



Draft Environmental Assessment Terms of Reference Rapid Transit Initiative

Public Consultation Meeting #2 Information Handout

Tuesday, March 8, 2005

Purpose of this Public Consultation Meeting

The Regional Municipality of Waterloo has prepared a Draft Environmental Assessment (EA) Terms of Reference for the development of a rapid transit service extending from Waterloo, through Kitchener to Cambridge. The first step in this process is the development of a Terms of Reference for the EA, which must be approved by the Minister of Environment before the Region can begin the EA preparation.

The purpose of this second Public Consultation Meeting is to present the Draft Terms of Reference which will guide the EA preparation, and solicit feedback from involved agencies, interested stakeholders and members of the public on the content and proposed approach to the EA preparation.

Results of the First Public Consultation Meeting

An initial Public Consultation Meeting was held on December 8, 2004 to introduce the EA process for the Rapid Transit initiative and to begin collecting public input on questions and issues that may be included in the Terms of Reference and addressed in the EA. Some of the issues, concerns and ideas generated at the first Public Consultation Meeting include:

- Use established rights of way for the Rapid Transit Initiative where possible;
- Ensure that the rapid transit technology or technologies can meet the Region's growth management and transportation goals;
- Provide a seamless rapid transit system integrated with conventional transit service and other modes of transportation;
- Consider impacts of the Rapid Transit Initiative both with and beyond the Central Transit Corridor; and
- Rapid transit service must be able to attract discretionary and new riders, and increase overall transit use.

Attendees at the first Public Consultation Meeting were also asked to provide ideas on how to consult the public during the EA preparation process. Those in attendance

preferred the public consultation meeting forum, as well as workshops and engaging neighbourhood associations. Preferred means of notifying the public included newspaper ads and articles, the Region's web site, radio, television, flyers and direct mailing.

Background

What is the Region undertaking? The Ontario EA Act applies to "undertakings" by municipalities. For this Environmental Assessment and Terms of Reference, the Region's undertaking may be described and defined as:

- a proposed rapid transit system,
- that is located within the primary re-urbanization area identified in the Regional Growth Management Strategy and includes:
 - o one or more proposed rapid transit technologies,
 - o one or more proposed rapid transit routes,
 - o several proposed rapid transit stations, and
 - o one or more proposed facilities to connect rapid transit with other transportation modes.

What is Rapid Transit? Rapid Transit involves new forms of transit service designed to increase travel speed, reliability, passenger comfort and convenience in order to be more competitive with car travel. A number of technologies are available for rapid transit in the Region of Waterloo (such as light rail transit and bus rapid transit), along a number of alternative routes. The best choices for the Rapid Transit initiative will be decided by the Individual Environmental Assessment to be conducted by the Region.

Where Would Rapid Transit Operate? – The exact routing of a rapid transit service in Waterloo Region has not been finalized. Routing is one of the key topics of the draft Terms of Reference and thus also the Individual Environmental Assessment to be conducted by the Region. At this time, the general information known about the proposed route is that it will be within the study area identified for the individual Environmental Assessment (see Exhibit 1). This area follows the general line of the potential Central Transit Corridor identified by the Region in the *Regional Official Policies Plan*. However, for this environmental assessment, the Region is proposing a specific study area, and thus more detail than is present in the ROPP. The study area represents the primary reurbanization area identified in the Regional Growth Management Strategy, plus an additional 500 metres on all sides. This proposed study area extends approximately 30 kilometres from the north edge of Waterloo, through Kitchener to the Galt City Centre in Cambridge. Consistent with this study area, the proposed route will be within the urban areas of the Region, including the Mercedes Industrial/Commercial Area and does not affect the firm countryside line approved by Regional Council on June 24, 2003.

The Region believes that this approach will assist its efforts to direct where, when and how future growth in the Region should best occur. The Region also believes that rapid

transit service running within this study area will act as a catalyst to attract investment in more intensified redevelopment, reshape our urban form and support and revitalize our core areas. The study area is also the location of the most used transit services currently operating in the Region.

What is an Individual Environmental Assessment? An Individual or “Full” Environmental Assessment (EA) is a process used in Ontario to determine the possible impacts of proposed municipal infrastructure projects, both positive and negative. For this environmental assessment, the Region wishes to ensure that it considers a broad and appropriate range of benefits and impacts. Further, the Region seeks a result that will provide major benefits, while avoiding or minimizing adverse impacts.

An Individual EA process must satisfy all applicable environmental assessment requirements of the Federal and Ontario governments. The Ontario process begins with the submission of a Terms of Reference for approval by the Minister of Environment documenting how the Individual EA will be conducted.

It is important to note that according to the EA Act of Ontario, the “environment” that is studied in this process includes not only natural conditions of air, land, water, plant and animal life and human beings, but also social, economic and cultural conditions affecting us and our communities.

Draft Terms of Reference Circulation & Notification

The Draft Terms of Reference has been circulated to the appropriate government agencies for their review, and has been posted on the Region’s project web site for public viewing at www.region.waterloo.on.ca/transitEA. Notification of this Public Consultation Meeting #2 was also mailed to those attending Public Consultation Meeting #1, and others who have expressed an interest in the project.

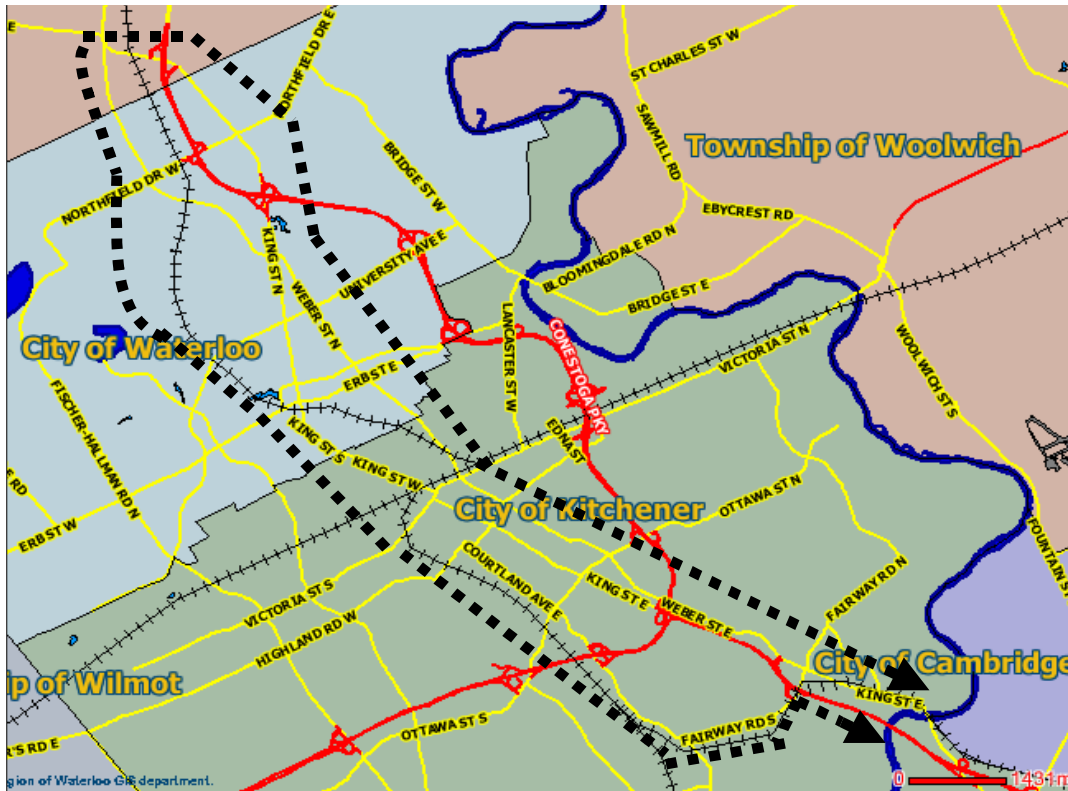
Summary of the Draft Terms of Reference Contents

The Draft Terms of Reference is presented in the following three parts:

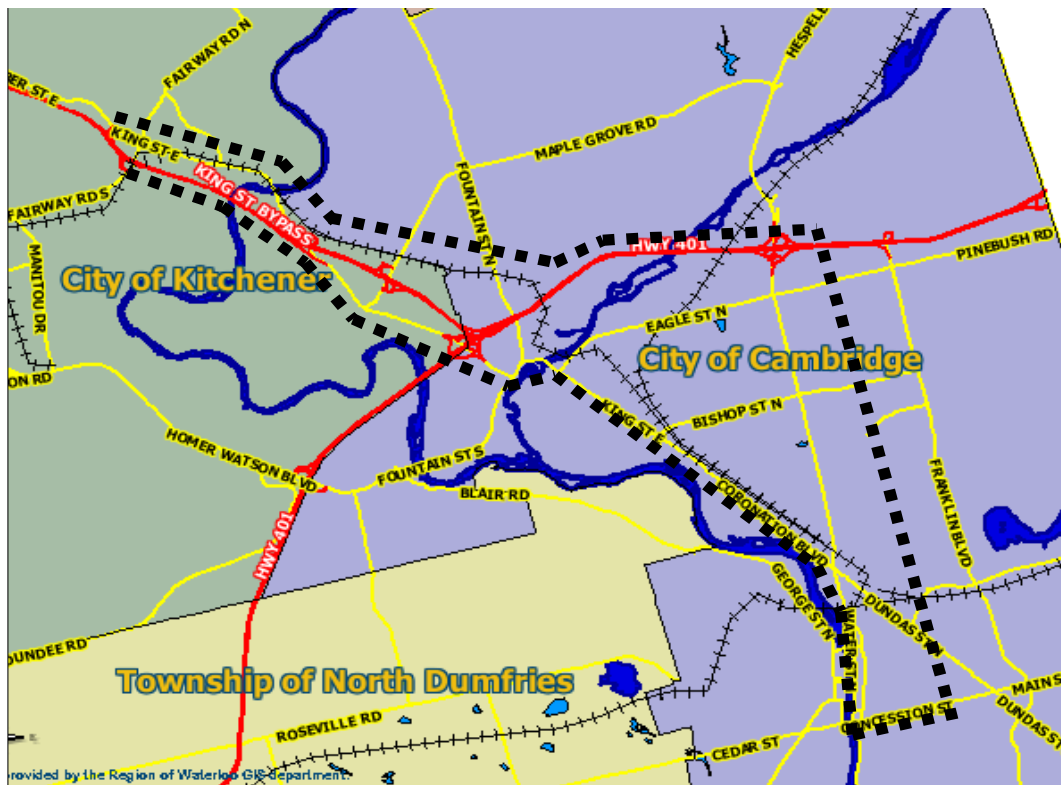
Part 1: Background

1. Introduction to the Terms of Reference includes its purpose and general guidance on how applicable federal and provincial EA requirements will be coordinated;
2. Description of the Rapid Transit Initiative Undertaking includes its purpose and a statement of rationale for the initiative based on the Provincial Growth Management Plan, Provincial Policy Statement, Regional Official Policies Plan and Regional Growth Management Strategy;
3. Description of the Study Area with proposed study area boundaries shown on Exhibit 1, summarizes existing built and natural environment features, potential environmental impacts and the recommended consultation process.

Exhibit 1 – Study Area Boundaries ■■■■■■■■■■



North Part



South Part

Part 2: The Environmental Assessment Process

The Environmental Assessment process is proposed to involve three phases of investigation, briefly described as follows:

4. Phase 1: Assessment of the proposed Undertaking (which is the proposed Rapid Transit Initiative, as set out above) and Alternatives to the Undertaking will compare three generic alternatives to the proposed rapid transit undertaking:
 - i. Baseline or do-nothing alternative, with the Region continuing to implement basic roadway improvements and Transportation Demand Management measures to address capacity deficiencies as required, but with no introduction of any further transit improvements or services in the Study Area;
 - ii. Improved Conventional Transit alternative, with the Region providing increased bus service and/or new transit service within the Study Area, without the inclusion of rapid transit; and
 - iii. Road Improvement/Expansion alternative, with the Region implementing roadway capacity and operational enhancements (e.g. widenings, extensions), along with Transportation Demand Management measures including conventional public transit and transit priority, measures to serve cycling, walking and increased auto occupancy and ways to alter regional travel characteristics, all without any rapid transit service.

Phase 1 includes goals and criteria for assessing these alternatives as shown below in Exhibit 2, and describes how the preferred Undertaking will be selected:

Exhibit 2 – Goals & Criteria for Assessing Alternatives to the Undertaking

Regional Growth Management Strategy Goals	Environmental Assessment Evaluation Criteria
Enhance Our Environment	1. Relative amount of land consumed 2. Relative impact on air quality 3. Relative impact of emissions contributing to climate change
Build Vibrant Urban Places	4. Relative contribution to Region re-urbanization objectives 5. Relative contribution to innovative urban design 6. Relative contribution to public health
Provide Greater Transportation Choice	7. Relative contribution to increased transportation choice 8. Relative contribution to increased Region transit ridership 9. Relative affordability of personal transportation cost 10. Relative flexibility to changes in operation
Protect Our Countryside	11. Relative contribution to the Region's countryside protection goal
Foster a Strong Economy	12. Relative contribution to downtown revitalization 13. Relative capital cost to the Region

Ensure Overall Coordination & Cooperation	14. Degree of compatibility with other Regional plans and strategies 15. Degree of compatibility with provincial and federal plans and strategies. ¹
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NOTE: If there are other goals and/or criteria that you consider important in assessing the three generic alternatives noted on page 3, please list them on the attached Comment Sheet.

With the alternatives to the undertaking identified, plus the evaluation criteria, the evaluation framework will apply the following decision steps to each alternative to the undertaking to determine if the proposed Undertaking is preferred:

- required data collection and analysis;
- evaluation of alternatives to the undertaking;
- selection of “draft” preferred alternative to the undertaking by proponent;
- public consultation on “draft” preferred alternative to the undertaking; and
- finalized selection of preferred undertaking based on consideration of public input.

If the proposed undertaking is preferred, the Region will advance to Phase 2 of the Assessment process. If an alternative to the undertaking is preferred, the Region will consider the appropriate next steps.

5. Phase 2: Assessment of Alternative Methods Of Carrying Out The Undertaking, summarized in Exhibit 3.

In Phase 2 of the Environmental Assessment process, the Region wishes to ensure that each alternative method of carrying out rapid transit meets its overall objectives. For this reason, the Region will begin the Phase 2 Assessment of Alternative Methods with a screening process to screen out alternatives that do not meet its objectives. The Region proposes to follow up this screening step with two distinct evaluation steps. The following summarizes the proposed three-step process:

Step 1: Screening Process for Alternative Technologies and Route Designs – As there exists a very broad range of alternative rapid transit technologies and route designs, the Region will be applying a screening process to screen out from further consideration those technologies and route designs that do not meet the Region’s objectives. The initial list of technologies and route designs is set out in Exhibit 3.

Step 2: Evaluation and Ranking of Reasonable Route Section Alternatives - All alternative technologies and route designs remaining after the screening process will be considered the “short list” of alternative rapid transit methods. These alternatives will then be considered in the context of specific alternative route locations within the study

¹ Includes *Places to Grow* Strategy for the Greater Golden Horseshoe Area: Compatible with Federal/Provincial/Municipal goals such as Promoting Economic Competitiveness, Protecting the Environment, Social Cohesiveness & Healthier Lifestyles, Rural Land Protection, Managing Growth, Intermodal Interconnectivity and Preventing Gridlock

area. Using seven study area sections, the Region will carry out a detailed evaluation and assessment of each reasonable route option and the short list technology and route design options. The relative advantages and disadvantages of each such option will be compared using the evaluation criteria described in Exhibit 5, leading to the identification of a ranking of each reasonable rapid transit method (i.e., route design, technology and route) within each study area section.

Step 3: Evaluation of Reasonable System Alternatives to Identify a Preferred System – The Region proposes to establish a rapid transit system. Therefore, following the identification of the rankings for each reasonable alternative method within each study area section, the Region will carry out an evaluation of the reasonable system options available to it. Each such system option will involve a rapid transit route that links up each of the three urban areas forming the study area. The purpose of this third step is to determine which system is, overall, preferred by the Region.. Alternative systems will be developed based on a mixture of different rapid transit technologies and/or route designs in different sections along the proposed route, and evaluated with criteria that will consider: (1) the Step 2 ranking, (2) the number and location of required transfer points in relation to the number of users; (3) the overall system economic costs; and (4) the overall system economic benefits to the Region. The evaluation methodology for this Step 3 is set out in Exhibit 6.

The result of this Phase of the Environmental Assessment will be the identification of a preferred rapid transit system, including the preferred technology or technologies, route design or designs and route linking the urban areas of Waterloo, Kitchener and Cambridge.

Exhibit 3 – Alternative Route Designs

Alternative Route Designs	Basic Route Characteristics	Potential Technology
1. Shared Use Route	Rapid Transit operating at-grade within the road right-of-way which it shares with other vehicular traffic along entire route length.	Bus Rapid Transit (BRT) Light Rail Transit (BRT)
2. Dedicated On-Road Route	Rapid Transit operating at-grade within the road right-of-way in a dedicated lane or lanes along entire route length.	Bus Rapid Transit (BRT) Light Rail Transit (LRT)
3. Dedicated Off-Road Route	Rapid Transit operating within an at-grade right-of-way that is separate from the road network along entire route length.	Bus Rapid Transit (BRT) Commuter Rail Light Rail Transit (LRT) Rail Multiple Units (DMU)
4. Mix of On/Off Road Route	Rapid Transit that is compatible operating at-grade in shared or dedicated on-road conditions, and dedicated off-road conditions along entire route length.	Bus Rapid Transit (BRT) Light Rail Transit (LRT)
5. Grade-Separated Route	Rapid Transit that operates within a dedicated right-of-way separated above or below street	Aerobus Automated Guideway Transit (AGT)

	level other than bridges or tunnels for crossing purposes.	Magnetic Levitation (Maglev) Monorail Personal Rapid Transit System (PRT) Subway
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A pass/fail approach will be used to “screen out” those methods that cannot properly perform within the context of Waterloo Region and the Environmental Assessment process. The screening criteria are presented in Exhibit 4 below:

Exhibit 4 – Criteria for Screening Alternative Methods

Screening Criteria	Pass/Fail Questions
RGMS Re-urbanization	Is the route design consistent with municipal intensification and redevelopment objectives?
Service Quality	Are there proven applications of the method in comparable settings?
System Performance	Does the route design improve transit travel time?

Once the short-listed methods (rapid transit technologies and routes) have been screened, those remaining will be assessed and evaluated based on a more detailed list of criteria and indicators (ways to measure the criteria). **If you think there are other criteria/indicators that should be considered, please list them on the attached Comment Sheet.**

Exhibit 5 – Criteria for Evaluating and Ranking Short-Listed Alternative Methods

Criteria Groups/ Criteria	Indicator
Transportation	
Ridership Potential	Ridership forecast and % share of total transportation trips
System Reliability	On-time performance of alternative technologies
System Performance	Average travel time and vehicle-kilometres of travel within the study area
Right of Way requirements	Hectares of land needing to be purchased x estimated cost per hectare
Travel time competitiveness with auto	Estimated future travel times and trip length for transit vs. auto
Social Environment	
Ability to serve residential uses	Number of residents within 800 m of all proposed stations along the route; Number of affordable housing units within 800 m of all proposed stations along the route
Ability to serve institutional uses (secondary, post secondary student populations, major government buildings, hospitals)	Number of institutional uses and projected users within 800m of all proposed stations along the route
Vibration	Number of buildings within 50 metres of the route centerline
Noise	Number and length of locations along route where ambient noise levels will increase by more than 5 dBA
Contribution to cultural environment	Total number of cultural uses within 800m of all proposed stations along the route

Contribution to recreational environment	Total number of recreational uses within 800m of all proposed stations along the route
Contribution to public health	Average percentage of total transit user trips taken by cycling or walking to transit stations; Number of auto trips converted to transit trips
Contribution to built heritage	Total number of designated heritage properties and buildings within 800 m of all proposed stations along the route
Natural Environment	
Ecological impact	Total displacement of terrestrial and aquatic features (ha) <i>plus</i> Total disruption of terrestrial and aquatic habitat (ha of habitat adjacent to system which will receive increased daily noise, lights, vibration)
Surface water quality	Linear km of new hard surfaces
Economic Impact	
Ability to serve concentrations of employment	Number of employment opportunities within 800m of all proposed stations along the route
Ability to serve retailers	Square footage of retail space and projected customers within 800 m of all proposed stations along the route
Cost	Estimated capital cost, and operations and maintenance cost associated with the method

The result of the Step 2 assessment will be a series of rankings for each reasonable alternative within each of the seven sections making up the overall rapid transit route. The purpose of Step 3 in this process is to, first, identify combinations of these sections that create reasonable system alternatives and, second, to evaluate the most reasonable alternatives to identify a preferred system which covers the entire route. The Region anticipates that this evaluation will include comparing between two and five reasonable system alternatives. The criteria listed in Exhibit 6 will be applied to each of the reasonable system design alternatives identified from the Step 2 rankings. **If you think there are other criteria/indicators that should be considered, please list them on the attached Comment Sheet.**

Exhibit 6 – Criteria for Evaluating Alternative Systems

Evaluation Criteria	Indicators
1. Section Route Rankings (Step 2)	Comparison of system alternative based on rankings of each section making up the alternative
2. System Performance	Number and location of required transfer points in relation to number of anticipated users
3. Overall System Economic Costs	Quantitative estimate of the total capital, operations and maintenance costs for the system alternative
4. Overall System Economic Benefits	Quantitative estimate of the total economic benefit potential resulting from the operations of an alternative system

If you think there are other criteria/indicators that should be considered, please list them on the attached Comment Sheet.

The result of this second Phase of the Environmental Assessment is the identification of a preferred rapid transit system, including preferred transportation technologies, routes and station locations.

6. Phase 3: Assessment of the Preliminary Design of the Undertaking provides basic guidance for the preparation of designs and mitigation measures for the preferred rapid transit system. This Phase will consider architectural and engineering design measures to further improve the benefits of the rapid transit initiative such as how to link rapid transit stations with surrounding land use. It will also include consideration of design measures that avoid or reduce adverse effects in areas near the road transit route.

Design measures under consideration may include may include:

- those which improve benefits, such as making facilities more transit friendly, improving accessibility of transit to persons, and/or improving integration of different modes of transportation;
- those which avoid impacts such as noise, vibration, other emissions and construction scheduling; and
- those which lessen impacts which cannot reasonably be avoided.

Part 3: Other Requirements

7. Other Approvals Required – A number of subsequent approvals may require more detailed design and information not available within the scope of the Ontario Environmental Assessment Act approval including Regional and local Official Plans, local zoning bylaws and other provincial and Canadian Environmental Assessment Act approvals;
8. Compliance Monitoring – During the Environmental Assessment preparation, Waterloo Region will commit to developing a compliance strategy and schedule to monitor the implementation of any recommended undertaking. This will include measuring potential impacts such as noise, water quality and air quality effects associated with the construction of the undertaking. The monitoring strategy will be developed in consultation with the Environmental Assessment and Approvals Branch of MOE. The proponent must comply with the terms and conditions of the monitoring strategy and the commitments identified in the Environmental Assessment, and report to MOE on how the compliance has been achieved.
9. Terms of Reference Flexibility – Where a matter is not specifically addressed in these Terms of Reference, there is an opportunity for the Region to consider additional assessment, analysis and/or agency, stakeholder and public input. Such matters include the following:
 - evaluation methodologies to be used to select the preferred planning alternative and/or alternative method;

- additional or expanded technical studies to ensure that the nature and magnitude of potential impacts (i.e. natural, socio-cultural, economic) are accurately identified and mitigated; and
- enhancements to the public consultation program.

Schedule of Events

Public Notification of Draft Terms of Reference Pre-Submission Review – March 1, 2005

30-day Public Review Period – March 2 – April 1, 2005

Pre-Submission Public Meeting #2 – March 8, 2005

Completion of Final Terms of Reference – April, 2005

Minister's Decision on Approval (maximum 12 weeks) – early July, 2005 latest.

We Want Your Input!

The Region of Waterloo requests input from the public on the questions offered on the attached Comment Sheet.

What Happens Next?

The project team will review all public and agency input received at this Public Meeting, and over the following weeks leading up to the April 1, 2005 deadline for submission of comments. During this review period, the project team may also contact and respond to agencies, stakeholders and individuals wishing to discuss any aspect of the Draft Terms of Reference. It will then be finalized with due regard to this input, and submitted to the Minister of Environment for approval. Subject to Minister approval, the Region of Waterloo plans to proceed with the Environmental Assessment for the Rapid Transit Initiative in accordance with the framework established in the Terms of Reference.

How Do I Stay Informed?

If you wish to stay informed about the progress of the Rapid Transit Initiative and the EA preparation, and have not previously identified yourself to the Region, please provide your name, postal address, e-mail address and any group affiliation to either:

Mr. Graham Vincent, P. Eng.
Director Transportation Planning
Regional Municipality of Waterloo
150 Frederick Street
Kitchener, ON N2G 4J3
Phone: 575-4027
Fax: 575-4449
e-mail: vgraham@region.waterloo.on.ca

OR Don Drackley, MCIP
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Region of Waterloo

Tear Off and Deposit in
Comment Box

COMMENT SHEET

Draft Environmental Assessment Terms of Reference Rapid Transit Initiative

Public Meeting
Tuesday, March 8, 2005

Please complete and hand in this Comment Sheet in the Comment Box so your views can be considered in the preparation of the Terms of Reference for the Rapid Transit Initiative Environmental Assessment. If you wish to prepare your comments later, then please mail, fax or e-mail your comments no later than **April 1, 2005** to:

Mr. David Durant, P. Eng.
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150 Frederick Street
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Phone: 757-4027
Fax: 575-4449
e-mail: ddavid@region.waterloo.on.ca

1. Other goals and criteria you suggest should be used to assess Alternatives to the Rapid Transit Undertaking?

2. Other criteria you suggest should be used to assess and evaluate the short list of Alternative Rapid Transit Methods?



3. Other criteria you suggest should be used to assess and evaluate Alternative Rapid Transit Systems?

4. How would you like to be kept informed about the progress of the Terms of Reference preparation?

Other Comments:

How did you find out about this meeting? _____

Your name: _____

Mailing Address: _____

Postal Code: _____

e-mail: _____

Thank you for your input.

COLLECTION NOTICE: Personal information requested on this form is collected under the authority of the Municipal Act and will be used to assist Regional staff and the Regional Planning and Works Committee in making decisions on this project. All names, addresses and comments will be included in material made available to the general public. Questions regarding this collection should be forwarded to the staff member indicated on the front page.