Canada

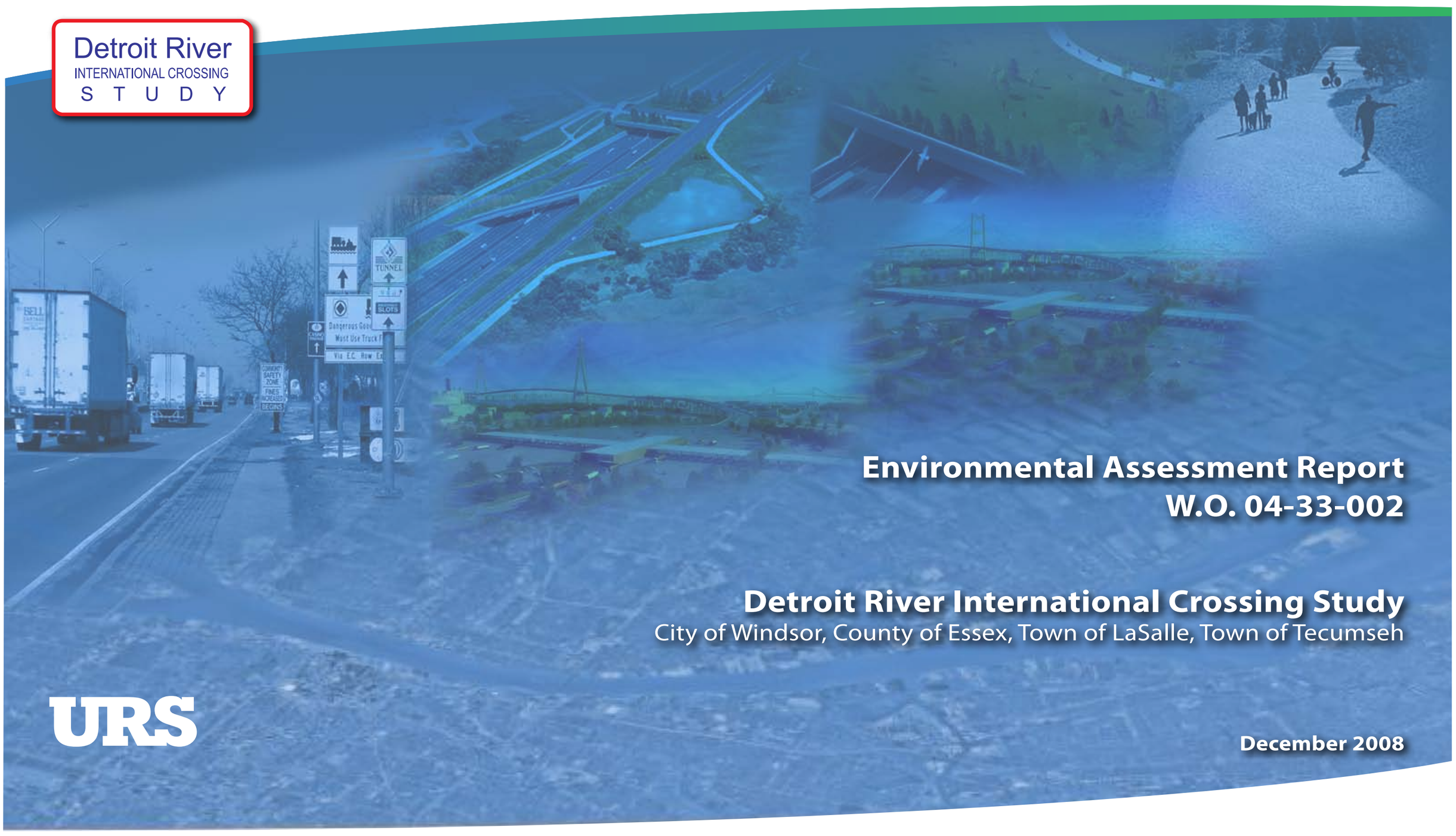
U.S. Department of Transportation
Federal Highway Administration

Ontario

MDOT
Michigan Department of Transportation

Canada-U.S.-Ontario-Michigan Border Transportation Partnership

Detroit River
INTERNATIONAL CROSSING
S T U D Y



Environmental Assessment Report
W.O. 04-33-002

Detroit River International Crossing Study

City of Windsor, County of Essex, Town of LaSalle, Town of Tecumseh

URS

December 2008

ENVIRONMENTAL ASSESSMENT REPORT

W.O. 04-33-002

DETROIT RIVER INTERNATIONAL CROSSING
ENVIRONMENTAL ASSESSMENT STUDY

City of Windsor, County of Essex, Town of LaSalle, Town of Tecumseh

Prepared for the Ministry of Transportation by:
URS Canada Inc.

Prepared and Reviewed by:

Murray Thompson, P. Eng.
Senior Project Manager

Patrick Puccini, P.Eng.
Deputy Project Manager

Ce document hautement spécialisé n'est disponsible qu'en anglais en vertue du règlement 411/97, qui en exempte l'application de la Loi sur les services en français. Pour de l'aide en français, veuillez communiquer avec le ministère des Transports, Bureau des services en français au: 905-704-2045 ou 905-704-2046.

December 2008

The Public Record

Copies of this document have been sent to the following locations:

Ontario Ministry of Transportation
Windsor Border Initiatives Implementation Group
949 McDougall Avenue, Suite 200
Windsor, Ontario
(519) 973-7367

Ontario Ministry of the Environment
Windsor Area Office
4510 Rhodes Drive, Unit 620
Windsor, Ontario
(519) 948-1464

Office of the Clerk
City of Windsor
350 City Hall Square West
Windsor, Ontario
(519) 255-6211

Office of the Clerk
Town of LaSalle
5950 Malden Road
LaSalle, Ontario
(519) 969-7770

Office of the Clerk
Town of Tecumseh
917 Lesperance Rd
Tecumseh, Ontario
(519) 735-2184

Office of the Clerk
County of Essex
360 Fairview Avenue West
Essex, Ontario
(519) 776-6441

Windsor Public Library
Central Branch
850 Ouellette Avenue
Windsor, Ontario
(519) 255-6770

Windsor Public Library
Sandwich Branch
3312 Sandwich Street
Windsor, Ontario
(519) 255-6770

Windsor Public Library
Nikola Budimir Branch
1310 Grand Marais West Road
Windsor, Ontario
(519) 255-6770

LaSalle Public Library
5940 Malden Road
LaSalle, Ontario
(519) 969-8992

Tecumseh Public Library
13675 St. Gregory's Road
Tecumseh, Ontario
(519) 735-3760

URS Canada Inc.
75 Commerce Valley Drive E.
Markham, Ontario
(905) 882-4401

Ontario Ministry of the Environment
Environmental Assessment & Approvals Branch
2 St. Clair Avenue West, Floor 12A
Toronto, Ontario
1-800-461-6290

Ontario Ministry of the Environment
West Region Office
733 Exeter Road
London, Ontario
1-800-265-7672

Project Website: **http://www.partnershipborderstudy.com**

EXECUTIVE SUMMARY

E.1 Overview and Background

The Detroit River International Crossing (DRIC) Study is a bi-national transportation improvement study that has been undertaken by the governments of Canada, United States, Ontario, and Michigan, who have formed the Canada-U.S.-Ontario-Michigan Border Transportation Partnership (the Partnership).

In 2001, the Partnership jointly commissioned a Planning/Need and Feasibility Study (P/NF) to identify a long-term strategy to address the safe and efficient movement of people and goods between Southwestern Ontario and Southeastern Michigan. The overall objectives of the Partnership in support of this strategy were the following:

- To improve the movement of people, goods and services in a safe and efficient manner across the Canadian / United States border at the Detroit and St. Clair Rivers to connect with existing national, provincial and regional transportation systems, such as I-75 and Highway 401;
- To enhance the regional economic vitality and Canadian/U.S. trade;
- To meet the long term needs of the U.S. and Canadian border inspection agencies;
- To expedite the planning and environmental study process to ensure that future travel demands in this region can be accommodated in a timely manner;
- To ensure that all modes of surface transportation including road, rail and marine will be considered;
- To use a single integrated planning and environmental study process, resulting in a single product, which will meet the requirements of all members of the Partnership;
- To ensure that any solutions which are developed as a result of the above integrated planning and environmental study process comply with all relevant and applicable federal, provincial, state and/or municipal laws, regulations, bylaws, ordinances or other binding enactments validly created by bodies with legislative or rule-making authority;
- To ensure that the process is conducted in a financially responsible and prudent manner; and
- To ensure that intelligent transportation systems/state-of-the-art facilities be provided to enhance border crossing efficiency.

After completion of the P/NF Study in 2004, the Partnership initiated a formal Environmental Assessment (EA) process for a new or expanded Detroit River International Crossing. As a first step in this process in Ontario, an EA Terms of Reference (EA TOR) was prepared. The *Detroit River International Crossing Study Environmental Assessment Terms of Reference (May 2004)* outlines the minimum considerations and study framework to be followed in completing this Environmental Assessment. The EA TOR was approved by the Ontario Minister of the Environment on September 17, 2004, and is available as a supporting document. A tabular summary of the commitments outlined in the EA TOR and how they have been addressed during the EA is provided in Section 1.5 of this EA Report.

While considering the objectives of the Partnership for the Detroit River International Crossing study, the study team generated and assessed illustrative crossing, plaza and access road alternatives within the Preliminary Analysis Area (PAA) generated at the outset of the study. Evaluation of these alternatives led to a refined Area of Continued Analysis (ACA). Within the ACA, six practical access road alternatives, four practical plaza alternatives, and three practical crossing alternatives were generated, assessed and evaluated.

After evaluating the practical alternatives for the access road, Canadian inspection plaza, and the international bridge crossing, the Technically and Environmentally Preferred Alternative (TEPA) was selected. The TEPA includes The Windsor-Essex Parkway, Plaza B1 and Crossing X-10B.

Subsequent to the selection of the TEPA, refinements were developed based on further technical analysis and stakeholder consultation, with the objectives of further enhancing the benefits or mitigating the effects of the TEPA. The combination of the TEPA and associated refinements along with the proposed mitigation measures are referred to collectively as the Recommended Plan, which is illustrated schematically in Exhibit E.1.

Key elements of the Recommended Plan are described in Section E.10, Section 1.8 and Chapter 9 of this EA Report. Anticipated environmental effects and proposed mitigation of the Recommended Plan are summarized in Chapter 10 of this EA Report.

Throughout the Detroit River International Crossing study extensive consultation efforts including seven Public Information Open Houses (PIOHs) were conducted to inform the public and obtain feedback about the technical analysis leading to the generation, assessment, and evaluation of the illustrative and practical alternatives, and ultimately, the TEPA and the Recommended Plan. Over 300 consultation sessions were held during the study with participation from thousands of Windsor-Essex County residents, community groups, experts, local elected officials, and other government agencies. Additional details of the consultation that has been completed as part of this study are included in Section E.3 and in Chapter 3.

The following sections provide a brief overview of the Detroit River International Crossing study that has led to the identification of the Recommended Plan. Additional details regarding the study are provided in subsequent chapters of this EA Report, and in supporting documentation that has been referenced throughout the report.

A complete list of the supporting documentation used as reference throughout this report is provided following the Executive Summary.

E.2 Study Purpose, Objectives and Scope

The Windsor-Detroit border crossing represents an important trade corridor between the United States and Canada. Based on 2006 border crossing statistics, approximately 28% of Canada-US surface trade passes through Windsor-Detroit.

The purpose of the undertaking is to provide for the safe, efficient and secure movement of people and goods across the Canadian-US border in the Detroit River area to support the economies of Ontario, Michigan, Canada and the US.

Given the importance of this trade corridor to the local, regional and national economies and the negative effects associated with poor traffic operations and congestion already occurring at existing

crossings, it was recognized that the partnering governments must take responsible steps to reduce the likelihood of disruption to transportation service in this corridor.

In order to meet the purpose, this study has addressed the following regional transportation and mobility needs:

- Provide new border crossing capacity to meet increased long-term travel demand;
- Improve system connectivity to enhance the continuous flow of people and goods;
- Improve operations and processing capabilities at the border; and
- Provide reasonable and secure crossing options (i.e. network redundancy).

In addition, the study team has sought to recommend transportation solutions which minimize community and environmental impacts as much as reasonably possible. In particular, the study team has strived to address the local communities' goals to:

- Improve quality of life;
- Take trucks off local streets; and
- Improve traffic movement across the border.

The objectives of the study can generally be expressed in terms of the seven key evaluation factors that were developed in consultation with the public and were used to evaluate all of the alternatives developed during the study. These included:

Changes to Air Quality

- How will each alternative affect future levels of pollutants in the atmosphere in the next 10, 20, and 30 years?

Protection of Community and Neighbourhood Characteristics

- How will each alternative affect homes and businesses?
- How will each alternative affect future traffic conditions?
- How will each alternative affect future noise and vibration levels?

Consistency with Existing and Planned Land Use

- How does each alternative affect existing and future planned land use?

Protection of Cultural Resources

- How will each alternative affect historical, cultural and archaeological features in the area?

Protection of the Natural Environment

- How will each alternative affect ecosystems, species, water systems or other important natural resources?
- How will environmentally significant areas or species at risk be affected by each alternative?

Improvements to Regional Mobility

- What will be needed to improve traffic flows in this area?
- How will each alternative affect future traffic conditions?
- How can a new river crossing and plaza be efficiently managed?

Cost and Constructability

- What is the cost of each alternative?
- Is each alternative constructible?
- Will each alternative provide value for the tax dollar?

E.3 Study Process and Schedule Milestones

The study process followed the requirements of the *Ontario Environmental Assessment Act* (OEAA) and *Canadian Environmental Assessment Act* (CEAA), and was guided by the approved EA TOR. As detailed in subsequent sections of this report, each stage of the study included systematic and thorough analysis at an appropriate level of detail as well as consultation with the affected stakeholders and the public.

Specifically, the process involved outlining and confirming the purpose and need for the undertaking. Planning work undertaken in the previous P/NF Study (2001 – 2004) was reviewed and updated. That work confirmed the need for a new international crossing in the Windsor-Detroit area as part of a 30-year long-term border strategy. The results of the analysis and a long list of illustrative plaza, crossing and access road alternatives were presented to the public and other stakeholders for input and review.

In parallel with the above activities, the study team prepared Work Plans that would guide the analysis of alternatives throughout the Environmental Assessment. These were reviewed by the appropriate approval agencies, and were also made available to the public and stakeholders for comment. The Work Plans are available as supporting documents.

The Detroit River International Crossing study commenced in January 2005. During the spring of 2005, the study team updated traffic forecasts, confirmed the need for the project, and generated a long list of illustrative alternatives.

The first round of Public Information Open Houses (PIOHs), held in June 2005, focused on the purpose and need for the study, and presented the illustrative plaza, crossing and access road alternatives for public review and comment. Attendees were also asked to provide input on the development of the seven evaluation factors to be used throughout the remainder of the study to help determine the impacts associated with each alternative.

A thorough and systematic analysis and evaluation of this long list of illustrative alternatives was carried out during the fall and the results were shown to the public and key stakeholders for input and review late in 2005. The results of the evaluation identified an Area of Continued Analysis (ACA).

At the second round of PIOHs, held in November-December 2005, the study team presented alternatives to the undertaking, the evaluation of the illustrative alternatives, as well as the Area of Continued Analysis that had been identified on the basis of this evaluation.

Early in 2006, the study team developed practical crossing, plaza and access road alternatives within the ACA. At the third round of PIOHs, held in March 2006, the practical alternatives for the plaza, crossing and access road were presented. In addition, attendees were encouraged to provide

feedback on the potential locations for interchanges, local access considerations (including service road options), and cross-sectional alternatives for at-grade, depressed and tunneled roadways.

The remainder of the 2006 calendar year focused on analysis of the practical alternatives. At the fourth round of PIOHs, held in December 2006, the study team presented the preliminary analysis of the practical alternatives for the plaza, crossing and access road. The public was advised on the status of the analysis work and conclusions to date. They were encouraged to comment on the analysis and work completed to date as well as the methods used to carry out the work conducted.

Informal consultations continued into the spring and summer of 2007 with growing interest around a concept which would be a combination of the tunneled and below-grade alternatives. At meetings with the City of Windsor, the vison of a more “green”, parkway-like, alternative emerged. The concept, would include a green corridor with tunneled sections, a grade separated recreational trail system, and extensive urban design of the green areas.

The DRIC study team built upon this vision to develop a Parkway Alternative, which was released for public comment in August 2007. The alternative included 10 tunneled sections (total length 1.5km), a grade separated recreational trail network, and extensive areas of future parkland.

Information on the evaluation process to be undertaken in selecting a technically and environmentally preferred alternative for the crossing, plaza and access road was provided. As well, the public was invited to provide ideas and comments to help the study team evaluate all the alternatives and develop a single preferred alternative.

The Partnership announced The Windsor-Essex Parkway as the Technically and Environmentally Preferred Alternative for the access road portion of the project in May 2008, and the preferred location for the international bridge crossing and Canadian plaza in June 2008.

At the sixth round of PIOHs, held in June 2008, the study team presented a broad overview of the study, as well as the analysis and evaluation process leading to the selection of The Windsor-Essex Parkway, Plaza B1, and Crossing X-10B as the Technically and Environmentally Preferred Alternative (TEPA). In addition, the study team responded to the “GreenLink” concept that had been suggested by the City of Windsor in terms of its similarities and differences to the recommended “Parkway” alternative.

The remainder of 2008 focused on detailed analysis and identification of appropriate mitigation measures for the TEPA, as well as the finalization of the supporting documents and the documentation of the Ontario Environmental Assessment Report and the Canadian Environmental Assessment Screening Report. These measures were included in a draft version of this EA Report, which was made available to the public, agencies, municipalities, First Nations, and other interested parties for review in November 2008.

At the seventh and final round of PIOHs, held in late November 2008, the study team presented the Recommended Plan for the new border transportation system. This Recommended Plan consisted of refinements made to the TEPA since the sixth round of PIOHs and the proposed mitigation strategies developed by the study team. The feedback obtained at this PIOH was utilized to make refinements to the Recommended Plan for inclusion in this EA Report.

Following the final round of PIOHs, the study team focused on reviewing comments received at the PIOH and during the review of the draft version of the EA Report.

E.4 Environmental Assessment Process

The Detroit River International Crossing study has followed the requirements of the *Ontario Environmental Assessment Act (OEAA)* under the Environmental Assessment process, and the requirements of the Canadian Environmental Assessment Act under subsection 5(1)(a) of the Canadian Environmental Assessment Act. As such, both EA processes have been coordinated pursuant to the *Canada-Ontario Agreement on Environmental Assessment Cooperation* (the Agreement).

For projects subject to the OEA Act, an environmental assessment involves identifying and planning for environmental issues and effects prior to implementing a project. The process allows reasonable opportunities for public involvement in the decision-making process of the project. An EA document is prepared by the proponent of the project and is subject to review by the public and government agencies.

The purpose of the *OEAA* is to help protect and conserve Ontario’s environment by ensuring that projects subject to the Act follow a planning process leading to environmentally sound decision-making. The *Detroit River International Crossing Study* has followed the requirements of the *OEAA* under the Environmental Assessment (EA) process *(Section 6.1 (2) of the OEAA)*. In general terms, an environmental assessment is a study which assesses the potential environmental effects and benefits of a project or undertaking on the environment. Key components of an EA include: consultation with members of the public, regulatory agencies, municipalities, and other stakeholders; First Nations engagement; the consideration of alternatives and their potential environmental effects; and the mitigation and management of environmental effects. The Detroit River International Crossing study has been undertaken consistent with the requirements identified in *Section 6.1 (2)* of the *OEAA*.

The *Canadian Environmental Assessment Act (CEAA)* is the legal basis for the federal environmental assessment process. The *Act* sets out the responsibilities and procedures for carrying out the environmental assessments of projects that involve federal government decision-making.

The federal environmental assessment process is applied whenever a federal authority has a specified decision-making responsibility in relation to a project, also known as a “trigger” for an environmental assessment. Specifically, the *Act* is “triggered” when a federal authority:

- Proposes a project;
- Provides financial assistance to a proponent to enable a project to be carried out;
- Sells, leases, or otherwise transfers control or administration of federal land to enable a project to be carried out; or
- Provides a licence, permit or an approval that is listed in the *Law List Regulations* that enables a project to be carried out.

As a co-proponent of the Canadian portion of the project, Transport Canada (TC) has determined that an EA is required pursuant to subsection 5(1)(a) of the *CEAA*. In addition, the project will require an approval under the *Navigable Waters Protection Act*, which is administered by TC, and is identified in the *Law List Regulations* under CEAA. As such, TC has identified itself as a Responsible Authority (RA) for the assessment. Fisheries and Oceans Canada (DFO) is also a Responsible Authority, in relation to *Fisheries Act* authorizations that will be required for certain water crossings along the access

road. The Windsor Port Authority (WPA) is a Prescribed Authority under the *Canada Port Authority Environmental Assessment Regulations,* in relation to federal water lots that will be crossed by the new international bridge. TC, DFO and the WPA coordinated their activities, to ensure that a single environmental assessment is conducted.

As a bi-national study, the federal/provincial EA undertaken in Canada was also coordinated with studies in the United States, which were undertaken in order to gain approval through the *National Environmental Policy Act (NEPA)*. Although the documents and approval processes are different, the objectives and processes of *NEPA* are similar to that of *OEAA*. There is no *NEPA* document that is equivalent to the *OEA TOR*, however, the Purpose of the Undertaking discussion in an *OEA TOR* is comparable to the *Purpose and Need Statement* under *NEPA*.

In addition, throughout the study process, the Partnership coordinated meetings between Canadian and United States federal and state / provincial agencies of common interests so that, to the extent possible, a bi-national approach to identifying and addressing issues could be developed.

Additional information regarding the EA process followed as part of this study are included in Chapter 2 of this report.

E.5 Consultation

From the outset of the study, the study team realized that the Detroit River International Crossing project would benefit and have impacts on many stakeholders throughout the Windsor and Essex County area. Therefore, the team set out to develop a consultation framework that would include a wide variety of stakeholders and allow opportunities for meaningful two-way dialogue throughout the project. To this end, the study team established the following consultation groups early in 2005:

- Municipal Advisory Group (MAG): Consisting of area municipalities and the County of Essex. As the study progressed, school boards were also invited to join the MAG.
- Canadian Agency Advisory Group (CANAAG): Consisting of agencies involved in the review and approval of the provincial EA Report and the federal CEAA Screening Report.
- Private Sector Advisory Group (PSAG): A bi-national consultation group. There were invitations sent to several business owners and associations in Canada and the U.S.
- Crossing Owners/Operators/Proponents (COOP): Consisting of owners and operators of current border crossings, and private sector proponents of new or expanded crossings.
- Community Consultation Group (CCG): The study team solicited membership from the public, representing a wide variety of backgrounds and interests to join the CCG. Everyone who asked to be involved was included in the group. Participants volunteered their time to meet with the team on a regular basis, learn about the project, and share their ideas and interests.
- First Nations Consultation: Consultation with First Nations began in January 2005, where several First Nations groups were initially consulted.

The consultation groups were established early in 2005 and the team has met with each of them several times at key milestones as detailed in the following sections. As the study evolved, the team consulted with various other interests groups and stakeholders, including community groups, business owners and individual property owners. After the selection of the ACA, a School Advisory Group was formed to provide more direct consultation with local school councils. In addition to the above the team maintained extensive coordination and consultation with the U.S. study team and relevant stakeholders. DRIC study Working Group and Steering Committee meetings were held at regular intervals throughout the four-year period. Study team representatives reciprocated attendance at most public meetings held on the opposite side of the border.

The study team also consulted with the general public throughout the course of the study. The main forum for public consultation has been Public Information Open Houses (PIOHs) and follow up workshops, bus and boat tours, as well as several context sensitive solutions workshops and an initial public outreach meeting. Each meeting was extensively advertised and well attended, in some cases, by more than 1,000 citizens. The PIOHs provided attendees with the opportunity to review and discuss display boards and handout materials, as well as video animations of proposals and other relevant information. PIOHs and workshops were staffed by several technical representatives of the study team as appropriate. These included technical and environmental specialists (air, noise, natural heritage, etc.), the lead consultant, and MTO (project management, environmental, and property specialists). At each public event, comments were solicited for consideration and response. Throughout the study, the study team also met with various community groups, as appropriate, in order to further understand and respond to specific issues and concerns.

To further general public knowledge about the project, the study team established a project website, which has been maintained throughout the course of the study (www.partnershipborderstudy.com). This website has provided up-to-date information on the study progress as well as draft reports as they have become available. A second project website (www.weparkway.ca) was added in the spring of 2008 to highlight the Technically and Environmentally Preferred Alternative for the access road portion of the study. The public has been further informed about the study through the local media. Study progress has been widely covered by the local newspaper, radio stations, and television stations.

Municipalities, agencies, businesses, communities, the public at large, and First Nations have been involved in the more than 300 meetings and events which have occurred. The information received through these various consultation activities has been considered in the development, analysis and evaluation of alternatives. In some cases, the comments and/or desires of interested stakeholders were not supported by the study team's analysis and evaluation, in which case they are not reflected in the final outcomes. However, in many cases the comments reinforced the analysis/evaluation and/or caused the team to adjust its thinking regarding the balance of impacts and benefits of the undertaking. In this way, the consultation has influenced the outcome of the project in many significant ways, and has helped shape the study leading up to the recommended alternative and development of mitigating measures.

A detailed summary of the consultation that has occurred throughout the Detroit River International Crossing study is provided in Chapter 3 of this EA Report, including a listing of all consultation activities to date.

E.6 The Existing Environment

At the outset of the study, a Preliminary Analysis Area (PAA) was developed for the generation and assessment of illustrative alternatives. The PAA is illustrated by the highlighted area in Exhibit 1.1 of

the EA Report, and represents a large portion of the Windsor-Essex region of Southwestern Ontario. More specifically, the PAA includes the City of Windsor and the Town of Amherstburg, Town of LaSalle and Town of Tecumseh within the County of Essex.

The Planning/Need and Feasibility Study (P/NF) completed in 2004 provided an inventory of the existing conditions in a Focused Analysis Area. As an initial step in the Detroit River International Crossing study and to build upon the work completed during the preparation of the Environmental Overview Report, further in-depth secondary source data collection was conducted within the PAA. A detailed review and inventory of existing conditions within the PAA was completed for the following areas: air quality; social impact assessment; economic assessment; land use; archaeological resources; cultural resources; natural heritage; acoustics and vibration; waste and waste management; and the existing transportation network. The key findings of this review based on each of these areas are documented in Chapter 4 of this EA Report. These findings were used to assist the study team in the generation, assessment and selection of both illustrative and practical alternatives.

In general, the study area on the Canadian side of the Detroit River has a combined population of over 300,000, including more rural parts of adjoining Essex County. It is characterized by both heavily urbanized and intensive agricultural land uses that are interspersed with a patchwork of remnant natural heritage features, including wetlands, prairies, and woodlots.

The primary land use in the City of Windsor is residential, with major employers clustered in manufacturing and commercial nodes across the city. Approximately 27 percent of employment in Windsor is related to automotive manufacturing and the machine, tool, die, and mold industry. Employment in manufacturing also dominates the different employment sectors in the area surrounding the City of Windsor. The presence of skilled labour in the Town of Tecumseh, the Town of LaSalle and the Town of Amherstburg keeps the area's industrial sector globally competitive, and supports a diverse employment base. In addition to these industrial pursuits, agriculture will remain one of the area's primary economic sectors.

Located within the City of Windsor and the Town of LaSalle is the Ojibway Prairie Provincial Prairie Reserve, which was regulated under the Provincial Parks Act in 1977 (OMNR 2002). Recently the Ojibway Prairie Park Management Plan was published, which sets out the park management directives for the next twenty years.

As outlined in the Official Plans for the City of Windsor and the Town of LaSalle, there are numerous parks and Open Space Features within the study area that provide recreational opportunities for the public. Municipal parks of note include the Ojibway Park and the Black Oak Heritage Park. These parks are associated with lands described as Environmentally Sensitive Areas (ESAs) or Areas of Natural or Scientific Interest (ANSIs).

The Detroit River has been designated a Canadian Heritage River. As such, the preservation and enhancement of its natural features, as well as its cultural and recreational values, is considered to be of both federal and provincial importance. The Detroit River is the first river to be designated a bi-national Heritage River. Canada and the U.S. have also initiated the establishment of the Detroit River International Wildlife Refuge. When fully established, the Refuge will include the marshes, coastal wetlands, islands, shoals, and riverfront lands from Mud Island on its north extent to the southern border of Sterling State Park in Monroe County, Michigan at its southern extent.

E.7 Transportation Needs Assessment

The Partnership jointly commissioned a *Planning/Need and Feasibility Study (P/NF)* in 2001, which identified a long-term strategy to promote the safe and efficient movement of people and goods between Southwest Ontario and Southeast Michigan. The transportation problems and opportunities identified during the P/NF Study provided the basis for the Partnership to initiate the environmental study processes for the development and assessment of transportation alternatives at the Detroit River international crossing.

In addition to the information presented in this section, Chapter 5 of the EA Report provides additional details regarding the transportation problems and opportunities of the study as well as "Alternatives to the Undertaking" that were considered.

TRANSPORTATION PROBLEMS AND NEEDS

The Ambassador Bridge and Detroit-Windsor Tunnel represent two of the busiest border crossings in North America. In 2006, they carried over 11 million passenger vehicles and over 3.7 million commercial vehicles annually and handled 28% of the total surface trade between Canada and the U.S. The delays and resultant queuing at these crossings will have several negative effects associated with poor transportation network operations should they not be addressed.

The current and future deficiencies in the roadway network serving the international border crossings at Windsor-Detroit that are anticipated within the 30-year timeframe are documented in the *Travel Demand Forecasts Working Paper*, which is available as a supporting document.

For this study, capacity was defined as the maximum vehicle service flow rate that can be sustained by a facility and represents a severe breakdown in traffic operations. This is a very undesirable condition with long queues and delays. Although traffic volumes up to the capacity can be accommodated, it was considered prudent to provide a level-of-service that is better than that provided when traffic volumes reach capacity. As such, capacity values within this study were defined as a range, with the upper limit corresponding to the maximum rate (as defined above) and the lower limit corresponding to the flow rate at which traffic operations start to become unstable due to the high number of vehicles using the facility.

The travel demand forecast reviewed existing and projected operations for all elements of the overall border crossing system, including the existing crossings, Canadian and U.S. border processing, and Canadian and U.S. access to the existing border processing facilities and crossings. The study identified future deficiencies for both the Ambassador Bridge and Detroit-Windsor Tunnel. The future capacity deficiencies for the various elements of the overall border crossing system are summarized in Table E.1.

TABLE E.1 – SUMMARY OF FUTURE DETROIT RIVER CROSSINGS CAPACITY DEFICIENCIES

Crossing	Time Capacity Reached				
	U.S. Road Access	U.S. Border Processing	Bridge/ Tunnel Roadbed	Canadian Border Processing	Canadian Road Access
Ambassador Bridge	Beyond 30 years	5 to 10 years	10 to 15 years	5 to 10 years	5 to 10 years
Detroit-Windsor Tunnel	0 to 5 years	5 to 10 years	30 years	5 to 10 years	5 to 10 years

Given the importance of the Detroit-Windsor trade corridor and the substantial number of people dependent upon safe, reliable access across the Detroit River on a daily basis, these capacity deficiencies are a serious problem that needs to be corrected. In order to relieve these problems and meet the purpose as defined in Section E.2, the Detroit River International Crossing study has strived to address the following regional transportation and mobility needs:

- Provide new border crossing capacity to meet increased long-term travel demand;
- Improve system connectivity to enhance the continuous flow of people and goods;
- Improve operations and processing capabilities at the border; and
- Provide reasonable and secure crossing options (i.e. network redundancy).

At the present time there is significant economic uncertainty. However, the travel demand forecasts that were completed were based on reasonable assumptions using the most current information available at the time, with extensive review and scrutiny by modeling experts from the Partnership agencies. This forecasting approach addressed future uncertainty through extensive sensitivity analyses, which capture a realistic range in the forecasts. The low growth scenario was intended to reflect much lower levels of demand which could be brought about by a variety of circumstances including low economic growth, currency exchange rates, the Western Hemisphere Travel Initiative, City of Windsor or provincial non-smoking initiatives, fuel prices and other such factors. Similarly, high growth scenarios were tested to determine the upside potential in cross-border demand based on more optimistic, yet reasonable growth assumptions.

Since the traffic forecasts were completed, there have been declines in cross border passenger car traffic. However, truck traffic remained fairly stable between 2001 and 2007 and in fact 2006 represented the peak in commercial vehicle traffic at the Ambassador Bridge. The most recent economic downturn will result in a truck volume decline in 2008. The recent declines in passenger car trips across the border coupled with the current economic downturn would indicate that the volumes are tending towards the lower range of the forecasts. It is prudent to assume that even considering some industry restructuring that Canadian / U.S. trade will ultimately recover and grow. Assuming only a very modest economic recovery over the long-term, the existing crossing facilities will reach their practical capacity within the planning horizon.

ALTERNATIVES TO THE UNDERTAKING

A number of planning alternatives (Alternatives to the Undertaking) were considered and assessed to address the identified transportation problems, as well as meeting the purpose of the undertaking. The alternatives that were considered included the following:

- Do Nothing;
- Improvements to border processing;
- Transportation demand management;
- Transportation systems management;
- New and/or improved rail alternatives including a new and/or expanded international rail crossing;
- New and/or improved transit services;
- New and/or improved marine services;
- New and/or improved road alternatives with a new or expanded international road crossing; and
- Combinations of the above.

The assessment of transportation planning alternatives provided an opportunity to examine fundamentally different ways of addressing transportation problems. In recognition of these fundamental differences among the planning alternatives, it was considered appropriate to assess the effectiveness of each type of alternative in addressing the problems and taking advantage of opportunities at a functional level.

The Alternatives to the Undertaking were assessed and evaluated using broad factors to determine which alternatives were practical and feasible from a transportation, environmental and border processing perspective. The evaluation factors were established to achieve the objectives of the study and were consistent with environmental approval processes in both Canada and the U.S. The factors developed for evaluating the transportation alternatives were as follows:

- Transportation Network Improvement;
- Transportation Opportunities;
- Governmental Land Use, Transportation Planning and Tourism Objectives;
- Border Processing;
- Environmental Feasibility; and,
- Technical Feasibility.

Based on the assessment and evaluation, the only transportation planning alternative that can meet the identified needs is one which includes the provision of New and/or Improved Roads with a New or Improved Crossing. This alternative was identified as the most effective at addressing the transportation network requirements, border processing requirements, and provides the highest overall level of "support" to planning and tourism objectives. This alternative has a comparable degree of environmental and technical feasibility as the other alternatives on the basis that impacts could be avoided, reduced or mitigated to the extent possible as with other infrastructure improvement

alternatives. It is also recognized that improved and expanded border processing capacity is an integral component of this solution.

In terms of addressing transportation network requirements for people and goods movement, a multi-modal approach provides choice for travelers and offers viable mechanisms to reduce auto use. Although alternatives for travel demand management, rail, transit, ferries, etc. cannot independently address the diverse user needs, sufficiently alleviate traffic congestion on the transportation network nor effectively provide reasonable options for maintaining the movement of people and goods in cases of disruptions at any of the existing border crossings, these alternatives should be included as part a multi-modal strategy for the medium and long-term needs of the transportation network in the area.

E.8 Illustrative Alternatives for Crossings, Plazas and Access Roads

Based on the selection of New and/or Improved Roads with a New or Improved Crossing as the recommended Alternative to the Undertaking, illustrative alternatives were developed within the Preliminary Analysis Area. A detailed summary of the approach used in the generation and evaluation is provided in Chapter 6. The term "illustrative" is used to describe the conceptual, "long list" alternatives determined within the PAA. In general, the alternatives to be considered for a new or expanded border crossing were categorized into the following components:

- A new or expanded crossing (tunnel or bridge);
- Plazas connected to the crossing (either directly or through a secure connection) for border agencies to inspect inbound and outbound drivers, passengers, vehicles and freight. These inspection plazas may also include other functions, such as toll collection and crossing maintenance facilities, and other border related services such as duty free shopping, brokerage offices, and other agency offices; and
- Controlled access roadways connecting the crossing plazas to the provincial or interstate freeway system.

The following guiding principles were developed to assist in the development of the illustrative crossing, inspection plaza and access road alternatives:

- Utilize existing infrastructure to the maximum extent - taking advantage of existing transportation and other linear corridors may improve usage of the transportation network and/or reduce impacts to other land uses;
- Seek areas or land uses that are compatible with transportation corridors and facilities, or areas in transition to compatible land uses - compatible areas are those that are considered to be less impacted by new crossing, inspection plaza and access road alignments than other land uses (e.g. industrial areas may be considered to be less impacted be a new inspection plaza than residential areas). Areas in transition allow the opportunity to incorporate new access road alignments in the area planning;
- Minimize impacts to significant natural features - such features are usually regionally unique, protected by legislation/designations and may preclude a transportation facility; and
- Minimize impacts to city centres - such areas generally provide a focus for cultural, social and economic activities.

The guiding principles reflect the objectives of the Partnership to address transportation needs, take advantage of transportation opportunities, and avoid generating unacceptable impacts to the extent possible.

PLAZA ALTERNATIVES

The identification of possible sites for inspection plazas was the initial step in the development of illustrative alternatives. This was due to the relatively large associated property requirement and specific siting requirements unique to their purpose. The crossing alternatives and road alternatives were developed subsequently, based on the alternative plaza locations.

On the basis of the guiding principles and the siting considerations identified by the study team, thirteen (13) potential plaza locations were identified on the Canadian side of the river. The identification of plaza locations on the Canadian side was coordinated with the identification of plaza locations on the US side. The plaza sites were divided into three geographical categories – east plaza sites, central plaza sites, and south plaza sites.

CROSSING ALTERNATIVES

Once the plaza locations were identified on the Canadian and US side of the Detroit River, the study team developed international crossing alternatives (bridge and tunnel options were considered) to connect the plaza sites. New crossing alternatives were developed based on providing six lanes over/under the Detroit River. A total of 15 potential crossing locations were identified. These alternatives were grouped into four geographical categories – area of Fighting Island, area of Zug Island, Area of Ambassador Bridge, and Area of Belle Isle.

ACCESS ROAD ALTERNATIVES

Illustrative access road alternatives were developed connecting Highway 401 in the Windsor-Essex County area to the alternative plaza locations. The development of access road alternatives considered significant features relating to the natural, social and cultural environment. Route optimization software (Quantm) was also used to aid in the generation of illustrative access road alternatives to verify the range of alternatives identified by the study team. These access road alternatives were divided into three geographic categories – southern alternatives, central alternatives, and eastern alternatives.

EVALUATION OF ILLUSTRATIVE ALTERNATIVES

The illustrative crossing, inspection plaza and access road alternatives were evaluated following a multi-stage process. Initially, the illustrative alternatives were assessed and evaluated separately on the Canadian and U.S. sides. The results of the U.S. and Canadian analyses were then compiled for an end-to-end assessment of illustrative crossing, plaza and access road alternatives for connecting Highway 401 in Ontario to the interstate freeway system in Michigan. The evaluation of illustrative alternatives was based on consideration of the seven key evaluation factors discussed in Section E.2. Although the same seven performance factors were used by both the Canadian and U.S. study teams, certain unique criteria and measures were employed by the U.S. study team that reflect the requirements and conditions on the U.S. side of the Detroit River.

The reasoned argument method was the primary evaluation method employed to select the recommended illustrative alternatives. This method highlights the differences in net impacts associated with the various alternatives. Based on these differences, the advantages and disadvantages of each alternative are identified. The relative importance of the impacts are examined to provide a clear rationale for the selection of a preferred alternative.

The arithmetic evaluation was the secondary method employed for this study. This method incorporates numeric values for both the level of importance of each environmental attribute (referred to as the weight) and the magnitude of the impact or benefit associated with an alternative (referred to as the score). The weight is multiplied by the score to obtain a total weighted score. The totals for each alternative are compared to determine the preferred alternative. The Arithmetic Method also allows for sensitivity testing as numerous weighting scenarios can be developed.

The evaluation of illustrative alternatives by the Canadian study team determined preferred alternatives for the southern, central and eastern access road alternatives. An evaluation of the preferred alternatives from each of the three geographic categories was then completed, based on consideration of the seven key evaluation factors.

The evaluation revealed that the southern alternatives generally have lower impacts to community features, which is a primary objective of this project, and have comparable costs and constructability risks to the other alternatives. However, the southern alternatives do not provide adequate benefits to existing crossings and key connecting roadways which operate over capacity during peak travel periods, and therefore do not provide an improvement to regional mobility in the long term.

Although the eastern access road alternatives were generally found to provide adequate improvements to regional mobility, they have higher community impacts than the central alternatives and were therefore not recommended for continued analysis.

The central access road alternatives represented a reasonable balance between benefits to regional mobility and community impacts, and were therefore recommended for continued analysis. These access road alternatives initially corresponded to four crossing and five plaza alternatives.

AREA OF CONTINUED ANALYSIS

Following further review and assessment of the illustrative plaza and crossing alternatives within the central access road corridor, including an end-to-end assessment of illustrative crossing, plaza and access road alternatives for connecting Highway 401 in Ontario to the interstate freeway system in Michigan, an Area of Continued Analysis (ACA) was identified for possible practical crossing, plaza and access road alternatives. These practical alternatives represented refinements of crossing alternatives X10 and X11, as well as possible alternatives connecting to the Ambassador Bridge Gateway and expanded plaza area on the U.S. side. The ACA area extended from Zug Island to the vicinity of the Ambassador Bridge on the U.S. side, and from Broadway Avenue to Brock Street in Sandwich Towne on the Canadian side.

On the Canadian side, the ACA encompassed illustrative plazas CC2, CC3 and CC7 and was defined to provide sufficient area to enable a range of access road alignments and crossing alignments to be developed for continued analysis. The area was also defined to accommodate refinement to the locations and alignments of crossing, plaza and access road alignments in the Ojibway Industrial Park area.

The residential community of Sandwich, Black Oak/Ojibway protected natural areas served to limit the extent of the Area of Continued Analysis on the Canadian side. The area also included the Huron Church/Talbot Road corridor and the Highway 401 corridor from Highway 3 to Dougall Parkway.

On the US side, the ACA encompassed the area of southwest Detroit between the I-75 corridor and the riverfront between Zug Island and the Ambassador Bridge.

Within the ACA, the study team generated, assessed and evaluated a number of practical crossing, plaza, and access road alternatives. A detailed description of the existing conditions of the ACA is included in Chapter 7, including a description and inventory of existing conditions for the following areas: air quality; social impact assessment; economic assessment; land use; archaeological resources; cultural resources; natural heritage; acoustics and vibration; waste and waste management; and the existing transportation network.

E.9 Practical Alternatives for Crossings, Plazas and Access Roads

The term “practical alternative” is used to describe the more refined alternatives that emerged from the assessment and evaluation of the broader level conceptual alternatives, i.e. the illustrative alternatives. This terminology was adopted on both sides of the border to promote the coordinated approach between the two EA processes. The practical alternatives that were generated and evaluated were located within the Area of Continued Analysis determined following the illustrative alternatives stage.

As outlined in Chapter 8 of this EA Report, the generation of practical plaza and crossing alternatives was based on a number of technical objectives derived from consultation with agencies, municipalities, specialists (including traffic, highway design, foundations and structural specialists), and the public. A total of three practical crossing alternatives and four practical plaza alternatives were developed on the basis of this generation criteria, as follows:

CROSSING ALTERNATIVES

- Practical Crossing Alternative A (Crossing ‘A’) is within the X-10 corridor. Due to the distance required to touch-down at-grade, the crossing connects only to Practical Plaza Alternative A (Plaza ‘A’) on the Canadian side of the river.
- Practical Crossing Alternative B (‘Crossing B’) is the other crossing within the X-10 corridor and connects to the south end of the plaza area on the U.S. side of the river. The crossing connects to Plaza A and Plaza B1 on the Canadian side of the river.
- Practical Crossing Alternative C (‘Crossing C’) is within the X-11 corridor. This alternative features four distinct crossing-plaza combinations, including two ways of connecting to Plaza A (via the Brighton Beach area or parallel to the Ojibway Parkway), a connection to Plaza B, and a connection to Plaza C.

PLAZA ALTERNATIVES

- Practical Plaza Alternative A is bounded by Ojibway Parkway, E.C. Row Expressway, Malden Road and Armanda Road/Broadway Avenue. Plaza A connects to all three crossing alternatives

and is located approximately 2.0 km to 3.5 km from the Detroit River (corresponding to the approaches via Crossing A and Crossing C, respectively).

- Practical Plaza Alternative B connects to Crossing C and is located approximately 2.0 km from the Detroit River via the approach to Crossing C, within the Brighton Beach Industrial Area.
- Practical Plaza Alternative B1 is a variation of Plaza B and connects to Crossing B. This site is located approximately 1.0 km from the Detroit River via the approach to Crossing B. The plaza is also within the Brighton Beach Industrial Area, bounded by the Detroit River, Chappus Street, Ojibway Parkway and Broadway Street.
- Practical Plaza Alternative C connects to Crossing C and is located approximately 1.3 km from the Detroit River via the approach to Crossing C. The plaza is sited directly adjacent to the Detroit River shoreline and is bounded by Prospect Avenue, Sandwich Street and Chappus Street and the Brighton Beach industrial area to the south.

EVALUATION OF PRACTICAL CROSSING AND PLAZA ALTERNATIVES

As with the evaluation of illustrative alternatives and in accordance with the evaluation process developed for this study, the assessment and evaluation of these practical alternatives was undertaken following both a reasoned argument method, and an arithmetic method (weighted scoring). The reasoned argument method was the primary method, while the arithmetic method was the secondary method, which served as a basis of comparison for the evaluation findings.

For the purposes of the assessment, the practical plaza and crossing alternatives were organized by crossing corridor to determine the best plaza/crossing combination by corridor. The results of the evaluations identified that Crossing A-Plaza A (Crossing X-10A), Crossing B-Plaza B1 (Crossing X-10B) and Crossing C-Plaza B (Crossing X-11C) were the plaza-crossing alternatives that would be considered on the Canadian side.

Following the identification of the preferred plaza-crossing alternatives for each crossing corridor, the three alternatives were evaluated and assessed against one another based on the seven key evaluation factors. Overall, Crossing X-10B was identified as the preferred alternative in three of the six factor areas in which a preference could be expressed. Both the X-10A and X-11C alternatives were identified as least preferred in two factor areas. Crossing X-10B was not identified as the least preferred in any factor area.

As such, Crossing X-10B and Plaza B1 were selected as the Technically and Environmentally Preferred crossing and plaza.

ACCESS ROAD ALTERNATIVES

The generation of practical access road alternatives was based on the premise that it would extend from Highway 401 at North Talbot Road to the new plaza. Based on the mobility needs of the project, as well as community/municipal consultation, the following objectives guided the generation of practical alternatives in the Huron Church Road/Highway 3 corridor.

- Separate international and local traffic;
- Maintain the local and regional function of the Huron Church Road/Highway 3 corridor;
- Keep the existing traffic within the existing corridor during construction to minimize traffic infiltration onto other city streets; and
- Minimize the direct and indirect property impacts.

The study team considered four basic operational concepts:

- Integrated freeway with interchanges. Service roads provided, as needed, to maintain local access and circulation;
- Separate freeway paralleled by one-way service roads;
- Separate freeway paralleled by existing Huron Church Road/Highway 3;
- Tunnel below a rebuilt Huron Church Road/Highway 3 corridor.

The study team concluded that Concept 1 (an integrated freeway with local service roads only as required) would not adequately achieve the above-noted objectives. The remaining three concepts were then developed into five cross-section alternatives that better met the objectives. On this basis, the study team developed the following five initial access road alternatives between Highway 3 and the Malden Road area:

- Alternative 1A – At-grade six-lane freeway with parallel one-way service roads on either side of the freeway;
- Alternative 1B – Below-grade six-lane freeway with parallel one-way service roads on either side of the freeway;
- Alternative 2A – At-grade six-lane freeway with parallel service roads on one side of the freeway;
- Alternative 2B – Below-grade six-lane freeway with parallel service roads on one side of the freeway;
- Alternative 3 – Six lane freeway in a cut and cover tunnel with service roads on the surface.

As the findings of the technical work became clearer during the technical analysis of the five alternatives and in response to comments and feedback received through various consultation activities, the study team developed a modified access road alternative based on the below-grade and tunnel alternatives. This new alternative was identified as the Parkway and featured a below grade freeway with 10 tunnel sections ranging in length from 120 m to 240 m, strategically placed to maintain existing access across and along the corridor, as well to provide new connections for roads, trails and wildlife linkages. The Parkway alternative was initially presented for public review and comment at the fifth round of PIOHs in August 2007.

In response to the Parkway, the City of Windsor released an access road concept entitled GreenLinkWindsor. Like The Parkway, the GreenLinkWindsor concept proposed a below-grade freeway with tunnel sections, a separate service road for local traffic, a wider right-of-way with buffer areas between the corridor and adjacent residential areas, and a continuous recreational trail system along the corridor.

The study team carefully considered the GreenLinkWindsor concept, as well as the comments provided by other stakeholders, including other municipalities, government agencies and the public. The comments received were used to refine The Parkway. Based on this input, and on further deliberations by the study team, a number of refinements were made to The Parkway alternative in the period following the August 2007 PIOHs. These refinements were adopted to reduce the effects of The Parkway alternative and to improve the transportation benefits and community benefits to the extent

practical. The refined Parkway alternative was subsequently re-named as The Windsor-Essex Parkway.

EVALUATION OF PRACTICAL ACCESS ROAD ALTERNATIVES

The five initial access road alternatives and The Windsor-Essex Parkway alternative were assessed and evaluated using the same approach undertaken for the evaluation of practical crossing and plaza alternatives, with a focus on the seven key evaluation factors. The Windsor-Essex Parkway was identified as preferred over the other access road alternatives in four of the seven key factor areas considered. In two of the seven factor areas, no clear preference was identified. In the area of Cost and Constructability, the at-grade Alternative 2A was identified as the preferred alternative. The Windsor-Essex Parkway alternative was the second-most expensive alternative and was identified as having greater cost and constructability risks than the other alternatives except for the tunnel alternative.

Overall, The Windsor-Essex Parkway was considered to provide the best balance of impacts and benefits. As such, The Windsor-Essex Parkway was selected as the Technically and Environmentally Preferred access road alternative.

E.10 Description of the Recommended Plan

Subsequent to the selection and presentation of The Windsor-Essex Parkway, Plaza B1 and Crossing X-10B as the components of the TEPA, several refinements were developed based on further technical analysis and stakeholder consultation, with the objectives of further enhancing the benefits or mitigating the effects of the TEPA.

The combination of the TEPA and associated refinements along with the proposed mitigation measures are referred to collectively as the Recommended Plan.

The location of the Recommended Plan is illustrated schematically in Exhibit E.1. Key elements of the Recommended Plan are outlined below, with additional information provided in Chapter 9.

EXHIBIT E.1 – RECOMMENDED PLAN

THE WINDSOR-ESSEX PARKWAY

The Windsor-Essex Parkway is the recommended access road component of the new border transportation system that will provide a direct route connecting Highway 401 in Windsor, Ontario to Interstate 75 in Detroit, Michigan. The Windsor-Essex Parkway is planned as a six-lane urban freeway with 11 tunnels and service roads. It allows long-distance international traffic to travel unimpeded by traffic signals to a new inspection plaza and river crossing while improving community linkages and providing extensive new trails, green space and other recreational opportunities. The Windsor-Essex Parkway includes:

- Over 300 acres of parkland;
- 20 km of recreational trails;
- 11 tunnels covering approximately 1.8 km of freeway;
- New 4-lane service roads;
- Improvements to the movement of traffic to and from the border;
- Stormwater management ponds in selected locations;
- Noise mitigation measures;
- Full illumination along the freeway; and
- Conventional illumination along service roads, side roads, and sections of the trail system.

From the inspection plaza easterly approximately 1 km to where the freeway portion of The Windsor-Essex Parkway approaches E.C. Row Expressway approximately 0.3 km east of Matchette Road, the proposed freeway is grade separated over the Essex Terminal Railway, Ojibway Parkway and Matchette Road and is situated south of the existing E.C. Row Expressway corridor.

From approximately 0.3 km east of Matchette Road to approximately 0.4 km west of Huron Church Road, the freeway portion of The Windsor-Essex Parkway and E.C. Row Expressway are integrated into a core-collector system. In this section, the eastbound and westbound lanes of E.C. Row Expressway diverge and the freeway portion of The Windsor-Essex Parkway is aligned between them.

From north of Bethlehem Avenue/Labelle Street to approximately 1.0 km east of Howard Avenue, the proposed freeway is below-grade, predominantly in open-cut with grass side slopes. Retaining walls, either partial-height or full-height, are required in localized areas where necessary.

Within this section, the location of the service road relative to the freeway varies. From north of Bethlehem Avenue/Labelle Street to east of Huron Church Line the proposed service road is adjacent to the proposed freeway on the north side. From east of Huron Church Line to approximately 0.7 km west of Howard Avenue, the proposed service road is situated on the south side of the proposed freeway. From 0.7 km west of Howard Avenue to approximately 0.3 km east of Howard Avenue, the proposed service road is once again located adjacent to the proposed freeway on the north side. East of this location, no service road is proposed.

From approximately 1.0 km east of Howard Avenue to North Talbot Road, The Windsor-Essex Parkway is predominantly at existing grade. There is no service road proposed through this section.

Interchanges and access points between the proposed freeway, proposed service road and side roads are included in The Windsor-Essex Parkway design concept to facilitate mobility and local access in the corridor and provide the opportunity for border-bound motorists to choose a border crossing.

A modern roundabout is proposed for the intersection of realigned Highway 3, the proposed Howard Avenue diversion and the proposed freeway on and off-ramps east of Howard Avenue.

A potential carpool lot site has been identified on the east side of the Howard Avenue diversion, south of the proposed roundabout at realigned Highway 3. Further design stages of the project will include additional study as to the layout and feasibility of providing this carpool lot.

PLAZA B1

On the Canadian side, plaza alternatives were developed considering the need to provide improved border processing facilities to meet future travel demand and security requirements at the border crossing. All plaza alternatives considered were much larger than the current plazas at the Ambassador Bridge and the Detroit-Windsor Tunnel. The new plaza, Plaza B1 will be designed to serve the future (2035) travel demands at the border crossing. Initial construction of the plaza may not include the fully developed plaza, as the plaza may be developed in stages. The initial construction of the plaza will be such that future expansion will be possible by way of constructing additional inspection booths or tolls.

Plaza B1 was developed in consultation with Canada Border Services Agency and provides sufficient areas for primary inspection lane booths and on-site secondary inspection of people and goods. The plaza alternative also allows for dedicated NEXUS and FAST lanes and provides for a substantial improvement of border crossing processing capabilities.

Canada Border Services Agency has reviewed and tested functional layouts of the plaza alternatives to confirm the suitability under future traffic conditions. Plaza B1 includes:

- Total plaza area of 137 acres (55 hectares);
- Total of 29 inbound inspection lanes;
- Total of 103 secondary inspection parking spaces for commercial vehicles;
- Nine toll collection lanes; and
- Stormwater management features to control quality and quantity of runoff water.

The final design of the plaza will incorporate a local access road along the edge of the plaza that will provide continuity for traffic between Sandwich Street and Broadway Street as well as access for plaza employees. Local access will also be provided at the north end of the plaza from a realigned Sandwich Street to the Brighton Beach Power Station and Keith Transformer Station.

CROSSING X-10B

The new Detroit River crossing is being developed as a six-lane bridge providing three Canada-bound lanes and three US-bound lanes. The capacity of the new crossing, Crossing X-10B, will accommodate future travel demand, both in terms of meeting capacity and providing flexibility to stream traffic on the crossing to improve border process (e.g. designated NEXUS/FAST lane).

The new river crossing will be constructed to link inspection plazas on the Canadian and US sides of the Detroit River, and will be a key component of the new end-to-end transportation system that will link existing Highway 401 to the US Interstate system. The crossing will consist of both a main bridge that will span the width of the Detroit River, and approaches to the main bridge constructed on piers that will connect to plazas in both Canada and the US. The main bridge and approaches will be constructed on the Crossing X-10B alignment.

Two bridge types are being considered for the new crossing: a cable-stayed bridge and a suspension bridge. Selection of the bridge type will be made during subsequent design phases of this project.

E.11 Environmental Effects and Mitigation of the Recommended Plan

Impacts on environmental features resulting from the Technically and Environmentally Preferred Alternative (TEPA), along with proposed mitigation measures of the Recommended Plan, are described in Chapter 10 of this EA Report. Technical reports addressing the mitigation for the Recommended Plan have been prepared as part of this study to address the environmental and engineering factors considered as part of this study, and are available as supporting documents. The key factors that were considered included: Air Quality; Human Health Risk; Social Impact; Noise and Vibration; Natural Heritage; Cultural Heritage; Archaeological Assessment; Economic Impact; Waste and Waste Management; and Existing and Planned Land Use.

It should be noted that all of the environmental factors, with the exception of the Human Health Risk Assessment, have been used at every evaluative stage leading to the development of the TEPA. The Human Health Risk Assessment was conducted for the Recommended Plan. For each factor,

including the Human Health Risk Assessment, the analysis of the environmental effects was made for both the future "No-Build" case and for the Recommended Plan. The methodologies for the various investigations are consistent with the work plans that were reviewed by appropriate agencies and interested stakeholders. This approach is also consistent with the approved *OEA Terms of Reference (TOR)*, May 2, 2004.

A brief summary of general environmental effects of the Recommended Plan and proposed mitigation measures for a number of the key disciplines is provided below. Additional details of these effects and mitigation measures are provided in Table 10.5, and in the various technical reports prepared for each discipline.

AIR QUALITY

- In general, potential impacts from The Windsor-Essex Parkway are small and limited to areas in close proximity to the road. The greatest benefit of The Windsor-Essex Parkway will be from the reduction in truck idling along the traffic corridor. Overall the implementation of The Windsor-Essex Parkway will mitigate future transportation related air quality impacts within the study area over the future "No-Build" alternative because it provides a wide right-of-way and improvements in traffic flow, by eliminating stop-and-go conditions caused by the traffic signals that exist in the Highway 3/ Huron Church Road corridor today.
- Air quality in the vicinity of the proposed plaza will be impacted relative to future "No-Build" within approximately 250 m from the Plaza property boundary by 2035. The highest impacts will likely occur within 50 to 100 m of the boundary. Given the location of the plaza in an industrial area, impacts to residential areas are minimized.
- Various mitigation measures will be employed during construction to minimize adverse air quality effects such as dust impacts through the use of proper controls.

HUMAN HEALTH RISK ASSESSMENT

- Predicted concentrations of gaseous air pollutants, fine particulate matter, and Volatile Organic Compounds for the future "No-Build" and the Recommended Plan scenarios are not much different from each other and background. Thus, the Recommended Plan does not result in an increased health risk over the future "No-Build" or background scenarios. This conclusion supports the findings of the Air Quality Impact Assessment.

NOISE AND VIBRATION

- Through the use of best practices, noise can be mitigated during the construction and operating phase.
- With a 5 m high barrier in place, the proposed project is predicted to result in no to a marginal noise impact for The Windsor-Essex Parkway It should also be noted that for many receptors, especially along the north side of the Windsor-Essex Parkway, a decrease in noise levels compared to future "No-Build" noise levels was predicted.
- For Plaza B1, a potential noise impact was identified for receptors in the Ojibway Parkway to Malden Road areas that are in the vicinity of the proposed approach roadway. However, the receptor sound levels can be reduced to within 5 dB above the future "No-Build" sound levels with a 5 m high acoustic barrier installed on the proposed approach roadway. Due to the relatively large distance between Crossing B and the closest receptors in Sandwich Towne, no noise mitigation measures are proposed for the Crossing.
- The Windsor-Essex Parkway is not expected to cause vibrations in the 50 mm/sec range; therefore, no structural damage is anticipated from vehicular traffic.

PROTECTION OF COMMUNITY AND NEIGHBOURHOOD CHARACTERISTICS

- It is recognized that the project will impact the adjacent neighbourhood communities to varying degrees. Through continued consultation with those impacted, residents can contribute to the management of the changes that affect them and their quality of life. Similarly, while the displacement of businesses along the Highway 3/Huron Church Road corridor that serve the local neighbourhoods will potentially cause a change in social patterns and community function, the displacement of businesses along the proposed access road will have limited overall economic impact. Despite the immediate loss of revenue and employment, the loss of businesses will be offset by gains in other businesses, or the displaced businesses will relocate to other areas.

ECONOMIC IMPACTS

- Although the Recommended Plan will displace a number of businesses, displaced businesses are offered fair market value for their businesses, which will provide them an opportunity to relocate if they so choose. For businesses that are not physically displaced but are otherwise affected, signage will be considered at certain intersections/interchanges, as policies permit, to make motorists aware of businesses/business clusters. Efforts will also be made during the construction phase to ensure access is maintained to operating businesses.

EXISTING AND PLANNED LAND USE

- The Windsor-Essex Parkway with its provision for buffer space adjacent to the corridor, and the opportunities for various recreational land uses such as trails and greenspace is consistent with local municipal planning policies. Potential impacts result from land use being changed from either residential, commercial, open space, industrial, or vacant to a transportation-related use.

ARCHAEOLOGICAL RESOURCES

- Archaeological resources have been identified within the Recommended Plan. The exact nature, extent and significance of these resources will not be known until the completion of the Stage 2 and 3 assessments within the Recommended Plan. Upon completion of Stage 2 & 3 assessment, determination of the extent of impacts to significant archaeological resources can be made. Where significant archaeological resources are encountered, mitigation will be required. This will entail either avoidance or mitigative excavation.
- Assessments have been completed on areas exhibiting the greatest archaeological potential, therefore further significant archaeological finds are not anticipated.

BUILT HERITAGE RESOURCES

- Without mitigation, there is a potential for the loss of six heritage features with cultural heritage value or interest within the Recommended Plan. A Built Heritage Resource Documentation Report will be required for all six Built Heritage Features. Where relocation is recommended, the City of Windsor Heritage Committee should be consulted.

NATURAL ENVIRONMENT

- The construction of the Recommended Plan will result in the displacement of wildlife and wildlife habitat and potential mortality to species at risk, and portions of provincially significant wildlife habitat may be lost. However, habitat restoration and enhancement will be implemented to create new and higher quality habitat. Areas of habitat to be retained will be clearly marked in the field and protected from construction activities. Wildlife salvage will be carried out prior to clearing/grubbing to reduce the risk of wildlife mortality. Restoration and enhancement of habitat located along The Windsor-Essex Parkway will be used at strategic locations to reconnect significant wildlife habitat located on both sides of The Windsor-Essex Parkway.
- A total of approximately 131.7 ha of vegetation communities will be removed to construct the Recommended Plan. At the same time, the design of The Windsor-Essex Parkway affords the opportunity to establish approximately 100 ha of green space using restoration and enhancement approaches. In addition, there are opportunities to partner in enhancements to other lands in public ownership adds another opportunity for overall benefits.
- The loss of fish habitat through enclosure or physical destruction will likely occur in 10 of the 15 watercourses/drains within the study area (excluding the Detroit River). However, culverts, designed using fish-friendly methods, and channels, designed using natural channel design principles, should not form barriers to fish passage during operations.
- Riparian vegetation should be maintained where possible. A fish habitat compensation plan will be prepared during later design stages to ensure no net loss of the productive capacity of fish habitat.

URBAN DESIGN AND LANDSCAPE PLAN

- The urban design and aesthetic plan will address the visual aspects of the form, finish and materials used in the landscape and open spaces as well as in proposed structures (e.g. bridges, abutments, retaining walls, noise attenuation and safety barriers).
- Mitigation measures to reduce or improve visual and landscape impacts will include the development of clear urban design and aesthetic guidelines to guide all aspects of future design; the use of landforming and vegetation strategies to improve views, aesthetics, ecological function and screening; and the inclusion of a multi-use trail system and pedestrian-accessible open space within the Recommended Plan. These mitigation measures will improve the visual character, aesthetic presence and landscape impact of the Recommended Plan. The result of the landscape and visual impact mitigation will be a landscape that is unified, green, connected, integrated, and functions as a culturally significant gateway.

E.12 Commitments to Consultation, Compliance Monitoring and Permits/Approvals

The Ministry of Transportation (MTO) is committed to maintaining consultation efforts to keep interested parties informed of activities, future design phases and project implementation. In addition, MTO is committed to ensuring that compliance monitoring is conducted of commitments made during the EA and subsequent phases, including necessary permits and approvals.

Consultation plans will generally involve an outline of committed communications with agencies, municipalities, the public, property owners, and other stakeholders as deemed necessary. Consultation plans will also involve an outline of committed communications with First Nations. These consultation plans will be made available for public input at the outset of the future design phase to ensure they outline appropriate commitments made during the EA including changes as described in the amending procedure (refer to Chapter A). Components that outline specific consultation requirements will be consistent with commitments made throughout the EA.

During future design phases, commitments made in the EA regarding design works and environmental analysis and impact assessment; development and incorporation of mitigation measures; obtaining of regulatory agency approvals and permits; and consultation with interested and potentially affected stakeholders will be monitored. The monitoring activities will be integrated with the design schedule for each segment to ensure timely verification that the commitments have been met by appropriate design solutions before construction activities commence.

Supporting Documents

The following is a list of supporting documentation that is referenced throughout this Environmental Assessment (EA) Report. These documents are available electronically from the study website as follows: (http://www.partnershipborderstudy.com). Hard copies of the report are available from URS Canada upon request.

1. Detroit River International Crossing Environmental Assessment Terms of Reference (May 2004)
2. Draft Acoustics and Vibration Work Plan (February 2006)
3. Draft Air Quality Work Plan (February 2006)
4. Draft Archaeology Work Plan (February 2006)
5. Draft Cultural Heritage Work Plan (February 2006)
6. Draft Economic Impact Work Plan (October 2006)
7. Draft Natural Heritage Work Plan (February 2006)
8. Draft Social Impact Assessment Work Plan (February 2006)
9. Draft Technical Considerations Work Plan (November 2005)
10. Draft Waste and Waste Management Work Plan (November 2005)
11. PIOH1 Summary Report (July 2005)
12. PIOH2 Summary Report (December 2005)
13. PIOH3 Summary Report (March 2006)
14. PIOH4 Summary Report (January 2007)
15. PIOH5 Summary Report (August 2007)
16. PIOH6 Summary Report (December 2008)
17. PIOH7 Summary Report (December 2008)
18. Transportation Planning and Need Study Report (November 2005)
19. Environmental Overview Paper – Canadian Existing Conditions Volume 1 (June 2005)
20. Environmental Overview Paper – Canadian Existing Conditions Volume 2 (June 2005)
21. Draft Feasible Transportation Alternatives (Alternatives to the Undertaking) Report (February 2006)
22. Travel Demand Forecasts Working Paper (September 2005)
23. Travel Demand Model Update Working Paper (September 2005)
24. Regional and National Economic Impact of Increasing Delay and Delay-Related Costs at the Windsor-Detroit Crossings (August 2005)
25. Generation and Assessment of Illustrative Alternatives Report (November 2005)
26. Generation and Assessment of Practical Alternatives and Selection of the Technically and Environmentally Preferred Alternative - Access Road (December 2008)
27. Generation and Assessment of Practical Alternatives and Selection of the Technically and Environmentally Preferred Alternative – Plaza and Crossing (December 2008)
28. Draft Level 2 Traffic Operations Analysis of Practical Alternatives (December 2008)
29. Draft Practical Alternatives Evaluation Working Paper – Air Quality Impact Assessment (May 2008)
30. Draft Practical Alternatives Evaluation Working Paper – Noise and Vibration Assessment (May 2008)
31. Draft Practical Alternatives Evaluation Working Paper – Social Impact Assessment (April 2008)
32. Assessment of Practical Access Road Alternatives Memorandum – Improve Regional Mobility (May 2008)
33. Draft Practical Alternatives Evaluation Working Paper – Economic Impact (May 2008)
34. Draft Practical Alternatives Evaluation Assessment Report – Existing and Planned Land Use (May 2008)
35. Draft Practical Alternatives Evaluation Working Paper – Archaeology (April 2008)
36. Draft Practical Alternatives Evaluation Working Paper – Cultural Heritage (April 2008)
37. Draft Practical Alternatives Evaluation Working Paper – Natural Heritage (April 2008)
38. Draft Practical Alternatives Evaluation Assessment Report – Stormwater Management Plan (March 2008)
39. Draft Practical Alternatives Evaluation Working Paper – Waste and Waste Management (May 2008)
40. Draft Pavement Engineering for Planning Report – Area of Continued Analysis (March 2008)
41. Draft Practical Alternatives Evaluation - Constructability Report for Plaza & Crossing Alternatives (December 2008)
42. Draft Practical Alternatives Evaluation – Constructability Report for Access Road Alternatives (May 2008)
43. Draft Preliminary Construction Cost Estimate Report for Practical Alternatives (Access Road and Inspection Plaza) (May 2008)
44. Bridge Conceptual Engineering Report (February 2008)
45. Draft Structural Planning Report for Practical Alternatives (May 2008)
46. Air Quality Impact Assessment - Technically and Environmentally Preferred Alternative (December 2008)
47. Air Quality Impact Assessment – The Recommended Plan Analysis – Technical Memorandum (December 2008)
48. Human Health Risk Assessment - Technically and Environmentally Preferred Alternative (December 2008)
49. Human Health Risk Assessment – The Recommended Plan Analysis – Technical Memorandum (December 2008)
50. Social Impact Assessment - Technically and Environmentally Preferred Alternative (December 2008)
51. Social Impact Assessment – The Recommended Plan Analysis – Technical Memorandum (December 2008)
52. Noise & Vibration Impact Assessment - Technically and Environmentally Preferred Alternative (December 2008)
53. Noise & Vibration Impact Assessment – The Recommended Plan Analysis – Technical Memorandum (December 2008)
54. Built Heritage Impact Assessment - Technically and Environmentally Preferred Alternative(December 2008)
55. Built Heritage Impact Assessment – The Recommended Plan Analysis – Technical Memorandum (December 2008)
56. Archaeological Assessment - Technically and Environmentally Preferred Alternative (December 2008)
57. Archaeological Assessment – The Recommended Plan Analysis – Technical Memorandum (December 2008)
58. Natural Heritage Assessment - The Recommended Plan (December 2008)
59. Urban Design and Landscape Planning Report – The Recommended Plan (December 2008)
60. Economic Impact – The Recommended Plan Analysis – Technical Memorandum (December 2008)
61. Existing and Planned Land Use – The Recommended Plan Analysis – Technical Memorandum (December 2008)
62. Waste and Waste Management – The Recommended Plan Analysis – Technical Memorandum (December 2008)
63. Level 3 Traffic Operations Analysis - Technically and Environmentally Preferred Alternative (December 2008)

TABLE OF CONTENTS

LIST OF EXHIBITS

LIST OF TABLES

List of Appendices

Glossary of Terms

20th Century Euro-Canadian – Generally understood to refer to the early 20th century European settlement period in Ontario.

95th percentile queue length – The traffic queue length that is expected to be exceeded only 5% of the time

Area of Continued Analysis (ACA) – Refers to the further defined study area that emerged from the Illustrative Crossing, Plaza, and Access Road Alternatives. The ACA formed the basis for the generation, assessment, and evaluation of the Practical Crossing, Plaza, and Access Road Alternatives.

Access Road – Refers to the proposed freeway facility connecting Highway 401 to the porposed customs plaza.

Agencies – Government bodies responsible for various approvals and/or permits required to undertake various aspects of the project such as property acquisition and construction

Area of Natural and Scientific Interest (ANSI) – Areas of land and water containing natural landscapes or features that have been identified as having life science or earth science values related to protection, scientific study or education.

ARCADY – A software package used for traffic analysis of roundabouts.

Archaic – In Ontario, this refers to the period between approximately 9,500 and 3000 years ago.

Arterial Roads – Roads that are intended to move large volumes of traffic at high speeds. The major distinction between this classification and the freeway classification is in the full control of access

AST – Above ground storage tank.

ATMS – Advanced Traffic Management Systems.

Average Annual Daily Traffic (AADT) – The average 24 hour, two-way traffic for the period January 1st to December 31st.

Back Slope – In a cross-section of the roadway, the back slope is the slope between the drainage channel (ditch) and the natural ground.

Built Heritage Features – Individual buildings or structures that may be associated with a variety of human activities, such as historical settlement and patterns of architectural development.

CANAAG – Canadian Agencies Advisory Group. A group composed of representatives from federal and provincial agencies with an interest in the project. Consists of agencies involved in the review and approval of the OEAA and CEAA Report.

Carolinian Canada - A non-profit coalition of more than 40 government and non-government conservation groups and any individuals who encourage the protection of remaining natural areas in the Carolinian region.

Community Consultation Group (CCG): The study team solicited membership from the public, representing a wide variety of backgrounds and interests to join the CCG. Everyone who asked to be involved was included in the group. Participants volunteered their time to meet with the team on a regular basis, learn about the project, and share their ideas and interests.

CEAA – *Canadian Environmental Assessment Act* or Canadian Environmental Assessment Agency.

Closed Circuit Television (CCTV) – A component of an ATMS system consisting of cameras positioned within a tunnel or along a roadway/freeway to monitor roadway operations.

Collector Roads – Roadways that collect traffic from local roads and feed it to arterial roads, or distribute it from arterial roads to local roads.

COOP Advisory Group – Crossing Owners, Operators and Proponents. An advisory group formed by the DRIC study team at the outset of the study.

Crossing - For the purposes of this study, the crossing refers to the proposed bridge over the Detroit River, and its approach structures.

Cross-section – The transverse profile of a road.

Crown – The highest break point of the surface of a roadway in cross-section.

CTC – Canadian Transit Company.

Cul-de-sac – A road open at one end only.

Cultural Heritage Resources – Describes both “cultural landscapes” and “built heritage features”.

Cultural Landscape – Collection of individual built heritage features and other related features that together form environmental features such as farm complexes, roadscapes and nucleated settlements.

Curb and Gutter – A curb has a vertical or a sloping face along the edge of a lane or shoulder that strengthens or protects the edge, or clearly defines the edge. A gutter is a paved shallow waterway provided for carrying surface drainage. Curbs and gutters together control and conduct stormwater and provide delineation for traffic.

Cut Section – A roadway located below natural ground elevation.

Demographic Trends – The characteristics and statistics of human populations.

Design Hour Volume (DHV) – The volume of traffic being designed for, usually the 30th highest hourly volume of the year, or the a.m. or p.m. peak hour volume.

Design Speed – A speed selected for the purposes of design.

DIBC – Detroit International Bridge Company

Drainage Channel (Ditch) – A drainage channel (or ditch) is placed adjacent to an outside lane or shoulder and is intended to control and conduct stormwater runoff. A shallow drainage channel is sometimes referred to as a swale.

DRIC – Detroit River International Crossing

Detroit River Tunnel Partnership (DRTP) – Partnership between two major private enterprises, Canadian Pacific Railway and Borealis Transportation Infrastructure Trust.

Environmental Assessment (EA) – An environmental assessment is a study that assesses the potential environmental effects and benefits of a project or undertaking on the environment.

Environmentally Sensitive Areas (ESA) – Those areas identified by any agency or level of government that contain natural features, perform ecological functions or have cultural, historical or visual amenities that are susceptible to disturbance by human activities and which warrant protection.

Evaluation Factors – Factors used to evaluate alternatives. The seven primary evaluation factors used for this study area were: changes to air quality; protection of neighbourhood and community features; consistency with existing and planned land use; protection of cultural resources; protection of natural environment; improvements to regional mobility; and cost and constructability.

Federal Environmental Assessment Coordinator (FEAC) – The Federal Environmental Assessment Coordinator (FEAC) must ensure that the screening of the project is carried out.

FHWA – United States Federal Highway Administration

Fill Section – A roadway located above the natural ground elevation.

Fore Slope/Side Slope – The slope between the roadway and drainage channel (ditch).

Freeway – A facility that accommodates the movement of large volumes of traffic at high speeds under free-flow conditions.

GDSOH – Geometric Design Standards for Ontario Highways.

Grade/Gradient – The rate of rise or fall of a roadway with respect to the horizontal distance, usually expressed as a percentage.

Guiderail – A longitudinal barrier which may be constructed of concrete, steel beam or of posts and rail.

Historical Settlements – Comprise two or more buildings, usually residences or former stores.

Horizontal Alignment – The configuration of a roadway as seen in plan, consisting of tangents, circular curves, and spirals or transition curves.

Environmental Assessment (EA) – An environmental assessment for an undertaking to which the *Ontario Environmental Assessment Act* applies, and which requires formal review and approval under the Act.

Illustrative Alternatives – The term “illustrative” is used to describe the conceptual or “long list” of alternatives.

Interchange – A grade-separated intersection with one or more turning roadways (ramps) for travel between the through roads.

Intersection (At-Grade) – The general area where two or more roads join or cross, within which are included the roadway and roadside facilities for traffic movements.

Lane/Traffic Lane – A part of the travelled way intended for the movement of a single line of vehicles.

Level of Service (LOS) – A measure of traffic operations at an intersection or along a freeway or local road. A LOS evaluation uses a six-letter grade scale (A to F) to rank the overall traffic handling ability of an intersection or a network based on delay per vehicle. LOS A indicates excellent traffic operations with minimal delays, while LOS F represents failing conditions with long delays. Levels of service E and F are generally considered undesirable.

Local Road – Local facilities that are normally short distance and emphasize the land access function.

Median – The area that laterally separates traffic lanes carrying traffic in opposite directions.

Median Barrier – A longitudinal barrier placed in the median to prevent a vehicle from crossing the median and encountering oncoming traffic or to protect a vehicle from a fixed object in the median.

Municipal Advisory Group (MAG) – An advisory group formed by the DRIC study team at the outset of the study.

MDOT – Michigan Department of Transportation

MES – Municipal Emergency Services

Mitigation – The elimination, reduction or control of the adverse environmental effects of the project.

MNR – Ontario Ministry of Natural Resources

MOE – Ontario Ministry of the Environment

MTO – Ontario Ministry of Transportation

Navigation Envelope – The vertical and horizontal clearance provided for marine traffic between a waterway and bridge or other structure.

NEPA – United States *National Environmental Policy Act*

OEAA – *Ontario Environmental Assessment Act*

OEPA – *Ontario Environmental Protection Act*

Official Plan (OP) – A municipal planning document that sets out general policies for current and future land use for the entire municipality.

Overpass – A grade separation in which the major road passes over an intersecting road or railway.

Preliminary Analysis Area (PAA) – Refers to the originally defined broad study area that formed the basis for the generation, assessment and evaluation of the illustrative crossing, plaza, and access road alternatives.

PIOH - Public Information Open House. Events where the project is presented in an open house, drop-in style format, with no formal presentation. Members of the public can meet one-on-one with the study team members.

Plaza - A customs plaza consisting of numerous lanes and kiosks through which all international traffic must pass. Can include inspections services and toll collection.

Practical Alternatives –The term "practical alternative" is used to describe the more refined alternatives that emerge from the assessment and evaluation of the broader level illustrative alternatives.

Private Sector Advisory Group (PSAG) – A bi-national consultation group formed by the DRIC study team at the outset of the study.

Prescribed Authority (PA) – The planning approval authority that the *Planning Act* assigns directly to a municipality, named in the regulation.

Proposed Freeway – The freeway portion of The Windsor-Essex Parkway

Proposed Service Road – The service road portion of The Windsor-Essex Parkway

Provincially Significant Wetland (PSW) – These are wetlands evaluated as provincially significant using the Ontario Wetlands Evaluation System (OWES).

Quaternary Period – Subdivision of geological time from the last two million years to the present. It can be divided into two epochs: the Pleistocene (two million years to ten thousand years ago) and the Holocene (ten thousand years ago to the present day).

Queue Warning System (QWS) – A component of an ATMS system used to detect vehicle delays and alert drivers of downstream congestion at overhead VMS signs.

Ramp – A turning roadway to permit the movement of traffic from one highway to another.

Responsible Authority (RA) – the federal authority that is required to ensure that an environmental assessment of a project is conducted as defined under the *Canadian Environmental Assessment Act*.

Right-of-Way – The area of land acquired for, or devoted to, the provision of a roadway.

SAG – School councils Advisory Group. A group formed by the DRIC study team at the outset of the study..

SARA – *Federal Species at Risk Act* (2002). The term species at risk refers to an extirpated, endangered or threatened species or a species of special concern.

Service Road – A road in the vicinity of a through road designed to intercept, collect and distribute traffic desiring to cross, enter or leave the through road and access adjacent properties.

Shoulder – Areas of pavement, gravel or hard surface, placed adjacent to through or auxiliary lanes. These areas are intended for emergency stopping and travel by emergency vehicles only. They also provide structural support for the pavement.

Sight Distance – The distance required for a driver to detect an information source or hazard which is difficult to perceive in a roadway environment that might be visually cluttered, recognize the hazard or its potential threat, select appropriate action, and compete the manoeuvre safely and efficiently.

Summer Average Daily Traffic (SADT) – The average 24-hour, two-way traffic from the period July 1 to August 31.

Superelevation – The gradient measured at right angles to the centre line across a roadway on a curve, from the inside to the outside edge.

TC – Transport Canada

TEPA – Technically and Environmentally Preferred Alternative for the Detroit River crossing, new customs plaza and access road linking these to the existing Highway 401. This consists of The Windsor-Essex Parkway, Plaza B1 and Crossing X10B.

The Partnership – The Canada-U.S.-Ontario-Michigan Border Transportation Partnership

Two-lane Road – A road that provides for one lane of through traffic in each direction.

Underpass – A grade separation (bridge) in which the major road passes under an intersecting road or railway.

Undetermined Pre-contact – An aboriginal site relating to the period prior to European contact for which the date and cultural affiliation have not been determined.

UST – Underground storage tank

Variable Message Sign (VMS) – An automated digital sign that informs motorists of potential diversion routes, slow traffic or incidents ahead, lane designations for customs, etc. A component of an ATMS system.

Vertical Alignment – The configuration of a roadway as seen in longitudinal section, consisting of tangents and parabolic curves.

VISSIM – A micro-simulation traffic analysis software package.

Warrant – A criterion that identifies the need for an addition to the highway such as traffic signals, traffic barriers, truck climbing lanes, passing lanes, left turn lanes, etc.

WIFN – Walpole Island First Nation

Windsor-Essex Parkway, The –The portion of the Recommended Plan that connects existing Highway 401 to the proposed new inspection plaza and international river crossing. The Windsor-Essex Parkway consists generally of a freeway portion connecting existing Highway 401 to the proposed plaza, a service road connecting existing Highway 3 to existing Huron Church Road, a multi-use trail network, buffer zones, tunnels, bridges, and all associated features such as lighting, ATMS, signs, etc.

Woodland Period – Referring to the period between roughly 3000 years ago and the beginnings of European contact. This refers to the period after ceramic vessels first. Distinguished from the Archaic by changes in stone tool styles and the introduction of ceramic vessel manufacture.

WPA – Windsor Port Authority (see also *Prescribed Authority*).

A APPROVALS BEING SOUGHT AND AMENDING PROCEDURE

A.1 Approvals Being Sought

The Detroit River International Crossing (DRIC) Environmental Assessment Report documents the coordinated Environmental Study undertaken by the Border Transportation Partnership, which includes the Ontario Ministry of Transportation, Transport Canada, the Michigan Department of Transportation (MDOT) and the U.S. Federal Highway Administration (FWHA). The study resulted from the *Planning/Need and Feasibility (P/NF) Study* completed in 2004, which identified the need to address the safe and efficient movement of people and goods in the long-term between Southwestern Ontario and Southeastern Michigan.

The Detroit River International Crossing study provided a consultation process that involved stakeholders, including external agencies, municipalities and the public at major milestones throughout the study. The study also incorporated additional workshops, presentations, and meetings with interested groups and individuals to identify and address concerns.

MTO, along with its partners in the Border Transportation Partnership, consulted and conducted an Environmental Assessment and identified a Recommended Plan for the Detroit River crossing, new customs plaza and access road linking these to the existing Highway 401. With this environmental assessment, MTO is seeking approval under the Ontario Environmental Assessment Act for the "Windsor-Essex Parkway",. The "Windsor-Essex Parkway" portion includes the proposed highway connection between Highway 401 and the proposed bridge between Windsor and Detroit, as well as any ancillary aspects of the Windsor-Essex Parkway, including features such as service roads, interchanges, and commuter parking lots.

That portion of the Recommended Plan which, for environmental assessment purposes, falls solely under federal authority, is therefore exclusively subject to the Canadian Environmental Assessment Act.

A CEAA Screening Report identifying project impacts and mitigation will be prepared, drawing from the technical work that has been carried out throughout the Detroit River International Crossing study. The final EA decisions by the federal and provincial governments will be based on the same technical information. It is anticipated that these final EA decisions will be made within a similar timeframe.

If this Environmental Assessment is approved, the Ministry of Transportation will then be in position to:

- Designate a highway right-of-way for the implementation of the recommended transportation improvement identified;
- Acquire property needed to build the facility and associated features, which may include but are not limited to: stormwater management facilities, temporary construction easements, mitigation and compensation measures, commuter parking lots, utility corridors, and service roads;
- Relocate affected utilities;
- Close, assume and designate roads as identified in Chapter 9;
- Make design and property refinements during future design phases;
- Construct the Recommended Plan; and
- Operate and maintain the completed Recommended Plan.

The approval being sought by this EA and commitments made in this EA will apply and be binding upon MTO, its agents, successors, transfers and/or assigns, and will be applicable to the design, construction, operation and maintenance of the The Windsor-Essex Parkway.

On the U.S. side, the U.S. portion of the crossing, the U.S. plaza and the U.S. interchange with I-75 is under the jurisdiction of the Michigan Department of Transportation (MDOT), and is the subject of a Final Environmental Impact Statement (FEIS). In December 2008, the Michigan Department of Transportation (MDOT) received Federal Highway Administration approval of the U.S. Final Environmental Impact Statement (FEIS).

In support of the approval being sought by this EA, this Detroit River International Crossing Study has followed the requirements of the *Ontario Environmental Assessment Act* (OEAA). This Environmental Assessment Report (EA Report) has been prepared for this project and provides information on the environmental effects and mitigation and the process that has been followed leading to the selection of the Recommended Plan, as well as the technical findings of the study.

In general, the EA Report includes the following information:

- Purpose of the undertaking and study history;
- Existing and future natural, socio-economic, cultural and engineering conditions in the study area;
- Description, analysis and evaluation of alternatives considered, including their associated potential impacts and evaluation of the alternatives;
- Description of the Recommended Plan and associated potential environmental effects and mitigation measures; and
- Commitments to future work and monitoring.

This EA Report is being made available to the public, other interested parties and external agencies for review. An Ontario Government Notice was placed in the local newspapers, mailed to more than 3,000 persons, agencies and other stakeholders on the study mailing list advising the submission of the Environmental Assessment to the Ontario Ministry of the Environment. This EA Report will be available for review commencing Friday, January 9, 2009 at the following locations:

Ontario Ministry of Transportation
Windsor Border Initiatives
Implementation Group
949 McDougall Avenue, Suite 200
Windsor, Ontario
(519) 973-7367

Office of the Clerk
Town of LaSalle
5950 Malden Road
LaSalle, Ontario
(519) 969-7770

Ontario Ministry of the Environment
Windsor Area Office
4510 Rhodes Drive, Unit 620
Windsor, Ontario
(519) 948-1464

Office of the Clerk
Town of Tecumseh
917 Lesperance Rd
Tecumseh, Ontario
(519) 735-2184

Office of the Clerk
City of Windsor
350 City Hall Square West
Windsor, Ontario
(519) 255-6211

Office of the Clerk
County of Essex
360 Fairview Avenue West
Essex, Ontario
(519) 776-6441

Windsor Public Library
Central Branch
850 Ouellette Avenue
Windsor, Ontario
(519) 255-6770

Windsor Public Library
Sandwich Branch
3312 Sandwich Street
Windsor, Ontario
(519) 255-6770

Windsor Public Library
Nikola Budimir Branch
1310 Grand Marais West Road
Windsor, Ontario
(519) 255-6770

LaSalle Public Library
5940 Malden Road
LaSalle, Ontario
(519) 969-8992

Tecumseh Public Library
13675 St. Gregory's Road
Tecumseh, Ontario
(519) 735-3760

URS Canada Inc.
75 Commerce Valley Drive E.
Markham, Ontario
(905) 882-4401

Ontario Ministry of the Environment
Environmental Assessment & Approvals Branch
2 St. Clair Avenue West, Floor 12A
Toronto, Ontario
1-800-461-6290

Ontario Ministry of the Environment
West Region Office
733 Exeter Road
London, Ontario
1-800-265-7672

Anyone wishing to provide comments on the environmental assessment must submit their comments in writing and/or by fax to the Ministry of the Environment by Friday February 27, 2009. All comments must be submitted to:

Catherine McLennon, Special Project Officer
Ministry of the Environment
EA Project Coordination Section
Environmental Assessment and Approvals Branch
2 St. Clair Avenue West, Floor 12A
Toronto, Ontario, M4V 1L5
Tel: 416-314-7222/1-800-461-6290
Fax: 416-314-8452

A copy of all comments will be forwarded to the proponent for its consideration.

A.2 Amending Procedure

As noted in previous section, if this Environmental Assessment is approved by the Ontario Minister of the Environment, the approval will include the right to make refinements to the alignment and to the right-of-way for the Windsor-Essex Parkway during future design phases.

The Ministry of Transportation has developed the undertaking to a concept design level of detail for the purposes of this Environmental Assessment Report. The concept design level of detail does not provide the same level of detail as will be available during later stages of design. However, the concept design as contained in this Environmental Assessment does provide a sufficient level of detail to assess the environmental impacts of the Recommended Plan. The environmental impacts identified in the Environmental Assessment are therefore to be considered sufficiently reliable on which to base a decision regarding approval of the undertaking.

Some aspects of the undertaking are subject to change as design details are developed through future phases of the project. Changes may arise in terms of study area conditions, the development of new technology or mitigation methods, or the identification of previous unknown information or concerns. The Ministry of Transportation's assessment of the significance of the proposed change(s) will be reviewed and overseen by the Ministry of the Environment, and will generally be based on further technical assessment and consideration of applicable policy, and public and agency input, as appropriate.

An assessment as to the significance of a proposed change will be based on consideration of the following issues:

- Are there any significant environmental issues?
- Are there any significant property issues?
- Is there a need to provide public documentation of any issues that have been identified?

If the proposed change is not anticipated to be significant based on the above considerations, the change will be documented in a Design and Construction Report (DCR), which will be made available for public review.

If the proposed change is anticipated to be significant, the amending procedure described below will be invoked. The amending procedure will be consistent with Chapter 10 of *MTO's Class Environmental Assessment for Provincial Transportation Facilities (approved 1999 - amended 2000).* This chapter outlines the process for amending an approved Environmental Assessment per the Class process, and specifies the following:

- Affected parties will be consulted on the proposed changes, anticipated environmental effects, proposed mitigation and the need for a Transportation Environmental Study Report (TESR). The Class EA process and the principles for transportation engineering, environmental protection, consultation, documentation and bump-up, and environmental clearance will be followed. Depending on the complexity of the proposed change, and the number of stakeholders affected by the proposed change, a public information centre may be held.
- A Transportation Environmental Study Report (TESR) will be prepared to document the circumstances necessitating the change, outline the proposed change, and identify the anticipated environmental effects and proposed mitigation measures. The TESR will constitute an addendum to the original EA and will be made available for a 30-day public review period.
- A Notice of Bump-up opportunity will be issued at the time of TESR submission.
- Only the changes noted in the TESR will be eligible for bump-up. The concept of the undertaking, as outlined in the original EA may not be challenged. In the event that a bump-up is granted, the proponent has the option of withdrawing the TESR and implementing the project as documented in the original EA.

1 STUDY OVERVIEW

This chapter provides a study overview, including related projects within or near the Study Area as shown in Exhibit 1.1. The Detroit River International Crossing (DRIC) study was initiated as a bi-national transportation improvement study by the governments of Canada, United States, Ontario, and Michigan. After completion of the Planning/Need and Feasibility Study (P/NF) in 2004, the *Environmental Assessment Terms of Reference (EA TOR*) was approved by the Ontario Minister of the Environment on September 17, 2004 (refer to Appendix C). While considering the objectives of the Partnership for the Detroit River International Crossing study, the DRIC study team generated and assessed illustrative crossing, plaza and access road alternatives within the generated Preliminary Analysis Area (PAA). Evaluation of these alternatives led to to the identification of an Area of Continued Analysis (ACA). Within the ACA, six practical access road alternatives, four practical plaza alternatives, and three practical crossing alternatives were generated, assessed and evaluated.

Throughout the Detroit River International Crossing study extensive consultation including Public Information Open Houses (PIOHs) was conducted to obtain input and inform the public about the technical analysis leading to the generation, assessment, and evaluation of the illustrative and practical alternatives, and ultimately, the Technically and Environmentally Preferred Alternative (TEPA) and the Recommended Plan. More than 300 consultation sessions were held during the study with participation from thousands of Windsor-Essex County residents, community groups, subject matter experts, local elected officials, and other government agencies.

1.1 Study Background

The Detroit River International Crossing (DRIC) Study is a bi-national transportation improvement study that has been undertaken by the governments of Canada, United States, Ontario, and Michigan, who have formed the Canada-U.S.-Ontario-Michigan Border Transportation Partnership (the Partnership).

The Partnership includes the transportation authorities of two federal governments and two provincial/state governments. The Federal Highway Administration (FHWA) is an arm of the U.S. Department of Transportation and Transport Canada (TC) is the corresponding federal agency in Canada. The Ontario Ministry of Transportation (MTO) and the Michigan Department of Transportation (MDOT) are the provincial and state agencies that have roadway jurisdiction in Ontario and Michigan, respectively.

In 2001, the Partnership jointly commissioned a Planning/Need and Feasibility Study (P/NF) to identify a long-term strategy to address the safe and efficient movement of people and goods between Southwestern Ontario and Southeastern Michigan. The overall objectives of the Partnership in support of this strategy were the following:

- To improve the movement of people, goods and services in a safe and efficient manner across the Canadian-U.S. border at the Detroit and St. Clair Rivers to connect with existing national, provincial and regional transportation systems, such as I-75 and Highway 401;
- To enhance the regional economic vitality and Canadian-U.S. trade;
- To meet the long-term needs of the U.S. and Canadian border inspection agencies;
- To expedite the planning and environmental study process to ensure that future travel demands in this region can be accommodated in a timely manner;
- To ensure that all modes of surface transportation including road, rail and marine will be considered;
- To use a single integrated planning and environmental study process, resulting in a single product, which will meet the requirements of all members of the Partnership;
- To ensure that any solutions that are developed as a result of the above integrated planning and environmental study process comply with all relevant and applicable federal, provincial, state and/or municipal laws, regulations, bylaws, ordinances or other binding enactments validly created by bodies with legislative or rule-making authority;
- To ensure that the process is conducted in a financially responsible and prudent manner; and
- To ensure that intelligent transportation systems/state-of-the-art facilities be provided to enhance border crossing efficiency.

The P/NF Study, completed in January 2004, identified a strategy for improvements to meet the long-term (2030 and beyond) needs of the transportation network serving cross-border traffic in the area of Southwestern Ontario and Southeastern Michigan. Among other things, the strategy confirmed the need for a new or expanded crossing of the Detroit River with connections to the freeway systems in Ontario and Michigan.

As a result of this recommendation, the Partnership initiated a formal environmental assessment process for a new or expanded Detroit River International Crossing (refer to Chapter 2 for further details). As a first step in this process in Ontario, an EA Terms of Reference (EA TOR) was prepared. The *Detroit River International Crossing Study Environmental Assessment Terms of Reference (May 2004)* outline the minimum considerations and study framework to be followed in completing this Environmental Assessment. The EA TOR was approved by the Ontario Minister of the Environment on September 17, 2004. The EA TOR is available as a supporting document.

The project detailed in this EA Report is part of an overall international transportation improvement project that requires approvals from governments on both sides of the border. The Partnership's coordinated process facilitated the joint selection of a preferred river crossing location to meet the requirements of the *Ontario Environmental Assessment Act* (OEAA), the *Canadian Environmental Assessment Act* (CEAA), and the *United States National Environmental Policy Act* (NEPA) effectively and efficiently.

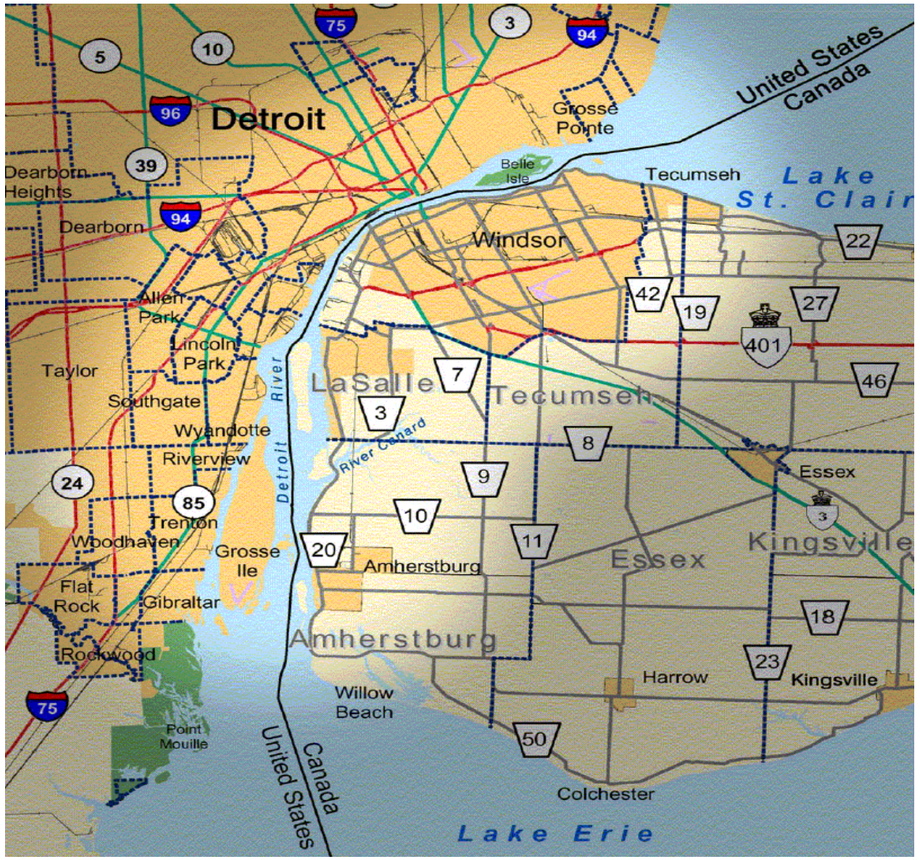
In a separate but parallel process, the Government of Canada, the Province of Ontario, the City of Windsor, and Essex County have continued to work together to reach agreement on additional initiatives to be pursued under the *Let's Get Windsor-Essex Moving* strategy. This initiative is aimed at relieving congestion and improving traffic flows to existing crossings in a manner that is consistent with the requirements of the Detroit River International Crossing study.

1.2 Study Location

The strategy identified during the P/NF Study formed the basis for the Detroit River International Crossing study and for the development of a study area in the Windsor-Essex region of Southwestern Ontario (refer to Exhibit 1.1).

The DRIC study focused on confirming the need, confirming the study area, and then generating, assessing, and evaluating alternatives to address the identified transportation needs. As the study progressed, the analysis area continued to focus on specific areas associated with illustrative and practical alternatives, and finally on the Technically and Environmentally Preferred Alternative (TEPA).

EXHIBIT 1.1 – STUDY AREA



1.3 Study Purpose, Objectives and Scope

The Windsor-Detroit border crossing represents an important trade corridor between the United States and Canada. Based on 2006 border crossing statistics, approximately 28 per cent of Canada-U.S. surface trade passes through Windsor-Detroit.

The purpose of the undertaking is to provide for the safe, efficient and secure movement of people and goods across the Canadian-U.S. border in the Detroit River area to support the economies of Ontario, Michigan, Canada and the U.S.

Given the importance of this trade corridor to the local, regional and national economies and the negative effects associated with poor traffic operations and congestion already occurring at existing crossings, it was recognized that the partnering governments must take responsible steps to reduce the likelihood of disruption to transportation service in this corridor.

In order to meet the purpose, this study has addressed the following regional transportation and mobility needs:

- Provide new border crossing capacity to meet increased long-term travel demand;
- Improve system connectivity to enhance the continuous flow of people and goods;
- Improve operations and processing capabilities at the border; and
- Provide reasonable and secure crossing options (i.e., network redundancy).

In addition, the study team has sought to recommend transportation solutions, that minimize community and environmental impacts as much as reasonably possible. In particular, the study team has strived to address the local communities' goals to:

- Improve quality of life;
- Take trucks off local streets; and
- Improve traffic movement across the border.

The objectives of the study can generally be expressed in terms of the seven key evaluation factors that were developed in consultation with the public and that were used to evaluate all of the alternatives developed during the study. These included:

Changes to Air Quality

- How will each alternative affect future levels of pollutants in the atmosphere in the next 10, 20 and 30 years?

Protection of Community and Neighbourhood Characteristics

- How will each alternative affect homes and businesses?
- How will each alternative affect future traffic conditions?
- How will each alternative affect future noise and vibration levels?

Consistency with Existing and Planned Land Use

- How does each alternative affect existing and future planned land use?

Protection of Cultural Resources

- How will each alternative affect historical, cultural and archaeological features in the area?

Protection of the Natural Environment

- How will each alternative affect ecosystems, species, water systems or other important natural resources?
- How will environmentally significant areas or species at risk be affected by each alternative?

Improvements to Regional Mobility

- What will be needed to improve traffic flows in this area?
- How will each alternative affect future traffic conditions?
- How can a new river crossing and plaza be efficiently managed?

Cost and Constructability

- What is the cost of each alternative?
- Is each alternative constructible?
- Will each alternative provide value for the tax dollar?

1.4 Key Components of the Detroit River International Crossing Study

A key component of the study involved preparing this Environmental Assessment Report (EA Report), which documents the environmental effects and the process that has been followed leading to the selection of the Technically and Environmentally Preferred Alternative (TEPA) and the Recommended Plan. To support the analysis and evaluation of alternatives, environmental and technical studies have been undertaken during the preparation of the EA Report, and results have been fully documented in supporting documents which are listed after the table of contents at the beginning of this report and available on the project website at www.partnershipborderstudy.com.

1.5 Overview of Study Process and Schedule Milestones

The study process followed the requirements of the OEAA and CEAA, and was guided by the approved EA TOR. Table 1.1, provides an overview of the commitments from the EA TOR, and describes how these commitments have been addressed, and where they are discussed in this EA Report.

As detailed in subsequent sections of this report, each stage of the study included systematic and thorough analysis at an appropriate level of detail as well as consultation with the affected stakeholders and the public. Overall project processes and schedule milestones are illustrated in Exhibit 1.2.

Specifically, the process involved outlining and confirming the purpose and need for the undertaking. Planning work undertaken in the previous P/NF Study (2001 – 2004) was reviewed and updated. That work confirmed the need for a new international crossing in the Windsor-Detroit area as part of a 30-year long-term border strategy. The results of the analysis and a long list of illustrative plaza, crossing and access road alternatives were presented to the public and other stakeholders for input and review.

In parallel with the above activities, the study team prepared Work Plans that would guide the analysis of alternatives throughout the Environmental Assessment. These were reviewed by the appropriate approval agencies, and were also made available to the public and key stakeholders for comment. The Work Plans are available as supporting documents.

As illustrated in Exhibit 1.2, the Detroit River International Crossing study commenced in January 2005. During the spring of 2005, the study team updated traffic forecasts, confirmed the need for the project, and generated a long list of illustrative alternatives.

The first round of Public Information Open Houses (PIOHs), held in June 2005, focused on the purpose and need for the study, and presented the illustrative plaza, crossing and access road alternatives for public review and comment. Attendees were also asked to provide input on the development of the seven evaluation factors to be used throughout the remainder of the study to help determine the impacts associated with each alternative.

A thorough and systematic analysis and evaluation of this long list of alternatives was carried out during the fall and the results were shown to the public and key stakeholders for input and review late in 2005. The results of the evaluation identified an Area of Continued Analysis (ACA).

At the second round of PIOHs, held in November-December 2005, the study team presented the evaluation of the illustrative alternatives, as well as the Area of Continued Analysis that had been identified on the basis of this evaluation.

Early in 2006, the study team developed practical crossing, plaza and access road alternatives within the ACA. At the third round of PIOHs, held in March 2006, the practical alternatives for the plaza, crossing and access road were presented. In addition, attendees were encouraged to provide feedback on the potential locations for interchanges, local access considerations (including service road options), and cross-sectional alternatives for at-grade, depressed and tunneled roadways.

The remainder of the 2006 calendar year focused on analysis of the practical alternatives. At the fourth round of PIOHs, held in December 2006, the study team presented the preliminary analysis of the practical alternatives for the plaza, crossing and access road. The public was advised on the status of the analysis work and conclusions to date. They were encouraged to comment on the analysis and work completed to date as well as the methods used to carry out the work conducted.

Informal consultations continued into the spring and summer of 2007 with growing interest around a concept which would be a combination of the tunneled and below-grade alternatives. At meetings with the City of Windsor, the vison of a more “green”, parkway-like, alternative emerged. The concept, would include a green corridor with tunneled sections, a grade separated recreational trail system, and extensive urban design of the green areas.

The DRIC study team built upon this vision to develop a Parkway Alternative, which was released for public comment in August 2007. The alternative included 10 tunneled sections (total length 1.5km), a grade separated recreational trail network, and extensive areas of future parkland.

At the fifth round of PIOHs, held in August 2007, the study team presented this new below-grade alternative. Described as a green transportation corridor, the access road for international traffic would be below-grade with a number of tunnels. Information on the evaluation process to be undertaken in selecting a technically and environmentally preferred alternative for the crossing, plaza and access road was provided. As well, the public was invited to provide ideas and comments to help the study team evaluate all the alternatives and develop a single preferred alternative.

The Partnership announced The Windsor-Essex Parkway as the Technically and Environmentally Preferred Alternative for the access road portion of the project in May 2008, and the preferred location for the international bridge crossing and Canadian plaza in June 2008.

At the sixth round of PIOHs, held in June 2008, the study team presented a broad overview of the study, as well as the analysis and evaluation process leading to the selection of The Windsor-Essex Parkway, Plaza B1, and Crossing X-10B as the Technically and Environmentally Preferred Alternative (TEPA). In addition, the study team responded to the "GreenLinkWindsor" concept that had been suggested by the City of Windsor in terms of its similarities and differences to the preferred alternative, The Windsor-Essex Parkway.

Subsequent to the sixth round of PIOHs, the study team focused on further refining the TEPA based on additional technical analysis, stakeholder consultation, and development of appropriate mitigation measures. These measures were included in a draft version of this EA Report, which was made available to the public, agencies, municipalities, First Nations, and other interested parties for review in November 2008.

At the seventh and final round of PIOHs, held in late November 2008, the study team presented the Recommended Plan for the new border transportation system. This Recommended Plan consisted of refinements made to the TEPA since the sixth round of PIOHs and the proposed mitigation strategies developed by the study team. The feedback obtained at this PIOH was incorporated in the Recommended Plan for inclusion in this EA Report.

Following the final round of PIOHs, the study team focused on reviewing comments received at the PIOH and during the review of the draft version of the EA Report.

TABLE 1.1 – SUMMARY OF EA TOR COMMITMENTS

EA TOR Chapter/Section Reference	Heading	Commitment	EA Report Chapter/Section Reference	Discussion
1.1	Background	• The Partnership is committed to implementing effective consultation programs throughout the study process. • The Partnership will continue to liaise with local municipalities, other government agencies, and private sector proponents regarding ongoing improvements to the local transportation network for consideration in the generation and assessment of alternatives in the Detroit River International Crossing Project.	• Chapter 3	• Outlines the comprehensive, effective and traceable consultation program undertaken for this study.
1.2	Purpose of the OEAA Terms of Reference	• MTO, as a member of the Canada-U.S.-Ontario-Michigan Border Transportation Partnership, will consider enhancements to the process and work tasks, as required over the course of the OEA study, based on consultation input, changes to provincial/state/federal (both U.S. and Canada) policies and the availability of new environmental information. • MTO, as a member of the Canada-U.S.-Ontario-Michigan Border Transportation Partnership will undertake this OEA based on the legislative requirements, policies, procedures and protocols that are in place at the time the work is done.	• Chapters 1, 2, 3, 10	• Chapter 1 provides an overview of the study process undertaken. • Chapter 2 describes the coordinated study process which incorporates the requirements of OEAA, CEAA and NEPA. • As outlined in Chapter 3, the consultation program (which included over 300 meetings) has influenced the project outcomes in several ways, including the development of the Parkway alternative and subsequent refinements. • Further to this, additional PIOHs beyond those envisioned by the EA TOR were required for this study to facilitate the comprehensive, effective and traceable consultation program undertaken for this study. • As discussed in Chapter 10, the study process and work tasks specific to endangered species were modified to accommodate the requirements of the Ontario Endangered Species Act (2007). • Chapter 10 includes discussion under each environmental factor about the relevant legislative requirements, policies, procedures, and protocols and how they apply to this project.
1.3	Ontario, Canadian and U.S. Planning and Environmental Assessment Processes	• An objective of the Border Transportation Partnership is to develop the appropriate integrated environmental planning process that incorporates the requirements of OEAA, CEAA and the NEPA processes as well as any other applicable Ontario, Canadian and U.S. legislation. Other applicable government policies and agreements will be considered in the integrated study process.	• Chapter 2	• Chapter 2 describes the coordinated study process which incorporates the requirements of OEAA, CEAA and NEPA. • All applicable government policies and agreements have been addressed by the project.
1.3.4	Integrated Environmental Study Process	• Recognizing that this international transportation improvement project will require approvals from governments on both sides of the border, the Partnership is proposing to follow an integrated study process which meets the requirements of the respective environmental study legislation for Canada, U.S., Ontario and Michigan.	• Chapter 2	• Chapter 2 describes the coordinated study process which incorporates the requirements of OEAA, CEAA and NEPA.
2.2	Summary of Transportation Problems	• The transportation problems in the Detroit River area outlined in the EA TOR will be further defined during the OEA.	• Chapter 5	• Chapter 5 includes a discussion on Transportation Problems. This discussion is based on previous work undertaken in P/NF study, but incorporates updated findings from the Travel Demand Study undertaken as part of the EA. The Travel Demand Study reflects changes in traffic and network demands based on more recent issues which arose subsequent to the P/NF study. It considered a range of forecasts which take into account both high and low growth scenarios.

EA TOR Chapter/Section Reference	Heading	Commitment	EA Report Chapter/Section Reference	Discussion
2.3	Transportation Opportunities	• Consideration of transportation opportunities will not be restricted to roadway improvements. The assessment of travel demand identified a number of aspects of the transportation system that are currently operating well below capacity, and will likely continue to operate below capacity in the future under the current travel patterns. As part of the generation and assessment of transportation alternatives, the opportunity to divert excess demand to under-utilized crossings or modes will be considered.	• Chapter 5	• This chapter assesses a range of multi-modal transportation planning alternatives (Alternatives to the Undertaking) based on their ability to satisfy the study goals and objectives. It is noted that "In order to satisfy the study goals and objectives, it is apparent from the traffic analysis, that several of the transportation planning alternatives, implemented in concert will be required to address future transportation needs across the Detroit River." The following is also noted: "It is also clear that the only combination of alternatives that can practically accommodate a significant amount of increased demand for travel and effectively provide reasonable options for maintaining the movement of people and goods in cases of disruptions at any of the existing border crossings is one which includes the 'New and/or Improved Roads with a New or Improved Crossing' alternative. All other alternatives, even in combination, will not provide sufficient long-term border capacity to meet future needs."
3	Assessment and Evaluation	• The intent of the Partnership is to conduct one body of work pertaining to alternative generation, analysis and evaluation, and document the project findings in a format(s) suitable for circulation and review by the bi-national government agencies/ministries/departments and the general public.	• N/A	• The Partnership coordinated the analysis, schedule and products of the study to satisfy the requirements of both countries.
3.1	Process for Identifying and Assessing Transportation Planning Alternatives (Alternatives to the Undertaking)	• The Canada-U.S-Ontario-Michigan P/NF Study identified several transportation planning alternatives, which will be revisited in the EA under the integrated environmental study process. The alternatives to be considered in the OEA/EIS will include, but are not limited to: – Do nothing; – Improvements to border processing; – Transportation demand management; – New and/or improved rail alternatives with new and/or expanded international rail crossing; – New and/or improved transit services; – New and/or improved marine services; – New and/or improved road alternatives with new or expanded international road crossing; and – Combinations of the above. • During the Environmental Assessment, MTO will provide opportunity for interested parties, agencies, stakeholders, etc. to review and comment upon the range of planning alternatives to be considered. • Table 3.1 (of the EA TOR) identifies a listing of proposed factors and criteria to be considered for evaluating the practicality and feasibility of transportation alternatives. It should be noted that Table 3.1 represents the minimum considerations concerning	• Chapter 5	• All of the transportation planning alternatives documented in the EA TOR are discussed in Chapter 5 of the EA Report. • The development, assessment and evaluation of the transportation planning alternatives was presented to the public and stakeholders for comment during the second round of PIOH's (December 2005). • The factors identified in Table 3.1 of the EA TOR were used to evaluate the transportation planning alternatives. • The assessment and evaluation of the transportation planning alternatives was clearly and concisely conveyed to stakeholders, and was based on secondary source data as well as input obtained through consultation.

EA TOR Chapter/Section Reference	Heading	Commitment	EA Report Chapter/Section Reference	Discussion
		the identification and assessment of transportation planning alternatives. This listing is subject to refinement and modifications based on input received and study findings. • During the integrated environmental study process, MTO will provide the opportunity for interested parties, agencies, stakeholders, etc. to review and provide comments on the factors and criteria used to identify a preferred transportation planning alternative. Comments on the factors and criteria will be incorporated in the identification and assessment of planning alternatives, as appropriate. • The assessment of planning alternatives will consider work completed as part of the P/NF study, and will be based primarily on secondary source data and consultation. The basis for the assessment will include: – Government legislation, policies and guidelines; – Municipal policy (i.e. Official Plans); – Public, Agencies, Consultation Groups, and other stakeholder's issues and concerns; and – Project Team expertise. • The assessment will be documented clearly and concisely in a format that can be easily understood by all stakeholders. • The assessment of planning alternatives will identify the recommended planning alternative(s) to be carried forward for further consideration in the integrated environmental study process.		
3.2	Process for Generating a Study Area	• Follow proposed process outlined in EA TOR for generating a Study Area. • During the integrated environmental study process, MTO will provide opportunity for interested parties to review and comment on the study area limits.	• Chapter 1	• The Study Area was generated based on the transportation problems identified during the P/NF Study. • The Study Area was defined based on avoiding significant physical constraints that may preclude the development of feasible alternatives, to provide continuous corridors of sufficient area to generate a range of linear transportation facility alternatives, and to accommodate the generation of alternatives that could reasonably address the stated problems and take advantage of opportunities.
3.3	Process for the Generation and Evaluation of Alternatives (Alternative Methods)	• During the OEA, work plans will be developed to outline specific environmental inputs, investigations and methods of data collection and impact assessment at the respective study stages.	• N/A	• Work plans were developed for project disciplines which outlined specific environmental inputs, investigations and methods of data collection and impact assessment at the respective study stages. • The work plans were reviewed by applicable agencies and interested stakeholders. • The work plans are included as Supporting Documents.
3.3.1	Illustrative Alternatives (Alternative Methods)	• Follow four step process to identify Opportunity Corridors: – Step 1: Identify design requirements for linear transportation facility alternatives.	• Chapter 6	• Chapter 6 outlines the process followed in generating, assessing and evaluating the illustrative crossing, plaza and access road alternatives. • Constraints within the study area were identified and consulted on at the Initial

EA TOR Chapter/Section Reference	Heading	Commitment	EA Report Chapter/Section Reference	Discussion
		– Step 2: Establish constraint areas in the study area. – Step 3: Establish guiding principles for the development of opportunity corridors for illustrative alternatives. – Step 4: Assess the feasibility of the alternative opportunity corridors and identify preferred opportunity corridors for the generation of illustrative alternatives. • Consultation activities, including Public Information Open Houses, will provide an opportunity for interested parties to review and comment upon the assessment of opportunity corridors. • Illustrative alternatives will be developed based on technical and environmental objectives to avoid the most significant/sensitive environmental resource areas and study area features to the extent possible. • The objectives for generating alternatives will be to develop alternatives that are efficient/direct, meet objectives and design requirements of Partnership agencies, reflect the needs of border agencies, and minimize/avoid impacts to significant environmental and study area features to the extent possible. • Consider the environmental components outlined in Table 3.3 in generating illustrative alternatives. • The alternatives will be reviewed with agencies and the public through the consultation process and Public Information Open Houses. • The Partnership recognizes that the evaluation of alternatives for the Detroit River International Crossing Project may be complex due to the diverse nature of the project area and the inherent differences in cultures, values, objectives and priorities of the Canadian and American communities potentially impacted by the project. The evaluation will strive to incorporate the commonalities among the bi-national communities and objectively address their differences. • Consultation activities, such as Public Information Open Houses, will provide opportunity for interested parties to review and comment upon the evaluation of illustrative alternatives. • The assessment of impacts will include an examination of the significance of effects as required under CEAA. • The Partnership is proposing two complementary evaluation approaches to assist in the selection of a recommended alternative for the proposed Detroit River International Crossing. A Reasoned Argument (or Trade-off) method will be the primary tool used to identify a preferred alternative. An Arithmetic (weighting-scoring) method will be the secondary tool and will be used to verify the results of the trade-off method. • During the integrated environmental study, the decision making process will be clearly documented in support of a traceable process and to ensure it is		Public Outreach event in April 2005. • The generation of illustrative crossing, plaza and access road alternatives was presented at the first round of PIOHs in June 2005. The evaluation of the illustrative alternatives and identification of the ACA for generating practical alternatives was presented at the second round of PIOHs in November 2005. • The criteria provided in Table 3.3 of the EA TOR and the objectives embodied in the TOR were considered in generating the illustrative alternatives. • The generation, assessment and evaluation of the illustrative alternatives was undertaken in a coordinated fashion with the U.S. study team. A summary of the assessment of the illustrative alternatives on the U.S. side of the border, as well as the overall end-to-end evaluation is included in Chapter 6. • The illustrative alternatives were evaluated using a reasoned argument method as the primary evaluation tool, and an arithmetic method as the secondary evaluation tool. Both methods involved an assessment of significance of effects, and allowed public and stakeholders to provide their input on this issue through the use of multiple weighting scenarios (public, Community Consultation Group (CCG), study team). A questionnaire style rating tool was used to facilitate this process. • The evaluation of the illustrative alternatives was based on the criteria provided in Table 3.4 of the EA TOR. However, to enable the public to more easily provide input to the study teams in terms of rating the importance of the factors, the Canadian and U.S. study teams developed a revised evaluation table that simplified the number of factor areas to be considered from 18 to 7. The seven factors in the revised evaluation table are consistent with those in Table 3.4 of the EA TOR.

EA TOR Chapter/Section Reference	Heading	Commitment	EA Report Chapter/Section Reference	Discussion
		understandable to those who may be affected by the decisions. • One weighting scenario will be developed by the Partnership Project Team, other weighting scenarios will be developed by the general public. Additional weighting scenarios can be developed in consultation with regulatory agencies and municipalities. • The Partnership will consider all weighting scenarios in selecting a preferred alternative. • Questionnaires focused on establishing the relative weights that participants feel should be given to each environmental attribute will be distributed at the appropriate round of consultation activities. • The evaluation criteria listed in Table 3.4 of the EA TOR represent the minimum requirements in the process of evaluating alternatives and are subject to refinement and modification during the integrated environmental study process based on study findings, government policy and input received from the various stakeholder groups, including the public.		
3.3.2	Practical Alternatives	• The evaluation of illustrative alternatives will identify the practical alternative(s) to be carried forward for further consideration. • More detailed mapping of the practical alternatives will be prepared based on additional secondary sources data, field surveys and investigations and additional consultation. • The relative importance of the factors, as identified during the evaluation of illustrative alternatives, will be used in the evaluation of practical alternatives. • The third round of Public Information Open Houses (PIOH) will be arranged in conjunction with the U.S. Public Hearing to provide stakeholders a similar opportunity to comment on the analysis of practical alternatives. The consultation activities associated with the third round of PIOH will include meetings with Canadian ministries/agencies (both federal and provincial) to provide an opportunity to input to the generation and analysis of practical alternatives. • Upon completion of the third round of Public Information Open Houses the partnership will consider the comments received, refine the alternatives and analysis as required, and undertake the evaluation of the practical alternatives. • As with the illustrative alternatives, two evaluation methods will be used – Reasoned Argument and Arithmetic.	• Chapters 7, 8	• More detailed field investigations for the ACA were undertaken to support the analysis and evaluation of the practical crossing, plaza and access road alternatives. • The evaluation of the practical alternatives was undertaken consistent with the approach used to evaluate the illustrative alternatives. The same evaluation methods and evaluation criteria were used, and the three different weighting scenarios (public, CCG and study team) were applied. • The practical crossing, plaza and access road alternatives were presented to members of the public and external stakeholders at the third and fourth round of PIOHs in March 2006 and December 2006 respectively. These alternatives were also discussed at workshops held subsequent to those PIOHs, in April 2006 and January 2007 respectively. • The TOR proposed five rounds of PIOHs during the study. In total, the study team provided seven rounds of PIOHs. • The analysis of the five original access road alternatives, along with the corresponding plaza and crossing alternatives was presented at the fifth round of PIOHs in August 2007, six months in advance of the U.S. public hearing. Technical reports which provided the details of the analysis were made available on the study website during the summer and fall of 2007 to assist stakeholders in reviewing the analysis of the practical alternatives. • A Parkway alternative was developed, based on refinements to the below-grade and tunnel alternatives. The Parkway was presented at the fifth round of PIOHs in August 2007. The Parkway alternative was based on the notion of a more “green”, context sensitive alternative, which emerged through consultation with the City of Windsor. Following the fifth round of PIOHs, the

EA TOR Chapter/Section Reference	Heading	Commitment	EA Report Chapter/Section Reference	Discussion
				Parkway alternative was refined. The study team considered stakeholder input in making these refinements. The refined Parkway alternative was renamed The Windsor-Essex Parkway, and was thoroughly analysed and evaluated along with the five original practical access road alternatives. The results of this evaluation were presented at the sixth round of PIOHs in June 2008. • The commitment in the EA TOR to present the analysis of the practical alternatives prior to selecting the TEPA was addressed through presentation of the preliminary analysis results at the December 2006 PIOH and the complete analysis of the five original practical alternatives at the fifth round of PIOHs in August 2007. Given that the Windsor–Essex Parkway alternative was a refinement of the original below-grade and tunnel alternatives, the analysis of the Windsor–Essex Parkway alternative was presented together with the evaluation of practical alternatives at the sixth round of PIOHs in June 2008. • Comments on the analysis of The Windsor-Essex Parkway were sought and were incorporated into the concept design of The Windsor-Essex Parkway, which was presented along with the associated mitigation, as the Recommended Plan at the seventh and final round of PIOHs in November 2008.
3.4.1	Development of the Concept Design	• The Concept Design plan will be undertaken to a level of engineering detail necessary to support: – The development of mitigation measures in consultation with the appropriate agencies; – A decision under CEAA by each Federal Regulatory Authority (RA) on whether adverse environmental effects (after mitigation) are significant or not; – OEA approval under OEAA; and – FHWA approval under NEPA. • In addition to the continuing public and private sector consultation, a fifth round of Public Information Open Houses will be held to seek stakeholder input to the concept Design alternatives. • Mitigating measures will be developed during the concept design phase and, upon selection of the preferred Concept Design, these measures will be incorporated to alleviate the anticipated environmental effects. • Concept Design plans will be prepared for the preferred concept alternative(s) at an appropriate level of detail. Typical elements of Concept Design can be viewed in supporting documentation.	• Chapters 9, 10, Appendix A	• The Concept Design of the Recommended Plan was developed to the level of engineering detail specified in the EA TOR. • The Concept Design of the Recommended Plan was presented to members of the public and external stakeholders at the seventh round of PIOHs in November 2008. It should be noted that additional PIOHs beyond the five that were envisioned in the EA TOR were required for this study to facilitate comprehensive, effective and traceable consultation program undertaken for this study. • As documented in Chapter 10, a comprehensive set of mitigating measures was developed for all environmental factors to alleviate the environmental effects, and in many cases to provide positive benefits to the community, including reduced noise impacts, vegetative buffers, a multi-use trail system, etc.
4	Monitoring Strategy	• During the integrated environmental study process, MTO will commit to developing a monitoring program for the implementation (construction) of the proposed design for the Detroit River International Crossing in cooperation with MDOT, FHWA and TC. The OEA Report will include a comprehensive list of all commitments made during	• Chapter 10, 11	• The EA Report commits to a monitoring plan to ensure that the implementation of the mitigating measures and key design features are consistent with the approvals of the EA and in accordance with the contract.

EA TOR Chapter/Section Reference	Heading	Commitment	EA Report Chapter/Section Reference	Discussion
		the study to guide future environmental work and consultation as well as effects and compliance monitoring.		• Monitoring will be carried out by Construction Administration staff, as well as through periodic site visits by environmental specialists. • Chapter 11 commits to the development of a Compliance Monitoring Plan to document, track and record compliance and monitoring efforts on a project. • Chapter 11 also commits to future consultation requirements during subsequent design stages.
5	Consultation for the Integrated Environmental Study Process	• Consultation activities undertaken during the study will focus on the following seven stages of the planning process: – Purpose and Need / Assessment of Planning Alternatives – Development of Illustrative Alternatives – Refinement and Evaluation of Illustrative Alternatives – Analysis of Practical Alternatives – Evaluation and Selection of a Preferred Practical Alternative – Concept Design and Mitigation of the Preferred Alternative – Environmental Assessment Documentation Submission	• Chapter 3	• Chapter 3 summarizes the seven rounds of PIOHs that were held at key study milestones, as well as the over 300 meetings held with external stakeholders in many different forums throughout the course of the project.
5.1	Public Consultation During the Integrated Environmental Study Process	• Within the integrated environmental study process, public consultation will involve reviewing, commenting and providing input to the technical and environmental work undertaken and to provide input to the public consultation process. • Implement the public consultation program consistent with the requirements of Sections 5.1.1 (Public Information Open Houses and Follow-up Activities), 5.1.2 (Public Notification) and 5.1.3 (Private Sector Advisory Group) of the EA TOR.	• Chapter 3	• Chapter 3 summarizes the public input obtained throughout the study, as well as the techniques employed to elicit this input.
5.2	Approach for Consulting External Agencies, Ministries and First Nations during the Integrated Environmental Study Process	• Implement the public consultation program consistent with the requirements of Sections 5.2.1 (Ministries/Departments/Agencies), 5.2.2 (Federal Agencies), 5.2.3 (Municipalities), 5.2.4 (Municipal Councils), and 5.2.5 (First Nations) of the EA TOR.	• Chapter 3	• Chapter 3 summarizes the input obtained from external agencies, ministries, First Nations, municipalities, etc., as well as the techniques employed to elicit this input.
5.3	Pre-Submission Review of the Environmental Assessment Report/Environmental Impact Statement	• The OEA/EIS Report will be available for a municipal/agency/public/First Nations review prior to finalizing for formal submission. • The final Municipal Advisory Group, Private Sector Advisory Group and Regulatory Agency Advisory Group meetings will be used to present an OEA/EIS Report for review prior to submission for formal review and approval.	• Chapter 3	• As discussed in Chapter 3, the draft EA Report was made available to public and external stakeholders during a Pre-Submission review from November 12, 2008 to December 12, 2008.
5.4	Submission of the EA/EIS/CEAA Screening Report	• Once finalized, the OEA Report will be submitted to MOE. The submission will be in accordance with Reg. 334, including: – The OEA Report will include an Executive Summary and a list of studies and reports done in connection with the undertaking or matters related to the	• Chapter A	• The submission of the final EA Report to the Minister of the Environment is described in Chapter A. All requirements outlined in the EA TOR have been adhered to. • A CEAA Screening Report will be submitted to Transport Canada for circulation

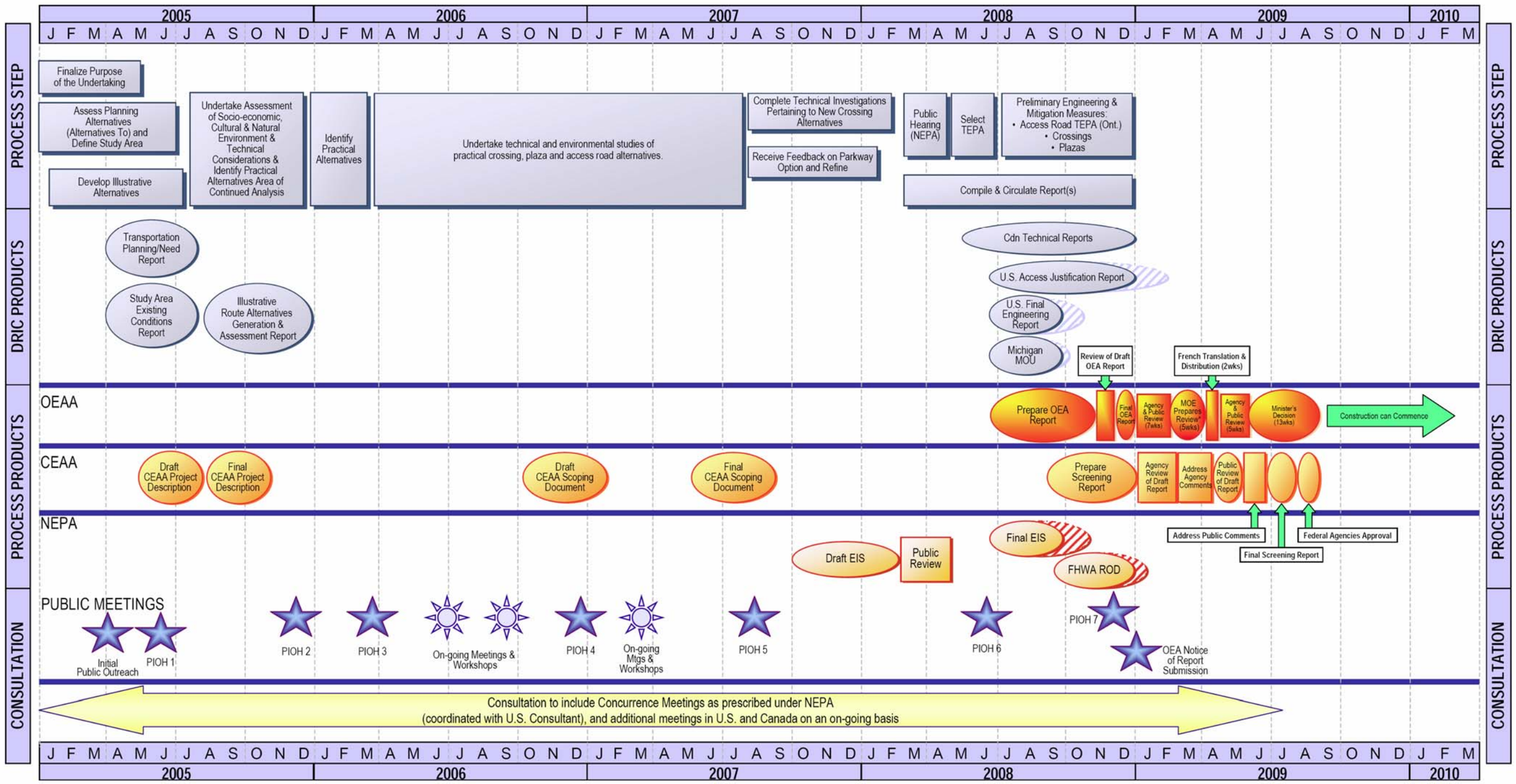
EA TOR Chapter/Section Reference	Heading	Commitment	EA Report Chapter/Section Reference	Discussion
		undertaking. – Unbound maps showing the location of the undertaking and the area affected by it will be included in the submission. • The OEA Report will document all pertinent aspects of the study concerning both sides of the border (i.e. existing conditions, consultation activities, environmental effects, mitigation and commitments). • This Terms of Reference (TOR) document and the Minister's "Notice of Approval" of the TOR will also be included in the appendices of the OEA Report. • As part of the MOE review process, the Report will be circulated to all pertinent government agencies for review, and will also be made available for public review. • Upon consideration of all comments received, the Minister will make a decision on the OEA. • Under CEAA, a Screening Report(s) is prepared and circulated to the Screening Committee (federal government review team). • The Screening Report(s) is then circulated to all pertinent federal regulatory authorities (RAs) for review. • The OEA Report will be appended to the Screening Report(s) as part of this circulation.		to all pertinent federal regulatory authorities (RAs) for review. The OEA Report will be appended to the Screening Report as part of this circulation.
6	Other Approvals Required	• Consultation with approval agencies will continue during the EA to coordinate timing of approvals, approval requirements and to ensure that approvals are ultimately obtainable.	• Chapter 11	• Chapter 11 provides a list of the approvals that will be required during the design phases of the EA. Consultation with approval agencies will continue during the EA to coordinate timing of approvals, approval requirements and to ensure that approvals are ultimately obtainable.

Detroit River INTERNATIONAL CROSSING STUDY

Study Process Schedule

Canada · U.S. Department of Transportation Federal Highway Administration · Ontario · MDOT

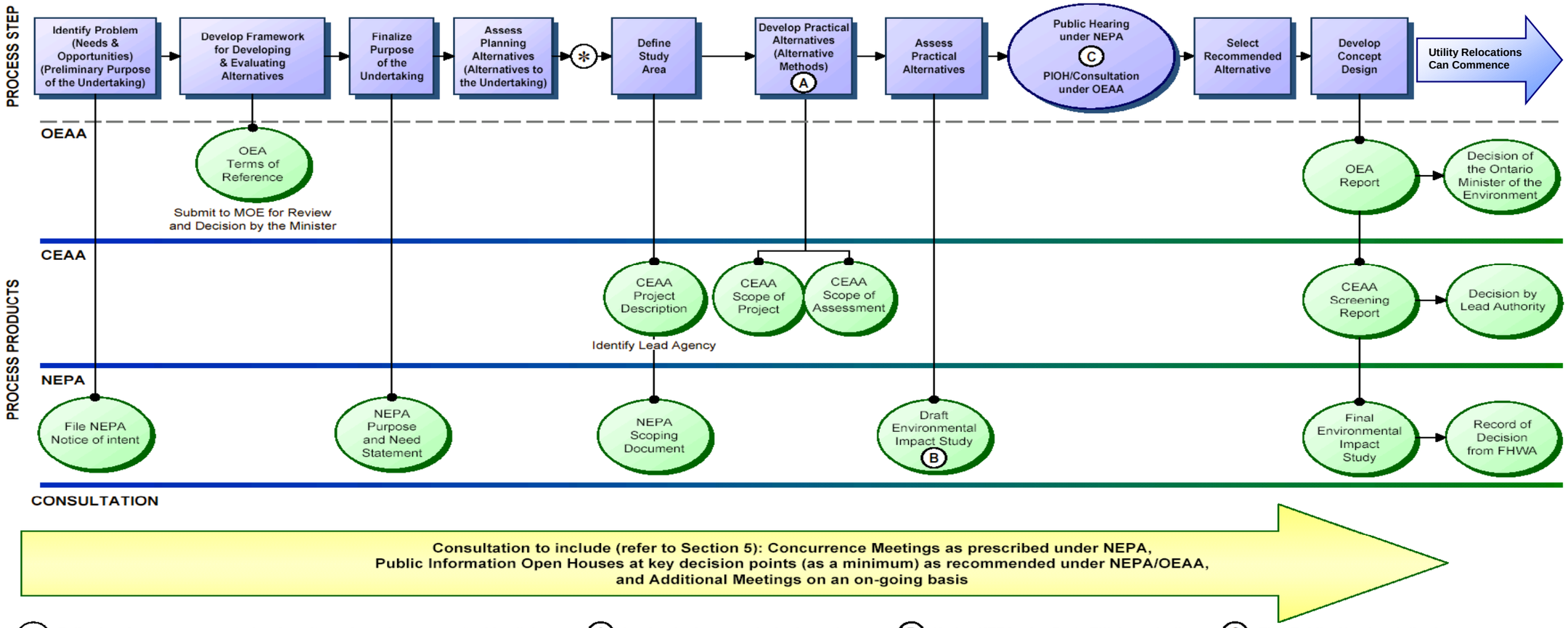
The activities and studies for the DRIC project will be conducted in accordance with the requirements of approval agencies in Canada and the U.S.



*minimum legislated timeframes; these timeframes could be extended if there are significant concerns raised through the public and agency reviews

URS · CORRADINO

EXHIBIT 1.3 – COORDINATED NEPA/OEAA/CEAA PROCESS



(*) Following the assessment of planning alternatives, the process for identifying a recommended linear transportation facility, for which MTO would serve as the proponent, is illustrated. If the assessment of planning alternatives recommends other/additional alternatives, appropriate planning/implementation processes may be initiated by other proponents. MTO will meet with MOE at this point of the integrated environmental study process to obtain guidance/comment on future actions.

(A) In developing practical alternatives, the Project Team will first identify Illustrative Alternatives. The preferred Illustrative Alternatives will be carried forward as Practical Alternatives (See Section 3.3).

(B) Under NEPA, the Draft EIS is typically prepared and circulated prior to any selection of a recommended alternative.

(C) The Public Hearing following the circulation of the Draft EIS is mandatory under NEPA.

1.6 Study Process: A Coordinated Approach

An objective of the Border Transportation Partnership was to develop an appropriate coordinated environmental planning process that incorporated the requirements of the Ontario Environmental Assessment Act (OEAA), Canadian Environmental Assessment Act (CEAA) and the U.S. National Environmental Policy Act (NEPA) processes as well as any other applicable Ontario, Canadian and U.S. legislation.

Further to this, the Partnership's goal was to conduct essentially one body of work pertaining to alternative generation, analysis and evaluation, and to document the project findings in format(s) suitable for circulation and review by government agencies, ministries, and departments and the general public.

This work has been summarized in a series of documents. This OEA Report summarizes the work undertaken on the Canadian side of the Detroit River in accordance with the requirements of the OEAA.

In addition, a CEAA Screening Report is being prepared to meet the requirements of the CEAA process. Under CEAA, a Screening Report is prepared and circulated to the Screening Committee (federal government review team). The Screening Report is then circulated to all pertinent federal regulatory authorities (RAs) for review. The OEA Report will be appended to the Screening Report as part of this circulation. The RA responsible for the preparation of the respective Screening Report will determine if further agency or stakeholder review is required. The RAs will decide whether to exercise any power or perform any duty or function that would permit the project to proceed. As delegated by the RAs, Screening Reports may be carried out by the Partnership (or their consultants) with direction from the RAs in consultation with expert federal authorities (FAs).

In the U.S., the Final EIS (FEIS) was submitted to U.S. Federal Highway Administration (FHWA). FHWA will circulate the FEIS to government agencies and members of the public that have made substantive comments. Upon consideration of all comments received, FHWA will issue a Record of Decision. In December 2008, the Michigan Department of Transportation received Federal Highway Administration approval of the U.S. Final Environmental Impact Statement (FEIS).

A key principle of the process was that government ministries, departments, and agencies, as well as municipalities, non-government agencies, interest groups, community groups, First Nations and interested members of the public were provided with the opportunity to participate and offer input throughout the study. The Partnership proactively sought input from all stakeholders at key points in the decision-making process.

In addition, throughout the environmental study process, the Partnership coordinated meetings between Canadian and United States federal, state and provincial agencies with common or shared interests so that, as much as possible, a bi-national approach to identifying and addressing issues was developed.

Another key principle of the coordinated process was that, where two or more processes specified different requirements in conducting the study, the Partnership sought to incorporate the most rigorous requirement to the extent possible. However, there were certain requirements that were unique to a particular jurisdiction that needed to be directly incorporated into the corresponding study process. These issues were addressed as required by the Partnership during the coordinated study process. This coordinated process is schematically illustrated in Exhibit 1.3.

1.7 Relevant Projects / Initiatives

1.7.1 Canadian Projects / Initiatives

Prior to the Detroit River International Crossing study, the governments of Canada and Ontario announced a joint investment in Windsor-Essex for the *Let's Get Windsor-Essex Moving* strategy – a series of transportation infrastructure projects aimed at reducing congestion and improving efficiency in the local road network leading to the border crossings.

To date, more than $100 million has been invested in this strategy on several projects, including road-rail grade separations, road-widening projects, installation of intelligent transportation systems and improvements to the Detroit-Windsor Truck Ferry.

The Ontario Ministry of Transportation continues to improve Highway 3 in Essex County through a two-phase widening project from Leamington to Windsor. Phase 1 includes the widening of Highway 3 from two lanes to four from the west junction of Essex County Road 34 to Essex County Road 8 near Windsor. This project was completed in 2008. Phase 2 begins in 2009 and will widen Highway 3 from two lanes to five from Essex County Road 11 to the west junction of Essex County Road 34.

The Detroit International Bridge Company/Canadian Transit Company have proposed to build a second span adjacent to the existing Ambassador Bridge, referred to as the *Ambassador Bridge Enhancement Project*. The project includes a new suspension bridge similar in appearance to the Ambassador Bridge, located along the same corridor. A federal Environmental Assessment under the *Canadian Environmental Assessment Act* has been initiated for the proposed Ambassador Bridge Enhancement Project.

In addition, the Ambassador Bridge Company recently acquired land to expand its plaza operations and toll booth capacity in Windsor, Ontario. Construction has begun to expand the Ambassador Bridge plaza.

1.7.2 United States Projects / Initiatives

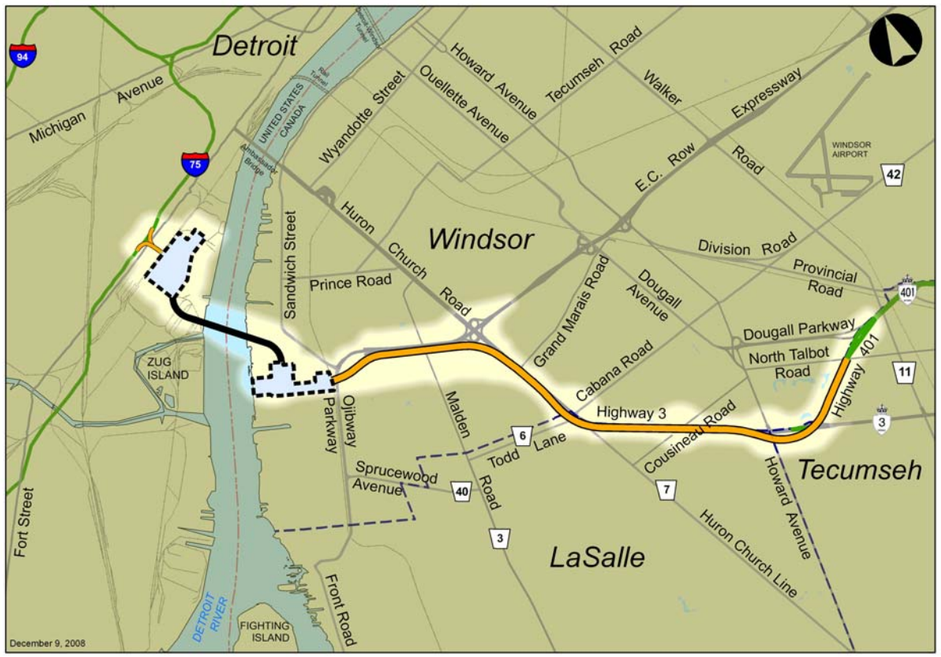
Construction is underway on the *Ambassador Gateway Project* in Detroit, Michigan. This project, which is being undertaken by the Michigan Department of Transportation (MDOT), is expected to be completed by December 2009. It will connect Detroit area freeways to the Ambassador Bridge and Detroit's Mexicantown neighbourhood. The project includes redesigning the Ambassador Bridge U.S. Plaza to improve safety and ease traffic flow.

1.8 Description of the Recommended Plan

After evaluating several illustrative and practical alternatives for the access road, Canadian inspection plaza, and the international bridge crossing within the study area, the study team selected the Technically and Environmentally Preferred Alternative (TEPA). The TEPA was refined based on additional technical analysis, stakeholder consultation, and development of appropriate mitigation

measures. The combination of the TEPA and associated refinements along with the proposed mitigation measures are referred to collectively as the Recommended Plan. Key elements of the Recommended Plan are described in the following sections. (Refer to **Exhibit 1.4** for an illustration of The Recommended Plan, which includes the Windsor-Essex Parkway, Plaza B1 and Crossing X-10B.)

EXHIBIT 1.4 –THE RECOMMENDED PLAN



1.8.1 The Windsor-Essex Parkway

The Windsor-Essex Parkway is a key component of a new border transportation system that will provide a direct route connecting Highway 401 in Windsor, Ontario to Interstate 75 in Detroit, Michigan.

The Windsor-Essex Parkway is planned as a six-lane urban freeway with 11 tunnels, and service roads. It allows long-distance international traffic to travel unimpeded by traffic signals to a new inspection plaza and river crossing while improving community linkages and providing extensive new trails, green space and other recreational opportunities. The Windsor-Essex Parkway includes:

- More than 120 ha (300 acres) of parkland;
- 20 km of recreational trails;
- 11 tunnels covering approximately 1.8 km of freeway;
- A new four-lane service road;
- Improvements to the movement of traffic to and from the border;
- Stormwater management ponds in selected locations;
- Noise mitigation measures;
- Full illumination along the freeway; and
- Conventional illumination along service roads, side roads and sections of the trail system.

From the inspection plaza easterly approximately 1 km to where the freeway portion of The Windsor-Essex Parkway approaches E.C. Row Expressway approximately 0.3 km east of Matchette Road, the proposed freeway is grade separated over the Essex Terminal Railway, Ojibway Parkway and Matchette Road and situated south of the existing E.C. Row Expressway corridor.

From approximately 0.3 km east of Matchette Road to approximately 0.4 km west of Huron Church Road, the freeway portion of The Windsor-Essex Parkway and E.C. Row Expressway are integrated into a core-collector system. In this section, the eastbound and westbound lanes of E.C. Row Expressway diverge and the freeway portion of The Windsor-Essex Parkway is aligned between them.

From north of Bethlehem Avenue/Labelle Street to approximately 1.0 km east of Howard Avenue, the proposed freeway is below-grade, predominantly in open-cut with grass side slopes. Retaining walls, either partial-height or full-height, are required in certain localized areas.

Within this section, the location of the service road relative to the freeway varies. From north of Bethlehem Avenue/Labelle Street to east of Huron Church Line the proposed service road is adjacent to the proposed freeway on the north side. From east of Huron Church Line to approximately 0.7 km west of Howard Avenue, the proposed service road is situated on the south side of the proposed freeway. From 0.7 km west of Howard Avenue to approximately 0.3 km east of Howard Avenue, the proposed service road is once again located adjacent to the proposed freeway on the north side. East of this location, no service road is proposed.

From approximately 1.0 km east of Howard Avenue to North Talbot Road, The Windsor-Essex Parkway is predominantly at existing grade. There is no service road proposed through this section.

1.8.2 Plaza B1

On the Canadian side, plaza alternatives were developed considering the need to provide improved border processing facilities to meet future travel demand and security requirements at the border crossing. All plaza alternatives considered were much larger than the current plazas at the Ambassador Bridge and the Detroit-Windsor Tunnel. The new plaza, Plaza B1 will be designed to serve the future (2035) travel demands at the border crossing. Initial construction of the plaza may not include the fully developed plaza, as the plaza may be constructed in stages. The initial construction of the plaza will be such that future expansion will be possible by way of constructing additional inspection booths or tolls.

Plaza B1 was developed in consultation with Canada Border Services Agency and provides sufficient area for primary inspection lane booths and on-site secondary inspection of people and goods. The plaza alternative also allows for dedicated NEXUS and FAST lanes and provides for a substantial improvement of border processing capabilities.

Canada Border Services Agency has reviewed and tested functional layouts of the plaza alternatives to confirm the suitability under future traffic conditions. Plaza B1 includes:

- Total plaza area of 55 ha (137 acres);
- Total of 29 inbound inspection lanes;
- Total of 103 secondary inspection parking spaces for commercial vehicles;
- Nine toll collection lanes; and
- Stormwater management features to control quality and quantity of runoff water.

The final design of the plaza will incorporate a local access road along the edge of the plaza that will provide continuity for traffic between Sandwich Street and Broadway Street as well as access for plaza employees. Local access will also be provided at the north end of the plaza from a realigned Sandwich Street to the Brighton Beach Power Station and Keith Transformer Station.

1.8.3 Crossing X-10B

The new Detroit River crossing is being developed as a six-lane bridge providing three Canada bound lanes and three U.S. bound lanes. The new crossing, Crossing X-10B will accommodate future travel demand, by both meeting capacity needs and providing flexibility to allow for the streaming of traffic to improve border processing (e.g., designated NEXUS/FAST lane).

The new river crossing will be constructed to link inspection plazas on the Canadian and U.S. sides of the Detroit River, and will be a key component of the new end-to-end transportation system that will link existing Highway 401 to the U.S. Interstate system. The crossing will consist of both a main bridge that will span the width of the Detroit River, and approaches to the main bridge constructed on piers that will connect to plazas in both Canada and the U.S. The main bridge and approaches will be constructed on the Crossing X-10B alignment.

Two bridge types are being considered for the new crossing: a cable-stayed bridge and a suspension bridge. Selection of the bridge type will be made during subsequent design phases of this project.

The reader is referred to Chapter 9 for further details of The Windsor-Essex Parkway, Plaza B1, and Crossing X-10B.