MEDIA RELEASE: Friday, March 15, 2013, 4:30 p.m.

REGIONAL MUNICIPALITY OF WATERLOO
PLANNING AND WORKS COMMITTEE
AGENDA

Tuesday, March 19, 2013
9:00 a.m.
Regional Council Chambers
150 Frederick Street, Kitchener

1. DECLARATIONS OF PECUNIARY INTEREST UNDER THE MUNICIPAL CONFLICT OF INTEREST ACT

2. DELEGATIONS

CONSENT AGENDA ITEMS
Items on the Consent Agenda can be approved in one motion of Committee to save time. Prior to the motion being voted on, any member of Committee may request that one or more of the items be removed from the Consent Agenda and voted on separately.

3. REQUEST TO REMOVE ITEMS FROM CONSENT AGENDA

4. MOTION TO APPROVE ITEMS OR RECEIVE FOR INFORMATION

a) E-13-027, Pedestrian Collision Countermeasure Review at the King Street (Regional Road 15) and University Avenue (Regional Road 57) Intersection, in the City of Waterloo (Approval) 1

b) E-13-039, Financial Support of Waterloo-Wellington Children’s Groundwater Festival (Approval) 8

c) P-13-023, Year End 2012 Population and Household Estimates for the Region of Waterloo (Approval) 10

d) P-13-025, 2012 Building Permit Activity and Growth Monitoring (Information) 16

e) P-13-026, Grand River Transit 2013 Fare Change Public Consultation (Information) 29

*f) CR-RS-13-027, 190 Cedar Street Cambridge, Road Dedication Report Distributed Separately (Approval) 38

g) Memo: Hespeler Road Resurfacing - Bishop Street to Eagle Street / Pinebush Road, City of Cambridge

REGULAR AGENDA RESUMES

5. REPORTS – TRANSPORTATION AND ENVIRONMENTAL SERVICES

1348702
DESIGN AND CONSTRUCTION

a) E-13-038, Sawmill Road and Northfield Drive Improvements in the Village of Conestogo – Township of Woolwich

b) E-13-042, Victoria Street Improvements from Edna Street to Bruce Street, City of Kitchener - Recommended Design Concept

RAPID TRANSIT

c) E-13-046, Public Information Centre for Location and Access Modifications for Grand River Hospital Rapid Transit Stop

WATER SERVICES

d) E-13-033, Consultant Selection for the Kitchener WWTP Upgrades Value Engineering Workshops

e) E-13-037, Biosolids Heat Drying Facility - Business Case Approval for P3 Canada Fund


REPORTS – PLANNING, HOUSING AND COMMUNITY SERVICES

TRANSPORTATION PLANNING

g) P-13-027, Niagara to Greater Toronto Area Corridor and Strategic Economic Corridors

6. INFORMATION/CORRESPONDENCE

a) Council Enquiries and Requests for Information Tracking List

7. OTHER BUSINESS

8. NEXT MEETING – April 9, 2013

9. MOTION TO GO INTO CLOSED SESSION

THAT a closed meeting of the Planning and Works, Administration and Finance and Community Services Committees be held on Tuesday, March 19, 2013 immediately following the Planning and Works Committee meeting in the Waterloo County Room, in accordance with Section 239 of the Municipal Act, 2001, for the purposes of considering the following subject matters:

a) proposed or pending litigation related to a municipal by-law
b) proposed or pending acquisition of land in the City of Kitchener
c) proposed or pending litigation and receiving of legal advice that is subject to solicitor-client privilege related to a matter before an administrative tribunal
d) receiving of legal advice that is subject to solicitor-client privilege related to a legal matters

e) labour relations regarding contract negotiations

f) proposed or pending litigation and receiving of legal advice that is subject to solicitor-client privilege related to a legal proceeding

10. ADJOURN
## NEXT MEETINGS

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Description</th>
<th>Location</th>
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</thead>
<tbody>
<tr>
<td><strong>Planning and Works Committee</strong></td>
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<tr>
<td>April 9, 2013</td>
<td>9:00 A.M.</td>
<td>Public Meeting for the Implementation Guideline for Cultural Heritage Landscape Conservation</td>
<td>Council Chamber 2nd Floor, Regional Administration Building 150 Frederick Street Kitchener, Ontario</td>
</tr>
<tr>
<td>April 9, 2013</td>
<td>9:10 A.M.</td>
<td>Public Meeting for the Regional Transportation Corridor Design Guidelines</td>
<td>Council Chamber 2nd Floor, Regional Administration Building 150 Frederick Street Kitchener, Ontario</td>
</tr>
<tr>
<td>April 9, 2013</td>
<td>9:20 A.M.</td>
<td>Public Meeting for the Proposed Transportation Demand Management Modifications to the Regional</td>
<td>Council Chamber 2nd Floor, Regional Administration Building 150 Frederick Street Kitchener, Ontario</td>
</tr>
<tr>
<td>April 9, 2013</td>
<td>9:30 A.M.</td>
<td>Planning and Works Committee</td>
<td>Council Chamber 2nd Floor, Regional Administration Building 150 Frederick Street Kitchener, Ontario</td>
</tr>
<tr>
<td>April 30, 2013</td>
<td>9:00 A.M.</td>
<td>Planning and Works Committee</td>
<td>Council Chamber 2nd Floor, Regional Administration Building 150 Frederick Street Kitchener, Ontario</td>
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<tr>
<td><strong>Planning, Housing and Community Services</strong></td>
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<tr>
<td>Mon., March 18, 2013</td>
<td>12:00 P.M. - 4:00 P.M.</td>
<td>2013 Proposed Transit Service Improvement Plan Public Consultation Centre</td>
<td>University of Waterloo Great Hall Student Life Centre 200 University Ave. West Waterloo, Ontario</td>
</tr>
<tr>
<td>Tue., March 19, 2013</td>
<td>4:00 P.M. - 8:00 P.M.</td>
<td>2013 Proposed Transit Service Improvement Plan Public Consultation Centre</td>
<td>Kitchener Waterloo Bilingual School Gym 600 Erb Street West Waterloo, Ontario</td>
</tr>
<tr>
<td>Thu., March 21, 2013</td>
<td>4:00 P.M. - 8:00 P.M.</td>
<td>2013 Proposed Transit Service Improvement Plan Public Consultation Centre</td>
<td>Waterloo Mennonite Brethren Church 245 Lexington Road Waterloo, Ontario</td>
</tr>
<tr>
<td>Fri., March 22, 2013</td>
<td>12:00 P.M. - 4:00 P.M.</td>
<td>2013 Proposed Transit Service Improvement Plan Public Consultation Centre</td>
<td>Wilfrid Laurier University, Concourse – Fred Nichols Campus Centre 75 University Ave. West Waterloo, Ontario</td>
</tr>
<tr>
<td>Tue., March 26, 2013</td>
<td>4:00 P.M. – 8:00 P.M.</td>
<td>Grand River Transit 2013 Fare Change Public Consultation</td>
<td>Regional Administration Building Lobby 150 Frederick Street Kitchener, Ontario</td>
</tr>
</tbody>
</table>
TO: Chair Jim Wideman and Members of the Planning and Works Committee

DATE: March 19, 2013

FILE CODE: T11-60/CM

SUBJECT: PEDESTRIAN COLLISION COUNTERMEASURE REVIEW AT THE KING STREET (REGIONAL ROAD 15) AND UNIVERSITY AVENUE (REGIONAL ROAD 57) INTERSECTION, IN THE CITY OF WATERLOO

RECOMMENDATION:

THAT the Regional Municipality approve the recommendations to enhance pedestrian safety at the intersection of King Street (Regional Road 15) and University Avenue (Regional Road 57) in the City of Waterloo as outlined in Report E-13-027, dated March 19, 2013.

SUMMARY:

NIL

REPORT:

At the September 11, 2012 Planning and Works Committee meeting, members of the committee requested staff to provide a report addressing pedestrian safety and potential countermeasures to address pedestrian collisions at the King Street (Regional Road 15) /University Avenue (Regional Road 57) intersection, in the City of Waterloo.

King Street and University Avenue is a signalized intersection where King Street runs north-south and University Avenue runs east-west. The estimated daily traffic at the intersection is 40,000 vehicles per day with an average annual daily pedestrian volume of approximately 6,000 pedestrians per day. Figure 1 shows the King Street /University Avenue intersection.
Collision Analysis

A review of collisions between September 2007 and September 2012 shows that the King Street /University Avenue intersection experienced a total of 12 collisions involving pedestrians where 2 were expected based on the Region’s collision prediction model. Any pedestrian collision occurring within 50 metres of the intersection has been included within this summary. A summary of the pedestrian collisions by year is shown in Table 1.

Table 1 – Pedestrian Collisions by Year

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<tbody>
<tr>
<td>Pedestrian</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>3</td>
</tr>
</tbody>
</table>

Of the 12 pedestrian collisions, 1 collision occurred in each of the east, west and south crosswalks and 3 collisions occurred in north crosswalk. The collision history also shows that 4 collisions occurred within the midblock section downstream of the intersection (3 just north of the intersection and 1 just south of the intersection). A single collision occurred in the middle of the intersection.
involving a roller-blader turning left and not yielding to oncoming traffic. A single collision occurred as a result of 2 cars colliding and careening into waiting pedestrians.

The review identified that 4 collisions involved left-turning motorists and 1 collision involved a right-turning motorist. A detailed assessment of the pedestrian collisions by time of day shows that 8 pedestrian collisions occurred during low light conditions and 4 occurred during daylight conditions. Further review shows that of the 12 total collisions, 6 collisions occurred where the pedestrian had the right-of-way and a motorist failed to yield, and 5 collisions occurred where the pedestrian disobeyed the traffic control.

A diagram of the pedestrian collisions between September 2007 and September 2012 is shown in Figure 2.

Figure 2 – Pedestrian Collision Diagram (September 2007 – September 2012)

This intersection also experienced a total of 121 collisions where 66 were expected between 2007 and 2011 ranking it 6th overall for most unexpected collisions in 2011. The majority of collisions (71%) involve rear-end and turning type collisions.

**Countermeasures**

Transportation staff considered a number of potential countermeasures to minimize pedestrian collisions at the King Street /University Avenue intersection. Table 2 is a summary of countermeasures considered.
### Table 2: Pedestrian Collision Countermeasures Considered

<table>
<thead>
<tr>
<th>Countermeasures</th>
<th>Positive Impacts</th>
<th>Negative Impacts</th>
<th>Crash Reduction Factor (CRF)</th>
<th>Impact on Pedestrian Collisions at King St./University Ave</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Traffic Signal Operation</td>
<td></td>
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</tbody>
</table>
| Fully Protected Left-Turn Phase (All approaches) | 1. Remove pedestrian /vehicle conflicts when vehicles turn left  
2. Reduce turning movement collisions (33 collisions in 5 years) | 1. Reduces the left-turn lane capacity  
2. Cause delays to vehicles turning left and increase vehicle queues  
3. Increase pollution (noise /carbon)  
4. Degrades overall intersection operation | Unknown | Effective |
| No Right Turn on Red                           | 1. Remove pedestrian /vehicle conflicts when vehicles turn right                | 1. Will cause delays to vehicles turning right  
2. Enforcement will be required | Unknown | Unknown |
| Exclusive Pedestrian Phase (Scramble Pedestrian Phase) | 1. Pedestrian has exclusive signal phase in all four directions  
2. Eliminate pedestrian /vehicle conflict | 1. No turning permitted  
2. Increase pedestrian delays  
3. Increase vehicles delays  
4. Pedestrians would wait longer to get an exclusive phase which may increase non compliance of pedestrians.  
5. Increase pollution (noise /carbon)  
6. Not coordinated with other signals | Unknown | Unknown |
| Pedestrian Countdown Signals                   | 1. Improve pedestrian crossing behaviour, such as fewer pedestrians running or aborting crossings and fewer pedestrians trapped in crosswalks when a signal turns red | 1. Not accessible to pedestrians with impaired vision | 18% | Minimal |
| 2 Pavement Markings                            |                                                                                 |                                                                                  |                              |                                                           |
| Ladder Marking Crosswalk                       | 1. Ladder crosswalks are more visible to the driver and therefore better define pedestrian areas. | 1. Reduced road surface friction | 61% | Effective |
| Offset Pedestrian Crosswalks                  | 1. Provides space between crosswalk and opposing traffic  
2. Increased space for motorist perception /reaction | 1. May require slightly longer all-red traffic signal phase | Unknown | Unknown |
| 3 Illumination                                 |                                                                                 |                                                                                  |                              |                                                           |
| Flood Lighting the crosswalk                   | 1. It will light the pedestrian and crosswalk beyond Regional standards         | 1. More energy consumption | 62% | Minimal |
| LED Street Lighting                            | 1. Brighter light at the crosswalks than existing lighting  
2. Less Energy consumption                    |                                                                                  | Unknown | Unknown |
| In-Pavement Lighted Markers                    | 1. It will light the crosswalk and make it prominent to vehicles during low light | 1. In winter, snow may cover the lights and reduce the visibility | Unknown | Unknown |
| 4 Design Elements                              |                                                                                 |                                                                                  |                              |                                                           |
| Roundabout                                     | 1. Slower speeds means drivers have more time to judge and react to pedestrians  
2. A pedestrian has two crossings of one-way traffic moving at slower speeds | 1. Property requirements and construction cost | 40 % to 60 % | Effective |
| Median Island                                  | 1. Pedestrian refuge  
2. Host signal infrastructure  
3. Slow down turning motorists                 | 1. Property requirements and construction cost | 80% | Effective |

Transportation staff recently completed a review of the existing illumination at the King Street /University Avenue intersection. It was identified that street lighting can be added to the northwest corner of the intersection. As such staff has planned the installation of additional street lighting in March 2013.

Pedestrian countdown signals (PCS) are already planned to be installed in 2013 at the King Street /University Avenue intersection based on the Region’s annual PCS program. PCS have shown an 18% decrease in pedestrian collisions at signalized intersections based on Regional studies.
In addition to the aforementioned countermeasures, the King Street/University Avenue intersection warrants the installation of ladder crosswalk markings. Ladder crosswalk markings can potentially reduce pedestrian collisions occurring at intersections by 61% based on Regional studies, however, there are interlocking brick crosswalks at the intersection currently preventing installation of ladder crosswalk markings. As an interim measure, temporary ladder crosswalks can be painted onto the existing crosswalk. Typically plastic markings are used to mark ladder crosswalks for longevity.

Staff also believes setback crosswalks can minimize pedestrian collisions as they will provide motorists more time to react to crossing pedestrians when turning left or right as well as provide room for a motorist to stop and not be in conflict with on-coming vehicles. Like roundabout crosswalks, offset crosswalks at traffic signals provide storage for 1 stopped vehicle and allows pedestrians to cross roadways where the speed of turning vehicles remains slow. Situating the crosswalk further downstream of the intersection would unduly expose pedestrians to higher motorist speed and take pedestrians away from their desired travel path which is not preferred. For these reasons and similar to roundabout design, staff prefer offset crosswalks at traffic signals to be situated no more than 5-7 metres from the conflicting vehicular path. Figure 3 shows a draft concept of the setback design. Similar to ladder markings, the existing interlocking brick is currently preventing installation of offset crosswalks.

**Figure 3 – Draft Concept of Setback Crosswalk**
Studies have found that the presence of a pedestrian refuge island and or a median island is associated with 40% fewer pedestrian collisions. Local research has found positive results as well. In 2006 a median island was installed on the 4-lane section of Weber Street between Fergus Avenue and Kinzie Avenue to mitigate pedestrian crossing collisions. Over a 5-year period, that stretch of Weber Street saw 5 pedestrians struck by motorists prior to the installation of a median island. By comparison, only 1 pedestrian collision occurred in the 5-year period after the installation of the median island representing an 80% reduction in pedestrian collisions attributable to the median island. Staff believes the presence of median islands at this intersection would slow down turning motorists and provide a place of refuge for pedestrians crossing outside of the intersection, however property constraints prevent the installation of these median islands.

RECOMMENDATIONS:

In addition to pedestrian collision countermeasures already planned for 2013 (additional street lighting and PCS), staff is recommending the following countermeasures to improve pedestrian safety at the intersection of University Avenue and King Street:

- Temporarily paint ladder crosswalks onto existing brick crosswalks, in 2013
- Remove brick crosswalks in 2014; and
- Install offset ladder crosswalks.

Staff expects the pedestrian collision countermeasures planned and recommended for this intersection will reduce the frequency of pedestrian collisions occurring at or near this intersection by a combined total of 68% or more. Staff is also carefully reviewing the concept, impacts and feasibility of constructing raised crosswalks at this location. If feasible, staff may consider incorporating raised crosswalks into the design of this intersection for construction in 2014. At this time staff has no applicable countermeasures to address rear-end and turning movement type collisions that are also occurring at this intersection. A more detailed review of motor vehicle collisions at this intersection will be provided as part of the 2012 annual collision report anticipated to be presented in September 2013.

Staff from the City of Waterloo has been consulted and support these recommendations.

CORPORATE STRATEGIC PLAN:

This report addresses the Region’s goal to implement proven roadway safety strategies and education to enhance the safety of our roadways (Strategic Objective 3.3.2).

FINANCIAL IMPLICATIONS:

The estimated cost of implementing the recommended pedestrian collision countermeasures (removal of brick crosswalks and installation of offset ladder crosswalks) is $75,000. Funding for these countermeasures will be considered in the development of the 2014 Transportation Capital Program. The cost to paint temporary ladder markings on brick crosswalks is $2,000.00 and is included in the 2013 Transportation Maintenance budget.
OTHER DEPARTMENT CONSULTATIONS/CONCURRENCE:
NIL

ATTACHMENTS:
NIL

PREPARED BY:  Ashfaq Rauf, Engineering Technologist (Traffic), Traffic Engineering

APPROVED BY:  Thomas Schmidt, Commissioner, Transportation and Environmental Services
RECOMMENDATION:

THAT the Regional Municipality of Waterloo provide on-going financial support to the Waterloo Wellington Children’s Groundwater Festival in the amount of $30,000 each year for a 5-year term as outlined in Report E-13-039 dated March 19, 2013.

SUMMARY:

NIL

REPORT:

Community education and participation is essential for source water protection initiatives and is one of the key components outlined in the Water Resources Protection Strategy. The Waterloo Wellington Children’s Groundwater Festival (Festival) has been and continues to be a fundamental program for educating local children and by extension their parents about water protection and conservation. This is the 18th year for the Festival. To-date, over 74,000 students have participated and including adults and volunteers results in a total of almost 100,000 members of the community that have been educated on water protection and conservation related topics since the Festival’s inception in Waterloo Region.

The Festival is a week-long event hosted at Waterloo Region Museum in late May to early June. It provides hands-on water education opportunities for students in Grades 2 to 5 and is closely linked to the provincial education curriculum. An organizing committee consisting of staff from Region of Waterloo Water Services, Public Health, Waste Management, Planning, Housing and Community Services; City of Kitchener; City of Waterloo; City of Guelph; Grand River Conservation Authority; University of Waterloo; and several private firms develop the Festival format for each year. The Festival is run by Waterloo Region Museum staff, the steering committee, one paid staff coordinator and approximately 550 volunteers of which approximately 400 consist of area high school students.

Financing for the Festival, which has operating costs of $90,000, has varied each year and is obtained from a variety of sources including private sector grants (e.g. TD Friends of the Environment), private sector sponsorship, The Region of Waterloo, City of Guelph, Kitchener Utilities and Grand River Conservation Authority (Foundation). Many of these organizations also provide in-kind financial support through volunteers and by equipping some of the activity centres.

Water Services has been involved with the Festival since its inception and has contributed $30,000 per year since 2004. Regional Council has authorized this payment on a five-year basis including that for the period 2007 through 2012 (E07-072). As the Festival is part of Water Services core
education and awareness initiatives, staff is requesting Regional Council’s approval for an on-going, annual commitment of $30,000 for a 5-year term. Region staff will revisit this approach and bring forward appropriate recommendations for Regional Council’s consideration if there is any substantive change to the content or the structure of the Festival in future years.

CORPORATE STRATEGIC PLAN:

The Festival contributes to the implementation of the Region’s Strategic Plan objectives to protect the quality and quantity of our drinking water sources.

FINANCIAL IMPLICATIONS:

The approved 2013 Water Capital Program includes $226,000 for 2013 and sufficient funds in subsequent years obtained from Regional Development Charges and Water Reserves.

OTHER DEPARTMENT CONSULTATIONS/CONCURRENCE:

Staff from Waterloo Region Museum, part of the Planning, Housing and Community Services department, supports the Festival and Water Services on-going financial contribution.

ATTACHMENTS:

NIL

PREPARED BY:  Eric Hodgins, Manager, Hydrogeology & Source Water

APPROVED BY:  Thomas Schmidt, Commissioner, Transportation and Environmental Services
REGION OF WATERLOO
PLANNING, HOUSING AND COMMUNITY SERVICES
Community Services

TO: Chair Jim Wideman and Members of the Planning and Works Committee
DATE: March 19, 2013
FILE CODE: D15-60 (A)
SUBJECT: YEAR END 2012 POPULATION AND HOUSEHOLD ESTIMATES FOR THE REGION OF WATERLOO

RECOMMENDATION:


SUMMARY:

Each year, an estimate of the year-end population and households is produced for the Region and each Area Municipality by Regional staff (see Figure 1). The Regional population as of year-end 2012 is estimated at 559,000 including full-time university and college students residing in the Region. The estimated number of households is 199,450, an increase of 2,870 or 1.46% over 2011.

The annual population growth rate was 1.27%, representing an increase of 7,000 people over 2011. This growth rate was moderately higher than the previous year’s growth of 1.24%, but below the 15-year average rate of 1.76%. The Region’s continuing growth reflects the diversity of the local economy, and the community’s desirability.

The Regional figures are based on Census population and household data; however, they additionally include an estimate of full-time post-secondary students, and the Census undercount, at year-end, and therefore provide a better estimate of the total number of people and households that require services such as water, transit and policing.

The tables in Figures 1 and 3 of this report are proposed to be included in a Planning Information Bulletin to be distributed to Area Municipalities and other parties, as well as being posted on the Region’s website for broader community access.

Population estimates are used by many Regional and Area Municipal departments, agencies, boards, and community groups to understand land use, plan infrastructure and service programs, calculate service costs per resident, assess housing needs and track health-related trends.

REPORT:

Population and Household Estimates

Figure 1 provides the year-end 2012 population and household estimates for all Area Municipalities, with 2011 comparators. The population estimate for year-end 2012 is 559,000. This represents an increase of 7,000 people or 1.27% over the population estimate for 2011 of
552,000. Of the Area Municipalities, North Dumfries experienced the highest annual growth rate, at 2.7%, representing 250 additional people. In absolute growth, Waterloo grew the most, with 2,700 new residents, representing a growth rate of 2.1%.

The estimated number of households in the Region is 199,450. Households are equivalent to “occupied dwellings”. Growth in households from 2011 is 2,870 units (1.46%), similar to the growth in the previous year. In 2012, the largest increase in the number of households occurred in Waterloo, which grew by 1,130 occupied units, accounting for nearly 40% of the Regional growth of households. In percentage increase, North Dumfries had the largest growth in households, with 110 new households representing a 3.5% growth rate.

The calculated Persons Per Unit (PPU) for year-end 2012 is 2.72, representing the estimated Regional population in regular households in relation to the number of households in the Region. This PPU value includes the students who are resident in the Region, as well as the under-coverage rate applied to Regional population estimates. It should be noted that the average number of persons per unit (PPU) has been declining for several decades according to Census data. This trend has been the result of smaller and fewer families, increased economic well-being and independence, and an aging population. However, the overall PPU calculated using the above definition has resulted in relatively flat overall PPUs for the past five years, due to the increase in the number of post-secondary students in the Region, who live in units with much higher PPUs.

Methodology
An estimate of the current population and households in the Region is prepared by Planning, Housing and Community Services staff each year. The estimate is primarily based on the most recent Census of Canada, which was May 2011. Initial data from this Census became available in February, 2012 and has been incorporated into the figures in this report. The Census data provides a 2011 count of 507,096 population and 191,595 occupied dwellings, and is further described in a series of Census Bulletins for Waterloo Region. Additional demographic and dwelling characteristics data, which shed further light on students and other aspects of population and dwellings, has become available in Census releases through 2012, and further such data will become available through the National Household Survey in 2013. The Census estimate of undercoverage for the 2011 Census will be available in 2014. Future estimates of 2011 and 2012 population and dwellings will be adjusted as required, based on this forthcoming data.

While the Region’s population and household estimates are anchored to 2011 Census estimates, in the subsequent inter-censal years (2012-2015), the households and their related population are extrapolated using building activity. An estimated occupancy date is assigned to each building permit, and this date determines when new dwellings were added to the inventory of occupied units. These sources are supplemented by data from the Municipal Property Assessment Corporation (MPAC), correlated with a visual inspection of recent aerial photography, and data such as vacancy rates published by Canada Mortgage and Housing Corporation (CMHC). As a result, the growth in households is not identical to building activity in each year, which is described in Report P-13-025, 2012 Building Permit Activity and Growth Monitoring Report.

Although the Census population and household counts provide the foundation data, the estimate of population contained in this report differs from the population reported by the Census in several ways. To best reflect the total number of people consuming services at year-end within the Region, adjustments are made to include:

- the Census net under-coverage (those people who were missed or double counted by the Census). Net under-coverage will not be available from Statistics Canada until 2013/2014. Until then, a four per cent under-coverage is assumed, consistent with 2006, and with Places to Grow assumptions;
- temporary residents in the Region, most notably students who study at our post-secondary institutions; and
- growth during the time period from mid May to yearend.

The full-time student population represents a substantial component of the difference between Census and Regional population estimates, and contributes to the growth in total population. An extensive review of post-secondary student population was undertaken in 2012, based on recent data from the University of Waterloo, Wilfrid Laurier University and Conestoga College, and has resulted in a better understanding of the size and character of the student population in the Region.

Of the estimated 28,550 students residing temporarily in the Region as of year-end 2012, there are approximately 8,740 in student residences, and 19,810 living elsewhere in the community. Conversely, there are an estimated 7,080 students whose home is within the Region, but who reside elsewhere during the school year. After considering the flows of students, both into and out of the Region, the net effect of post-secondary students on the population of Waterloo Region is 21,470 people, as summarized in Figure 1.

To put this in context, there are now an estimated 56,800 post-secondary students enrolled in
full-time programs of Conestoga College, the University of Waterloo, and Wilfrid Laurier University, on the campuses which are located in Waterloo Region, as shown in Figure 2. Not included are the smaller schools such as business and technical training colleges, as well as thousands of students with part-time enrolments at our local schools, but who typically already live in the Region, or who commute in for these programs, and therefore do not add to our local population.

With respect to the full-time students at the college and two universities, including undergraduate, graduate and post-graduate levels, an estimated 47,465 students are resident in the Region, while another 9,335 are estimated to live outside the Region, and either commute in for school, are on co-op work terms, or have other arrangements. Of those who live in the Region while they study, it is further estimated that 28,550 have taken up temporary residence in the Region, while their primary place of residence is elsewhere, often at the home of parents who live outside the Region.

The household estimate contained in this report differs from the number of dwellings occupied by usual residents reported in the Census, due to the following adjustments:

- vacancy rates in rental accommodations, which have risen to a 2.6% in 2012 (from 1.7% in 2011) as reported by Canada Mortgage and Housing Corporation (CMHC);
- some student households, since the Census figure does not include dwellings solely occupied by foreign and temporary residents; and
- growth during the time period from mid-May to year-end.

Population and Household Trends

As the 2011 Census has provided the most recent population and household data, adjustments of population and dwelling estimates that had previously been based on 2006 Census data is required. This new data, as well as cancellation of building permits and other updates to historical data, necessitates retroactive adjustments be made to previous years’ population and household estimates. Figure 3 provides revised estimates for the 1991-2012 periods, together with a preliminary forecast for year-end 2013 based on recent building activity. It is anticipated that 2013 population increase will be moderately higher than it was in 2012, despite the recent tapering of new permit activity, due to the future occupation of apartment units which were issued building permits in 2011.
The 15-year period from 1998 to 2012 approximates one complete cycle in the housing market, during which the Region’s population grew by an average of 8,587 per annum, or 1.76%. The most recent five-year period, from 2008 to 2012, has been characterized by more moderate growth in Waterloo Region, with average annual growth in this period of 7,080 people (1.32%) and 2,802 households per year (1.47%).

**Area Municipal Consultation/Coordination**

This report has been circulated to all Area Municipalities.

**CORPORATE STRATEGIC PLAN:**

Many of the objectives and actions contained in the Corporate Strategic Plan rely on estimates of population and households, including Strategic Objectives 2.2 “Develop, optimize and maintain infrastructure to meet current and projected needs”, 3.1 “Implement a Light Rail Transit System in the Central Transit Corridor, fully integrated with an expanded conventional transit system”, and 5.3 “Ensure Regional programs and services are efficient and effective and demonstrate accountability to the public”. 
FINANCIAL IMPLICATIONS:
NIL

OTHER DEPARTMENT CONSULTATIONS/CONCURRENCE:
NIL

ATTACHMENTS:
NIL

PREPARED BY:  Virgil Martin, Planning Information Specialist  
Margaret Parkin, Manager, Planning Information and Research

APPROVED BY:  Rob Horne, Commissioner of Planning, Housing and Community Services
REGION OF WATERLOO
PLANNING, HOUSING AND COMMUNITY SERVICES
Community Services

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

DATE: March 19, 2013  FILE CODE: D07-40(A)

SUBJECT: 2012 BUILDING PERMIT ACTIVITY AND GROWTH MONITORING

RECOMMENDATION:

For information.

SUMMARY:

This report provides a summary of building permit activity across the Region in 2012, with comparisons to previous years. It reflects building permit data related to new construction, excluding agricultural, and net of cancelled permits, as provided by Area Municipalities.

The total value of new building permits issued for both residential and non-residential buildings has returned to more normal levels after two years of record high values. In 2012, the total value of new building permits issued across Waterloo Region was $881 million, comprised of $520 million in the residential sector, and $360 million in the industrial, commercial, and institutional sectors. Overall, new construction in Waterloo Region remains quite active.

Building permits for new non-residential floor space increased 20% to 1.97 million square feet relative to 2011. At the same time, the value of non-residential permits issued in 2012 decreased 37% to $360 million relative to 2011 when non-residential permit values were the second highest recorded in the Region.

In residential activity, permits were issued for 2,433 units in 2012, down from 3,586 units in 2011 and below the 30-year regional average of 3,250 units. Similarly, the value of these permits decreased from 2011, to $520.5 million. This tapering of building activity was anticipated in Report P-12-098, “Building Permit Activity January to June 2012”, dated September 11, 2012, and reflects the cyclical nature of residential building activity, which is subject to many factors including demand, housing prices and mortgage rates.

Canada Mortgage and Housing Corporation (CMHC) reported in its January 2013 issue of “Housing Now” that housing starts in the Kitchener-Cambridge-Waterloo Census Metropolitan Area (CMA) in 2012 were down 1.8% from 2011; this matches the 1.8% decline that CMHC had previously forecast, as reported in P-12-039, 2011 Building Permit Activity and Growth Monitoring, dated March 20, 2012. CMHC is forecasting a further 4.9% decline in housing starts in our CMA in 2013. In contrast, CMHC is forecasting a drop of 20.8% in starts across Ontario in 2013, followed by a modest 3.5% increase in 2014.

While the reurbanization target in the Province of Ontario’s Places to Grow Act (2006) does not come into effect until the year 2015, the levels for the Region of Waterloo from 2006 to year-end 2012 provide an early indication of how the residential building activity currently measures against the target. Permits for new residential units for the year 2012 indicate that 48% of units have been
created in the Built-up Area, exceeding the Places to Grow target of 40% by the year 2015 and the Regional Official Plan target of 45%. This is the third consecutive year that this benchmark has been exceeded, and the most recent three year average (2010 to 2012) has been 53%.

**REPORT:**

Building permit activity is one indicator of the strength of the local economy, as well as a predictor of the population growth. This report summarizes building activity in both the residential and non-residential sectors in the Region for 2012. Building activity data for previous years is provided for comparison purposes. These figures are compiled annually by Regional staff, based on data supplied by the Area Municipalities.

**Total Value of New Construction**

The total value of new building permits issued for both residential and non-residential buildings has returned to more normal levels after two years of record high values. In 2012, the total value of new building permits issued across Waterloo Region was $881 million, comprised of $520 million in the residential sector, and $360 million in the industrial, commercial, and institutional sectors. The change in industrial, commercial, institutional (ICI) and residential activity over 2011 is summarized in Figure 1.

**Figure 1: Summary of Building Permit Activity Change (2011-2012)**

<table>
<thead>
<tr>
<th>Type</th>
<th>Total Change from 2011</th>
<th>Percent Change from 2011</th>
<th>2012 Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Industrial</td>
<td>$7.5 million</td>
<td>21%</td>
<td>$43.2 million</td>
</tr>
<tr>
<td></td>
<td>92,000 sq. ft.</td>
<td>23%</td>
<td>304,000 sq. ft.</td>
</tr>
<tr>
<td>Commercial (office, recreation, retail, hotel)</td>
<td>$20.8 million</td>
<td>22%</td>
<td>$117.2 million</td>
</tr>
<tr>
<td></td>
<td>360,000 sq. ft.</td>
<td>67%</td>
<td>901,000 sq. ft.</td>
</tr>
<tr>
<td>Institutional</td>
<td>$242.8 million</td>
<td>55%</td>
<td>$199.6 million</td>
</tr>
<tr>
<td></td>
<td>57,000 sq. ft.</td>
<td>8%</td>
<td>768,000 sq. ft.</td>
</tr>
<tr>
<td>Residential</td>
<td>$211.2 million</td>
<td>29%</td>
<td>$520.5 million</td>
</tr>
<tr>
<td></td>
<td>1,153 units</td>
<td>32%</td>
<td>2,433 units</td>
</tr>
</tbody>
</table>

As shown in Figure 2, the total new construction value decreased 33% from 2011 values which were the second highest recorded in Waterloo Region, and places the level of new construction permits in line with activity between 2002 and 2009.
Building Activity in the Non-Residential Sector

The year 2012 showed mixed results in non-residential building activity, representing industrial, commercial and institutional sectors. While there was an overall tapering from 2011 in the value of permits issued, due primarily to the moderation in the value of permits in the institutional sector, both the industrial and commercial sectors posted higher values, increasing 7.5 million and 20.8 million respectively as shown in Figure 3.
The highest values for an individual 2012 non-residential building permit, by type, were:

- Institutional: $72 million for the Global Innovation Exchange building at Wilfrid Laurier University which will house the School of Business and Economics and the Department of Mathematics;
- Industrial: $21 million for the addition to K-W Hydro in Kitchener including mechanical, electrical and site servicing;
- Commercial: $12 million for the construction a 4 storey office building at 430 The Boardwalk in Waterloo.

Of the 28 permits valued over $2 million, Kitchener issued 10 permits, Waterloo issued 8, Cambridge issued 7, and Woolwich issued three. Attachment 1 lists the top 25 permits by construction value.

As illustrated in Figures 4 and 5, non-residential building permit values fluctuate by sector and by municipality from year to year. The municipalities of Waterloo, North Dumfries, and Woolwich saw increases in new non-residential construction values over 2011.
The floor space for new non-residential permits rebounded in 2012 in the Region of Waterloo from 2011 levels. In the commercial sector, new floor space increased 67% to 546,000 square feet, with a mix of office, recreational, and retail uses. Institutional permits also showed an increase, at 8%, for a total of 768,000 new square feet. In the industrial sector, new permits for 304,000 square feet was 25% lower than activity in 2011, although at a 21% higher value, as described previously in this report. Figure 6 shows the 10-year variation in non-residential floor space among the sectors.

New non-residential floor space varied amongst the area municipalities. Among the cities, new non-residential floor space was the highest in Kitchener, and both Kitchener and Waterloo posted increases from 2011, as shown in Figure 7. Among the townships, new non-residential floor space was the highest in Woolwich, as shown in Figure 8, with both North Dumfries and Woolwich experiencing increases.
Building Activity in the Residential Sector

Overall, 2012 saw a tapering of new building permits in the residential sector, after two years of relatively high activity in 2010 and 2011. Building permits were issued for 2,433 units, representing a decrease of 1,153 units from 2011, or 32%. The value of these permits similarly decreased 29% to $520.5 million from $731.7 million. While there were decreases in both single detached units (29%) and apartments (52%), there were increases experienced in semi-detached units (33%) and townhouses (59%).

As shown in Figure 9, the composition of the residential building activity, by type, was:

- 943 single detached units, accounting for 39% of the total residential units,
- 121 semi-detached units (5%),
- 480 townhouse units (20%), and
- 889 apartment units (37%).

Over the longer term, the percentage of single detached units constructed per year has fallen from a peak of 78% in 1998 to 39% in 2012, with a corresponding shift to higher-density housing types.
The location of all residential building permits issued for new construction in 2012 is shown on Map 1 (Attachment 2). Each circle is representative of the number of units constructed through each building permit.

Residential building permit activity decreased in all Area Municipalities between 2011 and 2012, as illustrated in Figure 10. While new residential units decreased by 32% across Waterloo Region, the municipalities of Wellesley and Kitchener saw the least amount of decrease.

**Figure 10: Total New Residential Units by Type and Municipality**

<table>
<thead>
<tr>
<th></th>
<th>Single Detached</th>
<th>Semi Detached</th>
<th>Townhouse</th>
<th>Apartment</th>
<th>Total</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cambridge</td>
<td>221</td>
<td>147</td>
<td>3</td>
<td>1</td>
<td>76</td>
<td>109</td>
</tr>
<tr>
<td>Kitchener</td>
<td>590</td>
<td>396</td>
<td>57</td>
<td>81</td>
<td>126</td>
<td>309</td>
</tr>
<tr>
<td>Waterloo</td>
<td>97</td>
<td>101</td>
<td>0</td>
<td>8</td>
<td>38</td>
<td>44</td>
</tr>
<tr>
<td>North Dumfries</td>
<td>51</td>
<td>40</td>
<td>20</td>
<td>18</td>
<td>34</td>
<td>18</td>
</tr>
<tr>
<td>Wellesley</td>
<td>31</td>
<td>30</td>
<td>6</td>
<td>4</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Wilmot</td>
<td>154</td>
<td>113</td>
<td>0</td>
<td>6</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>Woolwich</td>
<td>190</td>
<td>116</td>
<td>5</td>
<td>3</td>
<td>23</td>
<td>0</td>
</tr>
<tr>
<td><strong>Waterloo Region</strong></td>
<td><strong>1,334</strong></td>
<td><strong>943</strong></td>
<td><strong>91</strong></td>
<td><strong>121</strong></td>
<td><strong>301</strong></td>
<td><strong>480</strong></td>
</tr>
<tr>
<td>% Change</td>
<td>-29%</td>
<td>33%</td>
<td>59%</td>
<td>-52%</td>
<td>-32%</td>
<td></td>
</tr>
</tbody>
</table>

**Long Term Trends in Residential Building Activity**

The total annual number of new residential permits over thirty years is displayed in Figure 11. The graph clearly shows the cyclical nature of residential building activity, which reflects many factors including demand, housing prices and mortgage rates. The long-term annual average over the 30-year period of new residential units is 3,250. The residential building permit activity in 2012, at 2,433 new units, was 25% below the long term average.

**Figure 11: Historic Residential Building Activity (Thirty Years)**
Comparisons with CMHC Housing Starts

Locally, Canada Mortgage and Housing Corporation (CMHC) reported in its Housing Now edition (released February, 2013) that the 2,900 housing starts in the Kitchener-Cambridge-Waterloo Census Metropolitan Area (CMA) in 2012 were down 1.8% from 2011. These results match the 1.8% decline they had predicted in 2011, as reported in P-12-039, “2011 Building Permit Activity and Growth Monitoring”. CMHC’s latest prediction for 2013, as published in the Fall 2012 Housing Market Outlook, is a 4.9% decline in starts in the CMA for 2013. CMHC is predicting a drop in starts across the province in 2013 of 20.8%, followed by a modest 3.5% increase in 2014.

It is important to note that there are several differences between the statistics reported by CMHC and those found in this report. The first difference is that this report is for all seven Area Municipalities, whereas CMHC reports on the Kitchener CMA (Census Metropolitan Area) which includes only Kitchener, Waterloo, Cambridge, Woolwich and North Dumfries. Secondly, CMHC uses a ‘start’ as the measure of building activity. A ‘start’ is defined as the beginning of construction work on a building, usually when concrete has been poured for the footing. Further, any new housing units created through conversions from industrial uses are not included in the CMHC reports.

Monitoring Growth

On June 16, 2006, the Province of Ontario approved “Places to Grow: Growth Plan for the Greater Golden Horseshoe”, which included an objective to accommodate more growth through reurbanization. The Growth Plan set a minimum target of 40% of new residential units to be constructed within the Built Up Area (BUA) which was defined by the Province to delineate the lands already developed.

While the reurbanization target does not come into effect until the year 2015, the levels for the Region of Waterloo from 2006 to year-end 2012 provide an early indication of how the residential building activity currently measures against the target. As shown in Figures 12 and 13, permits for new residential units for the year 2012 indicate that 48% of units were in the Built Up Area, exceeding the Places to Grow requirement. This is the third consecutive year that this target has been exceeded, and the most recent three year average (2010 to 2012) has been 53%.

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Units in Region of Waterloo</th>
<th>Units Inside the Built Up Area</th>
<th>Percent of Units Inside the Built Up Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>3,220</td>
<td>1,669</td>
<td>52%</td>
</tr>
<tr>
<td>2007</td>
<td>3,102</td>
<td>1,430</td>
<td>46%</td>
</tr>
<tr>
<td>2008</td>
<td>2,969</td>
<td>974</td>
<td>33%</td>
</tr>
<tr>
<td>2009</td>
<td>2,765</td>
<td>1,028</td>
<td>37%</td>
</tr>
<tr>
<td>2010</td>
<td>4,138</td>
<td>2,371</td>
<td>57%</td>
</tr>
<tr>
<td>2011</td>
<td>3,586</td>
<td>1,952</td>
<td>54%</td>
</tr>
<tr>
<td>2012</td>
<td>2,433</td>
<td>1,175</td>
<td>48%</td>
</tr>
</tbody>
</table>
While there is no policy target for the amount of non-residential activity within the Built Up Area (BUA), the following figures (14 and 15) are reported for industrial, commercial and institutional building activity, measured both in size of new construction as well as building value, as provided on building permits issued. On average, over a seven year period, 67% of non-residential floor space was inside the BUA. In 2012, permits for 77% of non-residential floor space were issued inside the BUA; the highest percentage in the period.

**Figure 14: Non-Residential Floor Area within the Built Up Area**

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Floor Area in Region of Waterloo (ft²)</th>
<th>Total Floor Area Inside the Built Up Area (ft²)</th>
<th>Percent of Floor Area Inside the Built Up Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>2,943,604</td>
<td>2,172,656</td>
<td>74%</td>
</tr>
<tr>
<td>2007</td>
<td>2,762,978</td>
<td>1,804,348</td>
<td>65%</td>
</tr>
<tr>
<td>2008</td>
<td>3,292,062</td>
<td>2,255,101</td>
<td>69%</td>
</tr>
<tr>
<td>2009</td>
<td>2,507,288</td>
<td>1,498,360</td>
<td>60%</td>
</tr>
<tr>
<td>2010</td>
<td>3,677,207</td>
<td>2,055,130</td>
<td>56%</td>
</tr>
<tr>
<td>2011</td>
<td>1,648,371</td>
<td>1,122,879</td>
<td>68%</td>
</tr>
<tr>
<td>2012</td>
<td>1,973,128</td>
<td>1,511,282</td>
<td>77%</td>
</tr>
</tbody>
</table>

**Figure 15: Percentage of Non-Residential Floor Area in the Region inside the Places to Grow Built Up Area (2006-2012)**
In 2012, 17% of the units (403) and 34% of the non-residential floor space (663,152 ft²) were within 800 meters of the 23 planned Rapid Transit Station Areas in Cambridge, Kitchener and Waterloo, as illustrated in Figures 16 and 17. While there were less residential units within 800 meters of planned Rapid Transit Station Areas in 2012 than in 2011, there was a greater amount of non-residential floor space for which permits were issued.

**Figure 16: Percent within 800m of the Rapid Transit Station Area**

<table>
<thead>
<tr>
<th>Year</th>
<th>Residential Units</th>
<th>Non-Residential Floor Area</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total Units in Region of Waterloo</td>
<td>Units Within 800m of Rapid Transit Station Areas</td>
</tr>
<tr>
<td>2006</td>
<td>3,220</td>
<td>428</td>
</tr>
<tr>
<td>2007</td>
<td>3,102</td>
<td>498</td>
</tr>
<tr>
<td>2008</td>
<td>2,969</td>
<td>273</td>
</tr>
<tr>
<td>2009</td>
<td>2,765</td>
<td>330</td>
</tr>
<tr>
<td>2010</td>
<td>4,138</td>
<td>1,101</td>
</tr>
<tr>
<td>2011</td>
<td>3,586</td>
<td>964</td>
</tr>
<tr>
<td>2012</td>
<td>2,433</td>
<td>403</td>
</tr>
</tbody>
</table>

**Area Municipal Consultation/Coordination**

Building permit data are collected by Area Municipal staff and submitted to the Region. They are compiled for use in Regional development charge calculations, development tracking, forecasts, and reporting. Municipal staff is consulted for verification and insight into the data. Ongoing corrections and permit cancellations must be taken into consideration when comparing to previous building activity reports. Copies of this report have also been circulated to Area Municipalities.
CORPORATE STRATEGIC PLAN:

Tracking and reporting building permit activity contributes to Strategic Focus Area 2: Manage Growth to Foster Thriving and Productive Urban and Rural Communities

FINANCIAL IMPLICATIONS:

NIL

OTHER DEPARTMENT CONSULTATIONS/CONCURRENCE:

NIL

ATTACHMENTS:

Attachment 1 – Top 25 Non Residential permits by Construction Value
Attachment 2 – 2012 Building Permit Activity Map

PREPARED BY: David Stubbs, Planning Technician

APPROVED BY: Rob Horne, Commissioner, Planning, Housing and Community Services
## Attachment 1
### Top 25 Non-Residential Permits by Construction Value

<table>
<thead>
<tr>
<th>#</th>
<th>Address</th>
<th>Municipality</th>
<th>Structure Type</th>
<th>Floor Area</th>
<th>Construction Value</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>64 University Ave W</td>
<td>Waterloo</td>
<td>Inst</td>
<td>197,582</td>
<td>$72,000,000</td>
<td>Wilfrid Laurier University- New Global Innovation Exchange Academic Building</td>
</tr>
<tr>
<td>2</td>
<td>85 Chandler Dr</td>
<td>Kitchener</td>
<td>Inst</td>
<td>96,728</td>
<td>$25,591,000</td>
<td>Morrison Hershfield Ltd. – New Mechanical And Electrical Building For Grand River Transit</td>
</tr>
<tr>
<td>3</td>
<td>301 Victoria St S</td>
<td>Kitchener</td>
<td>Ind</td>
<td>13,907</td>
<td>$21,000,000</td>
<td>Walterfedy - An Addition To K-W Hydro Including Mechanical, Electrical And Site Servicing</td>
</tr>
<tr>
<td>4</td>
<td>30 Light Dr</td>
<td>Cambridge</td>
<td>Inst</td>
<td>98,398</td>
<td>$17,106,533</td>
<td>Mellow-Blamey Construction Limited – New Six Storey Retirement And Care Facility</td>
</tr>
<tr>
<td>5</td>
<td>250 Strasburg Rd</td>
<td>Kitchener</td>
<td>Inst</td>
<td>19,860</td>
<td>$14,573,494</td>
<td>Morrison Hershfield Ltd. - An Addition And Interior Alterations To Grand River Transit Building A</td>
</tr>
<tr>
<td>6</td>
<td>430 The Boardwalk</td>
<td>Waterloo</td>
<td>Comm</td>
<td>80,391</td>
<td>$12,000,000</td>
<td>The INCC Corp - New 4 Storey Office Building With Finished Basement.</td>
</tr>
<tr>
<td>7</td>
<td>130 Woodbine Ave</td>
<td>Kitchener</td>
<td>Inst</td>
<td>70,902</td>
<td>$10,000,000</td>
<td>Walter Fedy – New Huron Woodbine Elementary School</td>
</tr>
<tr>
<td>8</td>
<td>630 Weber St N</td>
<td>Waterloo</td>
<td>Comm</td>
<td>70,080</td>
<td>$9,000,000</td>
<td>630 Weber Street North Limited – New Two Storey Office Building.</td>
</tr>
<tr>
<td>9</td>
<td>400 East Ave</td>
<td>Kitchener</td>
<td>Comm</td>
<td>29,970</td>
<td>$9,000,000</td>
<td>Ball Construction - An Addition To The East Side Of The Kitchener Memorial Auditorium.</td>
</tr>
<tr>
<td>10</td>
<td>15 Baldwin Dr</td>
<td>Cambridge</td>
<td>Inst</td>
<td>47,856</td>
<td>$8,500,000</td>
<td>J. L. Cortes Architect Corporation - New Two Storey Elementary School</td>
</tr>
<tr>
<td>11</td>
<td>139 Northfield Dr W</td>
<td>Waterloo</td>
<td>Comm</td>
<td>65,876</td>
<td>$8,000,000</td>
<td>2269366 Ontario Limited - New Three Storey Office Building (Shell Only).</td>
</tr>
<tr>
<td>12</td>
<td>575 Conestoga Blvd</td>
<td>Cambridge</td>
<td>Comm</td>
<td>132,695</td>
<td>$8,000,000</td>
<td>Petroff Partnership Architects - New Lowes Home Improvement “ Retail Building</td>
</tr>
<tr>
<td>13</td>
<td>14 Benjamin Rd</td>
<td>Woolwich</td>
<td>Comm</td>
<td>69,071</td>
<td>$7,000,000</td>
<td>2154197 Ontario Inc – New Six Storey Holiday Inn Express</td>
</tr>
<tr>
<td>14</td>
<td>50 Kent Ave</td>
<td>Kitchener</td>
<td>Comm</td>
<td>55,757</td>
<td>$7,000,000</td>
<td>SRM Architects Inc. - New Two Commercial Storey Building.</td>
</tr>
<tr>
<td>15</td>
<td>90 Vondrau Dr</td>
<td>Cambridge</td>
<td>Ind</td>
<td>80,699</td>
<td>$7,000,000</td>
<td>William J Krohn Architect – New Construction Of An Industrial Building</td>
</tr>
<tr>
<td>16</td>
<td>140 Westmount Rd N</td>
<td>Waterloo</td>
<td>Inst</td>
<td>21,905</td>
<td>$6,200,000</td>
<td>Conrad Grebel University College - Addition And Interior Alterations.</td>
</tr>
<tr>
<td>17</td>
<td>390 Scott Rd</td>
<td>Cambridge</td>
<td>Inst</td>
<td>29,386</td>
<td>$5,300,000</td>
<td>Waterloo Region District School Board - Two Storey Classroom Addition, New Half Gymnasium Addition, Renovation To Existing Gym, Developmental Education Classroom</td>
</tr>
<tr>
<td>18</td>
<td>65 Lodge St</td>
<td>Waterloo</td>
<td>Inst</td>
<td>14,930</td>
<td>$5,293,000</td>
<td>Wilfrid Laurier University - New Two Storey University Building - Centre For Cold Regions</td>
</tr>
<tr>
<td>19</td>
<td>425 Bingemans Centre Dr</td>
<td>Kitchener</td>
<td>Comm</td>
<td>44,198</td>
<td>$5,000,000</td>
<td>ABA Architects Inc - Addition For Bingeman’s Lanes Includes Bowling Alleys And Boston Pizza.</td>
</tr>
<tr>
<td>20</td>
<td>75 University Ave W</td>
<td>Waterloo</td>
<td>Inst</td>
<td>13,692</td>
<td>$5,000,000</td>
<td>Wilfrid Laurier University - Addition And Renovation To The Athletics Complex</td>
</tr>
<tr>
<td>21</td>
<td>267 Grey Silo Rd</td>
<td>Waterloo</td>
<td>Comm</td>
<td>15,608</td>
<td>$3,750,000</td>
<td>Activa Holdings Inc - Private Recreational Facility For Grey Silo Condo Owners</td>
</tr>
<tr>
<td>22</td>
<td>4295 King St E</td>
<td>Kitchener</td>
<td>Comm</td>
<td>61,206</td>
<td>$3,000,000</td>
<td>S.G. Cunningham (Kitchener ) Limited - A New Four Storey Office Building</td>
</tr>
<tr>
<td>23</td>
<td>2723 Victoria St N</td>
<td>Woolwich</td>
<td>Comm</td>
<td>15,395</td>
<td>$2,950,000</td>
<td>Memorial Gardens Ltd – New Funeral Home/Reception Centre</td>
</tr>
<tr>
<td>24</td>
<td>49 Industrial Dr</td>
<td>Woolwich</td>
<td>Comm</td>
<td>19,518</td>
<td>$2,800,000</td>
<td>Home Hardware - Two Storey Addition To Office Portion Of Warehouse/Office Building</td>
</tr>
<tr>
<td>25</td>
<td>1500 King St E</td>
<td>Cambridge</td>
<td>Comm</td>
<td>19,160</td>
<td>$2,700,000</td>
<td>STC Construction Group - Shell For New Shoppers Drug Mart</td>
</tr>
</tbody>
</table>
Attachment 2

Map 1
2012 Residential Building Permit Activity
Regional Municipality of Waterloo

Legend
Residential Building Permits
Units
- 1 - 2
- 3 - 10
- 11 - 50
- 51 - 100
- 101 - 358

Township Urban Area
Municipal Boundary
Places to Grow - Built Up Area

Produced By: Planning, Housing and Community Services - Planning Information & Research, 2013
REPORT: P-13-026

REGION OF WATERLOO
PLANNING, HOUSING AND COMMUNITY SERVICES
Transportation Planning

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

DATE: March 19, 2013
FILE CODE: D28-60(A)

SUBJECT: GRAND RIVER TRANSIT 2013 FARE CHANGE PUBLIC CONSULTATION

RECOMMENDATION:

For information.

SUMMARY:

The 2013 Regional Budget includes a 7% increase to Grand River Transit (GRT) fares effective July 1, 2013. Fare increases help the transit system keep pace with increased costs and sustain on-going service improvements, as well as help to balance the municipal contribution to transit operating costs with transit fare revenue contribution. Two fare options have been developed that represent an overall average fare increase of 7%. Option 1 proposes slightly lower monthly pass prices, rewarding GRT’s frequent riders more than Option 2. The public will have the opportunity to provide feedback on the two fare options at a Public Consultation Centre (PCC) on Tuesday, March 26, 2013 in the lobby at 150 Frederick Street, Kitchener, as well as at the PCCs for the Proposed 2013 Transit Service Improvements on March 19, 21, and 22, 2013.

Various programs exist to assist residents who may not have the means to pay the full transit fare. The Transit for Reduced Income Program (TRIP) provides a subsidy for those who live on a reduced income, while the Transit Affordability Pass Program (TAPP) assists Ontario Works participants who are upgrading their education or attending English as a Second Language (ESL) programs. Reduced price tickets and monthly passes are also available for seniors and students.

A number of methods will be used by staff to inform the public of the PCC, including street signs, newspaper ads, emails, Twitter and the GRT website. The public can make comments by a number of means, including at the meeting, by phone or via the website. Following the PCC, staff will review the feedback and include the results in the analysis for a final recommendation to come to the Planning and Works Committee in late April.

REPORT:

The approved 2013 Regional Budget includes a 7% increase to GRT fares effective July 1, 2013, consistent with the 2011-2014 GRT Business Plan. The goal of the GRT Business Plan is to implement a fare strategy to keep pace with increasing costs, sustain service improvements and balance the municipal contribution to transit operating costs with transit revenues.

Fare Change Proposal

Two options have been developed for public consideration which achieve the overall 7% average fare revenue increase. Both options propose no increase to the $3.00 cash fare or $6.00 day pass fare, which were both increased by 20% in 2012, and are currently priced at round numbers that are convenient for transit customers (the cash fare requires a minimum of only two coins). The proposed fare options will continue to provide significant discounts over the cash fare to riders who use tickets and monthly passes.
Option 1 proposes slightly higher ticket prices than in Option 2, with an increase of $1.00 for a strip of five tickets or $0.20 per ticket, compared to an increase of $0.75 for a strip of five tickets or $0.15 per ticket in Option 2. Conversely, Option 1 proposes a lower increase on pass prices, with a monthly pass increased by $4.00 in comparison to an increase of $5.00 for a monthly pass in Option 2. Therefore, Option 1 rewards the most frequent riders of the transit system with lower pass prices than in Option 2.

The proposed fare change options are detailed in Table 1:

### Table 1: Recommended July 1, 2013 GRT Fares

<table>
<thead>
<tr>
<th>Fare Type</th>
<th>Current Fares</th>
<th>% Riders (2012)</th>
<th>2013 Fares Option 1</th>
<th>% change</th>
<th>2013 Fares Option 2</th>
<th>% change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adult Monthly Pass(^1)</td>
<td>$68.00</td>
<td>14.1%</td>
<td>$72.00</td>
<td>6%</td>
<td>$73.00</td>
<td>7%</td>
</tr>
<tr>
<td>Reduced Monthly Pass(^1,2)</td>
<td>$56.00</td>
<td>7.1%</td>
<td>$60.00</td>
<td>7%</td>
<td>$61.00</td>
<td>9%</td>
</tr>
<tr>
<td>Adult Tickets (Sold in Strip of Five)</td>
<td>$10.50 ($2.10 each)</td>
<td>10.0%</td>
<td>$11.50 ($2.30 each)</td>
<td>10%</td>
<td>$11.25 ($2.25 each)</td>
<td>7%</td>
</tr>
<tr>
<td>Reduced Tickets (Sold in Strip of Five)</td>
<td>$9.00 ($1.80 each)</td>
<td>4.6%</td>
<td>$10.00 ($2.00 each)</td>
<td>11%</td>
<td>$9.75 ($1.95 each)</td>
<td>8%</td>
</tr>
<tr>
<td>Cash Fare</td>
<td>$3.00</td>
<td>8.3%</td>
<td>$3.00</td>
<td>0%</td>
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</tr>
<tr>
<td>TravelWise Corporate Pass</td>
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<td>College Pass(^1) (per 4-month term)</td>
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<td>Student Summer Pass(^1) (July &amp; August)</td>
<td>$95.00</td>
<td>0.1%</td>
<td>$101.00</td>
<td>6%</td>
<td>$103.00</td>
<td>8%</td>
</tr>
<tr>
<td>Day Pass</td>
<td>$6.00</td>
<td>0.6%</td>
<td>$6.00</td>
<td>0%</td>
<td>$6.00</td>
<td>0%</td>
</tr>
<tr>
<td>TRIP Pass</td>
<td>$38.00</td>
<td>4.9%</td>
<td>$40.00</td>
<td>5%</td>
<td>$41.00</td>
<td>8%</td>
</tr>
<tr>
<td>U-PASS(^3,4)</td>
<td>$67.50</td>
<td>27.5%</td>
<td>$72.23</td>
<td>7%</td>
<td>$72.23</td>
<td>7%</td>
</tr>
<tr>
<td>High School 5-month Term Pass(^1,4,5)</td>
<td>$235.00</td>
<td>10.3%</td>
<td>$240.00</td>
<td>2%</td>
<td>$240.00</td>
<td>2%</td>
</tr>
</tbody>
</table>

Average Fare Increase: 7%

**NOTES:**
- Children under five ride free with a paying customer
- As of July 2012, all GRT fares are available to MobilityPLUS customers. Permanent Registered MobilityPLUS users ride conventional transit vehicles for free.
- Percent of riders column does not include free rides (including the TAPP Pass), GO Co-Fare, and adults riding at the student rate
- 1 – Photo I.D. charge of $5.00 required – one time fee for Adult and Senior Reduced Monthly Passes; per year for Student Reduced Monthly Passes; per term for Summer Pass, College Pass (except Conestoga College) and High School Pass (paid by student)
- 2 – Reduced fares are available to seniors, elementary & high school students
- 3 – As approved by Regional Council on March 28, 2012
- 4 – Fare prices are agreed through separate contract negotiations (with student associations at the universities in the case of the U-PASS and with the school transportation board in the case of the High School Pass).
- 5 – High School students can top-up the School Board funded High School Term Pass to allow unlimited travel during term on evenings, weekends and holidays. The top-up would be equivalent to the difference between the reduced monthly pass rate ($300 in Option 1 and $305 for Option 2) and the High School 5-month Pass ($240). Top-up fare is currently $45 and would increase to $60 for Option 1 and $65 for Option 2.
With either proposed fare option, GRT would continue to have average fares lower than those among comparable Ontario municipalities. Please see Appendix 1, which illustrates the current and average fare structures in these Ontario municipalities. The proposed 7% fare increase is consistent with the GRT Business Plan, which recommends a 7% increase in the average fare over the life of the plan. This will help move GRT towards achieving a greater contribution from fare revenue towards operating costs, sustain service improvements for ridership growth, and move GRT to fare levels more comparable with similar systems in Ontario.

The U-PASS price is set via negotiations with the student associations. Prices were recommended to the Planning and Works Committee in report P-12-040 dated March 20, 2012 and approved by Regional Council on March 28, 2012. A three-year term was agreed to between the student associations and the Region, so that until 2015, the U-PASS price would increase at the same average rate of other fare types; fee increases would be determined by the average increase to GRT fares as approved by Council each year.

**School Board Term Passes**

The high school term pass, purchased by the School Board transportation consortium for eligible students, is included in the fare increase proposal in Table 1 at a rate of increase of 2% to $240 for five months. Regional staff held several meetings with School Board transportation staff to discuss the proposed 7% fare increase, because they had expressed concerns with the ongoing transit fare increases, which have exceeded the amount of funding increases they have received from the Ministry of Education.

Through these discussions, several options were reviewed to look for potential financial gains to offset the proposed 7% fare increase. When no alternatives were found, Regional staff offered to propose limiting their increase in 2013 to 2% (similar to what was done last year). Despite these efforts, the School Board transportation consortium recently made a decision to discontinue using GRT services at two high schools (Resurrection and Galt Collegiate) this fall. They have cautioned that additional reductions may occur if transit prices keep rising, since it makes the yellow school bus a more affordable option. Regional staff will continue to dialogue with the School Board transportation consortium, and plan to explore the development of a longer term fare policy aimed at preserving their student ridership on GRT school services.

Additionally, in September 2012 an upgrade option to the School Board term pass was introduced to offer students unlimited access to GRT service on evenings, weekends, and holidays during the school term as a ‘top-up’ provision to their school-day-only bus pass. For this fare type, an increase is proposed, to continue the alignment of a high school student’s fares for a five-month term to the same price as five months at the reduced monthly pass rate ($300 in Option 1 or $305 in Option 2). The top-up provision is proposed at $60 per term for Option 1 or $65 for Option 2.

**Transit Fare Affordability Programs**

Residents may qualify for the Transit for Reduced Income Program (TRIP) if their income falls below the low income cut-off (LICO) as determined by Statistics Canada. Through this program, the Region provides a subsidy to those who live on a reduced income and want to purchase a bus pass. TRIP currently provides a discount of $30.00 per month to those who are eligible, requiring TRIP clients to only pay $38.00 for a monthly pass regularly priced at $68.00. For 2013, this discount is proposed to be increased to $32.00, to reduce the effect of the fare change on these customers. The customer would then be able to purchase a monthly pass for $40 under Option 1, an increase of $2 per month, or $41 under Option 2, an increase of $3 per month.

In the 2012 Regional Budget, an additional $305,000 was included to bring the TRIP budget to a total of $746,000, which allowed for approximately 2000 people to be served each month. This was an increase from approximately 1300 people in 2011. Implementation of this budget expansion eliminated all waiting
lists for the program through 2012. The proposed increase in the subsidy to $32 for the 2013 fare change allows approximately the same number of people to be served through 2013.

Additionally, the Region offers a free bus pass through the Transit Affordability Pass Program (TAPP) to Ontario Works participants who are upgrading their education or attending English as a Second Language programs.

**MobilityPLUS Fares and Fare Parity**

The Accessibility for Ontarians with Disabilities Act (AODA) required communities to introduce fare parity between conventional and specialized transit services on or before January 1, 2013. On July 1, 2012, monthly passes and discounted tickets were introduced to MobilityPLUS to comply with the AODA. Last year, the MobilityPLUS fare structure was broadened to include all fare categories available to conventional transit customers. All GRT fares are now available to MobilityPLUS customers, and consequently MobilityPLUS fares would increase at the same 7% average rate as recommended in this report.

**Public Consultation Centres**

A Public Consultation Centre (PCC) is being planned to obtain input from the public on the proposed fare change. The location and date of the Public Consultation Centre is:

<table>
<thead>
<tr>
<th>Date</th>
<th>Location</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tuesday, March 26, 2013</td>
<td>Regional Administrative Headquarters - Lobby 150 Frederick Street, Kitchener, ON</td>
<td>4:00-8:00 pm</td>
</tr>
</tbody>
</table>

Public input on the proposed fare change options will also be sought at the 2013 Transit Service Improvement PCCs being held on March 19, 21 and 22, 2013.

Brochures will be distributed at the PCCs, including proposed fare options and comment forms. A copy of the brochure is attached to this report as Appendix 2.

**Public Notification and Advertising**

In advance of the Public Consultation Centres, notification will be sent out via various means, including:
- Two roadside signs will be erected in front of the Regional Administrative Headquarters;
- The digital display in front of the Regional Administrative Headquarters will also be used to advertise the event;
- Notices will be posted in the local newspapers and neighbourhood publications;
- Posters informing transit riders of proposed changes and Public Consultation Centre dates, along with display boards and comment forms, will be posted at the Charles Street Transit Terminal in Kitchener and the Ainslie Street Transit Terminal in Cambridge;
- Posters will also be placed at community centres and on buses;
- Notices of proposed fare changes will be posted on the GRT website: [www.grt.ca](http://www.grt.ca);
- Comment forms will be available online and at the PCC;
- Mass emailing will be sent to those who subscribe to our rider e-alerts; and,
- Information will be sent out via social media including Twitter.

The public can provide comments through various means, including through the paper feedback forms, online forms, telephone, fax or conventional mail.
Next Steps

Following the Public Consultation Centre, staff will review the responses gathered and develop a preferred fare option. Any residents who have indicated an interest during the planning process will be contacted and provided a summary of plans, including any changes. Staff is planning to bring the fare change recommendation to Regional Planning and Works Committee in late April for implementation on July 1, 2013.

Area Municipal Consultation/Coordination

Area Municipalities were circulated the 2011-2014 GRT Business Plan for information and comment. This document outlined the general fare strategy being proposed herein. The municipalities were also circulated a copy of this report for information.

CORPORATE STRATEGIC PLAN:

The 2013 transit fare changes support the implementation of Regional Council’s Strategic Focus, under Focus Area 3, Sustainable Transportation: *Develop greater, more sustainable and safe transportation choices.*

FINANCIAL IMPLICATIONS:

The costs of planning and operating public consultation for transit fare changes are included in the 2013 GRT and Mobility PLUS operating budgets, as approved by Regional Council. The proposed fare change is expected to increase revenue by $636,000 in 2013. This amount is included in the 2013 GRT revenue budget.

OTHER DEPARTMENT CONSULTATIONS/CONCURRENCE:

Staff from Planning, Housing and Community Services, Finance and Transportation and Environmental Services worked together to develop these transit fare options.

ATTACHMENTS:

Appendix 1 – Current (2013) and Average Fares for Comparable Ontario Transit Systems
Appendix 2 – Brochure for PCC

PREPARED BY: *Eric Pisani*, Principal Planner

APPROVED BY: *Rob Horne*, Commissioner, Planning, Housing, and Community Services
### Appendix 1 – Current (2013) and Average Fares for Comparable Ontario Transit Systems

<table>
<thead>
<tr>
<th>Municipality</th>
<th>Cash Fare</th>
<th>Adult Ticket</th>
<th>Reduced Ticket</th>
<th>Adult Monthly Pass</th>
<th>Reduced Monthly Pass</th>
<th>2011 Average Fare</th>
</tr>
</thead>
<tbody>
<tr>
<td>York Region</td>
<td>$3.75</td>
<td>$3.00</td>
<td>$1.85</td>
<td>$120.00</td>
<td>$55.00</td>
<td>$2.60</td>
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<tr>
<td>Brampton</td>
<td>$3.25</td>
<td>$2.65</td>
<td>$1.50</td>
<td>$110.00</td>
<td>$50.00</td>
<td>$2.24</td>
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<tr>
<td>Mississauga</td>
<td>$3.25</td>
<td>$2.70</td>
<td>$1.80</td>
<td>$120.00</td>
<td>$50.00</td>
<td>$1.97</td>
</tr>
<tr>
<td>Toronto</td>
<td>$3.00</td>
<td>$2.65</td>
<td>$1.80</td>
<td>$128.50</td>
<td>$106.00</td>
<td>$1.94</td>
</tr>
<tr>
<td>Durham Region</td>
<td>$3.00</td>
<td>$2.70</td>
<td>$1.85</td>
<td>$100.00</td>
<td>$40.25</td>
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<td>Windsor</td>
<td>$2.50</td>
<td>$2.10</td>
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<td>$40.00</td>
<td>$1.76</td>
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<td>Hamilton</td>
<td>$2.55</td>
<td>$2.00</td>
<td>$1.65</td>
<td>$87.00</td>
<td>$71.00</td>
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<tr>
<td>Ottawa</td>
<td>$3.30</td>
<td>$2.60</td>
<td>$2.60</td>
<td>$96.25</td>
<td>$39.00</td>
<td>$1.59</td>
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<tr>
<td>Sudbury</td>
<td>$2.80</td>
<td>$2.10</td>
<td>$1.60</td>
<td>$78.00</td>
<td>$47.00</td>
<td>$1.57</td>
</tr>
<tr>
<td>Thunder Bay</td>
<td>$2.60</td>
<td>$2.00</td>
<td>$2.00</td>
<td>$69.50</td>
<td>$59.50</td>
<td>$1.45</td>
</tr>
<tr>
<td>London</td>
<td>$2.75</td>
<td>$1.90</td>
<td>$1.43</td>
<td>$81.00</td>
<td>$57.50</td>
<td>$1.33</td>
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<tr>
<td>GRT Option 1</td>
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<td>$2.30</td>
<td>$2.00</td>
<td>$72.00</td>
<td>$60.00</td>
<td>$1.27</td>
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<tr>
<td>GRT Option 2</td>
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<td>$2.25</td>
<td>$1.95</td>
<td>$73.00</td>
<td>$61.00</td>
<td>$1.27</td>
</tr>
<tr>
<td>Ontario Comparable System Median</td>
<td>$3.00</td>
<td>$2.50</td>
<td>$1.80</td>
<td>$87.00</td>
<td>$50.00</td>
<td>$1.68</td>
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<tr>
<td>Ontario Comparable System Average</td>
<td>$2.91</td>
<td>$2.40</td>
<td>$1.83</td>
<td>$88.38</td>
<td>$51.80</td>
<td>$1.77</td>
</tr>
</tbody>
</table>

**NOTE:** The above table includes all updates to fare prices for the municipalities shown to January, 2013. 2012 average fare data is not yet available, so 2011 data is shown with the exception of the proposed options for GRT.
PROPOSED 2013 TRANSIT FARE CHANGE

As part of the Region’s budget, Regional Council has approved an overall 7% fare increase for 2013 so passenger revenues can keep pace with increasing costs, to sustain service improvements outlined in the 2011-2014 Grand River Transit (GRT) Business Plan, and to balance the municipal contribution to transit operating costs with transit fare revenues.

GRT continues to offer a reliable, accessible and affordable public transit system to riders in Waterloo Region. GRT’s fares, even with the proposed changes, will continue to be among the lowest when compared to other transit agencies in Ontario.

Transit improvements planned for 2013 include:

- Improving service on Routes 5 Erb West, 6 Bridgeport, 12 Conestoga Mall, 13 Laurelwood, 29 Keats Way, 31 Lexington, and 35 Eastbridge, to provide more direct service and create connections to additional locations within the Region;
- Increasing hours of service;
- Extending the existing 201 Fischer-Hallman iXpress to Conestoga Mall; and
- Implementing a new University iXpress route between The Boardwalk at Ira Needles Boulevard, the University Avenue and Northfield Drive East employment area, and Conestoga Mall, via Erb Street West and University Avenue.

Improving transit service is the key to:

- Reducing transit travel times by creating more direct routes;
- Reducing customer wait times by increasing frequency;
- Increasing the number of potential destinations available to transit users;
- Ensuring buses arrive when scheduled; and
- Making it possible to use transit to travel later in the evening, on weekends as well as at peak times.

Why are some fares increasing by more or less than 7%?

When creating a fare change proposal, we aim to balance the change to each fare type, so that:
- Fare prices reward frequent riders.
- Transit remains affordable for seniors, students, persons on low incomes and persons with disabilities.
- Cash fares require the fewest possible number of coins, to be convenient for the user.
- Pass prices are rounded to the nearest dollar.
- Tickets are sold in strips of five, so the ticket price should make a round number when multiplied by five.

Keeping Transit Affordable

Transit provides the opportunity for financial savings to households by reducing the dependency on automobile usage and deferring the costs associated with usage or purchase of a car. Depending on the fare increase proposal that is selected, the annual cost for a transit rider who purchases monthly passes would be $864. The cost to own and operate a small car in 2012 was estimated by the Canadian Automobile Association (CAA) to be approximately $8,700 annually.¹

¹ [http://caa.ca/docs/eng/CAA_Driving_Costs_English.pdf](http://caa.ca/docs/eng/CAA_Driving_Costs_English.pdf)
Transit Tax Credit
The Government of Canada offers a public transit tax credit which reimburses riders for some of the cost of monthly passes. Additional information on this tax credit is available through the GRT website or the Canada Revenue Agency (http://www.transitpass.ca/).

Transit for Reduced Income Program (TRIP)
The Region provides a subsidy to those who live on a reduced income and want to purchase a bus pass. The Transit for Reduced Income Program (TRIP) currently provides a discount of $30.00 per month to those who are eligible. Beginning July 2013, it is proposed that the subsidy be increased to $32.00 to reduce the effect of the fare change on these customers. You may qualify for TRIP if your income falls below the low income cut-off (LICO) as determined by Statistics Canada.

More information on this program is available through the GRT website at: http://www.grt.ca/en/riderprograms/reducedincome.asp or by contacting 519-585-7555.

Transit Affordability Pass Program (TAPP)
The Region offers a free bus pass through the Transit Affordability Pass Program (TAPP) to Ontario Works participants who are upgrading their education or attending English as a Second Language programs.

MobilityPLUS
As of July 2012, all GRT fares are available to MobilityPLUS customers.

Thank you for taking the time to fill out the comment sheet attached. Customer feedback will be considered when Regional Council reviews this proposed fare change, and in the development of future fare strategies.

This proposed fare change will be considered by the Regional Planning and Works Committee on April 30, 2013 and by Regional Council on May 8, 2013.

If you wish to appear as a delegation, please contact the Regional Clerk’s office at 519-575-4420.

The fare change, subject to Regional Council approval, is proposed to take effect as of July 1, 2013.

If you would like to send comments at a later date, visit www.GRT.ca and submit a Comments and Suggestions Form, or call 519-585-7555. Please submit your comments by Friday, April 5, 2013.
Two fare change options have been developed which achieve the 7% average fare increase. Both options propose no increase to the $3.00 cash fare or $6.00 day pass fare, which were both increased by 20% in 2012. Option 1 proposes slightly higher ticket prices than in Option 2, and Option 2 proposes slightly higher pass prices than in Option 1, with a monthly pass increased by $5.00 in comparison to an increase of $4.00 for a monthly pass in Option 1. Therefore, Option 1 rewards the most frequent riders of the transit system, with lower pass prices than in Option 2.

**PROPOSED TRANSIT FARE CHANGE OPTIONS**

<table>
<thead>
<tr>
<th>Fare Type</th>
<th>Current Fares</th>
<th>% Riders (2012)</th>
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<td>5%</td>
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<td>6%</td>
</tr>
<tr>
<td>College Pass (per 4-month term)</td>
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<td>$240.00</td>
<td>6%</td>
<td>$244.00</td>
<td>7%</td>
</tr>
<tr>
<td>Student Summer Pass (July &amp; August)</td>
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<td>0.1%</td>
<td>$101.00</td>
<td>6%</td>
<td>$103.00</td>
<td>8%</td>
</tr>
<tr>
<td>Day Pass</td>
<td>$6.00</td>
<td>0.6%</td>
<td>$6.00</td>
<td>0%</td>
<td>$6.00</td>
<td>0%</td>
</tr>
<tr>
<td>TRIP Pass</td>
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**Average Fare Increase: 7%**

**NOTES:**

- Children under five ride free with a paying customer.
- As of July 2012, all GRT fares are available to MobilityPLUS customers. Permanent Registered MobilityPLUS users ride conventional transit vehicles for free.
- Percent of riders column does not include free rides (including the TAPP Pass), GO Co-Fare, and adults riding at the student rate.

1 – Photo I.D. charge of $5.00 required – one time fee for Adult and Senior Reduced Monthly Passes; per year for Student Reduced Monthly Passes; per term for Summer Pass, College Pass (except Conestoga College) and High School Pass (paid by student).

2 – Reduced fares are available to seniors, elementary & high school students.

3 – As approved by Regional Council on March 28, 2012.

4 – Fare prices are agreed through separate contract negotiations (with student associations at the universities in the case of the U-PASS and with the school transportation board in the case of the High School Pass).

5 – This fare provides a ‘top-up’ to the High School Term Pass to allow unlimited travel during term on evenings, weekends, and holidays. Purchasing this top up brings a high school student’s fares for a 5-month term to the same price as 5 months at the reduced monthly pass rate ($300 in Option 1 and $305 in Option 2).
TO: Chair Jim Wideman and Members of the Planning and Works Committee

DATE: March 19, 2013          FILE CODE: L07-70

SUBJECT: 190 Cedar Street Cambridge, Road Dedication

RECOMMENDATION:

THAT the Regional Municipality of Waterloo pass a by-law to add to the Regional Road System to form part of Regional Road 97 (Cedar Street, Cambridge) the lands described as:

- Part of Road Allowance between Concession 10 and 11, North Dumfries; Part Lot 12 Concession 11, North Dumfries; Part Subdivision of Lot 3, Concession 10, WGR; North Dumfries being Part 1 on 67R-3028 (aka Regional Road 97) (aka Cedar St); Cambridge (all of PIN 03800-0002 (LT).

AND THAT the Regional Solicitor be directed to register notice of such by-law on title to the lands that are subject of the by-law.

SUMMARY:

NIL

REPORT:

In connection with the sale of 190 Cedar Street, Cambridge by the owner, Regional staff were contacted by the owner’s solicitor to inquire about the dedication of a road widening along the frontage of 190 Cedar Street that was transferred to the Township of North Dumfries in 1949. A title search of the lands revealed that the transfer of the widening was not a dedication by the owner and no by-law had been passed by the municipality to dedicate such widening as part of Cedar Street. As a result, the lands known as 190 Cedar Street do not directly abut the public highway which is a title defect that requires correction. This title defect also affects other abutting properties adjacent to the 1949 road widening.

Cedar Street became part of the Regional Road system on January 1, 1973 pursuant to The Regional Municipality of Waterloo Act, 1972.

The proposed by-law will have the effect of dedicating all lands that were intended to be part of Cedar Street (Regional Road 97) between Southgate Road and Berkley Road in the City of Cambridge as part of the public highway. This will correct the technical title defect affecting the lands known as 190 Cedar Street and neighbouring lands that also abut the widening transferred in 1949.
CORPORATE STRATEGIC PLAN:

The proposed by-law supports the Region’s strategic focus on managing growth to foster thriving and productive urban and rural communities.

FINANCIAL IMPLICATIONS:

NIL

OTHER DEPARTMENT CONSULTATIONS/CONCURRENCE:

Staff from Transportation Planning have been consulted in the preparation of this report.

ATTACHMENTS

Sketch of Part of Cedar Street to be dedicated as public highway.

PREPARED BY:  Fiona McCrea, Solicitor Property

APPROVED BY:  Debra Arnold, Regional Solicitor/Director Legal Services
To: Chair Jim Wideman and Members of the Planning and Works Committee

From: Ian Young, Project Engineer Intern
       Gary MacDonald, Head, Transportation Rehabilitation

Subject: HESPELER ROAD RESURFACING – BISHOP STREET TO EAGLE STREET / PINEBUSH ROAD, CITY OF CAMBRIDGE

The Design and Construction Division is currently completing the design of a roadway resurfacing project on Hespeler Road from Bishop Street to Eagle Street / Pinebush Road planned for construction this year. The construction contract will be tendered in late April for contract award in early June. Construction is scheduled to commence in July and will continue until September, 2013.

The major components of the work include resurfacing of the asphalt roadway, changes to lane widths, installation of landscaping features including trees and shrubs in planting beds that will be constructed in the existing concrete median, the removal of eight bus pull-off bays, and modifications around the intersection at Eagle Street / Pinebush Road to accommodate the upcoming installation of Adapted Bus Rapid Transit (aBRT) stations and queue jump lanes.

The following paragraphs provide further details of the proposed 2013 resurfacing work on Hespeler Road.

Lane Width Changes

There are currently three through lanes in each direction on this section of Hespeler Road, each with a width of 3.65m. This section of Hespeler Road is classified by the Region’s Corridor Design Guidelines as a “Neighbourhood Connector – Avenue”, and the Guidelines suggest a desired lane width for the travel lanes of 3.35m. The existing pavement width in each direction will be modified from three lanes at 3.65m to two lanes at 3.35m with a curb lane of 4.25m. The additional width of the curb lane will serve to accommodate the large number of buses and trucks that travel on Hespeler Road, as well as provide some additional width for cyclists. The Region’s Cycling Master Plan does not designate Hespeler Road as a designated cycling route and there is insufficient road width for a dedicated cycling lane.

Landscaping Features

As part of a 2006 Regional reconstruction project, landscaping features including trees, shrubs and annual planting beds were installed on the section of Hespeler Road immediately to the south of the current resurfacing project, between Munch Avenue and Dunbar Road. The landscaping proposed for the 2013 project has been designed to match what was previously installed. At-grade median planting beds are proposed in the existing concrete median at four locations. The planting beds will range from 30-55m in length and will contain 4-8 trees as well as many smaller shrubs (and annual plantings at the expense of the City of Cambridge). All median landscaping work (with the exception of the annual plantings) is at the Region’s expense in accordance with the Region Landscaping / Streetscaping Policy and the City of Cambridge has confirmed they will fund the on-going landscaping maintenance under the Maintenance Agreement with the Region.
Removal of Bus Pull-off Bays

Eight existing bus bays along Hespeler Road are proposed to be removed and replaced with bus stops reinstated at curbside with the buses stopping in the curb lane. GRT staff have requested removal of these bus bays since bus bays reduce the performance of transit due to the delays encountered with buses re-entering the traffic stream. Improving transit time is important because Hespeler Road is currently used as an iXpress route and soon will be an aBRT route. Bus bays are normally only desired where a bus has a long layover time which does not apply at any of these locations along Hespeler Road. Any increase in delays to through traffic will be minimal as the stop times for buses are generally short while much of the congestion in the curb lane of Hespeler Road is caused by turning movements into the numerous business accesses along the corridor.

Adapted Bus Rapid Transit

The adapted Bus Rapid Transit (aBRT) system will be implemented on Hespeler Road within the limits of this summer’s resurfacing project, and the aBRT is scheduled to be operational by early 2014. Any changes that are required between the curb lines on Hespeler Road to accommodate aBRT will be incorporated into the road improvement contract this summer. Works that are proposed within the curb lines include re-alignment of the median islands and channelized right-turn islands at the Pinebush/Eagle intersection to allow for transit queue-jump lanes at this intersection. The other aBRT requirements above/behind the curbs (stations and platforms) are scheduled to be implemented in 2014 by the RT Division, following property acquisition and utility relocation as required.

Business Access and Lane Closures

The concrete and underground works incorporated in this summer’s Hespeler Road resurfacing project, including the replacement of curb, gutter and sidewalk, the modification of concrete medians to create landscaping planting beds, and catchbasin replacements, will take place between the hours of 7:00AM and 7:00PM Monday to Friday, and will require the intermittent closure of one lane in each direction. At least two lanes of through traffic in each direction will be maintained on Hespeler Road throughout these daytime hours with 3 lanes of traffic generally reinstated through the night.

The asphalt resurfacing of Hespeler Road is estimated to be done over two weeks in August and will take place primarily overnight, between the hours of 7:00 p.m. and 6:00 a.m. One lane of traffic in each direction will be maintained throughout this night work.

Access to all Hespeler Road businesses and to all side streets will be maintained to the best practical extent during the construction of this summer’s Hespeler Road resurfacing contract; however, due to the nature of the work, short-term access interruptions will be unavoidable during nighttime paving operations. During the paving work, access to side streets and private driveways will have to be restricted for up to 15 minutes at a time as the paving operation passes these locations. Police officers will be present at signalized intersections during the paving work to safely control traffic through the intersections. Notification will be provided in advance of temporary driveway closures, and alternate arrangements for access will be made where possible.

Public notification

Property owners and business tenants affected by the resurfacing project will be notified by mail prior to tender of the construction contract, with details of the planned work and contact information for the Region’s Project Manager provided. A second notification will be provided after contract award, outlining more precisely the contractor’s planned schedule and re-confirming the contact information for the construction work should any member of the public require additional information as construction proceeds.

Grand River Transit buses will continue to travel on Hespeler Road for the duration of these works; however temporary bus stop relocations will be required. Notification signage will be posted directing transit patrons to the temporary stops.

This memo is being provided to Regional Councillors for information purposes in advance of tender. If Councillors would like additional information on this project, please contact Ian Young at 519-575-4757 x3079.
TO: Chair Jim Wideman and Members of the Planning and Works Committee

DATE: March 19, 2013

FILE CODE: CO4-20, 5392

SUBJECT: SAWMILL ROAD AND NORTHFIELD DRIVE IMPROVEMENTS IN THE VILLAGE OF CONESTOGO, TOWNSHIP OF WOOLWICH

RECOMMENDATION:

THAT the Regional Municipality of Waterloo approve the Recommended Design Alternative for Sawmill Road (Regional Road No. 17) and Northfield Drive (Regional Road No. 22) within the Village of Conestogo in the Township of Woolwich as outlined in Report E-13-038.

SUMMARY:

The Region of Waterloo is currently considering improvements to Sawmill Road from Musselman Crescent to the Conestogo Bridge and to Northfield Drive from the South Limits of Conestogo to Country Spring Walk, within the Village of Conestogo. Please refer to Appendix ‘A’ for a Key Plan. This project has been initiated to address the poor pavement condition and the need for enhanced pedestrian and cycling facilities on Sawmill Road and Northfield Drive within the Project limits.

A Project Team consisting of staff from the Region of Waterloo, the Township of Woolwich, and Township of Woolwich Councillor Bonnie Bryant was established to direct the planning of these improvements.

An initial Public Consultation Centre (PCC) was held at Conestogo Public School, 1948 Sawmill Road in the Township of Woolwich on Wednesday October 5th, 2011 from 5:30 p.m. to 8:00 p.m. Plans showing the Project Team’s proposed design concept for improvements to Sawmill Road and Northfield Drive within the Village of Conestogo were on display and Project Team representatives were present to answer questions and to receive feedback from members of the public.

The Project Team recommended that Regional Planning and Works Committee endorse the Project Team’s recommended plans for improvements for Sawmill Road and Northfield Drive in a staff report tabled at the Regional Planning and Works Committee Meeting held on May 29th, 2012. These initially recommended plans for improvements did not include a widening of Sawmill Road or Northfield Drive to provide for cycling facilities.

At the May 29th 2012 Committee meeting, five (5) delegates appeared before Committee requesting that cycling facilities be incorporated as part of this project. The Planning and Works Committee directed that the project be referred back to the Project Team to consider including cycling facilities as part of the proposed improvements.
Following the direction from Committee, the Project Team developed several new Design Alternatives for the proposed improvements to Sawmill Road and Northfield Drive and narrowed the options to three (3) Design Alternatives to be presented for public input.

A Second Public Consultation Centre (PCC) was held at Conestogo Public School, 1948 Sawmill Road in the Township of Woolwich on Wednesday November 28, 2012 from 5:30 p.m. to 8:00 p.m. Plans showing the Project Team’s three (3) Design Alternatives were on display and Project Team representatives were present to answer questions and to receive feedback from members of the public.

In view of the public comments received, the existing roadway features and constraints, the scenic characteristics of Sawmill Road, and the relevant Regional Policies, Master Plans and practices, the Project Team now recommends that Regional Council approve the Recommended Design Alternative for improvements to Sawmill Road and Northfield Drive, described as follows:

- **Construct two 4.35 metre wide lanes, striped at 3.35 metres** on Sawmill Road from Musselman Crescent to 100 metres west of Misty River Drive;
- **Construct two 4.0 metre wide lanes**, on Sawmill Road from 100 metres west of Misty River Drive to 100 metres east of Harriet Street;
- **Construct two 4.6 metre wide lanes, striped at 3.35 metres** on Sawmill Road from 100 metres east of Harriet Street to the Grand River Bridge;
- Restrict parking on Sawmill Road to approximately 25 spaces between Glasgow Street and No. 1843 Sawmill Road;
- **Construct two 4.85 metre wide lanes, striped at 3.35 metres** on Northfield Drive from Sawmill Road to Country Spring Walk;
- Construct designated left-turn lanes on each approach of Sawmill Road at the intersection of Northfield Drive;
- Construct a northbound designated right-turn lane on Northfield Drive at the intersection of Sawmill Road;
- Construct new sidewalk on the north side of Sawmill Road from Harriet Street to Golf Course Road;
- Construct a pedestrian refuge island on Sawmill Road at the Conestogo Public School;
- Construct “Village Entrance Features” at each approach to the Village on Sawmill Road and Northfield Drive comprised of raised landscaped centre medians;
- Construct semi-mountable curb and 0.60 metre wide concrete maintenance strips on each side of Northfield Drive from Sawmill Road to 170 metres south of Sawmill Road; and
- Provide New Boulevard landscaping where feasible.

The Region’s Approved 2013 Transportation Capital Program and 10-Year Capital Forecast includes funds of $6,120,000 in years 2013 to 2018 inclusive in order to complete construction of the improvements to Sawmill Road from Musselman Crescent to the Conestogo Bridge and Northfield Drive from the South Limits of Conestogo to Country Spring Walk, to be funded from the Roads Rehabilitation Reserve Fund. The estimated project cost for the Recommended Design Alternative is $4,000,000.
Letters advising of the recommendations contained in this report were mailed to all those who attended the November 28, 2012 PCC and to all owners/residents abutting the Sawmill Road and Northfield Drive project limits on March 5th, 2013.

REPORT:

1.0 Background

The Region of Waterloo is currently considering improvements to Sawmill Road from Musselman Crescent to the Conestogo Bridge and to Northfield Drive from the South Limits of Conestogo to Country Spring Walk within the Village of Conestogo. Please refer to Appendix ‘A’ for a Key Plan. This project has been initiated to address the poor pavement condition and the need for enhanced pedestrian and cycling facilities on Sawmill Road and Northfield Drive within the project limits.

A Project Team consisting of staff from the Region of Waterloo, the Township of Woolwich, and Township of Woolwich Councillor Bonnie Bryant was established to direct the planning of these improvements.

The section of Sawmill Road within the project limits is an urbanized 2-lane roadway with mountable curbs to accommodate paved boulevard parking throughout most of the Village. Sidewalks currently exist on both sides of Sawmill Road from Musselman Crescent to Harriet Street. The Sawmill Road corridor through Conestogo is highly constrained, with numerous building fronts located immediately behind the existing sidewalks. Boulevard widths are minimal with overhead utilities located in close proximity to the existing curbs in many locations. This section of Sawmill Road is identified as a “Very Scenic” road in the Region's Scenic Roads and Special Character Streets Resource Document (December 2011). There are two (2) properties with heritage designations on Sawmill Road within the project limits (1790 Sawmill Road and 1924 Sawmill Road). Several mature trees are located in the existing boulevard areas. The posted speed limit on Sawmill Road is 50 km/hr and, based on a 2009 speed survey conducted by the Region, the average speed of travel is 52 km/hr. Storm sewers currently exist on Sawmill Road from Musselman Crescent to the Conestogo Bridge. These existing storm sewers are adequately sized and are in good condition.

Northfield Drive from Country Spring Walk to the south Village limits is a rural 2-lane roadway with narrow paved shoulders to the south Village limits. No sidewalks currently exist along this section of Northfield Drive. The section of Northfield Drive from Sawmill Road to the south Village limits has a narrow right-of-way of only 12 metres in some locations and residential building fronts are located in very close proximity to the right-of-way. The posted speed limit on Northfield Drive through the project limits is 50 km/hr.

The intersection of Sawmill Road and Northfield Drive is currently controlled by traffic control signals. There are no existing left-turn lanes at any approaches to this intersection. The intersection is currently operating at an adequate level-of-service; however, the level-of-service is projected to decline in the future as traffic volumes increase, resulting in delays for some traffic movements. There is some horse-and-buggy traffic along both Sawmill Road and Northfield Drive in the Village of Conestoga.

The Region's Context Sensitive Transportation Corridor Design Guidelines classify the sections of Sawmill Road and Northfield Drive within the project limits as Rural Village Main Streets. Rural Village Main Streets are prioritized for vehicular movements and active transportation.
The role of the Main Street is to support the community life of the village and to move traffic efficiently through town at an appropriate speed. The sections of Sawmill Road and Northfield Drive within the project limits are identified as being candidates for long-term on-road cycling facilities in the Region’s Cycling Master Plan. Additionally, the Region’s Draft Active Transportation Master Plan identifies the sections of Sawmill Road and Northfield Drive within the project limits as candidates for cycling facilities.

2.0 October 5th, 2011 Public Consultation Centre

An initial Public Consultation Centre (PCC) was held at Conestogo Public School, 1948 Sawmill Road in the Township of Woolwich on Wednesday October 5th, 2011 from 5:30 p.m. to 8:00 p.m. Preliminary plans for the proposed improvements to Sawmill Road and Northfield Drive under consideration at that time were on display and Project Team representatives were present to answer questions and to receive feedback from members of the public. Approximately one hundred and ten (110) members of the public attended this initial PCC and eighty three (83) members of the public formally signed in. Thirty-four (34) comment sheets were received as a result of this first Public Consultation Centre.

The preliminary plans for the proposed improvements to Sawmill Road and Northfield Drive presented by the Project Team at this initial public meeting included the following main elements:

- Reconstruction and widening of Sawmill Road and Northfield Drive to accommodate 1.5 metre wide cycling/buggy lanes on each side of the road;
- Removal of most of the boulevard parking on Sawmill Road;
- Construction of designated left-turn lanes on all approaches at the intersection of Sawmill Road and Northfield Drive;
- Extension of the sidewalk on the north side of Sawmill Road from Harriet Street to Golf Course Road;
- Construction of new sidewalk on Northfield Drive from Country Spring Walk to the South Village limits;
- Construction of a pedestrian refuge island on Sawmill Road at the Conestogo Public School; and
- Enhanced boulevard landscaping where feasible.

Please refer to Appendix ‘B’ for drawings of the proposed improvements presented by the Project Team at this first Public Consultation Centre.

In general, there was very little support expressed by the public for the proposed widening of Sawmill Road to accommodate on-road cycling/buggy lanes; for the removal of the boulevard parking on Sawmill Road; and for the construction of new sidewalk on Northfield Drive. There was generally support for the extension of the existing sidewalk on the north side of Sawmill Road from Harriet Street to Golf Course Road and for traffic operational improvements to the intersection of Sawmill Road and Northfield Drive. High vehicle speeds on Sawmill Road was also cited as a concern by some members of the public and there were requests for some form of ‘traffic calming’ measures on Sawmill Road to be incorporated as part of the proposed road improvements.
3.0 Project Team’s Response to the October 5\textsuperscript{th}, 2011 Public Consultation Centre

Following the October 5\textsuperscript{th}, 2011 PCC, the Project Team thoroughly reviewed all of the public comments received. The Project Team also met on-site and walked through the entire project area in order to view in the field the impacts and constraints associated with widening Sawmill Road and Northfield Drive to provide for 1.50 metre wide on-road cycling/buggy lanes, sidewalk and designated turn lanes at the intersection of Sawmill Road and Northfield Drive. The Project Team noted that a 1.50 metre widening on each side of Sawmill Road throughout the entire project limits would result in severe impacts to some abutting properties, trees, and overhead utilities, and would significantly reduce the boulevard area available for snow storage and utility plant. Additionally, the construction of new sidewalk on Northfield Drive, particularly south of Sawmill Road, would have significant property impacts, and the construction of a northbound designated left-turn lane on Northfield Drive would potentially require a full purchase of the property located at 1030 Northfield Drive.

The Project Team agreed that a significant widening of Sawmill Road would alter the appearance and ‘character’ of this scenic roadway corridor. The Project Team also assessed that new sidewalk on the entire length of Northfield Drive throughout the project limits would not likely attract many pedestrians due to existing available alternative walking routes, confirming comments made by several members of the public.

In view of the public comments received, the existing roadway features and constraints, and the scenic characteristics of Sawmill Road, the Project Team developed the following revised design concept for the proposed improvements to Sawmill Road and Northfield Drive:

- Reconstruction of Sawmill Road in its current configuration, with no widening for buggy/cycling lanes;
- No change to boulevard parking on Sawmill Road;
- Re-paving of the asphalt boulevards on Sawmill Road;
- Extension of the sidewalk on the north side of Sawmill Road from Harriet Street to Golf Course Road;
- Reconstruction of Northfield Drive from the South Village Limits to Country Spring Walk in its current configuration without sidewalks;
- Construction of a pedestrian refuge island on Sawmill Road at the Conestogo Public School;
- Construction of new designated left-turn lanes on Sawmill Road in each direction at Northfield Drive and construction of a new northbound designated right-turn lane on Northfield Drive at Sawmill Road; and
- Enhanced boulevard landscaping where feasible.

Please refer to Appendix ‘C’ for drawings of the revised design concept developed by the Project Team subsequent to the October 5\textsuperscript{th}, 2011 Public Consultation Centre. Correspondence was sent on March 12\textsuperscript{th}, 2012 to all area residents as well as those who attended the October 2011 PCC, informing them of the Project Team’s revised design concept and inviting public comments. Seven (7) members of the public responded to this letter, and all but one expressed support for this revised design concept.
4.0 Direction from Regional Planning and Works Committee on May 29, 2012

The Project Team recommended that Regional Planning and Works Committee endorse the Project Team’s revised design concept for improvements to Sawmill Road and Northfield Drive (with no widening of Sawmill Road or Northfield Drive for cycling facilities) in a staff report tabled at the Regional Planning and Works Committee Meeting held on May 29th, 2012.

At this May 29th 2012 Planning and Works Committee meeting, five (5) delegates spoke to the Planning and Works Committee requesting that cycling facilities be incorporated as part of the proposed improvements for Sawmill Road and Northfield Drive.

The Planning and Works Committee directed that this project be referred back to the Project Team to consider the following items as part of the scope of the improvements:

- Relocating boulevard parking from Sawmill Road to an alternative location;
- Constructing alternative multi-use trails as part of the improvements;
- Providing alternative cycling facilities on Flax Mill Drive;
- Providing traffic calming measures on Sawmill Road;
- Diverting trucks from Sawmill Road;
- Minimizing property impacts; and
- Preserving the history and culture of the Village of Conestogo.

5.0 Design Alternatives Developed following Regional Planning and Works Committee on May 29, 2012

Following the direction from the Regional Planning and Works Committee, the Project Team developed several new Design Alternatives for the proposed improvements to Sawmill Road and Northfield Drive. Based on the Project Team’s assessment of these Design Alternatives, the Project Team narrowed the options to three (3) Design Alternatives to be presented for public input. These three (3) Design Alternatives are described as follows:

DESIGN ALTERNATIVE No. 1 – Rehabilitate Sawmill Road in its Current Configuration

Rehabilitate Sawmill Road in its current configuration with two 3.35 metre wide lanes with no cycling facilities, and no change to boulevard parking.

DESIGN ALTERNATIVE No. 2 – Reconstruct and Widen Sawmill Road to provide for two 4.35 metre wide lanes (striped at 3.35 metres) on each side of Sawmill Road.

Construct two 4.35 metre wide lanes (striped at 3.35 metres) on each side of Sawmill Road and restrict parking to approximately 25 spaces between Glasgow Street and No. 1843 Sawmill Road. Because the Regional standard cycling lanes are a minimum of 1.25 metre wide, the additional 1.0 metre widening on each side of Sawmill Road would be available for cyclists but not designated as a cycling lane.
DESIGN ALTERNATIVE No. 3 – Reconstruct Sawmill Road with 1.25 metre wide Concrete Segregated Cycling Tracks within the Boulevards

Construct two 3.35 metre wide vehicle lanes, a 0.35 metre wide mountable curb and 1.25 metre wide concrete segregated cycling track behind the curb on each side of Sawmill Road and restrict parking to approximately 25 spaces between Glasgow Street and No. 1843 Sawmill Road.

Note: Design Alternatives No. 1, No. 2 and No. 3 each include the following elements:

i. Construction of designated left-turn lanes on each approach of Sawmill Road at the intersection of Northfield Drive;

ii. Construction of a northbound designated right-turn lane on Northfield Drive at the intersection of Sawmill Road;

iii. Construction of new sidewalk on the north side of Sawmill Road from Harriet Street to Golf Course Road;

iv. Construction of a pedestrian refuge island on Sawmill Road at the Conestogo Public School;

v. Construction of “Village Entrance Features” at each approach to the Village on Sawmill Road and Northfield Drive comprised of raised landscaped centre medians; and

vi. New Boulevard landscaping where feasible.

Design Alternatives No. 2 and No. 3 also include the following elements:

i. Construction of 4.0 metre wide lanes on Sawmill Road from 100 metres west of Misty River Drive to 100 metres east of Harriet Street;

ii. Construction of 4.60 metre wide lanes (striped at 3.35 metres) on Sawmill Road from 100 metres east of Harriet Street to the Grand River Bridge;

iii. Construction of semi-mountable curb and 0.60 metre wide concrete maintenance strips on each side of Northfield Drive from Sawmill Road to 170 metres south of Sawmill Road; and

iv. Construction of 4.85 metre wide lanes (striped at 3.35 metres) on each side of Northfield Drive from Sawmill Road to Country Spring Walk.

Please refer to Appendix ‘D’ for drawings of these three (3) Design Alternatives for proposed improvements to Sawmill Road and Northfield Drive.
6.0 Project Team’s Response to Items Raised by Committee on May 29th, 2012

In developing these three (3) Design Alternatives, the Project Team addressed all of the items raised by Planning and Works Committee at its May 29th, 2012 meeting. Please refer to Appendix ‘E’ for the Project Team’s responses.

A summary of the impacts of the three (3) Design Alternatives compared to the impacts of the Project Team’s October 2011 initially proposed improvements is provided as follows:

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October 2011 Initially Proposed Improvements (widening Sawmill Road for 1.50 metre wide buggy/cycling lanes)

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7.0 November 28th, 2012 Public Consultation Centre

The following criteria were used by the Project Team to evaluate the three (3) Design Alternatives in advance of a second Public Consultation Centre held on November 28th, 2012:

- **Transportation:** How does the alternative serve the expected vehicular, pedestrian, cycling and buggy traffic?
- **Maintenance:** What are the summer/winter maintenance considerations for each alternative?
- **Property/Corridor Impacts:** How does the alternative impact abutting properties, trees, driveways, parking and overhead utilities?
- **Cost:** What is the initial capital cost of each alternative and how do the alternatives compare with respect to the ongoing maintenance costs?
The Project Team thoroughly assessed each of the design alternatives using the aforementioned criteria. The Project Team's evaluation included an assessment of the advantages and disadvantages of each alternative. The results of this evaluation are presented in Appendix ‘F’.

The second Public Consultation Centre (PCC) was held at Conestogo Public School, 1948 Sawmill Road in the Township of Woolwich on Wednesday November 28, 2012 from 5:30 p.m. to 8:00 p.m. Plans showing the Project Team’s three (3) Design Alternatives were on display and Project Team representatives were present to answer questions and to receive feedback from members of the public. Approximately one hundred (100) members of the public attended this PCC and seventy four (74) members of the public formally signed in.

Forty-five (45) comment sheets were received from the public from this November 28th, 2012 Public Consultation Centre. Please refer to Appendix ‘G-1’ for all written public comments received and Appendix ‘G-2’ for a summary of the written public comments received.

The Project Team did not identify a preferred Design Alternative in advance of the PCC. The Project Team requested the public to rank the three (3) Design Alternatives in order of preference. The results received from the public are as follows:

<table>
<thead>
<tr>
<th>Preference</th>
<th>Design Alternative No. 1</th>
<th>Design Alternative No. 2</th>
<th>Design Alternative No. 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st Choice</td>
<td>29</td>
<td>13</td>
<td>3</td>
</tr>
<tr>
<td>2nd Choice</td>
<td>3</td>
<td>8</td>
<td>10</td>
</tr>
<tr>
<td>3rd Choice</td>
<td>5</td>
<td>2</td>
<td>6</td>
</tr>
</tbody>
</table>

The Project Team notes that public support was expressed for the extension of the existing sidewalk on the north side of Sawmill Road from Harriet Street to Golf Course Road and for traffic operational improvements to the intersection of Sawmill Road and Northfield Drive. Support was also indicated for the installation of a pedestrian refuge island at Conestogo Public School and for the proposed Village Entrance Features.

High vehicle speeds on Sawmill Road was again cited as a concern by the public and requests were made for a reduction in the speed limit from 50 km/hr to 40km/hr within the Village. Concerns were also raised that Design Alternatives No. 2 and No. 3 will reduce boulevard parking and alter the existing roadway configuration thereby adversely affecting the scenic characteristic of the Village of Conestogo.
8.0  Project Team’s Response to Public Input Received at the November 28th, 2012 Public Consultation Centre

Following the second PCC, the Project Team thoroughly reviewed all of the comments received. Although the majority of the public identified Design Alternative No. 1 as its preferred Design Alternative, there was also considerable public support indicated for Design Alternative No. 2. The Project Team notes that Design Alternative No. 2 supports the Regional Transportation Master Plan (RTMP) goals of optimizing our transportation system, promoting transportation choice and supporting sustainable development and strikes a balance of providing an on-road cycling facility through the Village of Conestogo while minimizing the impacts to the scenic characteristics of Sawmill Road. Design Alternative No. 2 also provides for some boulevard parking through the commercial area of the Village and at the Fire Station. Additionally, Design Alternative No. 2 aligns with the Region’s Cycling Master Plan and the Draft Active Transportation Master Plan.

In response to public concerns expressed regarding the loss of boulevard parking on Sawmill Road under Design Alternatives No. 2 and No. 3, the Project Team notes that while Design Alternatives No. 2 and No. 3 do reduce the existing boulevard parking within the Village of Conestogo by approximately 80%, parking would still be provided through the commercial area of the Village and in front of the Fire Station. The Project Team assesses that if the majority of the current boulevard parking arrangement was to be maintained under Design Alternatives No. 2 and No. 3, the adverse impacts to the Sawmill Road corridor would be very significant, as several additional trees and utility poles would conflict with the boulevard parking and would need to be removed or relocated. Additionally, this would bring road elements closer to the village buildings.

In response to concerns raised regarding high vehicle speeds on Sawmill Road, Regional practice does not allow for the use of “on-road” traffic calming measures on Regional arterial roadways. The Project Team notes that construction of a pedestrian refuge island on Sawmill Road at the Conestogo Public School and Village Entrance Features at each approach to the Village on Sawmill Road and Northfield Drive may provide a traffic calming benefit. Additionally, Regional practice does not generally support a posted speed limit of less than 50 km/hr on Regional Roads. There are a few sections of Regional Roads within the City of Cambridge that have been posted at 40 km/hr for several years; however, speed surveys completed in recent years have found that average travel speeds are 50 km/hr on these roadway locations, indicating that lowering the posted speed limit has not corresponded to lower average travel speeds at these locations.

9.0  Recommended Design Alternative

In view of the public comments received, the existing roadway features and constraints, the scenic characteristics of Sawmill Road, and the relevant Regional Policies, Master Plans and practices, the Project Team recommends Design Alternative No. 2 as the Recommended Design Alternative for Sawmill Road and Northfield Drive, described as follows:

- **Construct two 4.35 metre wide lanes, striped at 3.35 metres** on Sawmill Road from Musselman Crescent to 100 metres west of Misty River Drive;
- **Construct two 4.0 metre wide lanes**, on Sawmill Road from 100 metres west of Misty River Drive to 100 metres east of Harriet Street;
- **Construct two 4.6 metre wide lanes, striped at 3.35 metres** on Sawmill Road from 100 metres east of Harriet Street to the Grand River Bridge;
- Restrict parking on Sawmill Road to approximately 25 spaces between Glasgow Street and No. 1843 Sawmill Road;
- **Construct two 4.85 metre wide lanes, striped at 3.35 metres** on Northfield Drive from Sawmill Road to Country Spring Walk;
- Construct designated left-turn lanes on each approach of Sawmill Road at the intersection of Northfield Drive;
- Construct a northbound designated right-turn lane on Northfield Drive at the intersection of Sawmill Road;
- Construct new sidewalk on the north side of Sawmill Road from Harriet Street to Golf Course Road;
- Construct a pedestrian refuge island on Sawmill Road at the Conestogo Public School;
- Construct “Village Entrance Features” at each approach to the Village on Sawmill Road and Northfield Drive comprised of raised landscaped centre medians;
- Construct semi-mountable curb and 0.60 metre wide concrete maintenance strips on each side of Northfield Drive from Sawmill Road to 170 metres south of Sawmill Road; and
- Provide New Boulevard landscaping where feasible.

Please refer to Appendix ‘D’ for drawings of the Project Team’s Recommended Design Alternative.

Although the Recommended Design Alternative significantly minimizes impacts to abutting properties, the Region would still need to purchase very small portions of property from five (5) abutting properties (please refer to the figures in Appendix ‘C’ for property requirements) in order to construct the new sidewalk on Sawmill Road and new designated turn lanes at the intersection of Northfield Drive and Sawmill Road.

The preliminary project budget for the Recommended Design Alternative is estimated to be $4,000,000, substantially lower than the initial project budget of $5,200,000 that was developed based on the initially proposed 1.50 metre wide widening on each side of Sawmill Road for cycling/buggy lanes.

The Project Team is now recommending that Regional Council approve the Project Team’s Recommended Design Alternative as described in Report E-13-038. The Project Team believes that the Recommended Design Alternative best balances public preferences with Regional polices, guidelines, and objectives, while minimizing budget and adverse impacts to the Village of Conestogo.

Letters advising of the recommendations contained in this report were mailed to all those who attended the November 28, 2012 PCC and to all owners/residents abutting the Sawmill Road and Northfield Drive project limits on March 5th, 2013.
10.0 Project Timing

Subject to Council approval of the Recommended Design Alternative for the Sawmill Road and Northfield Drive improvements, acquisition of all required property and receipt of all technical and financial approvals, construction is scheduled to commence in May 2017 and be completed by November 2017.

11.0 Construction Staging

It is anticipated that construction will be completed in a staged approach in order to minimize disruption to traffic, businesses and residents, with detours for through traffic being provided as required. Local, emergency and pedestrian access will be maintained throughout construction. Detailed staging plans will be developed in consultation with the Township of Woolwich during the detailed design phase.

12.0 Project Costs

The Region of Waterloo is fully funding the road improvements on this project. The estimated total Regional project cost for the Sawmill Road and Northfield Drive improvements as described in the Recommended Design Alternative, including engineering, construction, utility relocations, property and other project costs, is $4,000,000.

CORPORATE STRATEGIC PLAN:

This project is in harmony with the Region’s Corporate Strategic Plan in that implementation of the Sawmill Road and Northfield Drive Improvements achieves Focus Area 2.2 (“Develop, Optimize and Maintain Infrastructure to Meet Current and Projected Needs”) specifically Strategic Objective 2.2.1 which is to ensure all Regional programs and services continue to prioritize and implement capital program projects required to meet community needs and ensure sustainability.

FINANCIAL IMPLICATIONS:

The Region’s Approved 2013 Transportation Capital Program and 10-Year Capital Forecast includes funds of $6,120,000 in years 2013 to 2018 inclusive in order to complete construction of improvements to Sawmill Road from Musselman Crescent to the Conestogo Bridge and Northfield Drive from the South Limits of Conestogo to Country Spring Walk to be funded from the Roads Rehabilitation Reserve Fund. Staff will review the project budget as part of 2014 Ten Year Transportation Capital Program budget deliberations.

OTHER DEPARTMENT CONSULTATIONS/CONCURRENCE:

Staff from the Transportation Planning Division of the Planning, Housing and Community Services Department were consulted for the preparation of this report.
ATTACHMENTS

Appendix A  Key Plan
Appendix B-1  Typical Cross-Section – October 5th, 2011, Project Team’s Initially Proposed Design Concept, Sawmill Road from Conestogo Bridge to Harriet Street
Appendix B-2  Typical Cross-Section – October 5th, 2011, Project Team’s Initially Proposed Design Concept, Sawmill Road from 1835 Sawmill Road to Glasgow Street
Appendix B-3  Typical Cross-Section – October 5th, 2011, Project Team’s Initially Proposed Design Concept, Sawmill Road from Glasgow Street to Musselman Crescent
Appendix B-4  Typical Cross-Section – October 5th, 2011, Project Team’s Initially Proposed Design Concept, Northfield Drive from South Village Limits to Sawmill Road
Appendix C-1  Typical Cross-Section – May 2012, Project Team’s Revised Design Concept, Northfield Drive from South Limits of Conestogo to Country Spring Walk
Appendix C-2  Typical Cross-Section – May 2012, Project Team’s Revised Design Concept, Sawmill Road from Musselman Crescent to Conestogo Bridge
Appendix C-3  Figure 1 – Proposed Sawmill Road and Northfield Drive Intersection Improvements and Property Acquisitions
Appendix C-4  Figure 2 – Proposed Sidewalk on North Side of Sawmill Road from Harriet Street to Golf Course Road and Property Acquisitions
Appendix D-1  Design Alternative No. 1 – Northfield Drive from South Limits of Conestogo to Country Spring Walk (November 28th, 2012)
Appendix D-2  Design Alternative No. 2 and 3 – Northfield Drive from South Limits of Conestogo to Sawmill Road (November 28th, 2012)
Appendix D-3  Design Alternative No. 2 and 3 – Northfield Drive from Sawmill Road to Country Spring Walk (November 28th, 2012)
Appendix D-4  Design Alternative No. 1 – Sawmill Road from Musselman Crescent to Conestogo Bridge (November 28th, 2012)
Appendix D-5  Design Alternative No. 2 – Sawmill Road from Musselman Crescent to Glasgow Street (November 28th, 2012)
Appendix D-6  Design Alternative No. 2 – Sawmill Road from Glasgow Street to Misty River Drive (November 28th, 2012)
Appendix D-7  Design Alternative No. 2 and 3 – Sawmill Road from Misty River Drive to Harriet Street (November 28th, 2012)
Appendix D-8  Design Alternative No. 2 and 3 – Sawmill Road from Harriet Street to Conestogo Bridge (November 28th, 2012)
Appendix D-9  Design Alternative No. 3 – Sawmill Road from Musselman Crescent to Glasgow Street (November 28th, 2012)
Appendix D-10  Design Alternative No. 3 – Sawmill Road from Glasgow Street to Misty River Drive (November 28th, 2012)
Appendix E  Project Team’s Responses to Items Raised by Committee on May 29th, 2012
Appendix F  Assessment of the Three (3) Design Alternatives Presented at the November 28th, 2012 Public Consultation Centre
Appendix G-1  Written Comments Received From the November 28th, 2012 Public Consultation Centre
Appendix G-2  Summary of Comments Received From the November 28th, 2012 Public Consultation Centre

PREPARED BY:  Jim Ellerman, Project Manager

APPROVED BY:  Thomas Schmidt, Commissioner Transportation and Environmental Services
APPENDIX B -1

Typical Cross Section – October 5, 2011, Project Team’s Initially Proposed Design Concept

SAWMILL ROAD
CONESTOGO BRIDGE to HARRIET STREET
APPE3NDIX B-2

Typical Cross Section – October 5, 2011, Project Team’s Initially Proposed Design Concept

SOUTH

PROPERTY LINE SOUTH SIDE

EXISTING 1.2m SIDEWALK

NEW 2.4m ON ROAD PARKING

NEW 1.5m RESERVED BIKE LANE

3.35m TRAVEL LANE

3.35m TRAVEL LANE

NEW 1.5m RESERVED BIKE LANE

VARIES 20.12m TO 23.17m

9.7m PAVED ROADWAY

NORTH

PROPERTY LINE NORTH SIDE

GRASSED BLVD VARIES

EXISTING 1.2m SIDEWALK

NEW TREES TO BE PLANTED WHERE FEASIBLE

SAWMILL ROAD

#1835 SAWMILL ROAD to GLASGOW STREET

0.5m WIDE MOUNTABLE CURB

BARRIER CURB

0.5m WIDE STANDARD CURB
APPENDIX B-3

Typical Cross Section – October 5, 2011, Project Team’s Initially Proposed Design Concept

SAWMILL ROAD
GLASGOW STREET to MUSSELMAN CRESCENT

* SIDEWALK EXISTS ON SAWMILL ROAD FROM MUSSELMAN CRESCENT TO HARRIET STREET. SIDEWALK IS 1.5m WIDE FROM MUSSELMAN CRESCENT TO NORTHFIELD DRIVE AND 1.2m WIDE FROM NORTHFIELD DRIVE TO HARRIET STREET

NEW TREES TO BE PLANTED WHERE FEASIBLE

0.5m WIDE STANDARD CURB

NEW 1.5m RESERVED BIKE LANE

3.35m TRAVEL LANE

3.35m TRAVEL LANE

NEW 1.5m RESERVED BIKE LANE

GRASSED BLVD VARIES

1.2 - 1.5m EXISTING SIDEWALK

9.7m PAVED ROADWAY

VARIES 20.12m TO 30.48m

SOUTH

PROPERTY LINE SOUTH SIDE

*1.2 - 1.5m EXISTING SIDEWALK

GRASSED BLVD VARIES

0.5m WIDE STANDARD CURB

NEW TREES TO BE PLANTED WHERE FEASIBLE

NORTH

PROPERTY LINE NORTH SIDE
APPENDIX B-4

Typical Cross Section – October 5, 2011, Project Team’s Initially Proposed Design Concept

NORTHFIELD DRIVE
SOUTH LIMITS OF CONESTOGO to SAWMILL ROAD
APPENDIX C-1

Typical Cross-Section – May 2012, Project Team’s Revised Design Concept, Northfield Drive from South Limits of Conestogo to Country Spring Walk

NORTHFIELD DRIVE
SOUTH LIMITS OF CONESTOGO to COUNTRY SPRING WALK
APPENDIX C-2

Typical Cross-Section – May 2012, Project Team’s Revised Design Concept,
Sawmill Road from Musselman Crescent to Conestogo Bridge

SAWMILL ROAD
MUSSELMAN CRESCENT to CONESTOGO BRIDGE

* SIDEWALK EXISTS ON SAWMILL ROAD FROM MUSSELMAN CRESCENT TO HARRIET STREET. SIDEWALK IS 1.5m WIDE FROM MUSSELMAN CRESCENT TO NORTHFIELD DRIVE AND 1.2m WIDE FROM NORTHFIELD DRIVE TO HARRIET STREET.
NEW 1.8m WIDE SIDEWALK FROM HARRIET STREET TO GOLF COURSE ROAD
APPENDIX C-3

Proposed Sawmill Road and Northfield Drive Intersection Improvements and Property Acquisitions
APPENDIX C-4
Proposed Sidewalk on North Side of Sawmill Road from Harriet Street to Golf Course Road and Property Acquisitions
APPENDIX D-1

Northfield Drive

Design Alternative No. 1 (November 28th, 2012)
APPENDIX D-2

Northfield Drive

Design Alternative No. 2 and No. 3 (November 28th, 2012)
APPENDIX D-3

Northfield Drive

Design Alternative No. 2 and No. 3 (November 28\textsuperscript{th}, 2012)

NORTHFIELD DRIVE
Sawmill Road to Country Spring Walk
APPENDIX D-4

Sawmill Road

Design Alternative No. 1 (November 28th, 2012)

SAWMILL ROAD
MUSSELMAN CRESCENT to CONESTOGO BRIDGE

* SIDEWALK EXISTS ON SAWMILL ROAD FROM MUSSELMAN CRESCENT TO HARRIET STREET. SIDEWALK IS 1.5m WIDE FROM MUSSELMAN CRESCENT TO NORTHFIELD DRIVE AND 1.2m WIDE FROM NORTHFIELD DRIVE TO HARRIET STREET. NEW 1.8m WIDE SIDEWALK FROM HARRIET STREET TO GOLF COURSE ROAD
APPENDIX D-5

Sawmill Road

Design Alternative No. 2 (November 28th, 2012)

Sawmill Road
Musselman Crescent to Glasgow Street

* Sidewalk exists on Sawmill Road from Musselman Crescent to Harriet Street. Sidewalk is 1.5m wide from Musselman Crescent to Northfield Drive and 1.2m wide from Northfield Drive to Harriet Street.
APPENDIX D-6

Sawmill Road

Design Alternative No. 2 (November 28th, 2012)

SOUTH

VARIES 20.12m TO 30.48m

NORTH

*1.2 - 1.5m EXISTING SIDEWALK

2.4m PARKING

2%

4.35m TRAVEL LANE

4.35m TRAVEL LANE

2.4m PARKING

2%

0.35m WIDE SEMI-MOUNTABLE CURB

0.35m WIDE SEMI-MOUNTABLE CURB

SAWMILL ROAD
GLASGOW STREET to MISTY RIVER DRIVE

* SIDEWALK EXISTS ON SAWMILL ROAD FROM MUSSELMAN CRESCENT TO HARRIET STREET. SIDEWALK IS 1.5m WIDE FROM MUSSELMAN CRESCENT TO NORTHFIELD DRIVE AND 1.2m WIDE FROM NORTHFIELD DRIVE TO HARRIET STREET
APPENDIX D-7

Sawmill Road

Design Alternative No. 2 and No. 3 (November 28th, 2012)

SAWMILL ROAD
MISTY RIVER DRIVE to HARRIET STREET

* SIDEWALK EXISTS ON SAWMILL ROAD FROM MUSSELMAN CRESCENT TO HARRIET STREET. SIDEWALK IS 1.5m WIDE FROM MUSSELMAN CRESCENT TO NORTHFIELD DRIVE AND 1.2m WIDE FROM NORTHFIELD DRIVE TO HARRIET STREET
APPENDIX D-8

Sawmill Road

Design Alternative No. 2 and No. 3 (November 28th, 2012)

Sawmill Road

HARRIET STREET to CONESTOGO BRIDGE
APPENDIX D-9

Sawmill Road

Design Alternative No. 3 (November 28th, 2012)

Sawmill Road
MUSSELMAN CRESCENT to GLASGOW STREET

* SIDEWALK EXISTS ON SAWMILL ROAD FROM MUSSELMAN CRESCENT TO HARRIET STREET. SIDEWALK IS 1.5m WIDE FROM MUSSELMAN CRESCENT TO NORTHFIELD DRIVE AND 1.2m WIDE FROM NORTHFIELD DRIVE TO HARRIET STREET
APPENDIX D-10

Sawmill Road

Design Alternative No. 3 (November 28th, 2012)

*SIDEWALK EXISTS ON SAWMILL ROAD FROM MUSSelman CRESCENT TO HARRIET STREET. SIDEWALK IS 1.5m WIDE FROM MUSSelman CRESCENT TO NORTHFIELD DRIVE AND 1.2m WIDE FROM NORTHFIELD DRIVE TO HARRIET STREET*
APPENDIX E
PROJECT TEAM’S RESPONSES TO ITEMS RAISED BY COMMITTEE ON MAY 29TH, 2012

i) Relocating Boulevard Parking from Sawmill Road to Another Location

The Project Team investigated the option of relocating the Sawmill Road boulevard parking to another location within the Village of Conestogo in order to compensate for the loss of boulevard parking on Sawmill Road under Design Alternatives No. 2 and No. 3. The Project Team consulted with Township of Woolwich staff and Township Fire Fighters. It is noted that volunteer Fire Fighters require a minimum of 20 parking spaces within close proximity of the Fire Hall on Sawmill Road in the event of a call. Various side streets and area properties were considered as alternative locations for parking. The Project Team assessed that no locations were deemed suitable candidates for off-site parking primarily due to lack of availability and distance from Sawmill Road and secondly due to cost.

ii) Constructing Multi-Use Trails as Part of this Project

The Project Team assessed the option of constructing boulevard Multi-Use Trails for cyclists and pedestrian traffic on Sawmill Road. Regional design guidelines do not recommend construction of boulevard Multi-Use Trails along roadway corridors with more than three (3) driveway entrances and/or intersections within a one kilometre distance. Based on the high number of driveways fronting Sawmill Road, construction of boulevard multi-use trails was not deemed to be appropriate for this project due to potential conflicts between cyclists and vehicles at driveway entrances.

iii) Providing Alternative Cycling Facilities on Flax Mill Drive

The Project Team assessed the option of providing cycling facilities on Flax Mill Drive with Township of Woolwich staff as Flax Mill Road is under the jurisdiction of the Township. Flax Mill Drive is a narrow side street with insufficient width to provide a suitable cycling facility within the roadway. Further, cyclists would likely find Flax Mill Drive a very indirect route and would not likely utilize it. Additionally, Flax Mill Drive does not extend through the entire project limits and does not fully alleviate the need for cycling facilities on a portion of Sawmill Road.

iv) Providing Traffic Calming Measures on Sawmill Road

Regional practice does not allow for the use of hard “on-road” traffic calming measures on Regional arterial roadways due to adverse effects on emergency service vehicle response times, noise from vehicles passing over the speed humps and general delays to traffic. The Project Team notes that the average speed on Sawmill Road is 52 km/hr based on the 2009 speed survey. The posted speed limit on Sawmill Road is 50km/hr through the Village of Conestogo.

The proposed construction of a Pedestrian Refuge Island on Sawmill Road at the Conestogo Public School and Village Entrance Features at each approach to the Village on Sawmill Road and Northfield Drive may provide a traffic calming benefit.
v) Diverting Truck Traffic from Sawmill Road

Regional staff has reviewed the use of Sawmill Road for heavy trucks in accordance with the Truck Route Policy approved by Council in June 1991. This Policy states that all Regional roads should be truck routes unless there are valid reasons for imposing prohibitions or time restrictions on a particular section of road. As stipulated in this Policy, valid reasons for truck restrictions include the following:

1. The section of roadway was not designed or constructed for heavy truck traffic or long vehicles; or
2. There are critical height or weight restrictions on the section of roadway.

Time restrictions for truck traffic may be considered when the environment of the section is primarily front-lotted urban residential with numerous driveways, and a suitable alternate truck route is available. A suitable alternate truck route is defined as a route that would be less than 50% longer than using the section for which the restriction is proposed, but not more than 4.0 km longer, and on which there are not valid reasons for a time restriction.

Based on this Policy, Sawmill Road is not considered a candidate for truck traffic restrictions because:

1. Sawmill Road is designed to accommodate heavy truck traffic; and
2. There is no viable alternative truck route that meets the criteria set out in the Policy as no alternative route is less than 4.0 km in length.

vi) Minimizing Property Impacts and Preserve the Heritage and Culture of the Village of Conestogo

Each of the Project Team’s three (3) Design Alternatives significantly reduces property impacts compared to the initially proposed improvements to Sawmill Road and Northfield Drive presented by the Project Team at the October 5th, 2011 Public Consultation Centre. The Project Team’s three (3) Design Alternatives minimize impacts to the roadway corridor as follows:

- Design Alternatives No. 2 and No. 3 each include reducing the road width from 100 metres west of Misty River Drive to 100 metres east of Harriet Street in order to avoid impacts to abutting properties (including one heritage property) and to avoid the potential of up to four full property buyouts;
- Design Alternatives No. 1, No. 2 and No. 3 each include two designated left-turn lanes on Sawmill Road at Northfield Drive and one northbound designated right-turn lane on Northfield Drive at Sawmill Road rather than left-turn lanes at all legs of the intersection
in order to minimize impacts to abutting properties and to avoid the need for a full property buyout. (The Project Team notes that these traffic operational improvements will result in an acceptable level-of-service for this intersection based on forecasted 2024 traffic volumes.);

- Design Alternative No. 1 includes no changes to Northfield Drive in order to avoid any impacts to abutting properties;
- Design Alternatives No. 2 and No. 3 include no widening of Northfield Drive south of Sawmill Road for cycling or sidewalk facilities, and a minimal widening of Northfield Drive north of Sawmill Road to include on-road cycling facilities (no sidewalk);
- Design Alternative No. 2 includes a reduced cycling facility width of 1.0 metre on Sawmill Road as opposed to the initially proposed 1.50 metre wide cycling facility on Sawmill Road in order to minimize impacts to abutting properties and the roadway corridor.
# APPENDIX F

**ASSESSMENT OF THE THREE (3) DESIGN ALTERNATIVES PRESENTED AT THE NOVEMBER 28\textsuperscript{TH}, 2012 PUBLIC CONSULTATION CENTRE**

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Alternative No. 1</th>
<th>Alternative No. 2</th>
<th>Alternative No. 3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Reconstruct Sawmill Road in its current configuration</td>
<td>Reconstruct and widen Sawmill Road to provide a 1.0 metre wide cycling facility on both sides of the road</td>
<td>Reconstruct Sawmill Road with 1.25 metre wide concrete segregated cycling tracks within the boulevard on both sides of the road</td>
</tr>
</tbody>
</table>
| **Transportation** (Vehicle, Cycling and Buggy traffic) | • Provides minimum travel lane widths of 3.35m – 3.50m  
• Does not provide designated cycling or buggy facilities  
• Minimal lane widths may provide a traffic calming effect | • Provides minimum travel lane width of 3.35 metres  
• Wider total lane width of 4.35 metres may encourage higher travel speeds  
• Provides for an on-road cycling facility  
• Provides some space for buggy traffic, but does not fully accommodate buggy widths | • Provides minimum travel lane width of 3.35 metres  
• Minimal lane widths may provide a traffic calming effect  
• Provides for a ‘buffer’ of 0.35 metres between travel lane and cycling tracks  
• Provides for a designated cycling facility behind curb  
• Does not provide designated facilities for buggy traffic  
• Adjacent parked vehicles could encroach onto cycle track if parked poorly (from Glasgow Street to 1843 Sawmill Road)  
• Potential conflict with vehicle doors opening and encroaching into cycle track (from Glasgow Street to 1843 Sawmill Road)  
• Potential conflict points between driveways and cycle tracks (from Musselman Crescent to 100 metres west of Misty River Drive)  
• Vehicles entering roadway at driveways and intersections may be stopped in cycle track (from Musselman Crescent to 100 metres west of Misty River Drive)  
• Some cyclists may stay on road and not use cycle tracks  
• Potential for vehicles to park within cycle track (from Musselman Crescent to 100 metres west of Misty River Drive) |
<table>
<thead>
<tr>
<th>Criteria</th>
<th>Alternative No. 1 Reconstruct Sawmill Road in its current configuration</th>
<th>Alternative No. 2 Reconstruct and widen Sawmill Road to provide a 1.0 metre wide cycling facility on both sides of the road</th>
<th>Alternative No. 3 Reconstruct Sawmill Road with 1.25 metre wide concrete segregated cycling tracks within the boulevard on both sides of the road</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maintenance (Summer/Winter Maintenance Considerations)</td>
<td>● No change from current practices</td>
<td>● No change from current practices</td>
<td>● Cycle tracks need to be maintained to same level as the roadway for both summer and winter conditions</td>
</tr>
<tr>
<td></td>
<td>● Slightly wider pavement to maintain than currently exists</td>
<td>● Slightly wider pavement to maintain than currently exists</td>
<td>● Special equipment may be required to clear snow and ice from cycle tracks, sweeping and other maintenance activities</td>
</tr>
<tr>
<td>Property/Corridor Impacts (impacts on utilities, trees, properties, driveways, parking)</td>
<td>● No change from current conditions</td>
<td>● Parking reduced by approximately 80% from what currently exists to avoid hydro pole and tree impacts</td>
<td>● Parking reduced by approximately 80% from what currently exists to avoid hydro pole and tree impacts and to minimize conflict points between cycling track and parking</td>
</tr>
<tr>
<td></td>
<td>● No change to existing boulevard parking</td>
<td>● 5 partial property purchases required, no full property purchases required</td>
<td>● 5 partial property purchases required, no full property purchases required</td>
</tr>
<tr>
<td></td>
<td>● 5 partial property purchases required, no full property purchases required</td>
<td>● Approximately 2 trees require removal</td>
<td>● Approximately 11 trees require removal</td>
</tr>
<tr>
<td></td>
<td>● Approximately 2 trees require removal</td>
<td>● 9 overhead hydro poles need to be relocated</td>
<td>● 17 overhead hydro poles need to be relocated</td>
</tr>
<tr>
<td></td>
<td>● 9 overhead hydro poles need to be relocated</td>
<td>□ Parking reduced by approximately 80% from what currently exists to avoid hydro pole and tree impacts</td>
<td>□ Parking reduced by approximately 80% from what currently exists to avoid hydro pole and tree impacts and to minimize conflict points between cycling track and parking</td>
</tr>
<tr>
<td></td>
<td></td>
<td>□ Minimal increase in operating costs due to slightly wider pavement width</td>
<td>□ Minimal increase in operating costs due to slightly wider pavement width</td>
</tr>
<tr>
<td></td>
<td></td>
<td>□ Capital Cost of approximately $4.0m</td>
<td>□ Capital Cost of approximately $4.0m</td>
</tr>
<tr>
<td></td>
<td></td>
<td>□ Increase of approximately $3,000 -$10,000/year in operating costs for maintaining the Cycling Tracks</td>
<td>□ Increase of approximately $3,000 -$10,000/year in operating costs for maintaining the Cycling Tracks</td>
</tr>
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### APPENDIX G-1

**SAWMILL ROAD AND NORTHFIELD DRIVE IMPROVEMENTS**  
**PUBLIC CONSULTATION CENTRE**  
**NOVEMBER 28, 2012**  

<table>
<thead>
<tr>
<th>ATTENDEE</th>
<th>COMMENT</th>
</tr>
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<tr>
<td>Judy M</td>
<td>I do not want bike lanes!!</td>
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<tr>
<td>Peter W</td>
<td>I’m a cyclist and often ride through Conestogo. I much prefer Alternative #2 with just a white line separating the bike lane from the car lane. It is safer than the semi-mountable curb separation in #3.</td>
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<tr>
<td>Keith G</td>
<td>Don’t understand why 80% of parking would be eliminated for alternatives 2 &amp; 3. Option 1 does not follow Regional Master Transportation/Cycling plan. Buy 1030 Sawmill to make a safer corner.</td>
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<td>Quinn O</td>
<td>Choice 2 &amp; 3 are: incredibly disruptive and costly for the sake of bikes. All boulevard parking is needed as there is limited parking as is if you want to encourage businesses in the town to start up/stay. The speed limit is 50km which is fine for the bikers you can’t have bike lanes everywhere. Try doing this in St. Jacobs. Sorry too disruptive please, please only go with Alternative #1! Don’t cave into bikers. Please.</td>
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<tr>
<td>Bill H</td>
<td>Improve Northfield/Sawmill intersection. Maintain current 2 lane arrangement of minimal Rd widening &amp; min. Capital Expenditure. Endorse speed limit i.e. 40km in school zone &amp; 50km elsewhere.</td>
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<td>Ruthann H</td>
<td>Both the 2\textsuperscript{nd} 7 3\textsuperscript{rd} alternatives would eliminate 80% of village parking – this would destroy the concept of a “village”. Imagine doing this to St. Jacobs – a disaster!! – and why is this even a consideration?? Keep the village as a village NOT a throughway – Drop the speed limit to 40 - &amp; bikes &amp; buggies would be even safer travelling through Conestogo.</td>
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<td>Darrel M</td>
<td>I appreciate having the chance for input. I would like to keep the town as close to it is now but improve traffic flow. I hope that improved flow does not increase speeds.</td>
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<td>Carol H</td>
<td>I think buggy traffic should be a paramount consideration, &amp; option 1 actions for less change to continue to allow for this. I also think that this option will address the traffic concerns but preserve trees, property &amp; parking spaces.</td>
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<tr>
<td>Eric P</td>
<td>The voice of cyclists not residents in Conestogo should not be able to rip-up our community. There are many other uses for funds. Fix up road (rehabilitate), and other wise Do not Add special cycling facilities. Cyclists can HANDLE the 80km roads entering and exiting Conestogo they do not require special facilities in town.</td>
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<td>San K</td>
<td>Need left turn lane heading North from Northfield to Sawmill or right hand turn lane onto Sawmill. Raise yellow marking centre on Northfield so</td>
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<tr>
<td>Kendra E</td>
<td>need tight turn lane from Sawmill turning right going south on Northfield.</td>
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<td>Concern with bike lanes – removal of parking in front of our property.</td>
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<td>Cyclists only come through sporadically, we live here.</td>
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<td>Elizabeth S</td>
<td>My concern with the widening of the road Alternative #2 &amp; #3 is safety issues as a result of “parking areas” in very close proximity to side walks. I cringe at the thought of the “green space” between the road and the sidewalk becoming increasingly narrow. I would love to see the beautiful trees that make Conestogo so picturesque remain part of our landscape. Bikers can find alternate routes when navigating through Conestogo. Safety of Conestogo’s residents comes first (walking pedestrians) Alternative #2 &amp; #3 (road widening) brings cars to close to some residential homes (parking area) This would increase road noise &amp; decrease aesthetics and decrease home value for such residents.</td>
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<td>Tim K</td>
<td>The RTMP supports active transportation facilities. Safety for cyclists is more important than 11 trees. Conestogo is a cycling hub and will only become more so over the decades that the design is in place. Failing to provide for sae space now will mean no safe space for the foreseeable future. Finally the emphasis on large truck traffic means that cyclists space is even more crucial.</td>
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<td>Vera B</td>
<td>I agree with Alternative #1 only, It will provide minimal lane widening, as mentioned, to provide a traffic calming effect. There will be no increases in operating maintenance costs. As well there are only a small # of trees requiring removal (as compared to alternative #2 &amp; #3). I am not in favour of providing a bike lane at all.</td>
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<td>Dan W</td>
<td>I understand that space is limited, and appreciate the efforts to maximize room and function for all roadway users. Cycling and buggy safety is best served by alternative 2, since attempts for Alt. 3 to have more segregation would be less used and physically a barrier for the buggies and the majority of cyclists would remain on the roadway no the “trucks”. Use of 6 meter concrete strips on Northfield helps no one – move to roadway width for extra safety. Remember dirt and gravel collect on cycling lanes &amp; travel lanes. Lets not waste money spent creating &amp; doing alternative 2 &amp; 3.</td>
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<td>Christine W</td>
<td>We cycle through Conestogo often and it is not safe in its current design. Widening for cyclists &amp; buggies would be the most beneficial in my opinion.</td>
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<td>Ed H</td>
<td>I do like option #3 but it is expensive &amp; more disruptive for property owners. Option #2 is therefore my 1st choice. It will no get school kids biking but adults might start biking along the cycling lane.</td>
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<td>G. D</td>
<td>I thin alternative 2 will meet the needs of the majority of users.</td>
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<td>Teresa L</td>
<td>Purchase house #1030 Northfield Drive – currently for sale. Expropriate larger area of property #1959 – empty lot on the corner of Sawmill Rd. &amp; Northfield Dr. Use these two lots to increase size of existing intersection to include turning lanes in each direction &amp; include sidewalks through intersection. This would likely provide long term improvement.</td>
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<td>Dean P</td>
<td>Alt. 2 &amp; 3 too many trees and widen roadway to encourage higher speeds for through traffic, the traffic speeds are already too fast. Proposals would also increase taxes.</td>
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<td>Eileen Y</td>
<td>Do not feel comfortable about losing trees. Mature majestic trees. Also capital costs are very high for alternative #2 &amp; #3, too high. Proposed #2 &amp; #3 would increase taxes.</td>
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<td>Greg R</td>
<td>Concerned about how close to the new road our house will end up with widening. Could bike lanes not be put down Flaxmill to accommodate bikers.</td>
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<td>Dave M</td>
<td>Not interested on any bike lanes as it widens the total roadway so I lose more grass boulevard. The existing horse run (as its called) is used for guest parking which I will be losing with any of the alternatives.</td>
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| D. U | 1.) When a sidewalk is placed immediately beside a busy road (Sawmill at Golfcourse Road and the corner of Sawmill and Northfield), this presents a danger to pedestrians (from vehicles) and means that the SNOWPLOWS will pile snow on these sidewalks during the winter. Do you reasonably expect residents to clear this snow??  
2.) There should be a DEDICATED LEFT TURN LANE in all four directions at the corner of Sawmill and Northfield.  
3.) Leave the mountable curbs and paved shoulders wherever possible for the use of buggies and bikes. NO DEDICATED BICYCLE LANE.  
4.) LEAVE EXISTING TREES and UNPAVED BOULEVARDS wherever possible. |
| Cam L | It’s hard to believe we’re talking in the millions for this project. The budget numbers should include buying the properties on south-west corner of Sawmill and Northfield currently for sale. It will never be cheaper and those poor folks will never sell it once the roads are closer yet!! |
| Dave K | I believe Option/Alternative 2 will be most functional and safest through continuous bike/buggy lanes though each end would be a further improvement. The entry features are a great idea. They should have some effect to slow down traffic particularly from the west (St Jacobs) end. |
| Marion B | I feel very strongly that we should not lose the parking on Sawmill Rd. The whole character of the quaint village setting must be preserved as much as possible. Having bicycles & buggies using the road has a calming effect on traffic and is mainly restricted to Sundays for buggies and evenings & weekends for bicycles and only for approx 4 months per year! We don’t need to spend extra money to accommodate bicycles when there is an
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| Don U    | Thank you to you and your team for once again providing the opportunity for public input concerning this project on November 28.  
I have finally had the opportunity to review the information package which you provided at the public consultation. Having done so, I feel that the Recommended Design Alternative outlined on the top half of page 4 of the information package is the most appropriate since it deals with the basic problems while essentially maintaining the current character of the village and is also the least costly.  
My one remaining concern is the failure to include a designated left turn lane southbound on Northfield Dr. In spite of the results of your traffic studies, the lack of such a turn lane does cause delays for southbound traffic during busy periods. Since there is already an advanced green northbound during these busy periods, why not simply provide the same opportunity for the southbound traffic at the same time? It is likely that you will have to deal with this problem in the future as traffic volume increases; so why not do it now during the upcoming reconstruction?  
By the way, I note that the property at 1030 Northfield Dr. is currently for sale. Why not acquire it now and remove a major impediment at the intersection of Sawmill Rd. and Northfield Dr. before reconstruction of the intersection takes place? |
| David J  | Thank you for the opportunity to view alternatives this past Wednesday. I would suggest that the alternatives stand as numbered #1, then 2 and least favourable is #3. |
| Don U    | As a postscript to my recent email concerning this topic, I occasionally ride my bicycle through the village using the paved shoulder. I have more concern for my safety as a cyclist when I am outside the village limits on either Sawmill Rd. and especially Northfield Dr. Therefore, I don’t see the need for dedicated bicycle lanes in the village when they do not exist immediately outside of the village. |
| Don U    | Option of taking the more scenic, quiet, parallel road which runs for most of the village.  
When I bike which is frequently, I find it is more about the “journey” than the “destination”! Because of the lower speed limit in the village it is not a problem to accommodate bikes and buggies on the existing road. I would rather see bike lanes designed for the part of Sawmill Rd. west of the village, towards St. Jacobs, where the speed limit is 80km. This is very dangerous and scary when riding a bike!  
Turn lanes at Intersection of Northfield & Sawmill are absolutely necessary. Would have like to have truck traffic re-routed via Northfield/University Ave or Expressway, or Elmira Rd. towards Guelph. There are too many homes close to road to have truck traffic through the village. |
<p>| David J  | Thank you for the opportunity to view alternatives this past Wednesday. I would suggest that the alternatives stand as numbered #1, then 2 and least favourable is #3. |</p>
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<td>Mary S</td>
<td>Reason for this has mostly financial implications. These days of public debt, I do not see the advantage of spending more money for improvements number 2 &amp; 3. While they offer advantages, the cost does not justify the advantages. For public safety it is important for a sidewalk completely throughout the village but the addition of bike paths and additional widths for sidewalk both sides and blvds is just not important enough to justify the cost. I believe the answer is quite simple given our economic times.</td>
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<tr>
<td>Peter W</td>
<td>I am writing to submit my input on the public consultation regarding options for Sawmill Road in Conestoga. As a member of the cycling community, my preferred option is Option 3, followed by Option 2. I am concerned about the potential for conflicts with the doors of parked cars and would like to recommend that on-street parking be reduced to a minimum and signage be added in parking areas to remind drivers and passengers of the need to check before opening car doors into the cycle track.</td>
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Given the information presented at the PCC and as contained in the Information Package, my 1st Choice is Alternative #2 followed by my 2nd Choice, which is Alternative #3. I do not believe reconstructing the roadways in their current configuration (i.e Alternative #1) warrants any consideration as this would fail to address a number of aspects of the Regional Official Plan (ROP), the Regional Transportation Master Plan, and the Regional Transportation Corridor Design Guidelines.

In stating my preference for Alternative #2, I do, however, have one suggested amendment. In particular, I would like to see the provision of a 1.0 metre bicycle lane included on the North side of Sawmill Road between Misty River Drive and Harriet Street. According to Appendix D-7 in the information package (p. 28) no bicycle lanes whatsoever are currently proposed to be included along this section of roadway. However, I note that both vehicle lanes flair out to 4.0 metres/lane from the 3.35 metres/lane proposed elsewhere. If both lanes were kept to the same standard as elsewhere along Sawmill Road (i.e. 3.35 metres/lane or 6.70 metres total), there would still be sufficient width to accommodate a 1.0 metre bike lane.
### ATTENDEE | COMMENT
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| Brian L | I was unable to attend the presentation on this project last night in Conestogo on Nov 28th.
As a resident of Waterloo Region and as a general member of cycling community I would like voice my support for alternative 3 in the information package. |

| Paul F | Thank you for the great amount of work and time which you and your team have spent regarding the reconstruction of Sawmill Road through Conestogo. Concern for our thoughts and opinions is appreciated.

As a resident of Conestogo living on the main street I am partial to option #1

- Safety of my children and pedestrians is foremost. Speaking with Dr. Sam Yagar, retired professor of Transportation in U of W engineering dep’t, widening the road will increase traffic speed. This being common knowledge of course. A instance where a horse was spooked and broke loose from the buggy with the result of a runaway horse, smashed buggy and telephone pole with wood damage is one instance. (telephone pole is in front of my home). I can name many times where speed, passing or lack |
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<td>of care occurred in near accidents.</td>
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<td>- Movement of traffic is understood as the ultimate need and Sawmill is a traffic artery. I fully understand this fact. Controlling speed is a very real concern. Widening the road and removing trees will not reduce speed. I live on Sawmill Road and know the speed vehicles travel at all times of day. Most obey the speed limits, many do not. Large and small vehicles.</td>
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<td>- Conestogo Public School is on Sawmill Road (as you are aware), speed reduction is imperative for the safety of children. Cars still pass on shoulder when cars ahead are turning left. I realize a study was completed and result was that this is not an issue. Let me assure you that the study was not comprehensive of every day activity. Neighbours park on the street with intent to stop passing on shoulder and slow traffic.</td>
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<td>- Horse and Buggy movement and safety is also necessary. The Mennonite community will not speak out for themselves as they do not believe in becoming involved with our affairs. Vehicles unfortunately do not seem to respect buggies and allow room for passing. I would really appreciate a program where we educate our drivers on the care of slowing down when approaching and passing buggies, cyclists, any slower moving objects both in town and on roads. The proposed bike lane is not wide enough to safely allow buggies to traverse with vehicles. This is a double edged sword I realise to make the road safe for buggies requires widening the road even more thereby increasing traffic speeds. Proposed bike lane is not the solution in my opinion.</td>
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<td>- Installation of proposed bike lane appears to reduce parking within the business section of Conestogo. Woolwich township has set aside a specific area zoned commercial/residential with the future and current requirements of businesses. Parking is needed on road side as it is in Waterloo, Kitchener, Elmira in fact all cities and towns. Will a bike lane not eliminate a large section of parking?</td>
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<td>- I am an avid cyclist riding a racing class road bike and consider myself one with the cycling crowd. A push for a bike lane in Conestogo by the cycling community is a selfish promotion. We (cyclists) ride with large vehicles passing us regularly, this is a hazard of cycling. I ride early in the morning when traffic is lighter. Cycling by commuters is very limited through Conestogo and most commuters ride bikes with wider tires thereby able to move onto gravel as needed. Road bikes with narrow tires are in a dangerous position to quickly move onto gravel shoulders. This is a hazard of our hobby. Yes, it is a hobby and should be taken as such. The cycling community should not lobby the “need” for a cycling lane for a hobby.</td>
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Essentially evening and weekend rides at the expense both monetary and function of townspeople living on Sawmill Road, business owners and Mennonite community.

- Cost of project is other real concern. Realizing that money has been budgeted for cycling lanes shouldn’t negate spending for the sake of spending. We and future generations still need to pay for this work. A strong sense of stewardship is expected of us.

- We all get one vote, surely the vote of those affected more directly, namely townspeople living on Sawmill Road should be weighed more heavily than a recreational, occasional user.

A difficult task has been given to you. After speaking with you at the Open House recently I know that due diligence and care will be provided and that all thoughts given will be discussed.

Sarah F

I would like to get my vote in for the Sawmill road rebuild. My vote is #1, rehabilitate in it’s current condition. I do not wish to register a second choice.

My comments are:

I have been a recreational cyclist and commuter cyclist for 25 years. Cycling through Conestogo is not a problem for me because I slow down, watch for cars pulling in and out of driveways, children, and other things one might encounter when passing through a community, and am not opposed to moving over or stopping if I anticipate a conflict with a vehicle. When packs are cycling down Sawmill, I have occasionally observed, even in areas where there is a designated bike lane, that they will often cycle two abreast and cars still have to swing around them. A sense of entitlement is not going to help one getting through Conestogo, cyclists still can not fly through undisturbed at high speed with driveways, the bikelane is not continuous, with merges that force cars and bikes together. Common sense is what is needed when traveling through built up areas. This will promote cyclist safety. There is always an alternative cycling route down Flaxmill road.

While I support the recreational cyclist, we are discussing my home and community. Widening the appearance of the road, will as studies have showed, causes traffic to move faster. My concern goes quickly from cyclist safety (which for reasons I have outlined above is not guaranteed by a bikelane) to pedestrian and children safety in my community. We have a school on the main road. Widening the road goes against all traffic calming measures that were given by Nancy Button years ago
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<td>appearance of a narrower road, park cars along the road, plant trees, emphasize that a community lives here. The cycling lane is not wide enough to accommodate buggies, a wheel would be hanging into traffic. More dangerous, especially if traffic is moving faster through town and trying to squeeze by. I live on the main street and I have seen more buggies use this road for commuting than cyclists. Businesses also depend on street parking. I do not feel Conestogo can afford to give up parking. When there are not cars parked, the parking lane is available to cyclists. Cyclists may have to occasionally stop, and go around a parked car. That has never been a problem for me.</td>
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<td>Susan S</td>
<td>I am a resident of Conestogo and enjoy living in this small town. I would like to retain the small town atmosphere that is currently here and believe that the village of Conestogo will not likely grow in size in the foreseeable future. Alternatives #2 and #3 would reduce the main street of Conestogo to one of pavement and few trees with very little on street parking available for the retailers on the street. This would definitely change the face of our village and remove its small town feel. Planting as many new trees as is feasible would also help retain the small town feeling. The retailers on Sawmill Road depend on parking in front of their businesses and on Sawmill Road. Your document points out the lack of suitable parking off of Sawmill Road and also the issue of parking for the volunteer fire department personnel when responding to an emergency. The use of semi-mountable curb to facilitate boulevard parking for alternative #1 could be very effective. The example of King Street in downtown Kitchener where the curb used creates a very easy transition from road to boulevard parking could be considered. This type of curb also makes the road safer for bicycles to ride on because it eliminates the deep V effect of the present curb and gutter. As a recreational cyclist who periodically uses Sawmill Road, I think the example of King Street in Kitchener would be a safer option than what is presently in place on Sawmill Road. Plans #2 and #3 are specifically geared to accommodate the cyclists, but I wonder if you had ever studied how many bicycles actually use the road. As a frequent driver on Sawmill Road in traveling from Waterloo to my home, I have not seen the number of bicycles in use that would warrant specific bike lanes with the cost and disruption to Sawmill Road that would result. Options #2 and #3 also leave no bicycle lanes between Misty River and Harriett, which seems strange if the goal is to provide continuous bike lanes. In terms of continuity, Sawmill Road west which continues to St. Jacobs has a very narrow paved area between the driving lane and the shoulder. As a result the bicycles would have no safe area once they leave Conestogo on the way to St. Jacobs, so why disrupt the town? Northfield Drive, both north and south, do not have continuous wide, safe bicycle lanes either. I would like more explicit information on the raised landscape centre median concept that you mention. How long? How wide? Where would they be placed? Are they similar to the ones which have been installed on Davenport Road between Conestogo Mall and Lexington Avenue? A suggestion for the intersection at Northfield and Sawmill Road would be to create a separate left turn lane from Northfield northbound going westbound on Sawmill Road with a combined straight through and right turn lane beside it. Perhaps an advanced green light would also help at that point.</td>
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<td>Matthew H</td>
<td>I didn’t get a chance to speak with you at the Public Consultation on November 28th at Conestogo Public School so I am taking this opportunity to share my thoughts and concerns about the most recent design elements and options that have been proposed for Sawmill Road and Northfield Drive in the Village of Conestogo. Sidewalks: The installation of sidewalks on Sawmill Road from Harriet Street to Golf</td>
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<td>Course Road, in my opinion, is the most critical element of any modification to Sawmill Road. A significant portion of the residents of Conestogo live to the east of this section of Sawmill Road and as such are put at increased and unnecessary risk when travelling on foot and by bicycle to the west of the Grand River. This situation is particularly acute for students and children that live east of the Grand River given that both Conestogo Public School and the village park/playground are both located approximately 1 km west of the Grand River. Currently the roadway in this area does not provide for balanced and safe used by all modes of travel and it needs to be addressed well in advance of the proposed 2016 construction timetable.</td>
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Lane Dividers/Islands:

I am in favour of any steps that lead to a reduction of speeds in the Village of Conestogo and I believe that Lane Dividing Islands can be effective in this objective but only if properly placed and in accordance with current best practices. In particular, the lane dividers proposed for the redesign in Option 2 & 3 need to be located at the speed transition points to and from 50 km/h. In particular, the proposed positioning of the lane divider islands proposed for the east side of Conestogo on Sawmill Road are placed well inside the speed transition point, as a result east bound traffic is likely to use the islands as speed transition points and not the actual point located farther to the east. Further I don’t believe that westbound traffic behaviour will alter for its current behaviour of waiting until the Grand River to reduce speed. |

Costs:

In the current economic climate cost must be a major factor in the decision process. As such, the low cost option needs to be the starting point in all discussions. |

Design Options 2 & 3:

Design Options 2 & 3 if selected as the design options will have definite and substantial changes to the character of the Village of Conestogo from its current state. I believe that these options can only be considered after a meaningful discussion and debate that involves the residents of Conestogo. I do not believe that the public consultation on November 28th meets the level of discuss necessary to make changes to the culture of this community. |

Community Safety & Speed Limits:
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<td>I don’t believe that any of the three design options go far enough to ensure community safety. Speed and traffic volumes, particularly heavy truck traffic, continue to increase in the Village of Conestogo and none of the three options address this in any meaningful manner. This is an omission that is unacceptable given the location of Conestogo Public School on Sawmill Road. I have been told on many occasions by Region Staff that there are no 40 km/h zones on regional roads in Waterloo Region. This is in fact not the case; for example Regional Road 75 south of Cedar St. in Cambridge, in proximity to St Gregory Catholic Public School has a 40 km/h zone. The residents and children of Conestogo should be entitled to the same level of safety and protection on regional roads as residents of Cambridge already enjoy.</td>
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<td>To respond to your specific request for feedback on the three design alternatives I can only support Alternative 1. Further, I don’t believe that Options 2 or 3 can be considered in the absence of additional community involvement and discussion involving the residents of Conestogo.</td>
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<td>While I am in support of Option 1, I do not believe that it goes far enough to ensure student and community safety for the residents of the Village of Conestogo. Specifically, Design Option 1 should be modified to include the following:</td>
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<td>• Reduce the posted speed limit to 40 km/h in the proximity of Conestogo Public School immediately;</td>
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<td>• Include Lane Dividers in Option 1 and position them at the transition points to 50 km/h on both Northfield Drive and Sawmill Road; and,</td>
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<td>• Advance the timetable to install sidewalks between Harriet Street and Golf Course Road to the spring of 2013, this is a student/pedestrian safety issues that can’t wait until 2016 to be addressed.</td>
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<td>If you have any questions regarding my comments or concerns please feel free to contact me and please keep me informed of future design discussions and consultations. In addition, I would like to receive notice of when this issue will be presented to Regional Council.</td>
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<td>The property at 1030 Northfield Dr. at the corner of the main intersection is currently for sale for $349,000. Prior to any redevelopment of the main street, you should acquire this property in order to add a proper left turn lane for the traffic coming from Waterloo. I was told at the meeting that the present traffic volume does not warrant a left turn lane. The project is not scheduled until 2016, the situation could be different by then. If you have</td>
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<td>Philip C</td>
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<td>Ron S</td>
<td>I respectfully offer the following comments; the Information Package dated Nov 28, 2012 is very well written and provides a good options summary. Alternative #1 is the preferred options for the following reasons. Alternative #1 maintains the functional usage of the street parking for all retailers and residents along the historic downtown corridor. It is recognised that traffic calming is recommended and be effective in addition it is recommended to reduce the speed limit to 40 km/Hr for safer pedestrian crossing at the retail section and the school. The complimentary usage of Buggy's/cyclists and vehicles works well as it is, but it can be made safer. This can be achieved by eliminating the existing curb &amp; gutter and replacing it with a mountable curb. This transition to a mountable curb eliminates the gutter section and it is replaced with pavement to the curb, and the overall pavement width is widened. The V shaped curb &amp; gutter is very unsafe for usage of the pavement by cyclists and Buggy's, this would make it overall safer along Sawmill Road. The boulevard surface along the Retail section should be constructed with landscape paving stones to compliment the appearance of the historic downtown buildings. It is recommended to develop a complimentary master lighting plan for the rural residential and village retail businesses. More detail should be provided for the raised centre median and the tree planting landscape plan.</td>
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</table>
| Michael K | Here is my feedback regarding the Sawmill Road and Northfield Drive Improvements. (see comments below) Preferred option: 1 Second choice: 3 Design Alternative 2 is not desired at all  
- I suggest a blended or hybrid solution. Design alternatives 2 and 3 are good options on Northfield Drive. Because there is no sidewalk, the concrete strip adds some separation for pedestrian and cyclist traffic. In addition, the narrower road will help reduce vehicle speed on this busy road with a lot of through traffic.  
- As a parent with 3 children aged 1 to 5, my primary concern is to reduce the speed of traffic and provide a safe village. While I don’t dispute the traffic survey data that the average speed is 50 km/hr in town, my anecdotal experience is that there is a very wide distribution with respect to time of day and location and a high standard deviation with a lot of vehicles in the 60-80 km/hr range. There is especially high speeds on Sawmill Road |
<table>
<thead>
<tr>
<th>ATTENDEE</th>
<th>COMMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>west of Northfield.</td>
<td></td>
</tr>
</tbody>
</table>

- I believe that 2 factors can help reduce speeds: narrow roads and maintaining/improving the visual character of the town (no one speeds through St Jacobs). As a cyclist myself, I understand the tension between narrow roads and the desire to provide separation between bikes and cars. However, the narrow road and small setbacks along Sawmill do not support the option to provide dedicated cycling facilities while preserving the visual quality of Conestogo. Thus, I am very much opposed to option 2, which will provide the combination of overall wider paved width with a significant impact on the village.

- I like the idea of the Village Entrance Features coming into town. Please place these as far west of Northfield on Sawmill as possible. Also, move the speed limit change farther west. This will reduce the problem we currently have with eastbound vehicles not slowing until they reach the intersection, and westbound vehicles racing from the intersection to hit 80 km/hr by the time they reach the sign.

- We currently cycle as a family along Sawmill in town, using the paved shoulder as a bicycle lane. This has served us well as we rarely encounter parked cars along the shoulder. For this reason I like some aspects of option 3, which provides a mountable curb with a segregated cycling path; however, this is tempered by the impact on property with this option. I think the loss of parking could be offset by putting the town hall property to good use.

- Since there will be significant cost savings along with these design changes (up to $5 million). Please consider adding some aesthetic features, such as premium gas lamp style street lamps, planters, hitch posts, etc. that blend in and enhance the architectural quality of this historic village.
## SAWMILL ROAD AND NORTHFIELD DRIVE IMPROVEMENTS

**COMMENT SUMMARY FROM THE PCC HELD ON NOVEMBER 28, 2012**

<table>
<thead>
<tr>
<th>Main Comments Received</th>
<th>Support</th>
<th>Oppose</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Widening of Sawmill Road for Cycling/Buggy Lanes</td>
<td>10</td>
<td>12</td>
</tr>
<tr>
<td>2. Remove Most Boulevard Parking on Sawmill Road</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>3. Sawmill Road and Northfield Drive Intersection Improvements</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>4. Installation of Sidewalk on Sawmill Road from Harriet Street to GCR</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>5. Request for Reduced Posted Speed Limit on Sawmill Road</td>
<td>4</td>
<td>N/A</td>
</tr>
<tr>
<td>6. Request for Restriction of Heavy Trucks on Sawmill Road</td>
<td>1</td>
<td>N/A</td>
</tr>
<tr>
<td>7. Installation of &quot;Village Entrance Features&quot;</td>
<td>3</td>
<td>0</td>
</tr>
</tbody>
</table>
TO: Chair Jim Wideman and Members of the Planning and Works Committee

DATE: March 19, 2013

SUBJECT: VICTORIA STREET IMPROVEMENTS FROM EDNA STREET TO BRUCE STREET, CITY OF KITCHENER – RECOMMENDED DESIGN CONCEPT

RECOMMENDATION:

THAT the Regional Municipality of Waterloo take the following actions with respect to the Victoria Street (Edna Street to Bruce Street) Class Environmental Assessment Study:

a) Approve the Recommended Design Concept for Victoria Street from Edna Street to Bruce Street as outlined in Report E-13-042.

b) Direct staff to file the Notice of Completion for this Class Environmental Assessment by means of advertisement in the local newspaper and mailings to the adjacent property owners, tenants and agencies and place the Screening for Environmental Assessment files on the public record for a period of 30 days.

SUMMARY:

The Region of Waterloo is undertaking a Class Environmental Assessment (EA) study to develop an operational and safety improvement strategy for the Victoria Street corridor between Edna Street and Bruce Street, in the City of Kitchener. The study limits are indicated on the Key Plan in Appendix “A”. The study is being guided by a Project Team consisting of staff from the Region of Waterloo and City of Kitchener Councillors Daniel Glenn-Graham and Scott Davey, along with input from the Ontario Ministry of Transportation (MTO).

The Victoria Street (Edna Street to Bruce Street) Class Environmental Assessment was initiated to address the need for improvements to reduce mid-block collisions largely associated with congestion and turning movements at commercial driveway locations. Two workshops were held with business and property owners located within the study area to gather feedback, discuss the nature of the problem and develop possible solutions. Those who attended the workshops generally agreed with the need to address the collision problems and participated in developing Alternative Design Concepts for consideration. The Project Team has reviewed and made modifications to the Alternative Design Concepts and evaluated them with particular emphasis on safety benefits, traffic operations, potential impacts on the natural environment and the social/economic environment, and costs.

In August 2012, the Provincial Government announced that the MTO would begin construction on New Highway 7 in 2015. This reversed a previous decision by the MTO (in 2010) to remove the new highway project from their five year plan. The New Highway 7 project will include replacement of the Conestoga Expressway bridge on Victoria Street and changes to the existing on and off ramp configurations. The Project Team has reviewed anticipated impacts of the new highway construction on the Victoria Street corridor and generated a modified Design Concept that will serve as a solution to meet present needs with an opportunity to adapt to future needs when New
Highway 7 is open.
Based on the evaluation of all Alternative Design Concepts, a thorough review of all public input received, and in consideration of the MTO’s plans for proceeding with New Highway 7 construction, the Project Team has identified **Alternative Design Concept 2A – Narrow Centre Concrete Median in the Short Term Including Widening for Conversion of the Median into a Future Two Way Left Turn Lane (TWLTL) - as the Recommended Design Concept.** Alternative Design Concept 2A includes: a continuous temporary narrow centre concrete median on Victoria Street between Edna Street and Bruce Street; widening of Victoria Street from Edna Street to the Conestoga Expressway bridge to accommodate a future two way left turn lane and; infill sidewalk along the south side of Victoria Street between Edna Street and the Conestoga Expressway bridge. Cross sections for the Recommended Design Concept are included in **Appendix “B”**.

Alternative Design Concept 2A was presented as the Project Team’s Preferred Design Concept at a Public Input Meeting (PIM) of Regional Planning and Works Committee on February 6, 2013, in the Regional Council Chamber to solicit comments from the general public and business and property owners in the study area regarding the proposed improvements and potential impacts. The Project Team has reviewed and responded to all comments received. (Please see Section 5 in this report and **Appendices “D” and “E”**.) Subject to approval by Regional Council, the Class Environmental Assessment Project File will be made available for a 30-day public review and subsequent approval by the Minister of Environment.

The estimated cost for the Project Team’s Recommended Design Concept is $1.4 million with anticipated construction of the improvements scheduled for 2014. The $1.4 million estimate includes rehabilitation of the Victoria Street pavement structure, complete replacement of the traffic signal infrastructure at the Edna Street and Bruce Street intersections (due to age and condition), widening of Victoria Street to accommodate the ultimate Two Way Left Turn Lane, relocation of storm system infrastructure, relocation of hydro poles, sidewalk reconstruction and infill sidewalk and other minor roadway improvements required to complete the project. The “throw-away” costs associated with installing and subsequently removing the centre concrete median are estimated at approximately $120,000.

**REPORT:**

1. **Background**

The Region of Waterloo is undertaking a Class Environmental Assessment (Class EA) study for the development of an operational and safety improvement strategy primarily to address high mid-block collision rates at commercial driveways along the Victoria Street Corridor between Edna Street and Bruce Street in the City of Kitchener. The study is following Schedule “B” of the Municipal Class EA process (2011). The study limits are indicated on the Key Plan in **Appendix “A”**. The study is being guided by a Project Team consisting of staff from the Region of Waterloo and City of Kitchener Councillors Daniel Glenn-Graham and Scott Davey, along with input from the Ontario Ministry of Transportation (MTO).

For more than 10 years, the study area along Victoria Street has consistently been reported as one of the Region’s worst collision locations. This section of Victoria Street experiences unique collision patterns resulting from congested peak hour operations, extensive intersection queuing, high turning volumes in and out of commercial driveways and tight spacing of commercial driveway locations. A key contributor to existing congestion in this corridor is traffic attempting to access the Conestoga Expressway ramps on Edna Street and Bruce Street. During peak times, the queuing at the ramp locations often reaches Victoria Street which, in turn, results in queuing on Victoria Street at the Edna Street and Bruce Street intersections.
The Region periodically reviews and optimizes traffic signal timing within the corridor; however, this has not been successful in resolving all the operational and safety concerns, primarily due to operational constraints on the system. Additional improvements are required within the study area to address current operational issues and safety concerns.

The existing pavement structure in the study area requires rehabilitation and existing traffic signal infrastructure needs to be replaced at the Edna Street and Bruce Street intersections due to age and condition. These improvements will need to be incorporated in the final Design Concept.

1.1 New Highway 7

One of the challenges encountered with this Victoria Street Class EA study has been the uncertain timing of New Highway 7. When the Ministry of Transportation (MTO) constructs New Highway 7 between Kitchener and Guelph it will attract most of the commuters that are presently using Victoria Street as a route between the two cities. It will also significantly change the highway ramp configuration in the vicinity of Victoria Street. Primary access to both the Conestoga Expressway and the new highway will shift from the Edna Street and Bruce Street ramps to new ramps that will be constructed at Wellington Street and Shirley Avenue. A copy of the preliminary layout plan for New Highway 7 at the Conestoga Expressway is included in Appendix “C”.

Once New Highway 7 is constructed, the change in highway access and reduced traffic volumes will significantly alter traffic operations on Victoria Street between Edna Street and Bruce Street. Therefore, decisions made within the Victoria Street study area are heavily influenced by the proposed configuration and construction timing of the new highway. MTO’s schedule for New Highway 7 construction has changed several times over the last ten years and the uncertainty has prompted the Region to delay the start of the Victoria Street Class EA on several occasions. The mid-block collision rate on Victoria Street between Edna Street and Bruce Street has continued to rise and Regional staff made a decision to formally initiate the Victoria Street Class EA study (at a time when New Highway 7 was not in the MTO’s five year plan) to address the operational and safety concerns in this corridor under the assumption that New Highway 7 would not be constructed in the near future.

In August 2012 the Provincial Government advanced the anticipated timing of New Highway 7 by announcing that it would proceed to construction within three years. Based on this announcement, with a construction duration estimated at approximately 5 years, New Highway 7 could be operational as early as 2020. Rather than placing the Victoria Street EA on hold again, the Project Team decided to focus on selecting a Recommended Design Concept that would accommodate ultimate needs in the corridor once New Highway 7 is open, while still addressing the immediate collision concerns that are present today.

1.2 Collisions

Collision data compiled by Region staff for the section of Victoria Street from Edna Street to Bruce Street identifies 75 actual collisions versus 31 expected collisions in the mid-block for the period of 2007 to 2011. This location is historically prone to collisions and the ranking has been getting worse over time. Victoria Street from Edna Street to Bruce Street ranked as the 11th worst location in the Region’s most recent annual collision report. It is important to note that the Region’s annual collision report compiles intersections and mid-block locations together. Among mid-block locations only, this section of Victoria Street ranked as the 3rd worst location in the Region.

The type of collisions occurring along this section of Victoria Street often result in injuries (1 in 5 collisions between 2007-2011 involved injury) and there was a fatality in this location in 2005. Typically, 75% of the collisions in the study area are either rear-end or sideswipe type collisions. Although other factors can be involved, many of these collisions within the study area occur when a vehicle is waiting in the through lane to turn left in to a driveway and the driver behind either does
not stop in time (rear-end) or makes a last second decision to change lanes (sideswipe).
1.3 Speed Survey

A speed survey at a mid-block location within the study area was undertaken by Region staff for a 24 hour period on June 5th and 6th, 2012. The posted speed in the corridor is 60 km/hr. The survey data indicates that the average speed is 54 km/hr and the 85th percentile speed is 66 km/hr (ie. 85% of all vehicles travel at less than 66 km/hr). The 85th percentile speed is quite low and the small spread between the average speed and 85th percentile speed suggests that speeds are fairly consistent most of the time. Approximately 65% of vehicles travel under the speed limit, likely due to the congestion in this area during peak times.

Collision data indicates that 96% of collisions take place between 9:00am and 7:00pm when the average speed is 53 km/hr. More than half of collisions (54%) take place in the three hour afternoon peak from 3:00pm to 6:00pm when the average speed is 52 km/hr.

Based on the results of the speed survey study and comparative collision review, the vast majority of collisions are taking place during periods of congestion when speeds are low. This data, combined with the type of collisions reported (rear-end, sideswipe and turning) suggests that the accidents are more directly related to the turning movements taking place, rather than to high speeds.

1.4 Operational Issues

The Victoria Street intersections at Edna Street and Bruce Street are congested during peak times. The westbound left turn movement at Edna Street and the eastbound right turn movement at Bruce Street are particularly heavy as many vehicles are destined for the Conestoga Expressway on-ramps located on Edna Street and Bruce Street. During peak periods these Expressway on-ramp intersections experience traffic queuing that extends to Victoria Street.

During peak times, the traffic queuing from the Expressway on-ramps has a major impact on the traffic operations on Victoria Street between Edna Street and Bruce Street. At these peak times, left turns from Victoria Street to Edna Street are delayed during the traffic signal green time and the resulting left turn queue on Victoria Street extends as far back as the Expressway bridge. The left-turn queuing on Victoria Street at Edna Street encroaches into the Victoria Street west bound through lanes forcing through traffic to a single curb lane which in-turn experiences significant queuing. East bound drivers on Victoria Street looking to turn left into the north side commercial driveways along this section of Victoria Street have a difficult time finding a gap in the west bound traffic (left turn and through traffic queuing) and block the inside eastbound lane while waiting, thereby forcing east bound drivers to a single curb lane.

Similarly, during peak times, right turns from Victoria Street to Bruce Street are delayed by queuing at the Bruce Street Expressway ramp and the resulting right turn queue on Victoria Street extends as far back as the Expressway bridge. The right turn queuing on Victoria Street at Bruce Street forces east bound through traffic to the inside lane which in-turn experiences significant queuing.

The congestion during peak traffic times described above results in drivers weaving from lane to lane and stopping suddenly which frequently leads to collisions. At these times, operations at the commercial entrances also suffer from this congestion as it makes left turns in or out difficult and queues form in the driveways. Frustrated drivers trying to make left turns often start moving across one lane at a time in an attempt to ‘force’ gaps in traffic which can also result in collisions.

1.5 Cycling, Pedestrian and Transit Needs

The section of Victoria Street between Edna Street and the Conestoga Expressway bridge has been previously identified as a corridor requiring infill sidewalk on the south side of the road. This recommendation is also included in the current draft of the Region’s Active Transportation Master Plan (ATMP). There is currently a narrow paved maintenance strip behind the curb along this
section of Victoria Street that is often mistaken for a sidewalk. Although pedestrian activity is currently fairly low along this corridor, the sidewalk connection is required on the south side to help complete the walking network in the area and provide a more comfortable pedestrian environment.

The Regional Cycling Master Plan and the current draft of the ATMP both identify alternate cycling routes in the area that route cyclists around this portion of the Victoria Street corridor. Therefore, no short or long term cycling needs have been identified within the project limits. There are no current transit routes along this section of Victoria Street; however, the Region’s Official Plan identifies Victoria Street as a future transit priority corridor. Transportation Planning has indicated that the approximate time frame for adding a transit route through this section is 2016/2017.

2. Business and Property Owners Workshops

Two workshops were held with business and property owners adjacent to the road allowance within the project limits. Four Alternative Design Concepts were developed at the first workshop with input from those in attendance. At the second workshop, the Project Team presented two viable short-listed Alternative Design Concepts for further input. Alternative Design Concept 2 (Centre Concrete Median) was presented as the Project Team’s Preliminary Preferred Design Concept. Details of the Alternative Design Concepts developed at the workshops along with a summary of the main issues raised at the workshops and responses by the Project Team are included in Section 5 and Appendix “D” of this report.

3. Assessment and Evaluation of Alternative Design Concepts

All Alternative Design Concepts have been assessed and evaluated by the Project Team with respect to impacts on the project environment related to:

- Safety (ability to address collision history concerns in this corridor)
- Traffic Operations (ability to accommodate expected vehicular and pedestrian traffic needs)
- Economic Environment (impact on commercial activities, anticipated capital/property costs)
- Property (impact on access, parking, buildings)
- Social Environment (impacts on pedestrians, noise impacts, air quality)
- Natural Environment (effect on existing vegetation, storm drainage, wildlife and wildlife habitat)

In 2010, the Ministry of Transportation (MTO) had removed New Highway 7 from their 5 year construction plan, so during the time that the Project Team initially assessed the Alternative Design Concepts for Victoria Street, the time frame for construction of the new highway was indefinite. Based on this, the Project Team had agreed that for the purpose of the Victoria Street study, it would be assumed that the existing Highway 7 and Conestoga Expressway infrastructure would remain in its current configuration well into the future. Thus the base assumption in assessing the alternatives initially was that Victoria Street traffic volumes would continue to rise in the foreseeable future and that congestion and queuing at the Edna and Bruce Street intersections would increase accordingly.

The announcement in August 2012 that New Highway 7 will proceed to construction by 2015 altered the Project Team’s base assumption about the project’s timing. If the MTO moves ahead with its current plan, the Victoria Street bridge would be replaced with a longer and wider structure, three of the four on-ramps to the Conestoga Expressway would be closed at Edna Street and Bruce Street, and the new highway would carry most of the commuter traffic between Kitchener and Guelph (possibly by 2020). As such, the Project Team re-assessed its Preliminary Preferred Design Concept in consideration of the New Highway 7 construction timing and considered a “modified” Design Concept that would address the immediate collision concerns that are present today while still accommodating ultimate conditions in the corridor once New Highway 7 is open.
Design Concept 2A - Narrow Centre Concrete Median in the Short Term Including Widening for Conversion of the Median into a Future Two Way Left Turn Lane (TWLTL) – The narrow centre concrete median would extend between the Edna Street intersection and Bruce Street intersection and eliminate left in and left out movements from driveways within this section of Victoria Street. U-turns would be permitted at the Edna Street and Bruce Street intersections for cars and small trucks. Victoria Street would be widened to provide a long westbound left turn lane to Edna Street in the short term until New Highway 7 is operational. This short term widening will be constructed wide enough to accommodate a future TWLTL (when New Highway 7 is constructed) which would "tie in" to the existing westbound left turn lane at Edna Street and a future lengthened left turn lane at Bruce Street (over the widened Conestoga Expressway bridge). During New Highway 7 construction (at the time that the Victoria Street bridge is replaced and the Expressway ramps are reconfigured), the narrow concrete median would be removed as a retrofit and the road converted to the TWLTL configuration.

The Project Team selected Alternative Design Concept 2A as the Preferred Design Concept after the New Highway 7 announcement in August 2012. A full assessment of all Alternative Design Concepts and rationale for this selection is included in Appendix “G” and a comparative analysis of the short-listed Alternative Design Concepts is included in Appendix “H”.

4. Public Input Meeting

A Public Input Meeting (PIM) of the Regional Municipality of Waterloo Planning and Works Committee was held in the Regional Council Chamber at 150 Frederick Street, Kitchener on February 6, 2013. Notices of the PIM were hand delivered to business and property owners on Victoria Street between Edna Street and the Conestoga Expressway bridge on January 11, 2013 and sent by email on January 14, 2013. The PIM was also advertised in the Kitchener-Waterloo Record and Kitchener Post on January 11, 2013 and January 25, 2013 and on the Region of Waterloo website.

Region staff presented Design Concept 2A as the Preferred Design Concept along with the rationale in making this selection and responded to questions from Planning and Works Committee members. Three delegations spoke at the PIM - Harry Froussios of Zelinka Priamo Limited (representing LCBO), Paul Connolly representing Natural Sound, and Ron Kraishnik representing Suzuki Saab of Kitchener-Waterloo.

Planning and Works Committee members requested clarification on the timing of the concrete median construction and the timing of the New Highway 7 project, the need for implementing changes immediately and the associated throw-away costs, and questioned whether other interim solutions were considered.

The delegations generally reiterated concerns raised at the business and property owner workshops about the route changes that would be required to access their businesses even if the concrete centre median is implemented as an interim measure. They also noted that the configuration of New Highway 7 will create even greater challenges for customers and delivery drivers trying to access this section of Victoria Street. Paul Connolly and Ron Kraishnik expressed concerns about lengthy disruptions to businesses during the Region’s construction of the proposed improvements on Victoria Street and during the MTO’s construction of New Highway 7.

A summary of the main issues raised at the PIM and responses by the Project Team are included in Section 5 and Appendix “E” of this report.
5. Main Concerns Raised by Business Owners

In general, business owners recognize the current collision problem, traffic congestion and operational difficulties within the study area. They acknowledge the challenge that their customers face trying to turn left in or left out of the commercial entrances in this area during peak traffic periods. Some have even noted that they personally adjust their own route in to work or heading home such that they don’t need to make a left turn movement in or out of one of the driveways. Many have witnessed collisions (or heard them taking place) just in front of their businesses; however, several business owners have expressed concerns with the concept of a temporary centre concrete median due to potential adverse impacts on their business access and operations, even if the median is constructed as an interim measure. With regard to the proposed implementation of Design Concept 2A, the Project Team understands that the key issue for business owners will be the changes in the way that customers and delivery truck drivers access their properties in the short term.

As the temporary centre concrete median would prevent left turns into and out of commercial entrances, drivers wanting to access the opposite side of the street would either need to plan their route accordingly (use the Edna/Frederick/Bruce block as a means of changing their direction of travel) or make a U-turn at the Victoria/Edna or Victoria/Bruce intersection. As part of implementing Design Concept 2A, local widening would be provided to allow cars and small trucks to make U-turn movements easily and the Region will consider additional signage to make drivers aware that U-turns are permissible at these locations.

Larger delivery vehicles would need to alter their route (using the Edna/Frederick/Bruce block) to change their direction of travel. Further discussion would take place with individual business owners during the detailed design stage to ensure that this transition would take place smoothly and to address any outstanding concerns. Region staff has been working with KW Surplus to determine turning movement requirements and establish a practical driveway configuration at that location. Turning movement needs at other individual driveway locations will also be addressed during detailed design. There are many options that could be considered to improve the existing access configurations such as larger entrance radii, semi-mountable portions of the boulevard, and semi-mountable portions of the centre median.

It is acknowledged that these route changes are undesirable to property and business owners in the short term. New Highway 7 construction will permit the removal of the centre concrete median and its conversion to a TWLTL when the Victoria Street bridge is replaced and the Expressway ramps are reconfigured; however, the timing of the MTO’s bridge replacement is currently undetermined and may not take place for several years. Because of the serious collision problem currently occurring in the corridor, the Project Team unanimously agreed that it is necessary to implement a centre concrete median in the interim as it is the most effective solution available to address existing collision and congestion issues. The Project Team notes that the aforementioned mitigating factors (U-turns and short alternate routes) will minimize any potential adverse access impacts to the adjacent business properties. Design Concept 2A also allows for a future retrofit to a Two Way Left Turn Lane (as the Victoria Street bridge is reconstructed and the Expressway ramps are reconfigured at Victoria Street) when it is expected that reduced traffic volumes will make it a viable and effective configuration for this project.

At the Public Input Meeting (PIM), several business owners noted concerns regarding a lengthy period of business disruption during construction as their perception was that the Region would be constructing the centre concrete median in 2014, just prior to the Victoria Street bridge replacement as part of the MTO’s New Highway 7 project, and that the Region would subsequently return to remove the centre concrete median after the new highway is open. The Region plans on avoiding this scenario. Prior to construction on Victoria Street, the Region will be regularly consulting with MTO regarding the timing of the New Highway 7 project, and in particular, the timing of the Victoria
Street bridge replacement and Expressway ramp reconfiguration. If it is anticipated that the bridge replacement and ramp reconfiguration will occur closer to the end of the New Highway 7 project (around 2020) or if the MTO project is delayed, the Region would implement the centre concrete median in 2014 with a construction duration of approximately 3 to 4 months. Two-way traffic would be maintained during construction along with access to all businesses. Subsequently, the median would be removed as part of the MTO’s project at the time that the Victoria Street bridge is replaced and the Expressway ramps are reconfigured (perhaps around 2019/2020 or later). The median removal would have minimal effect on the duration of the MTO’s work in the corridor. Conversely, if the MTO confirms that the Victoria Street bridge will be replaced and ramp reconfiguration will proceed early in the New Highway 7 construction process (around 2015/2016), the Region would forego construction of the centre concrete median and construct the Two Way Left Turn Lane as part of the MTO’s project. If the projects proceed as per this second scenario, the potential adverse access impacts of the centre concrete median would be avoided and the duration of construction would again be minimized.

A more comprehensive list of questions and concerns raised at the PIM are summarized in Appendix “E” along with responses from the Project Team.

6. Project Team Recommended Design Concept

Based on a review of the technical information gathered for this project, and in consideration of the evaluation of the benefits/opportunities of the Alternative Design Concepts, as well as a thorough review of all public comments received, the Project Team has identified Alternative Design Concept 2A – Narrow Centre Concrete Median in the Short Term Including Widening for Conversion of the Median into a Future Two Way Left Turn Lane (TWLTL) as the Recommended Design Concept for this Class EA Study.

Until the Victoria Street bridge is replaced and the Expressway ramps are reconfigured as part of New Highway 7 construction, it is expected that traffic volumes on Victoria Street will remain high and likely continue to rise. Although the Ministry of Transportation (MTO) has set a start date for New Highway 7 construction, the exact timing of the Victoria Street bridge replacement and ramp reconfiguration is uncertain.

The Project Team recognizes the need for Victoria Street improvements to address the safety and operational issues that currently exist in the corridor and may continue to exist at least in the short term until New Highway 7 is operational. The Recommended Design Concept effectively addresses the collision problems identified under current traffic conditions and can be easily adapted to a TWLTL configuration during construction of New Highway 7 when the Victoria Street bridge is replaced and the Expressway ramps are reconfigured.

As part of the Recommended Design Concept, Victoria Street would be widened to accommodate the ultimate TWLTL down the centre of the road, between Edna Street and the Conestoga Expressway bridge. As an interim condition (assuming the MTO will not be replacing the Victoria Street bridge structure in the short term), a narrow concrete median would be constructed at the south edge of the ultimate TWLTL and it would initially be marked as a dedicated westbound left turn lane at Edna Street. The width of the existing lanes over the Conestoga Expressway bridge would be reduced slightly to allow the narrow concrete median to extend all the way between the Edna Street and Bruce Street intersection. When the MTO replaces the Victoria Street bridge and reconfigures the Expressway ramps, the structure will need to be wider to accommodate a longer eastbound left turn lane at Bruce Street. At the same time, the centre concrete median would be removed and the westbound left turn lane at Edna Street would be reduced in length. A continuous TWLTL would then be provided, tying in to the left turn lanes at Edna Street and Bruce Street respectively.
Additional property along Victoria Street is not required for Alternative Design Concept 2A, except possibly for Hydro easements at some pole locations. New sidewalk will be provided along the south side of Victoria Street and existing sidewalk will be replaced where impacted in areas of roadway widening. The existing pavement structure will be rehabilitated and the traffic signal infrastructure at the Edna Street and Bruce Street intersections will be replaced.

It is recognized that the temporary centre concrete median would require route changes for customers and delivery vehicles wanting to turn left in or out of commercial entrances along this section of Victoria Street in the short term. These effects would be mitigated through design elements at the Edna Street and Bruce Street intersections to allow U-turns for cars and small trucks and by the availability of the relatively short alternate route of the Edna/Frederick/Bruce block for larger delivery trucks or for those uncomfortable making a U-turn.

If the Ministry of Transportation (MTO) is able to provide a construction schedule for the New Highway 7 project, prior to the Region’s Victoria Street project proceeding, that confirms the Victoria Street bridge replacement and Expressway ramp reconfiguration is scheduled early in the MTO’s Highway 7 project (ie. 2015/2016), staff would recommend that the Region construct Victoria Street to the ultimate TWLTL configuration as part of the MTO project rather than constructing the temporary centre concrete median first. If the Victoria Street bridge replacement and Expressway ramp reconfiguration is scheduled later in the staging process or the timing remains uncertain at the time that the Region’s Victoria Street project proceeds, the centre concrete median would be constructed initially and removed in conjunction with the future MTO project.

The Project Team has identified Alternative Design Concept 2A as the solution that offers the most flexibility to effectively address the current collision and operational problems while providing the ability to adapt the design at an appropriate time to meet future traffic conditions.

7. Project Cost

The capital cost for the Recommended Design Concept is estimated to be $1.4 million. The final cost will be further refined as part of the detailed design phase and will depend in part on costs for relocation of utilities. New sidewalks included in the conceptual estimate are expected to cost approximately $30,000.

The $1.4 million estimate includes rehabilitation of the Victoria Street pavement structure, complete replacement of the traffic signal infrastructure at the Edna Street and Bruce Street intersections (due to age and condition), widening of Victoria Street to accommodate the ultimate Two Way Left Turn Lane, relocation of storm system infrastructure, relocation of hydro poles, sidewalk reconstruction and infill sidewalk and other minor roadway improvements required to complete the project. The “throw-away” costs associated with installing and subsequently removing the centre concrete median are minor and estimated at approximately $120,000.

8. Next Steps

All members of the public who have expressed an interest in this project have been notified directly of the opportunity to comment before a final decision is made for this project.

Subject to Regional Council approval of the Recommended Design Concept, the Project File will be completed and a “Notice of Study Completion” will be filed in the public record for a 30 day review period. This filing will be advertised by mail-outs and notices in newspapers. If someone feels that the study did not fully address all of the issues, they can request that the Minister of Environment order the project to a more detailed environmental assessment, referred to as a Part II Order request. The Minister of Environment must receive such requests in writing, with a copy sent to the Region’s Commissioner of Transportation and Environmental Services. The Minister will determine
if a more detailed environmental assessment is required and the Minister’s decision will be final.
If there are no significant unresolved objections following the 30 day review period, the project will proceed to detailed design and construction. Depending on on-going discussions with MTO regarding the timing of the New Highway 7 construction, utility relocations could begin as early as fall 2013 and roadway construction could commence in the summer/fall of 2014.

Staff will continue to liaise with the MTO with respect to the New Highway 7 construction schedule. Notwithstanding the timing noted above, the Victoria Street bridge replacement and Expressway ramp reconfiguration timing would dictate the Region’s course of action with respect to the temporary centre concrete median. If New Highway 7 construction is delayed in the MTO’s construction program, the narrow concrete median would be constructed on Victoria Street as an interim safety measure. If New Highway 7 moves ahead as planned, but the Victoria Street bridge reconstruction and Expressway ramp reconfiguration is scheduled in the latter stages, the Region would construct the temporary concrete centre median initially and remove it in conjunction with the MTO’s project. If New Highway 7 goes ahead and the bridge replacement and Expressway ramp reconfiguration is scheduled early in the construction process, the Region would adjust its timing of the Victoria Street project and construct the ultimate TWLTL configuration initially, instead of constructing the temporary centre concrete median.

CORPORATE STRATEGIC PLAN:

This project is consistent with the development of Strategic Focus Area 2 (Growth Management and Prosperity) in terms of developing, optimizing and maintaining infrastructure to meet current and projected needs. It is also consistent with the development of Strategic Focus Area 3 (Sustainable Transportation) in terms of developing, promoting and integrating active forms of transportation (walking) and optimizing existing road capacity to safely manage traffic.

FINANCIAL IMPLICATIONS:

The 2013 Transportation Capital Program includes $1.51 million over the years 2013 to 2015 for the design and construction of this project to be funded from the Region Development Charges Reserve Fund.

OTHER DEPARTMENT CONSULTATIONS/CONCURRENCE:

Nil

ATTACHMENTS

Appendix A – Key Plan
Appendix B – Alternative Design Concept 2A (Preferred Design Concept)
Appendix C – Preliminary Layout Plan – New Highway 7 at the Conestoga Expressway
Appendix D – Summary of Workshops with Property and Business Owners
Appendix E – Summary of Comments from the February 6, 2013 Public Input Meeting (PIM) Including Responses from the Project Team
Appendix F – Report provided by Zelinka Priamo Ltd. (representing LCBO) and Response Letter from Region Staff
Appendix G – Assessment of Alternative Design Concepts
Appendix H – Comparative Analysis of Alternative Design Concepts

PREPARED BY: Frank Kosa, Senior Project Manager, Transportation Expansion

APPROVED BY: Thomas Schmidt, Commissioner, Transportation and Environmental Services
APPENDIX “A”

KEY PLAN OF STUDY AREA
VICTORIA STREET FROM EDNA STREET TO BRUCE STREET
CLASS ENVIRONMENTAL ASSESSMENT
ALTERNATIVE DESIGN CONCEPT 2A (RECOMMENDED DESIGN CONCEPT)
NARROW CENTRE CONCRETE MEDIAN IN THE SHORT TERM INCLUDING WIDENING FOR
CONVERSION OF THE MEDIAN INTO A FUTURE TWO WAY LEFT TURN LANE
APPENDIX “C”

PRELIMINARY LAYOUT PLAN
NEW HIGHWAY 7 AT THE CONESTOGA EXPRESSWAY

X – ON/OFF RAMP TO BE CLOSED

PROPOSED NEW BRIDGE(S)

DOCS #1355355 v3
APPENDIX “D”
SUMMARY OF WORKSHOPS WITH PROPERTY AND BUSINESS OWNERS

Two workshops were held with business and property owners adjacent to the road allowance within the project limits. For the first workshop, letters were mailed out and hand delivered to business and property owners on Victoria Street between Edna Street and the Conestoga Expressway bridge inviting them to attend the workshop with Project Team members to introduce the project and gather feedback. The objectives of the first workshop were to identify current problems, develop alternative solutions, and identify the evaluation criteria for the assessment of impacts and benefits of the alternative solutions.

Representatives from three of the eleven businesses attended the first workshop (KW Surplus, Suzuki of KW and Weston Bakeries). The workshop attendees identified many of the collision and operational issues outlined in Section 1 of this report. They also noted that some drivers already avoid making left turns directly in or out of driveways, choosing to make right turns and U-turns instead, or turning in to driveways at less congested locations and cutting through adjacent properties to reach their destination. A variety of suggested improvements were developed at the workshop and condensed into four Alternative Design Concepts for further consideration by the Project Team:

Design Concept 1 - Centre Two Way Left Turn Lane (TWLTL): Similar to other sections of Victoria Street, a centre turn lane would be provided as a refuge for drivers headed in either direction, waiting to turn left in to driveways, or for drivers turning left out of driveways and waiting to merge with traffic. The TWLTL would tie in to the existing westbound left turn lane at Edna Street and taper out at the west side of the Conestoga Expressway bridge.

Design Concept 2 - Centre Concrete Median: The centre concrete median would extend between the Edna Street intersection and Bruce Street intersection and eliminate left in and left out movements from driveways within this section of Victoria Street. U-turns would be permitted at the Edna Street and Bruce Street intersections for cars and small trucks.

Design Concept 3 - Centre Concrete Median with Roundabouts at Victoria/Edna and Victoria/Bruce: Similar to Design Concept 2 with the addition of roundabouts at the Edna Street and Bruce Street intersections. Roundabouts would allow all vehicles to make U-turns at the Edna Street and Bruce Street intersections.

Design Concept 4 - Centre Concrete Median with Traffic Signals Mid-Block: Similar to Design Concept 2 with the addition of a new signalized intersection at a mid-block location that would provide an alternate location for left turn access to the commercial properties within this section of Victoria Street. Internal driveway connections between properties would need to be implemented for this Design Concept.

A brief review of the impacts and benefits of each of the four Alternative Design Concepts was undertaken at the first workshop in conjunction with the business/property owners. Sketches of the Design Concepts have subsequently been created by the Project Team and further evaluated with particular emphasis on safety benefits, impacts on traffic operations, implementation costs, and potential impacts on the natural environment and social/economic environment.

A second workshop was held with business and property owners adjacent to the road allowance within the project limits in the spring of 2012. Again, letters were mailed out and hand delivered to business and property owners on Victoria Street between Edna Street and the Conestoga Expressway bridge inviting them to attend the second workshop with Project Team members.
At the second workshop, Alternative Design Concepts 3 and 4 were identified as having been assessed and screened out from further consideration by the Project Team. Alternative Design Concept 3 had been screened out primarily due to the considerable property impacts that the roundabouts would have along with very high costs. Alternative Design Concept 4 had been screened out as a mid-block signalized intersection would not meet conventional warrants and would result in increased operational problems within the corridor and within the driveways on private property.

The Project Team presented Alternative Design Concepts 1 and 2 as the short-listed alternatives with Alternative Design Concept 2 (Centre Concrete Median) as the Project Team’s Preliminary Preferred Design Concept. The second workshop was organized with business and property owners to outline the rationale in screening out Alternative Design Concepts 3 and 4, review the assessment and comparative evaluation of Alternative Design Concepts 1 and 2, and discuss the Project Team’s Preliminary Preferred Design Concept and any other concerns.

Representatives from five of the eleven businesses attended the second workshop (Ashton Pools, Factory Shoe, KW Surplus, Suncor and Suzuki of KW). The workshop attendees recognized the safety benefits associated with Alternative Design Concept 2 (Centre Concrete Median) but expressed concerns regarding property access. KW Surplus indicated a preference for Alternative Design Concept 2 as long as delivery truck access to their loading bays could be accommodated. The other participants generally indicated a preference for an alternative that would not restrict left turns in and out of driveways. The Project Team noted that since the Edna Street and Bruce Street intersections are in close proximity, U-turns would be available for vehicles wishing to “turn left” to their properties. The Project Team also noted that the Edna Street/Frederick Street/Bruce Street block provides an alternate means of access for delivery vehicles and for those drivers uncomfortable making U-turns.

Although KW Surplus expressed a preference for Alternative Design Concept 2, there was little support by the other business and property owners attending the workshop for either of the short-listed design alternatives. Instead, several attendees suggested addressing perceived speed issues in the corridor without altering the roadway configuration. In essence, their preference was for a ‘Do Nothing’ Alternative with enhanced speed control. When prompted for a preference between the two short-listed options, three of the five business/property owners in attendance expressed a preference for Alternative Design Concept 1 - Centre Two Way Left Turn Lane, to maintain full access at driveway locations.

Questions and concerns raised at the public consultation workshops by the business and property owners within the study area are summarized below, along with responses from the Project Team.

Two Way Left Turn Lanes

Several business owners noted that Two Way Left Turn Lanes (TWLTLs) seem to be working well on other sections of Victoria Street and questioned why the Project Team had concerns about a similar configuration for this project.

Project Team Response:

Other sections of Victoria Street with a Two Way Left Turn Lane (TWLTL) are working reasonably well (although some still demonstrate similar collision patterns related to turns in and out of driveways). The main difference along this section of Victoria Street is the operation of the intersections at Edna Street and Bruce Street in association with the traffic queuing from the Expressway on-ramps. These intersections have heavy turning movements and are very congested at peak times, primarily because they serve as main access points to the Expressway. This results in increased congestion within the Victoria Street mid-block which would limit the effectiveness of a TWLTL during those peak times.
under current traffic conditions.
The eastbound left turn lane at Victoria/Edna often has 200 metre to 300 metre long queues during peak times. During these times, queued vehicles would occupy the entire length of a TWLTL if implemented at the present time.

The number of driveways between Edna Street and the Expressway bridge would also limit the effectiveness of a TWLTL with the current level of congestion. When several vehicles are attempting to turn left into a business on either side of Victoria Street and occupy the TWLTL at the same time, drivers in the through lanes may not be sure which driveways these vehicles are trying to access or whether they are in the queue to turn left at Edna Street. This could result in additional traffic weaving in and out of the TWLTL and through traffic lanes, and raise the potential for sideswipe and rear-end accidents. The confusion generated during peak times would also create a potential for head on collisions within the TWLTL.

Two Way Left Turn Lanes generally function well when Average Annual Daily Traffic (AADT) volumes are moderate (10,000 to 28,000 vehicles/day). Victoria Street, between Edna and Bruce has an existing AADT of approximately 30,000 vehicles/day, and is expected to increase over the short term. The traffic volumes, combined with the intersection queuing and tight driveway spacing suggests that a TWLTL will not function well under current traffic conditions and may result in increased collision rates over the existing condition.

As future traffic levels on Victoria Street are projected to drop significantly when New Highway 7 is open, a TWLTL would be a viable alternative for this corridor at that time, particularly as reduced intersection queuing at Edna Street and Bruce Street is also anticipated.

**Signal Timing Adjustments**

A number of workshop attendees suggested that the advanced left turn signal time should be increased at Edna Street to reduce queuing.

**Project Team Response:**

The signal timing at Edna Street needs to be balanced with the signal timing at the Expressway ramp. All movements at each intersection need to be taken into consideration in balancing this timing as increasing green time for one movement takes green time away from other movements. Major adjustments to signal timing in favour of Victoria Street traffic could result in longer queues for vehicles exiting the Expressway which would be a more significant concern.

During detailed design, once the lane configuration is established on Victoria Street, the Region will investigate opportunities to further improve the signal timing at Victoria Street intersections at Edna Street and Bruce Street.

**Route changes**

One of the primary questions expressed by business owners is how customers and delivery vehicles would access businesses on the opposite side of the street if a centre concrete median is implemented.

**Project Team Response:**

Drivers wanting to access the opposite side of the street would either need to plan their route accordingly (use the Edna/Frederick/Bruce block as a means of changing their direction of travel), or make a U-turn at the Victoria/Edna or Victoria/Bruce intersection.
Although U-turns are legal at intersections that are not signed otherwise, many drivers are not aware of this. The Region could consider additional signage to make drivers aware that U-turns are permissible at these locations.

It is recognized that U-turns may add to the congestion at the Victoria/Edna and Victoria/Bruce intersections and may have further impacts on signal timing. The anticipated U-turn volumes would need to be considered when making adjustments to the signal timing at these intersections.

Large delivery vehicles would need to alter their route (using the Edna/Frederick/Bruce block) to change their direction of travel. Further discussion would be required with individual business owners during the detailed design stage to ensure that this transition would take place smoothly and to address any outstanding concerns.

**Truck Turning Movements Into Driveways**

Concerns were raised about truck movements in and out of driveways if a centre concrete median is implemented. It was noted that some businesses have delivery trucks that currently use the full width of Victoria Street for manoeuvres, particularly where loading bays are close to the roadway.

**Project Team Response:**

The Region has been working with KW Surplus to determine turning movement requirements and establish a practical driveway configuration at that location. Turning movement needs at other individual driveway locations may also need to be addressed during detailed design. There are many options that could be considered to improve the existing access configurations such as larger entrance radii, semi-mountable portions of the boulevard, and semi-mountable portions of the centre median. It is however noted by the Project Team that discouraging manoeuvres across the entire roadway width is a positive effect of the centre concrete median option, as long as appropriate measures are implemented to allow for truck access where required. During detailed design, the Region will meet with each property owner to confirm truck access needs.

**Speed Concerns and Speed Reduction Measures**

A primary concern raised at the second workshop relates to concerns about speeds along this stretch of Victoria Street. In particular, there were concerns expressed regarding the posted speed (60km/h as opposed to 50km/h which is posted further west). It was also noted that motorists speed up considerably heading west from Bruce Street as they cross the Expressway bridge and several workshop attendees expressed a desire to see the speed limit reduced in this area. It was suggested by some of the business owners that speed may be the major contributor to the accident rates experienced within the corridor.

**Project Team Response:**

In test cases studied by the Region, operating speeds have not been reduced in locations where posted speeds were reduced. Region Transportation staff attribute this to the fact that drivers tend to drive at speeds that feel comfortable to them based on their surroundings, rather than according to the posted speed. The Region has found that physically changing road corridors by reducing lane widths and adding other features such as curbing, trees etc. that give a more ‘crowded’ feel to the roadway has been more effective in reducing speeds.
Speed plays a role in most collisions, but it is not the only factor to consider. The collision pattern on Victoria Street, between Edna and Bruce is clearly indicative of problems associated with turning movements. Many of the collisions are directly with vehicles making a turn in or out of a driveway. Many of the other collisions (rear end or sideswipe) are associated with drivers hitting a vehicle waiting to turn into a driveway or making a last second decision to change lanes to try to avoid hitting a stopped vehicle.

Based on data from the period 2006-2010, 96% of collisions are taking place between 9:00am and 7:00pm. Based on a speed survey study on Victoria Street between Edna Street and Bruce Street conducted by the Region in June 2012, the average speed on this section of Victoria Street is 53 km/hr at this time of day with an 85th percentile speed of 64 km/hr.

The same data indicates that 54% of collisions are taking place during the afternoon peak (3:00pm – 6:00pm) when the average speed is 52 km/hr and the 85th percentile speed is 64 km/hr.

The collision and speed data indicate that the vast majority of collisions are taking place during periods of congestion when speeds are low. This data, combined with the type of collisions reported (rear-end, sideswipe and turning) suggests that the accidents are more directly related to the turning movements taking place, rather than to high speeds.

**Speed Reduction Measures**

A variety of measures were suggested by business and property owners to reduce operating speeds including: ongoing enforcement, speed notification signs, rumble strips, flashing yellow lights, and installation of a ‘singing median’.

**Project Team Response:**

Based on Regional pilot studies, police enforcement is rarely an effective means of reducing operating speeds. In test areas, operating speeds were found to stay about the same, or in some cases increase, both during and after intensified speed enforcement. Long term, ongoing enforcement may be more effective, but can be quite costly. Requests for increased enforcement can be made by Region staff should speeding become a safety concern but ultimately it is up to Police Services staff to prioritize locations.

Speed notification signs (electronic signs that detect and display vehicular speeds) can be used in instances where the speed limit has been reduced to draw further attention to the change; however, the effectiveness of these signs is reduced over time, particularly if drivers come to realize that there are no associated implications (ie. if enforcement is not present on a regular and ongoing basis).

Rumble strips are intended to notify drivers that there is a stop ahead. If the Region were to start installing them for other applications (such as on Victoria Street), their meaning would become confused which could reduce their effectiveness in areas of intended use.

Flashing yellow lights are used by the Region to draw attention to signage that is particularly important for safety reasons (school zones, speed advisory signs on sharp curves, etc.). Overuse of flashing lights would limit their effectiveness (ie. if every speed limit sign had a flashing light, over time, drivers would not notice the light any more than they would notice the sign).

Singing medians (continuous rumble strips down the centre median) are intended to notify drivers to stay off of that section of roadway. This would not be an appropriate treatment for a Two Way Left Turn Lane or if the intent is to allow drivers to cross over the median.

The Region will consider appropriate measures to encourage driving at reasonable speeds as part of the detailed design.
APPENDIX “E”
SUMMARY OF COMMENTS FROM THE FEBRUARY 6, 2013 PUBLIC INPUT MEETING (PIM)
INCLUDING RESPONSES FROM THE PROJECT TEAM

The PIM held on February 6, 2013, is documented in the official minutes of that meeting. The following is a summary of the comments and concerns that were expressed by Planning and Works Committee members and delegations to the meeting along with the Project Team’s responses which were later provided to the delegations:

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<th>No</th>
<th>Question/Comment by Delegation</th>
<th>Project Team Response</th>
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<tr>
<td>1</td>
<td>Harry Froussios of Zelinka Priamo Ltd. (representing LCBO) 1) LCBO has concerns about the centre concrete median restricting westbound traffic from turning left into the property, particularly delivery trucks as that is their current route. Delivery trucks are currently unable to turn in and out of the LCBO’s access off of Edna Street due to the driveway configuration.</td>
<td>1) The Region will work with LCBO during detailed design to determine what modifications would be required to ensure that delivery vehicles can use the access on Edna Street. This access would also be available for LCBO customers heading westbound on Victoria Street.</td>
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<td></td>
<td>2) LCBO is concerned that a centre concrete median implemented as an interim solution would have long term effects on their business although they are not sure what those effects will be.</td>
<td>2) The Project Team recognizes that there would be an added inconvenience to customers trying to turn left in to the commercial entrances. However, that inconvenience can be mitigated by proceeding to the next intersection to make a U-turn. LCBO customers could also use the Edna Street driveway as an alternate access. Delivery drivers can also alter their routes accordingly and specific improvements can be made during the detailed design phase at some driveways to accommodate truck movements. The temporary centre concrete median would have a positive impact on the operation of the driveways themselves as they would operate more efficiently with right-in / right-out movements only. Some customers may view this as a net benefit in accessing the businesses.</td>
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<td>3)</td>
<td>LCBO has hired a traffic consultant to review traffic patterns in the area and provide a report outlining the anticipated impacts of the Victoria Street project. Zelinka Priamo will provide a summary of the report to the Region prior to March 6.</td>
<td>3) The Region received this report and accompanying letter from Zelinka Priamo on February 27, 2013 and staff provided a response letter on March 4, 2013. The letters are included in Appendix “F”.</td>
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<td>4)</td>
<td>LCBO prefers the TWLTL alternative, but if a centre concrete median is implemented it is imperative that U-turns be permitted at intersections to help customers reach the businesses along this stretch.</td>
<td>4) U-turns will be permitted.</td>
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<td>5)</td>
<td>LCBO is concerned about the overall impact that New Highway 7 will have on their business although they are unsure what those impacts will be.</td>
<td>5) Any concerns specific to New Highway 7 are to be addressed by the MTO.</td>
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| 2 | Paul Connolly representing Natural Sound  
1) Natural Sound is concerned about the length of time it will take to complete all of this construction on Victoria Street – it will kill off a lot of businesses. First the Region will be constructing the median, then the MTO will be constructing the bridge and then the Region will be waiting to come back and remove the median. This will be disastrous to businesses. | 1) The Region plans on avoiding this scenario. Prior to construction on Victoria Street, the Region will be regularly consulting with MTO regarding the timing of the New Highway 7 project, and in particular, the timing of the Victoria Street bridge replacement and Expressway ramp reconfiguration. If it is anticipated that the bridge replacement and ramp reconfiguration will occur closer to the end of the New Highway 7 project (around 2020) or if the MTO project is delayed, the Region would implement the temporary centre concrete median in 2014 with a construction duration of approximately 3 to 4 months. Two-way traffic would be maintained during construction along with access to all businesses. Subsequently, the median would be removed as part of the MTO’s project at the time that the Victoria Street bridge is replaced and the Expressway ramp are reconfigured (perhaps around 2019/2020 or later). The median removal would have minimal effect on the duration of the MTO’s work in the corridor. |
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<td></td>
<td>2) Paul hears accidents taking place in front of their business and agrees that the accidents are terrible, but Victoria Street has been like this for decades. Is it really necessary to construct the temporary median now and increase construction by another year or two years?</td>
<td>1) Cont. Conversely, if the MTO confirms that the Victoria Street bridge will be replaced and the ramp reconfiguration will proceed early in the New Highway 7 construction process (around 2015/2016), the Region would forego construction of the temporary centre concrete median and instead construct the Two Way Left Turn Lane as part of the MTO’s project. If the projects proceed in this manner, the potential adverse access impacts of the temporary centre concrete median would be avoided and the duration of construction would again be minimized.</td>
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<td></td>
<td>2) This location has been steadily rising in the ranking of the Region’s worst collision locations and currently ranks as the third worst mid-block location in the entire Region. See comments above (Councillor Strickland – question 5) regarding maintaining the “Status Quo”. See comments above regarding construction duration.</td>
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<td>3) It will cost $1.4 to construct the median – that’s a lot of money to spend rather than waiting a couple of years.</td>
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<th>3) The $1.4 million estimate includes rehabilitation of the Victoria Street pavement structure, complete replacement of the traffic signal infrastructure at the Edna Street and Bruce Street intersections (due to age and condition), widening of Victoria Street to accommodate the ultimate Two Way Left Turn Lane, relocation of storm system infrastructure, relocation of hydro poles, sidewalk reconstruction and infill sidewalk and other minor roadway improvements required to complete the project. These costs will be incurred whenever the project proceeds. The “throw-away” costs associated with installing and subsequently removing the temporary centre concrete median are estimated at only $120,000.</th>
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<td>2)</td>
<td>Ron has witnessed many accidents over the years. The accident that caused the fatality was definitely related to speed. The posted speed of 60 km/h is too high in this area.</td>
<td>Regions studies indicate that reducing the posted speed typically results in no significant change in average vehicle speeds. The speed study conducted in this area suggests that average speeds are already quite low, particularly during peak times, when most of the collisions are taking place.</td>
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<td>3)</td>
<td>This is a waste of taxpayers money and the construction will cause major disruptions to businesses.</td>
<td>See comments above (Paul Connolly – questions 1 and 3) regarding impacts to businesses and “throw-away” costs.</td>
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<td>4)</td>
<td>Several businesses will close prior to New Highway 7 construction as the MTO requires property to construct the new on-ramps, so traffic volumes will be reduced.</td>
<td>Although this may reduce traffic slightly in advance of New Highway 7, the major reduction will take place when the new highway is open and the ramp configuration has changed.</td>
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<td>1)</td>
<td>Will Victoria Street be closed when the Ministry of Transportation (MTO) reconstructs the Victoria Street bridge?</td>
<td>The MTO has not provided details on the timing or method of construction for the Victoria Street bridge.</td>
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<td>2)</td>
<td>Has the Project Team gathered data on the actual speed of vehicles during collisions?</td>
<td>The Project Team reviewed collision records but the reports often do not include an estimate of vehicle speed at the time of the accident.</td>
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<td>3)</td>
<td>Will the new Victoria Street bridge be wide enough to accommodate a Two Way Left Turn Lane (TWLTL).</td>
<td>Yes. The MTO needs to widen the bridge so that the eastbound left turn lane at Bruce Street can be extended. The bridge will be sufficiently wide for the TWLTL.</td>
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<td>4)</td>
<td>Did the Project Team consider a dual westbound Left Turn Lane (LTL) at the Edna Street intersection as an interim measure?</td>
<td>Yes, it was considered but eliminated as an option. Most of the traffic using the existing westbound LTL at Edna Street proceeds to turn left on to the Conestoga Expressway at the on-ramp intersection on Edna Street. To avoid creating a weaving issue, a dual westbound LTL on Victoria at Edna would require a dual southbound LTL on Edna at the on-ramp along with widening of the on-ramp itself. The Edna Street intersection at the on-ramp is under MTO jurisdiction and would require MTO approval for any modifications. MTO would not support this as an interim measure given that the</td>
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<td>on-ramp configuration will change at this location as part of New Highway 7 construction.</td>
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<td>Question/Comment by Planning and Works Committee Members</td>
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| 5) How does this section of Victoria Street compare with the section further east with the existing TWLTL in terms of collision patterns? | 4) Cont.
Property would also be required on Victoria Street and Edna Street to accommodate dual left turn lanes making this a costly option with adverse impacts to the existing loading bays at the Westons Bakery as well as adjacent residential properties on Edna Street to accommodate a temporary traffic condition that will change with the construction of New Highway 7. |
<p>| 6) Is the centre concrete median intended to be temporary? | 5) The TWLTL further east on Victoria Street functions reasonably well, although some of the same collision patterns related to turning movements exist there as well, but to a lesser extent. The Project Team expects that a TWLTL would not function as well between Edna Street and Bruce Street under present traffic conditions due to the congestion in this area during peak times and the intersection queuing at the Edna Street and Bruce Street intersections resulting from motorists destined for the Conestoga Expressway ramps. The queue (at Edna in particular) would extend in to the TWLTL forming a barrier to turning vehicles, similar to the existing condition. |
| 7) What are the “throw-away” costs associated with constructing the centre concrete median initially and subsequently removing it to provide the TWLTL? | 6) Yes. Now that New Highway 7 is proceeding and traffic levels on Victoria Street are expected to drop dramatically when it is open, the centre concrete median is preferred by the Project Team as an interim measure to address current collision problems until the MTO proceeds with replacement of the Victoria Street bridge. |
|                                                          | 7) Approximately $120,000. |</p>
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<td>8) Is there enough room to install the TWLTL now?</td>
<td>8) Yes, but the TWLTL will not address the collision problem under existing traffic conditions. Queuing at Edna Street would extend in to the TWLTL forming a barrier to turning vehicles, similar to the existing condition. It may actually add confusion as drivers would be uncertain whether queued vehicles in the TWLTL intend on turning at the traffic signal or in to a commercial driveway. In this respect the Project Team has assessed that adding a TWLTL prior to New Highway 7 proceeding would be worse than a ‘Do Nothing’ alternative.</td>
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<td>9) Has the Project Team considered how the centre concrete median will negatively affect businesses in the study area?</td>
<td>9) Yes. See comments above (Harry Froussios – question 2) regarding impacts to businesses.</td>
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<td>10) Will U-turns be permitted at the Victoria/Edna and Victoria/Bruce intersections?</td>
<td>10) Yes. U-turns are currently permitted and will continue to be permitted at those intersections. Some additional widening would be provided at each intersection to better accommodate the U-turn movements.</td>
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<tr>
<td>11) Would motorists making a U-turn do so from the LTL or from a separate lane?</td>
<td>11) They would make the U-turn from the LTL.</td>
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<tr>
<td>12) Why won’t a TWLTL work here – is it because of the volume of traffic or the operation of the intersections?</td>
<td>12) Both. The volume of traffic in the study area already exceeds the threshold at which a TWLTL is considered effective. Severe queuing at the intersections during peak periods and the tightly spaced commercial driveways add to the problem.</td>
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<td>13) Has the Project Team considered adjustments to the signal timing at the Victoria/Edna intersection?</td>
<td>13) Yes. The Region periodically reviews and optimizes traffic signal timing within the corridor. The signal timing at Victoria/Edna needs to be balanced with the signal timing at the Expressway ramp intersection on Edna. Major adjustments in favour of Victoria Street traffic could adversely affect traffic exiting the Expressway at Edna Street and result in longer queues on the exit ramp.</td>
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<td>Question/Comment by Planning and Works Committee Members</td>
<td>Project Team Response</td>
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<td>----------------------------------------------------------</td>
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<tr>
<td>14) Did the Project Team consider maintaining the “Status Quo” and deferring the project for a couple of years until New Highway 7 proceeds?</td>
<td>14) Yes. This was considered, but this “wait and see” approach has been ongoing for many years with this project as New Highway 7 has been advanced and delayed in the MTO’s construction program on several occasions. The Project Team has concluded that action needs to be taken to address the collision problem in the study area that exists now and has been getting worse over time. If the MTO confirms that New Highway 7 is proceeding in 2015 and that the Victoria Street bridge and Expressway ramps will be replaced early in the project, the Region would forego construction of the temporary centre concrete median and instead build the TWLTL initially as part of the MTO work.</td>
</tr>
</tbody>
</table>
February 26, 2013

Region of Waterloo
150 Frederick St., 6th Floor
Kitchener, ON
N2G 4J3

Attention: Mr. Frank Kosa, Senior Project Manager, Design and Construction
Dear Mr. Kosa:

RE: Victoria Street North Infrastructure Improvements (Edna to Bruce)
617 Victoria Street North
Liquor Control Board of Ontario (LCBO)
Kitchener, ON

Our File: LCB/KIT/12:01

We are the planning consultants acting on behalf of the Liquor Control Board of Ontario (LCBO), which operate the LCBO retail store on lands known municipally as 617 Victoria Street North in the City of Kitchener (the subject lands).

In June 2012, LCBO was made aware that the Region of Waterloo ("Region") was in the process of undertaking a study to define infrastructure improvements along Victoria Street North between Edna Street and Bruce Street, which include the subject lands. It is our understanding that Staff is proposing a raised centre median, either as a temporary or permanent solution, in attempt to alleviate traffic congestion and collision issues within the study area.

At the Public Information Meeting ("PIM") on February 6, 2013, Harry Froussios of Zelinka Priamo Ltd. provided preliminary comments on the potential impact of the proposed raised centre median on the LCBO store. Subsequent to the comments provided at the PIM, we are pleased to provide the following:

- Existing full-moves access to the LCBO store along Victoria Street will be restricted to right-in/right-out only. We expect that LCBO business will suffer as a result of customers not being able to easily access the site from Victoria Street;

- Westbound vehicles travelling along Victoria Street and turning left into the LCBO site would be forced to use the Edna Street access or make a U-turn at the Edna / Victoria intersection. Without a separate left-turn lane on Edna, vehicles could create queuing issues on Edna Street if the LCBO access is blocked by northbound traffic. These queues could potentially create negative impacts on the operation of the Edna / Victoria intersection as well as increasing the potential for riskier driver maneuvers for vehicles destined to Highway 7;

- Delivery trucks would have difficulty accessing the LCBO site with the proposed...
turning restrictions. 53-foot trucks would need to adjust their routes in order to approach the site from the appropriate direction; and even right-turns to and from the LCBO site would encroach beyond the extent of the existing driveways. It is also important to note that access to the LCBO site from Edna Street would not be possible for 53-foot trucks given the current configuration of the access driveway and the location of the LCBO store;

- It is our understanding that the raised centre median is intended to be implemented for a temporary period of time and replaced with a two-way left turn lane (TWLTL) once construction of the Highway 7 extension is complete, or once construction of the Victoria Street bridge widening commences. Given the uncertainty with respect to timing for these projects, we believe that the planned function and long-term viability of local businesses should not be negatively impacted for the sake of an interim traffic control measure; and

- Notwithstanding the above, if the raised centre median is implemented as a temporary measure, we would like reassurance from Staff that U-turns will be permitted for westbound Victoria Street traffic at the Edna / Victoria intersection. This measure, however, will not address our concerns related to truck traffic entering and exiting the site.

In conclusion, it is our opinion that a TWLTL be implemented instead of, or without an interim need for, the raised centre median, as this option provides the most flexibility to customers and delivery trucks. Furthermore, we have included with this letter, a Traffic Report conducted by Stantec Engineering providing additional technical data in support of the above comments.

We thank you for the opportunity to provide the above comments on behalf of LCBO. Should you have any questions, or require further information, please give us a call.

Yours very truly,

ZELINKA PRIAMO LTD.

Ian Rutledge, M.PL
Planner

cc: Bruno Pezzot, Liquor Control Board of Ontario (Via email)
    Robert French, Liquor Control Board of Ontario (Via email)
    Harry Froussios, Zelinka Priamo Ltd. (Via email)
Mr. Ian Rutledge, M.PL
Zelinka Priamo Ltd. (Representing LCBO)
20 Maud Street, Suite 305
Toronto, ON M5V 2M5

Dear Mr. Rutledge:

Re: Victoria Street North Infrastructure Improvements (Edna to Bruce)

617 Victoria Street North

Liquor Control Board of Ontario (LCBO)

In response to the comments included in the letter from Zelinka Priamo (ZP) on behalf of the LCBO dated February 26, 2013 regarding the above noted project, we offer the following:

ZP Comment: …We expect that LCBO business will suffer as a result of customers not being able to easily access the site from Victoria Street.

- The temporary concrete median will add a minor inconvenience to customers trying to turn left into the LCBO from Victoria Street as they will need to proceed to the Edna Street intersection to make a U-turn or to turn left and use the LCBO’s Edna Street driveway as an alternate access. Once accustomed to the change, customers may also choose to adjust their route to use the Bruce/Frederick/Edna block if they find this more convenient. The Project Team does not expect this change to be a significant deterrent to customers reaching the LCBO property.

ZP Comment: …Without a separate left-turn lane on Edna, vehicles could create queuing issues on Edna Street if the LCBO access is blocked by northbound traffic. These queues could potentially create negative impacts on the operation of the Edna/Victoria intersection as well as increasing the potential for riskier driver manoeuvres for vehicles destined to Highway 7.

- According to the Stantec Traffic Study (dated Feb. 15, 2013) that ZP provided, the southbound left turn movement at the Edna Street access to the LCBO is expected to perform at LOS ‘A’ (less than 10 second delay) and there are only 21 vehicles projected to make this movement during the peak hour. Potential negative impacts at the Edna/Victoria intersection would be minor. Vehicles stopping in the through lane on Edna Street is preferable to vehicles stopping in the through lane on Victoria Street from a safety perspective given current traffic volumes and patterns.

ZP Comment: Delivery trucks would have difficulty accessing the LCBO site with the proposed turning restrictions…It is also important to note that access to the LCBO site from Edna Street would not be possible for 53-foot trucks given the current configuration of the access driveway and the location of the LCBO store.

- The Region will work with LCBO during the detailed design stage to assess how trucks access the site now and how they will access the site with the temporary concrete median in place. Any required modifications to the entrances will be incorporated with the construction contract to ensure access is maintained.
ZP Comment: …Given the uncertainty with respect to timing for these projects, we believe that the planned function and long-term viability of local businesses should not be negatively impacted for the sake of an interim traffic control measure.

- It is the uncertainty regarding New Highway 7 staging, combined with ongoing collision problems in the study area that has prompted the Project Team to recommend an interim solution to address current safety concerns.

ZP Comment: …if the raised centre median is implemented as a temporary measure, we would like reassurance from Staff that U-turns will be permitted for westbound Victoria Street traffic at the Edna/Victoria intersection.

- U-turns are currently permitted at both the Edna/Victoria and Bruce/Victoria intersections and will continue to be permitted after construction of the temporary concrete median.

ZP Comment: …It is our opinion that a TWLTL be implemented instead of, or without an interim need for, the raised centre median, as this option provides the most flexibility to customers and delivery trucks.

- As outlined above, mitigating measures are available to provide access for customers and delivery trucks. The Project Team has assessed that an interim centre concrete median is recommended to address present safety concerns until traffic volumes on Victoria Street are reduced as a result of New Highway 7 construction.

Please do not hesitate to contact the undersigned if you have any further questions or comments.

Yours truly,

Frank Kosa, P.Eng.
Senior Project Manager, Transportation Expansion
APPENDIX “G”
ASSESSMENT OF ALTERNATIVE DESIGN CONCEPTS

The Project Team has selected Alternative Design Concept 2A as the Recommended Design Concept. An assessment of the alternatives considered and the rationale for this selection is included below.

Assessment of Alternative Design Concept 1 (Centre Two Way Left Turn Lane)

Upon initial consideration, the Project Team viewed Alternative Design Concept 1 as a viable alternative to help address turning collision issues in the study area. Two Way Left Turn Lanes (TWLTLs) are commonly implemented in corridors where mid-block turning movements are problematic. The TWLTL can act as a refuge area for those waiting to turn left in to a driveway, or for those turning out of a driveway waiting to merge with traffic. However, based on a review of traffic operations within the study area, the Project Team expects that collision rates could be as high or higher than the ‘Do Nothing’ alternative if Alternative Design Concept 1 is implemented under current traffic conditions on Victoria Street.

Traffic levels on Victoria Street are currently higher than the threshold at which a TWLTL is typically considered effective. Based on current queuing for the westbound left turn movement at the Victoria/Edna intersection, most of the TWLTL would be occupied during peak periods, further reducing its effectiveness. Turning left out of driveways is currently difficult during peak periods (when most accidents are occurring) with the existing four lane configuration. Adding a TWLTL that is frequently occupied (and difficult to turn in to) would add another lane to cross. It may also be more difficult to judge traffic gaps on the opposite side of the road. This could dissuade more drivers from turning left out of driveways, or it could result in more collisions.

With drivers trying to access the many driveways between Edna Street and the Expressway bridge from both directions, combined with the anticipated queuing from the Edna Street intersection, it would be difficult to judge when a driver wanting to turn left into one of the driveways should enter the TWLTL. This confusion could result in more sudden braking and rear-end collisions, more drivers moving in and out of the TWLTL causing side-swipe collisions, possible head on collisions in the TWLTL and more angle-type collisions with people trying to cross the TWLTL.

This alternative is potentially less effective than the ‘Do Nothing’ option if implemented under current traffic conditions as it would not likely reduce (and may actually increase) current collision rates. A TWLTL could be effective in reducing collisions if traffic volumes were lower and intersection queuing was reduced (particularly the left turn queuing at Edna Street). When New Highway 7 is open, these reductions are likely, which would allow for implementation of a TWLTL.

It would serve as a continuous connection between the left turn lane at Edna Street and the future lengthened left turn lane at Bruce Street (over the widened Conestoga Expressway bridge).

Assessment of Alternative Design Concept 2 (Centre Concrete Median)

Alternative Design Concept 2 achieves the primary objective of this study (to reduce mid-block collisions) under the current traffic conditions as it would be expected to reduce collisions by at least 25%. The Project Team initially preferred this alternative prior to the MTO's latest announcement regarding New Highway 7. A modified version of this alternative has been developed (Alternative Design Concept 2A) to take into account the impacts of the new highway construction on the Victoria Street corridor.

It is expected that a centre concrete median will result in a significant reduction in collisions under current traffic conditions. Left turns in and out of driveways would no longer be feasible which would eliminate collisions directly related to these turning movements entirely, and significantly reduce collisions that are indirectly related to these movements (rear-end and side-swipe).
Potential impacts to businesses in eliminating the left turns in and out of driveways can be mitigated through
properly designed intersections at Edna and Bruce to allow U-turns and by the availability of a relatively short alternate route (Edna/Frederick/Bruce block) for large delivery trucks or for those uncomfortable making a U-turn.

This alternative would help ease congestion on this section of Victoria Street during peak times as vehicles would no longer block the through lane while waiting to make left turn movements at driveways. Driveways would operate more effectively as drivers would not be waiting for long periods of time to attempt a left out movement. An extension of the westbound left turn lane at Edna Street would be feasible which may further reduce congestion in the through lanes. Introducing a centre median and reducing lane widths will also help give the roadway a more constrained feel which may help to reduce travel speeds.

As it is currently anticipated that New Highway 7 construction will significantly reduce traffic on Victoria Street and reduce left turn queues at the Edna Street intersection, the net benefit of a centre concrete median may be diminished in the ultimate condition. With lesser congestion and better operations in the corridor, a Two Way Left Turn Lane may ultimately provide comparable safety benefits while still offering ease of access to adjacent commercial properties.

**Assessment of Alternative Design Concept 2A (Narrow Centre Concrete Median in the Short Term Including Widening for Conversion of the Median into a Future Two Way Left Turn Lane)**

Alternative Design Concept 2A combines the immediate benefits of Alternative Design Concept 2 with the ultimate benefits of Alternative Design Concept 1. The temporary centre concrete median would achieve the primary objective of this study (to reduce mid-block collisions) under current traffic conditions, with the flexibility to adapt to a TWLTL when New Highway 7 is constructed and traffic volumes are lower. The Project Team has identified Alternative Design Concept 2A as the Recommended Design Concept.

The temporary narrow centre concrete median would offer all of the safety benefits as outlined above for Alternative Design Concept 2 under current traffic conditions. When the Victoria Street bridge is replaced and the Expressway ramps are reconfigured as part of New Highway 7 construction, the temporary centre concrete median can be removed with minimal additional reconstruction. With lower traffic volumes and reduced intersection queuing, a TWLTL would act as an effective refuge area for vehicles turning left in to or out of commercial driveways. The TWLTL would form a continuous connection between the left turn lane at Edna Street and the future lengthened left turn lane at Bruce Street (over the widened Conestoga Expressway bridge).

The timing of the Victoria Street bridge replacement and Expressway ramp reconfiguration would dictate the Region’s course of action with respect to the temporary centre concrete median. If New Highway 7 construction is delayed in the MTO’s construction program, the narrow concrete median would be constructed on Victoria Street as an interim safety measure. If New Highway 7 moves ahead as planned, but the Victoria Street bridge reconstruction and ramp reconfiguration is scheduled in the latter stages, the Region would construct the temporary concrete centre median initially and remove it in conjunction with the bridge replacement. If New Highway 7 goes ahead and the bridge replacement and ramp reconfiguration is scheduled early in the construction process, the Region could consider adjusting its timing of the Victoria Street project and construct the ultimate TWLTL configuration initially, instead of constructing the temporary centre concrete median.

**Assessment of Alternative Design Concept 3 (Centre Concrete Median with Roundabouts)**

Alternative Design Concept 3 is a modified version of Alternative Design Concept 2 developed during the first workshop as a means of providing easier access to commercial driveways. The centre concrete median prevents drivers from turning left in to and out of the commercial entrances.
Roundabouts at both ends of the corridor would provide an easy means of making a U-turn both for customers and for delivery truck drivers. This would be more convenient than making a U-turn at
the traffic signals or having to change routes to use the Edna Street/Frederick Street/Bruce Street block to turn around.

Although this alternative offers easier driveway access within the study area, The Project Team screened out Alternative Design Concept 3 from further consideration due to the extensive property purchase that would be required to implement roundabouts at the Edna Street and Bruce Street intersections. Full buy-outs of at least six businesses would be necessary along with major impacts to at least two others. Estimated costs for Alternative Design Concept 3 is approximately 7 to 10 times that of the other Alternative Design Concepts and conventional warrants for roundabouts are not present at these intersections (ie. there are no other significant improvements required at either intersection nor any significant safety or operational concerns that would be mitigated by a roundabout).

**Assessment of Alternative Design Concept 4 (Centre Concrete Median with Mid-Block Traffic Signal)**

Alternative Design Concept 4 also represents a modified version of Alternative Design Concept 2 developed at the first workshop. This alternative would allow drivers to turn left in and out of commercial areas at one specific mid-block location, at a new signalized intersection.

While this concept has worked reasonably well in other locations (Hespeler Road for example), the Project Team screened out Alternative Design Concept 4 from further consideration for several reasons. The existing building and parking lot configuration in the study area does not readily lend itself to a single access point. There is no practical location for internal driveway connections and there is insufficient space to accommodate internal queuing at a new signalized intersection.

Conventional warrants for signals would not be present at this location as there would be insufficient volumes from the ‘plaza’. Mid-block signals would also result in significant operational issues at adjacent intersections due to the close proximity (particularly at Edna where the existing left turn lane would be reduced in length). Shared access to businesses would be required with links between parking areas which may present liability concerns and internal queuing within the ‘plaza’ at the intersection location would result in operational issues within the driveways and parking areas.

**Assessment of the ‘Do Nothing’ Alternative**

Several attendees at the second workshop suggested a ‘Do Nothing’ alternative in conjunction with measures to try to control travel speeds. This approach would have little to no effect on addressing the existing collision problems or operational challenges and is not preferred by the Project Team.

With a ‘Do Nothing’ alternative, the current high rate of collisions is expected to continue and possibly increase in the short term as traffic volumes increase, resulting in many more injuries. As data collected suggests that current collision patterns are more directly related to congestion and turning movements, speed reduction measures or increased enforcement are likely to have very little effect in reducing accident rates. Therefore, the ‘Do Nothing’ alternative, even with speed reduction measures, does not address the core issues identified in this study.
## Comparative Analysis of Short-Listed Alternative Design Concepts

### Appendix "H"

<table>
<thead>
<tr>
<th>Alternative Design Concept 1</th>
<th>Alternative Design Concept 2</th>
<th>Alternative Design Concept 3</th>
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</thead>
<tbody>
<tr>
<td>Narrow Centre Concrete Median</td>
<td>Narrow Centre Concrete Median</td>
<td>Narrow Centre Concrete Median</td>
</tr>
<tr>
<td>Casual median addresses safety concerns identified in the TIP for our construction conditions.</td>
<td>Concrete median addresses safety concerns identified in the TIP for our construction conditions.</td>
<td>Concrete median addresses safety concerns identified in the TIP for our construction conditions.</td>
</tr>
<tr>
<td>Provides a moderate level of improvement to existing traffic operations.</td>
<td>Provides a moderate level of improvement to existing traffic operations.</td>
<td>Provides a moderate level of improvement to existing traffic operations.</td>
</tr>
<tr>
<td>Addresses safety concerns identified in this study for construction conditions.</td>
<td>Mitigates factors included to minimize potential impact on commercial activities. TMLT.</td>
<td>Mitigates factors included to minimize potential impact on commercial activities. TMLT.</td>
</tr>
<tr>
<td>No significant impacts on property.</td>
<td>No significant impacts on property.</td>
<td>New sidewalk on south side of Victoria Street to accommodate pedestrians.</td>
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<td>$1.4 million.</td>
<td>$1.4 million.</td>
<td>$1.2 million.</td>
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### Evaluation Criteria

<table>
<thead>
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<th>3rd</th>
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<tbody>
<tr>
<td>Safety (ability to address safety concerns)</td>
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<tr>
<td>Traffic Operations (ability to accommodate vehicles and pedestrian traffic)</td>
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<tr>
<td>Economic Environment (impact on commercial activities or property access)</td>
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<tr>
<td>Property (impact on access, parking, buildings)</td>
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<tr>
<td>Social Environment (impact on pedestrian, cyclists, noise, or quality)</td>
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<tr>
<td>Natural Environment (effect on watering, vegetation, stormwater, habitat)</td>
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<tr>
<td>Cost (capital cost and property cost)</td>
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<tr>
<td>Overall Rank</td>
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**Note:** The table above represents a comparative analysis of short-listed alternative design concepts, with each concept evaluated against various criteria. The rankings and costs are indicative of the overall performance and cost-effectiveness of each design. The specifics of each alternative's safety, traffic operations, economic environment, property impact, social environment, natural environment, and cost are detailed in the table.
TO: Chair Jim Wideman and Members of the Planning and Works Committee

DATE: March 19, 2013

FILE CODE: A02-30/PW

SUBJECT: PUBLIC INFORMATION CENTRE FOR LOCATION AND ACCESS MODIFICATIONS FOR GRAND RIVER HOSPITAL RAPID TRANSIT STOP

RECOMMENDATION:

For information.

REPORT:

The Region of Waterloo’s Rapid Transit (RT) Project is moving forward, with construction starting in 2014 and service beginning in 2017. As part of the early functional design, an RT stop was identified on King Street at Pine Street, across from Grand River Hospital (GRH) to serve the hospital and surrounding residential, commercial, and institutional areas.

Regional staff have been working with GRH and the Cities of Kitchener and Waterloo to develop a design that will maintain key access points to the hospital, maintain traffic circulation, and provide safe and efficient RT service in the area. The evaluation was based on the following general considerations:

- Access to GRH emergency entrance and internal circulation
- Rapid Transit operations and safety
- Non-vehicular traffic operations and safety
- Neighbourhood access and traffic circulation
- Property, construction cost and staging

The design evaluation has resulted in the need for the following access modifications on King Street between Union and Green Streets:

- The RT stop will shift from Pine Street to a new intersection at the existing main entrance to the hospital.
- A new traffic signal at the existing main entrance to the hospital to maintain left turn access and the existing fire route.
- A new traffic signal at Mount Hope Street to accommodate the proposed relocation of the Hospital emergency entrance via Mount Hope Street.
- The existing traffic signal at Pine Street will be removed with the intersection becoming right-in and right-out only. Existing left turn movements at Pine Street will be accommodated via U-turns at Green Street and Mount Hope Street.
- This design will result in minimal neighbourhood cut-through traffic and out of direction travel.

A Public Information Centre (PIC) to present these modifications has been scheduled as follows:

Date: Wednesday, March 20, 2013 – Drop in from 4 p.m. to 8 p.m.
Location: Knox Presbyterian Church  
Address: 50 Erb Street West, Waterloo

Letters were sent out to residents and businesses in the adjacent neighbourhoods in the Cities of Kitchener and Waterloo on March 6, 2013 inviting them to participate in the PIC. Newspaper advertisements were also inserted the Waterloo Chronicle (March 13, 2013), the Record (March 15, 2013), and the Kitchener Post (March 15, 2013). Road signs advertising the PIC were posted on March 13, 2013.

Feedback, opinions and input received at the PIC will be used by staff when they make their final recommendation to Council. The revised design will be reflected in the Request for Proposal (RFP) to be issued this spring.

CORPORATE STRATEGIC PLAN:

The report supports Focus Area 3.1 of Council’s Strategic Focus: Develop an implementation plan for light rail transit including corridor and station area planning.

FINANCIAL IMPLICATIONS:

The cost of the location and access modifications identified for the Grand River Hospital RT stop will be included in the RT contract.

OTHER DEPARTMENT CONSULTATIONS/CONCURRENCE:

None

ATTACHMENTS

Attachment A – GRH Rapid Transit Stop Location and Access Modifications  
Attachment B – Invite Letter  
Attachment C – PIC Presentation Boards  
Attachment D – Public Comment Form

PREPARED BY: Masood Mirza, Senior Project Manager

APPROVED BY: Thomas Schmidt, Commissioner, Transportation and Environmental Services
GRH Rapid Transit Stop Location and Access Modifications

- New signalized intersection at Mt. Hope St. & King St.
- New signalized intersection at the main entrance to Grand River Hospital & King St.
- New EMS/Emergency Access
- Existing signal removed from the Pine St. intersection and changed to right-in/right-out only (i.e. no left turns)
- No changes at the Green St. intersection

Legend:
- New Signal
- Removed Signal
- No Change
Dear Sir or Madam,

Re:  Public Information Centre – Grand River Hospital Rapid Transit Stop Location and Access Modifications

The Region of Waterloo’s Rapid Transit (RT) Project is moving forward, with construction starting in 2014 and service beginning in 2017. As part of the early functional design, an RT stop was identified on King St. at Pine St., across from Grand River Hospital to serve the hospital and surrounding residential, commercial, and institutional areas.

Recent refinements to the designs, however, have identified the following access modifications between Union St. and Green St.:

- The RT stop will shift from Pine St. to a new intersection at the existing main entrance to the hospital.
- A new traffic signal at the existing main entrance to the hospital to maintain left turn access and the existing fire route.
- A new traffic signal at Mount Hope St. to accommodate the proposed relocation of the Hospital emergency entrance via Mount Hope St.
- The existing traffic signal at Pine St. will be removed with the intersection becoming right-in and right-out only. Existing left turn movements at Pine St. will be accommodated via U-turns at Green St. and Mount Hope St.

Residents are invited to a Public Information Centre where Regional, City and Grand River Hospital teams will be available to answer questions.

Date:  Wednesday, March 20, 2013 – Drop in from 4 p.m. to 8 p.m.
Location:  Knox Presbyterian Church
Address:  50 Erb St. W., Waterloo

If you are unable to attend, but wish to obtain information about the project, please contact the undersigned at 519-575-4757 x3168.

Yours truly,

Masood Mirza
Senior Project Manager, Rapid Transit Engineering

/vn
Welcome
Public Information Centre
Grand River Hospital Rapid Transit Stop
Location and Access Modifications
INTRODUCTION

- This Public Information Centre will communicate location, access and traffic flow changes around Grand River Hospital and along the Rapid Transit route on King St. between Union St. and Green St.

- The Region of Waterloo in coordination with Grand River Hospital and the Cities of Kitchener and Waterloo have prepared an option for maintaining access to key points at the hospital and maintaining traffic circulation, while also providing a safe and efficient Rapid Transit service in the area.

- The Public Information Centre will also address the measures being taken to minimize changes for local residents and businesses.
DESIGN CONSIDERATIONS

Design Considerations:
- Does the design maintain or improve access to Grand River Hospital’s main entrance?
- Does the design maintain or improve access to Grand River Hospital’s emergency entrance?
- Does the design maintain or improve Grand River Hospital’s internal circulation?
- Does the design maintain fire access to the hospital?
- Does the design impact adjacent landowners? If so, are there ways to minimize the impact?
- Does the design maintain or improve vehicular and pedestrian access to local businesses?
- Does the design minimize out-of-direction travel for vehicles and pedestrians?
- Does the design minimize any potential cut-through neighbourhood traffic?
- Does the design increase land acquisition requirements?
- Does the design increase project costs?
- Is the design technically feasible?

Design Requirements:
- Left turns will only be permitted at signalized intersections by vehicles because of the centre-running LRT tracks
- Safe, accessible and efficient access should be maintained to the hospital
- Changes should be limited to low-volume turning movements
- Traffic changes must be mitigated through the provision of alternative routes and/or U-turn opportunities
ACCESS MODIFICATIONS

New signalized intersection at Mt. Hope St. & King St.

New signalized intersection at the main entrance to Grand River Hospital & King St.

New Signal
Removed Signal
No Change

Existing signal removed from the Pine St. intersection and changed to right-in/right-out only (i.e. no left turns)

No changes at the Green St. intersection
STRENGTHS/CHALLENGES

Design Considerations:
- Main entrance to the hospital maintained and signalized for safer and more efficient vehicular and pedestrian access
- The signalized intersection on King St. at Mt. Hope St. improves access to the new emergency and EMS entrance via Mt. Hope St.
- Traffic circulation on King St., as well as around and internal to Grand River Hospital, is maintained
- Minimal neighbourhood cut-through traffic anticipated on Union, Mary and Herbert Streets (up to 20 vehicles per peak hour or 1 vehicle every 3 minutes). These low volumes do not require mitigation measures.
- Minimal out-of-direction travel for vehicles (up to 165 metres)
- Improved integration between GRT buses and the Rapid Transit service

Challenges:
- Removal of left turn movements in and out of Pine
  - An estimated 75-95 vehicles per peak hour are currently making left turns into Pine St. and left turns out of Pine St.
- Pedestrian crosswalks removed from the existing Pine St. intersection

Mitigation Measures:
- U-turn opportunities at the signalized intersections of Mt. Hope St. (165 metres north) and Green St. (150 metres south)
- Pedestrian crosswalks will be added at the new signalized intersections of Mt. Hope St. (approx. 2 min walk from Pine St.) and the hospital main entrance (approx. 1 min walk from Pine St.)
IMPACTED MOVEMENTS

Pine St. will become right-in/right-out only, impacting existing left turn movements
MITIGATION OF IMPACTED MOVEMENTS

New Traffic Signal

Existing traffic signal removed, becoming right-in/right-out only

New left turn lane to Mt. Hope St. will allow U-turns

Pine St.

New Traffic Signal

Grand River Hospital

Left turn lane will allow U-turns

Keep existing Traffic Signal

### Intersection Level of Service (A-F)

<table>
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<tr>
<th>Intersection</th>
<th>AM Peak Hour</th>
<th>PM Peak Hour</th>
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<tr>
<td></td>
<td>Current</td>
<td>Future</td>
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<tr>
<td>Green/King</td>
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<td>B</td>
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<td>GRH Main Entrance/King</td>
<td>-</td>
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</tr>
<tr>
<td>Pine/King</td>
<td>B</td>
<td>-</td>
</tr>
<tr>
<td>Mt. Hope/King</td>
<td>-</td>
<td>A</td>
</tr>
</tbody>
</table>

AM (PM) 17 (8)

71 (63)

AM (PM) 1 (9)

AM (PM) 21 (11)
MUTIGATION

The changes to Pine Street can be mitigated by:
Current left out from Pine St. to King St.:
Option 1A
Right turn on King St.
U-turn at Mt. Hope St.
Option 1B
Left turn on Mount Hope St.
Left turn on Park St.
MITIGATION

The changes to Pine Street can be mitigated by:
Current left in from King St. to Pine St.:  
Option 1  
Left turn at Union St.  
Right turn at Mary or Herbert St.  
Option 2  
U-turn at Green St.  
Right turn on Pine St.
NEXT STEPS

All access changes will be included in the Request For Proposal (RFP) for the Design-Build-Finance-Operate-Maintain (DBFOM) Consortium who will be building the Region’s Rapid Transit System

- 2014: Project construction begins
- 2017: LRT Service begins
- Residents to be updated through on-going Rapid Transit community engagement
Thank You

Contact Us:

Rapid Transit Division
Region of Waterloo
50 Queen Street North, Suite 830
Kitchener, Ontario, Canada
N2H 6P4

Phone: 519-575-4757 ext. 3242
E-mail: rtinfo@regionofwaterloo.ca
Facebook: www.facebook.com/ROWRapidTransit
Twitter: @ROWRapidTransit
Website: www.regionofwaterloo.ca/rapidtransit
Grand River Hospital Rapid Transit Stop
Location and Access Modifications
Public Information Centre – Comment Form

1. Was the purpose of the public information centre clearly identified?
__________________________________________________________________________
__________________________________________________________________________
__________________________________________________________________________

2. Did the display boards outline the process and proposed changes in a concise, meaningful and understandable way?
__________________________________________________________________________
__________________________________________________________________________
__________________________________________________________________________

3. Was staff approachable and knowledgeable? Did they answer your questions/concerns?
__________________________________________________________________________
__________________________________________________________________________
__________________________________________________________________________

4. Do you have any other comments?
__________________________________________________________________________
__________________________________________________________________________
__________________________________________________________________________

Name: ______________________ Phone #: ________________________________
Address: _____________________ Email: _________________________________

The comments and submissions you provide will be used to assist the Region in making a decision on the location and access modifications. Under the Municipal Act, personal information such as name, address, telephone number and property location that may be included in a submission becomes part of the public record. Questions regarding the collection of this information should be referred to the Rapid Transit Infoline 519-575-4757 x3242.
TO: Chair Jim Wideman and Members of the Planning and Works Committee

DATE: March 19, 2013

FILE CODE: C06-60/E13-20/8797-10

SUBJECT: CONSULTANT SELECTION FOR THE KITCHENER WWTP UPGRADES VALUE ENGINEERING WORKSHOPS

RECOMMENDATION:

THAT the Regional Municipality of Waterloo enter into a Consulting Services Agreement with Arcadis Canada Inc. of Waterloo, Ontario to provide value engineering services related to the detailed design of construction contracts 2 to 4 of the Kitchener Wastewater Treatment Plant (WWTP) Phase 3 Upgrades at an upset fee limit of $295,453.00 plus applicable taxes, as per Report E-13-033, dated March 19, 2013.

SUMMARY:

Upgrades at the Kitchener WWTP are on-going in accordance with the Region’s approved Wastewater Treatment Master Plan Update (2007). AECOM was retained by the Region in June 2010 (Report E-10-071) to complete a Class Environmental Assessment (EA) Study, site-wide facility plan and preliminary design for Phase 3 of the Kitchener WWTP Upgrades. The preliminary design completed by AECOM identified five separate construction contracts to be designed and constructed over the period of 2012 through 2020. Upon successful completion of this phase of the project, it was the intention of the Region to extend AECOM’s contract to also undertake the detailed design and construction administration for the Kitchener WWTP Upgrades (Report E-08-010).

In February 2012, the Region requested proposals for undertaking Value Engineering (VE) reviews at the preliminary design phase of the above project, and four other separate VE reviews at approximately 60% completion of the detailed design of four of the construction contracts defined in the preliminary design. Based on this competitive consultant selection process that followed the Region’s Policy for the Selection of Consulting Services and Purchasing By-Law, Arcadis Canada Inc. (Arcadis) was the successful Consultant. Due to schedule constraints and the fact that AECOM could only submit their work plan and fees for the detailed design and services during construction to the Region after incorporating the VE recommendations in the preliminary design, it was decided to separately award the preliminary design VE review to Arcadis to avoid any delays in the completion of the preliminary design. The remaining VE reviews for the construction contracts would be awarded upon the definition of all activities and phases for these contracts.

AECOM was recently retained by the Region (Report E-12-108) to conduct the detailed design and provide services during construction for the Kitchener WWTP Upgrades. During fee negotiations with AECOM, the initial five construction contracts identified in the preliminary design were consolidated into four construction contracts. Three of these contracts are to be subjected to a VE
review at the 60% detailed design stage in order to identify additional savings and constructability methods to better manage cost and schedule. Therefore, the Project Team recommends that Arcadis Canada Inc. be retained to conduct three detailed design VE workshops at an upset fee limit of $295,453.00 plus applicable taxes.

REPORT:

Background

Upgrades to the Kitchener WWTP are on-going in accordance with the Region’s approved Wastewater Treatment Master Plan Update (2007). AECOM was retained by the Region in June 2010 (Report E-10-071) to complete a Class EA study, site-wide facility plan, and preliminary design for Phase 3 of the Kitchener WWTP Upgrades. In June 2012, Council directed staff (Report E-12-059) to enter into negotiations with AECOM for the extension of the above assignment to also include detailed design and services during construction of Phase 3 of the Kitchener WWTP Upgrades. This extension was awarded by Council in November 2012 (Report E-12-108).

For projects of the size and complexity of the Kitchener WWTP Upgrades, it is best practice to complete a Value Engineering (VE) review before completing each major design or construction phase of the project. The purpose of this review is to (i) ensure that the project was accomplishing necessary functions; (ii) identify areas of unnecessary or excess cost; (iii) identify and evaluate cost reducing alternatives; (iv) examine opportunities to add value to the project; and (v) identify methods to manage cost and schedule.

In February 2012, the Region requested proposals for undertaking the VE for the Kitchener WWTP Upgrades. This assignment consisted of completing a VE review before the completion of the preliminary design of this project, and four other separate VE reviews at approximately 60% completion of the detailed design of construction contracts 2 to 5 proposed in the preliminary design. Based on this competitive consultant selection process, Arcadis Canada Inc. (Arcadis) was the successful Consultant. Due to schedule constraints and the fact that AECOM could only submit their work plan and fees for the detailed design and services during construction to the Region after incorporating the VE recommendations in the preliminary design, it was decided to separately award the preliminary design VE review to Arcadis to avoid any delays in the completion of the preliminary design. The remaining VE reviews for the construction contracts would be awarded upon the definition of all activities and phases for these contracts, which was completed by November 2012.

Through a concerted effort of Region’s staff, OCWA staff, AECOM design team and the VE team, approximately $5 million of construction cost savings have resulted from the preliminary design VE review alone. This exercise also recommended improvements to contracting approaches and operations, which will increase efficiencies and result in cost savings in the subsequent phases of the project. During fee negotiations with AECOM, the initial five contracts identified in the preliminary design were consolidated into four contracts. Three of these contracts are to be subjected to a VE review at the 60% detailed design stage instead of the four contracts initially envisioned during the preliminary design phase. More details about the Consultant Selection for this project are provided next.
Consultant Selection

A Request for Consultant Services to provide VE services for Phase 3 of the Kitchener WWTP Upgrades was advertised in the Kitchener-Waterloo Record and on the Region’s Purchasing website on Wednesday, February 8, 2012. Six consulting firms responded to the advertisement by submitting Proposals. Five firms were short listed based on the Quality and Equity Factors as defined in the Region’s Consultant Selection Policy, as follows:

- Arcadis Canada Inc.;
- Hatch Mott MacDonald;
- Hazen & Sawyer, P.C.;
- NCE Value Engineers Inc.; and
- Stantec Consulting Ltd.

The Project Team involved in the consultant selection consisted of:

José Bicudo, Senior Project Engineer, Engineering and Planning, Water Services
Jo-Anne Ing, Senior Project Manager, Environmental Engineering, Design and Construction
Khalid Mehmood, Manager, Engineering and Wastewater Programs, Water Services
J. Cavalcante, Manager, Engineering and Planning, Water Services

The evaluation criteria used for selecting the successful consultant were consistent with the Region’s Consultant Selection Policy and Purchasing By-Law. The evaluation criteria and their respective weightings were as follows:

**Quality Factors (80%)**
- Project Approach and Understanding (25%)
- Project Manager (20%)
- Support Staff (20%)
- Experience on Similar Projects (15%)

**Equity Factors (5%)**
- Current Regional Workload (3%)
- Local Office (2%)

**Price Factor (15%)**
- Upset Price (15%)

The proposals submitted by the short-listed consultants demonstrated a good understanding of the project, capable project teams and experience on similar projects. After reviewing the proposals that included detailed work plans, schedules, and upset budgets, Arcadis had the highest overall score and the lowest cost estimate both for the preliminary design VE review and for additional detailed design VE reviews.

Based on the above evaluation, Arcadis was retained to conduct the preliminary design VE review at an upset fee limit of $128,300 plus applicable taxes (CAO Report P12-013 of April 25, 2012). The Project Team recommends that Arcadis be retained to conduct the remaining three VE reviews for the detailed design phase of construction contracts 2 to 4, at an upset fee limit of $295,453.00 plus applicable taxes.
The scope of work for this assignment includes:

- Preparation of Study Team Information Workbooks and other required material for three 3-day VE workshops;
- Three 3-day VE workshops at the 60% detailed design of construction contracts 2 to 4;
- Preparation and delivery of three separate draft and final VE Reports, one for each of the three construction contracts.

Schedule

Subject to Council’s approval of this assignment, the proposed schedule for the assignment is as follows:

- Pre-event activities to be completed between one and two weeks prior to each workshop, starting in May 2013;
- VE workshops in June 2013, early Spring 2014 and late Fall 2014;
- Delivery of final VE Reports for each workshop by the end of July 2013, late Spring 2014, and early Winter 2014.

Consultant Upset Limit

The upset limit for consulting fees and disbursements for the VE reviews for the detailed design phases of construction contracts 2 to 4 of the Kitchener WWTP Upgrades is $295,453.00 plus applicable taxes. A breakdown of the consulting upset fee is included in Appendix A attached to this report.

CORPORATE STRATEGIC PLAN:

The VE workshops for the detailed design of the Kitchener WWTP upgrades supports the Corporate Strategic Plan Focus Area 2: “Growth Management and Prosperity,” Strategic Objective 2.2: “Develop, optimize and maintain infrastructure to meet current and projected needs.”

FINANCIAL IMPLICATIONS:

The approved 2013 10-year Wastewater Capital Program includes a budget of $67,255,000.00 between 2013 and 2014 for the Kitchener WWTP upgrades. The consultant’s fees for the VE reviews are within the project allowance in the current budget and will be funded from Regional Development Charges and Wastewater Reserve Funds.
OTHER DEPARTMENT CONSULTATIONS/CONCURRENCE:

Finance Department, Procurement and Supply Services

ATTACHMENTS

Appendix A: Breakdown of Consultant's Upset Fee

PREPARED BY: José R. Bicudo, Senior Project Engineer, Water Services

APPROVED BY: Thomas Schmidt, Commissioner, Transportation and Environmental Services
Appendix A – Breakdown of Consultant’s Upset Fee (2013 – 2014)

<table>
<thead>
<tr>
<th>Task</th>
<th>Description</th>
<th>Fees (2013-2014)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Task 1</td>
<td>VE Workshop 2</td>
<td>$95,286</td>
</tr>
<tr>
<td>Task 2</td>
<td>VE Workshop 3</td>
<td>$98,518</td>
</tr>
<tr>
<td>Task 3</td>
<td>VE Workshop 4</td>
<td>$101,649</td>
</tr>
<tr>
<td><strong>Total Consultant Upset Fee</strong></td>
<td></td>
<td><strong>$295,453</strong></td>
</tr>
</tbody>
</table>
TO: Chair Jim Wideman and Members of the Planning and Works Committee

DATE: March 19, 2013

FILE CODE: C06-60/E14-01

SUBJECT: BIOSOLIDS HEAT DRYING FACILITY – BUSINESS CASE APPROVAL FOR P3 CANADA FUND

RECOMMENDATION:

THAT The Regional Municipality of Waterloo endorse the Business Case Report supporting the procurement of the Region’s centralized biosolids heat drying facility as a Public-Private Partnership (P3) model;

AND THAT The Regional Municipality of Waterloo authorize Region staff to submit the completed Business Case to P3 Canada for funding consideration under the P3 Canada Fund;

AND THAT Region staff report back to Regional Council with an update of P3 Canada approval process and next steps, prior to proceeding with next phase of the procurement process, all as described in Report No. E-12-078.

SUMMARY:

Report No. E-12-078 dated August 14, 2012, informed that an application was made by Region staff to Round Four of the PPP Canada Fund (Public-Private Partnership Canada, or P3 Canada) seeking financial support for up to 25 per cent of the cost of constructing a centralized biosolids heat drying facility using a P3 delivery approach, the key component in the preferred strategy under the Region’s 2011 Biosolids Master Plan. On September 26, 2012, P3 Canada notified the Region that application was screened for further analysis and requested the submission of a Business Case Report for the proposed project.

Report E-13-037 dated March 19, 2013, presents the outcomes of the Business Case Report, and makes further recommendations for developing the biosolids heat drying facility using a P3 delivery model. It also recommends that Regional Council endorse and direct Region staff to submit the Business Case Report to PPP Canada for the Biosolids Heat Drying Facility and report back to Regional Council with next steps.

REPORT:

Background

On August 16, 2011, Regional Council approved the 2011 Biosolids Master Plan (BMP), an update to the previous biosolids master plan completed in 2003 (Report E-11-067). A thorough review of all currently available technologies in the biosolids industry was undertaken in the BMP. The
The proposed biosolids heat drying facility offers the following benefits to the Region.

1. Reduced dependence on land application and landfilling: Forecasted biosolids volumes in the Region, based on the Province’s Places to Grow population projections, indicate that the practice of land application would be difficult to sustain within Regional boundaries due to availability of land. By drying biosolids to a usable end product, the volume can be greatly reduced and be used as a soil amendment, as a fertilizer, as a renewable fuel source for cement kilns or for emerging energy recovery processes.

2. Reduced impact on the environment: In line with the Region’s sustainability goals, there are numerous opportunities to reduce the Region’s impact on the environment. First, the facility would be within Regional boundaries; therefore, the haulage distance of wet biosolids cake would be reduced thereby lessening fossil fuel consumption for transport. Second, by reducing the volume of solids to a dry product at the facility, haulage volumes are greatly reduced, again reducing fossil fuel consumption. Third, by optimizing the usage of waste energy that is otherwise lost to the atmosphere, the impact to the environment is reduced; at the same time there is less reliance on fossil fuels to power the heat drying facility. Fourth, the project demonstrates environmental stewardship as the Region tries to lessen its biosolids land application/disposal in neighbouring communities.

3. Innovative concept: Although heat drying technology is a proven technology with several existing installations supplied by many vendors within North America and Europe, a key feature of the proposed facility is the usage of waste heat as an energy input.

On August 14, 2012, Regional Council endorsed an application made by Regional staff to Round Four of the PPP Canada Fund (Public-Private Partnership Canada, or P3 Canada) seeking financial support for up to 25 per cent of the cost of constructing a centralized biosolids heat drying facility using the P3 delivery approach (Report E-12-078). The funding under a P3 project would require that only a portion of the funds be paid to the successful P3 consortium at pre-determined milestones or at substantial completion of the project. At this time, a percentage of the capital cost would have been paid, while the remaining amount is financed privately over the term of the contract. P3 contracts are structured this way so that the amount financed privately is at-risk, thereby incentivizing the P3 consortium to complete construction on time, operate the facility according to Region specification and to keep the facility well maintained over the contract term. Given the size of this project and the short duration for construction (estimated at 18 to 24 months), together with the fact that this project is considered to be on the lower end of the spectrum of projects appropriate for P3 delivery, no milestone payments are recommended and only a percentage sum of the capital costs at substantial completion of construction be made, while the remainder be paid using long term private financing. Should the Region be successful with its application to P3 Canada, the P3 Canada Fund’s share of the project (25 per cent) would be paid to the Region at substantial completion.
On September 11, 2012, Regional Council approved a consulting services assignment to Deloitte and Touche LLP (Deloitte) to complete a full Business Case Analysis, the next step in supporting the implementation of the proposed heat drying facility through a P3 (Report E-12-096). This approval was received in anticipation that the Region’s application would be screened into Round 4 of the P3 Canada Fund. On September 26, 2012, P3 Canada notified the Region that it was screened for further analysis and requested the submission of a business case.

The above report also described a number of procurement models that were examined during a preliminary risk workshop, followed by a preliminary Value for Money (VFM) analysis. The VFM analysis is a comparison of the risk-adjusted costs of a project using a P3 delivery model versus traditional delivery over the life of the facility. The various models would transfer to the private sector any or all of the design (D), build (B), finance (F), operation (O), or maintenance (M) components of the project. Under any procurement model, the Region would continue to own the land and facility.

Preliminary VFM results suggested that a P3 model could be beneficial for the Region due to the transfer of risks to the private sector and that a DBFOM model would transfer the most risk to the private sector partner, thereby providing the most benefit to the Region. A VFM between 10 and 15 per cent is considered attractive and the preliminary results showed a VFM close to 15 per cent for the project. This value was calculated without the inclusion of the P3 Canada Fund contribution; inclusion of the P3 Canada Fund contribution would further increase the attractiveness of this delivery model.

The September 11, 2012, report also informed Regional Council on the outcome of a consultant selection assignment for carrying out a Municipal Class Environmental Assessment (Class EA) for the biosolids heat drying facility, awarded to the firm CIMA+. The focus of this Class EA was to determine the preferred site for constructing the proposed facility. This work is being undertaken in parallel to the business case assignment and the results are expected to be reported to Regional Council in a separate report in late spring 2013.

On November 27, 2012, Regional Council approved a consulting services assignment to Arcadis Canada Inc. (Arcadis) for providing engineering services to update the heat drying facility construction cost estimate presented in the 2011 BMP (Report E-12-122). This work was carried out as a result of P3 Canada’s request to increase the accuracy of the BMP construction cost estimate.

This report presents the outcomes of the updated cost estimate and VFM analysis of the business case, and makes further recommendations for developing the biosolids heat drying facility using a P3 delivery model. It also recommends that Regional Council endorse and direct Region staff to submit the Business Case report to P3 Canada for the Biosolids Heat Drying Facility and then report back to Regional Council with next steps.

Results of Technical Assistance

The previous cost estimate developed in the BMP was prepared based on a budgetary level of accuracy normally used for master plans (+/- 30 per cent). Due to P3 Canada’s requirement for increased accuracy of these cost estimates, the Region retained Arcadis to update the cost estimates. The scope of Arcadis’ assignment consisted of preparing a Basis of Design Report that was comprised of design assumptions, facility layout and updated construction and Operations and Maintenance (O/M) cost estimates. The updated cost estimates were used in the business case as the base case for further VFM analysis, as per the P3 Canada publication entitled, P3 Canada
Business Case Development Guide.

The Basis of Design was prepared assuming a facility that:
1. Can handle the Region’s biosolids production from the main wastewater treatment plants until 2041;
2. Minimizes the social impacts of the facility by implementing enhanced odour control and noise control measures;
3. Adopts standard industry best management practices for similar facilities;
4. Utilizes the available waste heat from existing processes that presently utilize landfill gas at one of the Region’s waste management centres.

Based on the above assumptions, an updated construction cost of $54.7M and annual O/M cost of $6M was estimated for the facility.

The next sections describe the steps taken for preparing the business case. The business case develops the rationale for a procurement decision using a P3 delivery model. This included an assessment of the market conditions, further analysis of the delivery model, and updating of the preliminary VFM analysis.

Results of the Business Case Analysis – Assessment of Market Conditions

Two steps were undertaken to understand the market conditions for the project using a P3 delivery model. The first was a market questionnaire and the second was market soundings.

On October 18, 2012, a market questionnaire regarding the project was advertised on the MERX tendering website, a national tendering website used by municipalities across Canada. The goals of the market questionnaire were as follows:

1. Provide preliminary information of the proposed project to prospective bidders;
2. Identify potential bidders for the project;
3. Understand the range of heat drying technologies available;
4. Gain insight on commercial parameters and structure of potential private partners.

Specifically, the questionnaire asked questions regarding the procurement approach, availability of proven drying technologies, term of a possible contract agreement, and commercial structure.

Twenty respondents completed the questionnaire and were grouped into one of four commercial structures below indicated by their preliminary level of interest in the project.

Developers: (2 respondents) Primarily interested in investing equity and taking a project management role. Developers would generally partner with a technology provider, as well as with design-build and O&M subcontractors.

Integrated Developers: (12 respondents) They would provide technology for biosolids management, invest equity, and take on a project management role for operations and maintenance. They may provide and/or partner with other equity investors or subcontractors to provide design-build, financing and O&M services.

Technology Providers: (4 respondents) They would provide technology for biosolids management. They may partner with Developers, as well as with design-build and O&M subcontractors.
**Design Builders:** (2 respondents) They would design and build the biosolids management facility. They may partner with Developers, as well as with a Technology Provider and O&M subcontractors.

In addition to the market questionnaire, market sounding consultations were held in November and December of 2012 in the form of a one hour interview by Deloitte. The market sounding gathered additional information regarding technology selection, financing assumptions and procurement strategy. Twelve respondents agreed to participate in the market sounding interviews.

Based on an analysis of the market questionnaire and market soundings, the following conclusions are made:

1. **Significant market interest:** There was a strong market interest in the project using a P3 model as indicated by the number of respondents that was later confirmed in the market sounding consultation;
2. **Good range of heat drying technology vendors:** There was a good response by numerous vendors of proven heat drying technologies that would be appropriate for a Regional installation;
3. **Opportunity for innovation:** The usage of waste heat as an energy input allows vendors to propose innovative heat drying solutions for the Region’s facility;
4. **Marketable end product:** Heat drying vendors are able to produce a Class A product for beneficial use and a number of interested parties indicated that they would take on the risk of finding a market for these end products;
5. **Legislative changes:** Due to recent changes in laws concerning biosolids, respondents did express concern over assuming 100 per cent risk for changes in laws and regulations. A risk allocation where the Region and the P3 consortium share the risk would likely be more appropriate;
6. **Approvals by Ministry of Environment:** Respondents suggested that the Ministry of Environment be approached early in the process to streamline the approval process. Regional staff has already initiated pre-consultation with the Ministry;
7. **Term of contract:** Most respondents stated a term between 20 and 30 years would be appropriate.

**Results of the Business Case Analysis – Delivery Model**

In the preliminary VFM analysis, the traditional approach of Design-Bid-Build (DBB) was compared to three P3 delivery models, Design-Build-Finance (DBF), Design-Build-Operate-Maintenance (DBOM) and Design-Build-Finance-Operate-Maintain (DBFOM). The DBF model showed a low amount of risk transfer and low VFM, and was not considered for further evaluation.

The DBOM model provides some risk transfer as the initial design is integrated with construction, operations and maintenance of the facility over a long term. However, this model does not include long-term financing. Thus, unless a single integrated firm provides all of the design, construction, operation and maintenance, successful transfer of risk to the private sector may not be realized as a single party would likely not be present over the entire life of the facility.

The DBFOM model provides greater motivation for the P3 contractor to ensure the facility is constructed and operated to fully meet the Region’s performance specifications. The P3 Consortium will typically be led by an equity investor, who acts as the umbrella for the various companies and contractors in the consortium for the entire term of the P3 contract. The equity
investor also ensures that all parties within the consortium work together during the P3 contract. DBFOM is the project delivery model that will have the lowest risk to the Region, and has been recommended as the procurement model for the biosolids heat drying facility. It should be noted that P3 Canada considers the DBFOM model as the strongest model of P3 for successful project implementation and highest transfer of risk to the private sector.

**Results of the Business Case Analysis – Update of Preliminary VFM Analysis**

The preliminary VFM analysis presented to Regional Council on September 11, 2012, was based on cost estimates developed in the 2011 BMP, a preliminary risk valuation, and a number of preliminary financial assumptions. An updated VFM analysis was conducted during the business case that used the updated cost estimate prepared by Arcadis, assessment of capital costs, review of risk valuation, and up-to-date financial assumptions with input from the market questionnaire. It is noted that the VFM is not a static value but will continue to vary as more information is obtained as the project development progresses.

The VFM process is outlined in the P3 Business Case Development Guide, and was reviewed in a meeting held with P3 Canada on November 22, 2012. Staff from P3 Canada explained to the Region and its financial advisor the process and design assumptions required to update the VFM analysis for the Business Case.

The first step for updating the VFM was determining the capital cost for the P3 delivery model, based on the updated cost estimate. This capital cost includes the construction cost ($54.7M), financial costs, closing costs and inflation over the construction period. The capital cost was, based on the P3 Canada Business Case Development Guide, between $82M and $83.5M depending on the percentage paid by the Region at substantial completion.

The next step was to develop the risk register for the heat drying facility, which is a list of discrete risks to the project over the course of its life. In total, there were approximately 70 risks identified within the following 10 risk categories: policy, Class EA, site condition, infrastructure and technology, procurement, construction, operations, maintenance, concession management and project agreement.

The valuation of the risk is the next step. This is where each risk is assigned a probability of occurring and its impact on the Region and the P3 consortium. Risks are then allocated to either the public or private sector for the traditional and DBFOM model.

Two major variables can impact the outcome of the VFM analysis: the contract term and the percentage of capital cost to be paid over the operating term.

The responses from the market questionnaire indicated that the market deemed a contract term of 20 to 30 years to be a suitable duration. From a practical standpoint, this is the industry standard for the expected life of the heat drying equipment (but not the building and other parts of the facility which would typically have a longer life). Due to the expectation that biosolids management in the Region is expected to become more challenging in the future, a term equivalent to one life cycle of the heat drying equipment or 25 years was determined to be the most beneficial term for the Region.

Regarding the percentage of private financing to be paid over the term, a degree of private sector financing that strikes a balance between relying less on private sector financing and using private sector financing to anchor risk transfer is necessary. The reasons for this are as follows:
- Ensuring Performance: With private sector financing at risk over the term, the P3 consortium will make efforts to ensure the facility performance adheres to the Region’s specification, otherwise the Region will have the right to withhold payment;
- Maintenance of the Facility: Private sector financing acts as the Region’s leverage to ensure that the P3 contractor adequately maintains the facility throughout the term according to the Region’s hand back requirements;
- Market response: Market response indicated that a project of this size is relatively small, thus market interest in the project will decrease if the percentage of private sector financing is too low. Respondents indicated up to 75 per cent to be appropriate.

In order to demonstrate the sensitivity of the percentage of capital costs to be paid over the term, a high, medium and low scenario was prepared. The high scenario reflects the responses from the market questionnaire, which indicated that the market considered a project with 75 per cent to be reasonable for this project. For the low scenario, P3 Canada had indicated that they would allow no less than 50 per cent of the capital costs to be paid over the term for funding projects of this size. Deloitte also provided a medium scenario of 62 per cent. This is based on market feedback which indicated that projects with greater than $50M at risk over the operating term to be viable projects.

The following table shows the total capital cost, the private sector financing over the term, and the Region’s upfront share at substantial completion of the facility, as the percentage of private sector financing is varied for the high, medium and low scenarios.

<table>
<thead>
<tr>
<th>Percentage of Private Sector Financing</th>
<th>Total Capital Cost</th>
<th>Private Sector Financing over Term</th>
<th>Region’s Upfront Share</th>
</tr>
</thead>
<tbody>
<tr>
<td>High (75%)</td>
<td>$83.5</td>
<td>$62.6</td>
<td>$20.9M</td>
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<tr>
<td>Medium (62%)</td>
<td>$82.7</td>
<td>$51.3</td>
<td>$31.4M</td>
</tr>
<tr>
<td>Low (50%)</td>
<td>$82.0</td>
<td>$41.0</td>
<td>$41.0M</td>
</tr>
</tbody>
</table>

1 – not considering P3 Canada Funding

Using the above table, the following table presents the sensitivity of the percentage of capital cost paid at substantial completion on the VFM results for a 25 year contract term.

<table>
<thead>
<tr>
<th>Percentage of Private Sector Financing</th>
<th>Risk Transfer</th>
<th>Market Acceptability</th>
<th>VFM (%)</th>
<th>Price Compression (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>High (75%)</td>
<td>Good</td>
<td>Good</td>
<td>15.3</td>
<td>5.3</td>
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<tr>
<td>Medium (62%)</td>
<td>Fair</td>
<td>Fair</td>
<td>16.7</td>
<td>3.5</td>
</tr>
<tr>
<td>Low (50%)</td>
<td>Poor</td>
<td>Caution</td>
<td>17.9</td>
<td>1.8</td>
</tr>
</tbody>
</table>

1 – not considering P3 Canada Funding
2 – the amount of capital cost reduction that the Region would seek from potential bidders to offset the additional costs to the Region for the transferred risk to the private sector on the finance component of the DBFOM model. It includes P3 Canada Funding.

As shown, the DBFOM continues to attain an attractive VFM for the project. Also, the VFM increases with a lower percentage of private financing. From a strictly fiscal viewpoint, the highest VFM would be the most attractive. However, as the percentage of the capital costs paid at substantial completion is increased, the transfer of risk to the private sector decreases. This is because there is less financial risk anchored to the P3 consortium to operate the facility in the desired manner. Additionally, as the lending agency requires a greater amount of private financing risk to ensure that it protects its investment, the greater amount allows them to carry out due
diligence over their P3 consortium to ensure it delivers as per output specification.

Further refinements to the cost model are required however the above indicates that the medium (62 per cent) percentage of private financing may provide a good balance of anchoring private sector interests while minimizing the amount of private financing costs to the Region.

Description of Procurement Process

It is recommended that a standard P3 procurement process generally used by the P3 industry be adopted for the biosolids heat drying facility. Different from traditional procurement processes, the P3 procurement process is an output specification-based process thereby allowing the private sector to develop innovative solutions to achieve the desired goal of producing a beneficial end product. By assuring that the Region will follow a standard procurement process, market interest will be maintained, consequently helping to ensure sufficient competition. The procurement process would be divided into two stages.

Stage one would be the RFQ (Request for Qualification) and Stage two would be the RFP (Request for Proposal). The RFQ is a binding procurement procedure where the procurement is openly advertised with the intent to qualify potential P3 consortia and have them submit proposals in Stage 2. The RFQ would include information such as project background, procurement information, key performance specifications, details of the contract, and evaluation methodology. Interested P3 consortia would provide, in their submissions, their overall approach and an explanation of their experiences with similar installations. The submissions would be evaluated based on technical criteria (70–85 per cent) and financial criteria (15 – 30 per cent) and it is expected that three screened P3 consortia would be screened to Stage two (RFP). The RFP is the final procurement procedure where the three P3 consortia would prepare their binding designs and detailed costs.

Recommended Action

The following actions are recommended for the Project.

It is recommended that Regional Council endorse the Business Case Report prepared by Deloitte and authorize Region staff to submit the report to P3 Canada for funding consideration under the P3 Canada Fund.

As a result of the P3 Canada investment analysis and decision, it is anticipated that the following can occur.

1) **Positive Result:** In the event of a successful funding decision, Region staff would report back with all necessary advisors (technical, financial, legal, owner's engineer, fairness advisor) required to carry out Stages 1 and 2 of the P3 procurement process

2) **Negative Result:** In the event of a negative funding decision, Region staff would examine the results and provide a recommendation on how to proceed with the project without P3 Canada funding.

3) **Request for Additional Information and/or Studies:** It is natural to expect that P3 Canada would have questions on the Business Case report. However, depending on the extent of comments, a delay in approval may be encountered to collect additional information or undertake further study. Should such changes require deviation from the Business Case as presented, Regional staff will prepare an updated report to Regional Council.
Implementation and Next Steps

Upcoming key milestone dates for the implementation of the biosolids heat drying facility using the P3 approach are as follows:

- Submission of business case by Region: March 19, 2013 (this report)
- Completion of Class EA by Region: Late spring, 2013*
- Notification of funding decision, P3 Canada: Fall, 2013
- Consultant selection for the procurement of the P3 consortium: Fall 2013*
- Selection of the P3 consortium: Spring 2015*
- Project ready for construction: middle of 2015
- Construction completion: end 2017

* anticipated future Council report

CORPORATE STRATEGIC PLAN:

The implementation of the strategy recommended in the Biosolids Master Plan supports the Corporate Strategic Plan Focus Areas 1 and 2: Environmental Sustainability, and Growth Management and Prosperity, respectively; and the following strategic objectives: Reduce greenhouse emissions and work to improve air quality in Waterloo Region, protect the quality and quantity of our drinking water sources, and develop, optimize and maintain infrastructure to meet current and projected needs.

FINANCIAL IMPLICATIONS:

The Region’s 2013 ten year capital program includes $16M in 2017 and $5M thereafter based on the preliminary cost estimates in the 2011 BMP for the repayment of the construction costs of the heat drying facility assuming a P3 model is adopted. The Business Case developed new estimates based on the updated construction cost estimate and a detailed financial analysis which includes financial costs, closing costs and inflation for undertaking the project as a P3. The updated costs assuming a 25 year operating term with private financing at 64 per cent are $31.4M in 2017 and $4M thereafter over the term, and will be included in the 2014 capital program. The 2017 amount will be offset by $20.7M as a result of successful P3 Canada Funding or a net amount of $10.7M. An amount of $6M will be included in the operations program, as well as a life cycle cost component for the equipment.

OTHER DEPARTMENT CONSULTATIONS/CONCURRENCE:

This report was prepared with input from the Finance Department.

ATTACHMENTS

Nil

PREPARED BY: Kaoru Yajima, Sr. Project Engineer, Water Services
APPROVED BY: Thomas Schmidt, Commissioner, Transportation and Environmental Services
TO: Chair Jim Wideman and Members of the Planning and Works Committee

DATE: March 19, 2013

FILE CODE: E04-80/MOE.SUM; C06-60/PW/WS.13

SUBJECT: 2012 SUMMARY REPORT FOR REGIONAL MUNICIPALITY OF WATERLOO INTEGRATED URBAN AND RURAL WATER SYSTEMS

RECOMMENDATION:

For information only.

SUMMARY: NIL

REPORT:

Background

Ontario Regulation 170/03 requires that a summary report for January 1 to December 31, 2012, be issued by March 31, 2013. The Region’s 2012 Summary Report will be made available after Council’s Resolution on March 27, 2013.

The 2012 Summary Report has four key objectives:

1) A statement identifying compliance with requirements including the Act, Regulations, Approvals and Ministry of the Environment (MOE) orders;
2) The details as to non-compliance with any requirements including duration;
3) A summary of the quantities and flow rates of water supplied; and
4) A comparison of quantities and flow rates to system’s approvals.

The Ministry of the Environment (MOE) annually performs 22 inspections of the Region’s water supply systems, including seven inspections of the distribution systems in the Townships of Wellesley and North Dumfries. A Drinking Water System Inspection Report (DWSIR) is prepared after each inspection, which reviews all regulatory issues and provides non-compliance or best management corrective actions. The Region’s 2012 Summary Report includes all non-compliance issues identified by Regional Municipality of Waterloo staff, through the MOE inspections, and any other relevant legislation, and reports on all related corrective action or mitigating measures.

Overview of Summary Report

The key findings from the 2012 Summary Report (attached as Appendix A) is that while there were a few minor incidents, they were detected and corrected quickly and there were no significant issues in the Region’s water supply systems and Townships of Wellesley and North Dumfries distribution systems. The Region’s Water Services has initiated plans to address all best
management and non-compliance issues identified by the MOE. The water quality meets the Safe Drinking Water Act requirements.

Annual Summary Report

A copy of the report will be placed in the Councillors’ Library after the Council meeting on March 27. Copies of the report are available free of charge from Water Services. The report will be posted on the Region’s website (regionofwaterloo.ca/water).

CORPORATE STRATEGIC PLAN:
The Annual Summary Report supports Focus Area 1: Protect and enhance the environment.

FINANCIAL IMPLICATIONS: NIL

OTHER DEPARTMENT CONSULTATIONS/CONCURRENCE:
The Public Health Department has reviewed this report.

ATTACHMENTS:
Appendix A: 2012 Summary Report for Integrated Urban and Rural Water Systems – no tables or appendices

PREPARED BY: Olga Vrentzos, Manager, Water Operations and Maintenance

APPROVED BY: Thomas Schmidt, Commissioner, Transportation and Environmental Services
2012 SUMMARY REPORT
PRESENTED TO REGIONAL COUNCIL
MARCH 2013
1.0 Overview

Schedule 22-2 of Ontario Regulation 170/03 states that owners of municipal drinking water systems shall ensure that, not later than March 31st of each year, a summary report is prepared for the preceding calendar year and presented to the members of municipal council. The Regulation has established the following criteria that must be included in the Summary Report:

1. list the requirements of the Act, the regulations, the system’s approval, drinking water works permit, municipal drinking water license, and any order applicable to the system that was not met at any time during the period covered by the report;

2. for each requirement in (1) specify the duration of the failure and the measures that were taken to correct the failure;

3. a summary of the quantities of flow rates of water supplied during the period covered by the report, including monthly average and maximum flows;

4. a comparison of the summary referred in (3) to the rated capacity flow rates approved by the system’s approval, drinking water works permit or municipal drinking water license

This report encompasses the above criteria.

2.0 Background

The Region of Waterloo is responsible for the bulk delivery of drinking water to seven local Area Municipalities. The municipal water supply is obtained from two sources: groundwater and surface water. In 2012 about 73% of the total annual water supply was obtained from 124 groundwater wells and the remaining 27% was obtained from the Mannheim Water Treatment Plant (Grand River raw surface water source).

This summary report includes all Region of Waterloo owned and operated drinking water treatment systems for Cambridge, Kitchener, Waterloo, Woolwich, and Wilmot. Relevant treatment and distribution system information for the townships of North Dumfries and Wellesley drinking water systems is contained in this report.

The summary report outlines non-compliance issues with respect to the SDWA, the regulations, the systems drinking water works permits, and municipal drinking water licenses. Each non-compliance issue and corresponding corrective action(s) or mitigating measure(s) is identified in Table 1. The summary of water quantity supplied and flow rates (appendix A) are compared to the system’s approvals and/or Municipal Drinking Water License’s (MDWL).

Adverse Water Quality Incidents (AWQIs) not captured in the Annual Water Quality Report (issued February 28th), are included in Appendix B of this report.
3.0 DRINKING WATER QUALITY MANAGEMENT SYSTEM CONFORMANCE AND MUNICIPAL DRINKING WATER LICENSING PROGRAM

The Regional Municipality of Waterloo, Water Services obtained Limited Scope-Entire DWQMS accreditation in January 2011 by a third party accreditation authority (appointed by the Ministry of the Environment-MOE). The MOE issued a Municipal Drinking Water License (MDWL) and Drinking Water Works Permit for each regionally owned and operated drinking water system on May 25th 2011. The following requirements have been met:

- **Drinking Water Works Permit (DWWP)** - A permit established to alter a drinking water system (in conjunction with MDWL replaces the certificate of approval)
- **Permit To Take Water (PTTW)** - Valid PTTW (existing)
- **An MOE Accepted Operational Plan** - Based on the Drinking Water Quality Standard (DWQMS) that documents the Quality Management System (QMS)
- **Accredited Operating Authority** - Limited Scope- Entire DWQMS in January 2011 with Full Scope-Entire DWQMS accreditation to be obtained in 2013 upon successful third party audit by National Sanitation Federation (NSF).
- **Financial Plans** - Issued July 2011.

The Quality Management System annual management review was conducted on December 19, 2012 in accordance with the Drinking Water Quality Standard (DWQMS). The management review included discussion of non-compliance issues and corresponding corrective action(s) to reduce and prevent subsequent non-compliance events. A separate report will be brought forward to address the full accreditation process.

4.0 HEALTH RELATED NOTIFICATIONS– BOIL WATER ADVISORIES (BWA)/DRINKING WATER ADVISORIES (DWA)

The Region of Waterloo Water Services Division in collaboration with the Public Health Department ensure a safe water supply. There were no boil water advisories or drinking water advisories issued during 2012.

5.0 REGULATORY COMPLIANCE

All regionally owned and operated drinking water systems have extensive water quality and quantity monitoring and reporting requirements. These requirements include the following:

- proper documentation
- analytical testing
- adverse incident reporting
- corrective actions
- calibration of flow meters, and
- continuous water quality monitoring instrumentation.
Appendix A
2012 WATER SUMMARY REPORT

The Ministry of the Environment (MOE) drinking water system inspections focus on compliance with the SDWA and related regulation(s). During 2012, 21 drinking water system inspections were completed (refer to Appendix D). The following inspections for the 2011/2012 period were not captured in the 2011 Summary Report are included in Appendix D:

- Linwood Drinking Water System
- Wellesley Drinking Water System

The following MOE inspections for the 2012/2013 inspection period not included in this report will be captured in 2013 Annual Summary Report:

- Linwood Drinking Water System
- Wellesley Drinking Water System
- Heidelberg Drinking Water System

Table 1 below summarizes non-compliance issues and associated corrective actions(s) under the SDWA, the Ontario Water Resources Act (OWRA) and relevant regulations, identified by RMOW staff and/or MOE Drinking Water Inspection Reports.
# Regulatory Non-Compliance Summary

<table>
<thead>
<tr>
<th>REGULATORY REQUIREMENT (SDWA &amp; OWRA)</th>
<th>LOCATION</th>
<th>DATE (ALL 2012 UNLESS NOTED)</th>
<th>DESCRIPTION</th>
<th>ROOT CAUSE</th>
<th>CORRECTIVE ACTION</th>
</tr>
</thead>
</table>
| O.Reg.170 Sch. 6-5 Continuous Monitoring | Roseville Drinking Water System | March 1 (1854hrs to 1900hrs) | Primary disinfection chlorine residual continuous monitoring not conducted as required (every 5 minutes) | RPU malfunction for 6 minute duration | **Short Term** RPU reset  
**Long Term** Remote RPU upgrade |
| O.Reg.170 Sch. 10-3 Microbiological Sampling | Cambridge Drinking Water System (Well H4) | May 13 (1530hrs) to May 15 (1635hrs) | RPU transmitted incorrect UV intensity required for primary disinfection | RPU transmission error. Primary disinfection requirements were met  
Note: The UV reactor is able to shut down the well and the UV reactor in the event of a low UV intensity. | **Short Term** UV reactor RPU was reset. The low UV intensity was reported as per MOE request  
**Long Term** SCADA/RPU has been programmed to shutdown the UV reactor and the well when the UV intensity value drops (the existing UV reactor internal software program also shuts down UV reactor and well) |
| O.Reg.128/04 Sch. 27 Logbook Entries | Cambridge Drinking Water System | April 27/11 and December 22/11 | Contractor made improper logbook entries (e.g. entries made in pencil, not | Human Error | **Short Term** The Logbook Entry SOP was amended to ensure |
### Appendix A
#### 2012 WATER SUMMARY REPORT

<table>
<thead>
<tr>
<th>REGULATORY REQUIREMENT (SDWA &amp; OWRA)</th>
<th>LOCATION</th>
<th>DATE (All 2012 Unless Noted)</th>
<th>DESCRIPTION</th>
<th>ROOT CAUSE</th>
<th>CORRECTIVE ACTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Well G5 and G8/)</td>
<td></td>
<td></td>
<td>made chronologically, page removed)</td>
<td></td>
<td>that logbook entry requirements are effectively communicated to contracted personnel before work is conducted at regional DWS facilities.</td>
</tr>
<tr>
<td><strong>Long Term</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>A letter along with the Logbook Entry SOP was sent to all relevant contractors. A signed acknowledgement form was returned by each contractor.</td>
</tr>
<tr>
<td><strong>Municipal Drinking Water License (MDWL)</strong> Schedule C Section 3.0- Flow meter accuracy</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mannheim Drinking Water System (Hidden Valley Lowlift)</td>
<td>From flow meter installation to April 25</td>
<td>HVLL raw water flow meter not verified since installation</td>
<td>Administrative error</td>
<td></td>
<td><strong>Short Term</strong> Insertion flow meter has been calibrated <strong>Long Term</strong> Insertion flow meter is scheduled to be calibrated annually.</td>
</tr>
<tr>
<td>Ayr Drinking Water System</td>
<td>March 21 to November 6</td>
<td>Well A2 flow meter variance of -24% was noted during annual calibration. Action was taken to correct the problem but re-verification was not scheduled until 6 months.</td>
<td>A protocol did not exist to trigger a re-verification</td>
<td></td>
<td><strong>Short Term</strong> The flow meter was verified and observed to be within an acceptable range <strong>Long Term</strong> A protocol has been established to address variances to ensure that re-verification is conducted and documented.</td>
</tr>
</tbody>
</table>
### Regulatory Requirement

#### Municipal Drinking Water License (MDWL)

<table>
<thead>
<tr>
<th>Schedule B</th>
<th>Section 15.0 - Drawings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location</td>
<td>New Dundee Drinking Water System</td>
</tr>
<tr>
<td>Date</td>
<td>June 4</td>
</tr>
<tr>
<td>Description</td>
<td>P&amp;ID and PFD drawings inconsistency (reservoir isolation valve)</td>
</tr>
<tr>
<td>Root Cause</td>
<td>Administrative error</td>
</tr>
</tbody>
</table>
| Corrective Action | **Short Term**
Drawings were updated in October 2012 to address this inconsistency.

**Long Term**
The P&ID's and PFD's will be compared annually during the compliance audits. Discrepancies will be addressed.

### O.Reg.170 Sch. 16 Reporting Adverse Results and Other Problems

<table>
<thead>
<tr>
<th>Notice of Resolution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location</td>
</tr>
<tr>
<td>Date</td>
</tr>
<tr>
<td>Description</td>
</tr>
<tr>
<td>Root Cause</td>
</tr>
</tbody>
</table>
| Corrective Action | **Short Term**
Upon noticing this error the AWQI resolution form 2B was faxed to PH and SAC.

**Long Term**
AWQI resolutions will be closely reviewed to ensure that required documentation is completed and provided to PH and SAC within the required timeframe.

### 6.0 Hydraulic Performance

A summary of the quantities of flow rates of water supplied during the period covered by the report, including monthly average and maximum flows can be found in appendix A.

The Region of Waterloo Drinking Water systems have 43 current Permits to Take Water (PTTW) and 14 Municipal Drinking Water Licenses and Drinking Water Works Permits. For a full list of PTTW, MDWLs/DWWPs refer to Appendix C. A flow exceedance is defined as a flow rate that exceeds the allowable limit specified in the PTTW for a period of greater than 10 minutes in duration or an exceedance of the maximum daily treated water volume that flows from the treatment subsystem into the distribution system, as identified in the MDWL. Table 2 lists site(s) exceeding the flow limits in 2011.
6.1 Permit to Take Water (PTTW) and Municipal Drinking Water License (MDWL) Daily Limit Exceedance

Table 2

<table>
<thead>
<tr>
<th>LOCATION</th>
<th>DATE</th>
<th>DURATION (HR:MIN)</th>
<th>DESCRIPTION</th>
<th>ROOT CAUSE</th>
<th>CORRECTIVE ACTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Hamburg Drinking Water System</td>
<td>March 26</td>
<td>00:29</td>
<td>Communication: Instantaneous flow exceedance for Well NH3 (PTTW limit 41 L/s) during pumping to waste (42 L/s)</td>
<td>Well rehabilitation involved pumping well to waste</td>
<td>Clear communication of flow limits to relevant contractors</td>
</tr>
<tr>
<td>West Montrose Drinking Water System</td>
<td>May 24</td>
<td>Daily MDWL limit exceeded</td>
<td>Treated water to distribution exceeded daily limit</td>
<td>High demand in distribution system</td>
<td></td>
</tr>
</tbody>
</table>

7.0 Instrumentation Maintenance Requirements

As per the MDWL and/or Reg. 170/03, flow meters and water quality analyzers (chlorine residual, and turbidity) are calibrated in accordance with manufacturers’ instructions. Refer to Table 1 for flow meter calibration non-compliance issues.

8.0 Well Maintenance

Routine well inspections conducted by RMOW staff and MOE inspectors indicate drinking water supply wells and monitoring wells were in compliance. Wells are maintained in accordance with O. Reg. 903, (made under the Ontario Water Resources Act) and O.Reg. 170/03 (sch.1).
REGION OF WATERLOO

PLANNING, HOUSING AND COMMUNITY SERVICES
Transportation Planning

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

DATE: March 19, 2013

FILE CODE: D09-30/NGTA

SUBJECT: NIAGARA TO GREATER TORONTO AREA CORRIDOR AND STRATEGIC ECONOMIC CORRIDORS

RECOMMENDATION:

THAT the Regional Municipality of Waterloo express its support for the Niagara to Greater Toronto Area (GTA) Corridor Transportation Development Strategy (TDS) developed by the Ministry of Transportation (MTO), as described in Report P-13-027, dated March 19, 2013;

THAT the Region of Waterloo encourage MTO to implement the Group 1 (Optimize Existing Networks) and Group 2 (New/Improved Non-Road Infrastructure) elements of the TDS as soon as possible;

THAT the Region of Waterloo continue to work with MTO and partner municipalities on strategic transportation planning for this area, to support the future strategic study of long-term highway improvements in the West Area;

AND THAT the Region of Waterloo continue to participate in the Municipal Caucus to advocate for strategic transportation investments that will support the Regional economy and promote economic development.

SUMMARY:

Since 2007, the Ontario Ministry of Transportation (MTO) has undertaken an Environmental Assessment to study transportation improvements between Niagara Region and the Greater Toronto Area (GTA). MTO held the final round of Public Information Centres (PICs) in February 2013 to present the proposed Transportation Development Strategy (TDS). Pending approval of the Minister of Transportation, the TDS will likely be released around June 2013. The TDS recommends improvements in a staged “building block” approach, with the following elements:

- Group 1 (Optimize Existing Networks)
- Group 2 (New/Improved Non-Road Infrastructure)
- Group 3 (Widen/Improve Existing Roads)
- Group 4 (New Transportation Corridors)

The TDS recommends aggressive Transportation Demand Management and Transportation System Management measures for Group 1 and aggressive expansion of public transit as part of Metrolinx’s “Big Move” for Group 2. The Region supports these directions and recommends that they be implemented as soon as possible, including MTO’s proposed Active Traffic Management Study, expansion of the current GO Train service to Kitchener/Waterloo along the Georgetown Line and extension of GO Train service to Cambridge along the Milton Line.

MTO identified Group 3 and Group 4 measures to address long-term transportation needs east of Hamilton/Burlington. However, MTO was unable to identify satisfactory road measures to accommodate long-term needs within the Hamilton/Burlington area closest to the Region of
Waterloo. The TDS recommends Group 3 initiatives to meet medium-term needs and further study for the long-term. The Region supports this direction but stresses that such a study needs to consider a longer-term timeframe and strategically integrate several ongoing studies to incorporate broad network planning principles and extensions of the highway grid north of Highway 401.

The Region has also been participating in discussions with the Regions of Halton, Niagara and Peel, and the Cities of Burlington and Hamilton, as well as MTO and the Southern Ontario Gateway Council, regarding strategic transportation planning to support economic development. The “Municipal Caucus” has articulated a vision that includes a connection between Highways 401 and 403 as part of a comprehensive plan that would connect the GTA West Corridor and the Niagara-GTA Corridor. The Region should continue to participate in these discussions.

REPORT:

Since 2007, the Ontario Ministry of Transportation (MTO) has undertaken an Environmental Assessment (EA) to study transportation improvements between Niagara Region and the Greater Toronto Area (GTA). The Study Area is shown in Attachment 1. The Niagara – GTA Corridor Planning and EA Study has been developing a Transportation Development Strategy (TDS) that will involve multiple modes. The TDS is to be approved by the Minister of Transportation after public consultation.

The draft TDS was released for public comment in March 2011 and contained recommended transportation improvements for the Study Area, divided into four groups. Described as a building block approach, Group 1 and Group 2 elements are intended to be implemented first and serve as a foundation for Group 3 and Group 4 elements. The groups are shown in Attachment 2 and are described briefly as follows:

1. Optimize Existing Networks (including transit, transportation demand management and transportation system management)
2. New/Expanded Non-Road Infrastructure (including public transit)
3. Widen/Improve Existing Roads (i.e. improvements to existing highways)
4. New Transportation Corridors (i.e. Group 3 PLUS new highways)

Following release and public comment on the draft TDS, MTO conducted additional analysis of the Group 3 and Group 4 alternatives. This analysis has recently been completed and MTO held Public Information Centres (PICs) regarding this additional analysis and the TDS in February 2013.

Group 1 (Optimize Existing Networks) elements of the TDS (Attachment 3) include traveller information systems, improved access to transit stations, improved integration of active transportation, and more aggressive use of Transportation Demand Management (TDM) and Transportation System Management (TSM). The TDS recommends completing an Active Traffic Management Study in the short-term.

Group 2 (New/Improved Non-Road Infrastructure) elements of the TDS include (Attachment 4) support for “The Big Move” by Metrolinx, express service along the GO Lakeshore line, various rapid transit initiatives in the Hamilton/Burlington area, and other improvements to rail lines.

The Region supports the direction of Groups 1 and 2 and has already recommended that these measures be implemented as soon as possible. The proposed Active Traffic Management Study represents a short-term project entirely under MTO’s control that could improve both safety and travel time reliability on highways used by Regional residents. Improvements to public transit service, in particular expanded GO Train service to Kitchener/Waterloo on the Georgetown Line and extended GO Train service to Cambridge on the Milton Line, are also necessary as soon as possible. Sufficient and consistent investment in GO Train services are necessary to promote a shift
away from private automobiles for long-distance commuting and help make public transit a viable alternative.

For the Group 3 (Widen/Improve Existing Roads) and Group 4 (New Transportation Corridors) elements of the TDS, MTO divided the study area into three areas: the West Area covering Hamilton and Burlington (Attachment 5), the Central Area between St. Catharines and Hamilton (Attachment 6), and the East Area between St. Catharines and Fort Erie (Attachment 7). The TDS includes the following elements:

- East Area: A new corridor connecting Highway 406 to the QEW
- Central Area: Widening of the QEW to 8 lanes (including high-occupancy vehicle lanes)
- West Area: Widening of highways 6, 403, 407, QEW to address medium-term needs, and a future study to determine how to meet long-term needs

The additional analysis undertaken by MTO was unable to identify a satisfactory Group 3/Group 4 alternative for the West Area that would satisfy long-term transportation needs without significant impacts to the natural, cultural and social environments. In addition to conventional highway construction, MTO examined several “outside-the-box” alternatives such as a second deck on Highway 403 and a tunnel under Lake Ontario. As noted above, the TDS identifies medium-term road improvements and recommends a future study to determine how to meet long-term needs.

Improvements to area highways are consistent with other ongoing MTO studies, including the Brantford to Cambridge Transportation Corridor, the GTA West Corridor and the Waterloo-Wellington-Brant inter-regional transportation planning initiative. The latter study aims to comprehensively identify regional transportation issues and move away from planning transportation infrastructure on a project-by-project basis. The Region should support the future study recommended in the TDS for the West Area, so long as it achieves the following objectives:

1. The future study should consider a longer term time frame than currently permitted. The current Provincial Policy Statement (PPS) only permits infrastructure planning for a 20-year timeframe. Proposed changes in the new draft PPS may extend this period, and the future study for the West Area should examine transportation needs for the long-term beyond 20 years.
2. The ongoing studies mentioned above highlight the need for comprehensive network planning that can integrate and benefit multiple modes of transportation. The proposed long-term study for the West Area should incorporate broad network planning principles and examine extensions of the highway grid north of Highway 401.
3. The study needs to incorporate progressive methodologies and continue to explore creative alternatives. The difficulty in identifying an alternative in the West Area was known before the Niagara – GTA study started, and a future long-term study using the same methods is likely to arrive at the same conclusion. MTO should continue and improve upon the creative process that resulted in the staged approach for this study and the GTA West Corridor.

**Municipal Caucus: Strategic Economic Logistics Corridors and Gateways**

Since December 2012, Niagara Region has been leading the formation of a group described as the “Municipal Caucus.” This group has been meeting to discuss how to respond to the Niagara-GTA Corridor study recommendations and also to encourage MTO to consider long-term transportation planning as an economic growth initiative. The Region of Waterloo has been participating in these meetings, and senior staff has met with their counterparts at the Regions of Halton, Niagara and Peel, the Cities of Burlington and Hamilton, as well as with MTO and the Southern Ontario Gateway Council, to articulate a common vision and commitment to comprehensively plan for this area of the Province. Attachment 8 shows a potential corridor connection between Highways 401 and 403 as part of a comprehensive plan that would connect the GTA West Corridor and the Niagara-GTA Corridor.
As these discussions have the potential to further the interests of Regional residents and businesses, the Region should continue to participate in these meetings.

Next Steps

MTO will review public comments and release the final TDS after it is approved by the Minister of Transportation, around June 2013. Following approval of the TDS, work will commence on the various elements of the strategy.

Area Municipal Consultations/Coordination

The area municipalities have received copies of previous Regional reports about the Niagara-GTA Corridor, and will receive a copy of this report. The area municipalities will be consulted about the activities of the Municipal Caucus as the initiative proceeds.

CORPORATE STRATEGIC PLAN:

Improved Provincial transportation infrastructure supports Strategic Objectives 2.2 (Develop, optimize and maintain infrastructure to meet current and projected needs) and 2.3 (Support a diverse, innovative and globally competitive economy). The transit components of the Niagara-GTA Corridor may also promote Strategic Objective 3.4 (Encourage improvements to intercity transportation services to and from Waterloo Region).

FINANCIAL IMPLICATIONS:

NIL

OTHER DEPARTMENT CONSULTATIONS/CONCURRENCE:

NIL

ATTACHMENTS:

Attachment 1 – Niagara-GTA Corridor Study Area
Attachment 2 – “Building Block” Approach (Groups)
Attachment 3 – Group 1 (Optimize Existing Networks) Elements
Attachment 4 – Group 2 (New/Improved Non-Road Infrastructure) Elements
Attachment 5 – West Area Highway Improvements (Proposed)
Attachment 6 – Central Area Highway Improvements (Proposed)
Attachment 7 – East Area Highway Improvements (Proposed)
Attachment 8 – Municipal Caucus Economic Logistics Corridor Vision

PREPARED BY: Geoffrey Keyworth, Senior Transportation Planning Engineer

APPROVED BY: Rob Horne, Commissioner, Planning, Housing and Community Services
ATTACHMENT 2 – “BUILDING BLOCK APPROACH” (GROUPS)
ATTACHMENT 3 – GROUP 1 (OPTIMIZE EXISTING NETWORK) ELEMENTS

Priority #1: Develop an Active Traffic Management strategy that improves performance of the existing transportation system by reducing demand and improving system efficiency.

- Transit use of highway shoulder lanes as an option to share traffic.
- HOV/Transit only roadways on ramps (or any弄得). 
- Innovative technologies to make transit efficient and attractive.
- Encourage use of cars on the road. 
- Provide frequent updates on traffic conditions.
- Smooth road work access to highways with signals on ramps (or any弄得).
- Encourage commuting via transit. 
- Reverse lane/turn to add alternative traffic direction.
ATTACHMENT 5 – WEST AREA HIGHWAY IMPROVEMENTS (PROPOSED)
ATTACHMENT 6 – CENTRAL AREA HIGHWAY IMPROVEMENTS (PROPOSED)
<table>
<thead>
<tr>
<th>Meeting date</th>
<th>Requestor</th>
<th>Request</th>
</tr>
</thead>
<tbody>
<tr>
<td>28-Mar-12</td>
<td>D. Craig</td>
<td>Report on possible enhancements similar to what is proposed for Weber Street in Kitchener at the railway overpass for the Delta construction in Cambridge.</td>
</tr>
<tr>
<td>28-Mar-12</td>
<td>Council</td>
<td>Staff to review the operation of the Homer Watson Boulevard/Block Line Road roundabout and report back to Council in 2013.</td>
</tr>
<tr>
<td>08-May-12</td>
<td>P&amp;W</td>
<td>Report detailing the rationale for the Injury Crash Cost calculation used by staff in reports for roadway improvements. (E-12-045 page 48 authored by Frank Kosa)</td>
</tr>
<tr>
<td>08-May-12</td>
<td>P&amp;W</td>
<td>Staff to review options for signalized vehicle lights and signalized pedestrian crosswalks in Roundabouts in the detailed design report prepared later in 2012 for Franklin Boulevard Improvements.</td>
</tr>
<tr>
<td>11-Sep-12</td>
<td>S. Strickland</td>
<td>Staff were requested to look into potential improvements at the King Street and University Avenue intersection due to the high pedestrian volumes during the school season and the increase of incidents there.</td>
</tr>
<tr>
<td></td>
<td>J. Haalboom</td>
<td>Staff continue to lobby the Province for changes to the Highway Traffic Act providing right of way to pedestrians and on an as needed basis provide an update to Council</td>
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<table>
<thead>
<tr>
<th>Assigned Department</th>
<th>Anticipated Response Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transportation and Environmental Services</td>
<td>April. 2013</td>
</tr>
<tr>
<td>Transportation and Environmental Services</td>
<td>Sept. 2013</td>
</tr>
<tr>
<td>Transportation and Environmental Services</td>
<td>Spring 2013</td>
</tr>
<tr>
<td>Transportation and Environmental Services</td>
<td>March 2013</td>
</tr>
<tr>
<td>Transportation and Environmental Services</td>
<td>19-Mar-2013</td>
</tr>
<tr>
<td>Transportation and Environmental Services</td>
<td>as required</td>
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