

# THE REGIONAL MUNICIPALITY OF YORK

Rapid Transit Public/Private Partnership Steering Committee

April 10, 2008

Report of the

Vice President of the York Region Rapid Transit Corporation

## **RAPID TRANSIT NETWORK PLAN PRINCIPLES, METROLINX BUSINESS CASE, AND ALTERNATIVE FINANCE AND PROCUREMENT ANALYSIS UPDATE**

### **1. RECOMMENDATIONS**

It is recommended that:

1. Council endorse the rapid transit network principles.
2. Staff report back on the progress of the Metrolinx business case and Infrastructure Ontario Alternative Finance and Procurement analysis.

### **2. PURPOSE**

The purpose of this report is to inform Council as to the status of the update to the draft 2007 Rapid Transit Network Configuration Plan, the status of the alternative finance procurement (AFP) process now underway with Metrolinx and Infrastructure Ontario, and network plan principles that have been developed to form the foundation of our 2008 Network Update report.

### **3. BACKGROUND**

This report was referred forward by Committee in February to the next Committee meeting. The report tabled at February Committee is superseded by this report, which has been updated to reflect recent developments.

The 2003 York Region Network report documented the analysis that was used to determine the rapid transit configuration that would most efficiently serve York Region's ongoing growth and development. The analysis built on a series of Regional policies, including the 2002 Transportation Master Plan, Centres and Corridors Study, and Rapid Transit Plan and recommended a three phase strategy for implementation of the system. The rapid transit corridors and alignments were detailed in subsequent environmental assessments (EA's).

The EA's contemplated the potential for conversion of the bus rapid transit (BRT) system to a fixed-guideway technology, such as light rail transit (LRT), once ridership reached levels capable of supporting the capital and operating costs of a fixed-guideway system. The 2003 report assumed that subway technology on the Vaughan North-South Link (Spadina line) would extend to York University by 2021. This segment was identified for a potential ultimate extension to Vaughan Corporate Center (VCC), a commitment that has since been made by the province, TTC and York Region. The 2003 report recognized the Region's long-term plan for extension of the Yonge subway to Langstaff, and considered alternatives with and without the extension. The report advised that an update to the report prior to 2011 would be important to confirm ridership growth and timing for the Yonge Street Subway extension.

In June 2007, staff undertook to update the draft network plan to reflect the findings of the MoveOntario 2020 announcement, including the impact of potentially earlier timing for the Yonge Street subway extension to Richmond Hill, and the effect of the Toronto Transit City light rail plan. In addition, staff undertook to update the plan to reflect the findings of the 2006 Transportation Tomorrow Survey results, which became available last fall.

#### **4. ANALYSIS AND OPTIONS**

##### **4.1 The 2008 rapid transit network plan is nearing completion**

The network modelling is now complete with 2011, 2021 and 2031 ridership completed based on the 2006 Transportation Tomorrow Survey. The most current 40% Regional growth scenario has been developed and provided by the Long Range Planning Branch and are included in the final modelling.

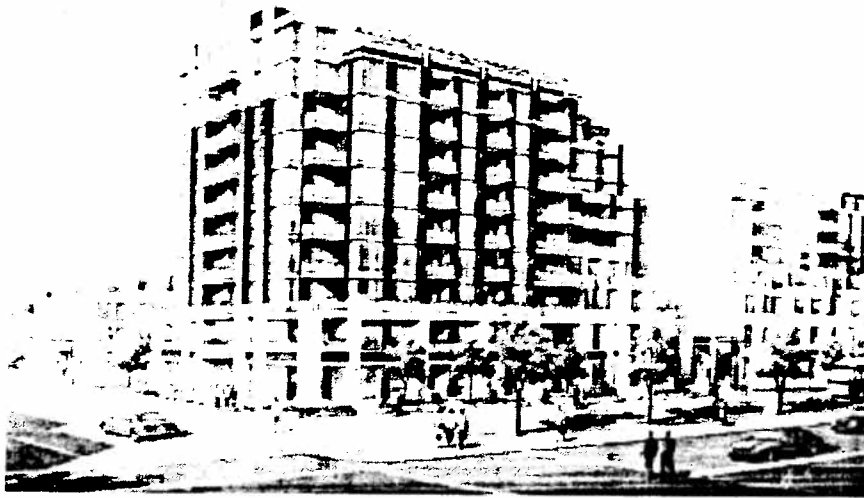
##### **4.2 Network Plan principles**

**Eight rapid transit principles have been identified to guide the implementation of the rapid transit network**

Eight rapid transit network principles have been developed to form the foundation of our 2008 Network Update report as follows:

**1) Strategically locate the rapid transit network in the heart of York Region's urban centres and corridors.**

This first principle locates the Rapid Transit network in the heart of the Region's Centres and Corridors strategy. The Rapid Transit network is the infrastructure backbone supporting the transformation of York Region into a mature urban area by concentrating growth and development within designated urban areas and along the Rapid Transit corridors that connect them.



**2) Choosing the right technology at the right time for the right cost.**

Phase 1, *Quick Start*, was our early action plan to build ridership and public support. It is a proven success and now needs to be evolved to ensure that momentum is not lost.

Phase 2 includes 67 km of segregated BRT Rapidways, designed to not preclude future conversion to LRT when warranted. Phase 2 also includes the extensions of the TTC Yonge-University-Spadina subway line to Highway 7 to both Richmond Hill Center and Vaughan Corporate Centre.

Phase 3 will consider evolving technologies to significantly increase passenger capacity as population, employment and system ridership continue to grow.

### 3) Connect inter-regional rapid transit systems.

Viva Phase 2 will provide convenient links with all of the north/south GO Rail lines crossing Highway 7, the inter-regional proposed 407 Transitway, the TTC subway, Brampton's Acceleride, Durham Region Transit and the City of Toronto's proposed Transit City LRT plans.

### 4) Deliver great rapid transit intermodal terminals.

The planned terminals for Phase 2 include a Highway 50 Terminal, Vaughan Corporate Centre, Jane/407, Steeles West Station, Concord, Richmond Hill Centre, Unionville GO Station, Cornell Terminal, Bernard, Green Lane and Main Street Newmarket.

Phase 2 Terminals	Transit Service Provider					
	Viva / YRT	TTC	GO Transit	Brampton Transit	Durham Transit	Private Operator
Richmond Hill Centre	•		•			•
Vaughan Corporate Centre	•		•	•		
Highway 50 Terminal	•	•	•	•		•
Jane/407	•	•	•	•		•
Steeles West Station	•	•				•
Concord	•		•			•
Unionville GO Station	•		•		•	•
Cornell Terminal	•				•	•
Bernard	•					
Green Lane	•		•			•
Main Street Newmarket	•		•			

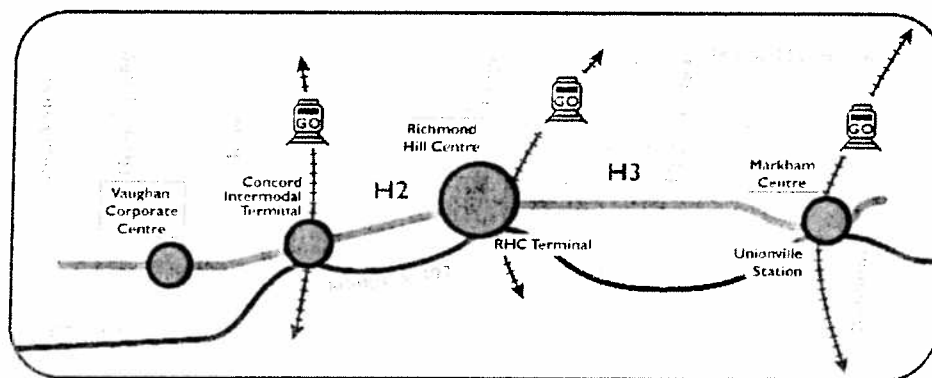
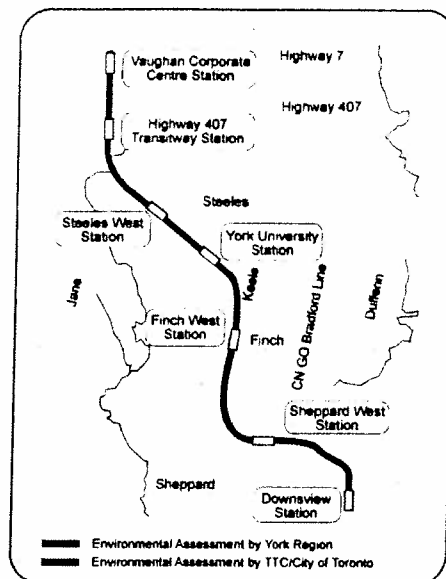
These terminals will play a major role in improving overall transit attraction and travel time savings for passengers. They will also provide significant opportunities to deliver high order transit-oriented development within York Region.

5) **Bring the Spadina and Yonge subways to Highway 7.**

There is a solid business case for extending the TTC Spadina and Yonge Street subway lines to Vaughan Corporate Center and Richmond Hill Center. The Yonge extension alone is projected to carry 27,000,000 trips annually in 2021.

6) **Strengthen Viva's core and then extend it.**

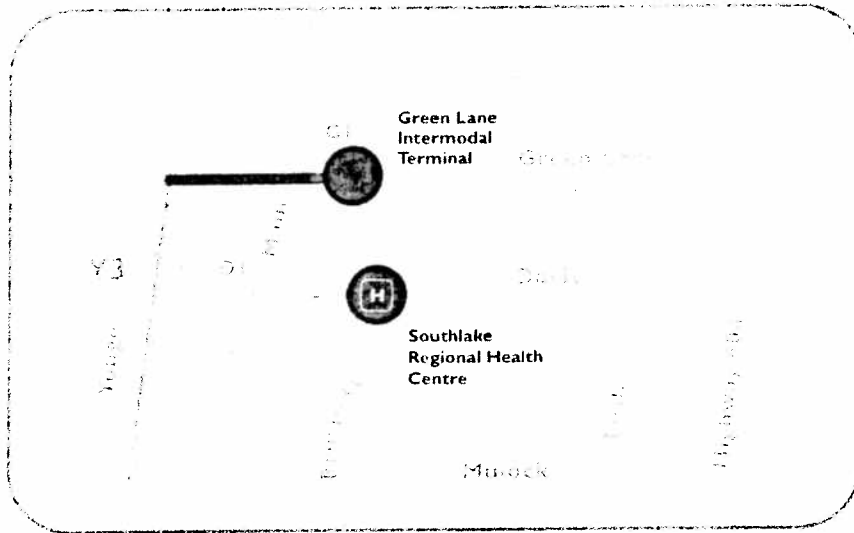
At the core of the rapid transit system are the Highway 7 and Yonge Street corridors, which converge at the Richmond Hill Center terminal. The south Yonge Street segment (Highway 7 to Finch Avenue) alone is used by 70% of all Viva Passengers. Highway 7 provides the critical connections between the Regional growth centers of Vaughan, Richmond Hill and Markham. North Yonge provides the critical connection with Newmarket.



7) **Address significant pressures along the corridors.**

The Y3 segment (north Yonge Street, from Mulock Drive to Green Lane, Green Lane to the GO Transit station, and Davis Drive from Yonge Street to Southlake Regional Health Centre) is critical to support the intensification intended by the Places to Grow plan and the designation of Newmarket Center as an Urban Growth Centre. In addition, it provides key support to the continued development of the Southlake Regional Health Centre providing services not only to York Region residents, but also residents in adjoining Regions.

The implementation of the BRT Rapidways will improve inter-regional travel and connectivity by providing convenient connections to GO Rail and GO bus routes serving northern York Region, Barrie, Durham Region and Simcoe County.



#### 8) Embrace all modes of transportation movement.

York Region has been active in promoting transportation demand management through such initiatives as the establishment of the Smart Commute program. Metrolinx is now responsible for the coordination of the transportation management associations that have been formed in the GTA over the past five years. Opportunities to strengthen the travel demand management programs of Smart Commute 404/7, North Toronto, Vaughan, and Central York will be the subject of future Metrolinx and York Region reports. The Region is nearing completion of the Pedestrian and Cycling Master Plan and opportunities to incorporate this mode of travel in the design of the rapid transit system are being evaluated.

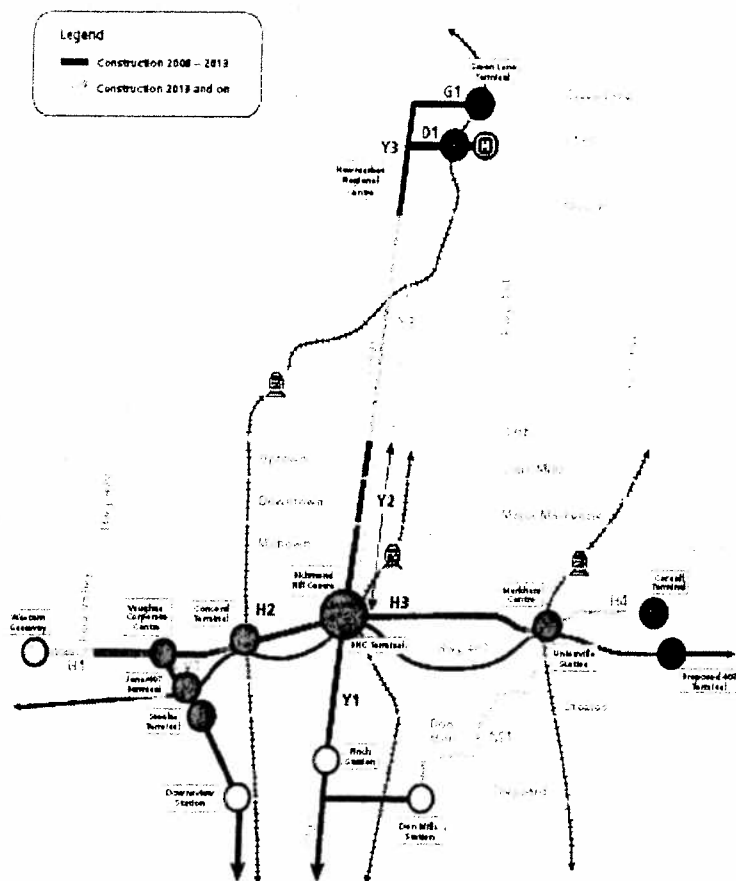
### 4.3 Rapid transit construction timing

**The timing for the construction of the York Region network plan has been updated**

In October 2007 Metrolinx requested the Region to provide our timing to construct the rapid transit network. Based on the foregoing principles and armed with our emerging draft network modelling updates the following base map for Viva Phase 2 was developed.

Viva Phase 2 now includes the extension of the Spadina Subway and Yonge University lines north to the Vaughan Corporate Centre and Highway 7 in Richmond Hill, respectively. Viva Phase 2 also includes the development of the balance of the rapid transit system as bus rapid transit.

## RT Network Plan Principles, Metrolinx Business Case and AFP Update

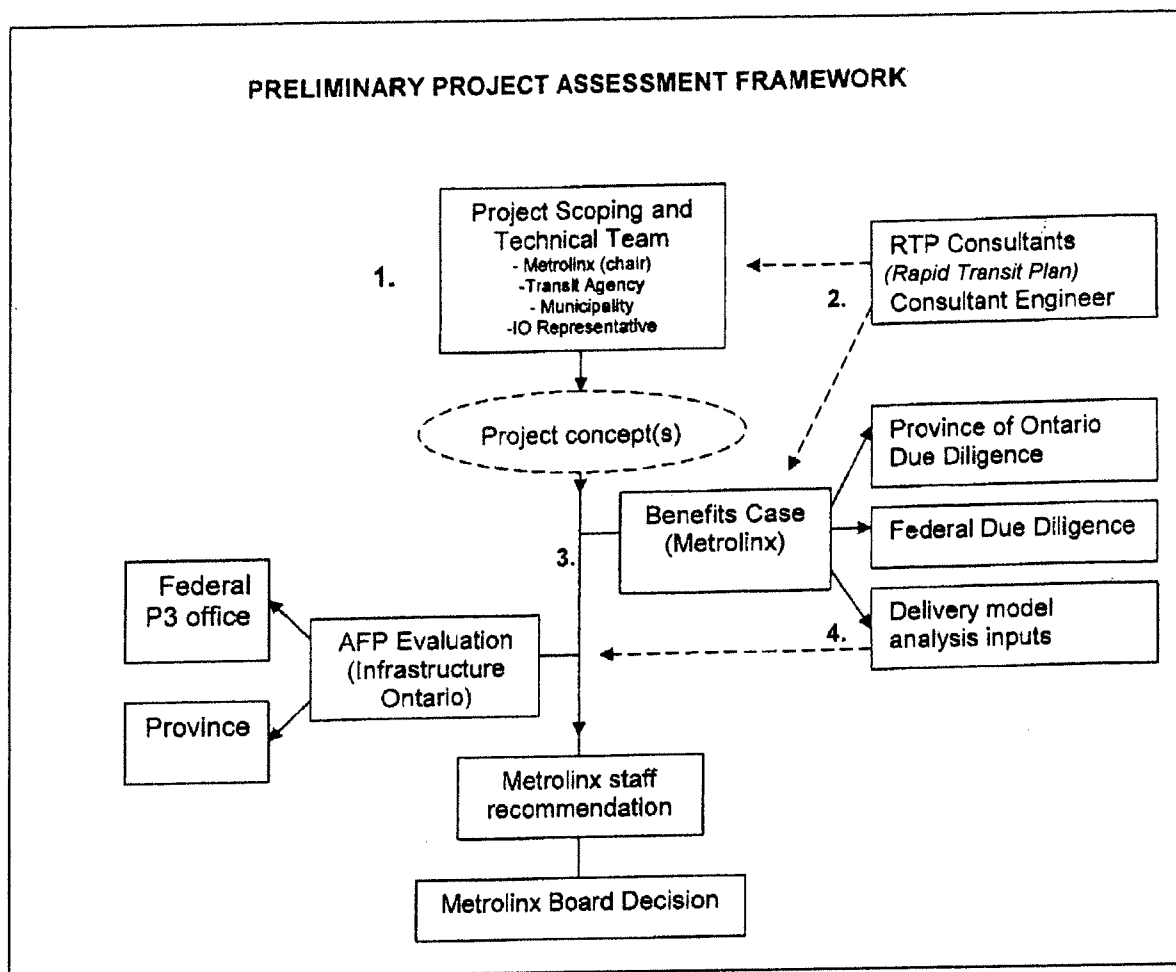


### 4.4 Network Alternative Finance Analysis

Staff are working with Metrolinx and Infrastructure Ontario on the alternative finance and procurement evaluation for the Yonge Street Subway and the entire Viva BRT network

In order to move from being one of the 52 potential candidate projects for MoveOntario 2020 funding to a capitalized project, the Region's subway and BRT project must be evaluated through the project assessment framework shown in Figure 1 below.

Figure 1



Metrolinx, as part of its comprehensive project implementation framework, is working in partnership with Infrastructure Ontario and municipal stakeholders to undertake a benefits case analysis for bus rapid transit that will include an AFP evaluation.

York Region was successful in having both the Yonge Street subway and the entire surface BRT network included in the first round of evaluations. Three meetings have now been held with the working group and staff are in the process of submitting the comprehensive data needed to support the AFP analysis.

The first step in the benefits case analysis is the development of three rapid transit network scenarios. The preferred option will advance for AFP analysis. The three scenarios being evaluated for the benefits case are described below.



Each scenario has different ridership and cost implications. BRT solutions will consider costs to construct, operate and maintain the network. The benefits case analysis will incorporate ridership projections based on respective scenario assumptions that are captured in each of the scenario descriptions for BRT below.

- Base Scenario – Phase 1 BRT operating in mixed traffic on all segments, except Yonge Street south of Highway 7. BRT in segregated rapidway on segment Y1 by 2011 and the Spadina Subway by 2015.
- Moderate Scenario – BRT in segregated rapidways on all network segments by 2015, and mixed traffic Y1 transit priority treatments by 2011. The Yonge Street Subway extension to Richmond Hill Centre by 2016 and the Spadina Subway by 2015.
- Bold Scenario – BRT in segregated rapidways on all network segments except for mixed traffic on Y1. HOV services on Davis Drive and Green Lane. LRT from Vaughan Corporate Centre to Markham Centre on Highway 7, and LRT from Richmond Hill Centre (Hwy 7) to Newmarket (Green Lane) by 2015. Two grade separations (Yonge Street in Richmond Hill and Hwy 7 at Hwy 404) post 2025. Yonge Street Subway extension (four stations) to Richmond Hill Centre by 2016 and the Spadina Subway by 2015.

The three scenarios for the Yonge Subway business case analysis are as follows:

- Base Scenario – BRT in segregated rapidways on all network segments and the Spadina Subway extension.
- Moderate Scenario – BRT in segregated rapidways on all network segments by 2015, and mixed traffic Y1 transit priority treatments by 2011. The Yonge Street Subway extension to Richmond Hill Centre by 2016 and the Spadina Subway by 2015.
- Bold Scenario – Yonge Street Subway extension to Richmond Hill Centre (six stations) by 2016. BRT in segregated rapidways on all network segments and improved Y1 transit priority treatments by 2011. Two grade separations (Yonge Street in Richmond Hill and Hwy 7 at Hwy 404) post 2025.

It is anticipated that the AFP process will be completed in late spring/early summer and the results will be reported back to Council at that time.

## 5. FINANCIAL IMPLICATIONS

The costs associated with supporting this effort are largely accommodated by the efforts of YRRTC senior and Regional staff; however, support to generate all of the required data is being supplied by YC2002 as a contingency task under the Y2/H3 work program.

The March 25, 2008 provincial budget announcement committed funding for all Metrolinx Stage 1 and Stage 2 “Quick Win” projects, including \$100 million for preliminary engineering, vehicles and intelligent transportation system for the Highway 7 Rapidway from Pine Valley Drive to Kennedy Road and the Yonge Street Rapidway from Richmond Hill Centre to Newmarket.

Metrolinx has also been tasked with determining the net requirement for the operating costs associated with all of these projects and staff will report back on this activity in future reports.

## 6. LOCAL MUNICIPAL IMPACT

The deployment of the rapid transit network to serve York Region municipalities is critical to the realization of the Regional and Provincial growth objectives. The funding of the rapid transit network will assure the local municipalities and their constituents that growth will be accompanied by a robust rapid transit network and at the same time meet the intensification targets set out in the Places to Grow Act.

## 7. CONCLUSION

The network modelling is now complete with 2011, 2021 and 2031 ridership completed based on the 2006 Transportation Tomorrow Survey. The most current 40% Regional growth scenario has been developed and provided by the Long Range Planning Branch and is included in the final modelling.

Eight rapid transit network principles have been developed to form the foundation of the 2008 Network Plan. This report seeks Council endorsement of the rapid transit network principles.

Staff is working with Metrolinx and Infrastructure Ontario on the AFP evaluation analysis of candidate projects. York Region was successful in having both the Yonge Street subway and the entire surface BRT network included in the first round of AFP evaluations. Three working group meetings have been held to date.

This report describes the three alternative network scenarios – base, moderate and bold for both the BRT and subway business case analysis. It is anticipated that the AFP

process will be completed in late spring/early summer and the results will be reported back to Council.

Staff will report back on the progress of the Metrolinx business case and Infrastructure Ontario Alternative Finance and Procurement analysis.

For additional information, please contact Mary-Frances Turner, Vice-President, York Region Rapid Transit Corporation at (905) 886-6767 ext. 2226.

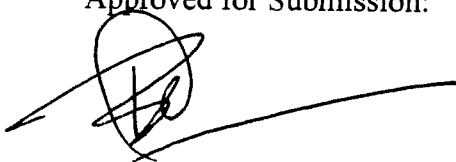
The Senior Management Group has reviewed this report.

Recommended by:



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Approved for Submission:



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Chief Administrative Officer

April 4, 2008

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