

## **HAMILTON RAPID TRANSIT BENEFITS CASE ANALYSIS (BCA) CONTEXT NOTE**

### ***Background***

On November 28, 2008, the Metrolinx Board approved the Regional Transportation Plan entitled *The Big Move*, which included rapid transit in Hamilton's east-west King-Main "B-Line" corridor as a "Top 15" priority project. The Board directed staff to undertake Benefits Case Analysis (BCA) work for all unfunded Top 15 priorities to help inform the project funding decision-making process.

The BCA identifies, at a high level, the best-performing project scope and implementation phasing options for rapid transit investments within each of the Top 15 corridors. The Metrolinx BCA extends beyond traditional transportation cost-benefit analysis: In addition to measuring the transportation user and financial impacts of each option, the BCA also addresses long-term economic, environmental and social impacts – consistent with the three foundation pillars of the Metrolinx *Big Move*, the Regional Transportation Plan for the Greater Toronto and Hamilton Area.

In close collaboration with the City of Hamilton, Metrolinx developed a BCA workplan for a 14.2-km segment of the King-Main corridor. Metrolinx and Hamilton staff agreed with the BCA research methodology, planning and technical inputs, and key findings. The BCA identified three project options for evaluation:

1. Bus Rapid Transit (BRT) from McMaster University to Eastgate Square: estimated capital cost: \$220 million
2. Light Rail Transit (LRT) from McMaster University to Eastgate Square: estimated cost: \$830 million
3. A phased variant of Option 2, with the initial 9.3-km phase of LRT from McMaster University to Ottawa Street, and BRT improvements for the balance of the corridor from Ottawa Street to Eastgate Square: \$600 million

The costs presented in this BCA are expressed in 2008 dollars as order-of-magnitude estimates for high-level project appraisal purposes only. Refined cost estimates, phasing strategies and implementation timelines are subject to detailed planning, design, and engineering (PDE) work currently underway and supported by a \$3 million Province of Ontario grant funded through Metrolinx. \*

### ***BCA Results and Next Workplan Steps***

The BCA demonstrated that all three options -- full BRT, full LRT and partial LRT will generate net benefits for Hamilton and the region. All three options will be capable of accommodating long-term travel demand growth in the corridor.

Although full LRT is the highest-cost option, it also generates the highest transportation user benefits in terms of travel time savings, ridership attraction and overall “qualitative” travel experience. LRT also carries a stronger potential to reduce greenhouse gas emissions and generate more significant economic development impacts such as employment, income and Gross Domestic Product (GDP) growth for the city and region. The BCA also identifies LRT as having greater potential to shape land uses and uplift land values along the King-Main corridor.

BRT is considerably less expensive to build and thus generates a strong benefits-cost ratio. At the same time, however, BRT delivers less total benefits and its secondary benefits are less extensive.

On the other hand, the significantly higher investment required for the full LRT option will require careful attention to the partial LRT option to increase affordability – and even to the BRT option if sufficient funding is unavailable for either LRT option.

The PDE workplan grant, executed in a 2009 agreement between Metrolinx and Hamilton, enables the city to build on the BCA results and continue to refine the case for LRT on the King-Main corridor, including:

- Detailed assessment of constraints and opportunities along the corridor
- Detailed route alignment and transit stop location alternatives
- Detailed ridership and level-of-service forecasts
- Detailed capital and operating costs
- Environmental Assessment (EA) process and public consultations

Metrolinx staff will continue to work collaboratively with Hamilton on the PDE workplan for the King-Main corridor and report back to the Metrolinx Board in late 2010 with a PDE workplan update.

## ***Staff Recommendation to Metrolinx Board***

### ***RESOLVED:***

- THAT the Metrolinx Board approve and publicly release the Hamilton King-Main Rapid Transit Benefit Case Analysis (BCA) report, demonstrating positive benefits for the Bus Rapid Transit (BRT), full Light Rail Transit (LRT) and phased LRT options;
- THAT the Board direct staff to continue to work collaboratively with the City of Hamilton on the planning, design and engineering (PDE) workplan for the King-Main corridor in 2010; and
- THAT staff report back to the Board in late 2010 with a PDE workplan status update.