

REPORT SUMMARY

The Wilbur Smith Associates (WSA) team – comprised of Wilbur Smith Associates, IBI Group (consultant for the DRIC-EIS study model development), Resource Systems Group Inc. (a nationally recognized stated preference and behavioral market research firm), and the Centre for Spatial Economics (an independent economic forecasting firm) – was retained by the Michigan Department of Transportation (MDOT) to refresh the comprehensive traffic study undertaken in 2008 on behalf of Transport Canada for the new proposed Detroit River International Crossing (DRIC) within the Detroit-Windsor region.

STUDY OUTLINE

The comprehensive nature of this study required that additional detailed analysis be performed beyond the typical analyses implemented as part of the environmental process. The study for the new bridge addresses three fundamental questions pertaining to:

- How much border crossing demand currently exists in the corridor;
- How much will the border crossing demand grow in the future;
- What share of traffic is expected to use the proposed new crossing and what will drivers be willing to pay to use it?

In order to address each of these extensive data and modeling was undertaken and included; a comprehensive review of historical databases and studies; a comprehensive traffic count program; a new origin-destination survey; a stated preference survey; an independent economic assessment of the local and provincial/state economic trends; the application of enhanced traffic assignment, route selection, and toll diversion modeling techniques; a detailed traffic forecasts of the DRIC under the baseline; and a risk assessment to measure and quantify the range of the traffic and revenue. The comprehensive data collected for the study both historically and for future projections were used to develop models that best represented the multitude of factors that influences the border crossing demand. The annual traffic and revenue estimates for the proposed DRIC were developed taking into account multiple key variables such as border crossing travel times, corridor growth variables, traffic seasonality, border crossing choices, ramp-up, and toll rate sensitivities.

PROJECTED DETROIT/ WINDSOR BORDER CROSSING DEMAND

Many socio-economic variables were investigated to evaluate their correlation to the growth in border crossing demand for three market segments, namely, the same-day travelers (with a sub-market segmentation of work/commute and other/recreational), overnight travelers, and commercial vehicles. The data collected showed that the border crossing demand is dependent on a myriad of industries that are local, statewide, and nationwide in magnitude and capture. The border crossing commercial traffic growth is more dependent on the growth of the entire North American-Ontario Region.

The most significant contributor to the overall DRIC revenue potential is the commercial vehicle market as a result of the higher tolls paid by this market. The frontier commercial vehicles historically grew at significant rates of over 6 percent annually between 1974 and 1999 (a total of 280 percent) with minor flattening of this growth occurring during the recessionary period in 1991. Unlike the decline in passenger vehicular traffic that began in 2000, the reduction in the commercial vehicle growth trends first occurred in 2001 following several unforeseen and unprecedented events that included the September 11th, 2001 attacks (which took approximately three year to recover from), the recent 2007-2009 recession, and the automobile industry collapse. This resulted in a negative average annual growth of -3.6 percent between 2001 and 2009, however, in spite of these unprecedented events the commercial vehicle traffic over the most recent 25-year period, still grew 74 percent. Applying the existing short-term trends of the identified variables to the developed border crossing demand models shows similar trends to the dramatic gains in commercial vehicle crossing demand that has been demonstrated over the last six months.

SUMMARY OF STUDY RESULTS

- The growth of the border crossing passenger car markets will remain very low over the short-term with increases occurring over the longer term as the local and Michigan state economies diversify.
- The majority of commercial vehicle traffic using the Ambassador Bridge (AMB)/ Detroit-Windsor Tunnel (DWT)/ Blue Water Bridge (BWB) has origins/destinations outside of Michigan and account for over 65 percent of the total commercial vehicle market. The Ontario trade turnover growth is directly correlated to the commercial vehicle border crossing traffic growth trends.
- The DRIC by 2025 is expected to capture 27.6 percent of the total passenger vehicle traffic across AMB/DWT/BWB (resulting in a 23.3 percent market share at the Ambassador Bridge compared to 36.0 percent under the no-build scenario) and 44.2 percent of the overall commercial vehicle traffic (resulting in a 33.4 percent market share at the Ambassador Bridge compared to a no-build market share of 65.0 percent).
- The DRIC will by 2025 capture 34.5 percent of the overall combined traffic along the four frontier border crossings within the Detroit/Windsor/Port Huron/Sarnia region (resulting in a 27.5 percent market share at the Ambassador Bridge compared to the no-build share of 48 percent).
- The DRIC is anticipated to attract approximately 9,000 passenger cars and 9,500 commercial vehicles during a normal weekday by the opening year of 2016. These will by 2025 grow to 12,800 and 13,500 for the passenger car and commercial vehicle, respectively. The DRIC is therefore expected to serve a total of approximately 26,500 daily vehicles by 2025, and over 37,100 by 2040 with the miscellaneous traffic included.
- The baseline revenue estimates are forecasted in U.S. dollars to generate revenues of close to \$70.4 million (nominal dollars) in the opening year (2016) and are expected to grow to \$123.5 million by 2025 at an average annual rate of

approximately 6.4 percent with ramp-up effects included. The nominal revenues between 2035 and 2065 are projected to grow from \$196.1 million to \$577.1 million, which reflects a long-term average annual growth rate 3.7 percent over the 30 year period under a 2.3 percent inflation growth index.

- The assessment of the key influential variables showed that there is a more significant upside to the projected border crossing demand given the existing low levels that have result from the multiple unprecedented events over the past decade.
- The current short-term trends in the automobile industry, the U.S. economy, and Ontario economy indicate strong recovery growth, which if sustained will result in significant growth in border crossing traffic from the current historical low levels in the coming years.
- The expected impact to the estimated Ambassador Bridge revenues are provided in the table below under the no-build and build scenarios and shows that the expected revenue growth over the next several years mirrors the anticipated growth in commercial vehicle traffic growth. The building of the DRIC will result in an approximate 45 percent reduction in future anticipated revenue at the Ambassador Bridge, and thus generate gross revenues that will be close to the 2009 revenue levels (approximately \$60 million) captured by the Ambassador Bridge.

Ambassador Bridge Annual Revenue Estimates (in Millions 2010\$'s) for DRIC No-Build and Build Scenario			
Year	No Build	Build	Difference
2015	\$93.9	\$93.9	(\$0.0)
2020	\$107.6	\$57.3	(\$50.3)
2025	\$125.0	\$67.3	(\$57.7)
2030	\$142.2	\$76.9	(\$65.2)
2035	\$156.6	\$85.0	(\$71.6)
2040	\$169.2	\$92.0	(\$77.3)
2045	\$181.0	\$98.5	(\$82.5)
2050	\$193.3	\$105.2	(\$88.2)
2055	\$205.5	\$111.7	(\$93.8)
2060	\$218.2	\$118.5	(\$99.7)

*DRIC opens in 2016. Revenue estimates based on current year toll rates.