Detroit River INTERNATIONAL CROSSING S T U D Y

DETROIT RIVER

INTERNATIONAL CROSSING STUDY

Update of Study Progress

August 2007

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

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The Border Transportation Partnership

Canada

U.S. Department of Transportation Federal Highway Administration

Ontario

MDOT Michigan Department of Transportation

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*

Environmental Assessment Key Study Activities

Environmental Assessment Key Study Activities

Identify Study Area Features, Opportunities & Constraints	✓
Develop Initial Set of Crossing Alternatives, Plaza Locations & Connecting Routes in Canada and the U.S.	✓
Define Area of Continued Analysis	✓
Present Specific Crossing, Plaza and Access Road Options	✓
Complete Social, Economic, Environmental and Engineering Assessments	
Identify Preferred Crossing Location, Plaza Locations & Connecting Routes in Canada and the U.S.	
Finalize Engineering and Mitigation Measures	
Document Study and Submit for Approvals	

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Crossing, Plaza & Route Alternatives

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Evaluation Factors

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

- Changes to Air Quality
- Protection of Community and Neighbourhood Characteristics
  - *includes assessment of residential and business property impacts, social features including schools, impacts to noise levels, access and community features*
- Consistency with Existing & Planned Land Use
- Protection of Cultural Resources
  - *includes parks, historic sites and areas of archaeological significance*
- Protection of Natural Environment
  - *includes plant and animal species and habitat features*
- Improvements to Regional Mobility
- Cost and Constructability

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Update on Analysis – Access Roads

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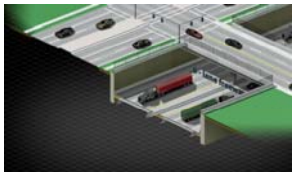
Access Road Alternatives

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, along side 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.

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Practical Alternatives

- All alternatives improve quality of life
- All alternatives take trucks off local streets
- All alternatives improve movement of traffic across the border

Practical Alternatives Analysis

Changes to Air Quality

- Access road is one component of the air quality issue in Windsor
  - Local air quality is more strongly influenced by background sources and transboundary flow than by transportation sources
- Improvements to fuels and technologies will reduce pollutants from vehicle emissions in future
- All alternatives provide a benefit to air quality in the immediate area of the corridor compared to do-nothing
  - Elimination of stopping and start-up at traffic signals for international traffic
  - No notable effect beyond 100m of access road for $PM_{2.5}$
  - Little difference among alternatives at 100m from right-of-way

Access Road Analysis

Noise Impact Assessment

- No substantial change in noise levels after mitigation with any alternatives
  - Malden Rd/Spring Garden area requires further study for mitigation

Access Road Analysis

At-grade alternatives (Alternatives 1A and 2A) do not provide the best balance of advantages and disadvantages

- least costly solution and fewer constructability risks
- fewer benefits in terms of protecting community and neighbourhood characteristics

Assessment does not support further analysis at this time

Access Road Analysis

End-to-end tunnel

- No advantages in terms of reducing impacts to properties, land use, natural features or cultural features
- Some advantages to air quality in the immediate corridor, but all alternatives provide same benefit to some degree
- Reductions in particulate concentrations offset by increases in gaseous pollutants
- Cost is 3 to 6 times higher

Assessment does not support further analysis at this time

Parkway Option

- Addresses the future transportation and mobility needs of the region
- Responds to local concerns

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Parkway Option

View of Labelle Street looking east from EC Row Expressway

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Parkway Option

View of Grand Marais short tunnel looking southeast from pedestrian path

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Parkway Option

Aerial view of Oakwood short tunnel deck looking east

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Parkway Option

View of southbound Highway 401 towards Oakwood short tunnel

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Parkway Option

Aerial view of Huron Church Line short tunnel looking east

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Next Steps – Access Road

- Refine Parkway option and complete analysis
- Continue to consult with public
- Complete technical and environmental studies
- With our U.S. partners, present a single technically and environmentally preferred alternative
- Submit final study documents

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Update on Analysis – Canadian Plazas and Crossings

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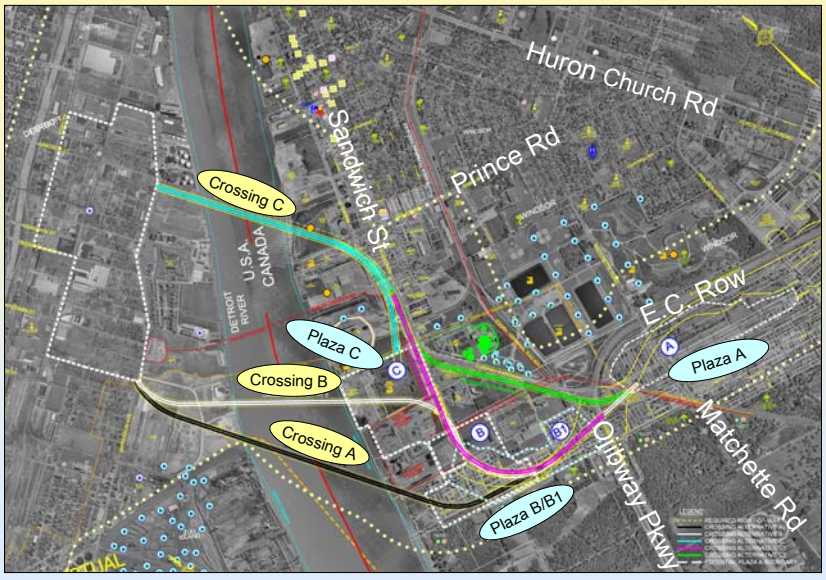
Plazas and Crossings – Findings to Date



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Plazas and Crossings – Findings to Date

- Analysis is still on-going
- Impacts associated with Plaza A and Crossing C are generally greater, given their proximity to residential areas
- The foundations investigations near the known brine well areas are nearing completion

Practical Alternatives Analysis

- All plazas and crossings result in change in air quality up to 250m away
- Alternatives displace between 35 and 70 residences and up to 6 businesses
- With Crossing C, approximately 100 households with notable change in noise levels
  - Cost effectiveness of mitigation measures requires further review
- Crossing A (longest) carries the highest cost:
  - $770 mil to $920 mil (USD) vs. $430-$580
  - Crossing A avoids known brinewell area on Canadian side

Next Steps – Plazas and Crossings

- Complete geotechnical investigations near brinewell areas
- Continue to consult with the public
- Complete the technical and environmental studies
- With our U.S. partners, present a single technically and environmentally preferred alternative
- Submit final study documents to approving agencies

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Property Acquisition

Property owners are seeking certainty about their future, but exact property requirements are not yet known

- Purchase requests are being considered for owners of properties currently having direct access to existing Highway 3 (Talbot Road) or Huron Church Road between Highway 401 and E.C. Row Expressway
- Contact Ministry of Transportation, Windsor Border Initiatives Implementation Group

Consultation Events

Public Information Open Houses

August 14th, 2007
2:00 p.m. to 8:00 p.m.
Holiday Inn Select, Ballroom
1855 Huron Church Road
Windsor

August 15th, 2007
2:00 p.m. to 8:00 p.m.
Ciociaro Club, Salons A & B
3745 North Talbot Road
Tecumseh

Public Workshop Sessions

August 22nd, 2007
2:00 p.m. to 9:00 p.m.
South Windsor Arena, Auditorium
2555 Pulford Street
Windsor

August 23rd, 2007
2:00 p.m. to 9:00 p.m.
South Windsor Arena, Auditorium
2555 Pulford Street
Windsor

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Air Quality Monitoring Update

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Ambient Air Monitoring

POLLUTANTS BEING MEASURED

- Measuring selected air pollutants from transportation sources
  - –Nitrogen Oxides (total NOx, NO, NO_2)
  - –Fine particulate matter ($PM_{2.5}$)
  - –- Selected air toxics:
    - Benzene
    - Acrolein *
    - Formaldehyde *
    - Acetaldehyde *
- Meteorology
    - Wind speed and direction
    - Temperature
    - Relative Humidity

* Provides the smell of diesel exhaust

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Ambient Air Monitoring

Station Operation

- Data is being collected continuously on an hourly basis
- Units are checked and recalibrated every two weeks
  - Self calibrate daily
- Equipment and sampling procedures were reviewed and approved by the MOE
- Speciated air toxics are being collected twice per week at each station
- Monitoring to continue for 1 year
  - Have collected data over 3 quarters to date
  - 2nd quarter report available on the project web site
  - 3rd quarter report to be released shortly

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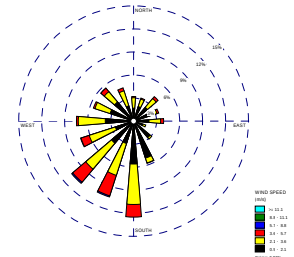
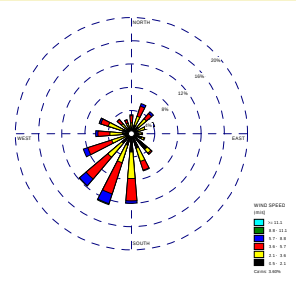
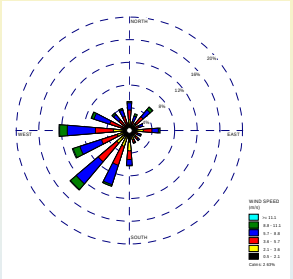
Wind Climate



OPHL Wind Rose
Oct 1, 06 – Mar 31, 07



SCC Wind Rose
Oct 1, 06 – Mar 31, 07



Windsor Airport
Wind Rose
Oct 1, 06 – Mar 31, 07

Ambient Air Monitoring

$PM_{2.5}$ Observations - October 2006 to March 2007

- Daily measured $PM_{2.5}$ concentrations are within the expected range
  - Ranged from 8 – 48 µg/m³ at the DRIC stations, and average 20 µg/m³
  - 3 year historical range at Windsor MOE stations was 1 – 52 µg/m³
- Concentrations at both stations are slightly elevated in comparison to historical seasonal trends MOE monitoring stations
  - MOE monitoring data for the period is not yet publicly available
- Observed some exceedances of the CCME Canada Wide Standard (CWS) at each site
  - 22 - 24 days above the CWS at each site
- Average concentrations are similar at both sites

Ambient Air Monitoring

NO_X Observations - October 2006 to March 2007

- Measured NO_X concentrations are within the expected range
  - Hourly ranged from 0 – 345 ppb
  - Daily ranged from 1 – 149 ppb
- Infrequent exceedances of the 1-hour or 24-hour MOE Ambient Air Quality Criteria (AAQC) for NO_X (200 ppb and 100 ppb respectively)
- Concentrations at both stations are slightly elevated in comparison to historical trends at MOE monitoring stations.
- NO_X concentrations were generally elevated during the morning and afternoon rush hour periods
- Measured concentrations are slightly higher at the OPHL site in comparison to the SCC site, but generally similar

Ambient Air Monitoring

VOC Observations – October 2006 to March 2007

Pollutant	Monitoring Station	Minimum Concentration	Maximum Concentration	Average Concentration	MOE AAQC
Formaldehyde	OPHL	1.0	5.0	2.2	65
	SCC	0.8	5.7	2.4	
Acetaldehyde	OPHL	0.3	2.4	1	500
	SCC	0.4	2.5	1.1	
Acrolein	OPHL	0.1	2.7	0.4	9.6*
	SCC	0.1	1.5	0.4	
Benzene	OPHL	0.3	1.8	0.6	NS
	SCC	0.3	3.1	0.6	

* converted to 24-hour from former 1-hour AAQC

Ambient Air Monitoring

Next Steps

- Continue monitoring for a 12-month period (to end of September 2007)
- Incorporate results of local MOE monitoring stations over same time period
  - Data not yet publicly available
- Validate the dispersion modeling
- Continue to incorporate the results into the AQ Assessment

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Update on Air Modelling

- Air dispersion modelling for the access road, plaza and crossing alternatives is complete
- Alternatives were evaluated in comparison to the no-build scenario
  - Results presented at August PIOH
    - Report will be available on project web site
  - Commencing air dispersion modelling on new Parkway Alternative