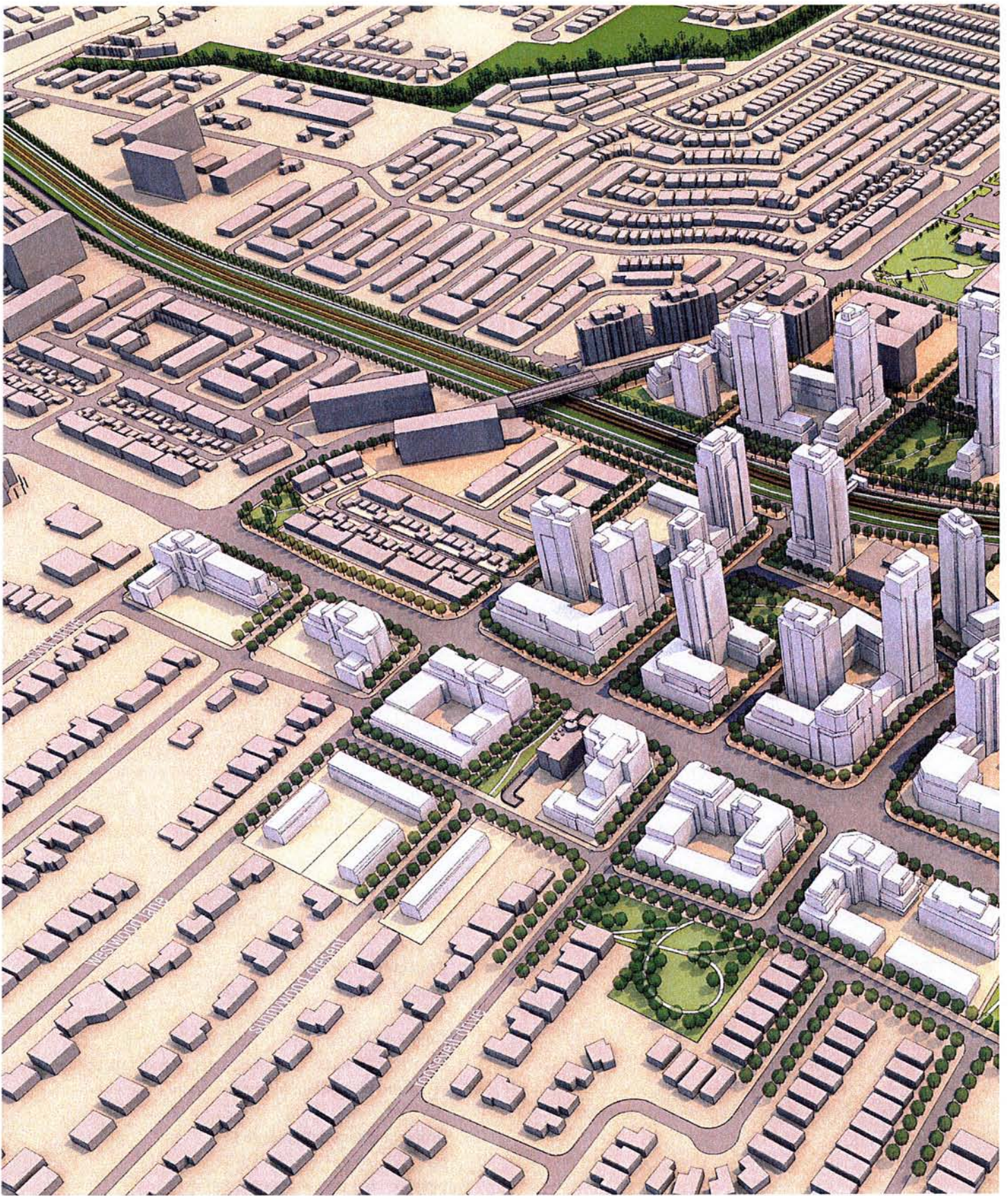
Office GFA 340,000 m<sup>2</sup>  
Retail GFA 93,000 m<sup>2</sup>  
Office jobs 12,600 (27m<sup>2</sup> per employee)  
Retail jobs 3,100

#### Projected Growth

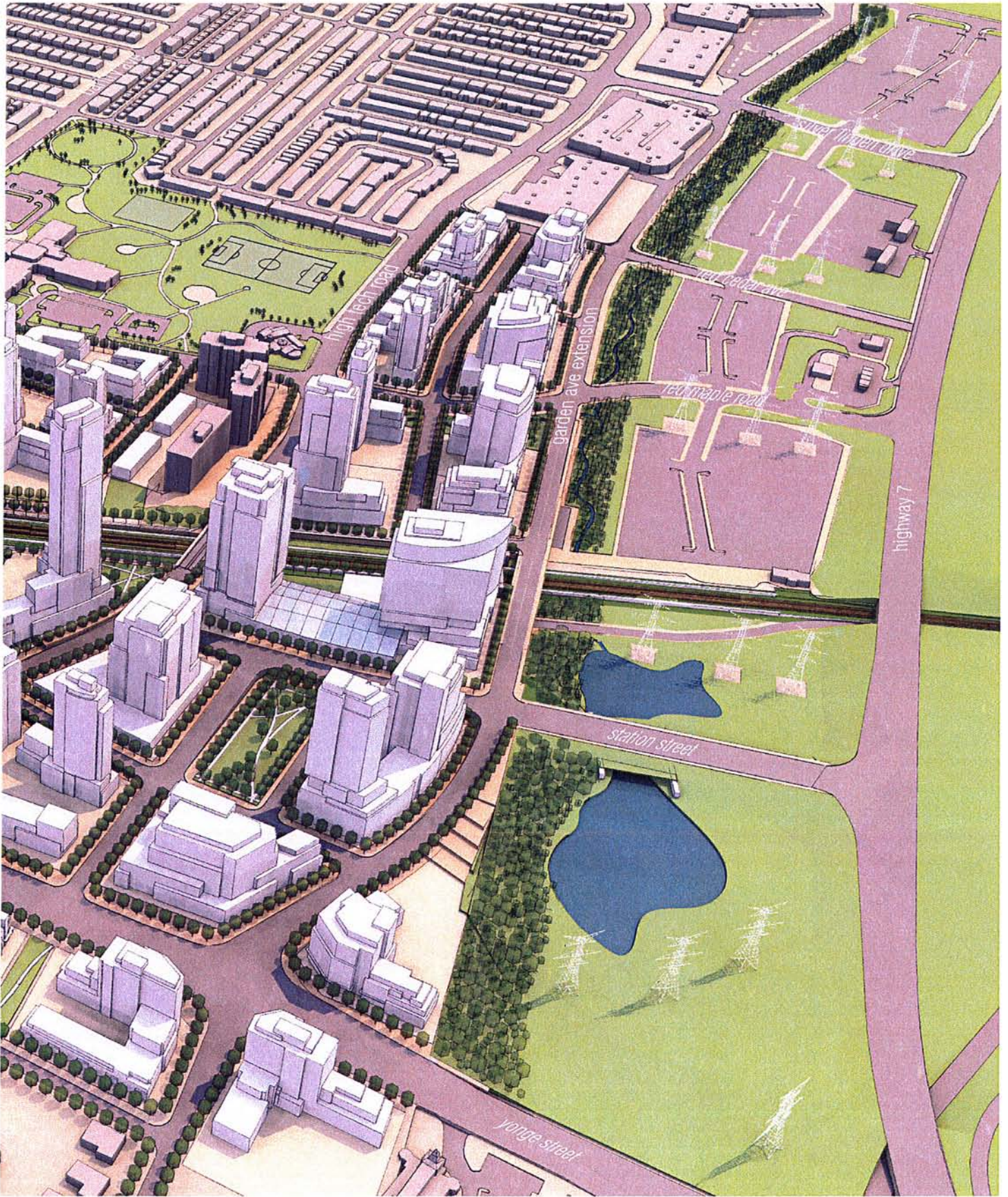
People 15,800  
Jobs 15,700  
Total People and jobs 31,500  
based on 70 ha 450 people and jobs per ha  
(1:1 ratio of residential to employment)

#### Projected Density (average FSI)

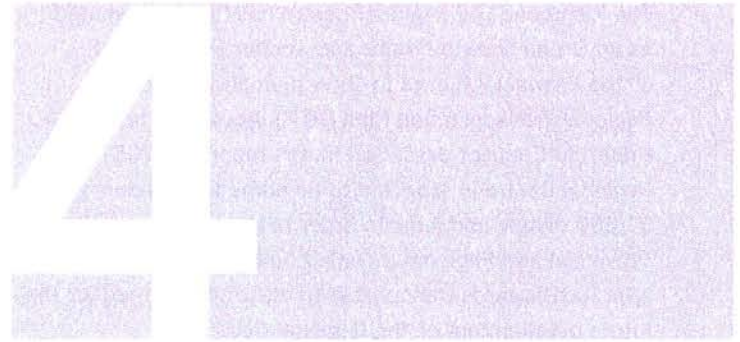
based on 70 ha 1.65 FSI  
based on net parcel area 4.6 FSI



THREE DIMENSIONAL RENDERING OF THE PREFERRED CONCEPT AT FULL BUILD OUT  
EXISTING DEVELOPMENT ◊ PROPOSED DEVELOPMENT ◊







## **Transportation and Servicing**

- 4.1 A Sustainable Transportation Vision for the Richmond Hill Regional Centre
- 4.2 Transportation Targets
- 4.3 A Future Road Network as the Framework for the Transportation System
- 4.4 Transit First Strategy
- 4.5 Parking Strategy
- 4.6 Travel Demand Management Strategy
- 4.7 Active Transportation Strategy
- 4.8 Future Transportation Operations
- 4.9 Servicing
- 4.10 Summary

## 4.1 A Sustainable Transportation Vision for the Richmond Hill Regional Centre

The Richmond Hill Regional Centre has been designated as an Urban Growth Centre and Anchor Hub as part of the Provincial Places to Grow plan and Metrolinx's Regional Transportation Plan (RTP). According to the Preferred Concept described in this report, by 2031 the Regional Centre is expected to be home to approximately 31,500 people and jobs. In order to be consistent with the Provincial and Regional planning policies, a sustainable approach towards transportation must be assumed for the future development of the Regional Centre.

The Preferred Concept for the Regional Centre is focused on the Centre's operation as a multi-modal transportation hub that integrates all modes of transport in a compact, environmentally sustainable fashion. Numerous infrastructure improvements to support the development of the Richmond Hill Regional Centre as an Anchor Mobility Hub will be required to ensure that the transportation facilities in the Centre operate in a functional and efficient manner.

The Preferred Concept for the Regional Centre will require an aggressive, proactive sustainable transportation approach involving the integration of land use and



LEFT TO RIGHT: SUBWAY, GO, 407 TRANSITWAY, VIVA & YRT – TRANSIT THAT WILL SERVE THE REGIONAL CENTRE

transportation planning, a high level of inter-regional and regional transit service, travel demand management policies that discourage single occupant vehicles, policies that encourage active transportation, arterial road improvements and multiple vehicular access points to the arterial road network, a fine internal grid road network to support all modes of travel, and parking management strategies that reduce auto demand. With these measures, the Regional Centre is expected to function at transportation levels of service comparable to other Urban Growth Centres and downtown areas in the Greater Toronto and Hamilton Area.



## 4.2 Transportation Targets

The Preferred Concept is based on the assumption that the Yonge Subway will be extended north to the Richmond Hill Centre and other proposed rapid transit services will converge at this location. This emphasis on higher-order transit accessibility is necessary in order to achieve the transportation targets and modal splits recommended for the Richmond Hill Regional Centre. The following transportation targets are proposed by the time of full-build out:

- 52% transit modal split;
- 2.5% cycling and walking trips;
- 5.5% auto passenger (carpoolers); and
- 40% auto driver, single-occupant vehicles.

These transportation targets would equate to a 60% non-auto modal share. Although ambitious, these targets are achievable provided that a regional rapid transit network and the proposed transit, active transportation, travel demand management (TDM) and parking management strategies recommended for the Regional Centre are in place.

Considering that the Richmond Hill Regional Centre is only two thirds of the Richmond Hill Centre / Langstaff Gateway Urban Growth Centre, a coordinated transportation study at the regional scale should be undertaken for the entire Urban Growth Centre to provide a comprehensive transportation strategy for both portions of the UGC. Such a study would examine the total impact of the UGC and develop a coordinated transportation strategy. It would also ensure that transportation targets are coordinated and consistent between the Richmond Hill Centre and the Langstaff Gateway.

## 4.3 Future Road Network - the Framework for the Transportation System

The planned future road network will provide the overall physical framework for the transportation system for the Preferred Concept, in terms of providing opportunities for multimodal access to and egress from the Centre, but also providing the internal physical network of transportation corridors that will accommodate pedestrians, cyclists, public transit and automobiles.

In this section the external or boundary road improvements around the Regional Centre and the internal road network are discussed.

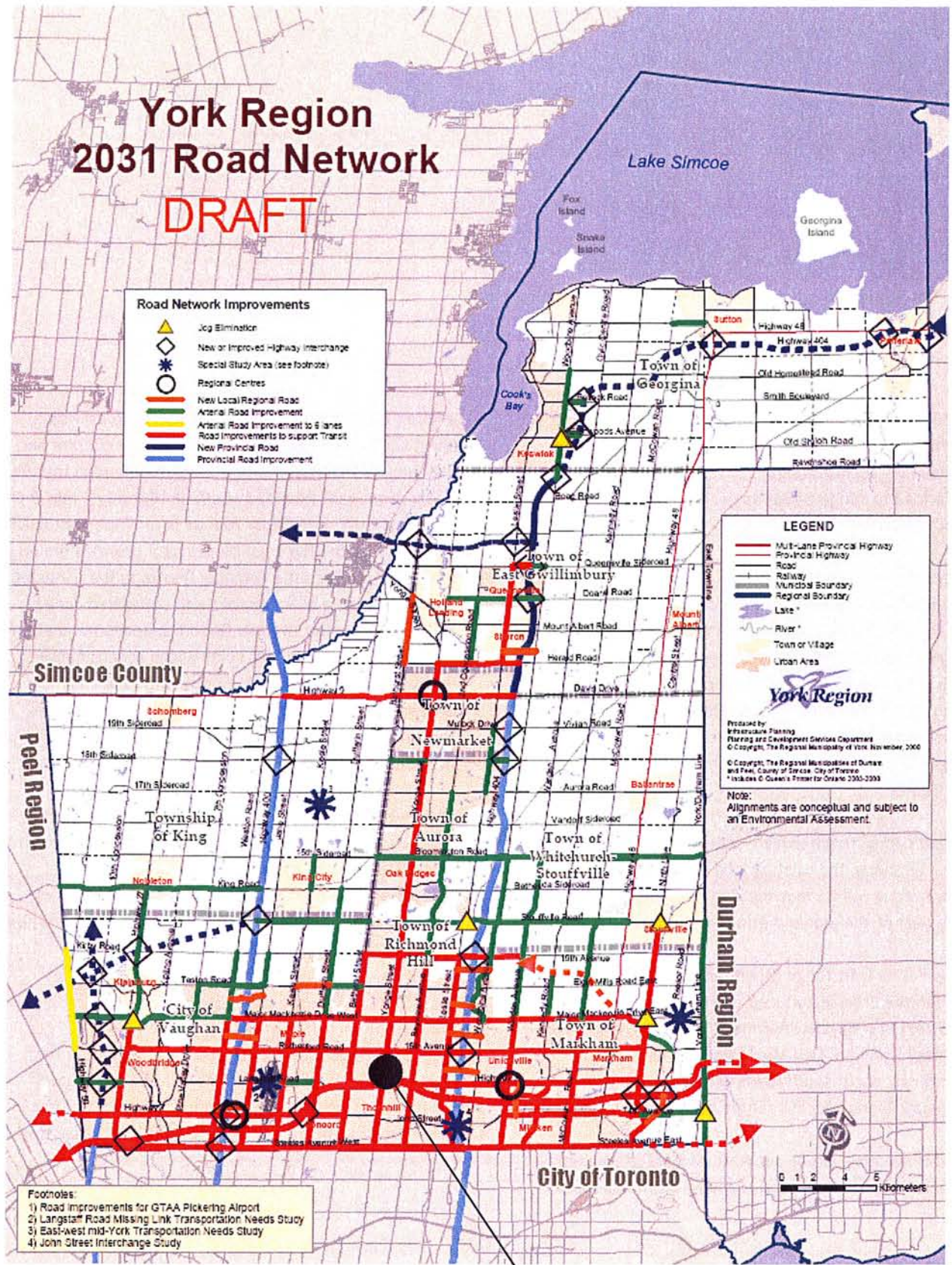
### 4.3.1. Boundary Road Network Improvements

The external Regional and Provincial road network is based on the draft recommendations of the York Region Transportation Master Plan Study (as of the preparation of this document). The future road network as recommended in the Preferred Concept is illustrated on the facing page.

Key elements of the future road network for the Preferred Concept of the Regional Centre area include:

- Highway 407– the main Provincial highway serving the Regional Centre, with existing interchanges at Yonge Street and Bayview Avenue. Highway 407 is currently four lanes per direction through the Regional Centre area, with the provision for widening to five lanes per direction. This study for the Regional Centre does not contemplate any changes to the Provincial highway network beyond what is currently planned by the Ministry of Transportation.
- Highway 404 – an important north-south Provincial highway, is less than four kilometres away, and provides good north-south access to northern York Region and to Toronto.
- Regional arterial network – The Richmond Hill Regional Centre is served by a grid network of Regional arterial roads under the jurisdiction of York Region. All arterials in the Regional Centre area, including Yonge Street, Bayview Avenue, Bathurst Street, Highway 7 and 16th Avenue, have been planned as transit supportive arterial roads in York Region's Transportation Master Plan update.
- Yonge Street – As the north-south arterial spine for the Regional Centre, it is proposed that Yonge Street between Highway 7 and 16th Avenue be transformed from its current role as a suburban, car-oriented arterial road to become a pedestrian-oriented, urban street that will meet the design goals for the Regional Centre. Instead of catering predominantly to long-distance commuter auto traffic, the role of Yonge Street in the Preferred Concept will focus more on serving pedestrians, transit, and local traffic, with on-street parking. Opportunities for on-street parking along major arterials serving the Richmond Hill Centre, such as Yonge Street and Highway 7, can be provided during off-peak periods. During peak periods, the parking lanes would be available for traffic use. On-street parking

# York Region 2031 Road Network DRAFT



YORK REGION 2031 ROAD NETWORK, THE REGION OF YORK

Richmond Hill Regional Centre

would be provided along other internal streets within the Richmond Hill Centre. In keeping with this new role, additional intersections (signalized and unsignalized) will be added to Yonge Street as part of the planned grid network of roads.

- The jug handle connection between Highway 7 and Yonge Street – In the Preferred Concept for the Regional Centre the existing loop connection will be reconfigured and regularized as part of the planned grid road network. From Yonge Street, the loop road will become an extension of Garden Avenue to Bayview Avenue. The north-south part will extend north from Highway 7 into the Regional Centre as the new north-south internal road for the Centre.
- Loop road connection between Highway 7 and Bayview Avenue – Similarly, the existing loop connection at Bayview Avenue will be reconfigured and regularized to become part of the planned grid road network.
- Highway 7 – As with Yonge Street, additional intersections will be introduced on Highway 7 between Yonge Street and Bayview Avenue. The intersecting roads on Highway 7 will be: Red Maple Road, Silver Linden Drive and new north-south roads where the Yonge Street and Bayview Avenue access ramps currently exist.
- Red Cedar Avenue – Grade separations were previously constructed at Highway 7 and Highway 407 to allow for

a future extension of Red Cedar Avenue. To provide a north-south road link between the Regional Centre and the Langstaff Gateway area, it is recommended that Red Cedar Avenue be extended south of Highway 7 into the Langstaff area. Red Cedar Avenue is an important north-south link for the Regional Centre as it provides the only direct link between the Regional Centre to the Langstaff Gateway, serving as an alternate to congested Yonge Street and Bayview Avenue. Good transportation network planning requires a direct north-south access between the Richmond Hill Regional Centre and Langstaff Gateway to facilitate the movement of motor-vehicles, transit vehicles, cyclists and pedestrians between the two centres.

- 16th Avenue – The only direct connection with 16th Avenue (other than Yonge Street and Bayview Avenue) is Red Maple. With the anticipated increased traffic demands at the existing unsignalized intersection of Red Maple and 16th Avenue, it is recommended that this intersection be signalized.

#### 4.3.2. New Internal Road Network

To successfully accommodate new development in the Regional Centre, new roads will need to be introduced. The Preferred Concept for the Regional Centre features a balanced grid with small urban blocks. A new street grid

would improve east-west connections, reduce the existing barrier of the rail and Hydro corridors and could improve north-south connections. Other benefits of this new road network will allow the Regional Centre to:

- Better accommodate future population and employment intensification in the area;
- Provide more crossing opportunities of the rail corridor for pedestrians, cyclists and automobiles;
- Provide multiple access opportunities between the Regional Centre and the surrounding road network;
- Allow for improved traffic circulation within the Regional Centre area; and
- Provide better connectivity by all travel modes.

Streets create the basis for future development. Streets, and the blocks that they create, should be clear, logical and well connected. A connected grid of streets is also the foundation of a successful pedestrian network that ties into transit and retail uses.

The road network in the Preferred Concept is to be comprised of the following road types:

- **Multi-Use Corridor:** A unique road type accessible by only transit vehicles, pedestrians and cyclists, connecting the Regional Centre area to the Langstaff lands to the south along the CN rail corridor.
- **Primary Streets:** Envisioned to carry the majority of traffic in the Regional Centre area and are streets typically served by transit. At Primary Street intersections, buildings should be intensified to create a presence at the street edge. A variety of building types are encouraged along Primary Streets to create a diverse landscape.
- **Secondary Streets:** Associated with mixed use, pedestrian-friendly development in the Regional Centre, Secondary Streets will be active roads that have appropriately landscaped sidewalks and carry less traffic than Primary Streets. Secondary Streets provide access to the interior of a neighbourhood unit, and will be narrower roads with on-street parking and a connected system of sidewalks, discouraging heavy traffic flow and speed. Servicing activities including garbage pick up, utility repairs and delivery will generally take place on Secondary Streets, as to not disturb traffic flow on Primary Streets.

- LEGEND
- multiuse corridor
  - primary street
  - secondary street
  - - - laneways
  - · - urban growth centre



PROPOSED STREET NETWORK FOR THE PREFERRED CONCEPT

- Laneways: This street type will play an important role for accessing housing units as well as commercial spaces along Yonge Street. Laneways will add diversity to the complement of streets in the Regional Centre and will play an important supportive function to Primary and Secondary Streets.

The expanded internal road network proposed within the Preferred Concept for the Regional Centre would accommodate future transportation demands associated with the redevelopment of the area. An emphasis on non-auto access will also work to mitigate traffic demands along arterial and local roads within and surrounding the Regional Centre area.

To provide additional east-west connectivity across the rail corridor, the internal road network will introduce an additional east-west road crossing – the Garden Avenue extension – resulting in three internal road crossings of the corridor. Furthermore, the road network will include three continuous east-west roads between Yonge Street

and Bayview Avenue – Garden Avenue, High Tech Road and Bantry Avenue. They will provide good internal circulation as well as additional access opportunities to Yonge Street and Bayview Avenue.

The internal grid network will also be expanded, to the east to Bayview Avenue. There will be a future internal road grid between Highway 7 and Bantry Avenue, and between Yonge Street and Bayview Avenue. This grid will provide multiple access opportunities to Highway 7.

“A connected grid of streets is the foundation of a successful pedestrian network that ties into transit and retail uses.”

## 4.4 Transit First Strategy

Numerous transit improvements and infrastructure projects are proposed in conjunction with the reurbanization of the Regional Centre. The planned future transit network is based on the draft recommendations of the York Region Transportation Master Plan.

Providing convenient transit connections to and within the Mobility Hub will be critical to achieving the desired transportation targets and to the success of the Preferred Concept. The various transit modes connecting at the Richmond Hill Regional Centre are being planned to come together in a compact, environmentally-conscious way that will minimize land consumption and maximize convenience and opportunities to improve the public realm.

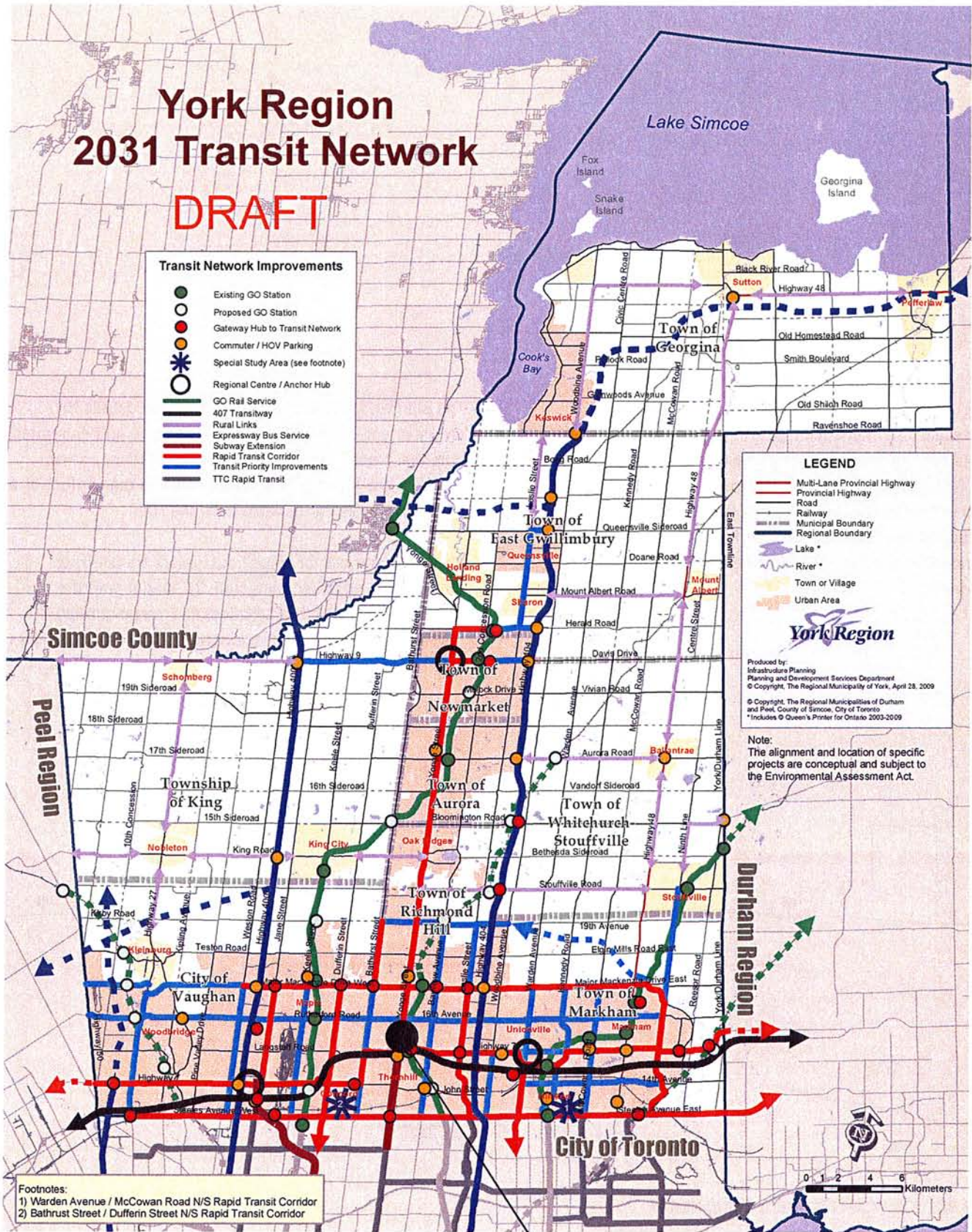
The York Region Transportation Master Plan provides for a hierarchy of transit services applicable to the Richmond Regional Centre:

- GO Rail providing inter-regional transit service
- 407 Transitway providing inter-regional, east-west transit service
- Yonge Street Subway Extension
- Rapidway and LRT/BRT network
- YRT local bus services
- Transit Supportive arterial road network

This same hierarchy of transit services will also serve the Regional Centre.

# York Region 2031 Transit Network

## DRAFT



YORK REGION 2031 TRANSIT NETWORK IMPROVEMENTS DIAGRAM, THE REGION OF YORK

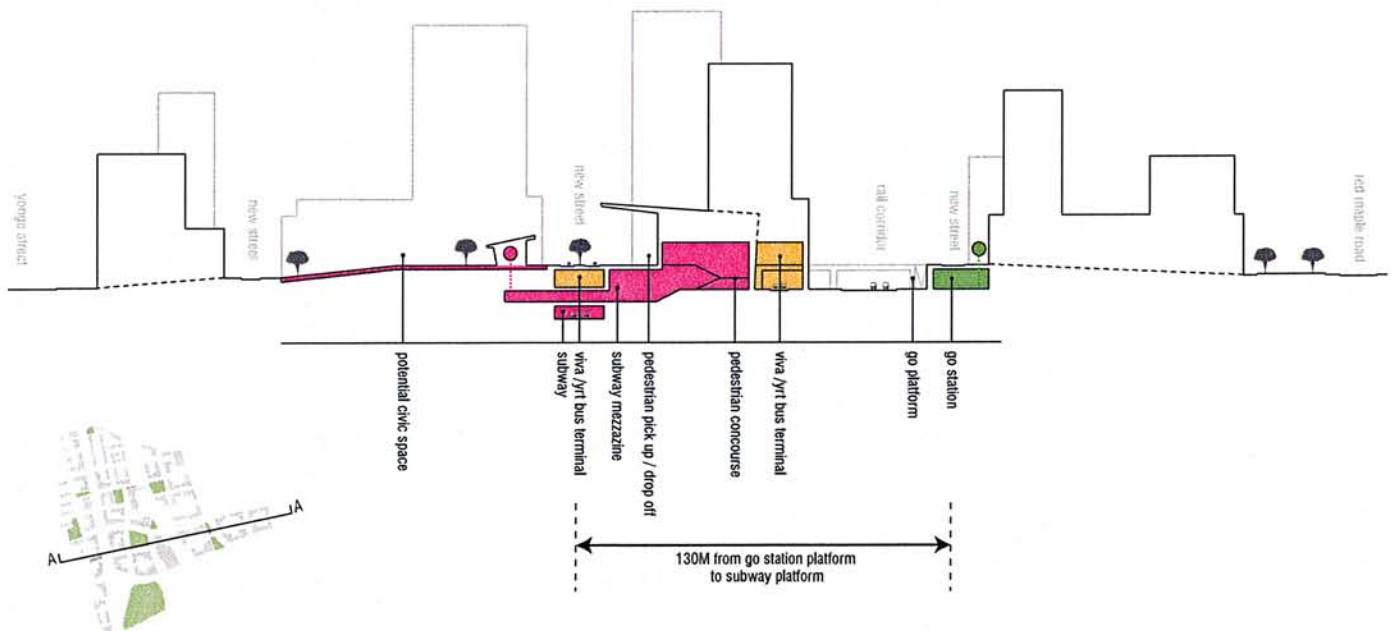
Richmond Hill Regional Centre

#### 4.4.1. Convergence of Transit Lines

The scale and intensity of growth contemplated in the Preferred Concept is directly linked to the development of the Richmond Hill Regional Centre as an Anchor Mobility Hub in the Greater Toronto and Hamilton Area. The site section below illustrates how all five modes of transit planned for the Centre could interface in a compact manner.

The plan view of the Mobility Hub further details the arrangement of transit at the Mobility Hub and illustrates potential transit stops adjacent to the station, access points to the Mobility Hub concourse and the capture of a five-minute walking distance from the Hub.

Walking distances for transit customers transferring between the relocated Langstaff GO station and the proposed YRT/VIVA bus terminal and Yonge subway station are expected to range between 40 and 130 metres.



SITE SECTION: MOBILITY HUB LOOKING NORTH

LEGEND

-  mobility hub
-  rapid transit route
-  rapid transit stop location
-  subway alignment
-  subway platform
-  407 transitway alignment
-  Go transit service
-  Go transit station
-  400m / 5min walking radius
-  urban growth centre



TRANSIT INITIATIVES WITHIN THE PREFERRED CONCEPT

## 4.5 Parking Strategy

A comprehensive parking strategy is a key part of the overall transportation strategy for the Preferred Concept for the Regional Centre, which involves parking policies, standards, parking supply and pricing. A proactive parking strategy can positively influence travel behaviour, encourage active transportation and transit usage, and contribute to the success of transit-oriented development.

An over supply of parking can consume scarce land that could otherwise be used for higher density mixed use development. Effective parking management strategies can be used to potentially reduce vehicle traffic and congestion, reduce collisions, energy consumption and green house gas emissions.

In the development of a parking management strategy for the Regional Centre, it is recognized that parking policies are a tool in an area-wide Travel Demand Management (TDM) Program. Specific recommendations for the Richmond Hill Regional Centre TDM program are currently under development and will be included as part of the final reporting of this study. Proposed key principles in the development of a parking management strategy include the following:

- Area-wide parking approach rather than site by site, so as to encourage shared parking use and make the most effective use of parking facilities;
- Reduced minimum parking standards for all uses;
- Requirements for shared parking usage;
- Establishment of maximum parking standards for all uses;

- Maximizing on-street parking as a major contributor to overall parking supply;
- Adopting parking policies that encourage rapid turnover of on-street parking;
- Parking charges for all non-residential uses;
- Encouraging commuters to park at facilities that are further from the heart of the Regional Centre thereby reserving the most accessible parking for visitors, customers and other short-term parkers;
- Minimizing exclusive parking for transit users and maximizing joint parking use. Any park and ride transit parking should be located on less valuable land – on the fringes of the Regional Centre;
- Enhanced walkability between parking facilities and final destinations; and
- Protecting existing communities from potential spillover parking.



PARKING FACILITY WITH STORMWATER MANAGEMENT IN PORTLAND, OREGON

## 4.6 Travel Demand Management Strategy

A Travel-Demand Management (TDM) strategy will be necessary to achieve the transportation targets recommended for the Preferred Concept. Key components recommended as part of this TDM strategy include:

- Policies to discourage single occupant vehicles during peak periods;
- Building on the success of the 404-7 Smart Commute program;
- Employer-based strategies;
- Parking strategies;
- Transit strategies;
- Car sharing; and
- Bike sharing.



VELIB BIKE SHARING SYSTEM IN PARIS, FRANCE

The TDM measures applied to the Regional Centre should build upon the success of the 404-7 Smart Commute association which works with local businesses, employers in the Richmond Hill and Markham areas to improve the quality of life for their employees by providing them with transportation options. These policies are aimed at reducing future traffic congestion and encouraging more environmentally-friendly and environmentally-sustainable travel modes.

A TDM strategy that builds upon sustainable transportation modes and travel options will be critical to the success of the Regional Centre transportation operations. A change in existing travel behaviour is required as part of the development of the Regional Centre to encourage more persons to consider transit, walking, cycling, carpooling and other non single-occupant motor-vehicle travel modes.



SHARED LANE IN BRISBANE, AUSTRALIA

## 4.7 Active Transportation Strategy

Active transportation, involving pedestrian and cycling access is another important component in the development of the Regional Centre. At present, there are very few designated cycling routes within the Regional Centre area and pedestrian / cycling connections to the Regional Centre bus terminal and Langstaff GO station are limited.

Recommended cycling and pedestrian routes between the Regional Centre and surrounding area consider existing and proposed pedestrian and cycling routes identified in current cycling and pedestrian master plans, or currently under study, by the Town of Richmond Hill, the Town of Markham, the City of Vaughan and York Region, while also taking into account the future development and internal road network for the Regional Centre.

Cycling and pedestrian routes identified in current studies, including routes on Highway 7, Yonge Street,

Bayview Avenue, High Tech Road and Langstaff Road have been incorporated into the Regional Centre's Active Transportation strategy. Additional cycling and pedestrian routes have also been included in the strategy to account for the proposed internal road network for the Richmond Hill Regional Centre.

Recommended future pedestrian and cycling connections to the Regional Centre area include:

- Bike lanes on major arterial roads including Highway 7, Yonge Street and Bayview Avenue;
- On-road cycling routes along local roads in the Richmond Hill Regional Centre Area including High Tech Road, Bantry Avenue and Langstaff Road; and
- An off-road cycling and pedestrian multi-use trail through the Highway 407 corridor, parallel to the Highway 407 ETR and the proposed 407 Transitway.



MULTIUSE TRAILS FOR WALKING AND CYCLING



GENEROUS SIDEWALKS AND PUBLIC REALM FEATURES



## 4.8 Future Transportation Operations

### 4.8.1. Richmond Hill Centre Phased Development Approach

Development of the Regional Centre will occur in phases over time to provide a gradual transition between existing and future land uses during redevelopment. A version of such phased development is described in Section 5 of this report. For the purposes of illustrating the progression of development within the Centre and its impact on transportation, the horizon years 2021 and 2031 have been identified as intermediate and full build out dates. By 2021, the Regional Centre area could be expected to be home to 14,200 people and jobs. The following rapid transit projects are expected to be in full operation by this time:

- The Yonge Subway extension;
- VIVA Next rapidways along Yonge Street and Highway 7;
- All-day, two-way GO train service along the Richmond Hill GO Rail line; and
- Increased Highway 407 bus service and local transit connections.

The future redevelopment of the Regional Centre is dependent on the Yonge Subway extension, as the population and employment densities proposed at the Regional Centre can only be supported with a subway and other higher-order transit facilities in place.

This transportation analysis in this report assumes that by 2031, the Regional Centre will be fully built out, and home to 31,500 people and jobs. Additional rapid transit projects expected to be in full operation by the 2031 horizon year would include:

- Express Rail on the Richmond Hill GO line, providing service every 15 minutes throughout the day in both directions between the Regional Centre and Toronto's Union Station; and;
- The Highway 407 Transitway.

	Number of Peak Period Trips Generated	
	2021	2031
Single-Occupant Vehicle Trips	4,810	6,440
Auto Passenger Trips	670	900
Transit Trips	1,690	8,370
Walking / Cycling Trips	120	390
<b>Total Trips</b>	<b>7,290</b>	<b>16,100</b>

TABLE ONE: RICHMOND HILL CENTRE FUTURE TRIP GENERATION

#### 4.8.2. Future Trip Generation

Based on the proposed land uses in the Preferred Concept for the Regional Centre, the total number of trips generated by all modes (auto-trips, transit-trips, walking/cycling trips, etc.) was determined for a typical weekday peak period. York Region's EMME/2 travel demand forecasting model was used to determine the number of peak period trips generated by the Regional Centre and typical peak hour traffic operations for the two horizon years. Table One describes the resulting peak period trip generation that would be expected for the 2021 and 2031 horizon years assuming all the transit infrastructure projects were in operation and the transportation targets set forth in Section 4.2 were achieved.

#### 4.8.3. Future Transportation Operations

##### Auto Trip Assignment

York Region's EMME/2 travel demand forecasting model was used to determine typical peak hour traffic operations for the Preferred Concept by assigning auto trips to the boundary road network in the Regional Centre area. This trip assignment was conducted for the 2021 and 2031 horizon years and included the land use assumptions for the proposed Langstaff Gateway development to the south.

The results of the trip assignment indicate that the majority of auto trips would use the arterial road network and Highway 407. For the 2021 horizon year, potential areas of traffic congestion include segments of Highway 407 in the vicinity of the Regional Centre and segments of Red Maple Road, Yonge Street and Bayview Avenue. By 2031, additional segments of these roads could see increases in traffic congestion, including some local roads within the Regional Centre itself, including High Tech Road. This is consistent with the findings of the York

Region Transportation Master Plan (2002) which indicated that the majority of capacity deficiencies in the Region would be experienced in the urban areas, including the Richmond Hill Centre area, specifically along the Yonge Street and Highway 7 corridors. The capacity deficiencies along Highway 7 and Yonge Street reinforced the need for higher-order transit along these corridors. The EMME/2 trip assignments do not take into consideration TDM, parking policies and active transportation strategies that could be applied in the Regional Centre area. Implementation of these strategies could help to mitigate traffic congestion on the boundary road network.

Future transportation operations for the Preferred Concept for the Regional Centre are expected to function at a level of service comparable to existing urban growth centres and downtown areas in the Greater Toronto Area. These include relatively low motor-vehicle travel speeds, high pedestrian traffic, close intersection spacing and frequent stops along roads with moderate to high levels of motor-vehicle traffic congestion during peak periods on major arterial roads serving the area.

##### Transit Trip Assignment

York Region's EMME/2 travel demand forecasting model was also used to determine the number of transit trips in the Regional Centre area during a typical weekday AM peak hour, and the distribution of those trips through the area transit network. The majority of transit trips would be concentrated along the Yonge Subway line, VIVA Yonge and VIVA Highway 7 (east of Yonge Street) corridors, with a high convergence of transit trips at the Regional Centre. By 2031, the total trips generated in the Regional Centre could top 16,000 trips with over 9,500 of those trips being transit, walking or cycling trips.

## 4.9 Servicing

The future intensification of the Richmond Hill Regional Centre is being driven by a number of factors including Provincial, regional and municipal growth management policies and the development of new inter-regional transit lines. It is expected that as more refined planning for the Centre advances and more details about anticipated development are known, plans for additional required servicing and storm water infrastructure should follow as a component of a subsequent secondary plan.

Further studies and investigations will be required to better understand the future servicing and storm water management needs of the Regional Centre. The following items are noted as things to consider proceeding to the Secondary Plan and zoning stage and ultimately to the Site Plan stage of implementing the Preferred Concept.

### 4.9.1 On-Site Considerations

The current on-site sanitary sewers are considered to be at or close to capacity so that as re-development is phased over the planning horizon of 25 or more years, a detailed evaluation of remaining capacity, if any, needs to be undertaken to determine requirements for new infrastructure.

New infrastructure including sanitary sewers and watermains will also be required for potential new streets proposed in the Concept. Existing on-site watermain capacity needs to be evaluated to suit the increased development intensity, however, except for potential new streets, new watermain pipes are less likely to be required since domestic use requirements are very small compared to requirements for fire flows and existing mains were designed to provide adequate fire flow. With an understanding of the cumulative impacts of the

proposed development it may be necessary to consider the economic viability of constructing a larger or a parallel sewer to provide the required capacity. The construction cost of this type of on-site sewers is expected to be economically viable.

Regarding storm sewers and storm water management, the on-site storm sewers have been designed to service the current land use designations, which feature large areas of impermeable services that were expected to have high runoff coefficients. As such redevelopment is not expected to require new storm sewers except on new streets.

The Preferred Concept shows a reconfiguration of the existing storm water management pond and the implementation of bioswales, a move that is intended to transform stormwater management techniques from isolated unattractive events into functional but attractive contributions to the naturalized landscape of the future Regional Centre. A detailed study and design would be able to determine exactly the impacts and advantages of reconfiguring the pond and implementing bioswales. Such modifications to the storm water pond should be possible bearing in mind the following:

- Advances in stormwater pond design since the development of the existing pond in the mid 1990's
- Setbacks from all roads
- Setbacks from the hydro towers
- Current design criteria are that maximum slopes are to be at least 4:1
- Topographic limitations caused by existing road grades and hydro tower base elevations.

Other techniques to decrease stormwater runoff volumes, called Low Impact Development (LID) practices should also be considered in the implementation of the Preferred Concept.

Such techniques as the following could be implemented through new official plan policies:

- green roofs
- increased surface infiltration
- grey water re-use for irrigation
- grey water re-use for toilet flushing

Stormwater guidelines for new developments may also include requirements to provide groundwater recharge and increased levels of quantity control. These requirements can be fulfilled by connecting roof drainage pipes to perforated pipe soak-away beds or to stormwater chambers. These systems can be located under parking or landscaped areas. Rainwater runoff can also be attenuated by storing roof run-off in tanks and subsequently using the water for irrigation of landscape areas or by providing roof-top controls or using other Low Impact Development techniques.

#### 4.9.2 Off-Site Considerations

In addition to considerations that must be accounted for on the Regional Centre site there are also off-site considerations that must be accounted for to determine the wider servicing implications of the Preferred Concept. With the current infrastructure in place today, most of the study area will drain to the York Durham trunk sewers at the southwest corner of the Study Area. This trunk sewer has been operating near its maximum capacity until recently when flows were diverted from the Yonge Street trunk sewer into a new relief sewer on 19th Avenue. This diversion and other potential options for the flows in the Yonge Street sewer need to be investigated in consultation with the Region of York. A number of factors influencing flows in this pipe need to be investigated such as:

- increased flows as a result of new intensification in the area along Yonge Street – outside the Study Area;

- potential mitigation of sanitary sewer volumes by water conservation criteria;
- continuing the Region's program to retrofit existing developed areas with water saving features; and
- continuing Town and Region initiatives to prevent inflow and infiltration flooding which is caused by storm run-off entering the sanitary sewer system.

As well as the foregoing initiatives which would allow increased sanitary sewer flows from the Regional Centre lands to drain to the Yonge Street trunk sewer, flow balancing using temporary storage to level the peak flows could be investigated.

With regard to off-site water mains, it is possible that the increase in intensity of development could strain the Region's existing watermain trunk and reservoir capacity so that at some point during the Regional Centre build-out period, new trunk watermain and reservoirs may also be required. The timing of the requirement for these new facilities could be delayed using the same water conservation initiatives for new and existing development as referred above to decrease sanitary sewer flows.

Lastly, consideration must also be given to the plans that the Town of Markham is advancing to allow development of similar intensity in the Langstaff Gateway area located immediately to the south of the Regional Centre. Development in the Langstaff area will effectively be seeking the same finite capacity and will affect the Region's ability to deliver capacity to the Richmond Hill Regional Centre. A coordinated study with Regional participation should be undertaken to understand the cumulative needs that the entire Urban Growth Centre, both the Langstaff Gateway and the Richmond Hill Regional Centre, would require.

## 4.10 Summary

The success of the Preferred Concept for the Regional Centre is dependent on the proposed transportation infrastructure improvements for the Centre as well as effective Travel Demand Management and parking strategies to achieve the desired transportation modal split targets. A coordinated approach to serving and a comprehensive understanding of cumulative impacts on existing sewer and stormwater infrastructure must be also be established to ensure that the Regional Centre is a well-functioning community in the future.

### 4.10.1 Transportation

The transportation modal split of 60% can be realized, provided that a Regional rapid transit network in the Greater Toronto and Hamilton Region is in place and the transportation infrastructure improvements recommended for the Regional Centre are constructed.

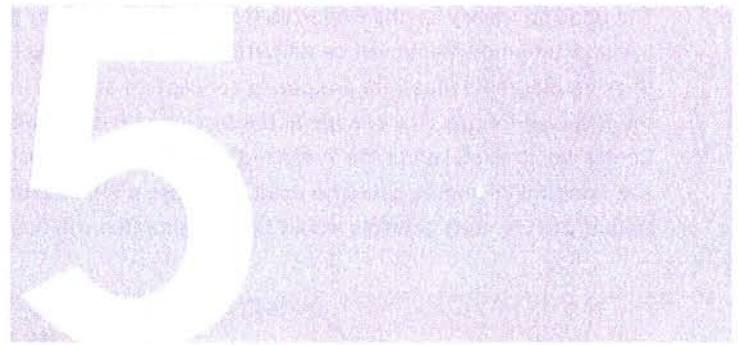
Future transportation operations at the Regional Centre are expected to function at transportation levels of services comparable to existing Urban Growth Centres and downtown areas in the Greater Toronto and Hamilton Area. These include relatively low motor-vehicle travel speeds, high pedestrian traffic, close intersection spacing and frequent stops along roads with moderate to high levels of motor-vehicle traffic congestion experienced on major arterial roads serving the area. Travel Demand Management, parking policies and active transportation strategies will be required to protect existing

communities from unnecessary traffic infiltration. Specific transportation recommendations for the Regional Centre are currently under development and will be provided to the Town as part of the final reporting. Investing in this transportation strategy will allow for the transportation vision of the Preferred Concept for the Richmond Hill Regional Centre to be achieved.

### 4.10.2 Servicing

To better understand the complete range of servicing requirements that the Preferred Concept would require a more detailed study with a broader scope would need to be undertaken. This study would most appropriately be performed during preparation of the secondary plan for the area. Many of the elements of such a study were described in Section 4.9 above. On the whole, a coordinated and cooperative investigation with the Town of Markham and the Region of York should be undertaken to determine a sustainable approach to planning for new infrastructure needed to support the future development of the Urban Growth Centre.

In addition, specific policies around Low Impact Development techniques should be incorporated into any forthcoming official plan policies for the Regional Centre.



## Phasing

## Phasing

The phasing theory for the Preferred Concept illustrated in this section is based on the assumption that all of the planned transportation elements will be delivered over the planning horizon. The rate, intensity and location of development that these phasing diagrams illustrate are purely conceptual and are intended to illustrate one possible scenario for the full build out of the Regional Centre. Any change to the transportation network that is currently planned to reach the Richmond Hill Regional Centre would likely affect the Preferred Concept and the resulting phasing strategy. Planning controls such as holding by-laws and conditional zoning could be used to ensure a phasing program that achieves a desirable progression of development. Details of how such controls would be implemented will be included in the final recommendations report.



## The Site Today

The Richmond Hill Regional Centre is currently the site of a mix of development types including a number of large format retail stores and associated parking lots, a few high rise residential towers as well as smaller scale commercial and residential development along Yonge Street.



## Greenfield Development and Intensification

The first phase of development in the Richmond Hill Regional Centre is likely to involve lands that are currently undeveloped. This includes the Red Maple Character Area as well as modifications to the stormwater pond, realignment of the Highway 7 interchange and the creation of a pedestrian bridge linking the end of Beresford Drive into the Red Maple Character Area. This development could take place in the context of the existing public transportation network in the Regional Centre.



## A Significant Transit Investment

The second phase of development in the Centre will likely coordinate with the arrival of the Yonge Street subway extension. Upon completion of the subway, overbuild of the station area can commence and the important Mobility Hub of the Centre can be created. This stage is also likely to see incremental intensification along some sections of Yonge Street.



## Short term re-urbanization

As the Mobility Hub becomes an established and well known place in the Region and the population of Richmond Hill grows, more office and residential development will be attracted to the Richmond Hill Regional Centre. It is anticipated that the existing commercial complex north of High Tech will have run its course as a valuable land use and will be redeveloped into a mixed use community during this stage.

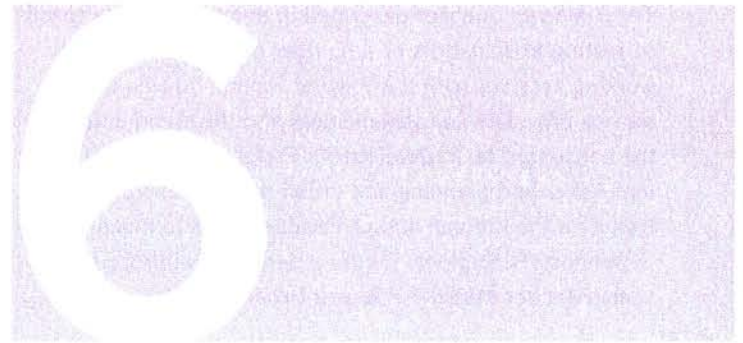


## Long term re-urbanization

In the long term, as Richmond Hill continues to grow and attract new investment, remaining parcels of land now highly valued for their proximity to transit and the vibrant Richmond Hill Regional Centre community, will redevelop. All the elements of the open space system and infrastructure investments will be in place and the Regional Centre will be functioning as a complete community.







## **Next Steps**

## Next Steps

The Preferred Concept described in this report is the result of testing and analysis of a number of options. Through working sessions with the Town of Richmond Hill, transit service providers key stakeholders and the community, the consultant team developed a Preferred Concept that features sound planning and urban design principles based on the rational and achievable desire to make the Richmond Hill Regional Centre a dense yet appropriately-scaled Anchor Mobility Hub and Urban Growth Centre.

Once the Preferred Concept is confirmed, the final phase of work will begin on the Design and Land Use Strategy for the Richmond Hill Regional Centre. The remaining tasks include the development of a final report which will include policy recommendations in the areas of urban design, land use, transportation and servicing. The final report will include draft Urban Design and Development Principles including strategies for controlling massing, density and heights of buildings and an Area Plan featuring a number of schedules and recommendations for Official Plan policies to implement the Preferred Concept.





