

COMMITTEE OF THE WHOLE (WORKING SESSION) – NOVEMBER 30, 2009

TORONTO-YORK SPADINA SUBWAY EXTENSION PROJECT STEELES WEST AND HIGHWAY 407 SUBWAY STATIONS CONCEPTUAL DESIGN SUBMISSIONS WARD 4

Recommendation

The Commissioner of Engineering and Public Works and the Commissioner of Planning recommend:

1. That the presentation from York Region Rapid Transit Corporation on the conceptual design submissions for the Steeles West and Highway 407 Subway Stations be received; and
2. That this report be received for information purposes.

Contribution to Sustainability

Construction of the Toronto-York Spadina Subway Extension (TYSSE) project will provide higher order transit infrastructure which supports compact urban form and offers an alternative mode of transportation to the single occupant automobile. In addition, the subway extension into the City will facilitate planned transit orientated development and growth in OPA 620 (Steeles West Secondary Plan Area) and the Vaughan Metropolitan Centre area.

The YYSSE is committed to applying sustainability standards in the design and construction of this project.

Economic Impact

There are no economic impacts resulting from the adoption of this report.

Communications Plan

The YYSSE project will include public open houses for the station design concepts and newsletters will be issued at strategic points throughout the design stage of the project. A copy of the initial newsletter is included as Attachment No. 1 to this report. Public Open Houses for the stations within Vaughan are anticipated to commence in early 2010. Project information can be found on the Toronto Transit Commission Spadina Subway Extension web site by following the link noted below:

http://www3.ttc.ca/About_the_TTC/Projects_and_initiatives/Spadina_subway_extension/index.jsp

Staff will be reporting to Council at key milestones throughout the duration of the subway project, which is anticipated to be in service by 2015.

Purpose

The purpose of this report is to provide Council with a high level overview of the key elements of the conceptual design submissions for the Steeles West and Highway 407 subway stations.

Background - Analysis and Options

The Provincial Environmental Assessment (EA) for the TYSSE from Downsview to Vaughan Metropolitan Centre was approved in 2007. The Federal Environmental Assessment was approved in March 2008.

The TYSSE is an 8.6km extension from the existing Downsview Station north west through York University within the City of Toronto and north to the Vaughan Metropolitan Centre in the City of Vaughan as shown on Attachment No 2.

There are six subway stations currently being designed as noted below:

- Sheppard Avenue West, on Parc Downsview Park Lands;
- Finch West station at the corner of Keele Street and Finch Avenue;
- York University station near the common of York University;
- Steeles West station at Northwest Gate and Steeles Avenue, east of Jane;
- Highway 407 station adjacent to Highway 407 and west of Jane Street; and
- Vaughan Metropolitan Centre at Highway 7 and Millway Avenue.

The estimated cost of this project is \$2.6 billion. The general subway alignment and proposed station locations have been identified on Attachment No. 2.

To encourage commuters to use the subway system, approximately 2,900 new parking spaces will be built in connection with three of the subway stations including:

- Finch West Station - 400 spaces
- Steeles West Station - 1,900 spaces
- Highway 407 Station - 600 spaces

Within the City of Vaughan, transit terminals and passenger pick-up and drop-off facilities will be provided at specific stations.

The TYSSE project is currently in the detailed design phase. Station design contracts were awarded last year with design currently underway by three lead design consultants, Arup Canada, AECOM, and The Spadina Group Associates. The TYSSE project office has recently forwarded conceptual design packages for the Steeles West and Highway 407 Stations to the City for review and comment.

Key highlights of the Steeles West Station design include (refer to Attachment No.3):

- Station diagonally located under the intersection of Steeles Ave. W. & North West Gate.
- York Region Transit (YRT) terminal located north of Steeles Ave.
- Transformer substation incorporated into YRT terminal.
- TTC transit terminal located on south side of Steeles Ave.
- On-street passenger pick-up and drop-off parking adjacent to YRT terminal.
- Natural light penetration into station.
- Commuter parking facilities within hydro corridor.

Key highlights of the Highway 407 Station design include (refer to Attachment No. 3):

- Multi-modal terminal (YRT and GO Transit).
- Passenger pick-up and drop off facility.
- 600 commuter parking spaces.
- Natural light penetration into station.

Comments on the current design submissions are due by year end. The design of the Vaughan Metropolitan Centre (VMC) station has not yet been presented to the Toronto Transit Commission. Accordingly, it will be the subject of a future report to Council.

The TYSSE Project Team is advancing the detailed designs for the Steeles West and Highway 407 Stations, subsequent and more advanced submissions will be forward to the City for review by early 2010. Open Houses for the station concepts are being planned for early 2010. Subsequent design development submissions are anticipated over the next six to eight months.

Staff is currently reviewing the Steeles West and Highway 407 Station conceptual plans in light of other strategic initiatives being undertaken by the City. The initiatives noted below require extensive coordination with the TYSSE Project Team and in some cases are required to support opening day infrastructure needs.

- Official Plan Review
- Vaughan Metropolitan Centre Focus Area Study
- OPA 620 Master Servicing Plan
- Vaughan Metropolitan Centre Master Servicing Plan
- Vaughan Metropolitan Centre existing roadway improvements / Municipal Class EA
- Black Creek Optimization Study
- Transportation Master Plan

To meet the planned subway extension opening in 2015, four tunnel boring machines will be used to excavate the tunnels. Tunnel boring machines will launch and bore the twin tunnels for a period of approximately two years while construction of the stations and tracks will continue through to 2015. The Highway 407 Station will be the staging location for tunnel drives to the Vaughan Metropolitan Centre and to the Steeles West stations.

Relationship to Vaughan Vision 2020/Strategic Plan

In consideration of the strategic priorities related to Vaughan Vision 2020, the recommendations of this report will assist in:

- The pursuit of excellence in service delivery;
- Leadership initiatives and promotion of environmental sustainability;
- Effective governance; and
- Planning and managing growth, and economic vitality.

Specific Strategic Plan Initiatives applicable to the recommendations made in this report include Vaughan's corporate priorities to:

- Work with other levels of government to continue to support the expansion of the Go Rail System, local transit and the Subway; and
- Support and plan high capacity transit at strategic location throughout the City.

This report is therefore consistent with the priorities previously set by Council and the necessary resources have been allocated and approved.

Regional Implications

The Region is a funding partner for the Toronto-York Spadina Subway Extension.

Conclusion

Staff are currently reviewing the design concept submissions and will provide comments to TYSSE by years end. The City will continue to work with TYSSE and York Region in supporting the urban design vision for surface infrastructure and other initiatives that are required to support the Spadina Subway Extension project.

Attachments

1. Attachment No 1 – TYSSE Spring 2009 Newsletter
2. Attachment No 2 - Spadina Subway Extension –alignment and station location
3. Attachment No 3. - Presentation – Spadina Subway Update -Steeles West and Highway 407 Stations (10% Conceptual Design)

Report prepared by:

Eric Gupta, Project Manager- Spadina Subway Extension – Ext. 8433.

Respectfully submitted,

Bill Robinson, P.Eng.
Commissioner of Engineering
and Public Works

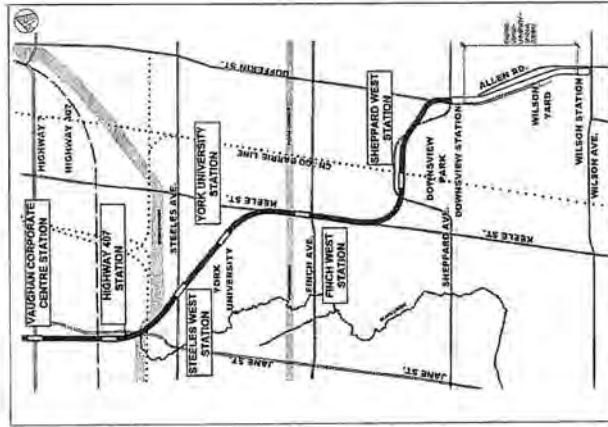
John Zipay
Commissioner of Planning

Andrew D. Pearce, C.E.T.
Director of Development / Transportation Engineering

Diana Birchall
Director of Urban Design

Roy McQuillin
Manager of Corporate Policy

Route Map



For more information:
 - Visit www.ttc.ca
 - Call 416-393-4001 (24 hour comment line)
 - Email: TYSS@ttc.ca

The Toronto-York Spadina Subway Extension project is jointly funded by the Government of Canada, the Province of Ontario, the City of Toronto and The Regional Municipality of York.



Activity on Spadina

The Toronto-York Spadina Subway Extension (TYSSSE) is well on its way to becoming a vital link for commuters, residents and visitors. The \$2.6 billion project jointly funded by the Government of Canada, the Province of Ontario, the City of Toronto and The Regional Municipality of York will provide a high quality rapid transit service connected to the fastest growing region in the GTA.

This extension will provide a crucial expansion to the existing Toronto Transit Commission's (TTC's) Yonge-University-Spadina subway and for the first time, cross the City of Toronto boundary into the City of Vaughan. The 8.6 km subway extension will have six stations along the route with accompanying commuter parking facilities and bus terminals.

Currently, the project is in the design phase. Station design contracts and the tunnelling design contract were awarded last year. Station design is currently underway by three lead design consultants - Arup Canada Inc., AECOM and The Spadina Group Associates. Public open houses will begin this year to unveil the preliminary design concepts of the six stations.

Over the next year, drill rigs will be used to gather soil samples at the future stations and tunnel locations along the project route. This drilling will gather soil samples to confirm ground conditions that will help engineers and designers determine design criteria, as well as soil and groundwater management measures that will be required along the alignment.

As this extension ties into the existing Yonge-University-Spadina subway, another track will be required for operations at TTC's Wilson Yard, south of Downsview Station. Starting later this fall, this work will require temporarily detouring a small part of Allen Road.

To meet the planned subway extension opening in 2015, four earth pressure balance tunnel boring machines will be used to dig the tunnels. Construction on the tunnels is expected to begin in 2010. Tunnel boring machines will launch and bore the twin tunnels for almost two years while construction of the stations and installation of the track and signals will continue through to 2015. During the last year of the project, project engineers and TTC operations staff will test, commission and safety certify the system before it is opened to the public.



Meet Andy Bertolo, P.Eng
 CHIEF PROJECT MANAGER

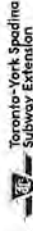
Love to play with train sets? For Andy Bertolo, he is building the ultimate train set.

Working with a project office staff of 84, growing to 120 in 2010, the Toronto native is in charge of building the Toronto-York Spadina Subway Extension.

Bertolo is a Professional Engineer who has worked for the TTC since 1997, following a 26-year career with Canadian National Railways.

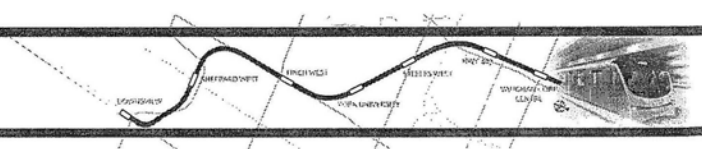
Building railways is nothing new to Bertolo who was the Chief Project Manager for the Sheppard Subway line. "Pretty well all issues that the project encounters ultimately relate to the goal of delivering the project as a quality product in a timely, safe and cost-effective manner."

Bertolo added that residents living near the start of the Spadina subway line, between Wilson and Downsview Station, will soon see visible signs of progress. The first major construction contract for the extension is to build a structure connecting the TTC's Wilson yard and the main line south of Downsview Station.

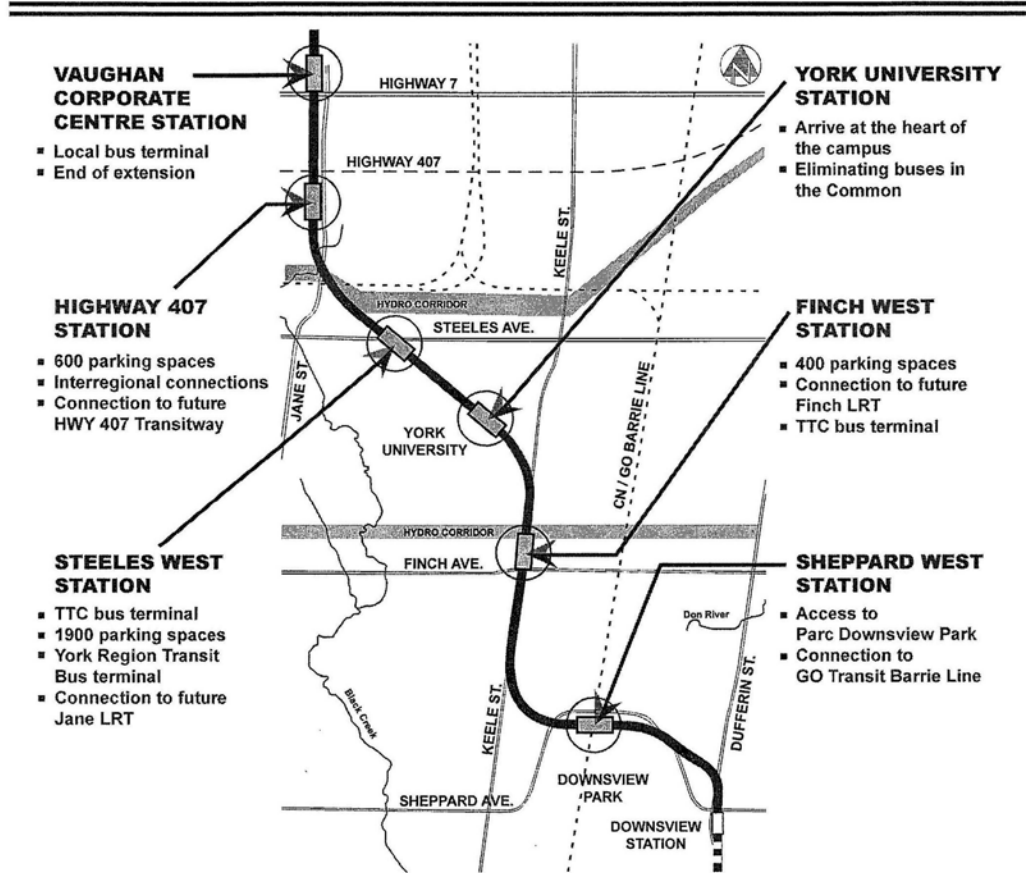





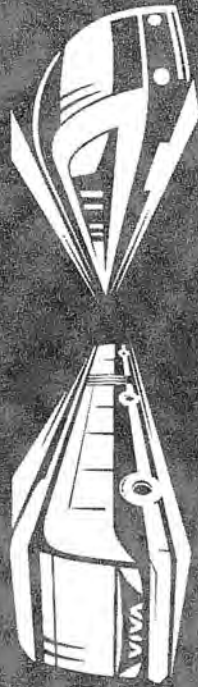
Toronto-York Spadina
Subway Extension



SUBWAY EXTENSION



<ul style="list-style-type: none"> Length of Extension: 8.6 km Project Timelines: <ul style="list-style-type: none"> > Start Tunnel Construction End of 2010 > Station Construction starts Mid 2010 > Start of Service End of 2015 <p>Ride the NEW Rocket to York Region</p>	 <p>Toronto-York Spadina Subway Extension</p>
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Spadina Subway Update
York Region Rapid Transit Corporation

City of Vaughan – Committee of the Whole

November 30, 2009