



REGION OF WATERLOO

**PLANNING, HOUSING AND COMMUNITY SERVICES
Transportation Planning**

TO: Chair Wideman and Members of the Planning and Works Committee

DATE: January 9, 2007 **FILE CODE:** D10-20/RT

**SUBJECT: RAPID TRANSIT ENVIRONMENTAL ASSESSMENT – PUBLIC CONSULTATION,
EVALUATION OF TECHNOLOGIES AND ROUTE DESIGNS**

RECOMMENDATION:

For Information.

SUMMARY:

The Region of Waterloo is currently carrying out an Environmental Assessment (EA) for the development of a rapid transit system. Phase 1, approved by Regional Council in July 2006, determined that the Rapid Transit Initiative is the preferred transportation strategy for Waterloo Region because it best achieves the goals of the Regional Growth Management Strategy and conforms with the Provincial Places to Grow Growth Plan for the Greater Golden Horseshoe.

The Phase 1 evaluation also demonstrated that, in light of the population growth anticipated in the Region by 2031 (from more than 500,000 to 729,000), none of the other alternatives considered (Baseline or Do Nothing, Improved Conventional Transit, Road Improvement and Expansion) would adequately meet the Region's growing transportation and land-use management needs. In fact, moving forward with the Baseline or Road Improvement and Expansion alternative would have significant negative impacts on the Region's natural and social environments over the long-term.

Phase 2 of the EA is now underway. It is a three-step process that will help Regional Council and the community select the rapid transit technology, routes and station locations that will best meet the Region's future transportation needs and land-use objectives.

The first step of Phase 2 is the evaluation and screening of 10 rapid transit technologies and their associated route designs. Using three evaluation criteria developed for the Terms of Reference and public input from a workshop held on September 21, 2006, the Rapid Transit Project Team is preparing to recommend that Bus Rapid Transit (BRT) and Light Rail Transit (LRT) technologies operating on a Mix of On/Off Road route designs be short-listed for further detailed assessment.

This proposed short list will be presented to the public at a series of Public Consultation Centres on January 9, 10 and 11, 2007 for public input on the results of the evaluation process (See attached Public Consultation Centre Information Handout).

It is expected that a recommended short list of technologies and route designs incorporating input from the public will be presented to Planning and Works Committee in the next few months for consideration. Following this, the next step of Phase 2, the detailed evaluation of reasonable routes and station locations for short-listed technologies and route designs, will begin.

REPORT:

Waterloo Region is one of the fastest growing communities in Canada. With a population of more than 500,000, and expected growth to 729,000 within the next 25 years, the Region is planning now for the challenges and opportunities associated with rapid population and employment growth.

In 2003, Region of Waterloo Council unanimously adopted the Regional Growth Management Strategy (RGMS), a long-term strategic framework that identifies where, when and how future residential and employment growth will be accommodated. The RGMS sets out strong and innovative goals for managing growth in urban areas and townships of the Region. It also identifies rapid transit as a key element that will help shape the future of the community.

Rapid transit is also a significant part of the Province's Growth Plan for the Greater Golden Horseshoe. The Plan designates the core areas of the Cities of Cambridge, Kitchener and Waterloo as Urban Growth Centres (UGC's), where much of the anticipated future population and employment growth will be directed. It also calls for the development of a rapid transit system to connect the UGC's to the larger provincial transportation network, and recommends that priority funding be given to infrastructure projects that support an integrated regional transportation system for the movement of people and goods throughout the Greater Golden Horseshoe.

The Region of Waterloo is currently carrying out an Individual Environmental Assessment for the development of a rapid transit system. Phase 1 of the EA, approved by Regional Council in July 2006, determined that the Rapid Transit Initiative is the preferred transportation strategy for Waterloo Region in favour of expanding the road network alone or improving conventional transit.

Environmental Assessment Process

The Region of Waterloo Rapid Transit Environmental Assessment is a three-phase process that will help Regional Council and the community select the rapid transit technology, routes and station locations that will best meet the Region's future transportation needs and land-use objectives. The EA is being conducted following Terms of Reference approved by the Ontario Minister of the Environment in July 2005:

- Phase 1: The evaluation and selection of a preferred transportation system strategy (The Rapid Transit Initiative was selected as the Preferred Transportation Strategy at the July 12, 2006 Regional Council meeting).
- Phase 2: Evaluation of alternative route designs and technologies and the identification of a preferred rapid transit system including station and route locations.
- Phase 3: Preliminary design of the recommended rapid transit system.

A significant component of the Rapid Transit EA involves ongoing consultation with the public and stakeholders throughout each phase of the study.

Status of the Environmental Assessment Process

Phase 1 of the Environmental Assessment was approved by Regional Council in July 2006 with the Rapid Transit Initiative chosen as the preferred transportation strategy for Waterloo Region. The Rapid Transit Initiative had the most positive response in 13 of the 15 evaluation criteria because it:

- Best achieves the goals of the Regional Growth Management Strategy and conforms with the Provincial Places to Grow Growth Plan for the Greater Golden Horseshoe;
- Supports reurbanization objectives, downtown revitalization and innovative urban design;

- Increases transportation choice and transit ridership;
- Is the least expensive form of motorized transportation when considering personal transportation costs;
- Contributes to the Region's countryside protection goal by facilitating reurbanization and reducing the pressure to expand urban boundaries;
- Provides a safe mode of transportation and promotes an active and healthier lifestyle; and
- Utilizes the least amount of land and minimizes the impact on air quality and greenhouse gas emissions.

The Phase 1 evaluation also demonstrated that, in light of the population growth anticipated in the Region by 2031 (from more than 500,000 to 729,000), none of the other alternatives considered (Baseline or Do Nothing, Improved Conventional Transit, Road Improvement and Expansion) would adequately meet the Region's growing transportation and land-use management needs. In fact, moving forward with the Baseline or Road Improvement and Expansion alternative would have significant negative impacts on the Region's natural and social environments over the long-term.

Phase 2 of the EA is now underway. The first step is the evaluation and screening of 10 rapid transit technologies and their associated route designs. The term "route design" refers to the physical structure(s) of the transit route within the urban environment (i.e. tunnels, at-grade, elevated guideways, etc.) that is inherently associated with each technology. The route design choice reflects the degree of interaction between the rapid transit system, other traffic and pedestrians, and the surrounding land uses. The route design is an important element of a rapid transit system because where the system operates will have a significant impact on its ability to meet urban design, intensification and reurbanization objectives.

For a complete list of the four route designs and 10 technologies that were evaluated, see Appendix A in the attached Public Consultation Centre Information Handout.

Public Input and the Evaluation Process

Each type of rapid transit technology and route design has features that make it suitable for different communities and transportation needs. To help determine which technology/route design alternatives may be most suitable for Waterloo Region, three evaluation criteria were developed and approved by the Ontario Ministry of Environment for Phase 2, Step 1. They are summarized below:

- Regional Growth Management Strategy (RGMS) Reurbanization Objectives: Does the rapid transit route design and technology support provincial and regional goals for managing future growth and development, such as promoting development in urban areas?;
- Service Quality: Has the technology been used in communities similar to Waterloo Region?; and
- Capacity: Is the technology appropriate for the expected transit demand?

Phase 2 began with a Public Information Session and Workshop on Sept. 21, 2006 to discuss potential rapid transit destinations, routes and station locations, as well as those characteristics of rapid transit the public feels are most important.

More than 140 community members from across the Region came together to provide ideas on where rapid transit routes and stations could be located. Participants at the workshop and other members of the community who provided input, also talked about the features of rapid transit that were most important to them. Accessibility, frequency and speed, safety, flexibility, environmentally friendly and a "good fit" with the existing community were some of the many ideas put forward.

Using the input from the community about which characteristics of a rapid transit system are most important to them, the Region's consultants developed a set of evaluation measures to help answer

the questions raised by the three evaluation criteria. The table on Pages 10 and 11 in the attached Public Consultation Centre Information Handout illustrates how public input was used to create 13 evaluation measures for Phase 2, Step 1.

Evaluation Results

Each route design and technology alternative was evaluated against the three criteria and the 13 measures developed to help the assessment of each criterion. For the assessment of each technology, inherently linked to specific route designs, failure in one measure means that the technology cannot fully meet the criterion and therefore fails that criterion. Failure in one criterion resulted in a "FAIL" for the technology and elimination from further consideration as it is not expected to meet the future needs of our community. Route designs were assessed using a "preferred" rating based on how well they responded to each measure.

The Mix of On/Off Road option was the only route design to receive a "PREFERRED" rating for all three criteria (See Appendix B of the Public Consultation Centre Information Handout for a summary of the evaluation of route designs). The following are some of the reasons:

- Supports redevelopment and intensification objectives;
- Optimizes use of existing off-road routes and on-road routes to serve major destinations;
- Compatible with existing and planned built neighbourhoods; and,
- Provides the opportunity to reduce rapid transit infrastructure cost by using existing corridors where available.

Bus Rapid Transit (BRT) and Light Rail Transit (LRT) were the only technologies to receive "PASS" ratings for all three criteria (See Appendices C and D of the Public Consultation Centre Information Handout for a summary of the evaluation of technologies).

Other route designs and technologies were not selected or failed the evaluation because they failed one or more of the three evaluation criteria and are therefore not expected to be able to meet the future needs of our community or the objectives of the RGMS and the Province's Growth Plan for the Greater Golden Horseshoe.

Public Consultation

The Rapid Transit Project Team is preparing to recommend that Bus Rapid Transit and Light Rail Transit operating on a Mix of On/Off Road route design form the proposed short list for future evaluation. They represent systems that have been developed and have flourished in cities across North America and Europe.

These systems have the potential to encourage a more compact urban form, complement pedestrian-friendly urban design, support street-level development around stations, reduce the growth of traffic congestion and associated air quality concerns and bring many other benefits to our community.

The proposed short list of technologies and route designs results will be presented to the public at a series of Public Consultation Centres (PCCs) where the Region will be asking for input on the evaluation and results. Each meeting will feature an informal drop-in format featuring displays, videos and information handouts. Regional staff and consultants will also be present to discuss the evaluation results and answer questions.

The PCCs will be held from 4 to 8 p.m. in three locations:

- Jan. 9, 2007 at the Cambridge Centre for the Arts, 45 Thorne Street
- Jan. 10, 2007 at the Regional Public Health and Social Services Building, 99 Regina Street
- Jan. 11, 2007 at the Regional Administrative Headquarters, 150 Frederick Street

The PCCs were widely advertised throughout our community using local media, road signs and a newsletter that was delivered to every household in the Region.

Next Steps

Once public input has been received and considered, the Region's Project Team intends to recommend a short list of technology/route design alternatives to the Planning and Works Committee on March 9, 2007 for consideration. Following this, the technologies and route design on the short list, and the system as a whole, will move forward to Phase 2, Steps 2 and 3 for more in-depth evaluation and additional public consultation.

Step 2 will begin in January 2007 and Public Consultation Centres are scheduled for April 2007. Step 3 will then begin and is scheduled to conclude in November 2007 with Public Consultation Centres scheduled for September 2007.

CORPORATE STRATEGIC PLAN

The report supports several objectives of Council's Strategic Focus. These include:

- Focus Area 1: Manage Regional Growth to Enhance Quality of Life
- Focus Area 3: Protect and Enhance the Environment
- Focus Area 4: Ensure High Quality Transportation System

FINANCIAL IMPLICATIONS:

The cost of the Rapid Transit EA study is being shared by the Region and Province with 50% of the cost funded by the Province. The Region's share will be funded through the Planning Capital program.

OTHER DEPARTMENT CONSULTATIONS/CONCURRENCE:

Members of the RT Project Team who have participated in reviewing the Phase 2, Step 1 Report represent various Regional Departments and Divisions, including Corporate Resources, Finance, Transportation and Environmental Services, and Legal Services.

ATTACHMENTS:

Attachment #1 - Rapid Transit Environmental Assessment, Public Consultation Centre Information Handout

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