Detroit River INTERNATIONAL CROSSING STUDY

Welcome to the Third
Public Information Open House

for the

DETROIT RIVER INTERNATIONAL CROSSING

ENVIRONMENTAL ASSESSMENT

March 28 and 30, 2006

>> Please Sign In <<

Members of the Project Team are available to discuss any questions that you may have.

Detroit River INTERNATIONAL CROSSING STUDY

The Project Team

The Partnership representing the governments of Canada, the United States, Ontario and Michigan is moving forward with the Environmental Assessment (EA) phase of the Detroit River International Crossing (DRIC) project to improve traffic flow and trade movement at the Windsor-Detroit border.

The Ontario Ministry of Transportation (MTO) is leading the Canadian work program in coordination with Transport Canada. The Michigan Department of Transportation (MDOT), in coordination with the U.S. Federal Highways Administration, is leading the U.S. work program.

URS Canada Inc. has been retained to assist MTO in undertaking the route planning and environmental assessment in accordance with the Ontario Environmental Assessment Act (OEA) and Canadian Environmental Assessment Act (CEAA). MDOT has also retained a consultant team to undertake the U.S. route planning and environmental impact study in accordance with the requirements of the National Environmental Policy Act (NEPA).

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Purpose of the DRIC Study

The **purpose** of a new or expanded Detroit River crossing with connections to the freeway systems in Ontario and Michigan 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.

- In order to meet the purpose, this study must 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)
- Given the importance of this trade corridor to the local, regional and national economies and recognizing the negative effects associated with poor traffic operations and congestion, the partnering governments must take all reasonable steps to reduce the likelihood of disruption to transportation service in this corridor.

The DRIC Study will:

- Coordinate the U.S. and Canadian work programs
- Investigate the engineering, social, economic, cultural and natural environment attributes of route and crossing alternatives
- Publicly present the assessment of direct and indirect impacts of the alternatives for public review
- Incorporate public and agency input in decision-making and development of mitigation

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Key Milestones

Study Area Features, Opportunities & Constraints	April '05	Initial Public Outreach
Initial Set of Crossing Alternatives, Plaza Locations & Connecting Routes in Canada and the U.S.	June '05	PIOH1
Area of Continued Analysis	December '05	PIOH2
Specific Crossing, Plaza and Access Road Options	March '06	PIOH3
Results of Social, Economic, Environmental and Engineering Assessments	December '06	PIOH4
Preferred Crossing Location, Plaza Locations & Connecting Routes in Canada and the U.S.	Spring '07	PIOH5
Finalize Engineering and Mitigation Measures	Summer '07	PIOH6
Document Study and Submit for Approvals	End of '07	Public Review

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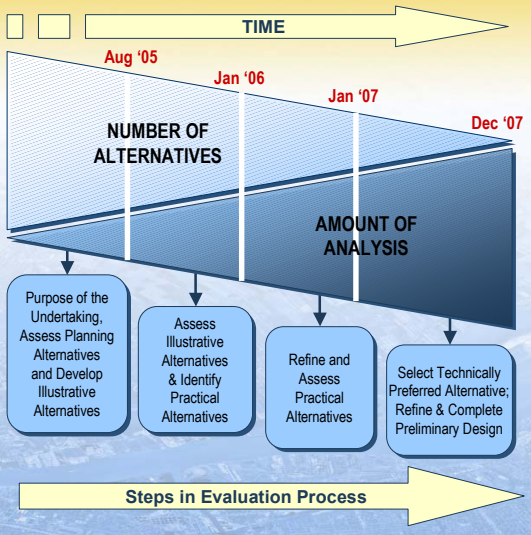
Evaluation Process

The underlying principle for the alternatives generation and evaluation process is to start with a broad perspective and become more focused/detailed as the project progresses.



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Evaluation Methods

The evaluation process for the Illustrative Alternatives involved two methods: **Reasoned Argument Method** and **Arithmetic Method**. The Reasoned Argument (trade-off) was the primary evaluation method employed to select alternatives for continued analysis with the Arithmetic approach used to substantiate the findings of the Reasoned Argument (trade-off) evaluation.

Reasoned Argument Method

Considered the **advantages** and **disadvantages** of each alternative and the relative significance of the impacts. The rationale used to select alternatives over others was derived from the following sources:

- National and international significance of the crossing;
- Government legislation, policies and guidelines;
- Existing Land Use and Municipal policy (i.e., Official Plans);
- Technical Considerations (i.e. degree to which the identified transportation problems are solved);
- Issues and concerns identified during consultation; and
- Project Team expertise.

Arithmetic Method

Considered both the level of importance of each environmental attribute (i.e. weight) and the magnitude of the impact or benefit (i.e. score). Generally, more weight is assigned to those features that are felt to be more important in assessing impacts. Weighting scenarios have been developed based on feedback from the general public and other stakeholders.

- Scores were assigned by qualified Project Team specialists with expertise in impact assessment;
- Relative impacts ranged from those that are positive (benefit the environment) to negative (detrimental to the environment);
- 1 to 7 scoring scale used to identify magnitude of an impact/benefit whereby:

1 = high impact		5 = low benefit
2 = moderate impact	4 = neutral/no impact	6 = moderate benefit
3 = low impact		7 = high benefit

- The weight was multiplied by the score to obtain a weighted score. The weighted scores were compared to determine the preferred alternative.

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End-to-End Evaluation

The results of the Canadian and U.S. Project Teams' analysis were brought forward for an end-to-end evaluation. The recommendations of the Canadian and U.S. Project Teams were brought forward and the Partnership made final recommendations based on the complete understanding of impacts and benefits on both sides of the river for all alternatives.

	Advantages	Disadvantages	Recommendations
Crossings X1 to X7 and X15	• South alternatives (Canadian side) have lower community impacts than other alternatives. • In the U.S., several downriver alternatives provided greater benefits to Maintaining Air Quality and others were noted as having lower community/neighbourhood characteristics than other alternatives. • For the East and North alternatives, the Canadian and U.S. analysis identified lower impacts to natural features than other alternatives.	• Analyses for South and East alternatives indicate inadequate benefits to regional mobility. • Canadian Analysis identified high constructability risks with a plaza on Fighting Island and Crossing X5. • Canadian and U.S. analysis for South alternatives identified high impacts for sensitive natural areas along the riverfront • U.S. analysis indicated generally higher impacts to natural features for the Downriver alternatives. • U.S. analysis identified that AC1 would disrupt an existing industrial operation (National Steel). Therefore, implementing Crossings X5 and X6, and X7 could pose a risk to the timeline of the project. • Analyses for East alternatives identified high impacts to established riverfront residential communities. • U.S. analysis identified North alternatives have poorer performance than most other alternatives in terms of impacts to community and neighbourhood characteristics, consistency with land use plans, impacts to cultural resources, impacts to air quality.	• The analysis of the Canadian and U.S. Project Teams agreed that these alternatives should be **eliminated from further study**. The disadvantages outweighed the advantages.
Crossings X8 and X9	• Both teams identified that crossing X8 and X9 alternatives offer high benefits to regional mobility.	• The Canadian analysis identified that X8 alternative offers lower benefits to regional mobility than the other central alternatives and that both X8 and X9 alternatives have high impacts to the significant natural features in the Ojibway area. • The U.S. analysis identified high constructability risks associated with Plaza AC2 (crossings X8 and X9) as well as Plaza AC2 is sited on the National Steel plant lands. These alternatives would require relocating the rolling mill without disrupting production. This increases constructability risks as well as the cost and time required to implement a new crossing.	• X8 and X9 alternatives are not the top performers in either country, and both alternatives have unique high impacts and risks. **Crossing X8 and X9 were eliminated from further study.**
Crossing X10 and X11	• Both teams identified that crossing X10 and X11 alternatives offer high benefits to regional mobility.	• The Canadian analysis identified Crossing X11 alternative has higher community impacts than the other central alternatives, including impacts to land use and cultural features, due to the proximity of the crossing and plaza to the residential and historic community of Sandwich.The U.S. analysis identified Plazas AC3 and AC4 (potential plaza locations for X10 and X11) as having negative impacts to community cohesion and character, as well as environmental justice impacts. Plaza AC3 would likely result in the displacement of approximately 300 residential units, while plaza AC4 would displace over 80 residences.	• The high benefits to regional mobility outweigh the disadvantages. These alternatives were found to have the best overall balance of meeting regional mobility needs and impacts to community features. The Canadian and U.S. Project Teams recommended the X10 and X11 alternatives to be carried forward for continued analysis.
Crossing X12	• Relatively low negative impacts on the U.S. side in terms of benefits provided to mobility. • The alternative provides improved regional mobility for the border transportation network on both sides of the river	• Relatively high negative impacts on the Canadian side and • Considered to have limited limited ability to provide continuous/ ongoing river crossing capacity for international traffic on the basis that this alternative would not provide a new crossing. • High community impacts to the residential area impacted by the expansion of the Canadian bridge plaza and the expansion of Huron Church Road to a freeway facility, and the potential for disruption to border traffic during construction	• The disadvantages of the Crossing X12 alternative outweighed the advantages. **The U.S. plaza of the Ambassador Bridge, with the improved connections to the interstate freeway system will be carried forward within the Area for Continued Analysis as a possible U.S. plaza site for a new crossing.**
Crossing X13 and X14	• Both teams identified that as a six-lane freeway, the Rail Corridor has a high benefit to regional mobility. • Two X14 alternatives were considered on the U.S. side. The X14Plaza I2/Connection to M-10 alternative performed better than most alternatives in terms of community/ neighborhood impacts, consistency with local planning, protecting natural features, improving regional mobility and constructability. The X14Plaza I3/Connection to M-10 among top performers in terms of protecting natural features, constructability and regional mobility.	• The Canadian analysis identified this alternative has high community impacts to regional commercial/retail areas and employment areas; high negative impacts to community character and cohesion in areas north of Tecumseh Road to the river and south of E.C. Row to Highway 401. • Canadian Analysis also noted concerns with constructability of interchanges along the rail corridor and security/monitoring of the remote plaza. • U.S. analysis noted that a crossing and inspection plaza would negatively affect the local community including impacts to businesses, schools and residences. As well, these alternatives had a poorer performance than most other alternatives in terms of protection of cultural features and maintaining air quality. • Neither of the X14 alternatives was among the top overall performers on the U.S. side.	• The disadvantages of the Crossing X13 and X14 alternatives outweighed the advantages. Therefore, the **Crossing X13 and X14 alternatives were eliminated from further study**
Conclusions: Area of Continued Analysis	• The results of the end-to-end evaluation of illustrative alternatives led to the identification of an area of continued analysis for possible practical crossing, plaza and connecting route alternatives. These practical alternatives will be 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. • On the Canadian side, this area would encompass plazas CC2, CC3 and CC7 and be defined to provide sufficient area to enable a range of connecting route alignments and crossing alignments to be developed for continued analysis. The area would also accommodate refinement to the locations and alignments of crossing, plaza and connecting route alignments in the Ojibway Industrial Park area. The residential community of Sandwich, Black Oak/Ojibway protected natural areas would serve to limit the extent of the area for continued analysis on the Canadian side. • On the U.S. side, the area would encompass the area of southwest Detroit between the I-75 corridor and the riverfront between Zug Island and the Ambassador Bridge. Possible improvements to connections to I-94 along Schaefer Road or Outer Drive will also be examined.		

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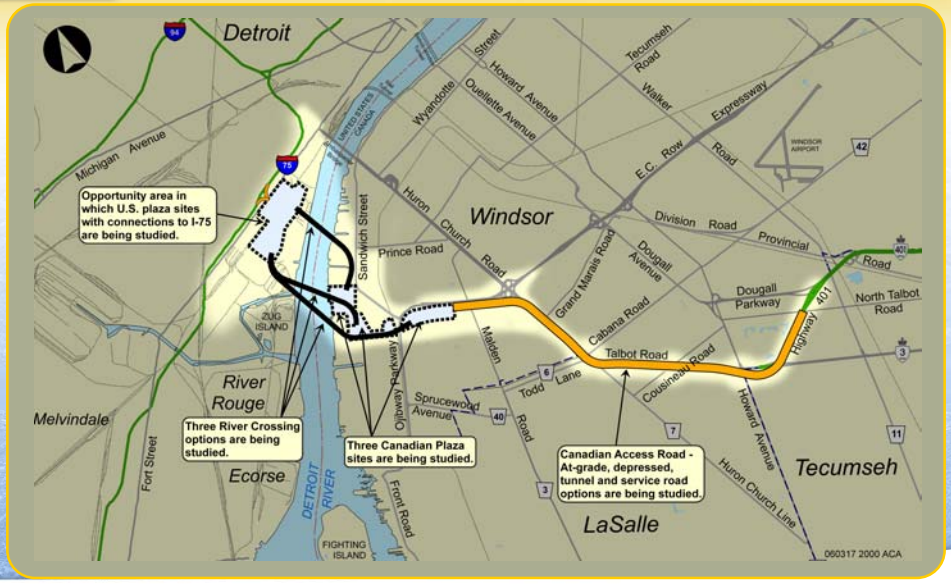
Crossing, Plaza & Route Alternatives



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Public Information Open House #2

The second round of Public Information Open House meetings were held November 29 in Windsor, November 30 in LaSalle and December 1 in Windsor (Sandwich). 433 people signed the attendance registry and 108 comment sheets were received.

Most Frequent Comments

- Continue to stay out of the Ojibway Prairie Area; give priority to the preservation of natural areas
- Concern with impacts to the Sandwich Area of Windsor
- Concerned with air quality; property depreciation
- Cost should not be a major factor
- Place plaza close to industrial/non-natural areas of Windsor
- Tunnel through Talbot Road area; construct berms
- Protect historic and cultural resources
- Use existing transportation corridors; including Huron Church, EC Row Expressway
- Use the DRTP Tunnel Proposal
- Place plaza as far west as possible
- Consider community impacts

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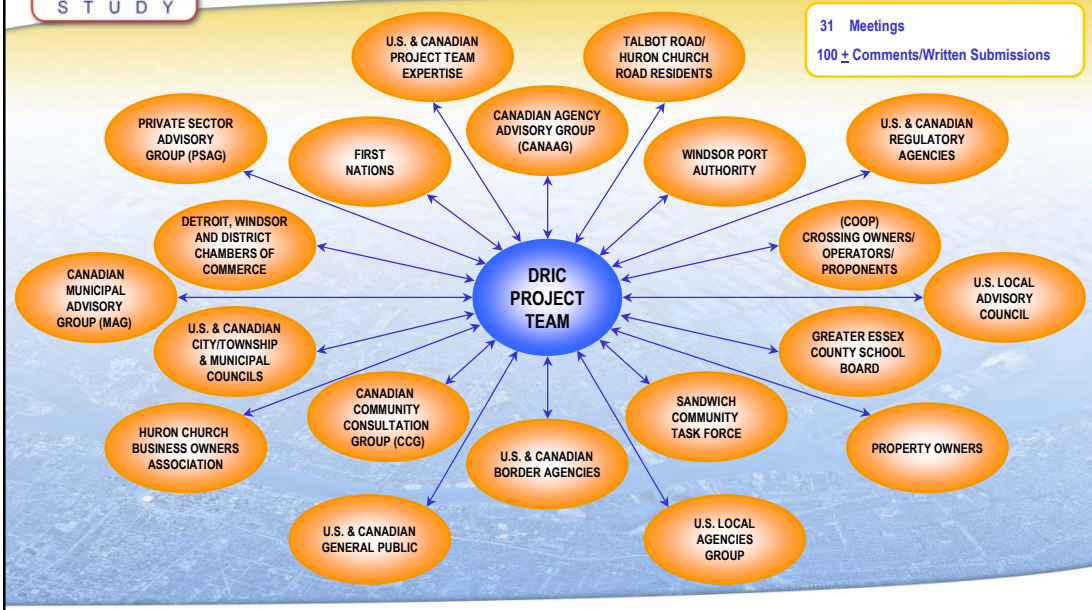
Consultation December 2005-February 2006

31 Meetings
100 + Comments/Written Submissions



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Analysis Results Canadian Side – South Alternatives

RECOMMENDATION: Due to the generally rural nature of the land uses south of LaSalle, the southern alternatives carried lower community impacts than the other alternatives. However, on the basis that a new transportation facility would not provide adequate benefits to regional mobility, **the Canadian Project Team did not recommend that any of the south alternatives be carried forward for further study.**

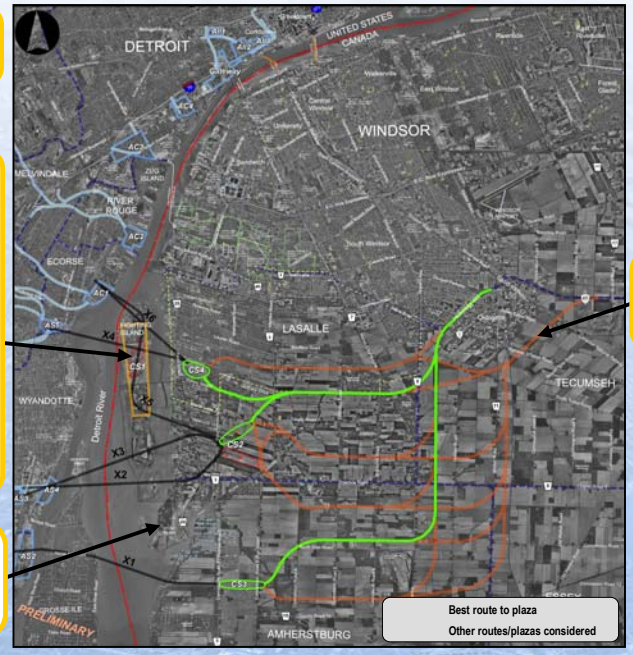
Six southern alternatives were eliminated from further consideration because these alternatives were located too far downriver to attract cross-border truck traffic, including the 50% of trucks that are local, and therefore would not improve regional mobility.

U.S. Plaza AC1 and Crossing X6 eliminated from further consideration on the basis of unacceptable impacts to existing industrial operation

Fighting Island

- North end of Island contains Provincially Significant Wetland and Environmentally Sensitive Area
- Middle and southern sections have historically been used for disposal of alkaline waste; this material ranges in thickness from 0.5m to 11m
- Construction of plaza would require removal of waste material to other parts of the island
- High constructability risks associated with this plaza and crossings on this island
- Plaza site CS1 and Crossing X5 were eliminated from further consideration

Natural Heritage Features – All south crossings except Crossing X1 were found to impact sensitive riverfront wetlands. Crossing X2 near Turkey Island was found to have the highest impacts.



For the south alternatives, a new transportation facility would not provide adequate benefits to **regional mobility**. A new crossing in the South area would not attract sufficient traffic to alleviate existing crossings or the roads connected to these crossings. Based on the assessment of Travel Demand for the study horizon (2035),the Ambassador Bridge, Detroit-Windsor Tunnel and key roads connected to these crossings would be congested, resulting in excessive delays during daily peak travel periods in the long term.

Alternatives passing east of **Oldcastle** were found to have higher costs but similar impacts as alternatives using Highway 401 corridor to Highway 3, and were not carried forward.

This area of Essex County is a predominately agricultural area; as a result, a new highway in this area would impact very few homes on the Canadian side compared to the other alternatives.

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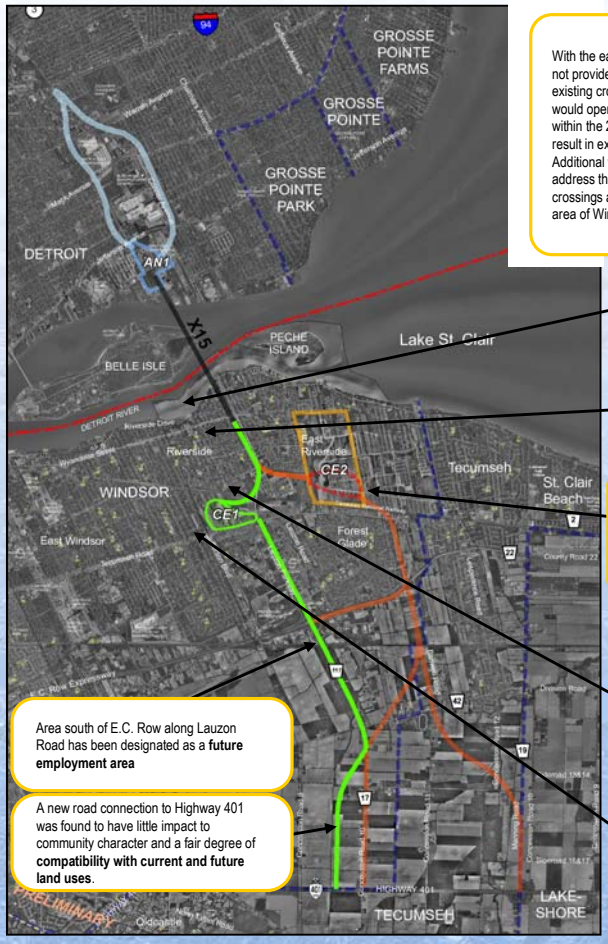
Analysis Results Canadian Side – East Alternatives

RECOMMENDATIONS: On the basis that a new transportation facility in this area of the city would not provide adequate benefits to regional mobility in the long-term, which is a primary objective of this project, and would have high community impacts, **the Canadian Project team did not recommend the east alternative be carried forward for further study**.

This crossing would not provide as much regional mobility improvement as crossings in the ACA and it would have higher community impacts. It was not carried forward for further study.



Best route to plaza

Other routes/plazas considered

With the east alternatives, a new transportation facility would not provide adequate benefits to **regional mobility**. The existing crossings and key roads serving these crossings would operate at or near capacity during peak travel periods within the 2035 planning horizon of this study. This would result in excessive delays during peak travel periods. Additional transportation improvements would be required to address the need for additional capacity at the existing crossings and on the key connecting roadways in the urban area of Windsor.

Kiwanis Park at the riverfront and Derwent Park at E.C. Row/Lauzon Parkway would be impacted

The east alternative was found to be not compatible with the established residential character of east Windsor, particularly north of E.C. Row Expressway. A new crossing and plaza in the riverfront area of east Windsor would have high **impacts to the community.**

Area east of Lauzon Road, along the Manning/Banwell Corridor, is planned for **future residential development**

Area south of E.C. Row along Lauzon Road has been designated as a **future employment area**

A new road connection to Highway 401 was found to have little impact to community character and a fair degree of **compatibility with current and future land uses**.

Plaza site CE1 displaces "big box" commercial uses, including Wal-Mart, Home Depot, Rona and other retail establishments

Significant **commercial development** exists along Tecumseh Road and Lauzon Road

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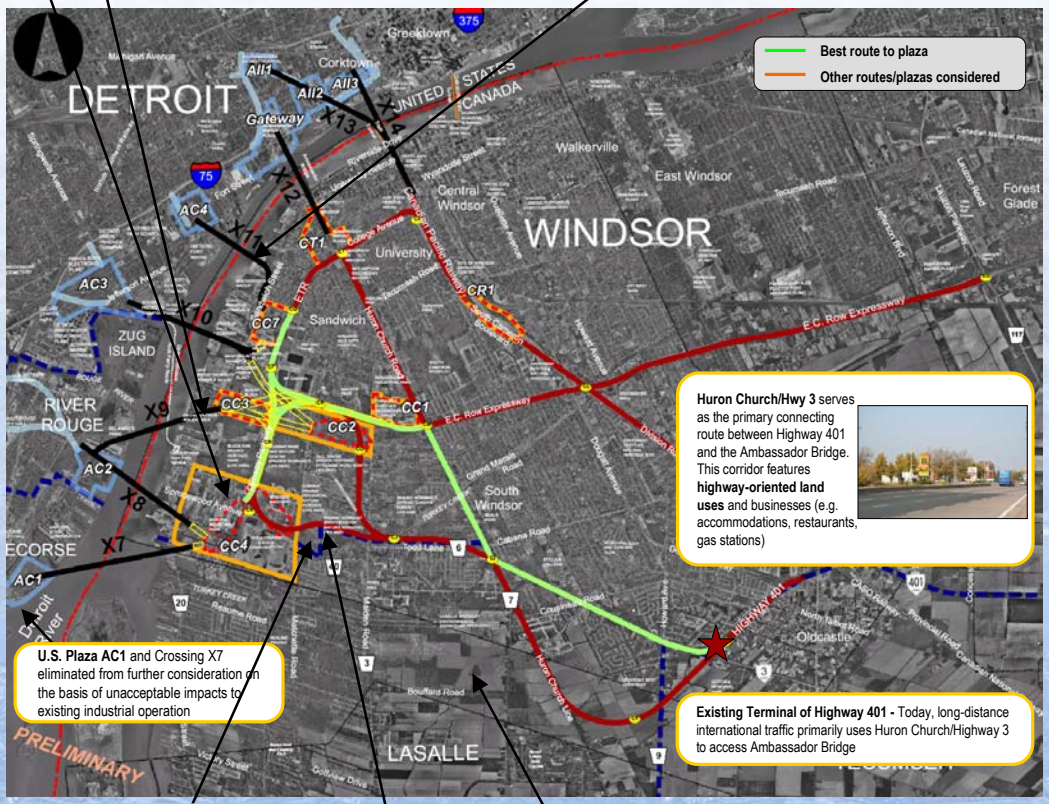
Analysis Results Canadian Side – Central Alternatives

RECOMMENDATION: The central alternatives represent the best balance of transportation benefits and community impacts on the Canadian side. Continued analysis of these central alternatives would provide opportunities to reduce the land use/community and natural feature impacts, as well as address issues of constructability. **The Canadian Project Team therefore recommended that the crossing X8, X9, X10 and X11 alternatives connected by a freeway in the Huron Church/Talbot Road corridor be carried forward as practical alternatives. Crossings X8 and X9 are not top performers in either country, and both alternatives have unique high impacts and risks. Crossing X8 and X9 were eliminated from further study.**

Crossing X9 and Route to Crossing X8 have high negative impacts to sensitive natural areas along riverfront.

Crossing X11 alternative has higher **community impacts** than the other central alternatives, including impacts to land use and cultural features, due to the proximity of the crossing and plaza to the residential and historic community of Sandwich.



Huron Church/Hwy 3 serves as the primary connecting route between Highway 401 and the Ambassador Bridge. This corridor features **highway-oriented land uses** and businesses (e.g. accommodations, restaurants, gas stations)

U.S. Plaza AC1 and Crossing X7 eliminated from further consideration on the basis of unacceptable impacts to existing industrial operation

Existing Terminal of Highway 401 - Today, long-distance international traffic primarily uses Huron Church/Highway 3 to access Ambassador Bridge

A new alignment in this area would sever the **Ojibway Prairie** Provincial Prairie Reserve an **Spring Garden Forest** designated Areas of Natural and Scientific Interest (ANSI) and Environmentally Sensitive Areas (ESA). This would have high negative impacts to habitat for threatened and endangered species.

New freeway in this area would sever **residential and natural areas**, negatively impacting community character and cohesion. Crossing X8 and X9 alternatives avoid the community of Sandwich, but have higher impacts to natural features associated with impacts to connectivity between the sensitive natural areas in the Ojibway area and the riverfront.

Town of LaSalle is proceeding with **approved plan** for development of lands south of Talbot Road with future urban area in support of growth. A new highway in this area conflicts with the Town's approved plans and disrupts municipal infrastructure constructed to serve these growth areas.

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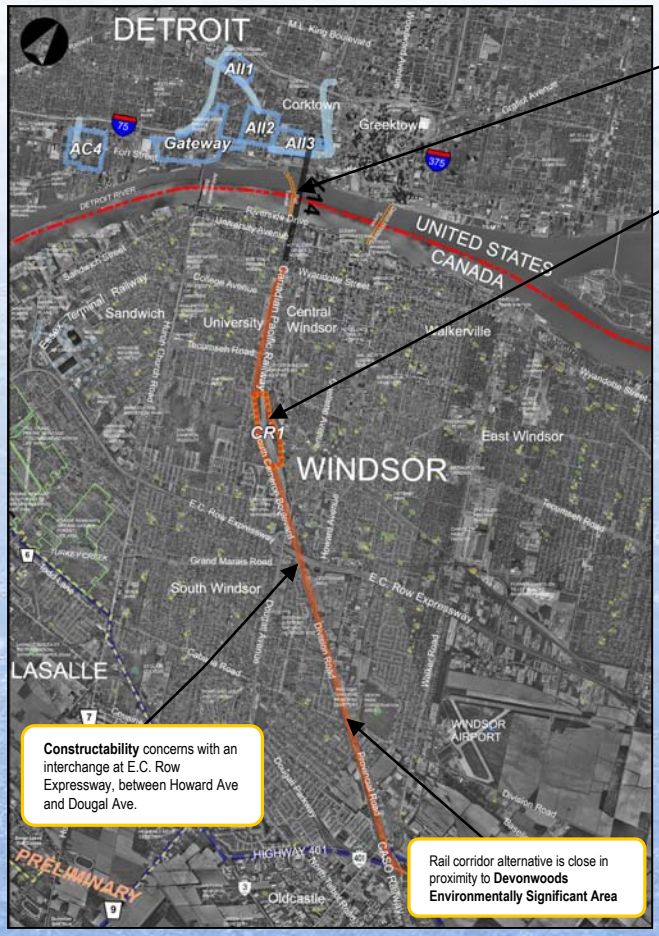
Analysis Results – Rail Corridor (X13/X14 and DRTP Truckway)

RECOMMENDATION: A freeway connecting to a plaza and new crossing in the downtown area was **not carried forward on the Canadian side on the basis that this alternative has high negative impacts to the community** and is not compatible with local land uses and City plans

The capacity provided by the Detroit River Tunnel Partnership's two-lane truckway proposal does not meet the region's long-term needs. Quite simply, two lanes are not enough to accommodate future traffic growth at the border.

The DRIC study team also looked at a six-lane freeway in the same corridor as the DRTP proposal. This option was eliminated because it would cut through a significant number of Windsor's residential neighbourhoods and would replace existing low-volume rail line with a major freeway, with direct and indirect impacts on more than 2,300 businesses and homes.



Constructability concerns with an interchange at E.C. Row Expressway, between Howard Ave and Dougal Ave.

Rail corridor alternative is close in proximity to **Devonwoods Environmentally Significant Area**

The U.S. and Canadian Project Teams considered a **tunnel under this section of the Detroit River** practically infeasible due to the time and cost implications for the project.

Border agencies raised issues of security and monitoring requirements associated with location of plaza and the proposed connection to a new a new crossing.

The Rail Corridor was assessed as:

- a two lane **truckway** utilizing the two existing single track rail tunnels;
- a six-lane freeway with a new six-lane **road tunnel** beneath the Detroit River; and,
- a six-lane freeway with a new six-lane **road bridge** over the Detroit River

The **DRTP truckway** proposal (Crossing X13) was found to provide inadequate capacity to meet the long-term needs of the border transportation networkand has high community impacts on the Canadian side. This option was eliminated from further study.

As a six-lane freeway with a new bridge or tunnel, the Rail Corridor alternative has a high benefit to **regional mobility**. However, a new freeway through central and south Windsor is not consistent with land use plans and would have high impacts to the community.

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Analysis Results X12 – Ambassador Bridge

RECOMMENDATION: Crossing X12 alternative not carried forward on the Canadian side. Higher benefits to regional mobility are outweighed by limited ability to provide continuous/ongoing river capacity for international traffic. As well, this alternative creates high impacts to the neighbourhoods in the vicinity of plaza, in particular the neighbourhood of Sandwich.

On the U.S. side, the Ambassador Bridge is well connected to freeways and is consistent with area land uses. The plaza and gateway connections of this crossing will be carried forward for further study.

•Twinning the existing Ambassador Bridge would require an expanded 100-acre inspection plaza to be located in the very heart of historic Sandwich Towne, adjacent to the University of Windsor. The access road would also be an issue; requiring either the conversion of all of Huron Church Road to a six-lane freeway, or construction of a new route through historic Sandwich.

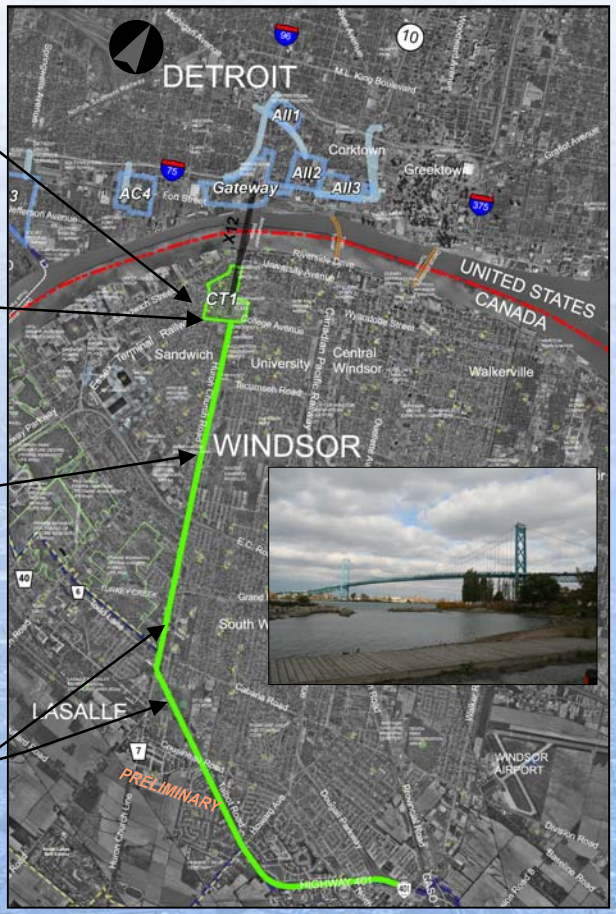
• More than 500 homes and businesses would be displaced and another 3,500 would be disrupted. Based on the community impacts of the access road and inspection plaza, the option to twin the Ambassador Bridge was eliminated.

Expansion of the crossing and existing plaza creates high impacts to the historic **Sandwich community**. The community impacts associated with twinning of Ambassador Bridge, expansion of the existing bridge plaza and expansion of Huron Church Road to a freeway are notably higher than those of the central alternatives.

Limited to no flexibility for **future plaza expansion** without a large number of property takings and significant disruption to the community of Sandwich

Route impacts to Huron Church Road between E.C.Row and the river would primarily affect **highway commercial land uses.** These commercial uses would have to be relocated.

Low impacts to **natural features**: are associated with this alternative. Impacts are limited to edge impacts to Spring Garden Prairie and St. Clair College Prairie



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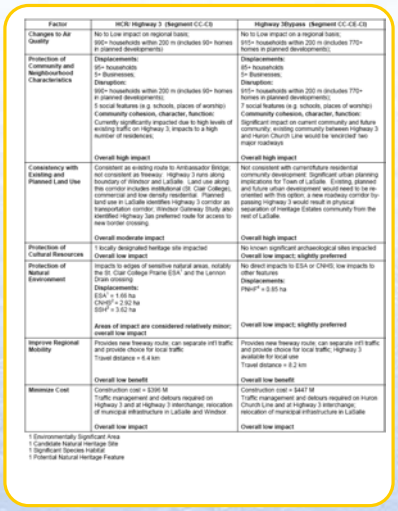
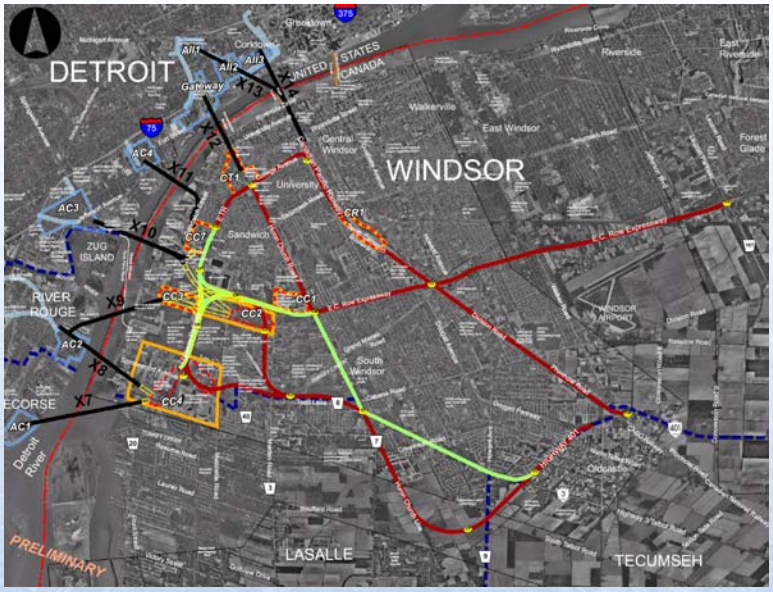
Highway 3 Bypass

- Both options provide similar benefits to regional mobility
- Both options have high impacts to community and neighbourhood features
- Highway 3 By-Pass option:
  - greater impacts to community characteristics
  - greater impacts to land use
  - slightly higher costs
  - slightly lower impacts to cultural and natural features
- Highway 3 option is preferred



Factor	HCR: Highway 3 (Segment CC-CI)	Highway 3Bypass (Segment CC-CE-CI)
Changes to Air Quality	No to Low impact on regional basis; 990+ households within 200 m (includes 90+ homes in planned developments)	No to Low impact on a regional basis; 915+ households within 200 m (includes 770+ homes in planned developments);
Protection of Community and Neighbourhood Characteristics	Displacements: 95+ households 5+ Businesses; Disruption: 990+ households within 200 m (includes 90+ homes in planned developments); 5 social features (e.g. schools, places of worship) Community cohesion, character, function: Currently significantly impacted due to high levels of existing traffic on Highway 3; impacts to a high number of residences; Overall high impact	Displacements: 65+ households 5+ Businesses; Disruption: 915+ households within 200 m (includes 770+ homes in planned developments); 7 social features (e.g. schools, places of worship) Community cohesion, character, function: Significant impact on current community and future community; existing community between Highway 3 and Huron Church Line would be knitted two major roadways Overall high impact
Consistency with Existing and Planned Land Use	Consistent as existing route to Ambassador Bridge; not consistent as freeway. Highway 3 runs along boundary of Windsor and LaSalle. Land use along this corridor includes institutional (St. Clair College), commercial and low density residential. Planned land use in LaSalle identifies Highway 3 corridor as transportation corridor; Windsor Gateway Study also identified Highway 3as preferred route for access to new border crossing Overall moderate impact	Not consistent with current/future residential community development. Significant urban planning implications for Town of LaSalle. Existing, planned and future urban development would need to be re-oriented with this option; a new roadway corridor by-passing Highway 3 would result in physical separation of Heritage Estates community from the rest of LaSalle. Overall high impact
Protection of Cultural Resources	1 locally designated heritage site impacted Overall low impact	No known significant archaeological sites impacted Overall low impact; slightly preferred
Protection of Natural Environment	Impacts to edges of sensitive natural areas, notably the St. Clair College Prairie ESA[1] and the Lennon Drain crossing Displacements: ESA[1] = 1.66 ha CHH[2] = 2.92 ha SSH[3] = 3.62 ha Areas of impact are considered relatively minor; overall low impact	No direct impacts to ESA or CHHS; low impacts to other features Displacements: PNH[4] = 0.85 ha Overall low impact; slightly preferred
Improve Regional Mobility	Provides new freeway route; can separate int'l traffic and provide choice for local traffic Travel distance = 6.4 km Overall low benefit	Provides new freeway route; can separate int'l traffic and provide choice for local traffic; Highway 3 available for local use Travel distance = 8.2 km Overall low benefit
Minimize Cost	Construction cost = $396 M Traffic management and detours required on Highway 3 and at Highway 3 interchange; relocation of municipal infrastructure in LaSalle and Windsor Overall low impact	Construction cost = $447 M Traffic management and detours required on Huron Church Line and at Highway 3 interchange; relocation of municipal infrastructure in LaSalle Overall low impact

1 Environmentally Significant Area
1 Candidate Natural Heritage Site
1 Significant Species Habitat
1 Potential Natural Heritage Feature



Summary of Evaluation	Project Team Weighting					Public Weighting					CCG Weighting[5]				
	Weighting	CC-CI		CC-CE-CI		Weighting	CC-CI		CC-CE-CI		Weighting	CC-CI		CC-CE-CI	
		Score	Weight x Score	Score	Weight x Score		Score	Weight x Score	Score	Weight x Score		Score	Weight x Score	Score	Weight x Score
Changes in Air Quality	12.39	3	37.17	3	37.17	17.32	3	51.96	3	51.96	17.30	3	51.90	3	51.90
Protect Community/ Neighborhood Characteristics	15.93	1	15.93	1	15.93	15.49	1	15.49	1	15.49	13.88	1	13.88	1	13.88
Maintain Consistency with Existing and Planned Land Use	12.39	2	24.78	1	12.39	12.89	2	25.78	1	12.89	13.69	2	27.38	1	13.69
Protect Cultural Resources	12.39	3	37.17	3	37.17	13.14	3	39.42	3	39.42	13.12	3	39.36	3	39.36
Protect the Natural Environment	15.93	3	47.79	3	47.79	16.34	3	49.02	3	49.02	17.11	3	51.33	3	51.33
Improve Regional Mobility	17.70	5	88.50	5	88.50	15.28	5	76.40	5	76.40	14.83	5	74.15	5	74.15
Minimize Cost	13.27	3	39.81	3	39.81	9.54	3	28.62	3	28.62	10.07	3	30.21	3	30.21
Total Weighted Score	100.00		291.15		278.76	100.00		286.69		273.80	100.00		288.21		274.52
Ranking			*1*		*2*			*1*		*2*			*1*		*2*

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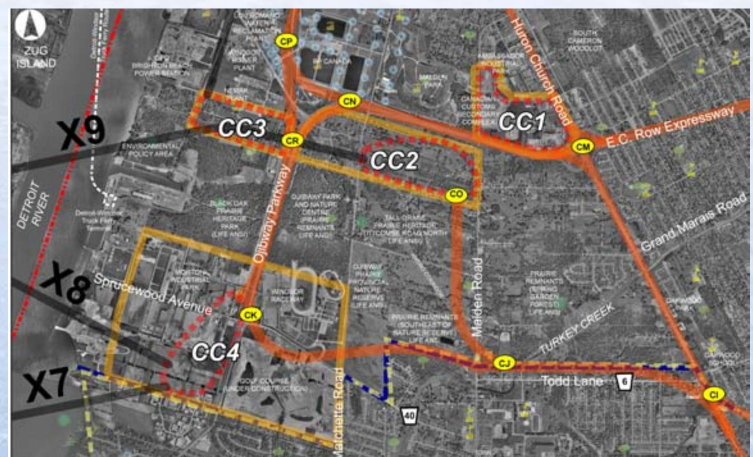
Huron Church / Ojibway Options

- All three options have high community impacts with similar direct/indirect impacts to residential areas
- Huron Church/EC Row option:
  - higher impacts to businesses
  - greater impacts to cultural features
  - slightly lower benefits to regional mobility
  - greater construction costs and more complex construction
  - lower impacts to community characteristics
  - lower impacts to land use
  - lower direct/indirect impacts to natural features west of Huron Church
- Overall, the advantages of Huron Church/EC Row option were considered to be more significant than the disadvantages

Factor	Highway 3/Huron Church/ EC Row (Segment CC-CI-CM-CN-CR)	Highway 3/Todd Lane/ Malden Road/EC Row (Segment CC-CI-CJ-CO-CR)	Highway 3/Todd Lane/ Ojibway Parkway (Segment CC-CI-CJ-CK-CR)
Changes to Air Quality	Overall no to low impact on system-wide basis 1370+ households within 200 m	Overall no to low impact on system-wide basis 1225+ households within 200 m	Overall no to low impact on system-wide basis 1165+ households within 200 m
Protection of Community and Neighbourhood Characteristics	**Displacements:** 130+ households 35+ Businesses; **Disruption:** 1370+ households within 200 m; 10 social features (e.g. schools, places of worship) **Cohesion and Character:** The Highway 3 segment is common to all three alternatives; This alternative largely follows the existing transportation corridor formed by Huron Church Road/EC Row Expressway/ Ojibway Parkway; moderate impact on community cohesion and character **Overall moderate impact**	**Displacements:** 115+ households 10- Businesses; **Disruption:** 1225+ households within 200 m; 7 social features (e.g. schools, places of worship) **Cohesion and Character:** The Highway 3 segment is common to all three alternatives; a new transportation corridor paralleling Todd Lane/Malden Road would sever residential areas from adjacent natural areas and impact highly valued community natural areas/open space; significant impact on community cohesion and character **Overall high impact**	**Displacements:** 120+ households 10+ Businesses; **Disruption:** 1165+ households within 200 m; 7 social features (e.g. schools, places of worship) **Cohesion and Character:** The Highway 3 segment is common to all three alternatives; a new transportation corridor paralleling Todd Lane/ Sprucewood Ave. would sever residential areas from adjacent natural areas and impact highly valued community natural areas/open space; significant impact on community cohesion and character **Overall high impact**
Consistency with Existing and Planned Land Use	Consistent as existing route to Ambassador Bridge; not consistent as freeway Option utilizes existing transportation corridors, reducing impacts to current and future land uses in this area of the City compared to the other options **Overall moderate impact**	Highway 3 section consistent as existing use to Ambassador Bridge, not consistent as freeway; New route through Spring Garden Planning Area not consistent with existing and planned land use; A new route is also not consistent with federal or provincial land use initiatives in this area to protect and perpetuate special and protected species and habitat in this area. **Overall high impact**	Highway 3 section consistent as existing use to Ambassador Bridge, not consistent as freeway; New route through Spring Garden Planning Area and Ojibway/Black Oak Natural Heritage Areas not consistent with existing and planned land use; A new route is also not consistent with federal or provincial initiatives in this area to protect and perpetuate special and protected species and habitat in this area. **Overall high impact**
Protection of Cultural Resources	1 locally designated Heritage site; 2 known significant archaeological sites impacted **Overall moderate impact**	1 locally designated Heritage site; no known significant archaeological sites impacted **Overall low impact**	1 locally designated Heritage site; 1 known significant archaeological site impacted **Overall low impact**
Protection of Natural Environment	**Displacements:** ANSI = 0.49 ha ESA = 2.54 ha CNHS = 10.10 ha SSH = 10.98 ha **Disruptions:** (i.e. within 500m of ROW) ANSI = 31.06 ha ESA = 52.48 ha CNHS = 214.76ha **Overall moderate impact to designated features**	**Displacements:** ANSI = 16.94 ha ESA = 23.68 ha CNHS = 28.5 ha SSH = 32.44 ha **Disruptions:** (i.e. within 500m of ROW) ANSI = 125.31 ha ESA = 151.72 ha CNHS = 184.63 ha **Overall high impact to designated features**	**Displacements:** ANSI = 23.14 ha ESA = 30.14 ha CNHS = 21.7 ha SSH = 35.43 ha **Disruptions:** (i.e. within 500m of ROW) ANSI = 198.41 ha ESA = 219.54 ha CNHS = 131.99 ha **Overall high impact to designated features**
Improve Regional Mobility	Provides new freeway route; can separate int'l traffic and provide choice for local traffic; Utilizes existing key links in local network for int'l traffic Travel distance = 12.5 km Considered overall low benefit to regional mobility as this is only the access road portion	Provides new freeway route; can separate int'l traffic and provide choice for local traffic; Huron Church Road available for local use Travel distance = 12.7 km Considered overall low benefit to regional mobility as this is only the access road portion; slightly preferred over HCR/EC Row option	Provides new freeway route; can separate int'l traffic and provide choice for local traffic Huron Church Road available for local use Travel distance = 12.2 km Considered overall low benefit to regional mobility as this is only the access road portion; slightly preferred over HCR/EC Row option
Minimize Cost	Construction Cost = $759 M Traffic staging required along complete length; existing interchanges on HCR/Talbot Rd at Highway 3 and E.C. Row will require reconfiguration; reconstruction of west end of EC Row assumed; detours at crossing roads/intersections may be required; relocation of utilities and municipal infrastructure required **Overall high impact**	Construction Cost = $651 M Traffic staging required along Highway 3 section; existing interchange on HCR/Talbot Rd at Highway 3 will require reconfiguration; reconstruction of portion of EC Row assumed; detours at crossing roads/intersections may be required; relocation of utilities and municipal infrastructure required **Overall moderate impact**	Construction Cost = $606 M Traffic staging required along Highway 3 section and Ojibway Parkway section; existing interchange on HCR/Talbot Rd at Highway 3 will require reconfiguration; detours at crossing roads/intersections may be required; relocation of utilities and municipal infrastructure required relocation of utilities and municipal infrastructure required **Overall moderate impact**



Summary of Evaluation — Project Team Weighting

Summary of Evaluation	Weighting	CC-CI-CM-CN-CR Score	CC-CI-CM-CN-CR Weight x Score	CC-CI-CJ-CO Score	CC-CI-CJ-CO Weight x Score	CC-CI-CJ-CK-CR Score	CC-CI-CJ-CK-CR Weight x Score
Changes in Air Quality	12.39	3	37.17	3	37.17	3	37.17
Protect Community/ Neighborhood Characteristics	15.93	2	31.86	1	15.93	1	15.93
Maintain Consistency with Existing and Planned Land Use	12.39	2	24.78	1	12.39	1	12.39
Protect Cultural Resources	12.39	2	24.78	3	37.17	3	37.17
Protect the Natural Environment	15.93	2	31.86	1	15.93	1	15.93
Improve Regional Mobility	17.70	5	88.50	5	88.50	5	88.50
Minimize Cost	13.27	1	13.27	2	26.54	2	26.54
Total Weighted Score	100.00		252.22		233.63		233.63
Ranking			1		2		2

Public Weighting

Summary of Evaluation	Weighting	CC-CI-CM-CN-CR Score	CC-CI-CM-CN-CR Weight x Score	CC-CI-CJ-CO Score	CC-CI-CJ-CO Weight x Score	CC-CI-CJ-CK-CR Score	CC-CI-CJ-CK-CR Weight x Score
Changes in Air Quality	17.32	3	51.96	3	51.96	3	51.96
Protect Community/ Neighborhood Characteristics	15.49	2	30.98	1	15.49	1	15.49
Maintain Consistency with Existing and Planned Land Use	12.89	2	25.78	1	12.89	1	12.89
Protect Cultural Resources	13.14	2	26.28	3	39.42	3	39.42
Protect the Natural Environment	16.34	2	32.68	1	16.34	1	16.34
Improve Regional Mobility	15.28	5	76.40	5	76.40	5	76.40
Minimize Cost	9.54	1	9.54	2	19.08	2	19.08
Total Weighted Score	100.00		253.62		231.58		231.58
Ranking			1		2		2

CCG Weighting[a]

Summary of Evaluation	Weighting	CC-CI-CM-CN-CR Score	CC-CI-CM-CN-CR Weight x Score	CC-CI-CJ-CO Score	CC-CI-CJ-CO Weight x Score	CC-CI-CJ-CK-CR Score	CC-CI-CJ-CK-CR Weight x Score
Changes in Air Quality	17.30	3	51.90	3	51.90	3	51.90
Protect Community/ Neighborhood Characteristics	13.88	2	27.76	1	13.88	1	13.88
Maintain Consistency with Existing and Planned Land Use	13.69	2	27.38	1	13.69	1	13.69
Protect Cultural Resources	13.12	2	26.24	3	39.36	3	39.36
Protect the Natural Environment	17.11	2	34.22	1	17.11	1	17.11
Improve Regional Mobility	14.83	5	74.15	5	74.15	5	74.15
Minimize Cost	10.07	1	10.07	2	20.14	2	20.14
Total Weighted Score	100.00		251.72		230.23		230.23
Ranking			1		2		2

Detroit River INTERNATIONAL CROSSING STUDY

Community Objectives-Crossings and Plazas

Feedback was received through workshops, meetings and question and answer sessions with the public, businesses, agencies, interested individuals, as well as written submissions.

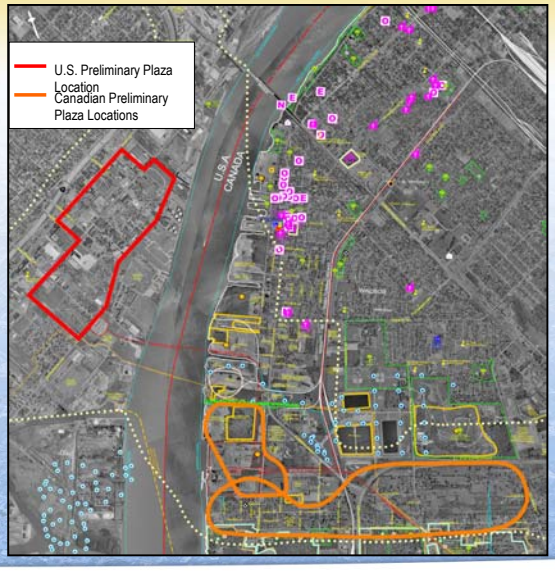
Inspection Plazas and River Crossings

- Concern with air and noise impacts; keep away from residential areas
- Concern with impacts to Sandwich community; keep plaza and crossing south of Prospect Avenue
- Keep away from natural features (Ojibway Prairie Area, Spring Garden ANSI, Black Oak Woods)
- Favourable plaza location is Brighton Beach industrial area
- Consider security/safety (spills) in the design of the plaza and crossing

Consultation, workshops and meetings will continue as the Project Team proceeds with the assessment of alternatives to incorporate refinements and design enhancement to reduce imports and increase benefits of the project.

Detroit River INTERNATIONAL CROSSING STUDY

Development of Plaza and Crossing Options



Inspection Plazas and River Crossings

- Concern with air and noise impacts; keep away from residential areas
- Concern with impacts to Sandwich community; keep plaza and crossing south of Prospect Avenue
- Keep away from natural features (Ojibway Prairie Area, Spring Garden ANSI, Black Oak Woods)
- Favourable plaza location is Brighton Beach industrial area
- Consider security/safety (spills) in the design of the plaza and crossing

Detroit River INTERNATIONAL CROSSING STUDY

Technical Objectives-Crossings

1. Maintain navigational clearances on the Detroit River
2. Locate crossing in area of sound bedrock
3. Avoid as much as possible areas sensitive to traffic impacts of crossing (e.g. noise, vibration, air quality) such as residential neighbourhoods
4. Minimize length of crossing
5. Maximum grade of crossing is 5%
6. Provide for 6 traffic lanes

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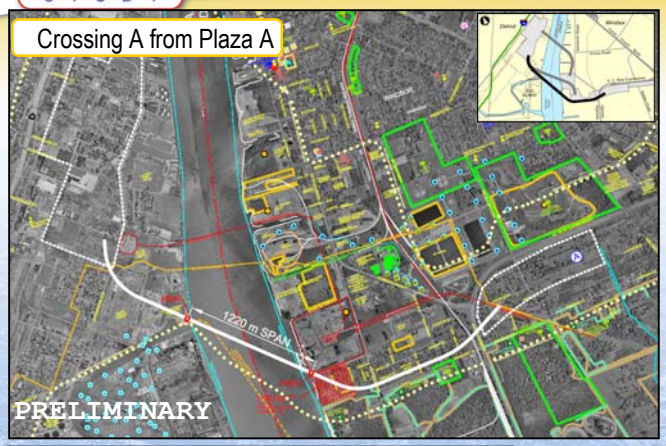
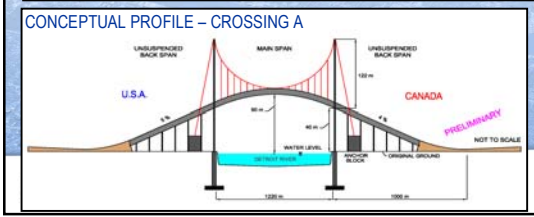
Detroit River INTERNATIONAL CROSSING STUDY

Crossing Alternative A



	Connecting to PLAZA A
Main Span Length:	1220 m
Number of Lanes:	6
Distance to Touchdown:	1000 m
Maximum Height over River:	50 m
Approx Height over River at Shoreline:	40 m
Approx. Height of Towers:	160 m
Distance from River to Plaza:	1740 m



Detroit River
INTERNATIONAL CROSSING
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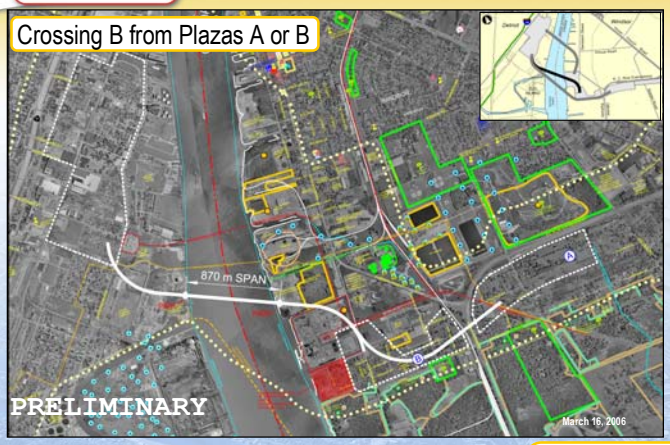
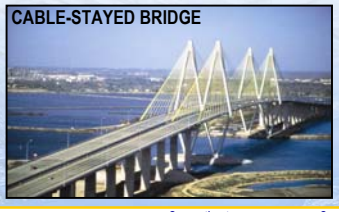
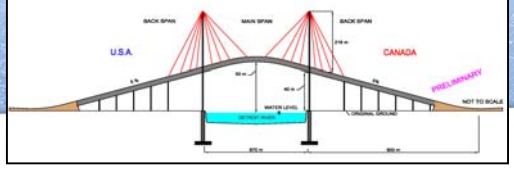
Crossing Alternative B





CONCEPTUAL PROFILE – CROSSING B AS CABLE-STAYED BRIDGE



	Connecting to PLAZA A	Connecting to PLAZA B
Main Span Length:	870 m	870 m
Number of Lanes:	6	6
Distance to Touchdown:	1120 m	975 m
Maximum Height Over River:	50 m	50 m
Height over River at Shoreline:	40 m	40 m
Height of Towers:	125–260 m	125–260 m
Distance from River to Plaza :	2120 m	760 m

Detroit River
INTERNATIONAL CROSSING
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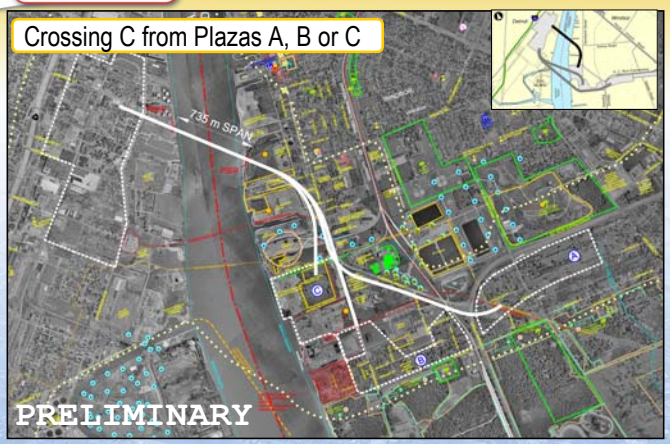
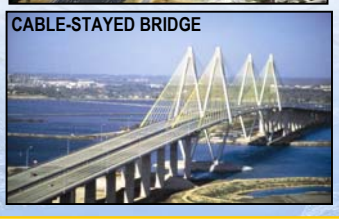
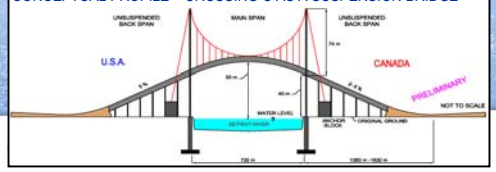
Crossing Alternative C





CONCEPTUAL PROFILE – CROSSING C AS A SUSPENSION BRIDGE



	Connecting to PLAZA A	Connecting to PLAZA B	Connecting to PLAZA C
Main Span Length:	735 m	735 m	735 m
Number of Lanes:	6	6	6
Distance to Touchdown:	1830 m	1920 m	1360 m
Maximum Height over River:	50 m	50 m	50 m
Height over River at Shoreline:	45 m (CAN)	45 m (CAN)	45 m (CAN)
Height of Towers:	115 – 225 m	115 – 225 m	115 – 225 m
Distance from River to Plaza:	2935 m	1955 m	1275 m

Example River Crossing Visualization

Plaza Requirements

The requirements for a new plaza to accommodate projected international traffic to the year 2035 include:

- Primary Inspection Areas
  - 17 commercial lanes
  - 22 passenger car lanes
  - Flexibility to convert passenger lanes for use by commercial vehicles
- Provision for 5 Outbound Inspection Lanes
- Secondary Inspection Areas
  - 150+ passenger/RV spaces
  - 6 bus parking spaces
  - 100+ commercial vehicle spaces
  - 12 Inspection Docks and VACIS Area
  - Agricultural Inspection Area
- Other Features
  - Main Port Building
  - Toll Lanes and Building
  - Administration/Maintenance Building
  - Duty Free Shop/Currency Exchange

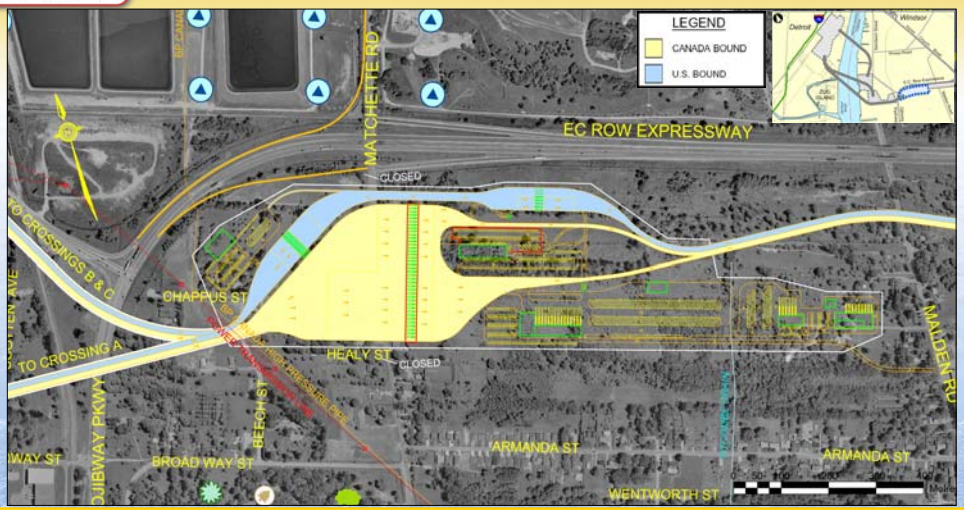
Detroit River INTERNATIONAL CROSSING STUDY

Technical Objectives-Plazas

1. Locate plaza as close to border as possible
2. Avoid as much as possible areas sensitive to a 24/7 Port of Entry operation (e.g. residential areas); provide for buffering/screening of plaza from any adjacent sensitive land uses
3. Avoid as much as possible areas of possible subsurface subsidence (e.g. brine wells)
4. Minimize land areas required, but provide flexibility for future expansion
5. Provide a clear line of sight between primary and secondary inspection areas
6. As much as possible, centralize inspection areas to reduce distances on plaza for employee access/response
7. Sites should provide a flat (3% or less) grade

Detroit River INTERNATIONAL CROSSING STUDY

Inspection Plaza Alternative A



Area:	Approx. 35 ha (85 acres)	**Land Uses Directly Affected:**	Residential; Industrial; Commercial.
Primary Inspection Lanes:	20 Passenger; 19 Commercial.	**Displacements:**	66 Residential Existing; 19 Residential Under Construction
Other Major Functions:	Secondary Inspection (Passenger/Commercial); Vehicle and Cargo Inspection System (VACIS); Agriculture Inspection; Toll Facilities.	**Utility Easements/ROWs:**	Power Transmission Line; BP Canada High Pressure Pipe
Can Connect with:	Crossings A, B & C	**Realignments/Closures:**	Chappus St.; Beech Street; Healy St.; Matchette Rd.

Detroit River INTERNATIONAL CROSSING STUDY

Inspection Plaza Alternative A – Conceptual Visualization

Detroit River INTERNATIONAL CROSSING STUDY

Inspection Plaza Alternative B

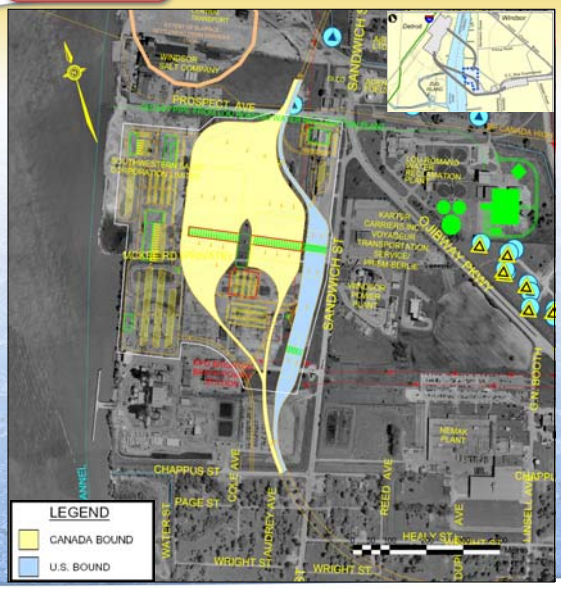
Area:	Approx. 35 ha (85 acres)	**Land Uses Directly Affected:**	Brighton Beach; OPG Parking; Transformer Station; Nemak; Ojibway Natural Area.
Primary Inspection Lanes:	20 Passenger; 19 Commercial.	**Displacements:**	12 Residential; 1 Manufacturing; 1 Utilities
Other Major Functions:	Secondary Inspection (Pass/Comm); Supplementary Inspection (VACIS); Agriculture Inspection; Toll Facilities.	**Existing Easements/ROWs:**	Power Transmission Line
Can Connect with:	Crossings B & C	**Realignments/Closures:**	Water St; Scott Ave; Cole Ave; Audrey Ave; Sandwich St; Chappus St.; Page St.; Wright St.; Broadway St.; Healy St.; Reed Ave.; Dupont St.

Detroit River INTERNATIONAL CROSSING STUDY

Inspection Plaza Alternative B – Conceptual Visualization

Detroit River INTERNATIONAL CROSSING STUDY

Inspection Plaza Alternative C



Area:	Approx. 35 ha (85 acres)
Primary Inspection Lanes:	20 Passenger; 19 Commercial.
Other Major Functions:	Secondary Inspection(Pass/Comm); Supplementary Vehicle Inspection (VACIS); Agriculture Inspection; Toll Facilities.
Land Uses Directly Affected:	Hydro One Transformer Station; Aggregate Operation; Windsor Salt; OPG Parking
Displacements:	Hydro One Transformer Station, Aggregate Operation; OPG Parking
Easements/ROWs Relocation:	Power Transmission Lines
Realignments/Closures:	Prospect Ave.; McKee St.; Euclid Ave.

Detroit River INTERNATIONAL CROSSING STUDY

Inspection Plaza Alternative C – Conceptual Visualization

Detroit River INTERNATIONAL CROSSING STUDY

Community Objectives-Routes

Feedback was received through workshops, meetings and question & answer sessions with the public, businesses, agencies and interested individuals, as well as written submissions.

Access Routes

- Concern with air and noise impacts
- Consider tunnel route in areas of residences and schools
- Consider safety in the design of the freeway
- Consider alternatives outside of the Area of Continued Analysis (e.g. DRTP alternatives, routes through ANSI areas)

Consultation, workshops and meetings will continue as the Project Team proceeds with the assessment of alternatives.

Detroit River INTERNATIONAL CROSSING STUDY

Access Route Alternatives

Objectives Developed Through Consultation:

1. Minimize the direct and indirect impacts to properties;

   i.e. Property Takings; Air, Noise, Dust impacts on sensitive areas such as residences and schools
2. Separate international and local traffic;
3. Maintain the local and regional function of the Huron Church Rd./Highway 3 Corridor; and
4. Keep traffic within the existing corridor during construction.

4 Basic Operational Concepts:

1. Separate freeway paralleled by one-way service roads; ✓
2. Separate freeway paralleled by existing Huron Church Road/Highway 3; ✓
3. Tunnel below a rebuilt Huron Church/Highway 3 Corridor; and ✓
4. Integrated freeway with interchanges. Service roads provided, as needed, to maintain local access; ✗ Not Carried Forward

Detroit River INTERNATIONAL CROSSING STUDY

Tunneling

Bored Tunnels

- The layer of soft ground available for boring is generally 25 m to 30 m, which is not thick enough for a 3-lane bored tunnel.
  - Bored Tunnel Requirements:
    - Ground to top of tunnel 15m
    - Tunnel 15 m
    - Bottom of tunnel to bedrock 5m
- The new freeway would have some sub-standard shoulder areas
- Access/egress by ramps would be difficult because of tunnel depth
  - Constructability concerns at tunnel portals
  - Risks with respect to dewatering and groundwater
  - Risks with respect to stability
- Conclusion: Bored tunnels are not considered practical

Cut and Cover Tunnels

- Generally feasible at depths up to 15m. Special controls will be required at depths greater than 7m
- Risks with respect to dewatering and groundwater
- Complex construction staging may be required
- Conclusion: Tunneling using cut and cover techniques will be analyzed and evaluated.

Detroit River INTERNATIONAL CROSSING STUDY

Tunnels (Cont.) - Ventilation Buildings

Why is Tunnel Ventilation Required?

- A vehicle tunnel can be either **naturally ventilated** or **mechanically ventilated**. Tunnel ventilation is required to control:
  - air quality within a tunnel;
  - air emissions from the tunnel's entrance and exit portals; and,
  - fire and/or emergency conditions within the tunnel.

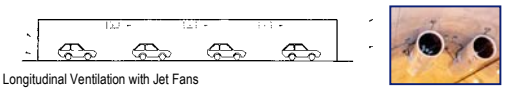
Ventilation Design Options

✖ **Natural Ventilated Tunnels** - Tunnels less than approximately 150 to 200 meters in length can be ventilated naturally. Wind and the movement of vehicles through the tunnels helps to disperse the vehicle exhaust. **Due to limitations with length, such a Design is not considered practical for Access Road alternatives.**

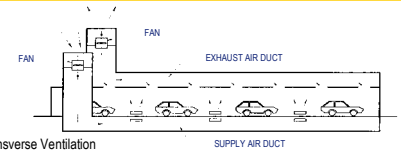
✓ **Mechanically Ventilated Tunnels –** *Longitudinal Ventilation* (e.g. jet fans) and *Full Transverse Ventilation* systems would be practical methods for the tunneled access road alternatives, as they could accommodate the 6 km (approximate) length the alternatives.

- **Longitudinal Ventilation** – 6 km tunnel would require approximately 300 jets; Suitable for low traffic volumes; Design issues include effectiveness of limiting portal emissions and fan noise; Examples include Cassier Tunnel, Vancouver.
- **Full Transverse Ventilation** – 6 km tunnel tunnel would require one large building or three smaller buildings; Design issues include noise, large land requirements but provides pollutant dispersal. Examples include Detroit-Windsor Tunnel.

Natural Ventilation



Longitudinal Ventilation with Jet Fans



Full Transverse Ventilation

Scales of a Ventilation Buildings

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Detroit River INTERNATIONAL CROSSING STUDY

Access Route Alternatives

1A One-way service roads on either side of 6-lane freeway at grade.

1B One-way service roads either side of 6-lane freeway depressed.

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URS

Detroit River INTERNATIONAL CROSSING STUDY

Access Route Alternatives

2A Six-lane freeway at grade, along side Huron Church/Highway 3.

2B Six-lane freeway depressed, parallel to Huron Church/Highway 3.

Detroit River INTERNATIONAL CROSSING STUDY

Access Route Alternatives

3 Cut and cover tunnel below rebuilt Huron Church Road/Highway 3 Corridor.

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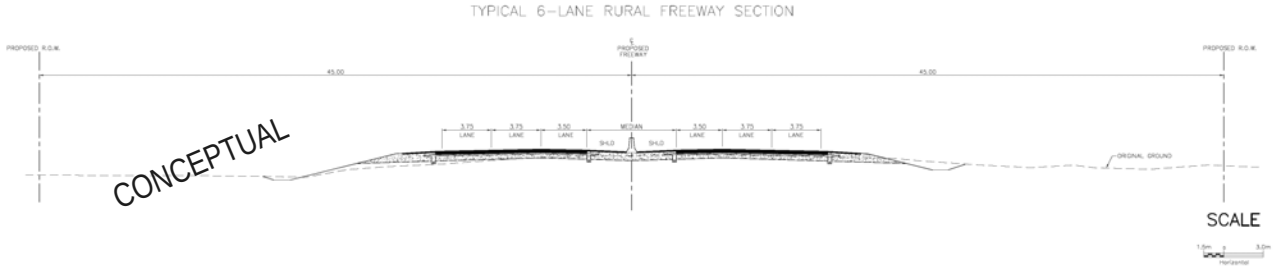
Access Road Conceptual Visualizations – Highway 401

Highway 401 from Dougall Parkway to Highway 3.

Existing Conditions

Highway 401 from North Talbot Road to Highway 3 to be widened from 4 to six lanes



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Detroit River
INTERNATIONAL CROSSING
S T U D Y

Access Road Conceptual Visualizations – Highway 3

Highway 3 between
Highway 401 and Howard Ave.

Existing Conditions

1A

One-way service roads on either side of 6-lane freeway at grade.

1B

One-way service roads either side of 6-lane freeway depressed.

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Detroit River
INTERNATIONAL CROSSING
S T U D Y

Access Road Conceptual Visualizations – Highway 3

Highway 3 between Highway 401 and Howard Ave.

2A Six-lane freeway at grade, along side Huron Church/ Highway 3.

2B Six-lane freeway depressed, parallel to Huron Church/Highway 3.

3 Cut and cover tunnel below rebuilt Huron Church Road/Highway 3 Corridor.

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Detroit River
INTERNATIONAL CROSSING
S T U D Y

Access Road Conceptual Visualizations – Highway 3

Highway 3 between Howard Ave. and Cousineau Rd.

Existing Conditions

Option 1

1A One-way service roads on either side of 6-lane freeway at grade.

Option 2

1A One-way service roads on either side of 6-lane freeway at grade.

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Detroit River
INTERNATIONAL CROSSING
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Access Road Conceptual Visualizations – Highway 3

Highway 3 between Howard Ave. and Cousineau Rd.

1B

One-way service roads either side of 6-lane freeway depressed.

Option 1

1B

One-way service roads either side of 6-lane freeway depressed.

Option 2

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Access Road Conceptual Visualizations – Highway 3

Highway 3 between Howard Ave. and Cousineau Rd.

2A

Six-lane freeway at grade, along side Huron Church/ Highway 3.

Option 1

2A

Six-lane freeway at grade, along side Huron Church/ Highway 3.

Option 2

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Detroit River
INTERNATIONAL CROSSING
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Access Road Conceptual Visualizations – Highway 3

Highway 3 between Howard Ave. and Cousineau Rd.

2B

Six-lane freeway depressed, parallel to Huron Church/Highway 3

Option 1

2B

Six-lane freeway depressed, parallel to Huron Church/Highway 3.

Option 2

3

Cut and cover tunnel below rebuilt Huron Church Road/Highway 3 Corridor.

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Access Road Conceptual Visualizations – Highway 3

Highway 3 between Cousineau Rd. to Cabana Rd.

Existing Conditions

1A One-way service roads on either side of 6-lane freeway at grade.

1B One-way service roads either side of 6-lane freeway depressed.

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Detroit River
INTERNATIONAL CROSSING
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Access Road Conceptual Visualizations – Highway 3

Highway 3 between Cousineau Rd. to Cabana Rd.

2A Six-lane freeway at grade, along side Huron Church/ Highway 3.

2B Six-lane freeway depressed, parallel to Huron Church/Highway 3.

3 Cut and cover tunnel below rebuilt Huron Church Road/Highway 3 Corridor.

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INTERNATIONAL CROSSING
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Access Road Conceptual Visualizations - Huron Church

Huron Church Road between
Cabana Rd. to Grand Marais Rd.

Existing Conditions

1A

One-way service roads on either side of 6-lane freeway at grade.

1B

One-way service roads either side of 6-lane freeway depressed.

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Access Road Conceptual Visualizations - Huron Church

Huron Church Road between Cabana Rd. to Grand Marais Rd.

2A Six-lane freeway at grade, along side Huron Church/ Highway 3.

2B Six-lane freeway depressed, parallel to Huron Church/Highway 3.

3 Cut and cover tunnel below rebuilt Huron Church Road/Highway 3 Corridor.

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Access Road Conceptual Visualizations - Huron Church

Huron Church Rd. between Grand Marais Rd. and E.C.Row Expressway.

Existing Conditions

1A

One-way service roads on either side of 6-lane freeway at grade.

1B

One-way service roads either side of 6-lane freeway depressed.

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Access Road Conceptual Visualizations - Huron Church

Huron Church Rd. between Grand Marais Rd. and E.C.Row Expressway.

2A Six-lane freeway at grade, along side Huron Church/ Highway 3.

2B Six-lane freeway depressed, parallel to Huron Church/Highway 3.

3 Cut and cover tunnel below rebuilt Huron Church Road/Highway 3 Corridor.

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Detroit River INTERNATIONAL CROSSING STUDY

Evaluation Factors

The assessment of Crossing, Plaza and Access Road options will be conducted in accordance with the Environmental and Technical Work Plans and will be based on the following factors and measures:

Factors	Performance Measures	
Changes to Air Quality	• Effect on concentration of particulate matter • Effect on concentration of gaseous pollutants	
Protection of Community and Neighborhood Characteristics	• Displacement of Residences and Social Features • Direct Impacts on Existing Businesses • Disruption to Residents and Social Features • Noise and Vibration Impacts • Community and Neighbourhood Impacts	• Traffic Impacts • Municipal Impacts • Displacement of Businesses • Disruption of Businesses • Other Effects on Businesses
Maintain Consistency with Existing and Planned Land Use	• Impacts to Land Use (existing and planned) • Impacts to Development Plans • Impacts to Contaminated Sites/Disposal Sites	
Protect Cultural Resources	• Impacts to Built Heritage Features • Impacts to Cultural Landscape Units	• Impacts to Parklands • Impact to Archaeological Features
Protect the Natural Environment	• Impacts to Ecological Landscapes • Communities/Ecosystems • Population/Species	• Surface Water/Groundwater Recharge Areas • Other Natural Resources
Improve Regional Mobility	• Assessment of Highway Network Effectiveness • Assessment of Continuous/ongoing River Crossing Capacity • Operational Considerations of Crossing System (River Crossing and Plaza)	
Minimize Cost	• Primary Construction Cost • Assessment of Constructability	

Detroit River INTERNATIONAL CROSSING STUDY

Evaluation Factors and Performance Measures

Changes in Air Quality

- Concentrations of pollutants associated with vehicle exhaust will be determined through computer modelling of future traffic conditions
- Model will predict ambient concentrations at sensitive receptors both with and without the project
- Results will be compared to MOE Ambient Air Quality Criteria and National Ambient Air Quality Objectives

Detroit River INTERNATIONAL CROSSING STUDY

Evaluation Factors and Performance Measures

Protection of Community & Neighbourhood Characteristics

- Local access traffic impacts
- Potential increases in noise levels at sensitive receptors
- # of residences and businesses potentially displaced and disrupted
- # of social features displaces and disrupted
- Potential impacts to delivery of public transit, school bus routes, emergency services and other services
- Public safety and security
- Impacts to community cohesion and character
- Examine direct and indirect effects on existing businesses in Area of Continued Analysis

Detroit River INTERNATIONAL CROSSING STUDY

Evaluation Factors and Performance Measures

Consistency with Existing and Planned Land Use

- Potential impacts to present and approved land uses and development applications
- Displacement/disruption effects to known contaminated sites or disposal sites
- Displacement/disruption effects to areas of potential for contamination
- Review land use types adjacent to connecting routes

Detroit River INTERNATIONAL CROSSING STUDY

Evaluation Factors and Performance Measures

Protection of Cultural Resources

- National historical sites displaced/disrupted
- Provincially designated properties displaced/disrupted
- Heritage easements displaced/disrupted
- Municipally-listed built heritage features displaced/disrupted
- Locally identified built heritage features displaced/disrupted
- Number of known archaeological sites or areas of high potential displaced/disrupted
- Cultural landscapes displaced/disrupted
- Disturbance of areas of archaeological site potential
- Parklands affected

Detroit River INTERNATIONAL CROSSING STUDY

Evaluation Factors and Performance Measures

Protection of Natural Environment

- Identify impacts to ecological landscapes
- Identify impacts to terrestrial communities/ecosystems
- Identify and evaluate impacts to aquatic communities/ecosystems
- Identify and evaluate impacts to Species at Risk
- Identify impacts to surface water, including stormwater and existing drainage in the study area
- Identify potential impacts to groundwater resources, including proximity to drinking wells

Detroit River INTERNATIONAL CROSSING STUDY

Evaluation Factors and Performance Measures

Improve Regional Mobility

- Highway Network Effectiveness
  - Service Levels on freeway and service roads
  - Operations at interchanges/intersections
- Continuous/ongoing river crossing capacity (i.e. redundancy)
  - Assessment of access to crossing
  - Separation of international and local traffic
- Operational Considerations of Crossing System (River crossing and Plaza)
  - Distance to plaza from international border
  - Accessibility
  - Serviceability
  - Security
  - Flexibility for expansion

Detroit River INTERNATIONAL CROSSING STUDY

Evaluation Factors and Performance Measures

Minimize Cost (includes assessment of constructability issues)

- Preliminary Costs
  - Millions of $ (2006) (includes construction, property, staging and maintenance)
- Constructability
  - Site constraints (e.g. utilities, land uses)
  - Geotechnical constraints (e.g. soils, brine wells)
  - Construction staging/duration
  - Assessment of construction risks
  - Degree of disruption due to construction
  - Degree of impact on traffic during construction
  - Length of alternatives (e.g. length of roadway skew angle of international crossing)

Detroit River INTERNATIONAL CROSSING STUDY

Governance

In addition to selecting a location for a new or expanded crossing, the Partnership is studying governance options to determine the structure for ownership, operation and maintenance of a new or expanded facility. The Partnership is committed to ensuring that any new or expanded crossing is subject to appropriate public oversight.

- Range of alternative governance models under consideration:
  - Government ownership and traditional capital procurement
  - Concession agreement
  - Combinations of the above
  - Other options

Detroit River INTERNATIONAL CROSSING STUDY

Next Steps

Consultation with Municipalities, Agencies, First Nations Interest Groups and U.S. Project Team	**Ongoing**
Obtain Comments on Crossing, Plaza and Access Road Options	**March - April '06**
PIOH3 Meeting at Ciociaro Club	March 28
PIOH3 Meeting at Novelletto Rosati Complex	March 30
Workshop at Ciociaro Club *(Please Register to Attend)*	April 11
Workshop at Novelletto Rosati Complex *(Please Register to Attend)*	April 12
Assess Options	**Spring/Summer '06**
Meetings to be scheduled for May, June and August	
Other meetings upon request	
Present Results of Assessment	**Nov./Dec. '06**
PIOH 4 and Workshops	To be Scheduled
Present Selection of Technically and Environmentally Preferred Alternative	**Spring '07**
PIOH5 and Workshops	

PIOH 3 Workshop Registration

Workshops are being arranged to allow interested persons opportunities to discuss the crossing, plaza and access road alternatives as well as project issues in greater detail with the Project Team.

- The workshops are scheduled as follows (additional dates will be arranged as required):

ACCESS ROADS
Tuesday April 11, 2006
6:30 p.m. to 9:00 p.m.
Ciociaro Club

CROSSINGS AND PLAZAS
Wednesday April 12, 2006
6:30 p.m. to 9:00 p.m.
Novelletto Rosati Complex

- Possible topics of discussion include:
  - Design issues relating to crossing alignments, plaza layout and access route alignments
  - Proposed methods and factors for the assessment of alternatives
  - Measures for reducing impacts and increasing benefits of the project
  - Design enhancements
- If you are interested in attending one of these workshops, please provide your contact information on the registration form available at this PIOH.
- For further information, please visit **www.partnershipborderstudy.com** or speak to a member of the Project Team.

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