



Office of the Regional Clerk
Corporate and Legal Services Department

NOTICE

RAPID TRANSIT PUBLIC/PRIVATE PARTNERSHIP

STEERING COMMITTEE

A meeting of the **Rapid Transit Public/Private Partnership Steering Committee** will be held on **Thursday, December 5, 2002**, in Committee Room "A", York Region Administrative Centre, 17250 Yonge Street, Newmarket, beginning at **11:00 a.m.**

Members of the Committee and staff are requested to bring the attached Agenda and accompanying material to the meeting.

A handwritten signature in black ink, appearing to read 'Denis Kelly'.

DENIS KELLY
REGIONAL CLERK

Karin Price
November 29, 2002
Attachment

COMMITTEE MEMBERS:

Regional Chair B. Fisch, Chair
Mayor Wm. Bell
Mayor D. Cousens
Mayor M. Di Biase
Regional Councillor D. Humeniuk, Vice-Chair
Regional Councillor B. O'Donnell (Alternate)

**Office of the Regional Clerk
CORPORATE AND LEGAL SERVICES DEPARTMENT**

A G E N D A

RAPID TRANSIT PUBLIC/PRIVATE PARTNERSHIP STEERING COMMITTEE

Thursday, December 5, 2002

**Committee Room "A"
Administrative Centre
17250 Yonge Street
Newmarket, Ontario**

11:00 a.m.

DISCLOSURE OF INTEREST

PAGE NO.

PRESENTATIONS

- | | |
|---|--|
| 1. Office Update | <i>Mary-Frances Turner and Sam Zimmerman</i> |
| 2. Communications | <i>Mary-Frances Turner</i> |
| 3. Environmental Assessment Update | <i>Paul May</i> |
| 4. Quick Start Work Plan | <i>Sam Zimmerman</i> |
| 5. Next Steps | <i>Mary-Frances Turner</i> |

**REPORTS SUBMITTED BY THE EXECUTIVE CO-ORDINATOR
YORK RAPID TRANSIT PROJECT**

- | | |
|---|----------|
| 6. Progress Report, York Rapid Transit Project | 1 |
|---|----------|

December 5, 2002, recommending that:

1. The Monthly Progress Report for the month of November and schedule of work activities, which are shown as *Attachment 1*, be received.

- | | |
|--------------------------------------|-----------|
| 7. Quick Start Program Update | 13 |
|--------------------------------------|-----------|

December 5, 2002, recommending that:

1. *Quick Start* Definition and Implementation Report, which is shown as *Attachment 2* be received for information.

OTHER BUSINESS

COMMITTEE TO RESOLVE INTO PRIVATE SESSION TO CONSIDER A LEGAL MATTER

ADJOURNMENT

Note: There may be additional items considered that do not appear on this Agenda. Please refer to the Committee Report to Council for all items considered at this meeting.

THE REGIONAL MUNICIPALITY OF YORK

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York Region Rapid Transit Public/Private Partnership Steering Committee
December 5, 2002

Report of the
Executive Co-ordinator York Region Rapid Transit Project

PROGRESS REPORT YORK RAPID TRANSIT PLAN

1. RECOMMENDATION

It is recommended that:

1. The Monthly Progress Report for the month of November and schedule of work activities, which are shown as *Attachment 1*, be received.

2. PURPOSE

This report provides a detailed description of the progress made in delivering the York Rapid Transit Plan during November 2002.

3. BACKGROUND

York Consortium is incurring anticipated expenses in accordance with the agreement between the Region of York and York Consortium dated June 27, 2002. The Consortium's revised second invoice for September, and October invoice have been received and are under review. Table 1 summarizes the financial status of the project.

Table 1
YRTP Project

	Cost (excluding GST)	% of Budget
Paid to Date	\$454,000	5.3%
Under Review (Sept.)	\$379,000	4.5%
Current Month (Oct.)	\$506,000	5.9%
Total Cost to Date	\$1,339,000	15.7%
Total Project Budget	\$8,500,000	100%

Approximately 16% of the budget has been expended, representing approximately 18% of the work plan being completed.

4. ANALYSIS AND OPTIONS

4.1 Progress Report

The June 27th contract required York Consortium to file monthly progress reports with York Region. The October report was distributed at the Steering Committee meeting of November 13, 2002. The attached progress report (*see Attachment 1*) for the month of November has the following highlights.

4.1.1 Funding

Continued to dialogue with federal and provincial officials in an effort to obtaining funding commitments to match the \$50 million commitment made by York Region for the \$150 million Quick Start program. York Rapid Transit Project (YRTP) staff met with Ministry of Transportation staff on November 21, 2002 to present and discuss the business plan in detail. Detailed discussion with Strategic Investment Fund officials occurred on December 1, 2002.

4.1.2 Communications

A CEO debriefing was held on November 12, 2002. Several meetings were held with senior government officials and senior staff at the federal and provincial levels. A Working Session was conducted for Council on November 28, 2002. The partnering session is scheduled for December 6, 2002. The York Rapid Transit Steering Committee Open House will be held the evening of January 16, 2003 at the YRTP offices at 1 West Pearce Street.

4.1.3 Business Structure

Over the past month the Consortia and York Region have commenced analysis of business structure or the 3P. Provincial and federal interest in the specifics of the 3P business structure is a frequent topic of discussion. This matter will be the subject of upcoming reports and presentations to Steering Committee.

4.1.4 Quick Start Program

Addressed in a separate report to the December 5, 2002 RT PPP Steering Committee meeting.

4.1.5 Transportation Planning

Total person movement trends were analyzed. Initial ridership estimates were developed for the Quick Start and Final System. Vehicle technology assessment commenced.

4.1.6 Environmental Assessments

4.1.6.1 Yonge Corridor

Technical Advisory Committee meeting was held on November 18, 2002, including City of Toronto. YRTP has responded to MOE and review agency comments regarding the Terms of Reference. Public meetings were held on November 27 and 28, 2002.

4.1.6.2 Markham N-S Corridor

Technical Advisory Committee meeting was held on November 29, 2002. The second public information centre originally scheduled for December 6, 2002 has been postponed to January 7, 2002 to present more progress. Transit Need and Justification is under development.

4.1.6.3 Highway 7 Corridor / Vaughan N-S Link

Draft Terms of Reference have been submitted to MOE and Review Agencies. Formal TOR submission is anticipated for the first or second week in December. The earliest possible date for approval is February 2003. Public information centres are scheduled for February 6, 7 and 15 at a location in each municipality.

5. FINANCIAL IMPLICATIONS

There are no new financial implications associated with this report.

6. LOCAL MUNICIPAL IMPACT

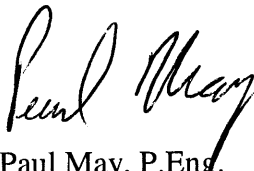
There are no local municipal impacts associated with this report.

7. CONCLUSION

The York Consortium and York Region staff achieved several significant YRTP plan milestones during the month of November, particularly with respect to advancing our requests for senior government funding support, communications with Area Councils and the public, and the environmental assessment process.

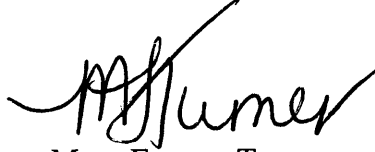
The Senior Management Group has reviewed this report.

Prepared by:



Paul May, P.Eng.
Director, Infrastructure Planning

Recommended by:



Mary-Frances Turner
Executive Coordinator York Rapid Transit Plan

Approved for Submission:



Michael R. Garrett
Chief Administrative Officer

December 5, 2002
DD/PM/gr

Attachment (1)

Version 3-2002-9-26

Regional Municipality of York

Monthly Progress Report

for the period November 1, 2002 to November 21, 2002

Doc. Ctrl. # O-02-000086
Report
November 26, 2002

INTRODUCTION

This report covers the period from November 1, 2002 through November 21, 2002.

1. PROJECT MANAGEMENT

A. SUMMARY OF ACTIVITIES:

Joint Project Office:

- Work continued on the computer networking system and the delivery of miscellaneous equipment and furniture.

Project Controls:

- Work continued on the Project Controls Manual for Stage 1 of the project.
- Continued work on the Data and Document Control System and continued logging in and filing documents received.
- Investigation of the platform required for the proposed Image Library was commenced.
- The October invoice to York Region was under preparation.

Partnering:

- The first partnering session has been scheduled for December 6.

Meetings & Co-ordination:

- Weekly co-ordination meetings for key YR and Consortium staff to discuss progress and to resolve various technical and administrative issues continued during the month.
- Supported YR staff in various Agency meetings on an as-requested basis as listed in other sections of this report.
- See Communications and EA sections for additional meetings.

Legal Services:

- Support from Osler, Hoskin & Harcourt LLP continued in Communications and Government Relations. Advice was also received on the Business Plan review and the P3 structure.

B. DELIVERABLES RESULTING FROM MONTHLY ACTIVITY:

- Draft of Procedures manual completed November 21.

C. PLANNED ACTIVITIES FOR SUBSEQUENT MONTH:

- Hold 1st Partnering workshop
- Fully implement document control system
- Initiate document and image libraries
- Update schedule and progress report
- Install web-based meeting planner software and train users
- Distribute instructions for document control, travel policies, invoicing procedures
- Complete Project Administration Manual

2. COMMUNICATIONS PROGRAM

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A. SUMMARY OF ACTIVITIES:

- Business case completed and submitted to the Provincial and Federal government at the start of November
 - Substantial effort at the end of October supported the document preparation
 - On-going tracking of copies, additional copy preparation and fine tuning of content continues
- Presentations made to:
 - Joint Management Committee
 - Steering Committee
 - Regional Council
 - CUTA annual meeting
- A set of meetings was held with SIF officials in Ottawa
 - A full day of meetings was held
 - Federal members and key staff were included in the meetings
- Briefings with federal and provincial members continued
 - Emphasis on advancing the business case
 - Meetings continue to be set up in Ottawa with local MP's and SIF staff members
 - Meetings being set up with Provincial representatives including SuperBuild ministers
- EA meeting materials developed for Yonge Corridor meeting
 - Meeting set and held November 27th and 28th
- Briefing notes prepared for several senior officials
- CEO meeting held at Chair Fisch's office

B. DELIVERABLES RESULTING FROM MONTHLY ACTIVITIES:

- Business Plan completed and submitted
- Several presentations prepared
- Business cards printed and distributed
- Develop employee survey for local businesses.

C. PLANNED ACTIVITIES FOR SUBSEQUENT MONTH:

- Team Building Session to be held December 6th for project staff
- Follow up on the submitted business plan will be required with emphasis on the provincial government
- Planning for an Open House in January will begin
- Planning for the for event around the CivisBus in January to be started
- Survey to be prepared and distributed to businesses in the Region

3. DATA COLLECTION

A. SUMMARY OF ACTIVITIES:

- Reviewing interim results of 2001 Transportation Tomorrow Survey (TTS) from University of Toronto Data Management Group.
- Analyzing interim results from TTS.

B. DELIVERABLES RESULTING FROM MONTHLY ACTIVITIES:

- N/A

C. PLANNED ACTIVITIES FOR SUBSEQUENT MONTH:

- Continue developing evaluation of the TTS for discussion with the Data Management Group from the University of Toronto.

4. NETWORK CONFIGURATION CONFIRMATION

A. SUMMARY OF ACTIVITIES:

- Continued analysis of 2001 Transportation Tomorrow Survey (TTS) and Regional growth from 1991 to 2001.
- Continued analyzing of relationships between Quick Start and long-term network.
- Developed plan for model runs.

B. DELIVERABLES RESULTING FROM MONTHLY ACTIVITIES:

- None due yet.

C. PLANNED ACTIVITIES FOR SUBSEQUENT MONTH:

- Finalization of Quick Start program
- Meetings with YRT to discuss Quick Start and long term network configuration.

5. QUICK START PROJECT IDENTIFICATION

A. SUMMARY OF ACTIVITIES:

- Continued developing initial capital and operation cost estimates for Quick Start.
- Definition of Quick Start revised via Funding Proposal to Superbuild.
- Quick Start definition/planning/costing ongoing.
- Identifying Quick start initiatives for 2003.

B. DELIVERABLES RESULTING FROM MONTHLY ACTIVITIES:

- None

C. PLANNED ACTIVITIES FOR SUBSEQUENT MONTH:

- Identify Quick Start initiatives for 2003.
- Develop concept plans.
- Meet with MOE and York Region to identify potential issues and constraints.

6. PROGRAM-WIDE TRANSPORTATION PLANNING

A. SUMMARY OF ACTIVITIES:

- Continued gathering technology characteristics from Siemens (LRT) and Irisbus (Civis)
- Developing Image Library for BRT and LRT (see comment in Project Management section)
- Continued analysis of initial 2001 Transportation Tomorrow Survey
- Attended weekly Markham Centre meetings
- Refining initial Capital Expenditure estimates for 5-year and 10-year intervals.

B. DELIVERABLES RESULTING FROM MONTHLY ACTIVITIES:

- None

C. PLANNED ACTIVITIES for SUBSEQUENT MONTH:

- Analysis of total person movement trends
- Complete technology assessment
- Development of initial ridership estimates for Quick Start and final system
- Participation with York staff in developing transit priority measures
- Participation with other GTA planners in reviewing Transportation Tomorrow Survey

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7. ENVIRONMENTAL ASSESSMENT

A. SUMMARY OF ACTIVITIES:

- Convened meeting of TAC to review material for Yonge St. Corridor PIC.
- Prepared presentation material and conducted first Public Consultation sessions for Yonge St. Corridor,
- On-going updating of Corridor inventories, (new aerial mapping not yet available from York Region)
- Procurement for three specialist sub-consultant assignments nearing completion.
- Program overview presented to Spadina Subway Extension Committee.
- Assembly of topo or road design plans of corridors continuing.
- Two meetings held with Markham Town Centre planning team and developer to review on-going development of ROW options through Town Centre.
- Attended two meetings with GO Transit and Markham Staff to coordinate rapid transit interface with GO Unionville Station and Hwy 407 inter-regional transit service.
- Attended two meetings of Quick Start Task Group to provide EA requirements.
- Development of alternative alignments on-going in Yonge and Hwy 7 corridors.
- Provided input for BRT and LRT Design Criteria.
- Public Advisory Committee representation established.
- Review of EA Fact Sheet prepared by Communications Group
- Preparation of methodology to evaluate Alternative Transport Solutions for Markham N-S Link.
- Investigation of potential sites for RT Maintenance and Storage Facility.

B. DELIVERABLES RESULTING FROM MONTH'S ACTIVITIES:

- Evaluation of Proposals for specialist environmental services.
- RFP document for Geological/Contaminated Soils services.
- Update of Environmental benefits section of Business Plan.
- Display materials for Yonge Str. Corridor Public Open House

C. PLANNED ACTIVITIES IN SUBSEQUENT MONTH:

- Yonge and Hwy 7 EA tasks that can be performed in advance of TOR approval will be pursued as MOE approval of Yonge and Hwy 7 Terms of Reference is not expected until Jan. 2003.
- Completion of alignment development to respond to Markham Town Centre right-of-way protection needs.
- Second Technical Advisory Committee meeting for Markham N-S Link to be held,
- Meeting with MOE to review Quick Start work scope to be held.
- Updating of corridor inventories to be completed.
- ROW topo. and design plan assembly to be completed.
- Meeting with City of Toronto to establish collaboration arrangements for Vaughan and Markham N-S Link Corridors to be convened.
- Sub-consultant Contracts for specialist services to be executed and work commenced.
- Development of RT alignment design options at Unionville GO Station interface to be completed when response from developer is received.
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- Development of RT alignment design options for Yonge and Hwy 7 Corridors.
- Yonge Str. Corridor Public Advisory Committee Meeting to be convened.

8. PROGRAM IMPLEMENTATION PLAN

A. SUMMARY OF ACTIVITIES:

- None this month

B. DELIVERABLES RESULTING FROM MONTHLY ACTIVITIES:

- N/A

C. PLANNED ACTIVITIES FOR SUBSEQUENT MONTH:

- N/A

9. CONSTRUCTABILITY ANALYSIS

A. SUMMARY OF ACTIVITIES:

- Continued constructability analysis on Quick Start Plan
- Commenced establishing cost library

B. DELIVERABLES RESULTING FROM MONTHLY ACTIVITIES:

- N/A

C. PLANNED ACTIVITIES FOR SUBSEQUENT MONTH:

- Constructability input on EA's
- Continue to refine Cost Library

10. FINANCIAL PLANNING AND ANALYSIS

A. SUMMARY OF ACTIVITIES:

- Continued discussions to evaluate creative leasing options for promoting private equity and further accessing limited recourse financing.
- Met with York Region to discuss SPC

B. DELIVERABLES RESULTING FROM MONTHLY ACTIVITIES:

- None this period

C. PLANNED ACTIVITIES FOR SUBSEQUENT MONTH:

- Co-ordinate Region/RBC meeting to further discuss and evaluate limited recourse finance alternatives
- Continue discussions with York Region regarding the SPC

11. BUSINESS MODEL / STAGES 2 & 3 TRANSITION

A. SUMMARY OF ACTIVITIES:

- Continued to discuss alternative business models.

B. DELIVERABLES RESULTING FROM MONTHLY ACTIVITIES:

- N/A

C. PLANNED ACTIVITIES FOR SUBSEQUENT MONTH:

- Prepare a “white paper” on Business Model and present to York Region in preparation for Draft Business Model and detailed road map.
- Continue to discuss Business Model with York Region

York Region Rapid Transit Public-Private Partnership Steering Committee

December 5, 2002

Report of the

Executive Co-ordinator York Rapid Transit Plan

QUICK START PROGRAM UPDATE

1. RECOMMENDATION

It is recommended that:

1. *Quick Start* Definition and Implementation Report, which is shown as *Attachment 2* be received for information.

2. PURPOSE

This report provides a detailed description of the definition of the *Quick Start* program and a proposed implementation plan.

3. BACKGROUND

This document describes the current status of the proposed York Rapid Transit Project's (YRTP) *Quick Start* program. The description is based on and consistent with the YRTP Business Plan (November 1, 2002), although further program and implementation details have been incorporated. The process to refine the definition of *Quick Start* is on-going; it is expected that the program definition will be completed by January 1, 2003. The cost-confidence process established in our contract with York Consortium will follow in order to procure *Quick Start* infrastructure. This iterative tendering process is anticipated to result in competitive pricing by the consortium. If the Region believes that a competitive price has not been achieved it may tender contracts through our standard tendering process. Also, no aspect of the *Quick Start* program, including vehicle acquisition, will proceed in the absence of funding commitments by the federal and provincial governments.

4. COMMENTARY

Subsequent to the recent publication of the Business Plan, certain additional work has been completed toward the definition of the *Quick Start* program. This work has focussed on developing a subset of *Quick Start* infrastructure projects that could be implemented prior to the completion of the Environmental Assessment (EA) process. These projects would be lower-cost, limited impact projects that would have utility both for *Quick Start* transit services and potentially existing transit services. Our goal is to provide a visible rapid transit program by early 2004. This requires the aggressive work program timelines identified in *Attachment 1* to be met. The *Quick Start* Definition and Implementation Report is attached (*Attachment 2*).

These projects include:

- Initial elements of a system-wide Intelligent Transportation System.
- Transit priority at signalized intersections system-wide.
- (Potential) installation of on-board transit vehicle-tracking equipment.
- Creation of intersection queue jumpers (by sharing use of existing general purpose right-turn lanes). Transit vehicles would use the existing right-turn lane at an intersection to bypass congestion and then continue straight through the intersection. A special traffic signal head would indicate a short green signal for transit vehicles exclusively. After transit vehicles bypass the congestion, the traffic signal would turn green for general traffic.
- Creation of bus pullouts and intersection queue jumpers that require limited roadway modification.
- Limited Park-and-Ride facilities.

Following the completion of the list of proposed short-term projects, discussions will be held with the Ministry of the Environment (MOE) to review the proposed list of projects. Given the more immediate concern of existing congestion along Yonge Street and Highway 7, initial short-term efforts focus on these two regional corridors.

4.1 Yonge Street Corridor

Terms of reference for an EA have been reviewed by MOE for the Yonge Street corridor, between 19th Avenue in Richmond Hill and the TTC Finch station. York Region recognizes the importance of keeping proposed short-term projects distinct from the on-going EA process while ensuring that any Quick Start project is coordinated with the longer-term infrastructure requirements. Proposed intersections with queue jumpers to be implemented in the short-term are identified in the attached report.

4.2 Highway 7 Corridor

Terms of reference for an EA have been submitted to MOE for review for the Highway 7 corridor. York Region recognizes the importance of keeping proposed short-term projects distinct from the on-going EA process while ensuring that any Quick Start project is coordinated with the longer-term infrastructure requirements. Proposed intersections with queue jumpers implemented in the short-term include major signalized intersections in the corridor as identified in the attached report.

4.3 Next Steps

Prior to January 1, 2003, several additional steps will be taken in order to finalize the definition and implementation plan for *Quick Start*.

4.3.1. Transportation Planning

- Station Areas
 - Compile additional land use data.
 - Conduct further analysis toward specifying station locations.

- Corridors
 - Collect data related to travel time/delay on transit services (existing studies and new, if needed).
- Travel Demand Forecasting
 - Develop future travel patterns and initial ridership forecasts (*Quick Start* and long-term).

4.3.2. Civil Design

- Conduct additional field studies.
- Collect available right-of-way mapping.
- Collect available aerial photography.
- Prepare conceptual typical sections.
- Conduct utility survey.
- Analyze potential permits/approvals.

4.3.3. Intelligent Transportation Systems

- Contact existing transit operators (York Transit, TTC, and GO Transit), and Roads Transportation staff to discuss current traffic operations issues, and bottlenecks for transit vehicles.
- Identify a representative list of intersections (30 of the 120 intersections) to perform traffic analysis.
- Obtain existing intersection traffic volume count data, geometrics, and signal timings information.
- Collect necessary intersection data where current information is dated or unavailable.
- Model the key intersections using a traffic simulation model (either Synchro/SimTraffic, or CORSIM).
- Assess the impacts of “transit priority” on intersection operations.
- York Consortium and Regional ITS staff to work on functional specifications for system.

4.4 Vehicle Acquisition

Additional information on YRTP vehicles will be presented at the Steering Committee meeting on December 5, 2002 which examines desirable characteristics of Quick Start vehicles and illustrates typical life-cycle costs for both conventional and advanced technology vehicles. Final selection of vehicles will be subject to the cost-confidence process.

5. FINANCIAL IMPLICATIONS

There are no new financial implications associated with this report.

6. LOCAL MUNICIPAL IMPACT

There are no local municipal impacts associated with this report.

7. CONCLUSION

York Consortium has made several strides toward further defining the *Quick Start* program. It is expected that the program definition will be completed by January 1, 2003. In order to achieve that deadline, substantial additional work needs to be completed, which will require significant allocation of staff resources by York Consortium, with substantial cooperation of York Region and municipal staff over the next weeks. In order to achieve visible rapid transit on the ground by early 2004 this work program is warranted.

The Senior Management Group has reviewed this report.

Prepared by:

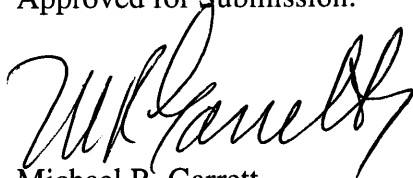
Paul May, P.Eng.
Director, Infrastructure Planning

Recommended by:



Mary-Frances Turner
Executive Coordinator York Rapid Transit Plan

Approved for Submission:



Michael R. Garrett
Chief Administrative Officer

December 5, 2002
DD/PM/gr

Attachments (2)

Version 3-2002-9-26

Quick Start Program Preliminary Short-term Schedule

1.	Complete Quick Start report	End Dec. 2002
2.	Regional Council approval in principle of Quick Start report	Jan. 2003
3.	Bus Demonstration and Testing	Jan. 2003
4.	Start Guaranteed Maximum Price (GMP) process	Feb. 2003
5.	Start cost analysis/procurement process for buses	Feb. 2003
6.	Order buses (subject to funding availability)	Mar. 2003
7.	Complete GMP	May 2003
8.	Award of contract for Quick Start construction	June 2003
9.	Detailed design starts	June 2003
10.	Phased construction commences	Summer/Fall 2003

Note: Schedule is subject to early confirmation of senior government funding and establishment of suitable business and governance arrangements.

***Quick Start* Definition and Implementation**

Interim Report

November 22, 2002

1 INTRODUCTION

This document describes the current status of the proposed YRTP *Quick Start* program. The description is based on, and is consistent with, the YRTP Business Plan (November 11, 2002), although further programmatic and implementation detail has been incorporated. The process to refine the definition of *Quick Start* is on-going; it is expected that the program definition will be completed by January 1, 2003. The cost-confidence process in order to procure *Quick Start* infrastructure will then follow.

The document begins by illustrating how *Quick Start* ties in to the overall YRTP and how *Quick Start* grew out of previous planning work conducted by York Region. Next, the four *Quick Start* routes are briefly described along with the components of the program, including a list of proposed stations and other physical attributes. This is followed by a discussion of the implementation of *Quick Start* components in the short- and longer-term timeframes. Toward the end of the document, proposed *Quick Start* transit vehicle fleet operations and operating costs are discussed. The document ends with a preliminary estimate of *Quick Start* capital costs.

2 MEETING THE NEED FOR EARLY ACTION

York Region has been experiencing substantial growth in residential population and employment over the last decade. The Region's municipalities currently are reviewing applications for several millions of square feet of additional development space. This growth has resulted in increasing levels of congestion in many of the major regional roadway corridors, which in turn has led to public concerns about the pace of growth, limited opportunities for pedestrians and bicyclists, buses caught in traffic, deteriorating air quality, and increasing travel times. The York Rapid Transit Plan (YRTP) was created in response to these concerns as an effective means of promoting transit oriented development (TOD).

The YRTP consists of three phases:

- ***Definition of the Overall Plan and Implementation of the Quick Start Program:*** This stage involves further refinement of the work done by the Region in their TMP, completion of EA work on the corridors in the TMP, and the implementation of a *Quick Start* program to get the first

elements of rapid transit operating as quickly as possible. The cost of the *Quick Start* program is estimated to be \$150 million;

- ***Design and Construction of the “Full System”:*** After the EA work is completed, and while *Quick Start* is being implemented, work will begin on design and construction of the Full System. The Full System will ultimately provide full-featured rapid transit in each of the four corridors. Preliminary cost estimates for the Full System are \$1.5 to \$2.2 billion, over a 10-year period, primarily depending on the choice of technologies and the extent of system facilities in each corridor; and
- ***Operation and Continued Development of the System:*** As pieces of the YRTP are completed, they may be operated and maintained by agreement between the Region and YC. Coordination with YRT, GO Transit and other operators will be required to put in place a system that meets the needs of all residents in a cost-effective manner. Conceptual costs for this ultimate network range from \$2.4 to \$4.1 billion (inclusive of *Quick Start* and Full System costs), depending on the length of the extensions, the extent of system facilities and, the choice of technologies.

3 QUICK START: RELATIONSHIP TO YRTP

In order to begin addressing the congestion, environmental, and social issues that the current growth in the Region has created, the first actions proposed in the YRTP, *Quick Start*, will place infrastructure on the ground as quickly as possible to provide short-term improvements to transit service, to reserve critical rights-of-way, especially around stations, and to begin moulding new development in a transit-oriented direction.

The Regional Official Plan and subsequent Transportation Master Plan (TMP) have focussed on four important emerging urban centres, encompassed within four regional transportation corridors. The four centres are:

- Vaughan Corporate Centre located near the intersection of Highways 400 and 7;
- Langstaff centred on Yonge Street and Highway 7;
- Markham Centre to the east of Warden Avenue, south of Highway 7; and
- Newmarket to the north on Yonge Street.

The four corridors are:

- Yonge Street;
- Highway 7;
- Vaughan North-South Link; and
- Markham North-South Link.

These four regional corridors will be the focus of continued residential and commercial development in York Region. The four urban centres within the regional corridors are intended to be focal points for business, government and culture with complementary medium- and high-density mixed-use development. Detailed development plans, incorporating supportive Smart Growth aims and policies, are already in place for each of the four regional centres. The York Rapid Transit Plan (YRTP) builds on the work completed in the TMP and reflects the changing development and travel patterns exhibited in York Region beginning in the 1990s.

4 QUICK START ROUTES

Preliminary planning efforts have identified potential rapid transit routes through each of the four regional corridors:

- ***Yonge-Newmarket:*** From a terminal at Leslie Street (east of Yonge Street) via Davis Drive, then Yonge Street to TTC Finch Station;
- ***Highway 7:*** From Markham-Stouffville Hospital via Highway 7 to Woodbridge, looping via Kipling and Woodbridge Avenue, returning via Islington to Highway 7;
- ***Vaughan-Downsview:*** From a loop in Woodbridge (via Highway 7, Kipling, Woodbridge, Islington) via Highway 7, Jane (Vaughan Corporate Centre), Steeles, York University access roads, Keele, Finch, Dufferin, Allen (or alternate routing through the Downsview area) to Downsview Station; and
- ***Markham-Don Mills:*** From Markham-Stouffville Hospital via Ninth Line, Highway 7 (Markham Centre), then via a north-south routing still under investigation to TTC Don Mills Station.

Both the Vaughan-Downsview and Highway 7 routes will operate on the Highway 7 routing between Jane Street and Woodbridge. The Markham-Don Mills and Highway 7 routes will similarly operate together on the Highway 7 routing between Leslie and Markham-Stouffville Hospital.

5 QUICK START COMPONENTS

Quick Start will comprise an integrated package of components supportive of rapid transit service.

5.1 STATIONS

The station spacing is intended to be approximately one to two kilometres, typical of most forms of rapid transit. In general, stations will be built on the far side of intersections, in order to minimize potential delay at signalized intersections. Detailed station location will depend on other factors, such as:

- major cross streets, especially those with existing or potential connecting bus routes;
- major origins and destinations; and
- higher-density residential developments.

While substantial additional analysis of these factors will be necessary in order to finalize station locations, preliminary locations for each of the four proposed lines are:

Yonge-Newmarket:

- Finch Subway
- Steeles (pick-up northbound, drop-off southbound)
- Clark
- John – Centre
- Royal Orchard
- Langstaff Inter-modal Terminal
- 16th – Carrville
- Weldrick
- Major MacKenzie
- Crosby
- Elgin Mills
- Bernard
- 19th – Gamble
- Stouffville

- King
- Bloomington
- Henderson
- Dunning
- Wellington
- Orchard Heights
- St. John's
- Mulock
- Eagle
- Yonge – Davis
- Longford
- Main
- Prospect
- Huron Heights
- Leslie

Highway 7:

- Markham-Stouffville Hospital
- Wootten
- Main – Markham
- Robinson
- McCowan
- Kennedy
- Main – Unionville
- Village Parkway
- Warden
- Rodick
- Woodbine
- Allstate – Valhalla
- Leslie – Beaver Creek
- Valleymede
- Bayview
- Langstaff Intermodal Terminal
- Hunter's Point
- Bathurst
- Dufferin
- Centre
- Keele
- Jane – Highway 7
- Commerce
- Weston
- Ansley Grove
- Aberdeen
- Pine Valley
- Wigwoss
- Islington

- Kipling
- Kipling – Woodbridge
- Woodbridge Core

Vaughan-Downsview:

- Downsview Subway
- Dufferin – Finch (pick-up northbound, drop-off southbound)
- Finch – Keele (pick-up northbound, drop-off southbound)
- York University (pick-up northbound, drop-off southbound)
- Steeles Park-and-Ride
- Steeles – Jane
- then, same stations as Highway 7 service west of Jane

Markham-Don Mills:

- Don Mills Subway
- Finch – Seneca College (pick-up northbound, drop-off southbound)
- Steeles (pick-up northbound, drop-off southbound)
- John Street
- Green Lane
- Commerce Valley
- then, same stations as Highway 7 east of Leslie

Note that three of the stations on the Highway 7 line are located at grade separated intersections (Bayview, Bathurst and Dufferin). In each case, pedestrian access facilities will need to be installed to enable connections with bus services on the intersecting north-south streets. In the case of Bathurst and Dufferin, complete facilities will need to be constructed. For Bayview, some facilities exist but may need upgrading.

The precise location and design of station sites will be determined in consultation with local municipalities. Opportunities for added station sites may be identified during consultation with local municipalities.

A basic modular rapid transit station design concept will be utilized throughout the transit system at all stations and major intermodal terminals (e.g., Langstaff). This design will be in subsequent phases of the YRTP and will provide weather protection, as well as a unique identity for the system. In general, YRTP stations will be used only by YRTP transit vehicles, with the exception of intermodal terminals. *Quick Start* stations and ancillary facilities like Park-and-Ride lots will be constructed as close as possible to the ultimate location of future rapid transit stations to the degree that the location can be identified prior to completion of the respective EA processes.

Where the ultimate location will be on a median transitway that can only be initiated after EA completion, the initial curb lane station will be constructed in a way that will allow many of the station components (e.g., station shelter) to be moved to a median platform at a later date.

5.2 RUNNING WAY IMPROVEMENTS AND TRANSIT PRIORITY MEASURES

Running way improvements, especially transit priority measures, are key to gaining the speed and reliability that form the essential characteristics of rapid transit. The running way for all *Quick Start* lines will generally be curb lanes in mixed traffic with transit priority “queue jumpers” at major intersections. The queue jumpers will typically consist of two components: transit-actuated signal priority; and exclusive bus lanes approaching the intersection, facilitating a through movement for buses. “Exclusive” lanes at intersections may share use with other vehicles turning right.

Intersections necessitating queue jumpers are typically major arterial crossings, where significant traffic delays to rapid-transit operations can occur. Final selection of queue jumper locations will depend on detailed study of traffic levels and delays. Preliminary queue jumper locations include:

Yonge-Newmarket:

- Steeles
- Clark (northbound approach to downtown Thornhill)
- Centre (southbound approach to downtown Thornhill)
- Access to Langstaff Inter-modal Terminal
- 16th – Carrville
- Major MacKenzie (northbound approach to downtown Richmond Hill)
- Crosby (southbound approach to downtown Richmond Hill)
- Elgin Mills
- Stouffville
- King
- Bloomington
- Wellington (approaches to downtown Aurora)
- Mulock
- Eagle
- Yonge – Davis
- Main
- Prospect
- Leslie

The queue jumpers on Yonge approaching the road narrowings in Thornhill, Richmond Hill and Aurora (noted in the list as northbound or southbound approaches) will need to be located where the lane reductions take place.

Highway 7:

- Main Street – Markham
- McCowan
- Kennedy
- Warden
- Woodbine
- Leslie – Beaver Creek
- access to Langstaff Intermodal Terminal
- Centre
- Keele
- Jane
- Weston
- Pine Valley
- Islington

Vaughan-Downsview:

- Steeles and Jane
- Steeles and York University access
- plus, major intersections on the Toronto portion of the route, if feasible

Markham-Don Mills:

- Don Mills and Steeles
- Don Mills and John
- plus, major intersections on the Toronto portion of the route, if feasible

Wherever possible, dedicated BRT running ways will be constructed within existing transportation rights-of-way. Possible examples include a location parallel to the railway tracks used by GO Transit trains under Highways 7 and 407, or in the median of Yonge Street between Steeles and Highway 7.

5.3 INTERMODAL TERMINALS

In addition to the stations along each line, certain locations would be designated intermodal terminals. Intermodal terminals will be sited to facilitate connections between YRTP rapid-transit lines and with other major transit modes, such as GO and TTC.

One major new intermodal terminal proposed for the *Quick Start* program would be at Langstaff, where the Yonge and Highway 7 corridors meet. The specific location of this off-street facility will likely be on the north side of Highway 7 adjacent to the Langstaff GO station, where transfers with GO commuter rail will also be provided. The facility will be designed to accommodate the two rapid-transit lines along with several local bus routes.

The other major *Quick Start* intermodal terminals are the three TTC subway terminals (Finch, Don Mills, Downsview) and the Unionville GO station. Finch and Don Mills stations currently have facilities for York Transit services, but will likely need upgrading or alterations to accommodate YRTP vehicles and increased service levels. A new facility for the Vaughan line will be needed at Downsview station.

5.4 QUICK START PARK-AND-RIDE

Park-and-Ride is an important strategy to support rapid transit in conjunction with an extensive network of connecting local bus routes. With the exception of GO stations, there are currently very few Park-and-Ride facilities in York Region. Those that do exist are primarily small, shared facilities along Highway 7 and other locations in Markham.

One major *Quick Start* facility is being pursued north of York University and Steeles, east of Jane, which should be attractive to Highway 400 commuters. This location would be well served by the Vaughan-Downsview Line and would complement the transit focal point at York University.

Specific locations for other *Quick Start* Park-and-Ride facilities will be dependent on municipal plans, zoning and property availability, in addition to the location of the transit lines and stations. Subject to further analysis and the results of the EA process, initial suggestions for Park-and-Ride facilities are:

Yonge Street:

- Langstaff Inter-modal Terminal
- North Richmond Hill (e.g., Stouffville Road or Gamble)
- Oak Ridges
- Aurora
- Newmarket

Highway 7 – Markham – Don Mills:

- Leslie and Highway 407
- Various locations along Highway 7, including possible expansion of existing facilities (e.g., First Markham Place, Markville Mall, Main Street Markham, Unionville GO station)

Highway 7 – Vaughan – Downsview:

- Steeles, east of Jane, north of York University
- Highway 7 west of Highway 400

5.5 OPERATIONS AND MAINTENANCE/FACILITIES

To accommodate the transit vehicles for *Quick Start*, operations and maintenance facilities will be required. These facilities could be provided by augmenting an existing maintenance facility or by constructing at a new location. In siting an O & M facility a number of issues must be considered including:

- Factors related to site design, such as size and configuration, surrounding land uses, operational efficiency, and other related items;
- Functional classification factors, such as level of maintenance to be provided, types of maintenance and storage facilities, parking and materials storage, and other related items;
- Staging options and strategies, such as initial and long-term requirements, including potential need for rail vehicle facilities, and other related items; and
- Operational and environmental considerations, such as climatic considerations, potential noise, traffic, management of hazardous materials, and other related items.

6 QUICK START IMPLEMENTATION

To provide improved levels of transit service shortly after the inception of YRTP activities, *Quick Start* infrastructure initiatives will be divided into two phases: short-term improvements that can be implemented immediately, without EA process approval, and longer-term improvements to be implemented following the completion of the EA process within the next 12-20 months.

6.1 SHORT-TERM IMPROVEMENTS

Short-term improvements will focus on facilities and equipment that will ultimately be incorporated into the YRTP Full System (e.g., priority control measures at signalized intersections, stations, and Park-and-Ride facilities). Prior to the commencement of YRTP service, expected in June 2004, these improvements can provide on-going benefits to existing transit services in the Region.

To clearly avoid any potential concerns regarding applicability of the EA process, short-term improvements will focus on projects that clearly fall under Schedule A (see *Municipal Class Environmental Assessment*, Municipal Engineers Association, June 2000). Short-term measures could include:

- Initial elements of a systemwide Intelligent Transportation System;
- Transit priority at signalized intersections systemwide;
- (Potential) Installation of on-board transit vehicle-tracking equipment;
- Creation of intersection queue jumpers (by sharing use of existing general purpose right-turn lanes). Transit vehicles would use the existing right-turn lane at an intersection to bypass congestion and then continue straight through the intersection. A special traffic signal head would indicate a short green signal for transit vehicles exclusively. After transit vehicles bypass congestion, the traffic signal would turn green for general traffic;
- Creation of bus pullouts and intersection queue jumpers that require limited roadway modification; and
- Limited Park-and-Ride facilities.

Following the completion of the list of proposed short-term projects, discussions will be held with MOE to review the proposed list of projects. Given the more immediate concern of existing congestion along Yonge Street and Highway 7, initial short-term efforts focus on these two regional corridors.

Yonge-Newmarket:

Terms of reference for an EA have been reviewed by MOE for the Yonge Street corridor, between 19th Avenue in Richmond Hill and the TTC Finch station. York Region recognizes the importance of keeping proposed short-term projects distinct from the on-going EA process.

Proposed intersections with queue jumpers implemented in the short-term include:

- John/Thornhill – southbound combined with near-side stop
- Royal Orchard – northbound and southbound
- 16th/Carville – northbound and southbound
- Loblaw Mall Supermarket Entrance – northbound
- Weldrick – northbound and southbound
- Harding Boulevard – northbound combined with near-side stop
- Major MacKenzie – both directions combined with near-side stops
- Crosby – northbound combined with near-side stop
- Elgin Mills – northbound combined with near-side stop
- Bernard – northbound and southbound
- 19th/Gamble – northbound combined with near-side stop
- Stouffville – northbound and southbound
- King – southbound
- Bloomington – northbound
- Henderson – northbound and southbound
- Dunning – northbound and southbound
- Orchard Heights – northbound
- St. John's – northbound
- Savage Road – northbound
- Mulock – northbound and southbound

Highway 7:

Terms of reference for an EA have been submitted to MOE for review for the Highway 7 corridor. York Region recognizes the importance of keeping proposed short-term projects distinct from the on-going EA process. Proposed intersections with queue jumpers implemented in the short-term include ALL signalized intersections in the corridor.

7 QUICK START TRANSIT VEHICLES

Rapid transit vehicles will be selected consistent with the nature of the service to be provided and the market served. For *Quick Start*, vehicles will have to meet several functional requirements, including

- Articulated 18-metre vehicles (to meet capacity and operating efficiency goals),
- 100% low-floor (for accessibility),
- Wide passenger aisles (to facilitate boarding and alighting), and
- Precision docking capability (to maximize efficiency at the stations)

These functional requirements are needed because of the large size and nature of the expected market. For instance, articulated vehicles will likely operate on the Yonge Street corridor for the *Quick Start* application, because of the overall volume of transit demand in this corridor and the pattern of ridership, with passengers frequently boarding and alighting, necessitating wide aisles and doors, level access/egress, and a single-level floor throughout the vehicle. The Civis by Irisbus is one vehicle that has demonstrated that it meets all of the functional requirements, and is available for *Quick Start*.

On other routes, where existing demand is lower, but expected to grow substantially, standard 12-meter buses would be initially deployed. As markets and land use mature, high-performance, high-capacity rapid transit vehicles, whether rubber-tired or track-bound, will be deployed on all routes.

The specific number of vehicles required for *Quick Start* service is discussed below. It should be noted that, while articulated 18-metre vehicles are proposed initially for high-demand routes, some of these vehicles could also be used for limited service during peak periods on other routes. The number of these vehicles available for use on other routes will depend on the total number of articulated 18-metre vehicles purchased.

7.1 QUICK START SERVICE LEVELS AND FREQUENCIES

During peak periods, rapid transit service should be frequent enough so that travelers do not need to memorize an operating schedule. In general, a 10-minute frequency (six trips per hour) provides this level of convenience for travelers. During the off-peak, the minimum frequency will average 15 minutes or better in built-up areas. On Yonge Street, frequencies will be higher because of capacity considerations. Over-time, capacity considerations may dictate a move to higher frequencies and upgraded vehicles throughout the system. Suggested service frequencies for *Quick Start* are indicated in Table 1.

Table 1: Quick Start Service Frequencies**			
	Peak Hours	Mid-day (M-F)	Evenings- Weekends
Yonge – Bernard – Newmarket	5 minutes	10 minutes	15 minutes
Vaughan – Downsview	10 minutes	30 minutes	30 minutes
Markham – Don Mills	10 minutes	30 minutes	30 minutes
Highway 7	10 minutes	30 minutes	30 minutes

**Assumes that 18-metre articulated vehicles would be used on the Yonge line and 12-metre standard vehicles would be used on the other lines.

On the Yonge line, especially during peak hours, some trips may operate only between Finch and north Richmond Hill (e.g., Bernard Terminal). The specifics will be subject to further demand estimates and detailed service design. Along the built-up portions of Highway 7, both the Downsview and Don Mills services would mesh schedules with the Highway 7 service to provide a combined five-minute peak service and 15-minute off-peak service in both Vaughan and Markham.

7.2 INTELLIGENT TRANSPORTATION SYSTEMS (ITS) APPLICATIONS

The *Quick Start* program will include a comprehensive, integrated Intelligent Transportation System (ITS). This system will support, through automatic vehicle location and digital communications capabilities:

- Real-time vehicle and station passenger information;
- Traffic signal priority;
- Operations command and control from a central facility (possibly shared with other elements of the York Transit System); and
- Remote safety and security monitoring.

7.3 FARE COLLECTION

Users of YRTP transit services will enjoy a fare collection system that will facilitate fast, multi-door vehicle boarding. In other words, passengers will not be limited to entering transit vehicles by the single door located next to the driver. This fare collection system will be integrated with the system on existing YRT services, and could either be smart card based or a conventional honour-fare, barrier-free system. The system will be designed to be compatible with other fare collection systems used in the GTA.

7.4 OPERATING COST ESTIMATES

Table 2 shows a preliminary estimate of the operating costs and cost components of the four rapid transit lines. Estimates are based on projected annual vehicle operating hours, following an assessment of proposed service frequencies and estimated round trip times. Estimated costs for the Yonge line, with articulated vehicles, are assumed to be \$90 per vehicle hour, while those for the other lines, with standard buses, are assumed to be \$80 per vehicle hour in 2002 dollars.

These rates include provisions for rights-of-way and facilities maintenance.

Table 2: Preliminary *Quick Start* Operating Cost Estimate

	Peak Vehicles (including spares)	Annual Vehicle Hours	Annual Operating Cost **
Yonge – Bernard – Newmarket	26 (30)	86,000	\$ 7,800,000
Vaughan – Downsview	7 (8)	20,000	1,600,000
Markham – Don Mills	10 (12)	30,000	2,400,000
Highway 7	13 (15)	40,000	3,200,000
Total	56 (65)	176,000	15,000,000

** Annual Operating Costs are in current dollars and do not include any debt service costs.

Up to half of the costs shown in Table 2 would be offset by rationalization of existing services, especially on Yonge Street. Also, these cost estimates do not include provisions for offsetting revenues. Because of the potential attractiveness of the services, the built-up nature of the corridors, the efficiency of the new high-speed services, and the projected significant amount of new ridership, cost recovery from fares is expected to cover somewhere between 60 and 80% of the gross operating costs, depending on the specific transit line.

8 CAPITAL COST ESTIMATES

Capital costs for the *Quick Start* program are estimated in millions of current dollars as shown in Table 3.

Table 3: Preliminary *Quick Start* Capital Costs
(Millions of Dollars)

	Yonge-Bernard- Newmarket	Vaughan- Downsview	Markham- Don Mills	Highway 7	TOTAL
Vehicles	\$ 45.0	\$ 4.0	\$ 6.0	\$ 7.5	\$ 62.5
Running Ways	13.5	2.8	2.8	9.2	28.3
Stations	8.7	1.8	1.8	6.6	18.9
Parking	6.4			5.2	11.6
ITS	5.6	1.1	1.1	4.9	12.7
Fare Systems					2.0
O & M Facilities					14.0
TOTAL	\$ 79.2	\$ 9.7	\$ 11.7	\$ 33.4	\$ 150.0