

## Improvements to Regional Mobility

As part of the impact assessment of the Detroit River International Crossing (DRIC) study, a review of transportation systems in Southwestern Ontario and Southeastern Michigan was undertaken. This review identified the improvements to mobility for international traffic (both truck and auto traffic) through increased capacity, improvements to border processing facilities, providing continuous access to the border crossing, and providing options in the border transportation network (redundancy) as compared to the “do nothing” alternative.

### How the Analysis was Done

The detailed traffic analysis incorporates an assessment of existing traffic operations at key locations as well as a detailed assessment of future traffic conditions for 2015, 2025 and 2035 horizon years. Passenger and commercial traffic volume forecasts were obtained from the Travel Demand Model developed for this study.

Existing traffic volumes were collected from a variety of sources including a series of traffic surveys undertaken by the study team in February 2006. The Practical Alternatives were assessed for measures of effectiveness such as levels of service, intersection delays, travel times, as well as network flexibility/local connections and anticipated changes to travel patterns.

The Synchro 6 and HCS 2000 software packages were used to predict traffic operations for various traffic, road network and horizon year scenarios. The analysis was undertaken for the intersections, arterial roadway sections as well as freeway segments within the Area of Continued Analysis.

### Existing Conditions

Highway 3 and Huron Church Road are high-order arterial roadways. In addition to providing a connection between Highway 401 and Highway 3 to the Ambassador Bridge, the road provides access to commercial and residential areas, as well as community and institutional uses.

Currently, both Highway 3 and Huron Church Road are generally operating with some congestion and near capacity during the peak hours. The proportion of trucks is largest nearest to the Ambassador Bridge plaza and during off-peak periods is as high as 60% and is approximately 30% during peak hours. Enhancements to border processing, such as FAST and pre-notification requirements along with additional primary inspection booths have reduced occurrences of resultant queues on Huron Church Road. Even with these enhancements the transportation system remains fragile.

### Future Conditions

By 2035, both international car and truck traffic through Windsor-Detroit is expected to grow significantly. Afternoon peak hour truck traffic is expected to more than double. International car traffic is expected to increase by about 50% over the next 30 years. If no new crossing facility is built, significant road capacity problems are expected to begin to occur by 2015. Conditions will deteriorate further by 2035 to a point where most intersections will operate over capacity. Unacceptable amounts of delay will be experienced, with travel times nearly doubling over existing conditions.

In the absence of improvements, it is expected that capacity problems will be widespread and not isolated to particular locations on Highway 3 and Huron Church Road. Traffic growth on Highway 3 and Huron Church Road will be constrained by its capacity limitations. By 2035, a significant amount of international traffic will divert to other Windsor/LaSalle area roads in order to avoid congestion on Highway 3 and Huron Church Road.

## **Practical Alternatives**

### **Access Road Alternatives**

All Practical Alternatives for the access road incorporate a new 6-lane freeway facility between the Highway 401/Highway 3 interchange and the new inspection plaza. The proposed new six-lane freeway will meet future demands to year 2035 and beyond by providing free flow traffic conditions from Highway 401 to the new inspection plaza. The six-lane freeway will also provide flexibility to designate lanes for streaming of border traffic (e.g. separate lanes for FAST/NEXUS traffic) in the vicinity of the new inspection plaza.

A service road will also be incorporated to enhance local access and mobility. All of the service roads will be two lanes in each direction with auxiliary turning lanes where required. All of the service road alternatives provide increased local and regional mobility over the "do nothing" alternative. This is primarily due to the creation of new capacity and shifting international traffic onto the new freeway. All Practical Alternatives will provide substantial travel time savings for local traffic when compared to the do nothing alternative.

Practical Alternatives 1A and 1B provide one-way service roads on each side of the freeway between Howard Avenue and the E.C. Row Expressway. Practical Alternatives 2A and 2B provide a parallel two-way service road beside the freeway. Major side streets will be connected across the new freeway and access ramps will connect the service roads to the freeway at key locations. Practical Alternatives 1A and 1B provide the most opportunities for connections between the service roads and the freeway. Practical Alternative 3 is a tunnel option that would have the two-way service road at-grade and generally above the tunnel itself. Existing side-street connections between Howard Avenue and Labelle Street/Spring Garden Road could remain in place under this alternative.

### **Plaza Alternatives**

In terms of providing improved border processing facilities to meet future travel demand and security requirements at the border crossing, both the Canadian and U.S. study teams are developing plaza alternatives that are much larger than those currently existing at the Ambassador Bridge and the Detroit-Windsor Tunnel. The plazas will be designed to serve the future (2035) travel demands at the border crossing. These new plazas are being developed in consultation with Canada Border Services Agency and the U.S. Department of Homeland Security Customs and Border Protection Branch to provide sufficient areas for primary inspection lane booths and on-site secondary inspection of people and goods. All the plaza alternatives will allow for dedicated NEXUS and FAST lanes and will provide for a substantial improvement of border processing capabilities including areas for permanent gamma ray inspection equipment.

### **Crossing Alternatives**

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

### **Remaining Activities**

The next steps for the access road are to refine the access points, interchanges and cross-street intersection configurations to improve operations and reduce impacts, where possible.

With respect to the plazas, U.S. and Canadian border agencies are reviewing the layouts of the plaza alternatives and will provide suggestions for operational improvements. These comments will be incorporated in the assessment of the alternatives.

For the crossing, a bridge type study is being undertaken to determine the preferred bridge alternative at each of the three crossing locations.