

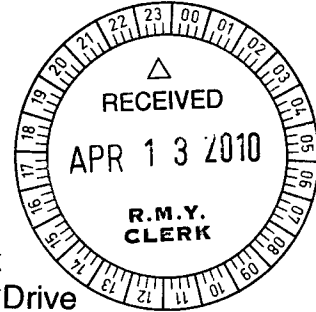
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FILE No. -

Corporate Services
Council and Administrative Services

April 7, 2010



The Regional Municipality of Peel
 Attn: Ms. C. Reid, Regional Clerk
 10 Peel Centre Drive, Suite "A", 5th Floor
 Brampton, ON L6T 4B9

City of Mississauga
 Attn: Ms. C. Greer, City Clerk
 Civic Centre, 300 City Centre Drive
 Mississauga, ON L5B 3C1

The Town of Caledon
 Attn: Ms. K. Landry, Town Clerk
 P.O. Box 1000, 6300 Old Church Road
 Caledon, ON L7C 1J6

The Region of York
 Attn: Mr. Denis Kelly, Regional Clerk
 Corporate Services Department
 17250 Yonge Street, 4th Floor
 Newmarket, ON L3Y 6Z1

City of Vaughan
 Mr. Jeffrey A. Abrams, City Clerk
 2141 Major Mackenzie Drive
 Vaughan, ON L6A 1T1

Metro Linx
 Attn: Mr. Rob MacIsaac, Chair
 20 Bay Street, Suite 901
 Toronto, ON M5J 2N8

Ministry of Transportation
 Central Region Office
 1201 Wilson Avenue, Building "D", 2nd Floor
 Downsview, ON M3M 1J8

Ministry of the Environment
 Central Region Office
 5775 Yonge Street, 8th Floor
 North York, ON M2M 4J1

Re: Highway 427 Transportation Corridor Environmental Assessment

The following recommendation of the Planning, Design and Development Committee Meeting of March 22, 2010, was approved by Council on March 31, 2010:

- PDD045-2010 1. That report from H. Zbogor, Manager, Long Range Transportation Planning and D. Kuperman, Transportation Policy Planner, Planning, Design and Development, dated February 26, 2010, to the Planning, Design and Development Committee Meeting of March 22, 2010, re: **Highway 427 Transportation Corridor Environmental Assessment** (File T17) be received; and,

cont...../

2. That the extension of Highway 427 to Major Mackenzie Drive be endorsed, allowing for expedited construction and a future transitway immediately to the west of the alignment, in accordance with the "427 Transportation Corridor Environmental Assessment EA" report of January 29, 2010;
3. That the Ministry of Transportation extend the planning area for the future transitway to Highway 7, in order to provide transit network connectivity with Viva and Züm services;
4. That the comments attached hereto as Appendix B, be endorsed as Brampton's official response to the Ministry's Notice of Study Completion;
5. That the Ministry of Transportation immediately initiate planning for a possible future extension of Highway 427 at least as far north as Highway 9; and,
6. That a copy of the subject report be forwarded for information to the regions of Peel and York, the cities of Mississauga and Vaughan, the Town of Caledon, Metrolinx, the Ministry of Transportation, and the Ministry of the Environment.

A copy of the subject report is being forwarded to you pursuant to the above recommendation.

Yours truly,



Chandra Urquhart
Legislative Coordinator
City Clerk's Office
Tel: 905-874-2116 Fax: 905-874-2119
e-mail: chandra.urquhart@brampton.ca

(PDD/F2)

cc: J. Corbett, Commissioner, Planning, Design and Development
T. Mulligan, Commissioner, Works and Transportation
A. Smith, Director, Planning Policy and Growth Management
H. Zbogor, Manager, Long Range Transportation Planning
D. Kuperman, Transportation Policy Planner, Planning, Design & Development



F2-1

Report

Planning, Design & Development Committee

Standing Committee of the Council
of the Corporation of the City of Brampton

Date: Wednesday, February 26, 2010

PLANNING, DESIGN & DEVELOPMENT COMMITTEE

File: T17HI-5

Subject: **RECOMMENDATION REPORT:** **DATE:** March 22, 2010
Highway 427 Transportation Corridor Environmental Assessment

Contact: David Kuperman, Transportation Policy Planner III (2410)
Henrik Zbogar, Manager, Long Range Transportation Planning (3553)

OVERVIEW:

- This report is in response to the Environmental Assessment (EA) Report for the 427 Transportation Corridor EA Study, which was submitted on January 29, 2010 by the Ontario Ministry of Transportation (MTO) to the Ontario Ministry of the Environment (MOE) for formal review, per the Environmental Assessment Act.
- Council is requested to endorse Brampton staff comments, submitted in draft to MTO by the stipulated March 19, 2010 deadline.
- Council is requested to endorse the Highway 427 Transportation Corridor EA, which recommends a preferred alternative that includes the extension of Hwy 427 from Highway 7 to Major Mackenzie Drive, and property protection for a Transitway on the west side of the highway.
- The preferred alternative and route were selected with the goals of minimizing effects on planned developments east and west of the corridor, serving truck traffic to the CP Vaughan Intermodal Facility, and allowing for maximum flexibility with regard to future extension and inter-regional transportation corridor planning.
- To the extent that this EA addresses existing and short-term transportation problems, Council Resolution PDD207-2009 had expressed the City's position that the Province expedite construction of the 427 extension, that this project be included in MTO's five-year highways construction program, and that the province initiate planning to a longer-term plan to extend Highway 427 beyond Major Mackenzie Drive.

RECOMMENDATIONS

1. THAT the report, "Recommendation Report: Highway 427 Transportation Corridor Environmental Assessment," dated February 26, 2010 be received;
2. THAT the extension of Highway 427 to Major Mackenzie Drive be endorsed, allowing for expedited construction and a future transitway immediately to the west of the alignment, in accordance with the "427 Transportation Corridor Environmental Assessment EA" report of January 29, 2010;
3. THAT the Ministry of Transportation extend the planning area for the future transitway to Highway 7, in order to provide transit network connectivity with Viva and Züm services;
4. THAT the comments attached hereto as Appendix B, be endorsed as Brampton's official response to the Ministry's Notice of Study Completion;
5. THAT the Ministry of Transportation immediately initiate planning for a possible future extension of Highway 427 at least as far north as Highway 9;
6. THAT a copy of the subject report be forwarded for information to the regions of Peel and York, the cities of Mississauga and Vaughan, the Town of Caledon, Metrolinx, the Ministry of Transportation, and the Ministry of the Environment.

BACKGROUND

Highway 427, inaugurated in 1972, originally extended from the Queen Elizabeth Way to Highway 401 and Pearson International Airport. It has subsequently been extended in stages to its current terminus at Highway 7.

The MTO originally commenced the EA process for the GTA North Transportation Corridor between the existing terminus of Highway 427 and Simcoe County in June 2002. The EA was officially terminated in March 2005, after the release of the Draft Growth Plan for the Greater Golden Horseshoe (the extension of Highway 427 across and north of the Oak Ridges Moraine is not identified as an initiative in the Growth Plan).

In February 2005, MTO started preparing the 427 Transportation Corridor EA Terms of Reference to support the policies and planning vision of the Growth Plan. The Terms of Reference were approved by the Ministry of the Environment (MOE) in November 2005, and the new EA began in April 2006.

In fall 2008, the Region of York opened the 427 Interim Arterial Extension, an 800-metre four-lane arterial road connecting the existing terminus of Highway 427 at Highway 7 and Zenway Boulevard. Funding for the project was provided by York Region, Peel Region, and the Government of Ontario.

The purpose of the EA study is to:

- Address existing and short term transportation problems related to the current Highway 427 terminus, truck accessibility to and from the CPR Vaughan Inter-Modal facility, and the related impact of truck traffic on roads in the Peel-York boundary area;
- Identify and protect required property to allow planned development to occur outside of the transportation corridor;
- Ensure that alternatives/preferred solutions will not preclude or predetermine planning for potential future transportation corridors such as the GTA West corridor or a future northerly extension of the 427 transportation corridor.

The analysis considered four alternatives:

1. No changes to the corridor, with the exception of programmed projects;
2. The use of Transportation Demand Management (TDM), Transportation System Management (TSM), and new roadway improvements;
3. TDM and TSM measures, improvements to existing roadway, and new or improved public transit services; and
4. TDM and TSM measures, new or improved transit services, new roadways, and a transitway.

Alternative 4 obtained the highest score overall, on the basis of providing the required transportation network to support planned approved development and achieving the objectives identified in the Growth Plan. It minimizes impacts to existing communities, and while it may have direct impacts on natural features such as minor waterways and some possible noise sensitive areas, no designated Environmentally Sensitive Areas are affected, and many of the significant effects may be avoided through appropriate design and construction mitigation techniques. Environmental mitigation is to be further evaluated during detail design. The Toronto and Region Conservation Authority (TRCA) has a commitment of achieving a net environmental gain from the project.

Subsequent analysis of termini and alignment resulted in a technically preferred route (TPR) described in the final EA report of January 2010.

- 6.6 km extension from Highway 7 to terminus at Major Mackenzie Drive
- Three interchanges at Langstaff Road, Rutherford Road, and Major Mackenzie Drive
- Six lanes from Highway 7 to Rutherford Road
- Four lanes from Rutherford Road to Major Mackenzie Drive

- Provision of a median HOV lane in each direction from Highway 7 to Rutherford Road.
- Identification and protection of a 60 metre transit right-of-way and transit stations to be located along the west side of the 110 metre freeway right-of-way (moving forward would require a separate EA study),
- Identification of transitway stations at the interchanges.

Consultations with the public and agencies were conducted from 2006 to 2009, with notifications in local media and on the study's website, www.427corridor.com. As a result of the consultations, refinements to the TPR include shifting the Major Mackenzie Drive interchange west. Major Mackenzie Drive will also be realigned slightly northward near the freeway, allowing the interchange to be off CP property.

A central alignment, rather than eastern or western, was selected to reduce impacts to planned communities near the corridor. The Major Mackenzie Drive terminus adequately serves the CP Vaughan Intermodal Terminal and provides flexibility by not precluding or predetermining planning for a future extension further north or other future transportation corridors such as GTA West.

The recently completed Peel-Highway 427 Extension Area Transportation Master Plan identified road network improvements in Peel – a combination of road widening and the provision of a new arterial road connecting Highway 50 at Major Mackenzie Drive to Mayfield Road – to accommodate transportation demands and to provide a logical connection to the Highway 427 Extension.

CURRENT SITUATION

The Final EA Study report for the 427 Transportation Corridor has been completed, and comments from the public and agencies are to be submitted to MTO by March 19, 2010. Staff supports the recommendations of the report, which includes the provision for a parallel Transitway, and which does not preclude technically feasible options for extending the highway further north. The recommended actions are consistent with local transportation master plans, including the Peel-Highway 427 Extension Area Transportation Master Plan, completed in July 2009 and subsequently endorsed by Brampton Council, which provides for City and Regional road network connectivity to the future Highway extension.

Construction of the Highway 427 extension will help to address current and projected short-term transportation needs in eastern Peel Region, such as relieving traffic congestion on Highway 50 (and queuing at the intersection of Highways 50 and 7), and facilitating the movement of goods in adjacent areas.

Brampton staff (and other municipal project team participants) has noted throughout this EA Study that the province has failed to adequately address longer-term planning needs related to the provincial highways network. Staff continues to recommend that MTO initiate a study to examine the need for a further extension of Highway 427 beyond the current terminus at Major Mackenzie Drive. Brampton Council has passed a resolution supporting the opening of the 427 Extension as soon as possible, and has supported a Region of Peel resolution that the 427 Extension proceed north as far as Highway 9. The possible connection to a future GTA West Corridor will be examined as part of the ongoing EA for that corridor.

Recognizing the narrowly-defined purpose of the EA to "address existing and short-term transportation problems..." (that was established through the initial EA Terms of Reference exercise), the preferred alternative has been designed in a manner that will accommodate any potential extension of the highway and/or connection to the GTA West Corridor.

INTERDEPARTMENTAL COMMENTS

Works & Transportation

- Notes that the facility will aid in the delivery of bus transportation, and will provide a good interface with Metrolinx's GO bus system and York Region Transit/VIVA
- Supports the transitway and the placement of the commuter parking lots.
- The transitway and commuter parking lots should be staged in construction with the building of the 427 Extension, and not after the highway is built. Some conceptual plans for the commuter lots show the terminal facility at the rear of the lot, which may cause future problems with internal bus traffic in these lots. The station (loading facilities) should be located at the front of the lots if possible so as not to interfere with general traffic and to provide an efficient intermodal transfer.
- There are presently no plans, conceptual or otherwise, to detail design a transitway south of this area on Highway 427 from south of the 407 to the present terminus at Highway 7. The lands adjacent to the 427 in this area to the south are not 60 metres wide and a transitway could only be implemented with some difficulty.
- While the transitway is meant to interface with local and inter-regional transit, there is no provision for a transit station within any quadrant of the existing Highway 427-Highway 7 interchange. All lands in the northern quadrants are under development. Provisions should be included to protect a station location to the south of the existing 427-7 interchange

within the South-West even though this area is outside the EA study area, or to undertake an additional MTO study if necessary.

- A bus by-pass shoulder is not included in preliminary design, but is also not precluded if required in the future. The EA includes a provision for HOV lanes, which could be used by buses. They are likely to be used by GO bus services prior to construction of the transitway, and could potentially be used for Brampton Transit's York University Express service in the future.
- Recommends that a meeting be arranged between Brampton Transit, York Region Transit, and GO Transit to determine if a transitway station at the 427 and 7 interchange would provide for a more practical interface between local and inter-regional transit than the Transportation and Transit Master Plan-proposed station at the intersection of Highways 50 and 7.
- The Peel-Highway 427 Extension Area Transportation Master Plan identified a new North-South Arterial Road (Major Mackenzie extension) from Highway 50 to Mayfield Road, which is currently shown in the 2010 10-Year Capital Program for construction in 2017. The timing for construction of the new North-South Arterial Road will need to be coordinated with the construction of the Highway 427 extension. An Environmental Assessment (EA) study was approved in Brampton's 2010 Capital Budget, which is being coordinated with the on-going planning process for Secondary Plan Area 47.

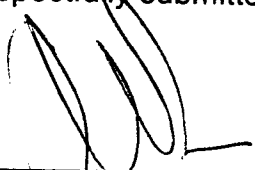
CONCLUSION

In response to MTO's request for comments, Brampton staff concludes that the data, analysis, and conclusions in EA are satisfactory, relevant, and substantiated for our purposes.

The Highway 427 Extension will help to address current and short-term transportation needs in the study area. However, construction of this facility is not currently funded, and the project will need to be included in the province's highway construction program in order that it can be built at the earliest possible opportunity. Also, in view of longer-term transportation needs that have been identified through other area studies, the province should initiate planning for the future extension of Highway 427 beyond the Major Mackenzie Drive terminus.

Once the EA report is approved by MOE, MTO can proceed with detailed design and property acquisition. In the best case scenario, construction of the Highway 427 Extension would be completed in 2014.

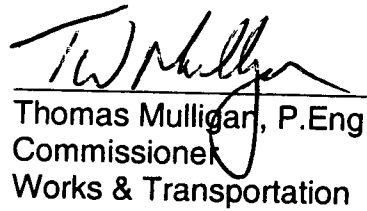
Respectfully submitted,



Adrian Smith, MCIP, RPP
Director, Planning Policy and
Growth Management



John Corbett, MCIP, RPP
Commissioner
Planning, Design & Development



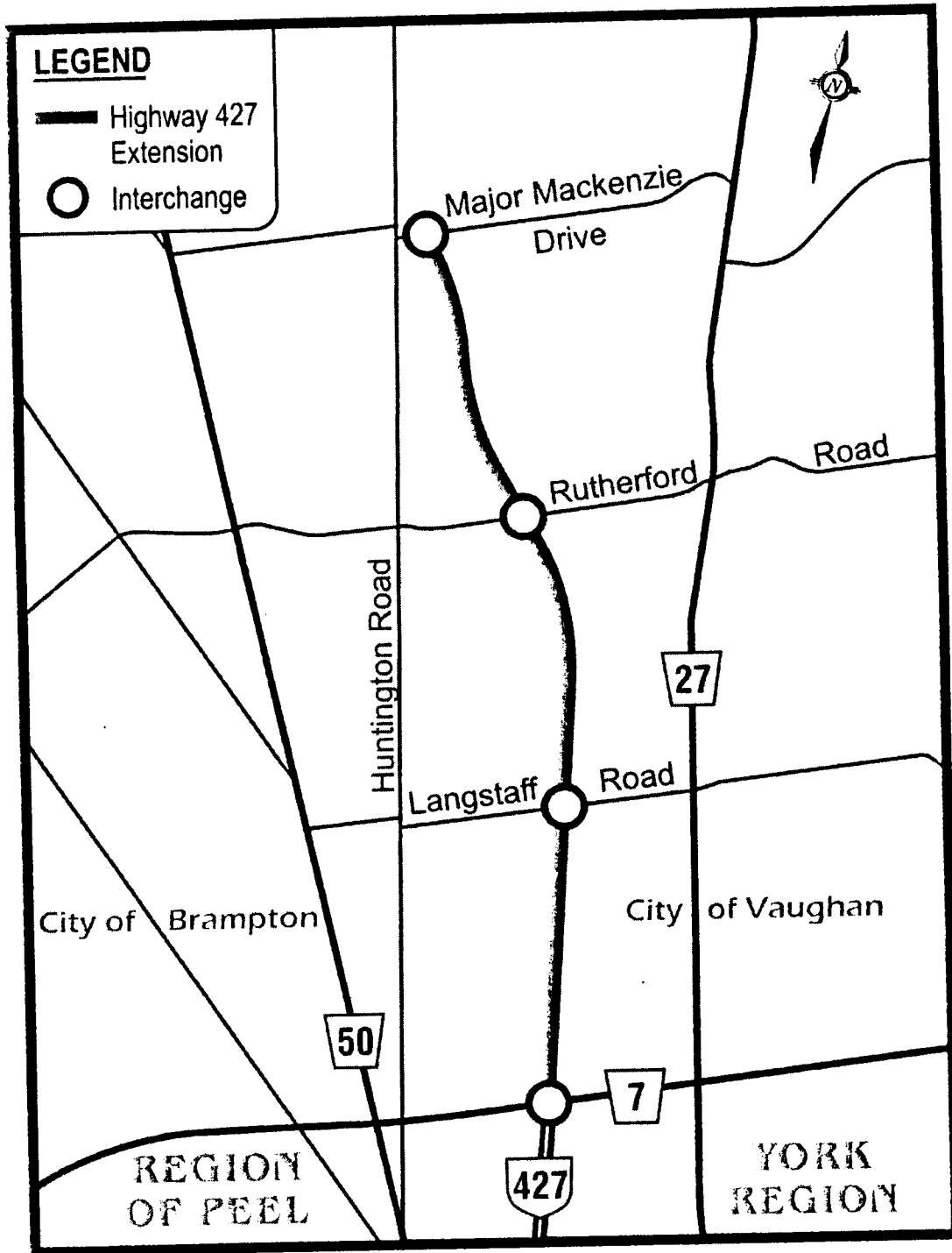
Thomas Mulligan, P.Eng
Commissioner
Works & Transportation

Authored by: David Kuperman, Transportation Policy Planner III

ATTACHMENTS

- A. Key Plan
- B. Summary of City of Brampton's Proposed Revisions to Highway 427
Transportation Corridor EA Report
- C. Highway 427 Transportation Corridor EA Executive Summary

Appendix A: Key Plan



Appendix B: Summary of City of Brampton's Proposed Revisions to Highway 427 Transportation Corridor EA Report

Section/Page/ Exhibit	Comment/Proposed Revision
General comments	▪ Staff support the preferred alternative and extension of Highway 427 to Major Mackenzie Drive. ▪ Staff recommend that MTO study an extension further north to Highway 9 as soon as possible, as well as integration with the GTA West Corridor.
Section 4.4.1	▪ GO Transit is mentioned in that they have instituted GO service (bus) to Bolton utilizing Highway 50.
Exhibit 5-11	▪ Correct spelling in title to "Technically <i>Preferred</i> Route"
Section 6.2.5	▪ Brampton Transit supports the transitway and the placement of the commute parking lots, which will provide a suitable interface between local and inter-regional transit. ▪ Transitway and commute parking lots should be staged in construction with the building of the 427 Extension. ▪ Station loading facilities should be located at the front of lots if possible for efficient operations. ▪ There are presently no plans to detail design a transitway south from the 407 to the present terminus at Highway 7. Also the lands adjacent to the 427 in this area to the south are not 60 metres wide and a transit way could only be implemented with some difficulty. ▪ There is no provision for a transit station within any quadrant of the existing 427-7 interchange. All lands in the northern quadrants are under development. ▪ The position of Brampton Transit is that provisions should be included to protect a station location to the south of this interchange within the South-west even though this area is outside the EA study area. If this is not possible an additional study should be undertaken by MTO post haste. ▪ Provisions should be included for a station location to the south of the existing 427-7 interchange (and an additional MTO study for this area if necessary). ▪ Brampton Transit, York Region Transit, and GO Transit should meet to determine if a station at the 427-7 interchange would be more practical than at Highways 50 and 7 (proposed in TTMP). ▪ Bus by-pass shoulders may be required in the future, and are not precluded by the proposed design.

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**Appendix C: Executive Summary of 427 Transportation Corridor
Environmental Assessment (EA) of January 29, 2010**

EXECUTIVE SUMMARY

This report documents the Environmental Assessment (EA) undertaken for the proposed 427 Transportation Corridor. The EA was undertaken in accordance with a Terms of Reference that was approved by the Minister of the Environment on November 1, 2005.

The Ontario Ministry of Transportation (MTO) in consultation with the Region of York, Region of Peel and surrounding municipalities, undertook the study to address existing and short-term transportation problems related to the current Highway 427 terminus, truck traffic accessibility to and from the CP Vaughan Intermodal Facility, and their impact on inter-regional traffic in the Peel-York boundary area. The study supports the transportation objectives of the Provincial *Growth Plan for the Greater Golden Horseshoe*.

Introduction and Overview of the Environmental Assessment Process (Chapter 1)

The *Growth Plan for the Greater Golden Horseshoe* (GGH) supports improving access to inter-modal facilities in order to enhance goods movement and provide access to major employment areas. Consistent with this direction, MTO initiated the formal Environmental Assessment process for the 427 Transportation Corridor, located within the western part of the City of Vaughan and the eastern part of the City of Brampton (see Exhibit ES-1).

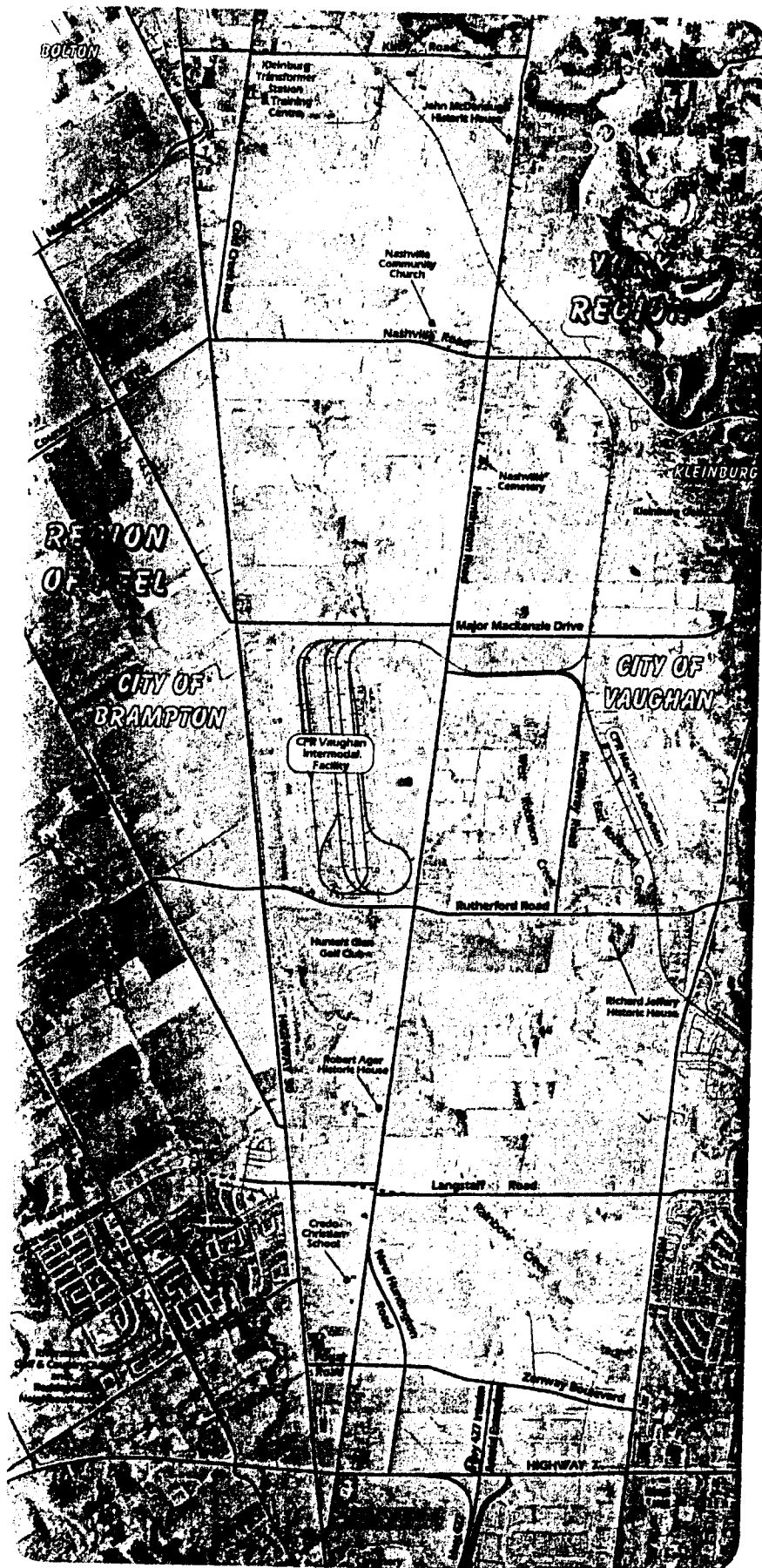
The 427 Transportation Corridor EA Study is closely related to the following studies:

- Western Vaughan Individual Environmental Assessment (York Region)
- GTA West Corridor Environmental Assessment (MTO)
- Peel/Highway 427 Extension Area Transportation Master Plan (Region of Peel, City of Brampton and Town of Caledon)
- Region of Peel Official Plan Review
- City of Brampton Official Plan
- York Region Official Plan
- City of Vaughan's Growth Management Strategy
- City of Vaughan Official Plan
- York Region Transportation Master Plan Update
- City of Vaughan Transportation Master Plan
- Brampton Transportation and Transit Master Plan Update
- Caledon Area Transportation Needs Study Update

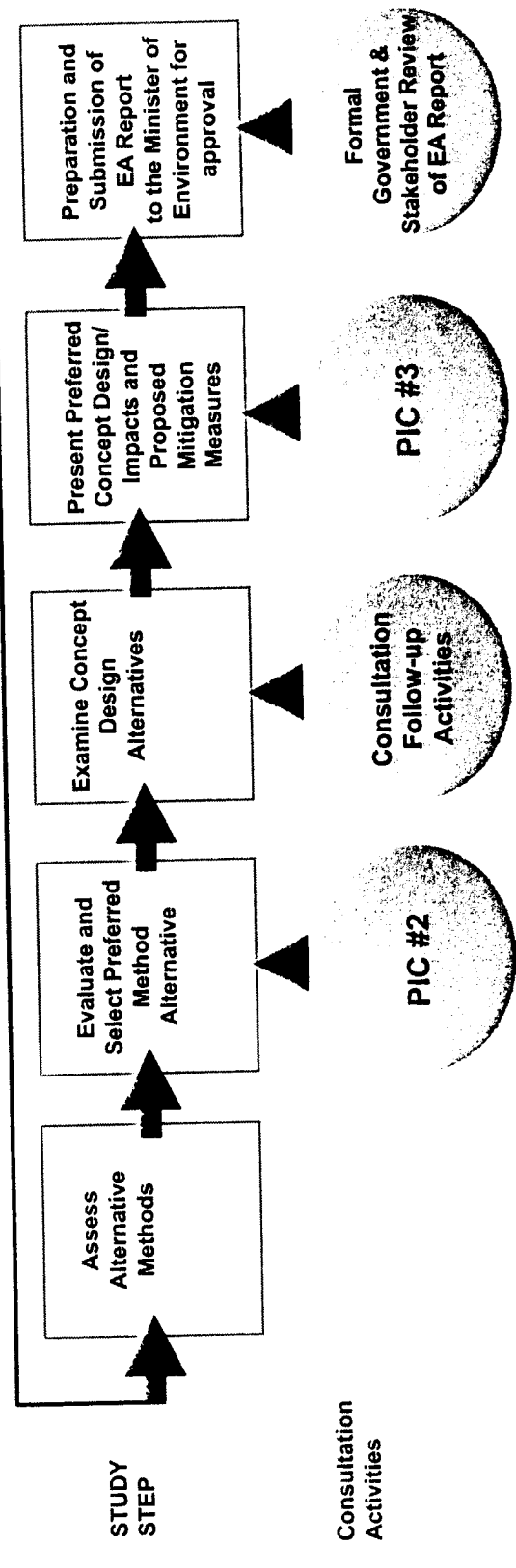
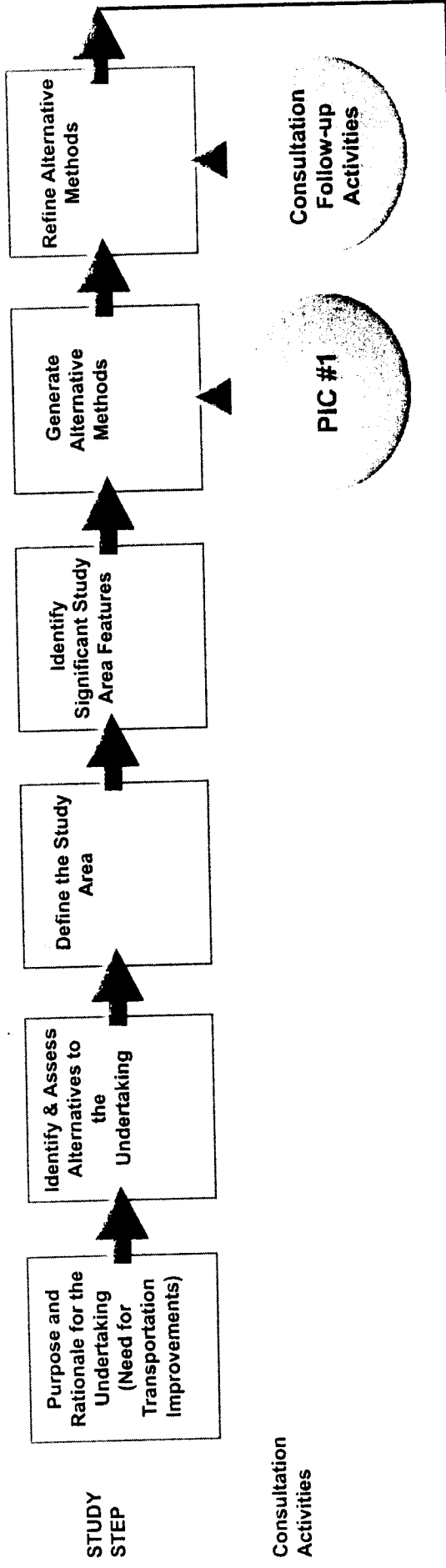
The 427 Transportation Corridor EA Study was undertaken as an Individual Environmental Assessment (IEA) under the Ontario Environmental Assessment Act (OEAA). It was conducted in accordance with the planning process documented in the 427 Transportation Corridor Environmental Assessment Terms of Reference (ToR), which was approved by the Minister of the Environment in November 2005. The main phases of the EA planning process were as follows (see Exhibit ES-2):

- Purpose and Rationale for the Undertaking
- Alternatives to the Undertaking
- Alternative Methods of Carrying Out the Undertaking
- Preliminary Design of the Preferred Alternative
- EA Report / Documentation

To date, no formal *Canadian Environmental Assessment Act* (CEAA) triggers have been identified and therefore a Screening under CEAA is not required.



F2-14



Outline of Study and Consultation Process (Chapter 2)

An extensive consultation process, in accordance with Section 7 of the ToR, was undertaken to assist in the planning and impact assessment for this project. Throughout the duration of the study, those consulted included external agencies (such as Provincial Ministries and Agencies, Federal Departments, Conservation Authority, municipalities, aboriginal communities and the public (including affected land owners, interest groups and the general public).

Numerous opportunities for input with these stakeholders was provided, including three rounds of Public Information Centres held at key points during the study process, stakeholder meetings, access to a project website (www.427corridor.com) with up-to-date study information, and direct contact with the Project Team.

The Draft EA Report was provided to Agencies and First Nations for review and was made available for public review prior to formal submission to the Ministry of the Environment (MOE) for an approval decision. This EA report has incorporated, as appropriate, comments received on the Draft EA Report.

An overview of the consultation process as well as a summary of consultation elements and consultation activities undertaken at key study milestones is provided in Chapter 2.

Study Area Conditions (Chapter 3)

Highway 427 currently terminates at Highway 7. The freeway is characterized by four basic lanes plus auxiliary ramp lanes between Highway 7 and Highway 407. The posted speed for the freeway is 100 km/hr. In Fall 2008, the Regional Municipality of York opened the 427 Interim Arterial Extension (Regional Road 99), which is a 4-lane arterial road link connecting the existing Highway 427 terminus at Highway 7 and Zenway Boulevard. This arterial road extension to Zenway Boulevard is a temporary road until Highway 427 is extended.

The majority of the existing land use within the Study Area is agricultural, with the exception of the CPR Vaughan Intermodal Facility, private businesses, and commercial / industrial properties. New residential developments are located east and west of the Study Area.

Plans for the development of Highway 427 have been incorporated into regional and local planning documents since the late 1990's. Development has been limited within the Study Area by local and regional policies that have opted for the alignment of the Highway 427 Extension to occur before development takes place. The York Region and City of Vaughan Official Plans have identified almost all available lands south of Major Mackenzie Drive for future industrial / commercial or residential uses. For the most part, the lands north of Major Mackenzie Drive are currently designated rural (particularly east of the CPR MacTier Subdivision), however, there is development pressure on these lands and the landowners are actively pursuing land use redesignations.

Key natural features within the Study Area include the Greenbelt; several areas of regionally significant forest; numerous York Region conservation land areas; two valley 'corridors' designated by York Region as regional greenlands; one locally significant wetland; and, a Canadian Heritage River System (the Humber River). Most of these features are not impacted by the Recommended Alternative. The Study Area is located within the Humber River Watershed, which is in the jurisdiction of the Toronto and Region Conservation Authority.

The Study Area is underlain by three water supply aquifers and confining aquitards. While the majority of the Study Area is not serviced by municipal water or sewer systems, one municipal water supply production well is currently in operation in the community of Nashville.

The Study Area has in excess of 52 registered archaeological sites, most of which were found during the assessment of nearby developments. In addition, the Study Area contains numerous cultural heritage landscapes and built heritage resources. The primary built heritage resources are residential and religious structures.

Further details on the existing study area conditions are provided in Chapter 3. A number of reports were prepared for the 427 Transportation Corridor EA Study, including the following:

- Terrestrial Ecosystem Impact Assessment Report
- Noise Impact Assessment
- Air Quality Report
- Cultural Heritage Resource Assessment Report
- Stage 1 Archaeological Assessment
- Stormwater Management and Drainage Report
- Fluvial Geomorphology Assessment Report
- Contamination Overview Study
- Hydrological (Groundwater) Assessment

All reports prepared for the 427 Transportation Corridor EA Study are contained in Appendices E – M of the Environmental Assessment Report.

Purpose and Rationale for the Undertaking (Chapter 4)

The purpose of the 427 Transportation Corridor EA Study is to:

- Address existing and short-term transportation problems related to the current Highway 427 terminus, truck traffic accessibility to and from the CP Vaughan Intermodal Facility, and their impact on inter-regional traffic in the Peel-York boundary area;

- Identify and protect required property for any proposed transportation corridor and allow planned development to occur outside of the transportation corridor;
- Ensure that alternatives / preferred solution will not preclude or predetermine planning for the other future transportation corridors such as the GTA West corridor or a future extension of the transportation corridor northerly, if ever required.

Highway 427 currently terminates at Highway 7 in the City of Vaughan. In Fall 2008, the Regional Municipality of York opened the 427 Interim Arterial Extension (Regional Road 99), which is a 4-lane arterial road link connecting the existing Highway 427 terminus at Highway 7 and Zenway Boulevard. The current terminus of Highway 427 contributes to a number of traffic issues on the adjacent road network, including operational issues on Highway 27, Highway 50 and their intersections at Highway 7. The current Highway 427 terminus restricts access to the planned industrial lands immediately north of Regional Road 7 / Zenway Boulevard and the residential lands west of Highway 50, where significant growth is planned in east Brampton and west Vaughan. In addition, employment lands are also planned in the area north of Mayfield Road along Highway 50 in Caledon.

With population forecasts for the City of Brampton, the Town of Caledon and the City of Vaughan anticipated to increase in the range of 35% to 50% over the next fifteen years, and corresponding employment forecasts set to increase in the range of 50% to 65%, the existing transportation network is not capable of supporting the projected growth in population, employment, and goods movement.

Generation and Evaluation of Alternatives to the Undertaking

During the Generation and Evaluation of Alternatives to the Undertaking, individual transportation alternatives were evaluated to determine the degree to which they could address the identified problems and opportunities. Since none of the individual transportation alternatives were able to address the identified problems and opportunities, it became apparent that a combination of the individual Alternatives to the Undertaking was desirable. Combination alternatives were also considered more realistic than the individual transportation alternatives since major transportation network improvements are rarely implemented in isolation. The following Combination Alternatives to the Undertaking were evaluated:

- **Alternative 1:** Do Nothing (including planned infrastructure improvements)
- **Alternative 2:** TDM, TSM and Improved Existing Roadways
- **Alternative 3:** TDM, TSM, Improved Existing Roadways, and New or Improved Transit Services
- **Alternative 4:** TDM, TSM, New or Improved Transit Services, and New Roadways / Transitways

Based on the assessment, Alternative 4 was identified as the preferred Alternative to the Undertaking. It provides the required transportation network to support planned approved development and achieve the objectives identified in the Growth Plan. From a socio-economic perspective, it minimizes impacts to existing communities by reducing congestion, the potential for traffic infiltration and access constraints. Although this alternative results in moderate potential direct effects to natural features, it is anticipated that significant effects can be avoided during route generation or through design mitigation.

The approach, findings and results of the Generation and Evaluation of Alternatives to the Undertaking Phase is documented in Sections 4.2-4.4.

Alternative Methods of Carrying Out the Undertaking (Chapter 5)

Alternative Methods of implementing the preferred Alternative to the Undertaking were generated, screened, assessed and evaluated in accordance with the approach outlined in the approved ToR.

The first step in the process was to define a study area in which feasible alignments could be developed based on achieving the purpose of the study while minimizing environmental impacts. Options for a west, north and east corridor were investigated. A north corridor was carried forward as it would be compatible with the planned future industrial development of the surrounding land and would provide the best possible opportunity to connect to the CPR Vaughan Intermodal Facility. The northern boundary was set around Mayfield Road / potential future extension of Mayfield Road. See Section 5.1 for additional details.

Having identified the Study Area, Alternative Methods were generated and examined. The Alternative Methods examined terminus locations and alignment alternatives.

First, terminus locations were generated. Terminus location alternatives were identified at each of the major east-west roads south of the Greenbelt: Langstaff Road, Rutherford Road, Major Mackenzie Drive and Nashville Road. In addition, an easterly extension of Mayfield Road was identified as a terminus location alternative. The long list of terminus locations was screened based on a consideration of study objectives and key environmental impacts in order to arrive at a short list.

Based on a further and more detailed analysis and evaluation of the short-listed alternatives, Major Mackenzie Drive was identified as the preferred terminus location alternative. The reasons for this are that it fulfills all of the study objectives without added environmental impacts, addresses the existing and short-term transportation issues associated with the current Highway 427 terminus, is compatible with the ultimate CPR Vaughan Intermodal Facility expansion plans and other planned municipal road improvements, and does not pre-determine / preclude a possible future extension and / or connection with a proposed GTA West Corridor.

The terminus location evaluation process is presented in detail in Section 5.3.

Alignment alternatives were then generated. In total, nine alignment alternatives were generated. Each was evaluated using a two-step process:

- **Step 1: Preferred in Each Section** – The nine alignment alternatives were separated into three sections: Western Routes, Central Routes and Eastern Routes. The alignment alternatives within each section were compared, to identify a preferred route in each section; and,
- **Step 2: Preferred Overall** – The preferred Western, Central, and Eastern alternatives were compared to each other, to identify an overall technically preferred route.

Based on the assessment and evaluation, the Central (C2) alternative was identified as the preferred alternative. As a result, the technically preferred terminus location alternative (Major Mackenzie Drive) and the technically preferred alignment alternative (C2 - Central) were combined to become the Technically Preferred Route (see Exhibit ES.3).

The Technically Preferred Route (TPR), C2-Central, was presented to municipalities, the public and key stakeholders for comment at the second round of consultation. During this consultation, a commitment was made to examine a westerly shift to the TPR in the Major Mackenzie Drive area. This commitment responded to Motions passed by the York Region Council and Region of Peel Council in May 2008 regarding the preference for a westerly alignment north of Rutherford Road, and requests to examine refinements to the TPR that would be more compatible with potential future land use north of Major Mackenzie Drive (while maintaining the integrity of the West Robinson Creek and protected York Region Greenlands), and the technical performance of the freeway. Upon further consultation with stakeholders, the TPR was revised with a westerly shift of the Major Mackenzie Drive Interchange. There was general agreement among stakeholders that the westerly shift was a reasonable balance among all interests and the approach was generally agreed to.

Following the confirmation of the revised TPR, preliminary design commenced to finalize the Recommended Alternative. Preliminary design included more detailed investigation and the development of preliminary plans, profiles, cross-sections and design criteria. Through continued consultation with stakeholders, the preliminary design was further refined. These refinements specifically dealt with:

- Section south of Langstaff Road;
- Rutherford Road Interchange;
- Major Mackenzie Drive Interchange;
- The Hydro Corridor crossing; and,
- Selected stormwater management pond locations.

Features of the Recommended Alternative (Chapter 6) and Environmental Effects, Mitigation Measures, and Commitments to Further Works (Chapter 7)

The Recommended Alternative for the Technically Preferred Route includes a transportation corridor consisting of a highway and transitway, as well as associated works and support facilities. The transportation corridor involves:

- The 6.6 km extension of Highway 427 to Major Mackenzie Drive. Six lanes are proposed from Highway 7 to Rutherford Road and four lanes are proposed from Rutherford Road to Major Mackenzie Drive;
- New interchanges at Langstaff Road, Rutherford Road and Major Mackenzie Drive; and,
- Protection for a dedicated transitway along the west side of the extension.

Associated works and support facilities include:

- Two arterial road overpasses;
- Two arterial road underpasses;
- One rail overpass;
- Two freeway watercourse crossings;
- Two crossing road watercourse crossings;
- Three local road realignments / connections;
- One carpool lot;
- Nine stormwater management ponds; and,
- Three transitway stations.

The Recommended Alternative for the highway component of the corridor has been developed to a preliminary design level while the transitway component of the corridor and its support facilities have been developed to a conceptual design level. The design work completed for both the highway and transitway components of the transportation corridor and the associated support facilities has been completed to a sufficient level of detail to confirm the feasibility of the proposed infrastructure and to identify the property requirements and environmental impacts. The transitway corridor and transitway support facilities will be subject to future Class EA studies prior to implementation.

Preliminary design activities involved the development of the design for the 427 Transportation Corridor in greater detail with respect to items such as:

- Horizontal and vertical alignment of the highway, transitway and crossing roads;

- Interchange locations and configurations;
- Crossing road treatments;
- Local road realignments / connections;
- Watercourse crossing treatments;
- Stormwater management measures; and,
- Confirmation of potential effects and recommended mitigation and commitments to further work associated with the Recommended Alternative.

The Recommended Alternative is described in detail throughout Chapter 6 and is shown on Plates 1 to 6 of Exhibit 6-3. Potential environmental effects, recommended mitigation and commitments to further works for the Recommended Alternative are outlined in Chapter 7.

Monitoring (Chapter 8)

In accordance with the Minister approved *427 Transportation Corridor EA Terms of Reference*, a monitoring strategy was developed for implementation of the Recommended Alternative. The monitoring strategy applies to both compliance monitoring and environmental effects monitoring (see Chapter 8).

The environmental effects monitoring strategy was developed based on the impact assessments carried out for the Recommended Alternative to ensure the following:

- That the predicted net negative effects are not exceeded;
- That the unexplained negative effects are addressed; and
- That the predicted benefits are realized.

The environmental effects monitoring strategy is outlined in Table 8.2.

Similar to environmental effects monitoring, a compliance monitoring strategy was developed to reflect how MTO proposed to ensure that the implementation of proposed mitigation measures and key design features are consistent with project commitments outlined in this EA Report and any subsequent documentation. The compliance monitoring strategy is outlined in Table 8.1. These commitments have been grouped by individual discipline (i.e. Vegetation, Groundwater Resources, etc.) or under the heading of "General" because some of the commitments are not specific to a particular discipline.

Other Approval Requirements and Amending the Environmental Assessment (Chapter 9)

In addition to requiring OEAA approval, there are a number of other provincial, federal and municipal approvals required to implement the Recommended Alternative.

A number of provincial approvals from the following ministries and government agencies will be required for the Recommended Alternative:

- Ministry of the Environment
- Ministry of Culture
- Ontario Realty Corporation
- Hydro One Networks

To date, no federal permits or approvals are anticipated to be required for this project. Based on feedback from federal agencies, it has been determined that the only potential federal approval requirement would occur if a *Fisheries Act* authorization is required. Watercourse crossing have been reviewed in accordance with the MTO/DFO/OMNR Fisheries Protocol (2006) and it has been determined, based on the preliminary design, that *Fisheries Act* authorization is not required. This will be reviewed based on final design details during Detail Design.

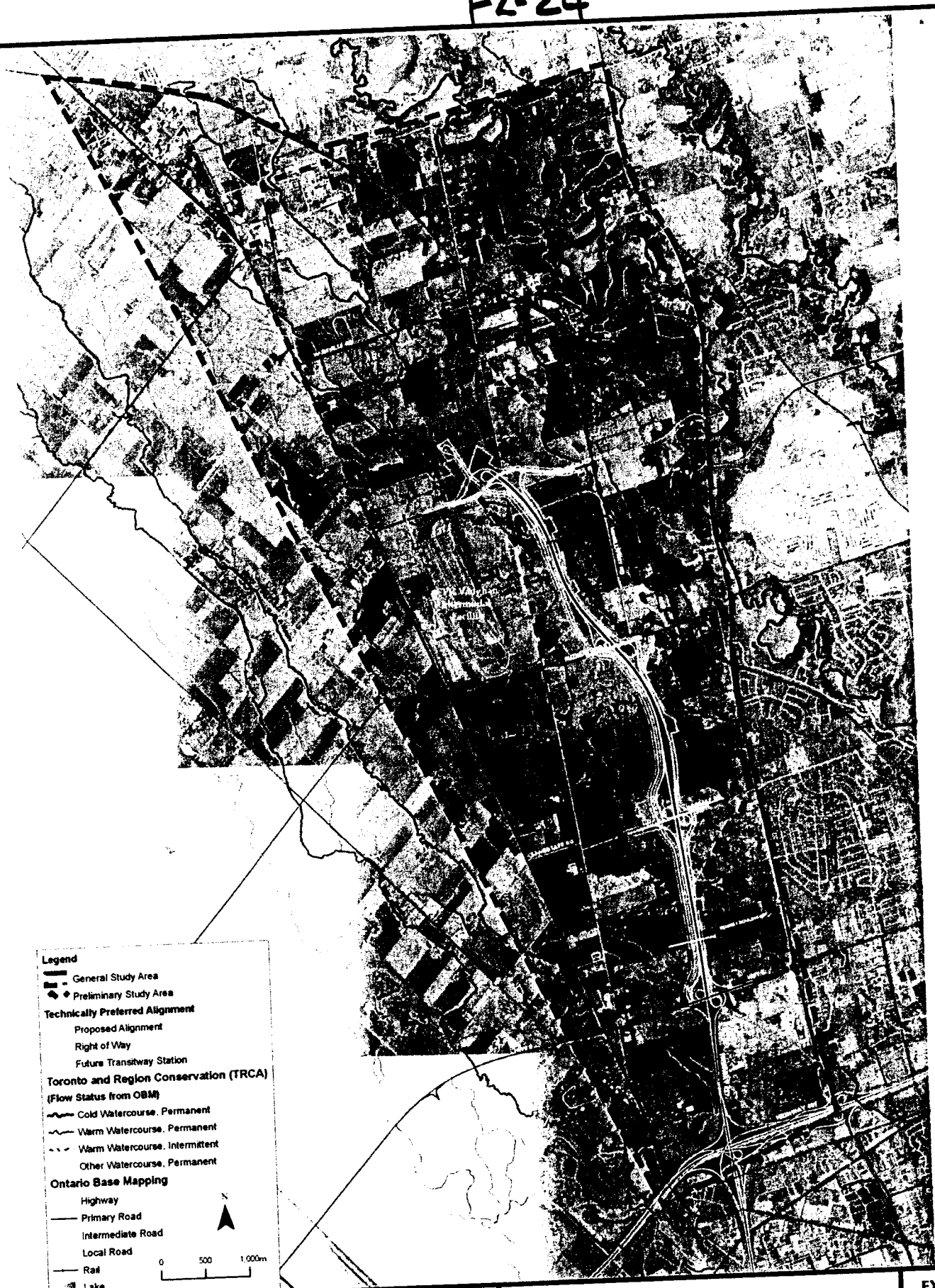
Undertakings of the Province are exempt from many of the typical municipal approvals. However, it is anticipated that a number of municipal approvals may be required from the Regional Municipality of York, Regional Municipality of Peel, City of Vaughan, Toronto and Region Conservation Authority and utility companies / authorities for such items as planning approvals, building permits, stormwater management, regulated area permits and approvals, sewer discharge approvals and noise bylaw exemptions.

The approval requirements are documented in Section 9-1.

Once this EA Report is approved, the remainder of the assessment will be carried out under the MTO Class EA process, which will apply to detail design, construction and operations/maintenance of the Recommended Alternative.

In recognition of the fact that there could be changes to the approved EA and Recommended Alternative following its approval by the Minister under the EA Act (i.e. during subsequent design phases and/or construction), MTO is proposing an amendment procedure reflecting the process outlined in their *Class Environmental Assessment for Provincial Transportation Facilities*, 2000 document. This amending procedure, outlined in Section 9.2, would benefit all parties potentially involved by providing an agreed to and well understood approvals process for ensuring proposed changes to the approved EA and Recommended Alternative are effectively and appropriately managed.

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- Legend**
- General Study Area
 - Preliminary Study Area
 - Technically Preferred Alignment**
 - Proposed Alignment
 - Right of Way
 - Future Transitway Station
 - Toronto and Region Conservation (TRCA)**
(Flow Status from OBM)
 - Cold Watercourse, Permanent
 - Warm Watercourse, Permanent
 - Warm Watercourse, Intermittent
 - Other Watercourse, Permanent
 - Ontario Base Mapping**
 - Highway
 - Primary Road
 - Intermediate Road
 - Local Road
 - Rail
 - Lake
- 0 500 1,000m



W.O. 05-20012
Highway 427 Transportation Corridor
Individual Environmental Assessment

Study Area Boundaries and
Recommended Alternative

EXHIBIT
7-1