

3

2008 TRAVEL TIME STUDY PARTICIPATION

The Planning and Economic Development Committee recommends the adoption of the recommendations contained in the following report dated February 22, 2008, from the Commissioner of Planning and Development Services:

1. RECOMMENDATIONS

It is recommended that:

1. Regional Council endorse the participation of York Region in the *2008 Travel Time Study* being conducted by the Ontario Ministry of Transportation.
2. Regional Council authorize the Commissioner of Planning and Development Services to enter into an agreement with the Ontario Ministry of Transportation on the Region's participation in the *2008 Travel Time Study* subject to a review by Legal Services.
3. The Regional Clerk forward a copy of this report to the Ontario Ministry of Transportation, Durham Region, Peel Region, and City of Toronto.

2. PURPOSE

This report seeks Regional Council's endorsement of York Region's participation in the *2008 Travel Time Study* and provide authorization to enter into an agreement as a participating municipality with the Ontario Ministry of Transportation.

3. BACKGROUND

The Region currently has comprehensive transportation monitoring programs including the Annual Average Daily Traffic Volumes Program and the Cordon Count Program. These programs monitor the traffic volumes on specific roads in the Region, however, they do not measure travel speeds and travel times which have become primary evaluation indicators for traffic congestion.

The travel time measure has been adopted by many agencies as a useful performance measure on highways and major roadways. The Ontario Ministry of Transportation (MTO) has conducted a biennial travel time study of the major provincial highways in the Greater Toronto Area (GTA) since 1996. In 2006, the City of Toronto and the Regional Municipality of Peel participated in the study with MTO. The combined travel time survey of major freeways and arterial roads within these jurisdictions accounted for a

total of approximately 1,050 kilometres. The survey was undertaken during the weekday morning, mid-day, and afternoon peak periods, and for the Labour Day weekend. Travel time data was collected by using Global Position System (GPS) equipped passenger vehicles and the results were documented as part of a report for the participating agencies.

4. ANALYSIS AND OPTIONS

4.1 TRAVEL TIME STUDY PARTICIPATION

Current Data Challenges

Travel time surveys are currently carried out as needed on a project basis and are generally limited in study scope. Staff face challenges in monitoring and implementing region-wide traffic management strategies and identifying the most significant areas of traffic congestion in the Region. To make York Region's transportation monitoring program more comprehensive, travel time and travel speed monitoring should be conducted regularly.

Recommended Study Participation

Staff recommend that Council endorse York Region's participation in the biennial travel time study undertaken by MTO to improve the existing transportation monitoring programs. Staff will use the study results to:

- Identify and map some of the most congested road corridors across the Region.
- Analyze the delays and sources of traffic congestion.
- Develop potential traffic congestion management strategies.
- Prioritize traffic improvement programs.
- Assess the performance of traffic management initiatives such as High Occupancy Vehicle (HOV) lane and Intelligent Transportation System (ITS).
- Calibrate and validate transportation planning and traffic operation models.

4.2 STUDY LOGISTICS

Survey Methodology

All travel time survey vehicles will be equipped with a GPS receiver. The GPS receiver will transmit recorded vehicle position data to a connected laptop computer at a polling interval of one to two seconds. Drivers will also be able to input the state of their vehicles as they travel the road corridors by recording the following states:

- "Stop" – vehicle comes to a stop in a queue (or due to another form of delay).
- "Start" – vehicle begins to accelerate from a stopped position.
- "Intersection" – vehicle crosses the far side of a signalized intersection.

All raw GPS data from the survey will be post processed to determine road segment travel times, mean speeds, and delays. Surveyors are required to operate their vehicles at an average speed of the general traffic stream.

For the arterial roads being surveyed, typically twelve runs will be conducted in the weekday morning and afternoon peak periods, and three runs will be carried out in the mid-day peak period. The maximum allowable error for the collected travel time data is 5 km/hour to achieve a 95% level of confidence.

Through available Viva information, York Region staff will obtain travel time data to assist in verifying the survey results.

Proposed York Region Arterial Roads for Survey

Attachment 1 shows the proposed York Region arterial roads to be surveyed in the fall of 2008. The survey will be undertaken on 18 Regional roads covering a total of approximately 300 kms of roadways or 600 kms of travel distance in both directions. The Regional roads were selected based on key criteria including the following:

- York Region rapid transit corridors.
- Representative links with potential High Occupancy Vehicle (HOV) lanes.
- Major goods movement corridors.
- Major commuter corridors.

The data collected for these roads will provide a solid baseline for studies including the Transportation Master Plan, traffic operational studies, and Environmental Assessment studies. Specific road links may be added or revised to accommodate future studies as the survey program matures.

Project Schedule

The Terms of Reference (TOR) for the 2008 study is scheduled for completion by the end of April. The selection of the consultant for the study will be carried out by the end of June.

The data collection phase will start on the Labour Day weekend of 2008. A draft report of *2008 Travel Time Study* will be submitted to MTO by the consultant in February 2009.

Coordination between MTO and Participating Municipalities

An agreement between MTO and participating municipalities is required. Legal Services will review it prior to execution.

As part of this study, MTO, as the proponent, will be responsible for procuring, managing and providing technical directions for the study, and act as the liaison with the consultant.

Participating municipal representatives will be involved in the evaluation of proposals and selection of the consultant. Currently, the municipalities agreeing to participate in the 2008 study include the City of Toronto, Durham Region and Peel Region.

The costs payable to MTO by the participating municipalities will include a proportion of the consultant's fees based on survey distance covered and the deliverables. The deliverables would include the final report, progress reports, presentations and any survey-related data. MTO will grant to the participating municipalities and its contractors the distribution and use of the data as stipulated in the Agreement.

5. FINANCIAL IMPLICATIONS

Sufficient budget for participation in the *2008 Travel Time Study* was approved as part of the 2007 10-year Roads Capital budget. It is anticipated that York Region's share of the project cost will be in the range of \$50,000-\$100,000.

6. LOCAL MUNICIPAL IMPACT

Once the study is completed, the data will be made available to other Regional departments, local area municipalities, and stakeholders to provide more comprehensive travel information in the Region. Local municipalities can also use the data to assist in their transportation planning activities and understanding of traffic congestion in their communities.

7. CONCLUSION

To better monitor and assess traffic patterns and congestion levels within the Region, staff recommend York Region's participation in the GTA-wide *Travel Time Study* with MTO as the proponent. The 2008 participating municipalities include the City of Toronto, the Regional Municipalities of Durham and Peel.

This study will help provide a regular and consistent performance measure of York Region arterial roads. It will also assist staff to be more effective in implementing and monitoring traffic management strategies and transportation initiatives in major congested travel corridors of the Region.

For more information on this report, please contact Richard Hui, Program Manager, Transportation Planning at Ext. 1578, or Paul May, Director Infrastructure Planning at Ext. 5029.

The Senior Management Group has reviewed this report.

(The attachment referred to in this clause is included with this report.)