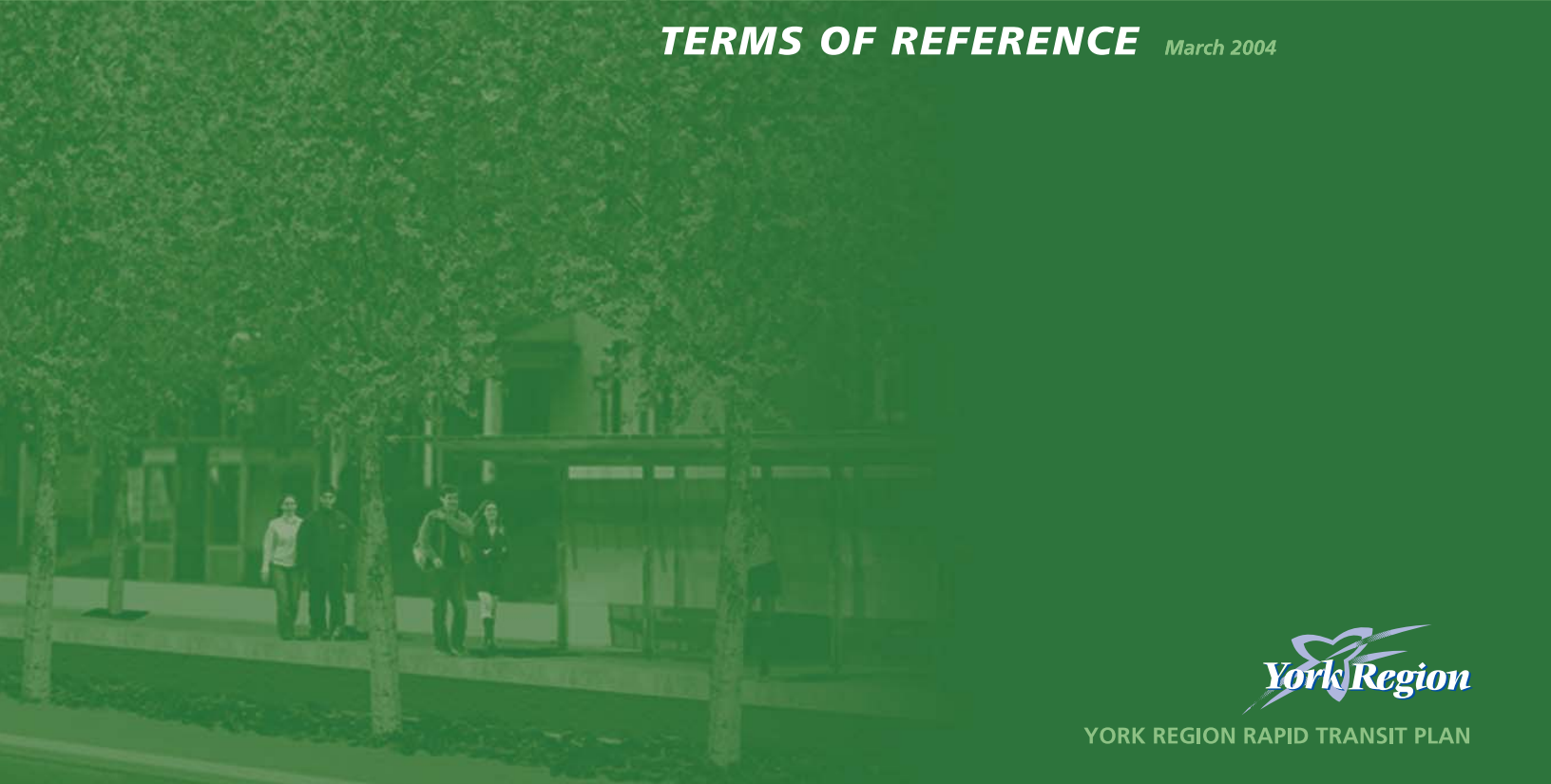


**ENVIRONMENTAL ASSESSMENT**

**HIGHWAY 7 CORRIDOR & VAUGHAN  
N-S LINK PUBLIC TRANSIT IMPROVEMENTS**



**TERMS OF REFERENCE** *March 2004*





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## **1. INTRODUCTION**

The Regional Municipality of York, (York Region), the proponent for the undertaking, wishes to proceed with the preparation of an Individual Environmental Assessment of public transit improvements in the Highway 7 and Vaughan North-South Link Corridors, in accordance with the Ontario Environmental Assessment Act.

In June 2003, the Region obtained Ministry of the Environment approval of a Terms of Reference (ToR) prepared under section 6 (2) (c) of the Environmental Assessment Act (EAA). This ToR set out in detail the requirements for preparation of the EA based on the findings of a Need and Justification Study carried out by the Region in 2002.

In October 2003, the Ministry of the Environment informed all proponents for Environmental Assessments that, due to a recent Divisional Court ruling on an undertaking in Eastern Ontario, it was unable to accept for review and approval EA Reports prepared under section 6 (2) (c) of the Act. Consequently York Region is re-submitting this Terms of Reference for the Minister's approval under section 6. (2)(a) of the EAA. The ToR will outline what will be studied in the EA to address the information requirements set out in section 6.1(2) of the EAA. These requirements include the following:

- A description of the purpose of the proposed undertaking;
- A description and statement of the rationale for the proposed undertaking, the alternative methods of carrying out the undertaking and the alternatives to the undertaking;
- An assessment of the alternatives to the undertaking;
- A detailed description of the environment to be affected and the actions needed to mitigate the effects;
- A description of the effects that will be caused or that might reasonably be caused to the environment;
- An evaluation of the advantages and disadvantages to the environment;
- A description of the public and agency consultation process undertaken during the EA preparation.

Through the EA study, the requirements of the Canadian EA Act will be addressed, subject to final confirmation of CEAA applicability.

### **1.1 PURPOSE AND OUTLINE OF TERMS OF REFERENCE**

The preparation of a Terms of Reference is a requirement of section 6.(1) of the EAA the purpose of the ToR is to describe the characteristics of the EA study. Once approved by the Minister of the Environment, this re-submitted Terms of Reference (ToR) will both provide the framework for preparing the EA and serve as a benchmark for reviewing the EA. It is understood that given the nature of a ToR and the complexity of the EA it is not intended to present every detail of all activities that will occur when preparing the EA. However the ToR sets out the minimum requirements and describes the methodology for conducting the EA, including:



***Highway 7 Corridor & Vaughan North-South Link Public Transit Improvements  
Environmental Assessment Terms of Reference***

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- a preliminary identification and description of the Alternatives to the Undertaking;
- a preliminary description of the study area and the existing environment;
- a description of the public and agency consultation undertaken during the ToR preparation;
- a work plan outlining the process to be followed and activities to be carried out in the EA Study;
- a description of the public consultation to be conducted during the EA study process;
- other approval requirements;
- a commitment to carry out compliance monitoring.



## **2. PURPOSE OF THE UNDERTAKING**

### **2.1 STATEMENT OF THE PROBLEM**

York Region has had the greatest proportional increase in population and employment amongst the four suburban regions of the Greater Toronto Area over the past 10 years. Within the 2021 planning horizon, the population of the Region is forecast to increase from the current 0.8 million residents to 1.2 million residents, while employment is estimated to increase from the existing 385,000 jobs to 655,000 by the year 2021.

Much of this growth is targeted to live and/or work in the southern areas, which include the Highway 7 corridor. This growth will generate a proportionate increase in travel demand. While it is expected there will be a greater segment of the population living and working within the Region itself, north-south travel demand between the Region and the City of Toronto will also remain a dominant feature amounting to 35% of total travel demand. Part of this travel will occur in the Vaughan North-South Link corridor.

York Region's Official Plan places a strong emphasis on significantly increasing public transit use to accommodate future transportation needs and support the Plan's vision of sustaining the natural environment, optimizing economic vitality and ensuring healthy communities. Three out of the four regional centres identified in the Regional Official Plan are located along the Highway 7 corridor – Vaughan Corporate Centre, Richmond Hill Centre, and Markham Centre. In addition, York University is immediately adjacent to the corridor, being on the boundary between York Region and the City of Toronto.

The long-term vision for Highway 7 is for it to develop into a multi-use, transit-supportive, urban street, providing an integrated community for residents to live, work, play, and learn. The Highway 7 corridor will link the three regional centres that serve as compact mixed-use areas intended as focal points for business, government and culture. Complementary medium and high-density residential development as well as historical and main-street areas, employment and business parks and rural and natural areas will round out the development in the corridor.

The Region's 2002 Transportation Master Plan (TMP) has reaffirmed the need to achieve a balanced transportation system by implementing rapid transit in four corridors. The TMP incorporates the Government of Ontario's Smart Growth vision for fostering and managing growth. This study and others completed recently have confirmed that most of the major east-west roads in southern York Region are at or approaching capacity and cannot sustain the Region's continual growth trend in auto traffic. Public transit has been identified to have an essential role to meet future travel needs, increase accessibility for residents, reduce dependence on automobiles, support the planned urban structure of the Region, and accommodate planned growth.

In the planned rapid transit network, shown in **Figure 1**, three of the four corridors comprise north-south rapid transit facilities. These include a link from the Vaughan Corporate Centre to the Spadina Subway. The others are the Yonge Street Corridor connecting Newmarket Regional Centre to the Yonge Subway, and a link from the proposed Markham Centre to the Sheppard Subway. The fourth corridor is an east-west rapid transit facility in the Highway 7 corridor connecting to all three of the north-south rapid transit lines, to the Region of Peel in the west and to the Region of Durham in the east.



Figure 1  
Rapid Transit Network



## 2.2 THE PURPOSE OF THE UNDERTAKING

The purpose of this “Undertaking”, the Highway 7 Corridor and Vaughan North-South Link Transitway, encompasses two fundamental objectives:

- Firstly, to respond to growth pressures by providing an improved public transit alternative to reduce automobile dependence; and
- Secondly, to help make the Region’s urban centres more liveable, pedestrian-oriented and economically viable by providing a valuable tool for structuring and achieving land use and social objectives.

In the Highway 7 and Vaughan N-S Link Corridor, the purpose can be summarized as:

- Providing improved public transit infrastructure and service in the network’s primary east-west corridor and western north-south corridor capable of reducing road congestion by increasing transit ridership significantly both within the corridor and across the network and regional boundary.
- Integrating public transit facilities in a manner that improves and enriches streetscapes with new amenities by using a holistic urban design approach to support the Region’s goals for mixed-use transit-oriented development along the corridor.



The first objective will be supported by interconnection with the other corridors and GTA transit systems such as GO Transit commuter rail and 400 highway series bus services and the TTC network in Toronto.

GO Transit has recently undertaken an Inter-regional Bus Rapid Transit (BRT) study, in which the main objective was to identify a feasible inter-regional bus rapid transit alignment and implementation strategy that complements and supports GO Transit's existing rail and bus network.

GO Transit's study acknowledges that rapid transit must be capable of attracting people who would otherwise drive when making suburb to suburb trips. This means complementary urban and inter-regional rapid transit systems that can emulate the network service provided by the freeway and arterial road system. Inter-regional systems are characterized by wide station spacings and high speed operations that favour long distance trips. Urban rapid transit operates at slower speeds with a closer station spacing to serve the local land use.

The proposed Highway 7 Corridor transit improvement are envisioned as urban public transit service, complementary to the inter-regional rapid transit system described in GO Transit's BRT study, and interconnected with other transit services including conventional bus services, GO Transit and the TTC network.



### **3. DESCRIPTION OF THE PROPOSED UNDERTAKING**

The undertaking, for which Ministry approval is sought, comprises the infrastructure, systems, vehicles and subsequent operational requirements necessary to achieve a significant improvement in public transit service and its attractiveness. In addition, the effects of a subway extension will be assessed for the link between the Vaughan Corporate Centre (in the Jane Street/Highway 7 area) to York University, in the event that the Spadina Subway is extended from the current terminus at Downsview Station to York University in the City of Toronto.

The proposed geographic limits of the EA Study Area for the Highway 7 Corridor Transitway is shown in **Figure 2** at the end of this document. It is generally located along the Highway 7 Corridor and bounded by the York-Peel boundary (Highway 50) to the west, and York-Durham boundary (York-Durham Line) to the east. The southern limit of the Study Area is Steeles Avenue while the northern limit is Major Mackenzie Drive.

At some point during the planning period to 2021, it is expected that the TTC's Spadina Subway would be extended north of Sheppard Avenue to York University. A logical approach in developing this extension is to define the northern limit as the proposed Vaughan Corporate Centre on Highway 7 at Highway 400. This will support the development of the Region's nodes and corridors strategy and respond to the corresponding growth in inter-regional transit demand. In order to protect property for a subway extension north of the Regional boundary, the extension will form part of the undertaking in this EA.

As indicated in Figure 2, the final alignment/configuration of the Undertaking has not been determined and will evolve from the detailed impact assessment analysis of the alternatives carried out during the EA Study. Accordingly, the final description of the Undertaking will be included in the EA document.



## **4. DESCRIPTION OF STUDY AREA**

### **4.1. DEFINITION OF THE EA STUDY AREA**

The geographic limits of the EA Study Area for the development of the undertaking were selected using the following guidelines:

- The constraints and opportunities within the study area as identified through the inventory of the existing and planned environment completed as part of a Need and Justification analysis carried out by the Region in parallel with ToR preparation;
- The configuration of the rapid transit network proposed in York Region's Transportation Master Plan considering integration with the existing TTC network; and
- The forecast level of transit ridership along the length of the corridor within the planning period to 2021.

The environmental inventory together with the resulting EA Study Area is illustrated in **Figure 3 a), b), c)** at the end of this document. The study area will be confirmed by the EA such that the study boundaries will include all environmental effects (natural and socio-economic) that will be influenced, including displacement and disruption in the area.

The corridor inventory will be updated as part of the EA process to include mapped data from the following sources:

- Oak Ridges Moraine Conservation Plan mapping information including:
  - the Land Use Designation Map
  - the Landform Conservation Area Map
  - the Areas of High Aquifer Vulnerability Map
- The MOE, Ministry of Natural Resources (MNR), Ministry of Municipal Affairs and Housing (MMAH), May 2000 Natural Heritage System for the Town of Richmond Hill, Town of Markham and City of Vaughan.
- Information contained in Figure 1, Figure 2, Figure 3 Schedules to proposed Official Plan Amendment 37 to the Region of York Official Plan, this includes updated information on rivers, wetlands and forests.
- Updated mapping from the MNR on wetlands.
- Mapping from the 2001 Rouge North Management Plan, 1997 Legacy: A strategy for a Healthy Humber and 1994 Forty Steps to A New Don for sub-watersheds within the EA Study Area
- Updated information on natural heritage and ecosystem features from the Toronto and Region Conservation Authority.
- The latest constraint mapping from the Toronto Region Conservation Authority.



During the EA study, if a significant net adverse environmental effect is determined to impact outside of the EA Study Area, the study area may be expanded for the purpose of evaluating the full effect of the identified significant net adverse environmental effect. For example, the assessment will identify the nature and level of effect of the undertaking and recommend mitigation measures for environmental factors such as noise, groundwater and vegetation. If the evaluation concludes that an effect extends beyond the EA Study Area (as described above) after recommended mitigation measures are identified, the study area will be expanded to encompass the geographic area where the effects are taking place, i.e. where there are changes in level of service of adjacent roads, in very specialized cases where a water feature such as a stream or an adjacent wetland outside the EA Study Area is potentially impacted or a fragmentation of forest/wooded area necessitates the relocation of a route alignment.

Criteria will be developed early in the EA process in consultation with appropriate agencies/parties to determine the necessity to expand the EA Study Area. Any future commitments to developing a monitoring program for the construction and operation of the transit improvements will include the expanded area(s).

#### **4.2. DESCRIPTION OF EXISTING NATURAL AND BUILT ENVIRONMENT**

Highway 7 is one of the busiest transportation corridors in York Region. It serves a number of communities with a variety of land uses, links the Region's southern municipalities, and acts as a connector to the major north-south transportation and transit networks. Currently single-use districts of alternating employment, residential and commercial use dominate the Highway 7 and Vaughan N-S Link corridors

The Highway 7 corridor is designated as a primary development corridor in the York Region Official Plan, with a mix of residential and employment use. The corridor will link three regional centres (Vaughan Corporate Centre, Richmond Hill Centre, and Markham Centre) that serve as compact mixed-use areas intended as focal points for business, government and culture. Complementary medium and high-density residential development as well as historical and main-street areas, employment and business parks and rural and natural areas will round out the development in the corridor. York University constitutes a major activity node on the edge of the corridor in the west.

During the Environmental Assessment, the existing and planned development will be inventoried in detail.

The general land use within the EA Study Area is illustrated in **Figure 4 a), b), c)** at the end of this document. The existing and planned development will be inventoried in detail in the initial stages of the proposed EA analysis and will be presented in the EA documentation.

The assessment of the proposed transit improvements will take into consideration the potential effects the project may have on the Don, Rouge and Humber River Watersheds. The EA Study Area is also characterized by the presence of several provincial and regional Environmental Significant/Sensitive Areas (ESAs), provincially significant wetlands (PSWs) and several Areas of Natural and Scientific Interest (ANSIs).

A full description and inventory of the natural environment in the Study Area will be provided in the EA Report.



## **5. ENVIRONMENTAL ASSESSMENT WORK PLAN**

This chapter describes the work plan that will guide the EA study.

### **5.1. GENERAL REQUIREMENTS**

The EA study will be consistent with the approach and requirements set out in Section 6.1 (2) of the *Environmental Assessment Act*. The EA will have the following components:

- A description of the purpose of the undertaking;
- A description of and statement of the rationale for the proposed undertaking, alternative methods for carrying out the undertaking and alternatives to the undertaking;
- A description of:
  - (I) the environment that will be affected or might reasonably be expected to be affected, directly or indirectly,
  - (II) the effects that will be caused or that might reasonably be expected to be caused to the environment, and
  - (III) the actions necessary or that may reasonably be expected to be necessary to prevent, change, mitigate or remedy the effects upon or the effects that might reasonably be expected upon the environment,by the undertaking, the alternative methods of carrying out the undertaking and the alternatives to the undertaking;
- An evaluation of the advantages and disadvantages to the environment of the undertaking, the alternative methods of carrying out the undertaking and the alternatives to the undertaking,
- A description of any consultation about the undertaking by the proponent and the results of the consultation

The specific activities to be carried as part of the EA are described in more detail in the following subsections. The proposed schedule for ToR review and approval and the execution of the EA Study and its documentation is as follows:

- Submission of the ToR by mid-March 2004
- A 30-day public and agency review of the EA ToR included in the 12 weeks for review and approval of the EA ToR by the Ministry of the Environment;
- Eight weeks for incorporation of relevant documentation and findings of transportation and environmental planning studies conducted previously by York Region and completion of any further EA Study activities, including additional public consultation to present final study recommendations.
- An estimated EA Report submission date of early August 2004
- Up to 30 weeks for Ministry of the Environment review and approval of the EA Documentation.



## **5.2. DESCRIPTION OF EXISTING LAND USES**

As background to the rationale for the undertaking, the EA will provide a detailed description of the undertaking background and context on urban development trends, key corridor constraints and opportunities and a historical chronology of planning activities that established a need for the undertaking.

## **5.3. DESCRIPTION OF AND STATEMENT OF RATIONALE FOR**

- **THE UNDERTAKING,**
- **ALTERNATIVES TO THE UNDERTAKING, and**
- **ALTERNATIVE METHODS OF CARRYING OUT THE UNDERTAKING**

### **5.3.1. Identification of Problem and Opportunities**

In general terms, the proposed undertaking can be described as enhancements to public transit service generally extending between the western and eastern regional boundaries in the Highway 7 Corridor and the corridor in Vaughan to link to the TTC's Spadina Subway in the City of Toronto.

Building on the analysis and recommendations of the 2002 York Region TMP and relevant information from other subsequent transportation planning studies, the rationale for the undertaking will be established and documented. Factors used to establish the rationale for the undertaking will include, but not be limited to:

- Response to deficiencies in transportation system performance (e.g. demand/capacity analyses);
- Consistency with the overall vision for the Region and City of Toronto;
- Effect on socio-economic environment;
- Effect on urban form;
- Effect on natural environment features;
- Direct costs and cost of travel time delay.

### **5.3.2. Alternatives to the Undertaking**

An initial list of potential alternatives to the undertaking has been developed during preparation of the ToR. The EA will address all reasonable alternatives. Alternatives to the undertaking are those alternatives that are functionally different, such as addressing the corridor transportation problems by road widening or by non-transit undertakings. The alternatives to the undertaking will be subject to an analysis and evaluation in the EA, (as described further in Section 5.5))

Alternatives to the undertaking, or 'Alternative Strategies', that have been identified for assessment in the EA Study in terms of their ability to address existing and future problems and needs in the study corridor include, but are not limited to, the following:



- *The Do Nothing strategy* including approved or committed road improvements only, as well as minor improvements to existing YRT transit services;
- *A Road Expansion strategy* that includes all committed road and transit improvements identified in the Do Nothing option, plus additional road widenings or new road construction such that future demand across the north-south screenlines are met;
- *Priority Transit with Transportation Demand Management* combines measures to enhance existing bus travel times and capacity as well as reduce peak period auto driver trips through Travel Demand Management (TDM) strategies, including introduction of High-Occupancy Vehicle (HOV) lanes on several north-south arterials;
- *Enhanced Bradford Line Commuter Rail Service* (from Union Station to Vaughan) using existing GO Rail technology, including additional peak period trains as well as higher frequency reverse peak direction and off-peak service; and
- *Rapid Transit Corridor Initiatives*, assessed as a generic option, without specifying detailed routing options or technology, and generally extending the full length of the corridor between the regional boundaries and north-south from the corridor to Toronto's rapid transit system.

### **5.3.3. Alternative Methods of Carrying out the Undertaking**

There are a wide range of transit improvement options that could be explored to implement the undertaking, including physical infrastructure alternatives, alternative technologies alternative routes and service characteristics.

#### **Physical Infrastructure Alternatives**

Physical infrastructure alternatives will differ by technology however, the following provides an indication of the range of options that may be assessed in the EA.

- Exclusive Lanes In Segregated Rights-Of-Way
- Exclusive Lanes in the Median or Centre of Arterial Streets
- Reversible Contra Flow Lanes in Centre Median
- Exclusive Curb Lanes
- Interior or Off-set Exclusive Bus Lanes
- Priority Measures in Mixed Traffic

#### **Technology Alternatives**

Public transit improvements may involve the development of networks and systems using one or a combination of the range of transit technologies currently available in the industry. These are listed below starting with the conventional buses currently operated in the Region.



- **Conventional Bus** - Conventional buses would be an integral part of any enhanced transit system, either serving to feed a rapid transit system or as an integral part of a bus-based system.
- **Bus Rapid Transit (BRT)** - is a flexible form of rapid transit that combines transit stations, vehicles, services, running way, and ITS elements into an integrated system.
- **Light Rail Transit (LRT)** - is a flexible transportation mode that can operate in a variety of settings. LRT is a relatively low cost form of rail technology, usually obtaining electric power from overhead wires.
- **Diesel Multiple Units (DMU)** - This technology is a modern form of a diesel-powered rail car. DMU's are self-propelled and distinguished from current commuter rail equipment with each vehicle motorized rather than pushed or pulled by a heavy diesel engine. This type of technology operates on conventional rail tracks.
- **Automated Guideway Transit (AGT)** – this technology uses fully automated driverless trains, with fully grade-separated operations, typically on an elevated guideway.
- **Subway**- the assumption in evaluating this technology would be that the TTC's existing heavy rail technology would be extended into the Region either underground in an easement or at ground level in a totally segregated right-of-way.

### **Routing Alternatives**

A primary role of the Undertaking is to support the growth and urban form arising from the Region's Nodes and Corridors strategy to shape development of corridors linking the designated Regional Centres, in this case, the Vaughan, Richmond Hill and Markham Centres. Also, as the major east-west corridor in the Region, it must also provide the principal connection to GO Transit's three radial commuter rail lines that cross the corridor in Vaughan, Richmond Hill and Markham. The Vaughan North-South Link will provide a key connection from the western segment of the corridor to York University and on to Toronto's Spadina Subway Line at the Downsview Station on Sheppard Avenue.

Options to fulfil this primary role of the Undertaking could include, but are not limited to, the following routes:

- The Steeles Avenue right-of-way,
- The Highway 7 right-of-way,
- The Highway 407 right-of-way,
- The Rutherford Road/Carrville Road/Sixteenth Avenue right-of-way,
- The Major Mackenzie Drive right-of-way,
- The Centre Street right-of-way,
- The Fourteenth Avenue right-of-way,
- Rights-of-way adjacent to the CN Rail York Subdivision or GO Transit's Stouffville GO Line in Markham,



- Combination of portions of the above road rights-of-way
- Combination of portions of the road rights-of-way and new right-of-way alongside the CN right-of-way.

The EA will include a full description of and statement of the rationale for alternative routing options as a means of carrying out the undertaking.

#### **5.4. DESCRIPTION OF EXISTING ENVIRONMENT**

An inventory of transportation, natural, social and economic environment conditions in the EA Study Area will be undertaken as part of the EA. The purpose of this exercise is to establish the baseline conditions and any planned changes to these conditions that are known at the time that the EA is completed. The existing conditions inventory will build upon the information collected during the development of the ToR. The existing conditions inventory will identify the status of the environmental elements listed below.

##### **Transportation**

- existing pedestrian and bicycle network in the vicinity of the stations;
- existing pathways connecting under existing bridges and culverts;
- connecting transit services;
- existing roadway network;
- existing pedestrian and bicycle demands in the vicinity of the stations;
- existing transit demands; and
- existing traffic volumes.

##### **Natural Environment**

- aquatic habitats and individual species;
- ESAs, ANSIs, PSWs, wood lots, Regional Storm Floodplains, hydro geological conditions, watercourses, valley corridors, erosion prone areas;
- RVTE Species;
- terrestrial features and individual species;
- water quality;
- existing drainage patterns in the vicinity of stations;
- known contaminated sites;
- geotechnical conditions (vibration);
- tributaries and streams including Order 1 and 2 streams and any groundwater upwellings in the EA Study Area;
- delineation of aquifers that may be impacted by the undertaking;



- ambient noise;
- air quality;
- natural heritage system linkages; and
- a three season (spring, summer, fall) natural heritage feature inventory will be conducted.

#### **Social Environment**

- inventory of land ownership patterns in the vicinity of any stations;
- inventory of existing land uses in the vicinity of any station locations;
- inventory of recreational features in the vicinity of public transit infrastructure; and
- current planning designations in the vicinity of the stations and any planned modifications.

#### **Cultural Environment**

- inventory of cultural/heritage features in the vicinity of public transit improvements; and
- any areas of likely archaeological features

The EA Report will include supporting information consisting of various technical studies describing the environmental as listed above, such as noise, air quality and vibration.

### **5.5 POTENTIAL ENVIRONMENTAL EFFECTS**

The EA will describe and assess the environmental effects of the proposed undertaking and alternatives. The study of effects will increase in detail as the study progresses to identify a preferred alternative. Potential effects to be studied include, but are not limited to, those listed below.

#### **PLANNING OBJECTIVES**

- effects on Region's goals and policies
- impact on approved urban structure plans

#### **NATURAL ENVIRONMENT**

- effect on fisheries and aquatic habitat
- effect on wildlife habitat
- effect on vegetation and wetland resources
- effect on quality and quantity of groundwater
- effect on quality and quantity of surface water
- effect on inter-relationships of factors that are part of local or regional ecosystem
- changes to local and global air quality
- effects to humans and environment from disruption of contaminated materials



SOCIAL ENVIRONMENT

- impact on navigation
- effects of traffic infiltration
- changes to accessibility
- effects of property loss
- effects of changes in noise and vibration levels due to operation of facility
- effects of noise and vibration during construction
- safety impacts

ECONOMIC ENVIRONMENT

- effects on businesses and other land uses
- effects on access
- effects on capital and operating costs
- effects on ability to move goods

CULTURAL ENVIRONMENT

- disruption and/or destruction of archaeological resources
- effects on built heritage features and cultural landscapes

TRANSPORTATION SERVICE

- effects on service to existing or planned developments and major activity generators
- effects on intermodal connectivity and connections to other regional transit facilities.

Appendix A provides an outline of the potential environmental factors to be assessed in the EA Studies of Alternative Methods of carrying out the undertaking.

The Environmental Assessment will detail the effects on the community of the construction and operation of the Undertaking and identify appropriate mitigation measures to reduce or eliminate impacts. Net effect will be assessed and documented. For CEAA purposes (to be determined), it is required that the significance of net effects be assessed, including any cumulative effects.

During the Environmental Assessment, the Proponent will work closely with the affected agencies and the public to refine issues/concerns and to develop acceptable measures for resolving concerns. Mitigation measures will be identified and clear mechanisms will be developed to ensure that they will be carried forward into design and construction.



## **5.6. ANALYSIS PROCESS**

### **5.6.1. General Approach**

For the undertaking, alternative methods of carrying out the undertaking and the alternatives to the undertaking, the EA Study will provide the following:

- A description of the environment that will be affected or might reasonably be affected;
- A description of potential effects;
- A description of mitigation measures; and,
- An evaluation of advantages and disadvantages to the environment.

The level of detail will depend on the elements being analysed (i.e. Alternatives to the undertaking, alternative methods of carrying out the Undertaking and the Undertaking). While the same primary categories of effect identified below will be used for all elements, the analysis of alternatives to the undertaking will rely on broader measures whereas analysis of alternative methods would involve more specific assessments of local effects. The effects of each alternative on the environment will be compared in a traceable and objective manner and used to identify the preferred alternative at each stage. An evaluation methodology that allows for the comparison of quantitative and qualitative data will be selected. The methodology and analysis results will be presented to the public and documented in the EA Report.

The effects of each alternative on the environment will be compared in a traceable and objective manner and used to identify the preferred alternative at each stage. An evaluation methodology that allows for the comparison of quantitative and qualitative data will be selected. The methodology and analysis results will be presented to the public and documented in the EA Report.

Information on the general methodology for assessing environmental effects, developing mitigation measures and evaluating alternatives is provided in the sections below.

Also provided are details on the development of alternatives and evaluation of advantages and disadvantages for each stage of the development of the preferred alternative design.

### **5.6.2. Assessment of Environmental Effects**

A detailed assessment of the environmental effects of the Undertaking and its alternatives will be documented relying on the relevant criteria, data sources and studies. This detailed analysis will consider effects in the following general areas including, but not limited to: planning objectives, natural environment, social environment, economic environment, cultural environment and transportation service/other technical requirements.

In general the assessment of environmental effects will include an inventory or profile of existing conditions, a prediction or assessment of the effects for each alternative, identification of impacts and mitigation measures and an evaluation of alternative design concepts.



An ecosystem-based approach will be used to guide the environmental effects assessment. In taking this approach, the ecosystem is defined broadly to include environmental, social and economic components and the respective interactions between these components. Impacts to significant ecosystem features and linkages will be avoided and the design for the undertaking will incorporate measures to protect and enhance the functions of these ecosystem features and linkages.

The following summarizes the scope of the key studies or tasks that will be undertaken to develop the evaluation process, development of the preferred alternative design and mitigation measures.

### **Planning Objectives**

Official Plans and related documents for both the Region and the local municipalities will be used as the basis for assessing the impacts of alternatives on the achievement of planning objectives. Some of these objectives were described in Section 2 of this ToR.

The findings of work pertaining to planning objectives undertaken in the parallel Need and Justification Study conducted by the Region will be incorporated in the EA Study and there will be an ongoing need to ensure that development of alternatives are consistent with the long term planning objectives of both the Region and local municipalities.

### **Natural Environment Impacts**

The existing conditions in the study area related to natural sciences, including physiography and soils, geology/hydrogeology, aquatic habitat and communities, vegetation and vegetation communities, wildlife and wildlife habitat and designated natural areas will be described in the EA Study. Field investigations will be conducted during the appropriate seasons in order to obtain existing conditions data and will be of sufficient scope to gain all necessary and required approvals. The identification of environmental features and relevant mapping of environmental constraints and deficiencies will be presented.

Following the analysis of existing conditions, the potential environmental effects resulting from the undertaking and its alternatives will be described and environmental protection/mitigation measures to avoid/prevent, control/mitigate, or compensate for adverse effects, or enhance positive effects will be identified. Specific environmental/mitigation measures will be identified for all environmental disciplines (e.g. physiography and soils, geology/hydrogeology, aquatic habitat and communities, vegetation and vegetation communities, wildlife and wildlife habitat and designated natural areas).

In addition to the natural sciences effects assessment, detailed studies of air quality and water quality and quantity will be undertaken as described below.

#### **Air Quality Assessment**

Air quality effects will be addressed and included in the EA along with mitigation plans to ensure that residences within the project study area are not adversely affected by the undertaking. Identified effects will be discussed in the context of Regulation 346 of the Environmental Protection Act and related guidelines.



Air quality monitoring data and meteorology data from MOE monitoring stations and other secondary sources will be used to determine the ambient air quality. The potential for changes in air quality due to operation of the undertaking will be assessed for above-grade conditions, taking into account future changes in ambient air quality with and without the undertaking.

A protocol for predicting air quality dispersion effects will be developed in consultation with MOE. Emissions of carbon monoxide (CO), nitrogen oxides (Nox), total suspended particles (TSP) and particulate matter (PM10) will be compared to provincial Ambient Air Quality Criteria (AAQC) to assess the potential for adverse effects. Respirable particulate matter (PM2.5) will also be assessed in comparison with the proposed Canada Wide Standard of 30 ug/m3.

Short-term odour effects will be predicted using a combination of odour emission rates available in literature. Assessment of potential odour emissions may incorporate available dispersion modelling techniques to evaluate the incremental change in air quality impacts of the transit facilities.

In those instances where the MOE air quality monitoring data and other secondary sources material is not sufficient to establish a baseline upon which to assess air quality effects, an independent air quality monitoring program and modelling of existing and proposed traffic flows will be undertaken to quantify impacts and net effects. This data will be used to supplement MOE data. The monitoring program will be developed in consultation with the MOE.

#### Water Quality and Quantity

The construction of the proposed transit improvements and related infrastructure could require the excavation of stream or river beds, or shorelines which can result in changes to sediments and aquatic habitat, as well as terrestrial flora and fauna.

The EA will outline an approach for water quality and quantity monitoring before, during and after the construction of any infrastructure.

As required by TRCA, the proponent will prepare a stormwater management report to address impacts on storm water quality and quantity associated with the increase in the percentage of impervious surfaces (e.g. commuter parking lots, roadways, stations, etc.) throughout the project limits. This plan will take into account existing background information (e.g. sub-watershed information, wetland information, existing drainage conditions and future drainage conditions). The stormwater management plan will evaluate a variety of stormwater management control options to maintain, and potentially enhance, existing water quality and quantity within the project limits. Impacts from the potential use of road salt during the winter season will also be considered and appropriate mitigation measures will be identified. The stormwater management plan will be prepared in the context of the March 2003 MOE Storm Water Management Practices Planning and Design Manual and the MOE Guidelines for Evaluating Construction Activities Impacting on Water Resources.

#### **Social Environment Impacts**

An assessment of socio-economic effects and proposed mitigation measures that includes information on potential conflicts over incompatible land uses, business interruptions and property impacts (if any) will be prepared and included in the EA Study.



The EA Study will provide a detailed inventory of existing land use and economic activity within the study area. The potential effects on existing land use and economic activity, both negative and positive, will be described. Potential conflicts within the immediately adjacent residential communities, future residential/ commercial development, recreational use of the valley lands, along with any existing utilities, will be key considerations in the selection of the preferred design alternative.

Detailed assessments of noise and vibration will be conducted as described below.

#### Noise Assessment

To establish baseline noise conditions in the Study Area, noise monitoring will be undertaken to measure the ambient (existing) noise environment. This noise monitoring will be used to demonstrate the accuracy of the more reliable prediction models. A monitoring location will be selected for each section of the roadway exhibiting a major change in the type or volume of traffic and the monitoring will be conducted for at least two continuous 24 hour periods. The traffic should closely reflect AADT volumes on the days selected for monitoring. Noise prediction modelling of existing road traffic noise using Ontario Ministry of the Environment (MOE) modelling procedures will be undertaken. The potential noise effects of the Undertaking will also be assessed using data available from other studies, considering the transit technology options.

The significance of noise effects will be assessed with respect to relevant guidelines including those used in other transit environmental assessments, MOE, Canada Mortgage and Housing Corporation (CMHC), and U.S. guidelines. The potential noise effects based on human response to sound exposure will also be examined. Where relevant, the study will refer to the experience of other transit systems in Canada. The evaluation of noise impacts will take into consideration the changes in future ambient noise levels due to increases in vehicular traffic, and the mix of traffic, with and without the proposed Undertaking.

#### Vibration Assessment

To determine baseline vibration conditions, a vibration monitoring program will be conducted. This program will involve measurement of the ambient (existing) vibration at each section of the roadway where a major change in vibration levels is expected (due to factors such as the proximity of nearby industries, a significant change in the volume of truck traffic, a change in road design or possible impact due to nearby rail traffic).

Vehicle vibration and off-site vibration levels, as a function of technology, distance and speed, will be estimated using the following:

- procedures that have been or will be used to measure vibration levels for similar transit EA's;
- vibration propagation efficiencies;
- vibration characteristics for the alternative transit technologies; and,
- available data from other transit systems with similar transit technologies.

The potential for adverse vibration impacts will be assessed by comparing predicted off-site vibration levels to relevant guidelines used on other rapid transit projects within the Province of Ontario. The evaluation of vibration effects will consider the changes in future ambient vibration levels due to increases in vehicular traffic, and changes in the proportions of bus and truck traffic, with and without the proposed undertaking.



## **Economic Environment**

Analysis of economic environment impacts will focus on potential changes (both positive and negative) to businesses located along potential routes including changes to accessibility, visibility, market potential and goods movement.

The assessment will also discuss the relationship between new transit services and development potential, and the resulting changes to municipal costs and revenues.

## **Cultural Environment**

Cultural heritage resources including built heritage features and cultural landscape features will be inventoried and described as part of the EA Study. This will include secondary source investigations such as previous cultural heritage reports compiled for the area as well as field surveys to supplement the existing secondary source and cultural heritage information. The investigations will be undertaken by a qualified consultant.

It is expected that there will be an increased level of detail and collection of field data as the EA Study progresses from initial route evaluation to the design of the preferred alternative.

Extensive consultation will be required with local municipalities as well as built heritage and cultural heritage landscape experts.

## **Transportation Service and Technical Requirements**

The transportation service analysis will build on the preliminary work carried out in the Region's Need and Justification Study and incorporate relevant information from on-going transportation planning studies. The multi-modal travel demand forecasting model developed for the York Rapid Transit Project will be used to evaluate alternative routes and technologies.

When analyzing the undertaking, detailed traffic analysis will be undertaken to determine the effects of potential reductions in road capacity on traffic level of service and traffic infiltration. Mitigation strategies will be developed to minimize the effects of changes to traffic capacity.

The EA Study will also consider, in the refinement of alternatives, the need to integrate improved transit services with other inter-regional transit services such as the Highway 407 BRT service. This would occur at major transit nodes such as Unionville GO station.

It is noted that the Ministry of Transportation is currently undertaking a study to examine the protection for transit on existing and proposed new 400-series highways. Accordingly, any transit initiatives proposed along the Highway 404 corridor must be coordinated with the Ministry's on-going study.

### **5.6.3. Mitigation**

As part of the assessment process, mitigation measures will be identified to offset predicted environmental effects that have been identified for the undertaking and its alternatives. The identification of mitigation measures will be developed in the context of relevant MOE technical guidelines. As the impact assessment process will be iterative as alternatives are developed and evaluated, opportunities to avoid or minimize impacts will be integrated wherever feasible.



Appropriate technical and economically feasible mitigation measures will be developed for specific character and sensitivities of the environmental features and the related significance (e.g. magnitude, duration, certainty) of the potential impact. Such measures may include, but are not limited to:

- Avoidance measures i.e. design options to minimize impacts to or caused by construction and operations noise and aesthetics;
- Protection of water quality and quantity through appropriate facility routing and drainage design; and,
- Identification of the recommended construction timing windows, staging of work, etc.

Mitigation measures will be developed in consultation with appropriate agency staff and stakeholders to confirm the environmental analyses, issues and impacts, and subsequently to review the impact assessment and mitigation measures. Mitigation measures will also include recommendations for a monitoring program.

#### **5.6.4. Advantages and Disadvantages**

The EA process will include an evaluation of the advantages and disadvantages to the environment of the alternatives to the undertaking, alternative methods of carrying out the undertaking and the undertaking. This evaluation will be conducted at a more general level when comparing alternatives to the undertaking and in more detail for the comparison of alternative methods for carrying out the undertaking. Factors considered may include, but are not limited to:

##### **Advantages to the Environment:**

- Ability to respond to current road and transit system deficiencies and future growth in travel demand;
- Provision of an efficient and balanced transportation network;
- Promotion of the principles of the Region of York Official Plan which promotes future urban growth and mixed use development in areas that are serviced effectively by transit;
- Contribution to better management of increasing levels of undesirable emissions from the transport sector;
- Potential for ecosystem restoration of degraded areas (e.g. tributaries of the Don and Rouge Rivers); and,
- Ecosystem connectivity restoration opportunities.

##### **Disadvantages to the Environment:**

- Potential impact to local natural features such as woodlands, ANSIs, PSWs, etc.
- Potential impact on water quality and water quantity relationships and water supplies;
- Potential impact on residential or commercial property;
- Noise and dust impacts from construction and/or operation;



- Disruption of existing traffic access and circulation patterns along proposed route alternatives; and
- Temporary disruption/congestion on local road network from construction activities.

## **5.7. ANALYSIS AND EVALUATION OF ALTERNATIVES**

### **5.7.1. Development of Evaluation Criteria**

Comments received from the public, agencies and other stakeholders will be used to prepare and confirm the detailed criteria for the analysis of the impacts of the alternatives. The criteria will be used to assess the magnitude and extent of effects on the environment from each alternative.

The EA will provide the rationale for the analysis criteria, along with their specific indicators (performance units of measurement). The indicators will have a combination of quantitative and qualitative measures. In all cases, they will be used in an objective and traceable manner.

### **5.7.2. Analysis and Evaluation of Alternatives to the Undertaking**

Potential alternatives to the undertaking, described previously in Section 5.3.3 will be developed to a level of detail sufficient to determine potential effects on the environment. Criteria that may be used to evaluate alternatives will include, but not limited to:

- Impact on transportation system performance (e.g. demand/capacity analyses);
- Consistency with the overall vision for the Region and City of Toronto;
- Impact on socio-economic environment;
- Impact on urban form;
- Impact on natural environment features;
- Impacts on air quality objectives;
- Direct costs; and,
- Travel time delay costs.

At this stage, evaluation of alternatives with respect to these criteria will be largely done on a qualitative basis, drawing on the results of the inventory of the existing environment and incorporating quantitative information where appropriate.

### **5.7.3. Analysis and Evaluation of Alternative Technologies and Locations for the Undertaking**

#### **Alternative Technologies**

As outlined in Section 5.3.2, alternative technologies will be evaluated using the following criteria:



Service Quality:

- user comfort
- speed
- reliability
- continuity of service

Strategic Considerations:

- consistency with overall rapid transit network plans
- ability to enhance acceptance of transit
- impact on land use objectives

Environmental Compatibility:

- socio-economic impact
- natural environment impact
- cultural and heritage impact

Cost Efficiency:

- Property requirements
- operating and capital costs
- lifecycle costs

**Alternative Locations**

In response to this basic concept for the undertaking, the EA Study will develop initial options for the location and design of the improved transit infrastructure and facilities such as stations and maintenance facilities. These options will be prepared at a level of detail sufficient for details analysis and evaluation of the full range of environmental effects of each alternative alignment and station location if required. The analysis will consider mitigation measures and the resulting net effects on the environment.

Comments from the public, key agencies, and stakeholders will be incorporated in the analysis of the alternatives, resulting in the refinement of the analysis as required.

The effects of each alternative alignment on the environment will be compared in a traceable and objective manner and used to identify the preferred alternative. An evaluation methodology that allows for the comparison of quantitative and qualitative data will be selected. The methodology and analysis results will be presented to the public and documented in the EA Report.

**5.7.4. Analysis and Evaluation of the Undertaking**

The potential undertaking may consist of transit vehicles operating in designated or shared right of ways, or combinations thereof. Options may also consist of widening existing facilities, or converting existing traffic lanes to transit lanes. The Undertaking will be developed to a level of detail so that the detailed effects on the environment are known and can be documented as part of the EA Study. Once details of the effects are known, mitigation measures can be identified.



The Undertaking will be developed in sufficient detail to identify the following:

- Horizontal and vertical alignment;
- Sectional details, including pavement width, turning lanes, boulevard treatments, etc.;
- Structures;
- Property Requirements;
- Access to adjacent properties;
- Impacts on cycling and pedestrian facilities;
- Station details (see below);
- Retaining walls;
- Drainage;
- Illumination;
- Utility Impacts and relocations; and,
- Preliminary costs.

#### **Refine and Select Preferred Infrastructure Locations**

Following public and agency review of the alternatives to the undertaking, and the analysis and evaluation of the alternatives, the locations and conceptual designs of the proposed undertaking will be refined and finalized. In addition, the EA study will address comments received on the preferred locations and designs of any new infrastructure.

### **5.8. EA STUDY CONSULTATION PLAN**

The EA Study will include all relevant input obtained from an extensive public consultation program conducted to date as well as the additional consultation planned during completion of the EA studies following approval of this re-submitted ToR. The purpose of the program is to ensure that all concerns and issues are brought forward early and addressed appropriately.

The consultation plan for the EA will build on and incorporate the consultation program conducted as part of the preparation of the previously approved ToR, the transportation and environmental planning studies completed to date and this ToR as described in the following section.

The consultation plan for the Highway 7 Corridor Public Transit Improvements was developed to reflect the consultation requirements outlined in the MOE's draft guidelines for the preparation of ToR. Other considerations that guided the consultation plan included:

- Conclusions from prior studies, including York Region's TMP and initial parallel studies of the Need and Justification for transportation improvements in the Highway 7 Corridor;
- The large study areas and diversity of land uses resulting in a range of potential issues;



- The desire to provide potentially interested stakeholders with the opportunity to be involved and provide input; and,
- The basic principles of effective consultation.

### **5.8.1. Elements of Public Consultation Program**

The key elements of the public consultation program will consist of:

- Public consultation centres held at key stages of the study Newsletters distributed at key stages in the study;
- Advertisements for the public consultation centres, and to announce the study initiation and stages;
- Project website on the York Region website; and,
- Individual meetings with agencies, municipalities, and other interest groups.

The mailing list from the Need and Justification Study, and from the ToR preparation, will also be maintained and updated throughout the EA study.

During the EA Study, the Technical Advisory Committee (TAC) will continue in its current role. Participating technical agencies will continue to be involved during the EA Study and will be actively involved in further defining the issues, developing and assessing alternative alignments and station locations, and determining mitigating measures for unavoidable impacts. Additional consultation with agencies will be held through individual meetings and/or workshops and correspondence. The TAC and other technical agencies to be consulted through the EA process were listed in the previous section.

The public, including the general public, communities, interest groups, institutions, property owners, and other stakeholders (as listed in Section 6.6.1) will continue to be provided with opportunities to review study findings and provide input. A Notice of Commencement of the EA Study will be placed in local newspapers and on the York Region website, and mailed to the study mailing list prepared as part of the current study as well as to those located within the area in which alternative alignments may be developed. The public will have three formal opportunities to participate in the EA Study through Public Consultation Centres (PCCs) as follows:

- First set of PCCs – to review and provide input regarding the collection of background data, present details on initial route alternatives and design concepts.
- Second set - to present detailed analysis criteria, evaluation methodology, and the development of alternative alignments and preliminary station locations.
- Third set – to review and provide input regarding the comprehensive analysis of the alternatives, the comparative evaluation of the alternatives, and determination of the preferred Undertaking, potential environmental effects and proposed mitigating measures. The comments received will then be taken into consideration to revise and finalize the Undertaking for which EA approval will be sought.

Measures should be taken to ensure that the public has sufficient time to review materials and become informed in advance of the Public Consultation Centres.



There will be other opportunities for public consultation through:

- Newsletters – to be distributed at key points in the EA study to all contacts on the mailing list, to provide updated information on the study status, and to advise the public on how to provide input.
- Individual meetings – as required, individual meetings with representatives of municipalities, public agencies, interest groups, community associations, business associations, heritage groups, environmental groups, and other stakeholders.
- Website – on the York Region website and the YRTP project website, to show updated information on the EA study through the duration of the study.

A List of Issues will be prepared and updated throughout the study. It will document issues raised by the public, agencies, and other stakeholders, and how the issues were addressed.

### **5.8.2. Technical Advisory Committee (TAC)**

For the EA Study, the Technical Advisory Committee formed during the preparation of the ToR will be retained and will continue its present role.

The following technical agencies will be consulted through the EA process either through participation on the TAC or by direct consultation:

- York Region
- Town of Markham
- Town of Richmond Hill
- City of Vaughan
- City of Toronto
- Toronto and Region Conservation Authority
- GO Transit
- TTC
- Ministry of Natural Resources (MNR)
- Ministry of Transportation (MTO)
- Ministry of Culture
- Ministry of Environment (MOE)

In addition to the key agencies with direct participation in the EA, a broader list of technical agencies with a prospective interest in the study will be contacted at key points during the EA and requested to supply technical input and comments on the study findings. The proposed list of technical agencies is shown in Table 2:



**TABLE 1: PROPOSED LIST OF TECHNICAL AGENCIES**

<i>Federal Departments</i>	<i>Provincial Ministries</i>	<i>Local Municipalities</i>
<ul style="list-style-type: none"> <li>• Fisheries and Oceans Canada</li> <li>• CEAA</li> <li>• Environment Canada</li> </ul>	<ul style="list-style-type: none"> <li>• Ministry of Environment</li> <li>• Ministry of Natural Resources (TAC)</li> <li>• Ministry of Transportation (TAC)</li> <li>• Ministry of Enterprise, Opportunity and Innovation</li> <li>• Ontario Realty Corporation</li> <li>• Ministry of Culture</li> <li>• Ministry of Tourism and Recreation</li> <li>• Ministry of Health and Long Term Care</li> <li>• Ministry of Education</li> <li>• Ministry of Municipal Affairs and Housing</li> </ul>	<ul style="list-style-type: none"> <li>• Region of York (TAC)</li> <li>• Town of Markham (TAC)</li> <li>• Town of Richmond Hill (TAC)</li> <li>• City of Vaughan (TAC)</li> <li>• City of Toronto (TAC)</li> </ul>
<i>Agencies and Authorities</i>		<i>Utilities</i>
<ul style="list-style-type: none"> <li>• Toronto Regional Conservation Authority (TAC)</li> <li>• GO Transit (TAC)</li> <li>• CP Rail</li> <li>• CN Rail</li> <li>• York Regional Police Department</li> <li>• 407 ETR Concession Company</li> <li>• Toronto Transit Commission (TTC) (TAC)</li> </ul>	<ul style="list-style-type: none"> <li>• York Region District School Board</li> <li>• York Region Catholic District School Board</li> <li>• Toronto District School Board</li> <li>• Toronto Catholic District School Board</li> <li>• York University</li> </ul>	<ul style="list-style-type: none"> <li>• Markham Hydro</li> <li>• Central Ontario Electric Commission</li> <li>• Enbridge Gas</li> <li>• Consumers Gas</li> <li>• Bell Canada</li> <li>• Rogers Cable</li> <li>• Shaw Cable Systems</li> <li>• Trans Canada Pipelines Ltd.</li> <li>• Hydro One Networks</li> </ul>

### 5.8.3 Regional Council Consultation

The EA Study findings (including the results of the public consultation process) and recommendations will be presented and submitted to the York Region’s Rapid Transit Steering Committee and Council for approval. During the EA Study, interim findings will be presented to the Steering Committee for the York Rapid Plan and the Regional Transportation and Works Committee. The study findings may also need to be presented to the municipal councils of the Town of Markham and City of Toronto.

### 5.9. COORDINATION WITH THE CITY OF TORONTO

The City of Toronto and the Toronto Transit Commission (TTC) are jointly carrying out a study to investigate options for improving surface transit operations between the Downsview Subway Station and York University. The study is being undertaken according to Schedule C of the Municipal Class EA. The Municipal Class EA is an approved process under the Ontario Environmental Assessment Act, which defines the steps the City must follow when planning to implement physical changes to a roadway. The study is expected to be completed in the summer of 2004.

Since the Vaughan N-S Link Transitway will have to be connected to Downsview Station to allow access to the subway, any improvements from Sheppard Avenue to Steeles Avenue that result from the above Municipal Class EA will have impact on the



overall service including amenities at Downsview Station. Impacts on the Downsview Station will be addressed in the Class EA Report.

As noted in the Introduction and throughout this report, there is a need to coordinate planning activities with those of the City of Toronto because the proposed undertaking relates closely to the City's proposed transit improvement undertaking in the Vaughan N-S Link corridor south of the Regional boundary.

In addition to being participants on the TAC, close coordination is required with the MTO, GO Transit and the TTC. The primary means of coordination will be through special meetings where required.

### **5.10. COMPLETE EA REPORT**

An EA Report will be prepared that fully meets the provincial and federal EA process requirements. The Report will document the EA process, data collected, alternatives that were considered, the analysis of the impacts of the alternatives, evaluation of the alternatives, mitigation strategy, monitoring program, and the recommendations on the preferred rapid transit technology, alignment, conceptual design, and station locations. It will also document the results of the public consultation process.

The preparation of the EA Report will involve the following steps:

1. Prepare draft EA Report: in accordance with the requirements outlined in Section 5.1 of this ToR;
2. Review draft EA Report with affected agencies and interested stakeholders;
3. Finalize EA Report with comments from affected agencies and interested stakeholders;
4. Submit the EA Report to MOE and any federal responsible authorities for approval;
5. Notify municipal clerks that the EA Report has been submitted; and
6. Post a public "Notice of Submission" of the EA Report.



## **6. CONSULTATION DURING PREPARATION OF TERMS OF REFERENCE**

The consultation plan conducted as part of the Highway 7 Corridor and Vaughan N-S Link Transitway Study provided key stakeholders the opportunity to provide input into both the need for the project and planning issues and the development of the ToR, including the consultation plan for the follow-on individual EA Study.

### **Technical Agencies**

Key technical agencies were asked to provide input through participating on the TAC. In addition, those technical agencies with a potential interest in the study, including provincial, municipal, and federal agencies, were contacted at key points during the study and requested to provide technical input and to comment on the study findings.

The technical agencies that were contacted included the following (those shown with an asterisk (\*) were also on the TAC):

• <i>Ministry of the Environment</i>	• <i>Ministry of Natural Resources</i>
– <i>Environmental Assessment &amp; Approvals Branch</i>	– <i>Aurora District*</i>
– <i>Central Region</i>	– <i>South Central Region</i>
– <i>York-Durham District</i>	• <i>Toronto and Region Conservation Authority*</i>
• <i>Ministry of Agriculture, Food and Rural Affairs</i>	• <i>Lake Simcoe Region Conservation Authority*</i>
• <i>Ministry of Tourism, Culture and Recreation</i>	• <i>Ministry of the Solicitor General – OPP</i>
– <i>Heritage Operations</i>	• <i>Ministry of Transportation*</i>
– <i>Regional Services Branch</i>	– <i>Urban Planning Office</i>
• <i>Ministry of Education</i>	– <i>Transportation Planning Branch</i>
– <i>York Region District School Board</i>	• <i>Williams Treaty First Nations</i>
– <i>York Region Separate School Board</i>	• <i>Ontario Realty Corporation</i>
– <i>CSD Centre Sud-Ouest</i>	• <i>York Regional Fire Coordinator</i>
– <i>CBD Catholique Centre Sud</i>	• <i>York Region Police Chief</i>
– <i>Toronto District School Board</i>	• <i>CN North America</i>
– <i>Toronto Catholic District School Board</i>	• <i>GO Transit*</i>
• <i>Ministry of Health</i>	• <i>Greater Toronto Services Board</i>
• <i>York Regional Health Unit</i>	• <i>Rouge Park</i>
• <i>Ministry of Municipal Affairs and Housing</i>	• <i>Waterfront Regeneration Trust Agency</i>
– <i>Office of the Greater Toronto Area</i>	• <i>Environment Canada</i>
– <i>Central Municipal services Office</i>	• <i>Canadian Environmental Assessment Agency</i>
▪ <i>Ontario Native Affairs Secretariat</i>	– <i>Ontario Region</i>



## **Public**

The public includes the general public, communities, interest groups and property owners. Input from the public was obtained in a variety of ways including:

- Initial public notice – to introduce the study, to invite interested members of the public to be placed on the mailing list and to provide any preliminary comments;
- Notice placed in local newspapers and on the Region's website, mailed to interest groups and community associations.
- Public Consultation Centres (PCCs) – held at a key point during the study with PCCs being held at 3 locations;
- Project website – provided ongoing opportunity for the public to contact the Region and provide comments; and,
- York Regional Transportation Master Plan Study – this study was being conducted in parallel and therefore pertinent information was input into the Transitway Study, as appropriate, including the results of an extensive "Survey of Resident Attitudes" (Environics Research; October 2000).

## **6.1 RE-SUBMITTED TERMS OF REFERENCE CONSULTATION**

The draft revised ToR were initially reviewed with the Region technical staff for input and comment. Thereafter, the draft ToR was revised and made available as follows:

- The contents of the draft ToR were published on the Region's "York in Motion" website for a period of two weeks with an invitation to submit comments in either written or electronic form.
- A notice explaining the reason for submission of a revised ToR and requesting comment on the draft revised document was published in two issues of Regional newspapers at the end of February 2004.
- The above notice was mailed to all those members of the public and other stakeholders who had asked to be included on mailing lists from the public consultation opportunities provided during the Region's Need and Justification Study and subsequent EA studies conducted following approval of the previously submitted Terms of Reference

A copy of the draft ToR was made available to agencies and the public for comment at York Region's Richmond Hill offices.

No comments on the draft ToR were received from the public or other stakeholders consulted.



## **7. OTHER APPROVALS**

It may not be possible to address all approval requirements at the time of seeking EA Act approval. A number of subsequent approvals may require detailed design and process information that is not available at the time of EA Act approval. York Region is committed to obtaining the necessary approvals at the appropriate time in the implementation phase.

The following post EA approvals may be required and as the Study progresses, other approvals may be identified. The agencies responsible for issuing these approvals will be consulted during the study to ensure that their interests and requirements are properly addressed thereby ensuring that there are no complications at the time of approval and that there can be reasonable assurance that approvals will be obtainable.

- Municipal Official Plan amendment and zoning bylaw changes if needed.
- Water taking permit from MOE.
- Sewage and water approvals, under the Ontario Water Resources Act, for stations and maintenance facilities.
- Municipal Noise bylaw amendments/exemptions if required during construction.
- Municipal building permits.
- Environmental Protection Act approvals for wastes generated at stations and maintenance facilities.
- CEAA (DFO Approvals, Navigable Waterways authorization, Railway Relocation and Crossings Act approvals).
- TRCA approvals (“Fill, Construction, Alteration to Waterways” permit and DFO authorization).
- MNR approvals under the Lakes and Rivers Improvements Act.
- MTO approval would be required where the undertaking impacts the MTO right-of-way or is within a permit control area.

### **7.1. CEAA APPLICABILITY**

The Canadian Environmental Assessment Act (CEAA) states that “an environmental assessment of a project is required before a federal authority exercises one of the following powers or performs one of the following duties or functions in respect of a project, namely, where a federal authority:

- is the proponent of the project and does any act or thing that commits the federal authority to carrying out the project in whole or in part;



- makes or authorizes payments or provides a guarantee for a loan or any other form of financial assistance to the proponent for the purpose of enabling the project to be carried out in whole or in part, except where the financial assistance is in the form of any reduction, avoidance, deferral, removal, refund, remission or other form of relief from the payment of any tax, duty or impost imposed under any Act or Parliament, unless that financial assistance is provided for the purpose of enabling an individual project specifically named in the Act, regulation or order that provides the relief to be carried out;
- has the administration of federal lands and sells, leases or otherwise disposes of those lands or any interests in those lands, or transfers the administration and control of those lands or interests to Her Majesty in right of a province, for the purpose of enabling the project to be carried out in whole or in part; and,
- under a provision prescribed pursuant to paragraph 59(f), issues a permit or license, grants an approval or takes any other action for the purpose of enabling the project to be carried out in whole or in part.”

If a federal EA is required, York Region will work with CEAA Agency and MOE to prepare an EA accordance with the “Draft Environmental Assessment Coordination Process for Proponents, dated June 12, 2001”, attached as Appendix B.



## **8. COMPLIANCE MONITORING**

The Regional Municipality of York is committed to the preparation of a compliance monitoring strategy and schedule during the preparation of the EA Study, to measure construction impacts such as noise, water quality and air quality effects associated with the construction of the Undertaking. The monitoring strategy will be developed in consultation with the Environmental Assessment and Approvals Branch of the MOE. The proponent must comply with the terms and conditions as well as the commitments identified in the EA and report to MOE on how the compliance has been achieved.

The framework for the monitoring strategy may include, but not be limited to, the following elements:

- compliance monitoring and effects monitoring;
- a plan for implementation of mitigation and contingency measures;
- long-term post construction monitoring and contingency measures and agreed upon triggers for employing contingency plans;
- provisions for monitoring water quality and quantity, air quality, and soils;
- provisions to ensure compliance with EA commitments (e.g. an independent environmental inspector, compliance committee, contract specifications) to ensure that all environmental standards and commitments for both construction and operation work are met; and,
- details on monitoring and reporting relationships.

Baseline information on existing environmental conditions is a critical part of the monitoring strategy and will therefore be emphasised in the EA.

The EA will describe how the proponent will achieve compliance (e.g. technical agencies approval and satisfy public interest) and how the compliance will be reported. The proponent or its contractor will be required to obtain all permits from regulatory agencies (e.g. MOE, TRCA, MNR, DFO, Navigable Waters Protection) prior to construction and will ensure compliance with all permit conditions throughout the work.

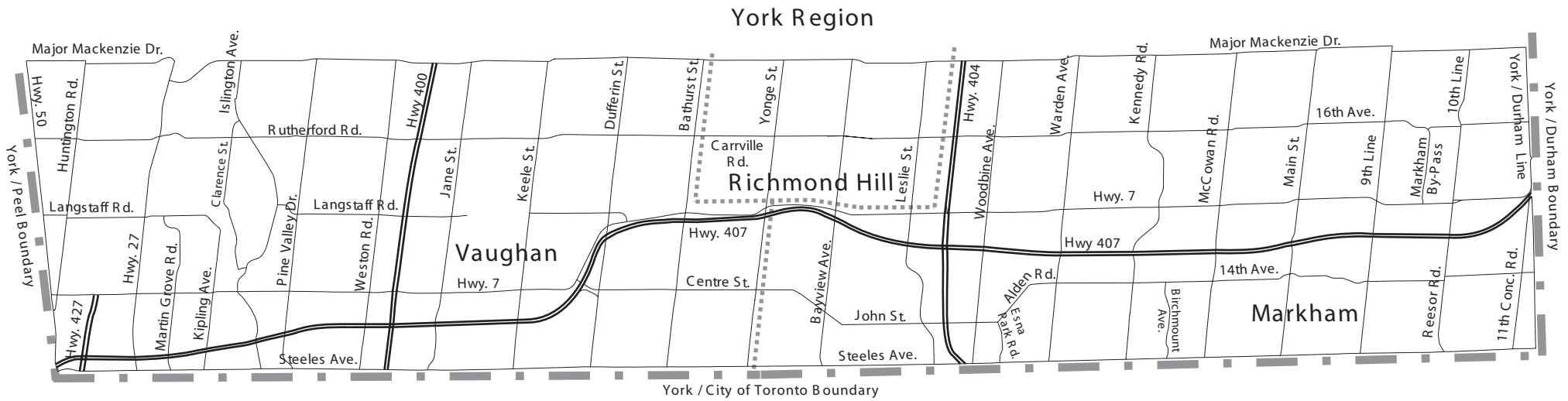
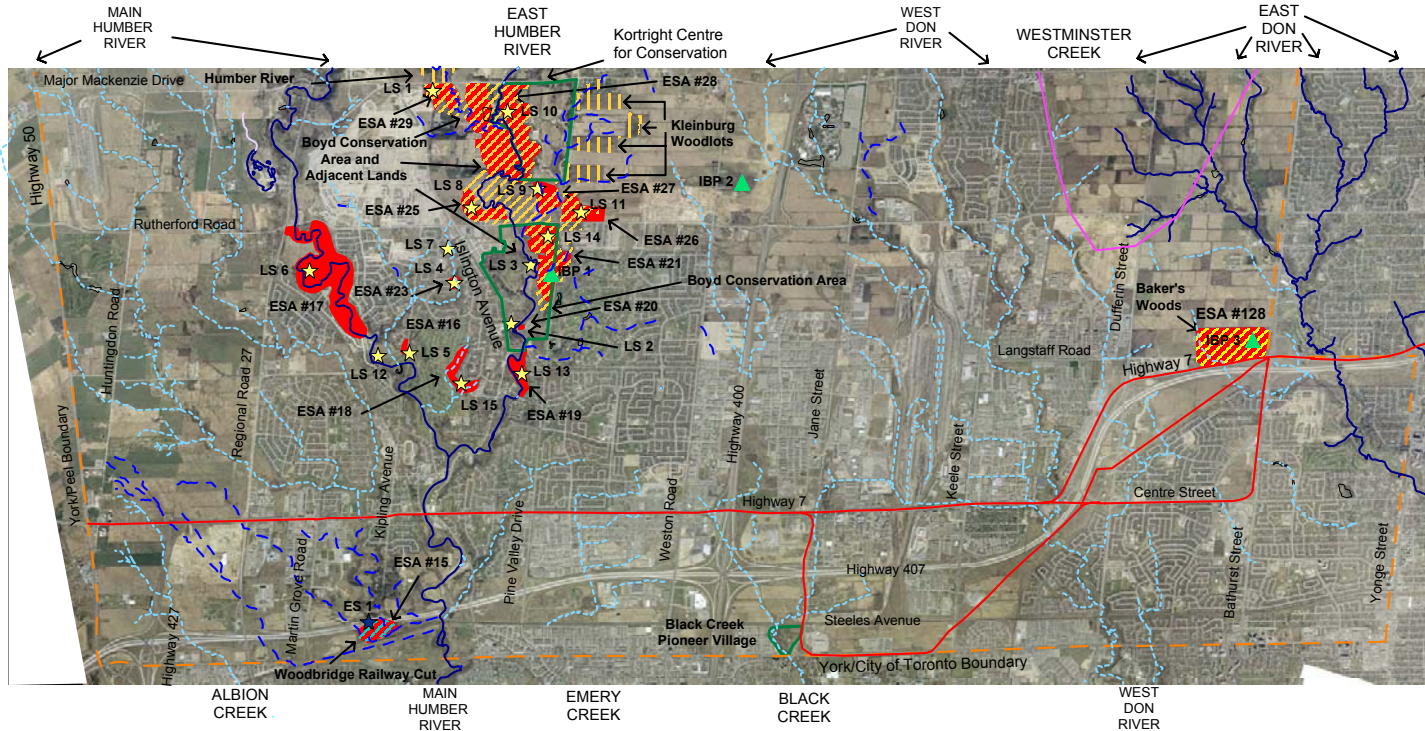


Figure 2  
Study Area

**Regional Municipality of York  
Highway 7 Corridor Transitway**



**LEGEND**

**WATERCOURSES**

- Cold water
- Cool water
- Warm water
- Unknown

**Routes Recommended for EA**

- Provincially Significant Life Science ANSI
- Regionally Significant Life Science ANSI
- ★ Life Science Site
- Provincially Significant Earth Science ANSI
- ★ Earth Science Site
- Provincially Significant Wetland
- Locally Significant Wetland
- Environmentally Significant Area
- Parkland
- Oak Ridges Moraine
- ▲ International Biological Program Site
- Municipal Boundary

**Natural Heritage Features  
Vaughan**

<b>Project:</b>	TA2633	Figure 3a
<b>Date:</b>	December 2002	Prepared By: EJ/SJ/CK Checked By: GWR
<b>Scale:</b>	1:70,000	

**LIFE SCIENCE SITES**

- |                              |                               |
|------------------------------|-------------------------------|
| LS 1 Boyd Forest             | LS 9 Graham's Woods           |
| LS 2 Boyd's Rock Cress       | LS 10 Kortright Area          |
| LS 3 Carex Peckii Area No. 1 | LS 11 McLean's Forest         |
| LS 4 Carex Peckii Area No. 2 | LS 12 North Woodbridge Ravine |
| LS 5 Clarence Street Forest  | LS 13 Pine Grove Forest       |
| LS 6 Elder Mills Forest      | LS 14 Pine Valley Forest      |
| LS 7 Grahams' Forest         | LS 15 Smith's Beech Forest    |
| LS 8 Graham's Forest Complex |                               |

**EARTH SCIENCE SITE**

- ES 1 Woodbridge Cut

**INTERNATIONAL BIOLOGICAL PROGRAM SITES**

- IBP 1 Boyd Conservation Area  
IBP 2 Vellore Tract  
IBP 3 Baker's Woods


















**ENVIRONMENTALLY SIGNIFICANT AREAS**

- |                                 |                                 |
|---------------------------------|---------------------------------|
| ESA #15 Woodbridge Cut          | ESA #25 Graham's Forest Complex |
| ESA #16 Clarence Street Forest  | ESA #26 McLean's Forest         |
| ESA #17 Elder Mills Forest      | ESA #27 Graham's Woods          |
| ESA #18 Smith's Beech Forest    | ESA #28 Kortright Area          |
| ESA #19 Pine Grove Forest       | ESA #29 Boyd Forest             |
| ESA #20 Boyd's Rock Cress       | ESA #128 Baker's Woods          |
| ESA #21 Pine Valley Forest      |                                 |
| ESA #23 Carex Pickii Area No. 2 |                                 |


**Regional Municipality of York  
Highway 7 Corridor Transitway**

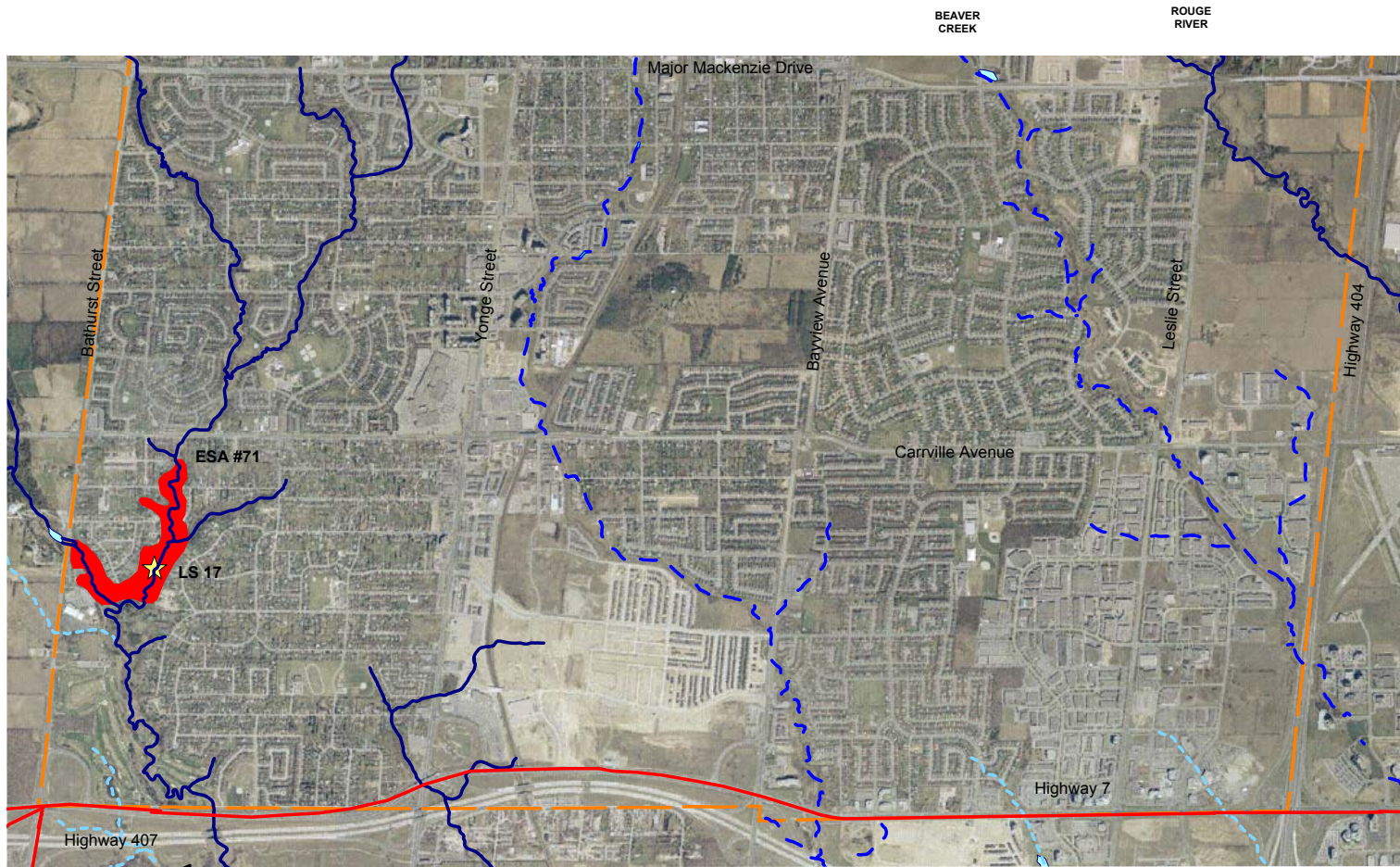
LEGEND

**WATERCOURSES**

-  Cold water
-  Cool water
-  Warm water
-  Unknown
  
-  Routes Recommended for EA
-  Provincially Significant Life Science ANSI
-  Regionally Significant Life Science ANSI
-  Life Science Site
-  Provincially Significant Earth Science ANSI
-  Earth Science Site
-  Provincially Significant Wetland
-  Locally Significant Wetland
-  Environmentally Significant Area
-  Parkland
-  Oak Ridges Moraine
-  International Biological Program Site
-  Municipal Boundary

**Natural Heritage Features  
Richmond Hill**

Project:	TA2633	Figure 3b
Date:	December 2002	Prepared By: EJS/CJA Checked By: GJK
Scale:	1:43,000	



**LIFE SCIENCE SITE**

LS 17 Richvale Forest

**ENVIRONMENTALLY SIGNIFICANT AREA**

ESA #71 Richvale Forest

EAST  
DON  
RIVER

GERMAN  
MILLS  
CREEK

**Regional Municipality of York  
Highway 7 Corridor Transitway**

**LEGEND**

**WATERCOURSES**

- Cold water
- - - Cool water
- · - · - Warm water
- Unknown

— Routes Recommended for EA

▨ Provincially Significant Life Science ANSI

▨ Regionally Significant Life Science ANSI

☆ Life Science Site

▨ Provincially Significant Earth Science ANSI

★ Earth Science Site

▨ Provincially Significant Wetland

▨ Locally Significant Wetland

■ Environmentally Significant Area

□ Parkland

— Oak Ridges Moraine

▲ International Biological Program Site

- - - Municipal Boundary

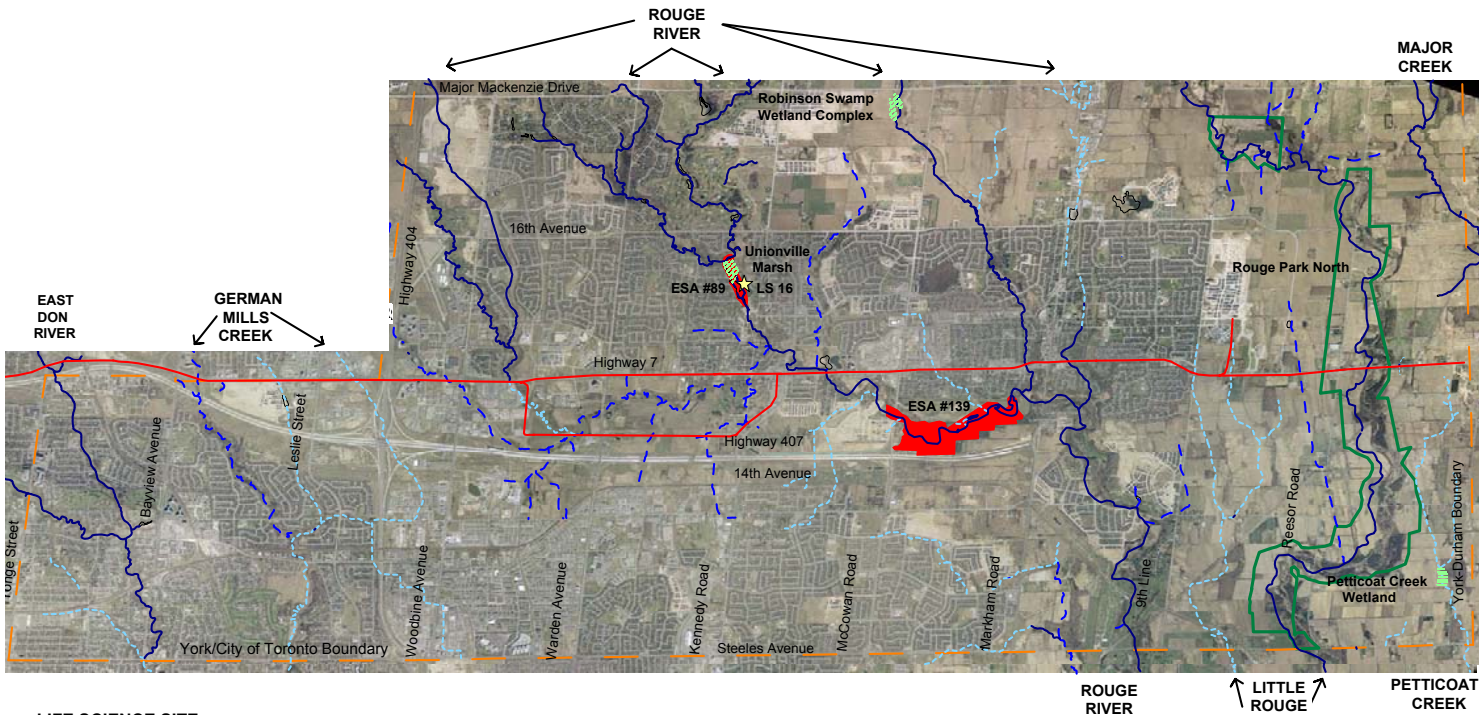
**Natural Heritage Features  
Markham**

Project: TA2633 Figure 3c

Date: December 2002

Scale: 1:70,000

Prepared By:  
EJS/CLK  
Checked By:  
GWR



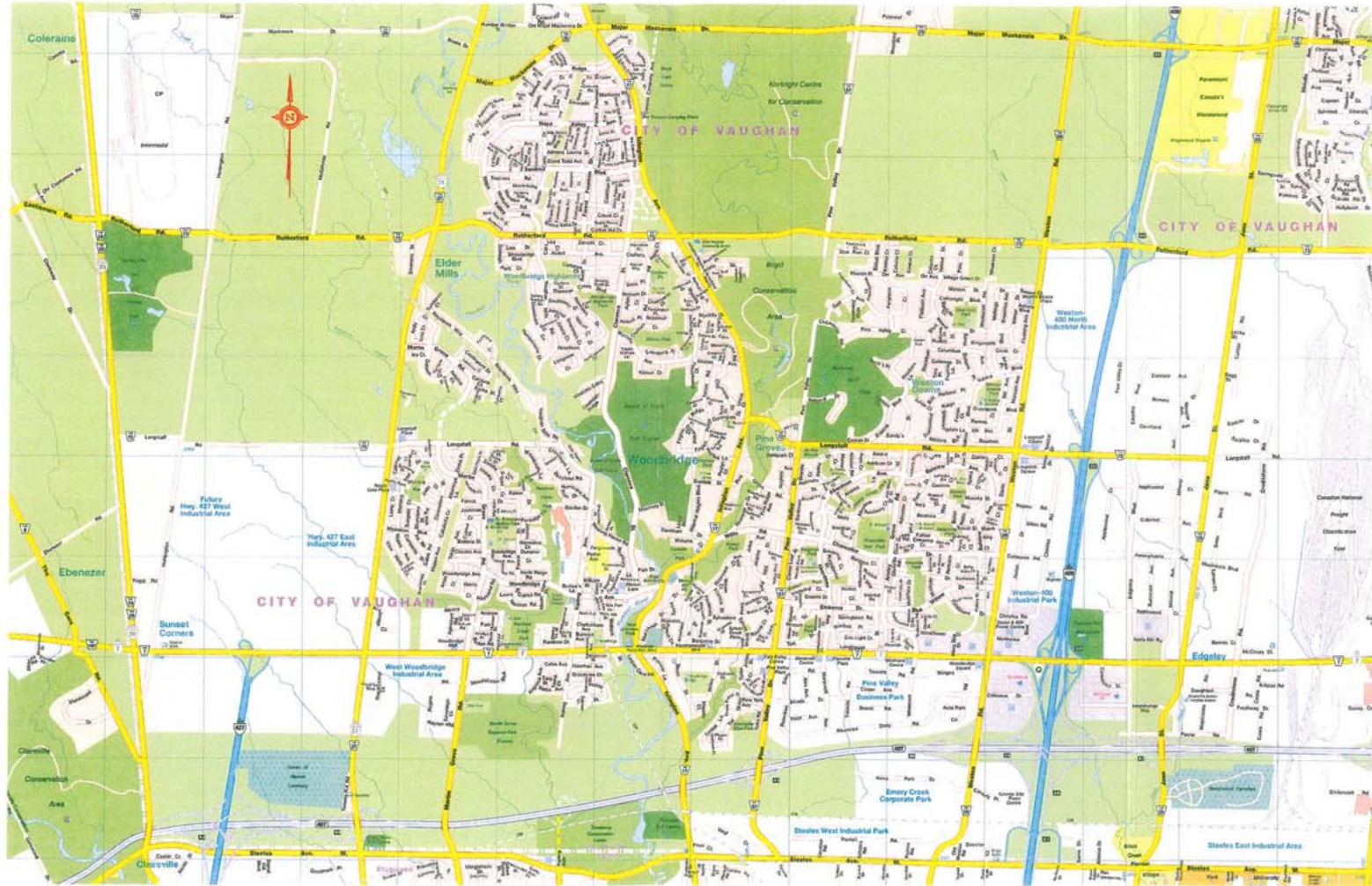
**LIFE SCIENCE SITE**

LS 16 Unionville Marsh

**ENVIRONMENTALLY SIGNIFICANT AREA**

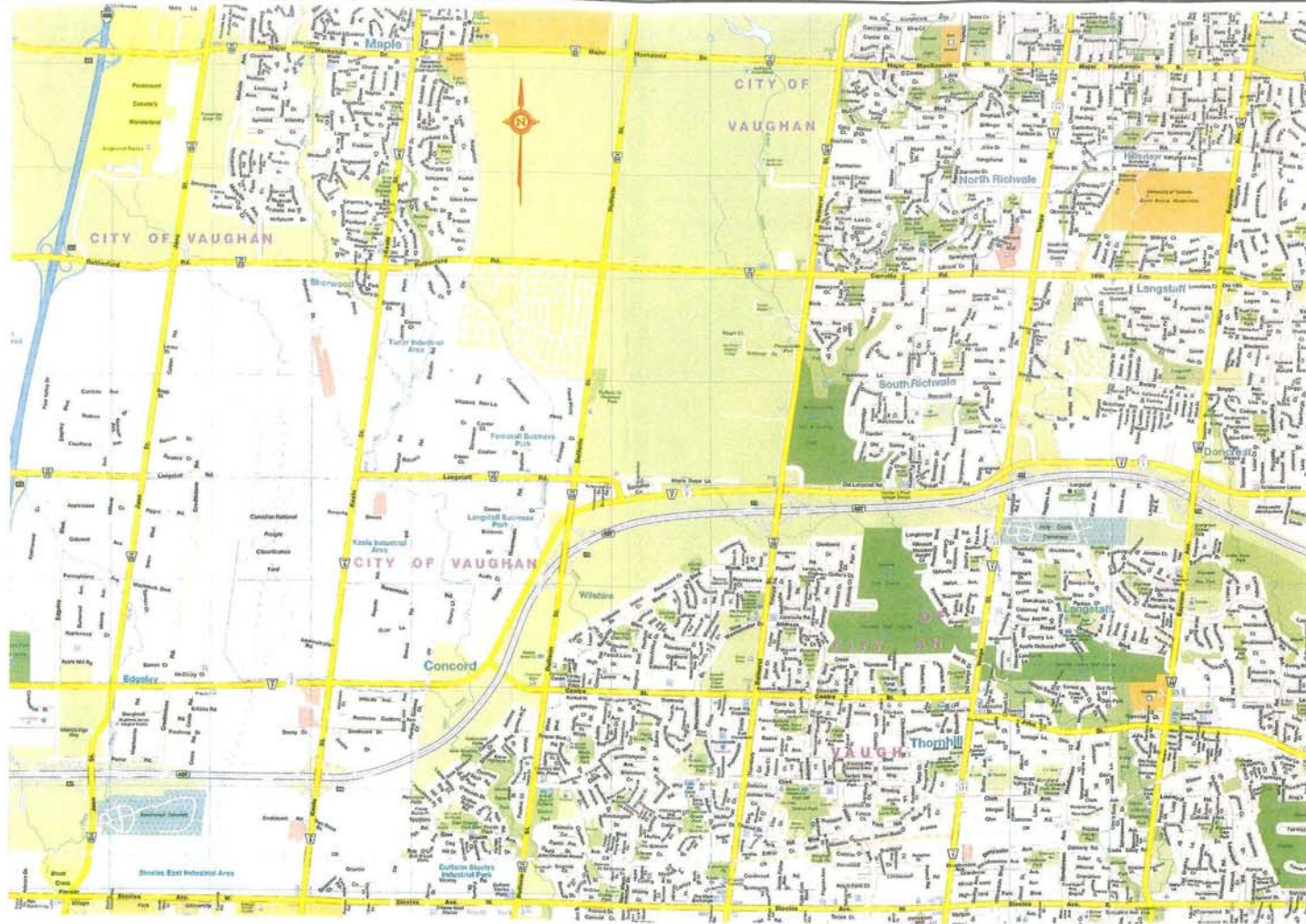
ESA #89 Unionville Marsh

ESA #139 Milne Woods



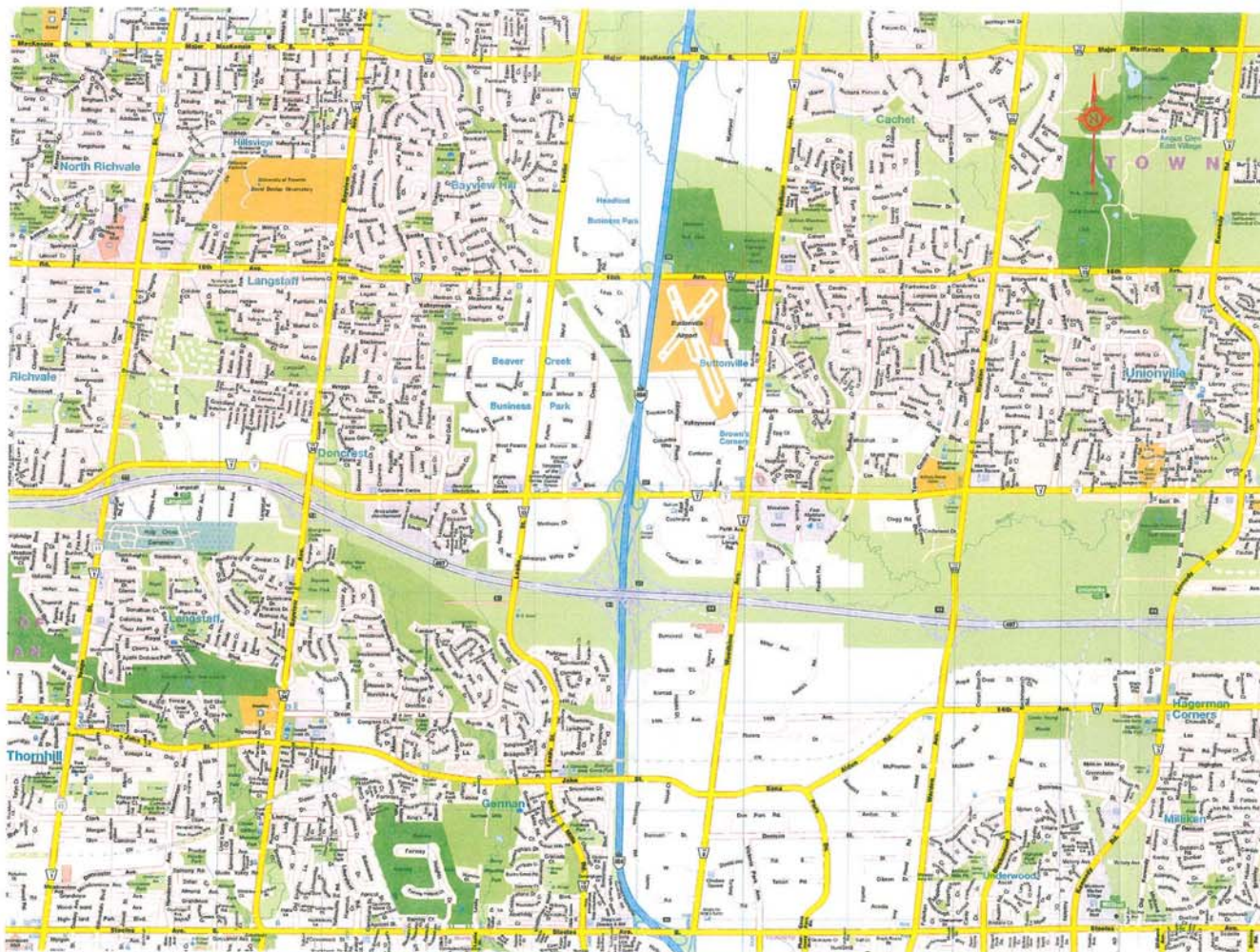
Not to Scale

**Figure 4a**  
**Existing Land Use**  
**Segment A (York-Peel Boundary to Jane Street)**



**Figure 4b**  
**Existing Land use**  
**Segment B (Jane Street to Bayview Avenue)**

Not to Scale



Not to Scale

**Figure 4c**  
**Existing Land Use**  
**Segment C (Yonge Street to Kennedy Road)**

## **APPENDIX A**

# **OUTLINE OF POTENTIAL ENVIRONMENTAL FACTORS**



## Highway 7 Corridor & Vaughan North South Link APPENDIX A

<b>TABLE A1 – OUTLINE OF POTENTIAL ENVIRONMENTAL FACTORS</b>			
<b>FACTOR</b>	<b>AGENCY</b>	<b>ISSUE/CONCERN</b>	<b>ACTION</b>
<b>GENERAL</b>			
Compliance	MOE		The commitments made during the preparation of the EA will be implemented through various means including contractual requirements placed on contractors and sub-contractors and dedicated construction inspectors. The Region will commit to examining the feasibility of establishing a community liaison group involving agencies and community representatives or environmental inspectors to ensure compliance with EA commitments.
<b>NATURAL ENVIRONMENT</b>			
Fisheries and Aquatic Habitat	MNR, DFO, MOE, TRCA, LSRCA, EC	The nature/extent of any aquatic habitat that may be disrupted, altered or indirectly affected by the undertaking (such as interference with fish movement, alteration/loss of streamside cover, changes in water quality due to erosion and sedimentation, storm discharges, temperature changes, implications to base flows as a result of dewatering) including Harmful Alteration, Disruption or Destruction of Fish Habitat (HADD). Tributaries/creeks in 4 watersheds (Don, Humber, Rouge, Holland) are within the EA Study Area. The TRCA has a Level 3 Agreement with the Department of Fisheries and Oceans.	Aquatic habitat information will be collected through field surveys, agency consultation, and review of background documentation. Potential effects on aquatic habitat will be assessed, mitigation measures identified, and a strategy for addressing the Fisheries Act (through preliminary and detailed design) will be provided in the EA document.
Wildlife Habitat	MNR, TRCA, LSRCA, DOE, EC	The construction of any facility can remove wildlife habitat, including the habitat of RVTE species, adversely affecting wildlife populations.  Linear facilities can fragment wildlife habitats and provide a barrier to wildlife travel corridors.	The majority of the corridor is already heavily urbanized. It is anticipated that the majority of the facility will be incorporated within the existing roadway infrastructure (either at grade or tunneled in short sections). Potential impacts on wildlife habitat and a determination of the significance will be undertaken during the EA study. The objective will be to maximize habitat protection and minimize disturbance.  Areas where wildlife movement opportunities can be maintained or improved will be reviewed during the EA study.



**TABLE A1 – OUTLINE OF POTENTIAL ENVIRONMENTAL FACTORS**

<b>FACTOR</b>	<b>AGENCY</b>	<b>ISSUE/CONCERN</b>	<b>ACTION</b>
Vegetation and Wetlands	MNR, MOE, TRCA, LSRCA, DOE, EC	Direct (intrusion) and indirect (noise, sediments, contaminants) affects on vegetation and wetland resources in the EA Study Area including the implications of dewatering on the groundwater and subsequent implications to vegetation and wetlands. These resources are important in providing wildlife and plant habitat, stabilizing slopes and soils, providing forest cover and filtering runoff.	Potential impacts on vegetation and wetland areas and a determination of the significance of those impacts will be undertaken during the EA study. Vegetation and wetland areas have been identified and mapped during the Feasibility Study using background sources and previous field work by Ecoplans Limited on other projects. This information will be updated during the EA with detailed fieldwork focusing on areas of potential intrusion/impact. Consideration of potential impacts on forest cover will be considered as well. Environmental protection and mitigation measures will be developed during the EA for implementation at preliminary and detailed design. Studies and appropriate methodologies to determine ecosystem relationships and impacts, e.g. connectivity will be reviewed.
Groundwater Resources	MOE, TRCA, LSRCA	Interference with recharge areas and release of contaminants can adversely affect the quantity and quality of groundwater. Interference with groundwater flow can adversely affect ecosystem components dependent upon groundwater discharge (e.g. streams and wetlands, fish, vegetation), and groundwater users (e.g. wells).	Groundwater recharge and discharge zones have been mapped in the EA Study Area using background sources and input from agencies during the Feasibility Study. The hydro geological conditions of the EA Study Area will be further reviewed during the EA and groundwater recharge, flow, discharge and quality will be considered during the planning, design, construction and operation of the facility. This will be done in consideration of the Oak Ridges Moraine Conservation Plan (draft) and associated Technical Guidelines. Contingency planning to ensure water supplies will also be included.
Surface Water Resources	MOE, MNR, DOE, TRCA, LSRCA	Surface water quantity and quality can be adversely affected by storm drainage, release of contaminants (i.e. sediments, chemicals), the loss of groundwater flow into surface features and obstruction of flows.	The EA Study Area encompasses 4 watersheds (Don, Humber, Rouge and Holland rivers). Watercourses have been identified and mapped in the Feasibility Study. Further field assessment will be completed during the EA as described under Fisheries above. The assessment will include the use of applicable standards and technical protocols, i.e. Provincial Water Quality Objectives/Guidelines, MOE Guidelines for Evaluating Construction Activities Impacting on Water Resources, MOE Storm Water Management Practices Planning and Design Manual. The EA will document measures to protect surface water quality and quantity during planning, design, construction and operation of the facility. Storm water management relationships will be assessed and documented in a Storm Water Management Report along with erosion and sediment control strategies, and hydraulic analyses which address conveyance concerns.



**TABLE A1 – OUTLINE OF POTENTIAL ENVIRONMENTAL FACTORS**

FACTOR	AGENCY	ISSUE/CONCERN	ACTION
Ecosystem Planning	MOE, EC, TRCA	Not only is it important to consider the individual environmental factors, but it is also important to consider the inter-relationships of factors that are part of the local or regional ecosystem.	An ecosystem approach has been initiated in the Feasibility Study by identifying and mapping the following inter-related features - Oak Ridges Moraine, recharge/discharge areas, wetlands, conservation areas, ANSIs, ESAs, permanent and intermittent watercourses, proposed natural corridors (Town of Richmond Hill Corridor Study), valley lands, species movements and woodlands. These features were further considered in the evaluation of alternative corridors as part of the Need and Justification report. These inter-relationships need to be pursued further in the EA planning by incorporating available watershed level information, documenting ecological relationships, and identifying protection/mitigation measures to maintain ecological functions from the perspective of environmental effects on natural features, including potential cumulative effects as appropriate.
Air Quality & Energy	MOE, EC	Transportation facilities can adversely affect both local and global air quality predominantly due to the burning of fossil fuels.	Air Quality and emissions have been considered in the Feasibility Study in assessing the merits of alternative corridors in addressing ridership in the congested Yonge Street corridor. Energy consumption and therefore air emissions will be a factor considered in the EA when assessing route alternatives and technologies. Recommendations will also be made concerning the need for proponent monitoring.
Contaminated Soil	MOE	Contaminated materials may be discovered during construction. If not properly handled they can cause adverse effects to humans and the environment.	Potential contaminated sites will be identified during the EA building on closed landfill site information available from MOE. Where these sites cannot be avoided, a management strategy consistent with MOE's Guidelines for the Management of Contaminated Sites will be developed. A contingency plan will be developed for addressing contaminated materials encountered during construction of the facility.



**TABLE A1 – OUTLINE OF EVALUATION METHODOLOGY (CONT'D)**

<b>SOCIAL ENVIRONMENT</b>			
Traffic Nuisance	MOE, Municipal Agencies	Traffic infiltration in neighbourhoods.	Estimate of traffic infiltration will be prepared for each option and included in evaluation.
Effects on Homes	MOE, Municipal Agencies	Dislocation created by property acquisition.	Possible mitigation through compensation and relocation program.
Noise and Vibration	MOE	Increased noise and vibration levels during construction and operation can adversely affect the quality of life of those living and working in proximity to the route.	The ambient noise level in the urban sections of the Yonge St. corridor is relatively high due to the existing high traffic levels. The effects of the undertaking on noise levels will be considered in the EA when assessing alignments and developing construction staging plans. A qualified acoustical consultant shall develop a framework for dealing with noise and vibration assessment, mitigation, compliance reporting, complaint response and monitoring in consultation with and to the satisfaction of the EAA Branch of MOE prior to the start of any noise and vibration studies on this project. The framework shall deal with the methodology and procedure which will be used in the analysis of the transit design alternatives from the noise aspect and with the methodology and procedure which will be used in the analysis and evaluation of the noise and vibration impacts associated with the construction and operation of the facility. It shall take into account not only the noise and vibration impacts which will be generated by the transit vehicles but also the noise impacts from ancillary facilities such as parking lots and service facilities. As part of this pre-consultation process the proponent shall address the noise concerns expressed by the EA and Approvals Branch of MOE with regard to the Draft ToR.
Safety	Municipal Agencies	The Transitway Facility will be operating in a high traffic area. It will be important to ensure that the public is protected from injury from the facility. In addition, emergency access to the vehicles, right of way and adjacent lands must be maintained.	Safety and emergency access will be a prime consideration in the EA when assessing technology options and in planning, designing, constructing, operating and maintaining the facility.

**TABLE A1 – OUTLINE OF EVALUATION METHODOLOGY (CONT'D)**



**TABLE A1 – OUTLINE OF EVALUATION METHODOLOGY (CONT'D)**

<b>ECONOMIC ENVIRONMENT</b>			
Effects on Businesses & Other Land Uses	Private Sector, Municipal Agencies, Ratepayers	The location of the transit facility and stations can have positive and negative effects on businesses and adjacent land uses. (loss of parking, restriction of access, limitation on commercial traffic circulation, business displacement)	Business and property owners will be closely involved in the planning of the undertaking during the EA to ensure that economic community benefits are maximized and property impacts are minimized.
Level of Accessibility	Private Sector, Municipal Agencies, Ratepayers	Construction of transit facility may create discontinuity in local pedestrian, traffic patterns.	The current circulation patterns will be established. Possible mitigation include additional road and pedestrian grade separation structures.
Goods Movement	Private Sector, Municipal Agencies, Ratepayers	Construction may restrict access and/or reduce road capacity.	Assessment will inventory major truck routes, loading areas, manufacturing operations to measure degree of impact.
Support of Approved Urban Structure	Private Sector, Municipal Agencies, Ratepayers	Facility location may support/encourage development through changes in accessibility. Also degree of impact is a function of existing/planned adjacent land use.	Subjective assessment based on detailed corridor land use inventory developed in association with Regional/local planning agencies.



**TABLE A1 – OUTLINE OF EVALUATION METHODOLOGY (CONT'D)**

<b>CULTURAL ENVIRONMENT</b>			
Archaeological Resources	MTCR, Municipal Agencies, Municipal Heritage Planners, LACAC, TRCA	The EA Study Area has a history of Native and European activity. Both riverbanks and heights of land represent high potential areas for archaeological resources. Note: TRCA owns property on the German Mills Creek, east of Yonge Street, south of 16 <sup>th</sup> Avenue as well as lands on the west side of Yonge Street, south of Gamble Sideroad on the Rouge River Tributary. TRCA undertakes all archaeological investigations on TRCA's property.	Most of the EA Study Area has been extensively altered over the years and is heavily urbanized. The EA will review all available background archaeological information including consultation with MTCR. A Phase 1 archaeology review will be undertaken. That review will identify areas of archaeological clearance and areas where further work (Phase 2) may be required prior to construction. As part of the inventory of the existing environment and assessment of environmental effects of the proposed transitway, the potential archaeological resources will be inventoried and the effects on them assessed during the EA process and any mitigation to minimize negative effects will be recommended. This will be completed before detail design activities for any part of the transitway.
Heritage Resources/ Cultural Landscapes	MTCR, Municipal Agencies, Municipal Heritage Planners, LACAC	The EA Study Area has numerous built heritage features and cultural landscapes. These must be carefully considered in the planning, design and construction of a transitway facility.	The preliminary identification of Built Heritage Features, Heritage Conservation Districts, and Cultural Landscapes has been undertaken during the Feasibility Study. This information has been mapped as part of that work. The EA will complete that assessment in further detail following the requirements of MTCR. The work will also identify potential impacts and required mitigation measures satisfactory to MTCR to ensure that cultural heritage features are identified and protected in the planning and design of the facility and as part of any post EA processes. Heritage impact statements will be prepared where the proposed transitway will be constructed through Heritage Conservation Districts. Through the EA process, York Region will commit to examining how the interpretation of the historic nature of the area will be implemented, i.e., plaques and/or signage at each transit station versus a plaque or information panel at either end of the facility. If necessitated by the level of impacts to heritage resources, recommendations for a Cultural Heritage Management Plan will be developed for the EA Study Area. The Plan will address potential impact and mitigation that might arise during the study.

## **APPENDIX B**

### **Draft Environmental Assessment Coordination Process For Proponents**

## APPENDIX B DRAFT ENVIRONMENTAL ASSESSMENT COORDINATION PROCESS FOR PROPOSERS

The following notes provide an overview explanation of each of the steps in the accompanying flow chart. The boxes in the flow chart are labeled for convenience - the planning process is not intended to be sequential, but rather iterative in nature. This process applies to projects that require an individual Environmental Assessment (EA) under the Ontario *Environmental Assessment Act* and a screening or a comprehensive study under the *Canadian Environmental Assessment Act*. The process embodies the concept of "one project – one assessment" and results in a single Terms of Reference / Scoping Document and a single EA document that meet both federal and provincial requirements.

Meetings with appropriate provincial and federal departments should occur, as required, throughout the planning process, as should opportunities for effective public consultation.

### Key Regulated Provincial Timelines

There are two key regulated Provincial Timelines, as per the requirements of the Ontario *Environmental Assessment Act*. Once the Terms of Reference (TOR) is submitted to the Ministry of the Environment (MOE), there is a 12 week period for public and agency review and a decision by the Minister of the Environment. Likewise, when an EA is submitted to MOE, there is a 30 week period for public and agency review and a decision by the Minister.

### Key Requirements (steps to be followed by proponent)

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#### PROJECT START UP PHASE

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##### **A1. Contact MOE-EAAB and CEAA to Discuss EA Requirements**

At the outset of project planning, the proponent should contact the MOE-EAAB and the CEAA to discuss environmental assessment requirements.

##### **A2. Receive and Review Federal and Provincial Information Packages**

Subsequent to the initial contact by the proponent, the MOE-EAAB and the CEAA will provide the proponent with packages, outlining information needs and process-related materials. These packages contain information on: federal and provincial EA processes; potential triggers to the *Canadian Environmental Assessment Act*; how to initiate the EA process; key department contacts; and information required from the proponent to continue in the process. The proponent will be provided with advice on how to prepare a preliminary project description, a critical initial information requirement.

##### **A3. Provide Preliminary Project Description**

Based on the advice received, the proponent should submit a preliminary project description to the MOE-EAAB and the CEAA, providing as much detailed information on the project as possible. The project description is critical to the initiation of the federal process and will be used to determine which federal departments have an interest in the project. The CEAA will circulate the project description to federal

departments and will receive feedback from federal departments regarding their potential role in the assessment.

**A4. Meet with MOE-EAAB and CEAA (as required)**

During the Project Start Up phase, the proponent should hold an initial meeting with the MOE-EAAB and the CEAA. The purpose of the meeting would be to discuss: the preliminary project description (if available); requirements for the draft TOR / Scoping Document: potential involvement of provincial and federal departments; time frames; and next steps. Following this meeting, the proponent should submit a final project description.

The timing for this first meeting may vary by project. Some proponents may choose to meet prior to preparing a preliminary project description, while others may be more advanced in their project details and may choose to meet once they have prepared the preliminary project description. Whatever the case, early contact with the MOE-EAAB and the CEAA is essential. Additional meetings may be held during the Project Start Up phase, as required.

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**TERMS OF REFERENCE / SCOPING PHASE**

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**B1. Prepare Draft TOR / Scoping Document**

The proponent prepares a draft TOR / Scoping Document, which meets the regulated requirements of the Ontario *Environmental Assessment Act* and which documents the confirmed federal scope of project and scope of assessment. A coordinated public and agency consultation program, as required by provincial regulation, and as appropriate to meet the needs of the federal process, would be undertaken.

**B2. Meet with Relevant Provincial and Federal Departments and Undertake Consultation (as required)**

During the preparation of the draft TOR / Scoping Document, the proponent should hold meetings with the MOE-EAAB, the CEAA and federal and provincial departments, as required to obtain input to and comment on the draft TOR / Scoping Document. An appropriate level of agency and public consultation should be undertaken during the preparation of the draft TOR / Scoping Document and would likely include circulation of the document to relevant departments.

**B3. Submit Final Terms of Reference / Scoping Document for Review and Approval**

The final Terms of Reference / Scoping Document would be submitted to MOE and the Responsible Authority. The TOR / Scoping Document is posted on the MOE web site and there is a 12 week provincial timeframe for the review of the TOR / Scoping Document and a decision by the Minister of the Environment. There is also a federal endorsement of the TOR / Scoping Document.

Note: Under the *Canadian Environmental Assessment Act*, a Responsible Authority is a federal department (e.g., Department of Fisheries and Oceans) with responsibility for ensuring that an environmental assessment of the project is prepared. The Responsible Authority would be identified as early in the planning process as possible. For some projects, there may be more than one Responsible Authority.

**B4. Approval for TOR / Scoping Document**

This involves approval from the provincial Minister of the Environment and endorsement by the federal Responsible Authority. Under the Ontario *Environmental Assessment Act*, the TOR become legally binding.

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## ENVIRONMENTAL ASSESSMENT PHASE

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### **C1. Prepare EA**

The proponent prepares the coordinated environmental assessment (i.e., one document that meets both provincial and federal EA requirements) and undertakes public and agency consultation, as appropriate.

### **C2. Meet with Relevant Provincial and Federal Departments and Undertake Consultation (as required)**

Meetings would be held at the proponent's initiative, and as required. The purpose of the meetings is to obtain federal and provincial department input to the EA and to review and resolve specific issues.

### **C3. Submit EA for Review and Approval**

The EA would be submitted to the MOE and to the Responsible Authority for a screening or to the Canadian Environmental Assessment Agency Headquarters for a comprehensive study. There is a 30-week regulated provincial timeline for the government and public review of the EA, with the Minister's decision following this review. The MOE-EAAB coordinates the provincial review of the EA, while the Responsible Authority coordinates the federal review for a screening. The federal review for a comprehensive study is coordinated by the Canadian Environmental Assessment Agency.

### **C4. Provincial EA Approval and RA Decision on Screening or Federal Minister's Decision on Comprehensive Study**

The Minister of the Environment makes a decision on the EA – this is then subject to Cabinet approval. Federally, the Responsible Authority makes a decision on a screening and the federal Minister of the Environment makes a decision on a comprehensive study.

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## POST ASSESSMENT PHASE

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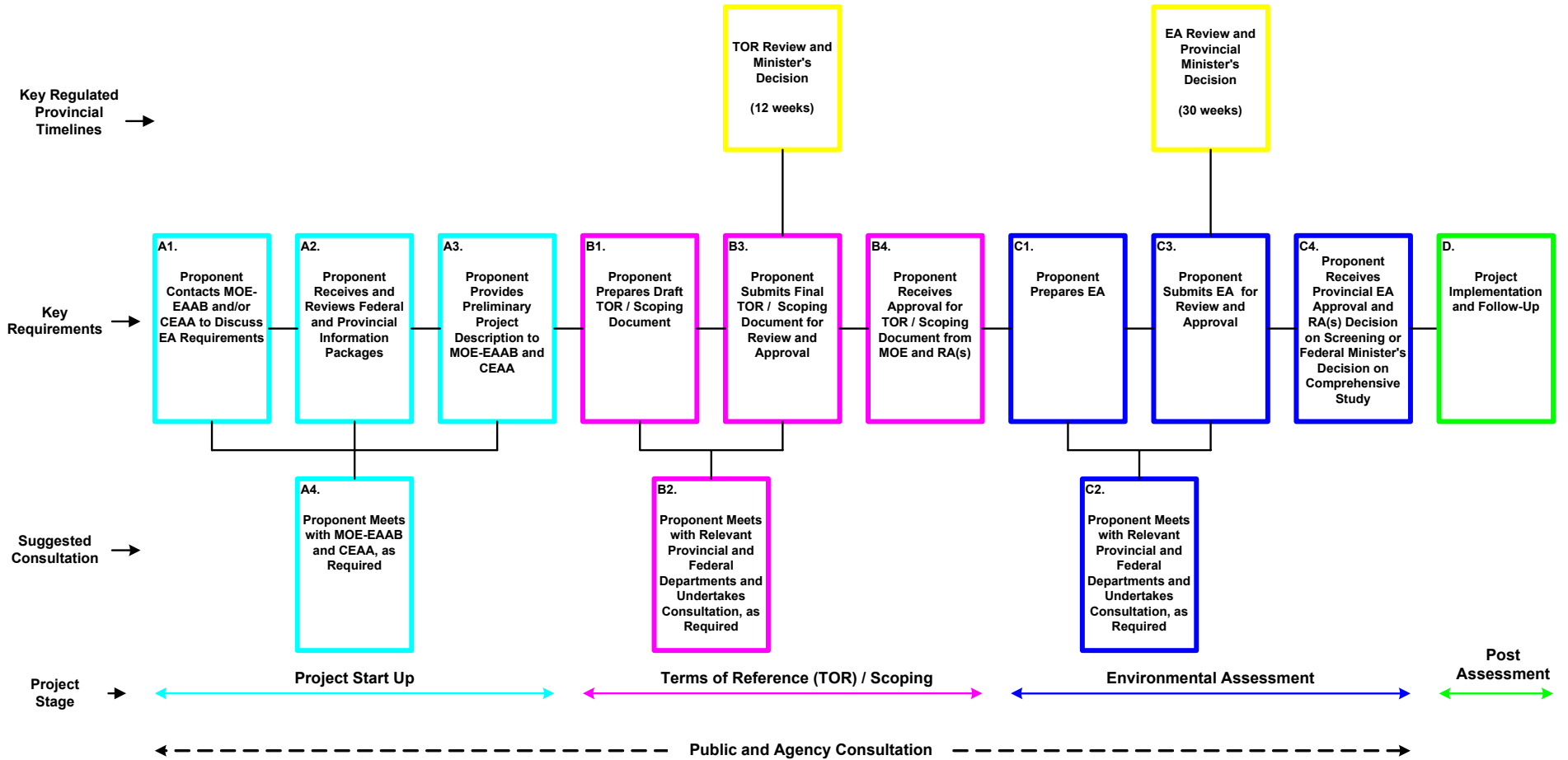
### **D. Project Implementation and Follow-Up**

During this phase, the project is implemented and all required follow-up and monitoring programs are undertaken.

### **Suggested Consultation**

Public and agency consultation should occur throughout the planning process, as appropriate to the nature and magnitude of the project. Meetings with the MOE – EAAB and the CEAA, as well as with relevant provincial and federal departments, should be held as required in each of the project phases, as illustrated by Boxes A4, B2 and C2. Since the planning process is iterative in nature, the public and agency consultation program may also need to be iterative. For example, a proponent may undertake public and agency consultation prior to the submission of the TOR / Scoping Document. During the review of the TOR / Scoping Document, a Time Out may be taken in order to address outstanding public and agency issues. During this Time Out, additional public and agency consultation may be required.

**Figure 1: Draft Environmental Assessment Coordination Process for Proponents**



Note: The boxes in the flow chart are labelled for convenience. The planning process is not intended to be sequential, but rather iterative in nature.

CEAA = Ontario Region Office - Canadian Environmental Assessment Agency  
 MOE - EAAB = Ontario Ministry of the Environment Environmental Assessment and Approvals Branch

June 12, 2001

# **BACKGROUND DOCUMENTS**

**COMMENTS ON PREVIOUS TERMS OF REFERENCE**

**(RECEIVED DURING YORK REGION'S NEED  
AND JUSTIFICATION STUDY)**

**Table 1**  
**Comments Received During York Region’s Need and Justification Study**

Agency	Comment	Response
Ministry of Agriculture	Satisfied that the draft ToR addresses the concerns of the Ministry.	
Canadian National Railway	No comments	
Ministry of Culture	<p><b>Heritage and Libraries Branch</b>  <b>Heritage Operations Unit</b></p> <ul style="list-style-type: none"> <li>a. Recommend separate consideration of cultural environment.</li> <li>b. Municipal heritage planners, Local Architectural Conservation Advisory Committees and municipal planning departments should be consulted throughout the EA.</li> <li>c. Strategy for consultation; Heritage Impact Statements</li> <li>d. A licensed archaeologist should be retained and its role in the EA should be added</li> <li>e. EA should have commitment to assessment and mitigation of impacts as part of the post-EA processes</li> </ul> <p><b>Regional Services Branch</b> – No comments</p>	<ul style="list-style-type: none"> <li>a. Section 5.3.1 and 5.3.4 of ToR have been revised.</li> <li>b. Table 6 of ToR has been revised</li> <li>c. Table 6 of ToR has been revised</li> <li>d. Table 6 of ToR has been revised</li> <li>e. Table 6 of ToR has been revised</li> </ul>

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Ministry of Education	<p>No comments on documentation and requested not to on the review team in the future.</p> <p>School boards that are affected by the project should be contacted and kept informed of details and proceedings.</p>	<p>Ministry of Education will not be part of the Government Review Team in future circulations.</p> <p>Section 6.6.1 of ToR has been revised to include school boards provided and added to the mailing list.</p>
Ministry of Environment and Energy <ul style="list-style-type: none"> <li>▪ Environmental Assessment and Approvals Branch</li> </ul>	<ul style="list-style-type: none"> <li>a. July 26, 2002 letter from Zivah Stocker provide comments on ToR and N&amp;J July 28, 2002 draft.</li> </ul>	<ul style="list-style-type: none"> <li>a. The comments have been incorporated into the August 2002 draft that was submitted to Government Review Team.</li> </ul>
<ul style="list-style-type: none"> <li>▪ Air and Noise Section</li> </ul>	<ul style="list-style-type: none"> <li>a. Table 6, Social Environment – Noise and Vibration under Actions – revised wording was provided.</li> <li>b. Provided MOE/TTC Protocol developed for light rail transit (LRT) for reference</li> <li>c. Provided MOE/MTO Protocol for reference – can be used as a basis in evaluating the significance of the traffic noise levels.</li> </ul>	<ul style="list-style-type: none"> <li>a. Table 6 of ToR has been revised</li> <li>b. Included in Appendix C of the Consultation Record for reference.</li> <li>c. Included in Appendix C of the Consultation Record for reference.</li> </ul>
<ul style="list-style-type: none"> <li>▪ Central Region, Technical Support Section</li> </ul>	<ul style="list-style-type: none"> <li>a. Ecosystem mapping – minimum list of mapped data is provided</li> <li>b. Recommend independent monitoring on ambient air quality; inclusion of the study of PM<sub>2.5</sub> and request additional information on the nature of the information on dispersion effects developed in Ottawa.</li> <li>c. Table 6 Compliance for MOE requires feasibility study of establishing community liaison groups.</li> </ul>	<ul style="list-style-type: none"> <li>a. Section 5.1 of ToR has been revised for the mapping to be incorporated in the EA.</li> <li>b. Section 6.3 of ToR has been revised.</li> <li>c. Table 6 has been revised.</li> </ul>

Agency	Comment	Response
	d. Table 6 Vegetation and Wetlands to include MOE under agencies and include studies to determine ecosystem relationship and impacts. e. Table 6 Ecosystem Planning to include identification of species movement. f. Table 6 Air Quality and Energy to include proponent monitoring.	d. Table 6 has been revised. e. Table 6 of ToR has been revised. f. Table 6 of ToR has been revised.
<ul style="list-style-type: none"> <li>▪ Central Region, Water Resources Section</li> </ul>	a. Provide detail discussion/rationale of how the selected EA area is consistent with the principles of an ecosystem-based approach to EA and well as the Oak Ridges Moraine Conservation Plan. b. Indicate that study area may be expanded if a significant net adverse environmental effect is determined. Specific criteria of what would trigger expanding the study area during the EA should be determined. c. Section 5.3 Potential Effect on the Natural Environment – Explicitly state the potential impacts to surface water and groundwater quality as well as quantity from undertaking as well. d. Table 6: various additions to the wetlands and surface water resources factors. e. Profile of existing conditions should include impacts to surface water and ground water. f. Recommended revision to Monitoring section of the	a. Section 5.3 of ToR has been revised. b. Section 5.1 of ToR has been revised. c. Section 5.3 of ToR has been revised. d. Table 6 of ToR has been revised. e. These natural features have been included under the next section 6.4 “Analysis Criteria and Impact Assessment Methodology” in Table 6 Analysis Factor. f. Section 9 of ToR has been revised.

Agency	Comment	Response
	ToR	
GO Transit	<p><b>Need and Justification</b></p> <ul style="list-style-type: none"> <li>a. Clarification on wording in Chapter 2 is required.</li> <li>b. Exhibit 2.3 and 2.4 future population and employment can be more meaningful in terms of density.</li> <li>c. Correction to GO information in Chapter 5 is provided</li> <li>d. Section 5.4.2, is the reason why York transit users are choice riders related to large percentages of them being students?</li> <li>e. Require supporting evidence/logic for statement "...local transit has been historically less competitive in York than it is elsewhere."</li> <li>f. Table 10.1 Project Transit Demand units should be specified.</li> </ul> <p><b>Terms of Reference</b></p> <ul style="list-style-type: none"> <li>g. Suggested edits for Section 2</li> <li>h. Section 2: Questions how could existing development</li> </ul>	<ul style="list-style-type: none"> <li>a. Included in the revision</li> <li>b. The population and employment densities are shown in Exhibit 2.6 and 6.6 to 6.9. Therefore, no changes made to N&amp;J.</li> <li>c. Section 5.3.4.1 of N&amp;J has been revised with the current GO Transit schedule available on the website for December 2002.</li> <li>d. In southern York Region, 40%, 10% and 15% of student uses YRT for Richmond Hill, Vaughan and Markham, respectively. (Source: YRT January-June 2002 Fare box) The statement is revised with "...of a vehicle), especially for work trips". The statement identifies the high auto ownership has an impact on transit ridership.</li> <li>e. Wording of 5.4.2 of N&amp;J has been revised to clarify how trip lengths shown transit ridership levels.</li> <li>f. AM Peak Hour Transit Persons is added to Table 10.1</li> <li>g. Section 2 of ToR has been revised</li> <li>h. Section 2 of ToR has been revised</li> </ul>

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	<p>be significantly altered over twenty year?</p> <p>i. Chapter 2: Questions the conflict between pedestrian friendliness and separate transit right-of-way?</p> <p>j. Chapter 2: “can be abbreviated by eliminating repetitious statements...”</p> <p>k. Exhibit 1: What is the different between different line types for GO Rail Services.</p> <p>l. Exhibit 1: Population and Employment Centres should be differentiated between existing vs. future and/or relative size.</p>	<p>i. As described in Section 3 Description of Proposed Undertaking, “separated transitway for the exclusive use of transit vehicles” is proposed. The separated transit right-of-way does not indicate that there will be long walking distances for pedestrians. To clarify, the term Rapid Transit is defined as transit with its own dedicated laneway/rail that is not impeded by mixed traffic. The exact location and alignment of the proposed undertaking will be evaluated based on pedestrian friendliness during the EA. To ensure pedestrian friendliness, the location of the transitway will generally be within the existing road right-of-way where separate transit right-of-way shall be within the existing road allowance. No changed to ToR is made.</p> <p>j. The chapter is to provide background in the need for the proposed undertaking. No revisions are made.</p> <p>k. Exhibit 1 of ToR, Exhibit A and 2.1 of N&amp;J has been revised.</p> <p>l. The centres are represented conceptually only to show the Highway 7’s potential to be part of the interregional transit plan and its ability</p>

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	m. Section 4: “sweeping landuse and policy changes” is also required for higher density and corridor intensification.	to link major existing or future centres. No revisions are made. m. Associate measures have been address in Section 2 Vision for Highway 7 under section 2.4.1 Office Plan and Planning Principles in Need and Justification report. These associate measures are not part of the Proposed Undertaking (section 4), therefore are not added into the Terms of Reference.
Ministry of Natural Resources (Aurora District)	a. Main Humber River should be identified as a cold water fishery. b. Little Rouge Creek should be identified as a cold water tributary of the Rouge River c. Recommend more contracting colour to be used to delineate various thermal regimes. d. Need more thorough identification of the natural heritage features within and adjacent to the proposed development corridor. e. ToR needs to include a detailing of how the proposed development will impact on natural resource features. f. Recommends minimum three seasons inventory to be conducted.	a. Section 5.2, Table 5.2, Exhibit 5.2a and Appendix B of N&J have been revised. Table 5 and Exhibit 7a of ToR have been revised. b. Exhibit 5.2c of N&J and Exhibit 7c of ToR have been revised. c. Exhibit 5.2a-c of N&J and Exhibit 7a-c of ToR has been revised with more contracting colour along with different line types. d. Section 5.2 of N&J has been revised. e. Detail impact on the natural resource features will be completed by the EA as identified in the EA work plan (Section 6) as well as Potential Environmental Effects (Section 5.3). No revision is made to ToR. f. Section 5.3.4 of ToR has been revised such that the three seasons inventory will be

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	g. Study Area should be larger than the right-of-way so that a Natural Heritage System approach can be used to evaluate impacts. h. Revise Rouge Park North boundary i. Potential impacts of surface run off, impervious surfaces, use of road salt should be considered.	completed during the EA. g. Section 5.1 of ToR has been revised. h. Exhibit 5.2c of N&J and Exhibit 7c of ToR have been revised. i. Section 5.3.3 of ToR has been revised.
Ontario Realty Corporation (ORC)	No comments	
Toronto Region Conservation Authority (reviewed ToR and N&J June 2002 draft and follow up meeting on October 25, 2002)	a. ESA #139 Milne Woods is missing b. North-south rapid transit links in all exhibits are to be labeled as “Proposed North-South Transit Corridor Subject to Separate EA”. Dashed lines will be used to represent these N-S RT. No distinction between utilizing existing and non-existing roadways is shown c. Exhibits should indicate major roadways for reference and add legends where appropriate. d. Oak Ridges Moraine should be mapped e. Create a glossary of acronyms with brief definition. f. Analysis of Alternative Transportation Strategies needs to be revisiting in terms of Natural	a. N&J report Table 5.2 and Exhibit 5.2c has been revised accordingly. ToR Table 5 and Exhibit 7c has been revised accordingly. Grant b. Exhibits in N&J and ToR have been revised. Since N-S RT is subjected to separate EA, it is unknown if the alignment will be on existing or non-existing roadways; therefore, they are not separately identified graphically. c. Applicable exhibits in N&J and ToR have been revised. d. N&J Exhibit 5.2a and ToR Exhibit 7a have been revised. Grant e. Glossary of Terms has been created and added into the appendix of N&J and ToR. f. It was agreed at the meeting that, the integrated north south and east-west rapid

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	<p>Environment ratings.</p> <p>g. Table 3 of ToR and Table 10.2 of N&amp;J – all technology could be implemented with adequate mitigation of environmental impacts need to be expanded.</p> <p><b>Terms of Reference specific comments:</b></p> <p>h. Clarify proposed undertaking will consist of one of the three RT options or a combination of the three options to be determined by the EA.</p> <p>i. Clarify that the project does not include other north-south rapid transit links.</p>	<p>transit options will have the lowest negative impact on natural environment and the other three options are rated equal. The clarification was provided that the “Do Nothing” option will have the most roadway improvement to accommodate the existing and future congestion levels, while the integrated N-S and E-W RT option will have the least roadway improvements since auto users will be diverted to become transit users. Section 8.3 and Table 8.1 and 8.2 of the N&amp;J report have been revised. Section 4 and Table 1 and 2 of ToR have been revised.</p> <p>g. Table 3 of ToR and Table 10.2 of N&amp;J have been revised.</p> <p>h. Section 3 of ToR has been revised.</p> <p>i. This ToR does not include proposed Sheppard Subway link. The ToR does include the short north-south segment between Vaughan Corporate Centre and Steeles Avenue (in the vicinity of Jane Street) providing the potential</p>

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	<ul style="list-style-type: none"> <li>j. Indicate stations will be located outside of valley corridor and street corridor.</li> <li>k. Indicate that storm water management report will be required in EA.</li> <li>l. Table 6: list all CEAA triggers; remove LSRCA from agency column; include HADD reference and revise watershed in study area.</li> <li>m. EA shall identify areas that have the potential to be tunneled. Add requirements for geotechnical reports to substantiate tunnel method and implications of any substantial dewatering and base flows.</li> <li>n. Provided information on TRCA’s policy and program interests.</li> </ul>	<p>to connect to Spadina Subway link.</p> <ul style="list-style-type: none"> <li>j. Section 5.3.2 of ToR has been revised.</li> <li>k. Section 5.3.3 of ToR has been revised.</li> <li>l. Table 6 of ToR has been revised.</li> <li>m. Table 6 and Section 5.3.2 of ToR has been revised.</li> <li>n. Included in Appendix C of the Consultation Record for reference.</li> </ul>
<p>Canadian Environmental Assessment Agency – Ontario Region</p>	<p><b>From Fisheries and Oceans Canada (DFO)</b></p> <ul style="list-style-type: none"> <li>a. Table 6 and Section 6.7: Add navigation as an analysis factor</li> <li>b. EA to include an analysis of the effects of the project on public right to navigation</li> <li>c. Table 6: Add regulatory approval as an issue/concern for compliance of CEAA</li> </ul> <p><b>From Transport Canada (TC)</b></p> <ul style="list-style-type: none"> <li>d. Recommended assessment of Section 16 – Factors under the Canadian Environmental Assessment Act</li> </ul>	<ul style="list-style-type: none"> <li>a. The ToR has been revised.</li> <li>b. Table 6 of ToR has been revised to include the analysis as part of the work plan.</li> <li>c. The ToR has been revised.</li> <li>d. Section 4 of the ToR has been assessed and the requirement of Section 16 of CEAA has</li> </ul>

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	<p>as described in Section 4 of ToR</p> <p><b>Environment Canada (EC)</b></p> <p>e. Include locations of route alternatives on natural heritage maps</p> <p>f. Add cumulative effects and significance of effects in Section 6.4.</p> <p>g. Table 6: add species at risk as an analysis factor</p> <p>h. Table 6: add large habitat blocks as an issue/concern for Wildlife Habitat.</p> <p>i. EC added to list of contacts for TAC under Section 6.6.1</p> <p>j. Need to reference impacts on migratory birds</p> <p>k. Provided comments on CEAA Requirements</p>	<p>been satisfied. No change was made to ToR associated with this comment.</p> <p>e. N&amp;J Exhibit 5.2a, 5.2b and 5.2c and ToR Exhibit 7a, 7b and 7c have been revised.</p> <p>f. Added under subsections “Analysis” and “Evaluation” in Section 6.4 of ToR.</p> <p>g. Under Wildlife habitat, RVTE species was added under issues and concerns.</p> <p>h. The ToR has been revised.</p> <p>i. The ToR has been revised.</p> <p>j. The ToR has been revised in the following sections: 6.7 Assessment of Environmental Effects of the Project under Natural Environment; 6.4.1 Process of Analysis and Impact Assessment under Analysis; 5.3.2 Potential Construction Effects.</p> <p>k. Included in Appendix C of the Consultation Record for reference.</p>