

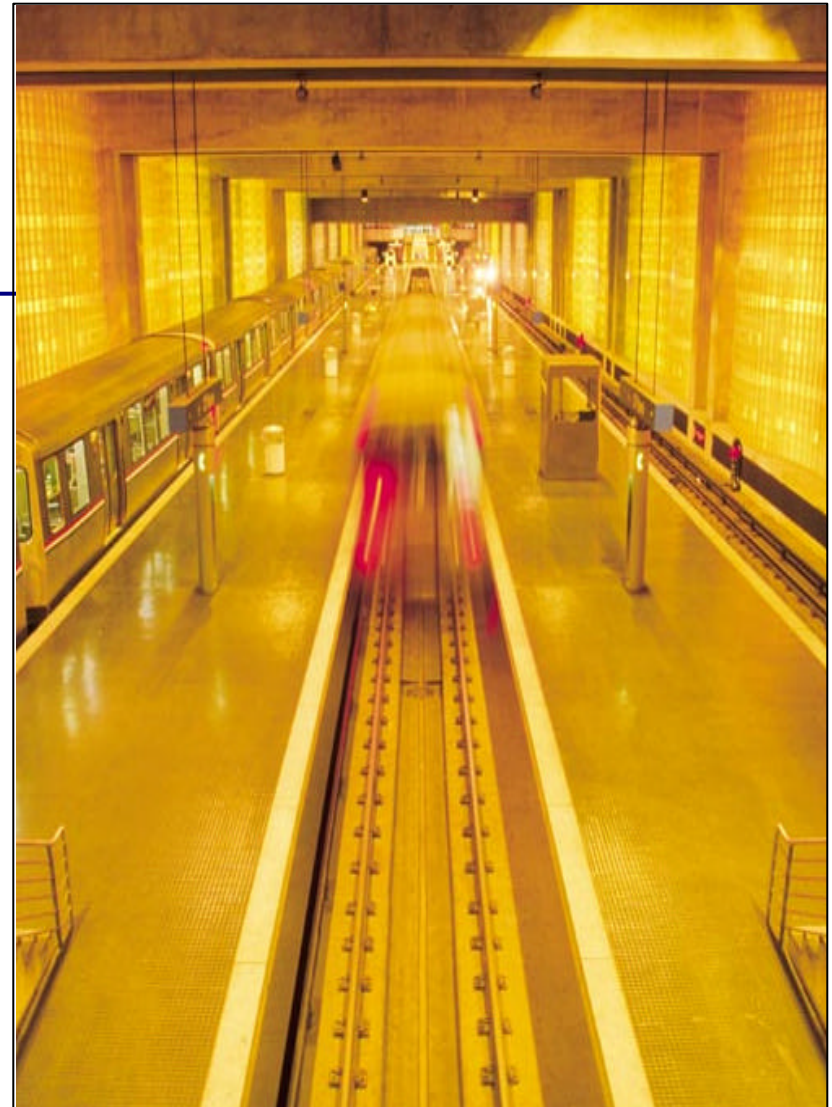
# Spadina-York Subway Extension

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Business Case:  
*A Solution for Gridlock in the  
Northwestern GTA*  
*Executive Summary*

June 22, 2001

Prepared for:  
The Spadina-York Subway  
Extension Committee



## Introduction

### **Objectives**

PricewaterhouseCoopers LLP ('PwC') was retained by the Spadina-York Subway Committee to prepare a business case, utilizing readily available information, in support of the Spadina Line subway extension from Downsview Station at Sheppard Avenue and the Allen Road to the planned Vaughan Corporate Centre located in the northeast and southeast quadrant of Highway 7 and Highway 400.

We understand that the Spadina-York Subway Extension Committee will use the business case to communicate the benefits of the project to decision-makers and influencers in recommending and approving rapid transit expansion projects for the Greater Toronto Area (GTA).

The primary objectives of the business case are as follows:

- i) define the project and its estimated costs;
- ii) assess the benefits of the project;
- iii) identify potential cost reductions and financing alternatives; and
- iv) summarize the unique opportunities that the subway extension offers to the GTA and the Province.

### **Scope of Work**

The scope of PwC's work included the following:

- Collecting and reviewing background information;
- Meetings with representatives from the Toronto Transit Commission, City of Vaughan, Region of York, the Greater Toronto Services Board, and York University;
- Identifying the benefits of the subway extension; and
- Identifying potential cost reduction and financing alternatives.

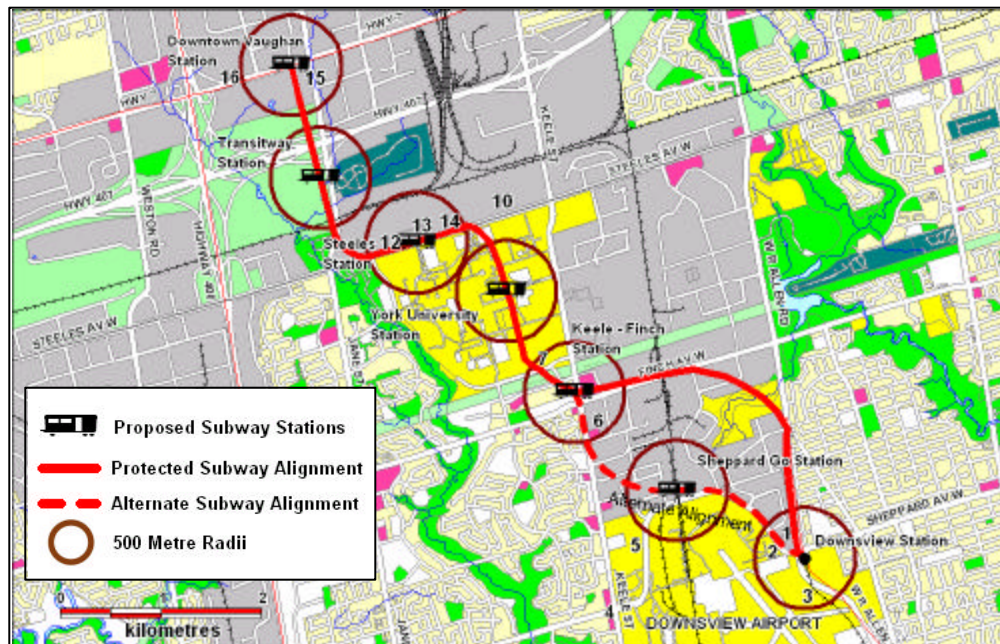
PwC relied on information provided to it by the York Spadina Subway Committee, but did not undertake an independent audit or verification of this information.

## The Need For Expanded Transit Infrastructure in the Northwestern GTA

- Over 70 percent of the existing highway network in the Greater Toronto Area (GTA) is congested in peak periods. Current congestion levels indicate clearly that the present regional transportation infrastructure cannot adequately support the needs of 5 million persons, let alone the additional 2.6 million that are forecasted over the next 30 years in the GTA.
- Traffic gridlock in the GTA carries an annual cost to businesses and road users of \$2B, provides a significant dampening effect on economic activity, impairs the “liveability” and quality of life of the region, reduces the GTA’s global competitiveness, and contributes to environmental degradation.
- There is limited land availability in York Region to expand its road network. According to York Region, approximately 25% of the major road network is currently operating at or near capacity.
- At the local level, major-transit trip generators such as York University, the future Vaughan Corporate Centre, the proposed Humber River Regional Hospital, and the planned Downsview Research and Technology Park are under-served by surface transit.
- At the regional level, there are presently no high-order transit gateways at the York/Toronto boundary, nor are there any viable inter-modal transfer points for commuter traffic from the Highway 400/407 corridors.
- According to the Ontario Trucking Association, the Highway 400/401 Interchange is one of the busiest sections of highway in North America. Truck volumes alone in this area exceed 35,000 vehicles per day.
- There is an urgent need for major transportation network improvements that improve levels of service in underserved transit areas of the northwestern GTA, an area that has long been under-served by higher-order transit connecting it to the central area.
- The *Spadina-York Subway Extension* efficiently addresses these needs.

## Project Definition

- An 8.6 km extension of the Spadina subway north and west from Downsview Station, to the Vaughan City Centre via the York University campus.
- Five subway stations, plus a potential GO-Train link.
- One major regional commuter gateway facility (i.e. the Steeles Avenue Gateway Station) at the York/Toronto boundary comprising 3,000 parking spaces and 18 bus bays.
- The project provides a high-order north-south commuter connection between downtown Toronto and the City of Vaughan / Region of York.
- The project can be logically phased. Phase One would comprise a subway extension through York University to Steeles Avenue to the Steeles Avenue Gateway. Phase 2 would extend northward to the planned Vaughan Corporate Centre.



Proposed Spadina-York  
Subway Extension Corridor

## Direct Project Benefits

- The project will serve as a major transit funnel to and from Toronto and the rapidly growing areas including: York Region, Brampton, and Barrie, helping to alleviate traffic congestion on Toronto's roads and highways.
- Transit options that reduce traffic levels and improve the overall efficiency for transporting goods in, out and across the GTA must be considered a priority. Based on the most recent planning projections for the GTA, the largest share of future population and employment growth will occur north of Steeles Avenue.
- From a land use perspective, the proposed subway alignments between Downsview Station and the City of Vaughan represent excellent opportunities for intensification of the transit corridor.
- The subway route has the potential to accommodate an additional 124,000 employees/post-secondary students and 28,000 residents along the subway route. Approximately 55% of this development activity would be sited within 500 metres of the proposed stations, the remaining 45% would be located on the immediate periphery – but still within close walking distance.
- The project has significant environmental benefits because of its potential to reverse the tide of northward expansion of residential development and employment – alleviating future development pressure on the Oak Ridges Moraine.
- The ability to retain students locally by providing accessible post-secondary options will have lasting economic benefits on the GTA. Research has shown a high co-relation between investment and business start-up and place of education. York University is a key economic development driver in the GTA, and represents a valuable asset for York Region and the City of Toronto to leverage from and support. The project would facilitate York Region's and the City of Toronto's ability to strengthen this relationship.
- The project has the capacity to serve as a development catalyst for a "Bio-medical R&D Corridor" in the GTA by functionally linking key research facilities (such as York University, University of Toronto, the Defence and Civil Institute for Environmental Medicine, and the downtown Toronto research hospitals located along University Avenue) with the proposed Research and Technology Park at Downsview, the newly proposed Humber River Regional Hospital sited at Keele Avenue and Sheppard, and the Vaughan Corporate Centre.
- The proposed subway route would also provide residents in the northwestern GTA with a safe, reliable and convenient means of accessing specialized health care services in Toronto.

## Financial Benefits

- Much of the route is protected for transit use, reducing implementation costs.
- Relatively low construction costs due to “cross-country” routing.
- Relatively low economic costs of construction disruption due to “cross-country” routing.
- Optimizes utilization of current subway infrastructure by balancing load on Yonge and Spadina lines.
- Potential for reducing public sector costs through public-private partnerships in some aspects of procurement (design and construction), operation, and financing.
- Acts as a catalyst for higher density development land uses along the corridor.
- Advanced in the planning stages, reducing implementation costs.

## How Project Meets Local and Regional Objectives

In addition to satisfying the secondary planning visions of strategic areas the City of Toronto (i.e., Downsview and York University) and the City of Vaughan (i.e., the Vaughan Corporate Centre) the proposed subway extension satisfies the broader planning goals and objectives of creating a healthy, efficient and sustainable urban region.

The Greater Toronto Services Board (GTSB), the Province of Ontario and the Toronto Transit Commission (TTC) each have criteria for evaluating the viability and desirability of transit and infrastructure projects. The following table summarizes how this project meets their stated objectives.

Criteria	How the Project Meets Criteria
<b>Greater Toronto Services Board – Removing Road Blocks: A Strategic Transportation Plan</b>	
Contributes to connected rapid transit network throughout GTA.	Interconnects TTC subway backbone, GO train, GO Bus, Brampton Transit, York Transit buses, future 407 transitway vehicles, and 400-series highway infrastructure.
Promotes compact and mixed-use developments that support transit.	Existing development along project route is mixed use. Future development will intensify mixed uses with developments at six nodes, including commercial, residential, hospital, and educational facilities.
Optimizes the use of all elements of transportation network.	Reduces load on congested roads and highways (both cars and buses) while balancing load on the Yonge-Spadina subway line.
Encourages development in urban centres and near transit stations.	Project contributes to “Smart Growth” by encouraging intensification within existing urban areas and/or along established transit corridors. Vaughan Corporate Centre Node is located on protected transit corridor.
Accommodates growth through strategic additions to the transportation network.	Increases north-south capacity of transit network between York Region and downtown Toronto, supporting growth in York Region, at York University, and along the route.
<b>Greater Toronto Services Board – Transit Corridor Priorities and Phasing Study</b>	
Potential for short-term and long-term peak and off-peak ridership and increased modal split.	Many local residents, students and workers are both under-served by transit and have no private vehicle alternative, so desirable modal split and short term demand are virtually guaranteed. York University and Seneca College have both a “reverse-flow” and off-peak transit demand that will be realized immediately and into the future as the campus intensifies and densities.
Network connectivity, continuity, and coordination with other transit services, making use convenient and attractive.	Interconnects TTC subway backbone, GO train, GO Bus, Brampton Transit, York Transit, future 407 transitway vehicles, and 400-series highway infrastructure.
Current and future land use supportive of transit.	Current development (e.g., York University) supports high order transit. Official Plans support intensification and densification in alignment with proposed project routing to assure long term demand.
Readiness of project and ease of implementation.	Significant portions of route are protected, planning has been done to meet EA requirements, Phase 1 has notionally received EA approval. Project is well advanced in the planning stage and can be advanced to an EA rapidly.
Relative cost-effectiveness.	“Cross-country” routing and protection of lands make the project relatively cost-effective compared to other potential subway projects.

<b>Continued Criteria</b>	<b>How the Project Meets Criteria</b>
<b>Province of Ontario - Ontario SmartGrowth</b>	
Sustains a strong economy	The project will directly serve one of the fastest growing areas the Province (and the GTA), thereby enabling the improved movement of goods and people through the region. The project utilizes and enhances existing subway resources, and establishes physical linkages between key research facilities such as York University, Seneca College, University of Toronto, the Defence and Civil Institute of Environmental Medicine and the downtown research hospitals with intensification and greenfield development opportunities.
Builds strong communities	The project serves to strengthen and reinforce quality of life issues in the GTA by mitigating traffic congestion in an area that has long been under-served by higher order public transit. The project will be the catalyst needed to encourage new residential development opportunities at densities that are (a) transit supportive and (b) enhance the physical attractiveness of the area. Subway investment will also enhance the liveability of central area neighbourhoods by reducing flow-through traffic, noise and parking.
Promotes a healthy environment	The project will stem the tide of northward expansion of the GTA by providing more residential choices within close proximity of the proposed route, reducing development pressures on agricultural and/or environmentally sensitive lands.
<b>Province of Ontario - SuperBuild: Building Ontario's Future</b>	
Creation of region-wide network service benefits	Integrates York Region transit, Brampton Transit, GO Transit, and TTC surface (bus) routes with higher order rapid transit. Provides a north-south connection for future 407 transitway. Provides for a new modal transfer point with GO train service.
Extension of existing inter-regional commuter rail corridors.	The project extends the existing local Spadina subway corridor into an inter-regional corridor, and optimizes the utilization of current infrastructure.
New inter-regional commuter rail corridors.	The project creates a new commuter rail corridor between York Region and downtown Toronto.
New or improved regional transit hubs and gateways.	Creates new transit hubs/gateways at Steeles Station (Phase 1) and Vaughan Centre (Phase 2)
Advanced transit technologies	Subway technology is the most advanced in terms of rider convenience and comfort, transit efficiency, surface pollution and noise levels.

<b>Continued Criteria</b>	<b>How the Project Meets Criteria</b>
<b>Toronto Transit Commission – Factors Influencing Land Use Impact of Rapid Transit Investment</b>	
Local public/private development investment activity.	Project will serve a rapidly expanding market that has demonstrated strong investment characteristics (i.e. Vaughan) and will serve other areas that have traditionally been underserved by both transit and investment (Downsview and York University). The project will serve as a catalyst for several high profile projects.
Local land available, assembled, and cost-effective for (re)development.	Large tracts of prime developable land are currently under single ownership, thereby facilitating manageable, rational development practices that are transit supportive.
Transit expansion stimulates new sustainable growth locally.	Alignment options connecting Downsview Station and the Vaughan Corporate Centre maximize the benefits accrued by new and expanded educational and healthcare amenities. The line also supports medium and high-density residential developments on lands throughout the corridor.
Local land use policies and public aligned with transit expansion and (re)development.	City of Vaughan Official Plan has protected the project corridor and lands for commuter parking and the Steeles Station. York University has protected two rights-of-way for the project. The City of Toronto has notionally received Environmental Assessment approval for the project, and is undertaking the Keele Employment Area Study and the Keele Street Land Use Study to develop transit-supportive plans as part of the Official Plan update.
Local lands attractive for transit-supportive (re)development and competitive with other opportunities.	Greenfield and redevelopment opportunities along project route are planned for transit-supportive densities. York University is already at a transit-supportive density, and the University has committed a large area south of the campus of greenfield development of non-academic uses (i.e. market residential, office and retail). In the City of Vaughan, local lands are situated at crossroads of the 400-series highway network as well as located on protected rapid transit corridor.
Alignment with Official Plans and Senior Government objectives.	Meets provincial and regional transit objectives (see above). Consistent with City of Toronto, Region of York and City of Vaughan Official Plans.

## Conclusions

- The project meets local, regional, and provincial objectives for transit initiatives.
- Land use and demand for transit are supportive of the project, both immediately, and into the future.
- The project expands and improves the effectiveness of the regional transit network, while optimizing and balancing the backbone of the Toronto transit system infrastructure.
- The proposed Steeles Avenue Gateway Station, with 3,000 parking spaces and 18 bus bays, would divert buses and commuters from other transit facilities such as Yorkdale, Finch Station, and York Mills -- providing direct relief to *bottom end* congestion along Highway 400, Black Creek Drive, The Allen Expressway, Yonge Street and Highway 401.
- The project contributes to the liveability and viability of the GTA as an economic centre through direct transportation, environmental, educational, employment, and land-use benefits.
- The project has many spin-off features making it a cost-effective option relative to other potential investments in subway infrastructure elsewhere in the GTA.
- Independent and separate planning processes have concluded that the project is highly desirable, technically supportable, and favoured over other transit options for the corridor.
- The project is well advanced in the planning and approvals process, and can be implemented on a timely basis, in two logical phases if required.
- The project represents the first and only inter-regional higher-order transit corridor that is presently protected and extends beyond the City of Toronto boundary.