iTRANS
transportation planning & engineering consultants

City of Toronto

Six Points Interchange Reconfiguration Class Environmental Assessment Study

Toronto, ON

October 2007

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Project # 2598

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EXECUTIVE SUMMARY

A. Background

The City of Toronto initiated a Municipal Class Environmental Assessment (EA) for the Six Points Interchange in 2003 to examine options for reconfiguring the interchange and to recommend a preferred design that is consistent with the policy objectives of the new ***Etobicoke Centre Secondary Plan***. The Etobicoke Centre is one of four designated centres in the City of Toronto Official Plan.

The primary study area, within which detailed transportation analyses were undertaken, is generally bounded by the Etobicoke Centre limits plus a portion of Kipling Avenue between Dundas Street and Burnhamthorpe Road. The Six Points Interchange is located where Dundas Street West, Kipling Avenue, and Bloor Street West converge, as illustrated in **Exhibit ES.1**. The Six Points Interchange in context to the adjacent lands is shown in **Exhibit ES.2**.

The existing interchange is a unique interchange, originally constructed by the Metropolitan Toronto Department of Roads in 1961. Reconfiguration of the Six Points Interchange has been a municipal objective for more than two decades. The former City of Etobicoke ***City Centre Secondary Plan***, approved in 1987, included a policy calling for the reconfiguration of the Six Points Interchange.

B. Study Purpose and Objectives

The purpose and objectives of this study are to:

- examine options for reconfiguring the Six Points Interchange and associated ramps and service roads
- recommend a preferred design and property protection plan for a reconfigured Six Points road network, consistent with the policy objectives of the new ***Etobicoke Centre Secondary Plan***

Key benefits to be achieved through any proposed redesign should include:

- simplifying the road network, potentially releasing surplus interchange lands for other uses
- an improved street and block pattern to facilitate new development and better integrate existing and future land uses on either side of Kipling Avenue
- creating a more desirable, attractive and safe environment for pedestrians and cyclists, including improved linkages to the Kipling Subway Station, adjacent neighbourhoods, employment areas and improved streetscaping
- improved vehicular access to lands adjacent to the Six Points Interchange, particularly the Westwood Theatre lands

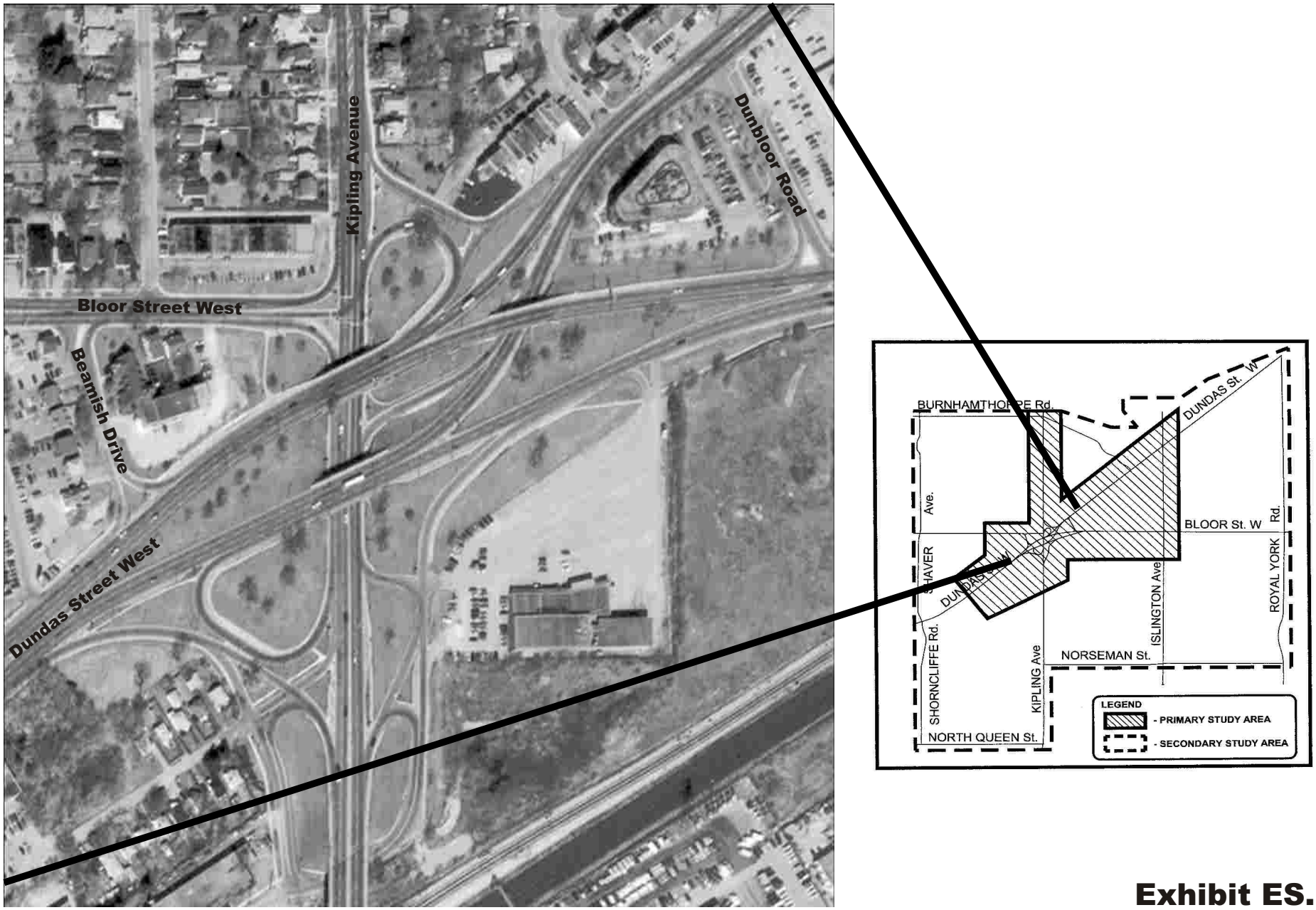

Exhibit ES.1

Six Points Interchange and Study Area

Not To Scale

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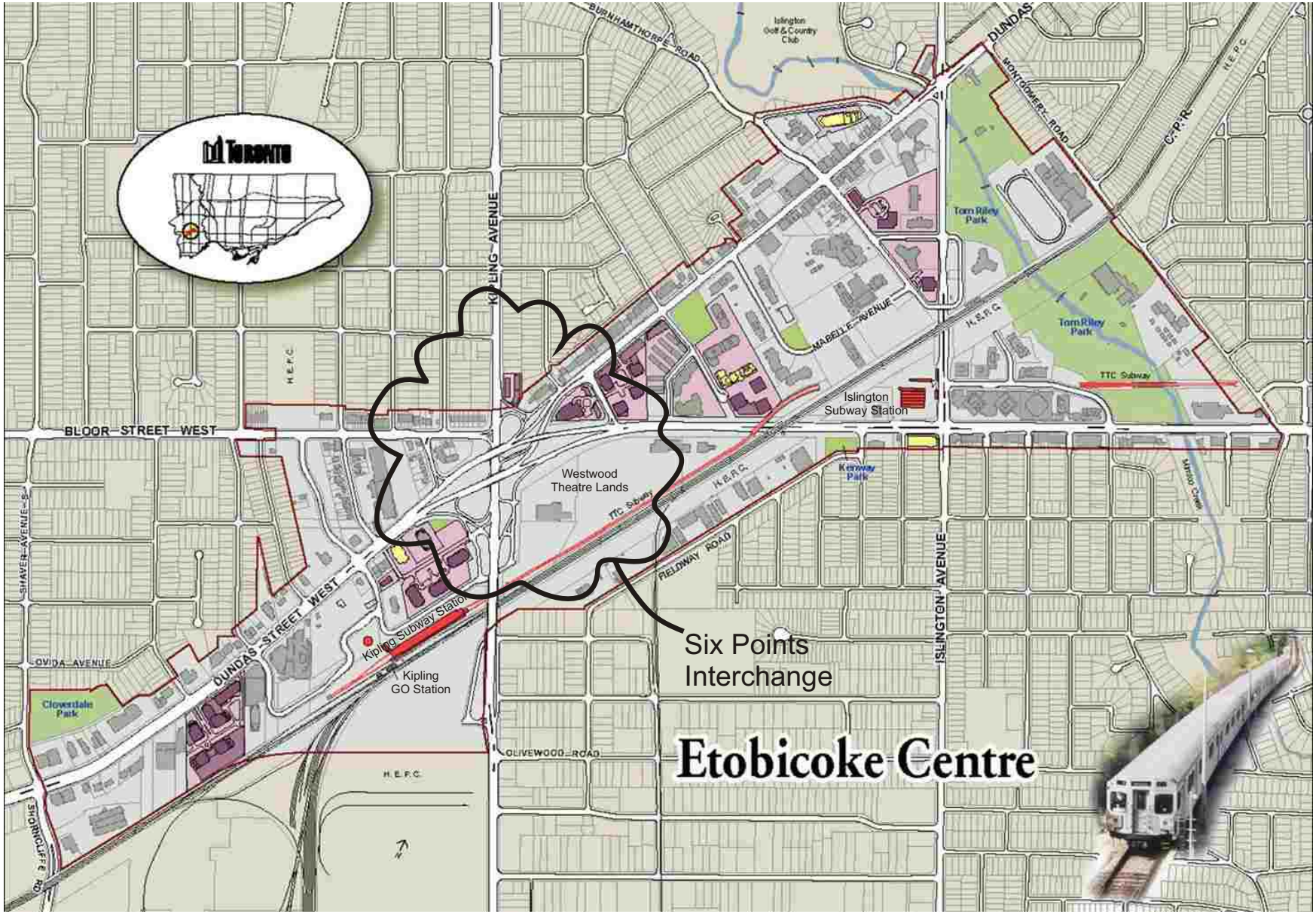

Legend

Etobicoke Centre Boundary

Not To Scale

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Exhibit ES.2
Etobicoke Centre

The preferred solution must maintain acceptable operating conditions for exiting and future surface transit services, particularly access to and from bus terminal facilities at Kipling Subway Station.

Acceptable future levels of service for traffic operations will be consistent with a highly urbanized pedestrian oriented environment.

C. Needs and Opportunities

A review of the existing conditions at the Six Points Interchange resulted in the identification of the following needs and opportunities to be addressed in this study:

City Building / Urban Design

- The Six Points Interchange occupies a significant amount of land, some of which could potentially be freed-up for alternative uses to support the development policies of the ***Etobicoke Centre Secondary Plan***.
- The Six Points Interchange is a major physical and psychological barrier, particularly between development on either side of Kipling Avenue, interrupting the physical continuity and connectivity of the Etobicoke Centre.
- Existing vehicular access to the Westwood Theatre lands is poor due to the existing freeway-type ramp configurations and site grading, adversely affecting future development potential.
- The existing road network layout needs to be simplified.
- Grade separations should be eliminated or reduced to facilitate an urban environment and pedestrian and cyclist amenities.
- Interchange-style loop ramps should be eliminated or reduced.
- 'Typical' street intersections and frontages should be maximized.
- The urban design objectives of the ***Etobicoke Centre Secondary Plan*** should be met.

Transit

- The Kipling Station is a key inter-regional transit gateway for west-end residents, and for commuters living beyond the City boundaries. The importance of this gateway will further increase with the planned construction of a new inter-regional transit terminal to serve Mississauga Transit and GO Transit, and an expanded TTC passenger drop-off and pick-up facility.
- Providing high quality pedestrian access to the Westwood Theatre lands and throughout the Six Points area will enhance access to the subway and surface transit facilities to further the City building objectives of the ***Etobicoke Centre Secondary Plan*** and reduce auto dependency.
- The Westwood Theatre site located on the east side of Kipling Avenue is currently not well connected to the Kipling Station. This problem is expected to intensify in the future as the lands east of the station redevelop.

Pedestrians

- Pedestrian activity is limited through the Six Points Interchange. Though sidewalks are provided throughout the Six Points Interchange, the inhospitable anti-urban environment of the area does not promote a highly functioning pedestrian environment where walking is interesting, safe and pleasurable. This is also true, given the poor visual amenity of the pedestrian routes throughout the interchange.
- The pedestrian connections to a variety of points of interest are poor, and pedestrian connection improvements are required between the east and west sides of Kipling Avenue. In particular, there is a need for a good pedestrian network access to the Kipling Subway station from the Westwood Theatre site, and from Dundas Street.

Cyclists

- Currently, use of the Six Points interchange by cyclists is minimal. The interchange is without facilities for cyclists and the interchange-type geometry, and free-flow traffic environment of the area is not conducive to cycling and could present safety concerns for cyclists.
- Bloor Street West, east and west of Kipling Avenue, and a section of Dundas Street between Kipling Avenue and Dunbloor Road have been identified as part of the 1000 km network of east-west and north-south bike routes within the City of Toronto Bike Plan. In addition, wider curb lanes to better accommodate and encourage cyclists should be considered in any reconfiguration of the interchange.
- There is a general need to improve cyclist connections to adjacent land uses.

Capacity and Operations

- Some of the major signalized intersections on roads approaching the Six Points area namely, Dundas Street at Poplar Avenue and Dundas Street at Islington Avenue are operating at or near capacity during the AM and PM peak hours. These gateway intersections are the major road network constraints in the study area and not the Six Points Interchange itself. This means that there are opportunities to reconfigure the interchange to take advantage of spare capacity.
- Midblock traffic volumes on the arterial road network approaching the Six Points area (Dundas Street east and west of Kipling Avenue, and Bloor Street east of Kipling Avenue) are nearing or are at capacity in the peak directions during the weekday AM and PM peak hours. Again, this means that there are opportunities to reconfigure the interchange to take advantage of spare capacity.
- Within the Six Points interchange, the northbound Kipling Avenue to westbound Dundas Street ramp is operating at capacity during the weekday AM and PM peak hours. During the weekday AM peak hour, the eastbound Dundas Street to southbound Kipling Avenue ramp is operating at capacity.
- There is an opportunity to mitigate the high number of rear-end collisions at the stop / yield conditions on the loop and direct ramps from Kipling Avenue northbound to Dundas Street westbound, and from Dundas Street eastbound to Kipling Avenue southbound.

D. Problem Statement

Based on observed needs and opportunities, there are city building / urban design issues, capacity deficiencies, operational, and safety concerns within the Six Points interchange which require a combination of solutions to address these concerns and deficiencies within the interchange. Solutions are required to **reconfigure the Six Points Interchange** to allow for a well connected Etobicoke Centre, and to meet the objectives in the ***Etobicoke Centre Secondary Plan***. The problem statement entails finding solutions necessary to:

- Simplify the road network layout, freeing up and making surplus interchange lands available for other uses.
- Maximize 'typical' street intersections and potential development frontages.
- Improve the landscape and streetscape of the area.
- Provide good pedestrian network access to and from the Kipling Subway Station, the Westwood Theatre site, Bloor and Dundas Streets, and improve pedestrian connections between the east and west sides of Kipling Avenue.
- Improve cyclist connections through the area to connect to adjacent land uses.
- Maintain acceptable surface transit operations, particularly to and from the Kipling Subway Station, considering existing and future bus operations.
- Have acceptable levels of service for traffic operations on the area arterial road network that are consistent with a highly urbanized pedestrian-oriented environment such as downtown Toronto and North York Centre.

E. Public Consultation

A comprehensive public consultation program was conducted for the Study, with the following components:

- **Mailing List:** A mailing list was established for the Study, which included public agencies and utilities, residents and businesses within and adjacent to the Study Area, and others who wrote, telephoned, e-mailed, or filled in comment sheets, or registered at a Public Meeting and Open House. People on the mailing list were sent a Notice at least one week prior to each of the public meetings. Opportunities for public input were provided throughout the process, including public meetings, telephone inquiries, letters, email and faxes.

- **Public Meetings and Open Houses:** Two formal public meetings and open houses were held during the Study. The first was held on Tuesday, March 2nd, 2004 at the Royal Canadian Legion, Branch 210, 3326 Bloor Street West. The second was held on Tuesday, June 20th, 2006 at the Etobicoke Collegiate Institute - 86 Montgomery Road. The meetings consisted of a public open house with display panels, followed by a formal public meeting comprised of a short presentation by City staff, followed by a question and answer period. Attendees were asked to sign-in when they entered the public open house. They were given a handout consisting of key display panels, and a comment form

to provide them with another opportunity to provide input to the study. Members of the study project team were on hand to respond to questions and concerns.

In April and May of 2007, the Ward Councillor held three community consultation sessions regarding the potential future use of the Westwood Theatre lands and the reconfiguration of the Six Points Interchange. These sessions were not part of the Municipal Class EA public consultation requirements.

- **Newspaper Advertisements:** At least one week prior to each public meeting, a newspaper advertisement was placed in two separate editions of the ***Etobicoke Guardian*** (South Section) to announce the date, time, and location of the public meeting. The newspaper advertisements invited the public to attend the meetings and to provide input. The advertisements provided information on contact names, telephone numbers, and addresses. A copy of the advertisements can be found in **Appendix E.2**.

- **Additional Notification:** At least one week prior to each public meeting notice of the public meeting were mailed to area residences and businesses. Notification letters were also mailed to utility companies and external agencies. For Open House No.1, approximately 10,000 notices were delivered via Canada Post to residences and businesses in the study area. Notification was mailed to 120 people on the project mailing list. For Open House No.2, approximately 10,000 notices were delivered via Canada Post to residences and businesses in the study area. Notification was mailed to over 440 people on the project mailing list.

- **Telephone Numbers**: Three telephone numbers, including a Teletype Message (TTY) and a 24-hour number were listed in all sources of advertisement and notification. This enabled members of the public to contact the City's project manager at their convenience.

- **City's website and project email address:** Through the newspaper advertisements and notices, members of the public were invited to visit the City's website at www.toronto.ca/involved/projects and to send comments via an e-mail address provided.

- **Utility Companies:** A meeting was held with the utility companies with services within the corridor. These companies included Toronto Hydro, Bell Canada, Rogers Cable Communications, and Enbridge Gas Distribution. The meeting was held on Wednesday, September 1st, 2004 at iTRANS. The meeting was held to confirm utility information, and to identify and discuss potential impacts that alternative reconfiguration designs for the Six Points Interchange may have on existing and/or planned services.

Further details on the public consultation process are documented in other sections of this report. A Summary of the Public Meetings can be found in **Appendix E.3**.

Major events in the public consultation process are summarized below:

▪ Study Initiation	**November 2003**
▪ Newspaper advertisement of Study Commencement	November 28 & December 3, 2003
▪ Notice of Study Commencement sent to external agencies / utilities	November 28, 2003
▪ Direct mailout to established mailing list of interested residents and businesses for Open House No. 1	February 16, 2004
▪ Direct mailout of notices to all area residences and businesses for Open House No. 1	Week of February 18, 2004
▪ Newspaper advertisement of Public Meeting and Open House No. 1	February 18 & 25, 2004
▪ **First Public Meeting and Open House**	**March 2, 2004**
▪ Direct mailout of notices to all area residences and businesses for Open House No. 2	Week of June 8, 2006
▪ Newspaper advertisement of Public Meeting and Open House No. 2	June 7 & 9, 2006
▪ **Second Public Meeting and Open House**	**June 20, 2006**
▪ **Community Consultation Sessions (Not part of the Municipal Class EA public consultation process)**	**April 28, May 15 & May 30, 2007**

F. "Long List" of Alternative Solutions

The Municipal Class Environmental Assessment process requires the identification of all reasonable alternatives solutions and examination of alternative designs to address the problem. After the Problem Statement (i.e. need for the reconfiguration of the interchange) was established, Phases 2 and 3 of the study were addressed in an integrated fashion by including design concepts as alternative solutions in the evaluation of alternative designs.

This integration of Phases 2 and 3 was necessary to fully respond to, and address the need to reconfigure the interchange, and to demonstrate that all alternatives were being considered. In this regard, a "Long List" and a "Short List" of alternatives were identified. The "Short List" was derived from the remaining alternatives after analysis of the "Long List".

The alternative solutions consist of a long list of 33 options including the 'Do Nothing' which comprised the "Long List". The alternative methods include four of six "Short List" options, for which refined design concepts were developed for 'major' reconfiguration of the interchange.

To address the problem statement, a "long list" of 33 alternative solutions was developed from a number of sources, including three separate studies conducted between 1983 and 1989 to review redesign concepts for the interchange, an urban design charrette held in 1999 in conjunction with the 'City Centre Secondary Plan' review, and concepts developed by this project's study team. In developing the concepts by this project's study team, two visioning workshops were held with City staff representing the City Planning Division, Transportation

Services Division, Technical Services Division, Facilities and Real Estate Division and the Public Consultation Unit.

The resulting concepts and those from the previous studies were grouped into the following six families to facilitate analysis:

1. **Do Nothing** – This alternative represented continuation of the status quo and would involve no changes or improvements to the existing Six Points interchange. This alternative provides a baseline for comparison purposes.

2. **Fully At-Grade –** This alternative included options with all at-grade intersections. No grade separation of the road network would be involved.

3. **Bloor-Dundas Connected with Grade Separation –** This alternative included options with Bloor Street west of Kipling Avenue connected to Dundas Street east of Kipling Avenue, and Dundas Street west of Kipling Avenue connected to Bloor Street east of Kipling Avenue. The options would involve grade separation with Kipling Avenue.

4. **Bloor Connected with Grade Separation –** This alternative included options with Bloor Street east and west of Kipling Avenue directly connected. These options would involve grade separation with Kipling Avenue, and with Dundas Street.

5. **Bloor Not Connected with Grade Separation –** This alternative included options with Dundas Street east and west of Kipling Avenue directly connected, or modifications to existing conditions. All options involved no direct connection of Bloor Street east and west of Kipling Avenue, and grade separation with Kipling Avenue.

6. **Roundabout and Ring Road –** This alternative included options with a ring-road system, and no grade separation.

A set of criteria, referred to as "coarse criteria", were developed by the project team, including the Technical Advisory Committee, to provide a first-step elimination of some of the 33 "long list" of alternative solutions. From this, a "short list" of alternative solutions for more detailed evaluation was defined. The criteria were developed to meet the objectives of the Problem Statement. The "coarse criteria" used to evaluate the 33 alternative solutions were as follows:

- Release interchange lands for other uses
- "Normalize" intersections (i.e. intersect at-grade, meet typical geometric design criteria, pedestrian and cyclist accessibility, etc.)
- Arterial road continuity / connectivity (i.e. Dundas-Dundas connection, Bloor-Bloor connection, and Kipling-Kipling connection)
- No "above grade" grade separations
- No significant impacts on active development sites

Illustrations of the 33 alternative solutions are provided in **Appendix B**.

G. "Short List" of Alternative Solutions

Initial "Short List" of Alternatives

The analysis of the 33 "long list" of alternative solutions resulted in an initial "short list" of six alternatives, including the 'Do-Nothing', that were carried forward for further comparison. The identified "short list" of alternative solutions was defined more specifically as follows:

1. **Do Nothing** – This alternative represents continuation of the status quo and would involve no changes or improvements to the existing Six Points Interchange. This alternative provides a baseline for comparison purposes.

2. **Fully At-Grade, Dundas Street Loop –** This alternative includes all at-grade intersections, with Dundas Street realigned to the south through the Westwood Theatre lands, and Bloor Street connected through the Kipling Avenue intersection.

3. **Fully At-Grade, Bloor Street Loop –** This alternative includes all at-grade intersections and connecting Bloor Street east and west of Kipling Avenue via a new alignment through the Westwood Theatre lands. Dundas Street West and Kipling Avenue would be connected at-grade on their current alignments, resulting in a skewed intersection.

4. **Fully At-Grade, Kipling Avenue Loop –** This alternative includes all at-grade intersections. To achieve right-angled intersections, Kipling Avenue would be realigned to the east, and Bloor Street east and west of Kipling Avenue connected via a new alignment through the Westwood Theatre lands. Dundas Street would connect on its current alignment.

5. **Dundas Street Underpass –** This alternative entails grade-separating Dundas Street in an underpass to Kipling Avenue and to Bloor Street. Bloor Street would connect through the Kipling Avenue intersection.

6. **Kipling Avenue Underpass –** This alternative entails grade-separating Kipling Avenue in an underpass to Dundas Street and to Bloor Street. Bloor Street would connect through the Kipling Avenue intersection and Dundas Street would be realigned to the south to account for appropriate intersection angles.

Illustrations of these "short list" of alternative solutions are provided in **Appendix B** and were presented at the March 2004 Public Meeting and Open House.

Final "Short List" of Alternatives

A pre-screening of the preliminary "short list" of alternatives was undertaken based upon the following criteria:

- Releasing developable interchange lands for other uses
- "Normalizing" intersections (i.e. meet typical geometric design criteria, pedestrian and cyclist accessibility, etc.)
- Avoiding significant adverse impacts on active development sites

After the preliminary review, three options – the Fully At-Grade Bloor Street Loop, the Fully At-Grade Kipling Avenue Loop, and the Kipling Avenue Underpass – were screened out from further evaluation for the following reasons:

Option	Reasons for Screening Out
Fully At-Grade Bloor Street Loop	▪ Roadway geometry results in non-"typical/normal" intersection at Dundas Street and Kipling Avenue – limits available capacity in the road network with restricted left turn movements ▪ Resulting block shapes and sizes are not conducive to development and/or road network users
Fully At-Grade Kipling Avenue Loop	▪ Significant impacts on existing homes and on active development site north of Bloor Street ▪ Resulting block shapes and sizes are not conducive to development and/or road network users ▪ Resulting roadway alignment geometry does not meet appropriate design criteria
Kipling Avenue Underpass	▪ Significant impacts on several homes on Kipling Avenue north of Bloor Street ▪ Resulting block shapes and sizes are not conducive to development and/or road network users

The following four alternative solutions were therefore carried forward for further refined design and detailed evaluation:

1. Do Nothing
2. Modified Existing – Improved Westwood Lands Access
3. Fully At-Grade, Dundas Street Loop
4. Dundas Street Underpass

Evaluation of Alternative Designs

The evaluation of the alternative designs is summarized below:

Option 1: – Do Nothing is the third ranked alternative, for the following reasons:

- Does not meet the objectives of the Problem Statement, since no changes will occur to the existing conditions. Thus urbanizing the Six Points area of the Etobicoke Centre to a level comparable to other City centres such as the North York City Centre would not be achieved.
- Limited opportunity to create appropriate development blocks, and improved streetscape.
- Very limited opportunity for improvement to pedestrian access to and from Kipling Station, the Westwood Theatre site, Bloor and Dundas Streets, and pedestrian connections between the east and west sides of Kipling Avenue.
- No improvement to cyclist connections through the area.
- Will require maintenance costs for the existing structures over time, however there are no construction costs for a new road network.

Option 2: – Modified Existing – Improved Westwood Lands Access is the second ranked alternative for the following reasons:

- Meets some of the objectives of the Problem Statement, with improved access to the Westwood Theatre lands allowing for transportation service of these lands, and some accommodation made for pedestrians and cyclists. However, the proposed road network will not be simplified over existing conditions.
- Some surplus interchange lands will be freed up with removal of a few access ramps.
- Provides for some opportunity to create appropriate development blocks, on the Westwood Theatre site.
- Maintains acceptable traffic levels of service.
- Provides lower level of transit vehicular accessibility to Kipling Station than Option 3.
- New construction cost significantly less than Options 3 and 4.

Option 3: – Fully At-Grade, Dundas Street Loop is the preferred alternative. This option addresses the Problem Statement by:

- Providing a simplified road network layout.
- Freeing up surplus interchange lands for other uses.
- Maximizing the flexibility to have the best potential to serve adjacent urban land uses, and provides the most opportunities to create appropriate development blocks, with improvements to the landscape and streetscape of the area.
- Providing good pedestrian access to and from Kipling Station, the Westwood Theatre site, Bloor and Dundas Streets, and improving pedestrian connections between the east and west sides of Kipling Avenue.
- Improving cyclist connections through the area to connect to adjacent land uses.
- Providing for surface transit operations, to and from the Kipling Subway Station, and enhanced opportunity for transit service through the area, including the Westwood Theatre lands.

It is anticipated that Option 3 will provide the highest return on land value of all four options. This option can be accommodated almost entirely within City-owned lands, and at a significantly lower cost than Option 4. Utility relocations would be necessary and some property would be required.

Option 4: – Dundas Street Underpass is the least preferred short listed option for the following reasons:

- Partially meets the objectives of the Problem Statement with surplus interchange lands freed up for other uses, which will be an improvement over existing conditions.
- Does not provide for the best development blocks of a reasonable size that promotes flexibility in use and development pattern over time, though this option has attributes comparable to Option 3.
- Has access and connectivity constraints as a result of the underpass, and provides for less developable frontage than Option 3.
- Overall traffic operations are not appreciably different than Option 3.
- Implementation cost is approximately 30 % higher than Option 3.

Preferred Alternative Design

The preferred alternative design for the reconfiguration of the Six Points Interchange is the **Fully At-Grade, Dundas Street Loop** (Option 3). This option provides for all at-grade intersections with Dundas Street West, Kipling Avenue, and Bloor Street West, and removes the existing interchange structures. Bloor Street West is made continuous across Kipling Avenue. Dundas Street, east and west of Kipling Avenue, will be connected via a new roadway through the Westwood Theatre lands, and via Dunbloor Road. The new grid of public roads will create new development parcels with good linkages to the surrounding established urban fabric.

Overall, this option would provide a balance among city building / urban design objectives, traffic and transit operational requirements, accommodation for pedestrians and cyclists, protection of stable residential communities, impacts to the community and future developments, and cost, with minimal environmental impacts.

This option provides for:

- Street cross-sections that meet urban design objectives for the Etobicoke Centre, and arterial road design standards in terms of pavement widths, lane widths, sidewalks, and boulevards.
- Better accommodation for pedestrians by providing an appropriate network of pedestrian sidewalks and linkages, including improved direct linkages between the Westwood Theatre lands and Kipling Station.
- Improved accommodation for cyclists with a bicycle facility on Bloor Street West, and 4.0 m ‘bike friendly’ curb lanes on Dundas Street West, and potentially on Kipling Avenue.

- Good accommodation for transit vehicles with an accessible road network through the Westwood Theatre site, wider (4.0 m) curb lanes on Dundas Street West and on Kipling Avenue. The retention of the loop ramps on the west side of Kipling Avenue, and possibly the east side of Kipling Avenue (the latter being dependent on future bus routing and development opportunities on the adjacent Westwood Theatre lands) provides convenient bus access to / from Kipling Station.

- Adequate number of lanes and the appropriate auxiliary lanes at intersections. The proposed number of lanes would provide adequate capacity for the roadway to accommodate traffic projections in the area.
- Improved streetscapings

Adverse impacts include the need to acquire a relatively small amount of private property and the potential for traffic infiltration. A total of approximately 585 m^2 of property would be required from the east and west sides of Dunbloor Road and from the west triangular corner of 2 Dunbloor Road. Traffic infiltration in adjacent residential communities will be monitored and mitigating measures pursued should they be warranted.

H. Recommended Design Concept

This section describes the engineering features of the recommended design concept for the reconfiguration of the Six Points Interchange. The preliminary design profile and typical cross-sections are included in **Appendix A**.

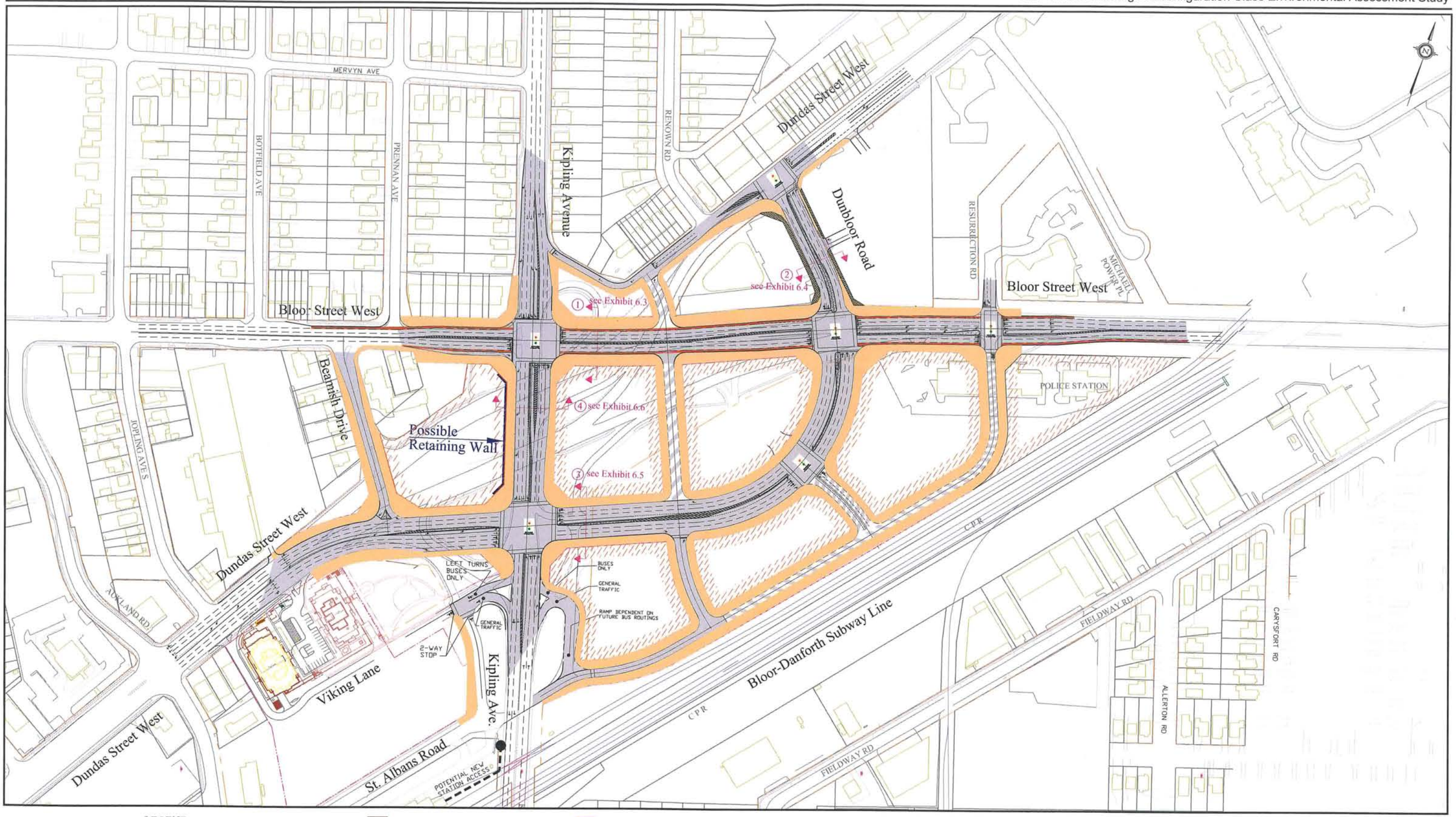
The preferred design for the reconfiguration of the Six Points Interchange, developed and refined considering public input, is described below:

- Dundas Street West, west of Kipling Avenue connected to Dundas Street West east of Kipling Avenue via a new roadway through the Westwood Theatre lands, and via Dunbloor Road.
- The extension of Bloor Street easterly, east of Kipling Avenue to connect to Bloor Street at Dunbloor Road.
- A widening of Kipling Avenue to 4/5 through lanes from just south of Viking Lane to approximately 165 m north of Bloor Street, within a 42 m right-of-way; 4.0 m curb lanes are proposed with exclusive turning lanes at the appropriate intersections.
- A 6-lane cross-section with exclusive left turn lanes at the appropriate intersections on Dundas Street through the Westwood Theatre lands matching the existing Dundas Street cross-section west of Kipling Avenue to Bloor Street, within a 42 m right-of-way; 4.0 m curb lanes are proposed as ‘bike friendly’ lanes and to accommodate transit vehicles.
- A 4-lane cross-section on Bloor Street, with a 1.8 m bike lane in each direction, and the potential for on-street parking, within a 42 m right-of-way.
- A 4-lane cross-section on Dunbloor Road, within a 26 m right-of-way.
- Retaining the existing loop ramps between St. Albans Road and Viking Road, with some movements potentially restricted to transit vehicles only.
- A new 2-lane roadway connection from St. Albans Road through the Westwood Theatre lands to Dundas Street.

- A potential east-west local road (paralleling the CP rail corridor) from approximately 130 m east of the service ramps on the east side of Kipling Avenue to the intersection of Bloor Street / Resurrection Road.
- A potential north-south local road connection from Dundas Street West continuing to north of Bloor Street to service the development blocks.
- A potential north-south local road between the potential local road (paralleling the CP rail corridor) to Dundas Street West. This potential north-south local road may be located approximately 240 m east of the Dundas Street / Kipling Avenue intersection.
- Overall improved streetscaping by providing trees on both sides of the roadways throughout the study corridors and opportunities for generous sidewalk and boulevard treatments. Other opportunities for additional streetscaping, such as median planting, could be explored during detailed design.

The preferred design concept is illustrated in **Exhibit ES.3**.

With reconfiguration of the Six Points interchange, approximately 15.5 acres of land will be readily available for development (assuming the redevelopment of the Police Station lands). Approximately 1.75 acres of additional remnant land would be available for potential uses such as, but not limited to, small parkettes, extensions to existing parks, public art installations, other amenities or public uses, or sale to adjacent property owners. Developable block sizes range in size from approximately 1.5 to 3.0 acres. Other remnant parcels range in size from approximately 0.2 to 0.5 acres.



LEGEND

- PROPOSED ROAD NETWORK
- POTENTIAL LOCAL ROADS
- PROPOSED DEVELOPMENT BLOCKS
- PROPERTY REQUIRED
- PROPOSED BIKE LANE
- PROPOSED BOULEVARDS
- CROSS SECTION LOCATIONS SEE EXHIBIT No.

Scale 1:3000+/-

October 2007

Exhibit ES.3
Preferred Design Concept - Dundas Street Loop

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I. Environmental Effects and Mitigation Measures

A summary of the potential impacts to the natural, social and economic environments, together with recommended mitigation measures is provided in **Table ES.1**.

Table ES.1: Potential Impacts and Proposed Mitigation Measures

Factor	Potential Impact	Proposed Mitigation
Natural Environment		
Vegetation	▪ Reduction of vegetation within the interchange area	▪ The right-of-way vegetation is primarily ornamental plantings and hedgerows. However, this urban vegetation provides habitat for birds and small mammals, shade, soil stabilization, and carbon cycling through respiration. Efforts should therefore be made to protect urban vegetation that does not need to be removed. ▪ Environmental protection measures designed to reduce vegetation removals, and to reduce potential impacts of road salt should be considered on a site-specific basis during detail design. Some of these measures are provided in **Section 6.2.2.1**. ▪ There are no rare, threatened or endangered vegetation or significant vegetation communities within the study limits. Therefore, this project will not affect any of these communities.
Wildlife	▪ Displacement of wildlife	▪ The right-of-way consists primarily of previously modified / disturbed terrestrial wildlife habitat with low habitat structure and diversity, and limited habitat capability. As are result, a reconfiguration of the interchange will not have a significant effect on wildlife and wildlife habitat. ▪ However, numerous bird species located within the project limits are listed under the Migratory Birds Convention Act (MBCA). To meet the requirements of the MBCA, no vegetation removals should occur during the nesting season (April 1 to July 31). If vegetation clearing is required during this period, a nesting survey should be carried out by a qualified avian biologist prior to construction. If active nests are found, a site-specific mitigation plan should be prepared in consultation with the Canadian Wildlife Service. ▪ There are no rare, threatened or endangered wildlife or significant wildlife habitat within the study limits. Therefore, this project will not affect any of these habitats.

Factor	Potential Impact	Proposed Mitigation
Natural Environment		
Fisheries and Aquatic Habitat	▪ Direct impact on fisheries and aquatic habitat	▪ There are no watercourses located within the study limits. Therefore, the proposed reconfiguration is not anticipated to affect any fisheries or aquatic habitat. ▪ During construction however, measures as described in **Section 6.2.2.4 -** erosion and sediment control, should be taken to minimize the potential for downstream impacts to fisheries and aquatic habitat.
Surface Water Quantity	▪ Increase in runoff volume and peak flows	▪ Maximize runoff volume and peak flow controls on developable lands ▪ Provide additional storage through "Super Pipes" in each of the storm sewer systems prior to the downstream constrained sewer segment, in order to match with the downstream allowable rates in each subcatchment area. ▪ The sizing of sewers to be conducted during the detail design stage.
Surface Water Quality	▪ Increase in Total Suspended Solids (TSS)	▪ Oil Grit Separators (OGSs) and storage tanks are potentially suitable for treating runoff from the road area. This is to be confirmed through more detailed water balance analysis with more site-specific hydrogeologic and soil data. ▪ "Super Pipes", recommended for peak flow control in each of the subcatchment areas, can also provide water quality control. The Total Solids (TSS) removal within the "Super Pipes" can be equivalent to storage tanks. However, the water quality performance should be verified at the detail design phase of the study. ▪ Runoff from developable lands can be treated with various source and end-of-pipe control measures, such as underground storage tanks and off-line wet ponds. These would provide peak flow control, as well as water quality control. ▪ Applying clean water collector systems technology in future development areas should be explored. This new technology will enhance ground water infiltration, and would provide runoff quantity and quality control. ▪ Existing developed areas should be retrofitted with source control measures such as downspout disconnections in residential areas and porous pavements in commercial areas.
Surface Water Infiltration	▪ Decrease in infiltration	▪ This decrease can be mitigated by implementing new technologies such as clean water collections systems and green roof systems. Rerouting parking lot runoff to grassed area in each of the developable areas can also enhance the infiltration volume under future conditions.

Factor	Potential Impact	Proposed Mitigation
Natural Environment		
Soil Removal, and Contaminants	▪ Potential for removal of contaminated soils	▪ Any soils that are removed during construction should be tested for contaminants. If the soils are contaminated, the City is to notify the MOE and have a contingency plan for how and where the soils will be disposed of or remediated. ▪ The City is to develop a contingency plan for how any gas tanks or petroleum storage sites encountered during construction will be handled, to ensure groundwater and soil contamination does not occur.
Social and Economic Environment		
Socio-Economic	▪ Impacts on businesses and residents	▪ Overall, a reconfiguration of the Six Points Interchange will provide for a vibrant mix of employment and housing which will present opportunities for residents to walk or use public transit to work. A reconfiguration will also allow for a hub of cultural, social, administrative and recreation uses, which will facilitate social interaction and foster a sense of community and identity for the area. ▪ In the short-term, the nature of the work required to reconfigure the interchange is such that traffic disruption and delays cannot be avoided. Existing businesses and residents will therefore be impacted while construction is taking place, mainly from traffic detours, restricted movements, etc. Timing of construction activities can be coordinated to minimize some of these impacts.
Noise and Road Construction	▪ Increase in existing noise levels.	▪ A reconfiguration of the Six Points Interchange will have none to negligible noise impact on noise sensitive receptor locations. As per the MTO/MOE guidelines, noise mitigation is not required for the proposed works. ▪ Construction activities are to comply with the requirements of the municipal noise by-laws.
Air Quality	▪ Degradation in ambient air quality conditions	▪ Local air quality impacts attributable to vehicular emissions from projected, future-build, peak-hour traffic volumes within the proposed new road network, are less than applicable government guidelines at the adjacent residences for all modeled scenarios. Air quality is therefore not a concern.
Property Requirements	▪ Requirement for additional property	▪ Approximately 585 m^2 of property will be required from two property owners. Formal definition of property requirements will be determined during detail design.
Streetscaping	▪ Reduced aesthetics	▪ Streetscaping is an important element in establishing an urban centre to help in increasing the enjoyment of area residents, businesses, and visitors, and to provide some definition and character of the area. As such, extensive streetscaping is proposed to be provided with a reconfiguration of the interchange. ▪ Streetscaping details will be determined during detail design, and will meet the City of Toronto (***Etobicoke Centre Secondary Plan***) streetscaping and urban design guidelines.

Factor	Potential Impact	Proposed Mitigation
Social and Economic Environment		
Archaeology, and Cultural Resources	▪ Identification of precontact and historic archaeological sites in undisturbed areas.	▪ In the event that deeply buried archaeological remains are encountered during construction, the Office of the Regulatory and Operations Group, Ministry of Tourism, Culture and Recreation should be contacted, and standard procedures should be adhered to during construction, in accordance with the Cemeteries Act.
Utilities	▪ Relocation of existing utilities (above ground and underground)	▪ Relocation of existing utilities will be significant. Formal definition of impacts on utilities, specifically Toronto Hydro, Enbridge Gas, Bell Canada and Rogers Cable, will be determined during detail design.
Other Services	▪ Relocation of existing water & wastewater services	▪ Relocation of existing water & wastewater services will be significant. Formal definition of impacts will be determined during detail design.
Illumination	▪ Need for illumination	▪ The need for and type of illumination will be confirmed during detail design. Illumination is to be provided as appropriate.
Construction Detours	▪ Inconvenience during construction.	▪ During detail design, a detailed construction staging and traffic management plan similar to that described in **Section 6.1.7** should be developed to determine how traffic will be accommodated during construction and how access to properties will be maintained. ▪ The City will attempt to mitigate impacts as much as possible.

APPENDICES A – G

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