

DETROIT RIVER INTERNATIONAL CROSSING STUDY

County of Essex

June 4, 2008

The Border Transportation Partnership

Canada



U.S. Department of Transportation
**Federal Highway
Administration**



Ontario



Purpose of the DRIC Study

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.

To construct a new end-to-end transportation system that will link Highway 401 to the U.S. interstate system with inspection plazas and a new river crossing in between.

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)

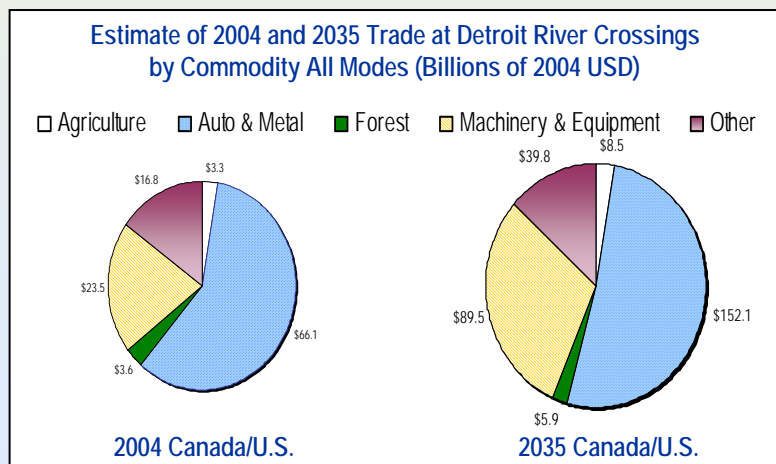
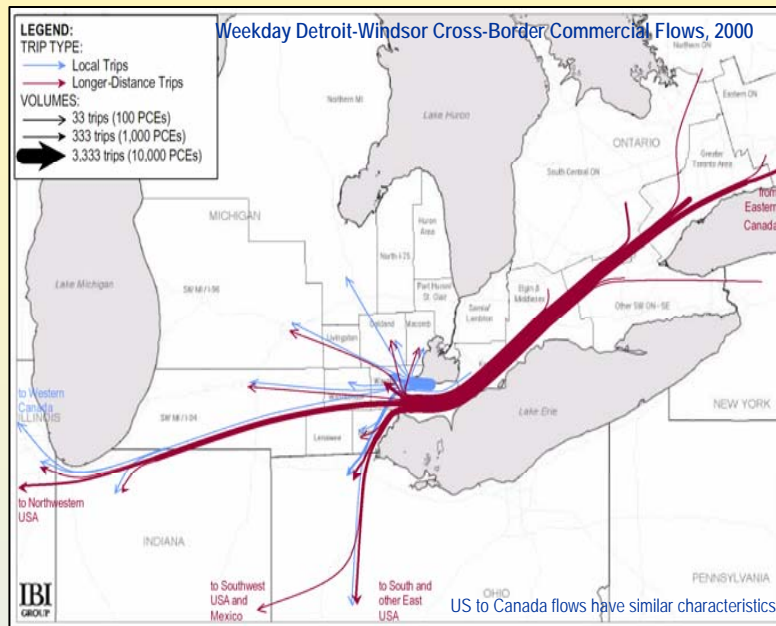
The Study Team seeks to implement transportation solutions which minimize community and environmental impacts as much as possible. In particular, the Canadian Study Team is looking to address the local communities' goals to:

- *Improve quality of life*
- *Take trucks off local streets*
- *Improve traffic movement across the border*

Purpose of the DRIC Study

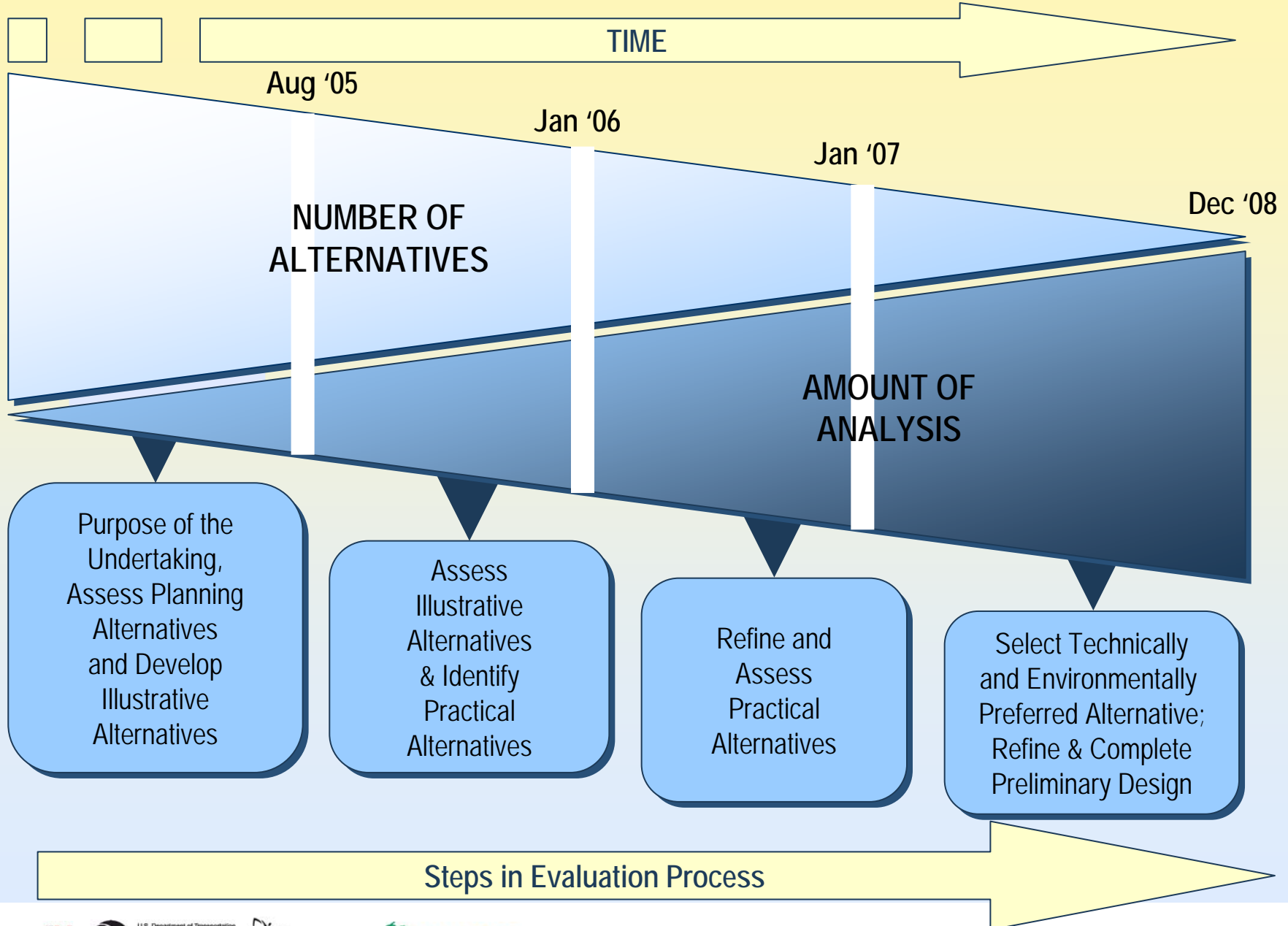
- The Canadian study team is looking to address the local communities' goals to:
 - *Improve quality of life*
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 - *Improve traffic movement across the border*

Windsor-Detroit: A Vital Link

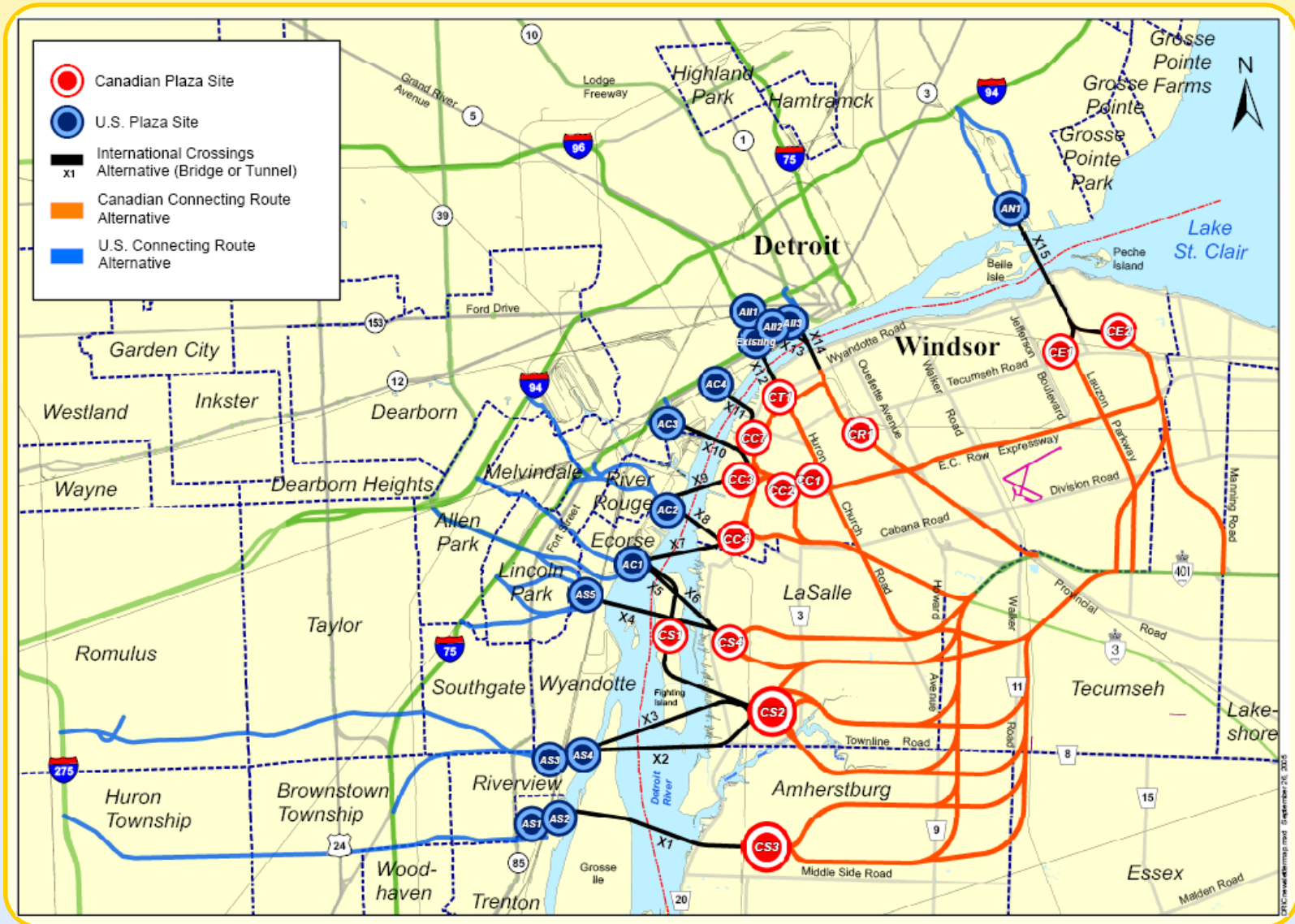


- More than 1/3 of the value of Canada's total exports and imports by road passes through Windsor-Detroit
- Over 80% of all goods crossing the Detroit River are carried by truck
- 50% of truck traffic and 90% of car traffic crossing the border is generated locally (i.e. Windsor, Essex/Detroit)
- The corridor is significant to the economies of two nations

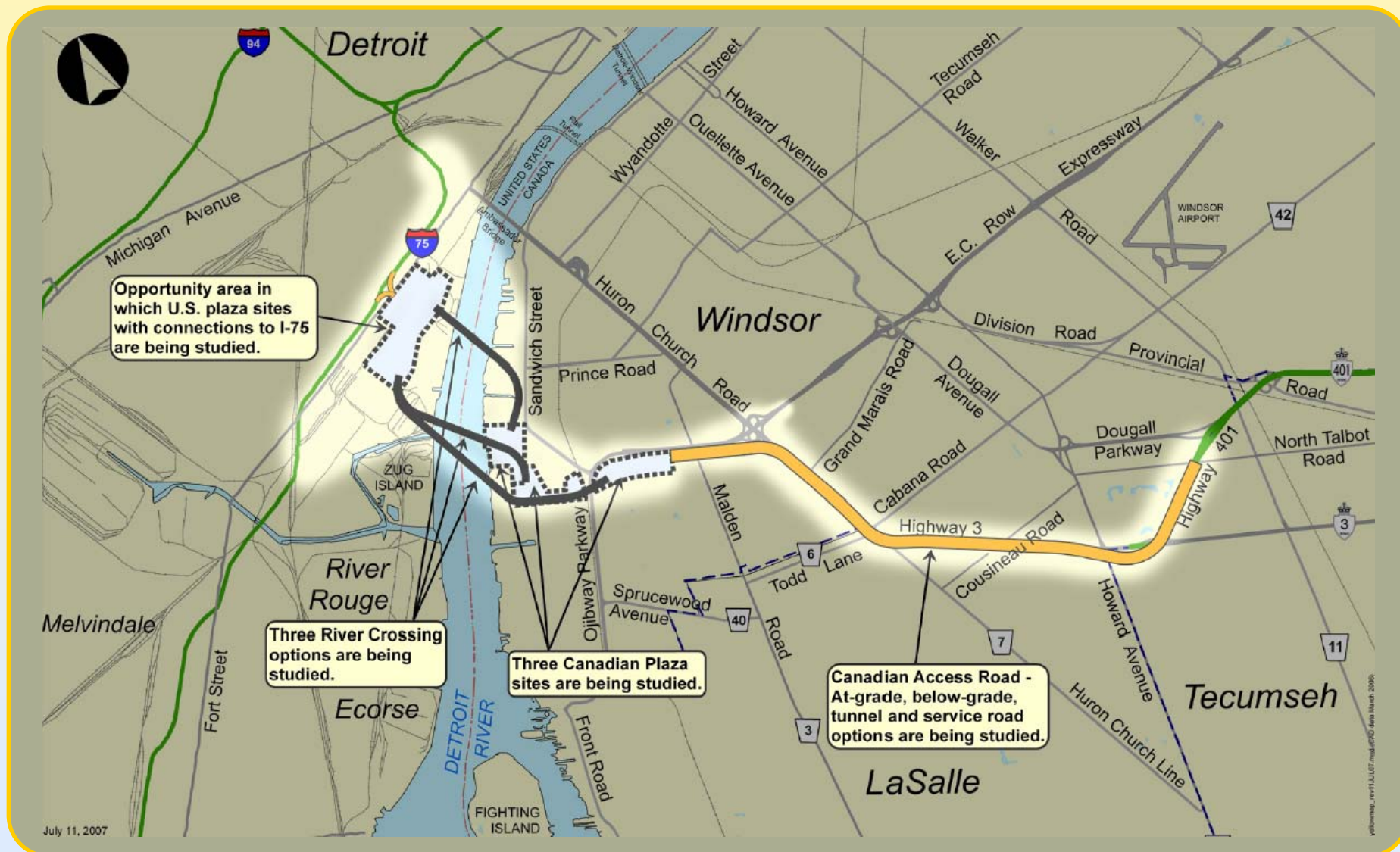
Evaluation Process



What Alternatives Were Studied?



Crossing, Plaza & Access Road Alternatives



Practical Access Road Alternatives



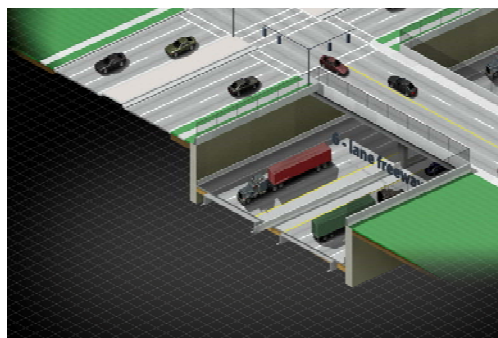
1a One-way service roads on either side of 6-lane freeway at grade;



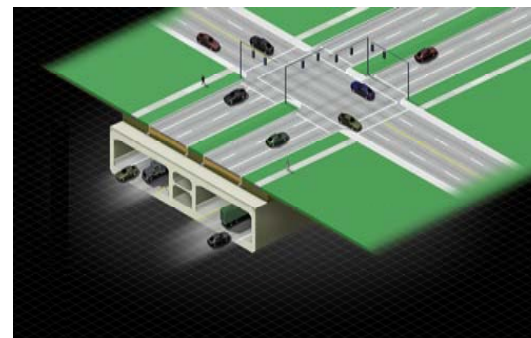
1b One-way service roads either side of 6-lane freeway below grade;



2a Six-lane freeway at-grade, parallel to Huron Church/Highway 3;



2b Six-lane freeway below grade, parallel to Huron Church/Highway 3;

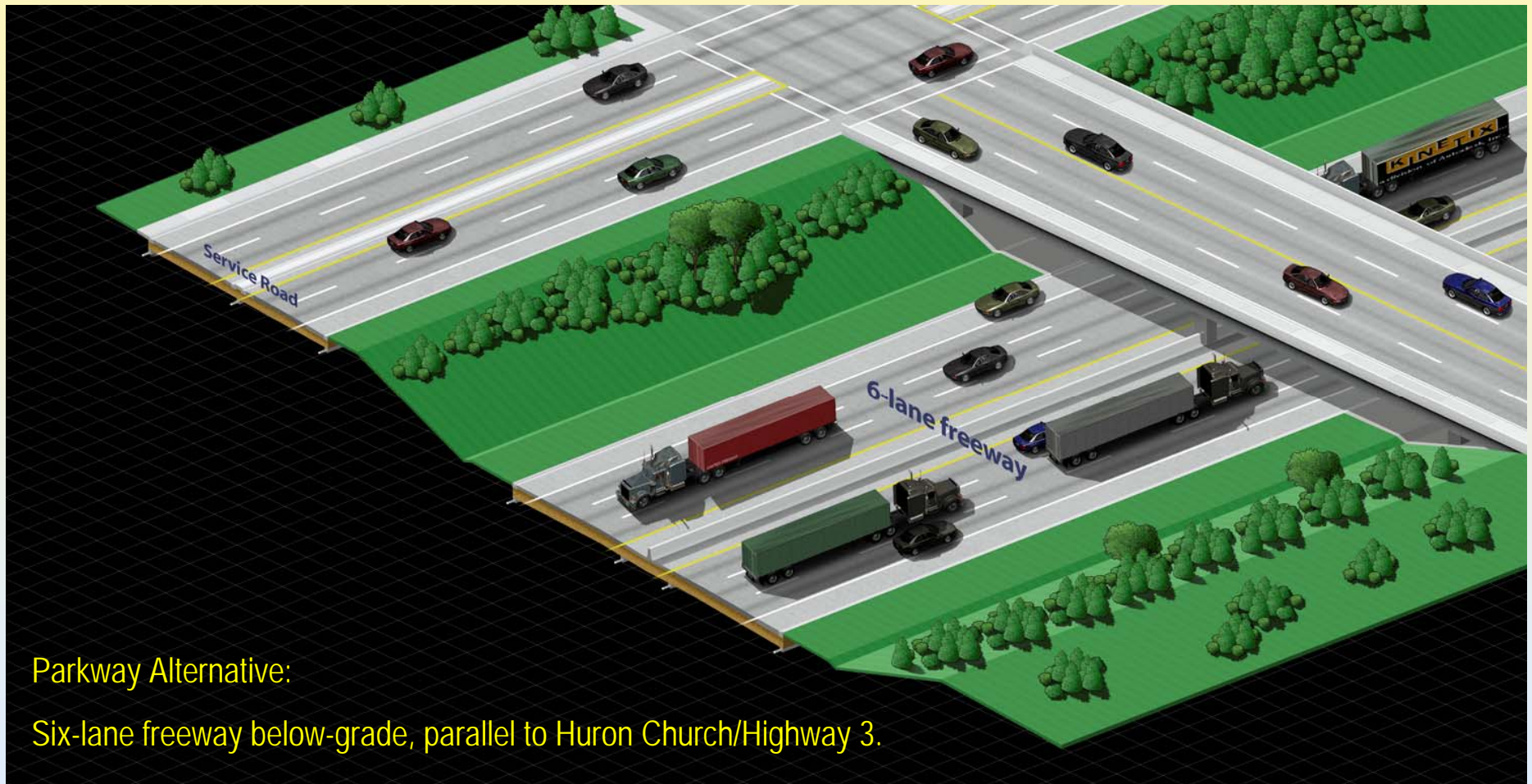


3 Cut and cover tunnel below rebuilt Huron Church Road/Highway 3 Corridor;

Summary of Analysis – August 2007

- The results of the analysis do not support further consideration of an at-grade roadway (Alternatives 1A and 2A)
 - Least costly solution and fewer constructability risks
 - Fewer benefits in terms of protecting community and neighbourhood characteristics
- The results of the analysis do not support further investigation of an end-to-end tunneled access road (Alternative 3)
 - No significant benefits to justify significant additional cost when compared to other alternatives
 - Other alternatives are available that offer similar benefits with less cost and less risks
- The Parkway alternative consisting of a below-grade access road with tunnel sections was developed based on refinements to the below grade and tunneled alternatives

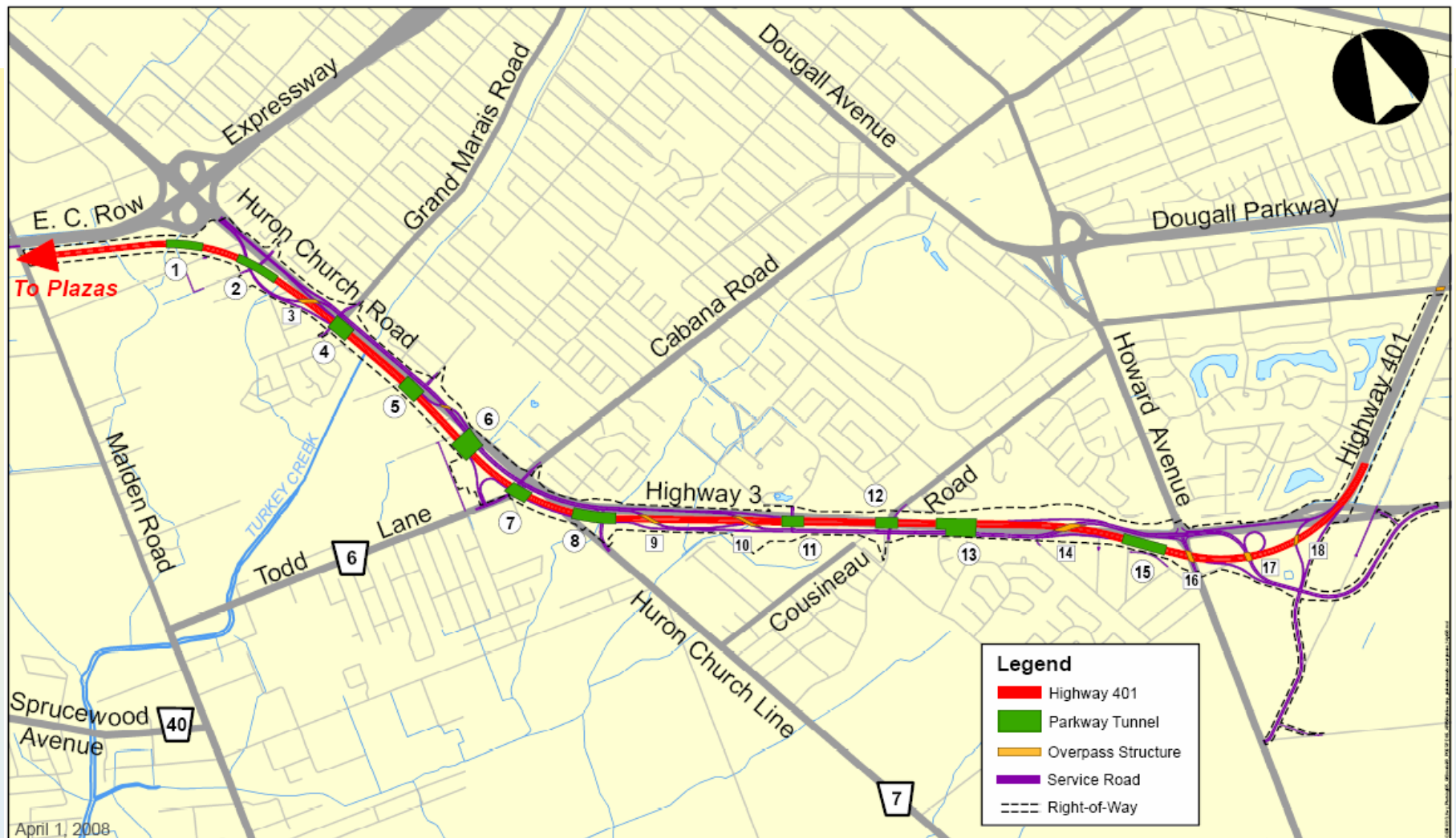
The Windsor – Essex Parkway



Parkway Alternative:

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

- Following the last round of PIOHs in August of 2007, the Parkway was refined to include:
 - Additional Tunnel in vicinity of Spring Garden
 - Location and Length of Tunnel at Oliver Estates revised
 - Overall length of tunnels increased to 1.86 km
 - Other Tunnel lengths and locations refined
 - Pedestrian and Cyclists Trails refined
 - New Loop ramp at Todd Lane (EW-S)
 - Howard Avenue Interchange modified to include connection to possible future Laurier Parkway Extension



April 1, 2008

I.D.	Location of Tunnel	Tunnel Length (M)	Roof Area (Sq M)
①	Spring Garden	200	9,000
②	Ramp N-E and Labelle Street	240	10,810
④	Grand Marais Road West	120	9,550
⑤	Pulford Street	120	9,705
⑥	Reddock St - Double Tunnel	120	15,320

Structures ③ ⑨ ⑩ ⑭ ⑮ ⑯ ⑰ ⑱ are proposed as roadway overpasses

I.D.	Location of Tunnel	Tunnel Length (M)	Roof Area (Sq M)
⑦	Cabana Road West	120	8,300
⑧	Huron Church Line	240	14,400
⑪	St. Clair College	120	7,225
⑫	Cousineau Road	120	7,225
⑬	Hearthwood Place - Double Tunnel	220	19,250
⑮	Oliver Estates Area	240	13,200

Changes in Air Quality

- All alternatives provide a net benefit to local air quality by reducing tailpipe emissions and reducing traffic diversion to city streets
- No substantive difference in changes in air quality among all alternatives considered
- End-to-end tunnel with ventilation buildings can result in minor reductions in particulate concentrations within 50m of right-of-way when compared to other alternatives
- The Windsor-Essex Parkway has similar benefits to air quality as other alternatives

Protect Community & Neighbourhood Characteristics

All Alternatives:

- Reduce international traffic on local streets
- Have no predicted noise impacts
- Have impacts in the Spring Garden Road / Malden Road area
- Have similar effect to neighbourhoods/businesses/social features
- Affect the same neighbourhoods to varying degrees

Plaza A connection has greater impacts than Plaza B/C connections

Below-grade alternatives provide aesthetic benefits

Protect Community & Neighbourhood Characteristics

- The Windsor-Essex Parkway provides greater buffer between neighbourhoods and roadway and as such requires more property
 - New tunnel connections reduce the 'barrier effect' of the roadway
 - New recreational and greenspace areas are possible along the corridor
 - Buffering effect reduces exposure of residences adjacent to roadway



*  **THE WINDSOR-ESSEX**
Parkway
BUILDING THE RIGHT SOLUTION NOW preferred

Maintain Consistency with Existing & Planned Land Use

- Windsor-Essex Parkway design enables buffer areas and landscaping
- Recreational uses can be developed with the Windsor-Essex Parkway, consistent with Windsor and LaSalle planning policies promoting active and healthy communities
- The Windsor-Essex Parkway is consistent with Provincial Planning Policies
- Plaza A connection has greater impacts than Plaza B/C connection



Protect Cultural Resources

- No difference among alternatives in terms of built heritage and archaeological features impacted
- Windsor-Essex Parkway provides greater opportunities for new parks/recreation areas linked to existing parks/trails



Protect the Natural Environment

- No significant difference among alternatives
- The Windsor-Essex Parkway provides greater opportunities for restoration, enhancement and ecological connections
- Plaza A connection has greater impacts than Plaza B/C connection

Improve Regional Mobility

- All alternatives provide a high benefit to regional mobility
 - Add capacity
 - Separate international and local traffic
 - Get trucks off local streets
- The Windsor-Essex Parkway provides
 - Better access between freeway and service road
 - Better service road operation

*  **THE WINDSOR-ESSEX Parkway** preferred
BUILDING THE RIGHT SOLUTION NOW

Cost and Constructability

- The Windsor-Essex Parkway alternative (\$1.6 billion) has higher construction cost than other below-grade alternatives
- Cost estimates (\$CDN for year 2011, Highway 401 to Malden Road)
 - At-grade alternatives: \$620 million to \$920 million
 - Below-grade alternatives: \$1.0 billion to \$1.4 billion
 - Tunnel alternatives: \$3.6 billion to 3.8 billion
- Windsor-Essex Parkway cost much higher than at-grade alternatives but much less than end-to-end tunnel

Summary of Assessment

Factor	Preferred Alternative
Air Quality	No Clear Preference
Community & Neighbourhood	Windsor-Essex Parkway
Land Use	Windsor-Essex Parkway
Cultural Resources	Windsor-Essex Parkway
Natural Environment	No Clear Preference
Regional Mobility	Windsor-Essex Parkway
Cost & Constructability	At-grade

- Overall: Advantages of Windsor-Essex Parkway outweigh higher costs and constructability concerns associated with this alternative

*  **THE WINDSOR-ESSEX Parkway** preferred
BUILDING THE RIGHT SOLUTION NOW

GreenLink

- Concept presented by the City of Windsor as input to The Parkway
- DRIC study team reviewed materials provided by Windsor
 - Same basic alignment as the Windsor-Essex Parkway but includes greater emphasis on tunnelling
 - Provides access to local road network at similar locations
 - Many features of GreenLink have been incorporated in the Windsor-Essex Parkway and are reflected in the analysis

Understanding GreenLink

- Knowledge of GreenLink helped DRIC team to develop Parkway
- Parkway developed from DRIC Practical Alternatives
 - Alternative 2B (below-grade freeway)
 - Alternative 3 end-to-end tunnel option
- DRIC Team analyzed end-to-end tunnel and found that tunnels offer little improvement in air quality
 - Tunnels in GreenLink would not provide substantial improvement in air quality, in comparison to Parkway

- There are many similarities between GreenLink and The Windsor-Essex Parkway:
Both Plans
 - Feature a six lane below-grade freeway with separate service roads for local traffic
 - Provide tunnelled sections in key locations
 - Include continuous trails that succeed in linking communities
 - Have nearly identical property requirements with buffer areas between the roadway and the adjacent community
 - Provide hundreds of acres of greenspace
 - Provide an opportunity to create a signature gateway welcoming travellers to Canada, Ontario and Windsor and Essex County.

- There are also many differences between GreenLink and The Windsor-Essex Parkway
- GreenLink does not meet provincial standards including:
 - Substandard shoulder widths
 - Insufficient drainage system
- GreenLink cost estimate does not include all expenditures required including:
 - **Only** accounts for road work from Highway 3 to EC Row Expressway
 - Substandard shoulder widths
 - Does not account for engineering and contract administration
 - Cost does not include adjustments for inflation
- Adjusting Greenlink cost estimate for total length of project, and to 2011 dollars, total cost estimated increases to \$2.3 and \$2.5 billion.
- Costs Approximately \$1 billion more than The Windsor-Essex Parkway, with no additional benefits

The Windsor-Essex Parkway includes:

- Six-lane below-grade freeway
- Four lane service road
- At least 240 acres of open space
- 11 tunnels
- Over 20 kms of new pedestrian and cyclists trails
- At Least 20 Interchange Ramps

Windsor-Essex Parkway provides 12,000 new jobs

- Complete evaluation of plaza-crossing alternatives with U.S. Team
- Preferred end-to-end solution anticipated Spring 2008
- Public Information Open Houses, Workshops
 - Dates to be determined
- Additional refinements possible following consultation
- Complete Environmental Assessment Documentation
 - Late Fall 2008



www.weparkway.ca

DRIC Study – Canadian Team

Ministry of Transportation

Windsor Border Initiatives

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