MEDIA RELEASE: Friday, February 24, 2012, 4:30 p.m.

REGIONAL MUNICIPALITY OF WATERLOO
PLANNING AND WORKS COMMITTEE
AGENDA

Tuesday, February 28, 2012
9:00 A.M.
Regional Council Chamber
150 Frederick Street, Kitchener, Ontario

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

2. DELEGATIONS

a) Dr. Jeff Casello, on behalf of the Reurbanization Working Group

b) Mr. Tim Jackson, Chief Executive Officer and Mr. Tim Ellis, Chief Operating Officer, Accelerator Centre

3. REPORTS – PLANNING, HOUSING AND COMMUNITY SERVICES

COMMUNITY PLANNING

a) P-12-021, Monthly Report of Development Activity for January 2012

b) P-12-024, Region of Waterloo (King/Victoria) Transit Hub

c) P-12-033, Region of Waterloo (King/Victoria) Transit Hub Preliminary Design Study and Station Area Access Plan – Consultant Selection

TRANSPORTATION PLANNING

d) P-12-025, Proposed Modifications to Regional Implementation Guideline for Road Allowance Dedications On and Adjacent to Known and Potentially Contaminated Sites

e) P-12-026, Ira Needles Boulevard Improvements – Highview Drive to Erb Street West

INTER-DEPARTMENTAL REPORT

f) E-12-022/CR-FM-12-004, Consultant Selection Results – 2007 to 2011

g) P-12-009/F-12-016, Brownfields Financial Incentive Program Update

h) P-12-011/E-12-020, Investigating Sustainable Approaches to Soil and Sediment Management

i) P-12-023/E-12-028, Recommended Regional Transit Supportive Strategy for the City of Cambridge – Proposed 2012 Implementation Plan
REPORTS – TRANSPORTATION AND ENVIRONMENTAL SERVICES

DESIGN AND CONSTRUCTION

j) E-12-004, Consultant Selection – Detailed Design and Contract Administration Services; Ottawa Street Intersection Improvements from Alpine Road to Homer Watson Boulevard, City of Kitchener

RAPID TRANSIT

k) CR-RS-12-013, Authorization to Expropriate Lands (1st Report) for Rapid Transit Project Stage 1 for Property and Interests on King Street South from John Street in the City of Waterloo to King Street West at Victoria Street, in the City of Kitchener

TRANSPORTATION

l) E-12-015, Intelligent Transportation Systems (ITS)

WATER

m) Fountain Street North and Maple Grove Road Area Water Supply Class Environmental Assessment Study – Public Information Centre #2 Package

WASTE MANAGEMENT

n) E-12-023, Consultant Selection for the Waste Management Master Plan

4. INFORMATION/CORRESPONDENCE

a) Memo from Planning, Housing and Community Services re: Delegation from the Accelerator Centre – Item 2. a)

5. OTHER BUSINESS

a) Council Enquiries and Requests for Information Tracking List

6. NEXT MEETING – March 20, 2012

7. ADJOURN
## MEETINGS

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Description</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Planning and Works Committee</strong></td>
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<tr>
<td>Tue., March 20, 2012</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>Tue., April 17, 2012</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>Wed., March 21, 2012</td>
<td>4:00 P.M. – 8:00 P.M.</td>
<td>Proposed 2012 Transit Service Improvements Public Consultation Centre</td>
<td>Pioneer Park Community Library, Games Room 150 Pioneer Drive Kitchener, Ontario</td>
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<tr>
<td>Thu., March 22, 2012</td>
<td>4:00 P.M. – 8:00 P.M.</td>
<td>Proposed 2012 Transit Service Improvements Public Consultation Centre</td>
<td>Clemens Mill Library (St. Benedict C.S.S.) Seminar Rooms 1 and 2 50 Saginaw Parkway Cambridge, Ontario</td>
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<tr>
<td><strong>Transportation and Environmental Services</strong></td>
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<td>March 1, 2012</td>
<td>5 P.M.</td>
<td>Fountain Street North and Maple grove Road Area Water supply Class Environmental Assessment Study – Information Package in advance of PCC</td>
<td>Water Services Operations Center 100 Maple Grove Road, Cambridge</td>
</tr>
</tbody>
</table>
REGION OF WATERLOO
PLANNING, HOUSING AND COMMUNITY SERVICES
Community Planning

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

DATE: February 28, 2012

FILE CODE: D18-01

SUBJECT: MONTHLY REPORT OF DEVELOPMENT ACTIVITY FOR JANUARY 2012

RECOMMENDATION:


SUMMARY:

In accordance with the Regional By-law 01-028, as amended, the Commissioner of Planning, Housing and Community Services has:

1. Approved the following part lot control exemption by-laws;
2. Modified the following plan of subdivision and plans of condominium; and
3. Released for registration the following plan of subdivision and plans of condominium.

REPORT:

City of Cambridge
1. Modification to Draft Plan of Subdivision 30T-05102
Draft Approval Date: May 28, 2008
Applicant: Chrisview Custom Homes Ltd.
Location: Water Street and Myers Road
Proposal: To remove 3 single detached dwelling lots. A total of 58 residential units will remain in the draft plan.
Processing Fee: Paid January 5, 2012
Commissioner’s Approval: January 18, 2012

City of Waterloo
1. Part Lot Control Exemption By-law 2012-007
Applicant: Clair Hills Development Inc.
Location: St. Moritz Avenue
Proposal: To permit the creation of 11 single detached units.
Processing Fee: Paid January 25, 2012
Commissioner’s Approval: January 26, 2012

2. Modification to Draft Plan of Condominium 30CDM-09402
Draft Approval Date: December 18, 2009
Applicant: COB GP Inc.
Location: 187 King Street South
Proposal: To consolidate Commercial Units 10 and 11 in Building A2 for a total of 21 commercial units within the condominium.
Processing Fee: Paid December 16, 2011
Commissioner’s Approval: January 20, 2012
Came Into Effect: Immediately
3. Registration of Draft Plan of Subdivision 30T-04403
Draft Approval Date: April 9, 2009
Phase: Entire Plan
Applicant: Doug Owen Construction Limited
Location: Wideman Road
Proposal: To permit the development of 39 single detached units and 4 unspecified future residential units.
Processing Fee: Paid December 20, 2011
Commissioner’s Release: January 10, 2012

4. Registration of Draft Plan of Condominium 30CDM-99404
Draft Approval Date: April 26, 2000
Phase: Entire Plan
Applicant: Rembrandt Developing (Waterloo) Inc.
Location: 360 Erbsville Road
Proposal: To provide for the amalgamation of two condominium corporations into one with the same total of 45 townhouse dwelling units.
Processing Fee: Paid December 23, 2011
Commissioner’s Release: January 5, 2012

5. Registration of Draft Plan of Condominium 30CDM-10405
Draft Approval Date: December 9, 2011
Phase: Entire Plan
Applicant: The INCC Corp.
Location: Ira Needles Boulevard and University Avenue
Proposal: To permit the development of 7 commercial units.
Processing Fee: Paid December 6, 2011
Commissioner’s Release: January 6, 2012

Township of North Dumfries
1. Part Lot Control Exemption By-law 2489-12
Applicant: 828543 Ontario Inc. and 839658 Ontario Inc.
Location: Vincent Drive, Ayr
Proposal: To permit the development of 4 semi-detached and 10 townhouse units.
Processing Fee: Paid January 10, 2012
Commissioner’s Approval: January 11, 2012

Township of Woolwich
1. Registration of Draft Plan of Condominium 30CDM-11701
Draft Approval Date: Exempt
Phase: Entire Plan
Applicant: Thomasfield Homes Limited
Location: Maplecrest Drive
Proposal: To create a common elements condominium tied to lands of registered plan of subdivision 58M-529 (30T-05701).
Processing Fee: Paid December 22, 2011
Commissioner’s Release: January 20, 2012
Residential Subdivision Activity January 2012 to January 31, 2012

<table>
<thead>
<tr>
<th>Area Municipality</th>
<th>Units in Residential Registered Plans</th>
<th>Residential Units Draft Approved</th>
<th>Pending Plans (Units Submitted)</th>
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*The acceptance and/or draft approval of plans of subdivision and condominium processed by the City of Kitchener under delegated approval authority are not included in this table.

For comparison, the following table has also been included:

Residential Subdivision Activity January 1, 2011 to January 31, 2011

<table>
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<tr>
<th>Area Municipality</th>
<th>Units in Residential Registered Plans</th>
<th>Residential Units Draft Approved</th>
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</tbody>
</table>

*The acceptance and/or draft approval of plans of subdivision and condominium processed by the City of Kitchener under delegated approval authority are not included in this table.

Area Municipal Consultation/Coordination

These planning approvals, including consultation with Area Municipalities, have been completed in accordance with the Planning Act. All approvals contained in this report were supported by the Area Municipal councils and/or staff.

CORPORATE STRATEGIC PLAN:

This report reflects actions taken by the Commissioner in accordance with the Delegation By-law adopted by Council. The activities described in this report are operational activities with the objective of Focus Area 2: Growth Management and Prosperity.

FINANCIAL IMPLICATIONS: NIL

OTHER DEPARTMENT CONSULTATIONS/CONCURRENCE: NIL

ATTACHMENTS: NIL

PREPARED BY: Andrea Banks, Program Assistant

APPROVED BY: Rob Horne, Commissioner of Planning, Housing and Community Service
TO: Chair Jim Wideman and Members of the Planning and Works Committee

DATE: February 28, 2012

FILE CODE: D10-20

SUBJECT: REGION OF WATERLOO (KING/VICTORIA) TRANSIT HUB

RECOMMENDATION:

For information.

SUMMARY:

Over the past several years, the Region has purchased a number of properties located at or near the intersection of King and Victoria Streets in the City of Kitchener for the purpose of developing a transit hub. The development of the transit hub will not only link the future Rapid Transit, GRT conventional transit, GO and Via train services and GO and other inter-city bus lines into one seamless public transportation system, it will also serve as a significant catalyst for development within this part of the City of Kitchener known as the Innovation District.

The project is being undertaken in four phases; site preparation, determination of the form of development, determination of the procurement model, and site construction. Phase 1 of the project is being undertaken by a multi-departmental team under the direction of the Commissioner of Planning Housing and Community Services. Phases 2 and 3 of this work is being overseen by a Project Team consisting of Regional staff, City of Kitchener staff, political representatives and agencies anticipated to use the transit hub once constructed. Oversight of Phase 4 of the project (construction of the multi-model transit hub and associated private or public sector uses) will be dependant on the procurement model chosen as part of Phase 3.

The development of the transit hub is directly linked to a number of other ongoing Regional projects including: the Corridor Development Strategy; the Weber Street grade separation; the King Street grade separation; the development of the Rapid Transit System; and the realignment of the Grand River Transit (GRT) conventional transit system. Coordination of these projects is of a high priority in order to ensure proper alignment of schedules, construction staging and interfaces, and public consultation/information processes. All of these projects are being undertaken in direct consultation and coordination with City of Kitchener staff.

Various studies are currently being undertaken to ready the site for future use as a transit hub. The site has also been prepared for use as a temporary parking area to facilitate the extension of GO Rail service to the Region.

REPORT:

Project Background

Over the past several years the Region has purchased of a number of properties located at or near the intersection of King and Victoria Streets in the City of Kitchener for the purpose of development of a transit hub that could be constructed on the resulting parcel of land in order to connect the future rapid transit system and Grand River Transit to inter-city bus and rail systems serving the
Region. As part of the process, the Region targeted a number of properties totalling approximately 1.6 hectares (four acres) of land for purchase, with the majority of these lands intended to play key roles in the development of the facility. This report provides an update to the process.

Project Description

Subject to future decisions by Regional Council, the proposed King/Victoria Transit Hub would be a facility designed to serve the intra and inter-Regional transportation needs of the public by bringing together access to and interconnections between various forms of transportation into one centralized facility. This project involves development of significant transportation infrastructure including: new train platforms to serve inter-city GO train and VIA Rail services; bus bays to support Grand River Transit (GRT) and intercity bus services such as GO bus and other private sector carriers; underground and at-grade connections to and from the new Regional rapid transit system (light rail); as well as the facilities necessary to support and integrate other transportation modes such as taxis, car share, cycling and pedestrians. The proposed King/Victoria Transit Hub will potentially be integrated into a combination of public and private sector higher density developments on the site, possibly including mixed use commercial/office development served by a large multi-level underground commercial parking structure.

This project is both an important component in the development of an integrated inter and intra-city transit system for the Region of Waterloo as well as a catalyst to support future development within the City of Kitchener’s planned Innovation District. City of Kitchener will play a major role in this project both through participation on the Project Team as described in this report and through consultation and the fulfillment of various roles associated with the completion of various studies and the processing of development applications.

Project Phases / Management

While there will be crossover among activities and particularly timing, the project breaks down into four relatively distinct components:

Phase 1 - acquisition and preparation of the site for development, including its temporary use as a site for parking associated with GO Rail service (this phase will include a public consultation process related to the future use of the property as part of the Planning Act process (currently underway – anticipated completion mid 2013);

Phase 2 - determination of the form and scale of development of the site, including development of the associated business case and public consultation process (currently underway – anticipated completion early 2013);

Phase 3 - determination of the business case and procurement model for the development (e.g., public sector owned and operated, public private partnership commonly known as a P3) or some alternative combination of the two (currently anticipated for completion - mid 2013, with a Request for Proposals (RFP) being issued shortly thereafter); and

Phase 4 - construction through to opening of the facility (construction of the Hub and the associated development has to be staged with the King Street grade separation and rapid transit projects. While construction of inter-face structures may occur concurrent with the King Street grade separation, the need for use of the Hub site for staging and temporary access for these projects means that construction of the main facilities and associated development on the site is currently anticipated to begin in late 2016 / early 2017.
Phase 1 is currently being undertaken under the direction of the Commissioner of Planning Housing and Community Services with Kevin Eby serving as the Project Director. A team of representatives from Community Planning, Transportation Planning, Facilities Management and Legal are currently working on the completion of Phase 1.

Phases 2 and 3 are intended to be undertaken by the same group of Regional staff in consultation with a Project Team. A draft Project Charter and Timeline has been developed for consideration by the Project Team as part of the first meeting which is currently being arranged. Political representatives on the Project Team include: Jim Wideman (Regional Councillor); Jean Haalboom (Regional Councillor); Sean Strickland (Regional Councillor); and Dan Glenn-Graham (City of Kitchener Councillor). In addition to the political representatives, the Project Team includes Regional staff representation from Transportation Planning, Transit Services, Facilities, Rapid Transit, the King Street Grade Separation Project Team, Legal Services, Finance, Marketing and Communications, Cultural Heritage Planning, City of Kitchener representation from Planning, Engineering, and Economic Development as well as representatives from GO Transit, Metrolinx, GEXR (Guelph Exeter Railway), VIA Rail and CN Rail.

The process for completion and management of Phase 4 of the project is entirely dependent upon the procurement model selected in Phase 3.

Progress to Date on Key Items

1. Planning Applications – Formal applications and all associated studies required to support the submission of an Official Plan Amendment and Zoning By-Law Amendment have been prepared and are expected to be submitted to the City of Kitchener within the next several weeks. The intent of these applications is to allow for the broadest range of uses and higher density appropriate for the site so as to eliminate constraints moving into the design and procurement processes. The GSP Group has been retained to assist with these Planning Act application processes. Regional Council will be kept apprised of the processing of these applications, and Regional staff will seek any required direction prior to key decision points in the process.

2. Environmental Assessment – The required environmental assessment process is planned to be undertaken through the completion of a Municipal Class Environmental Assessment Schedule ‘B’ that will be undertaken concurrently with the Planning Act processes noted above.

3. Soil/Groundwater Investigation and Remediation – Preliminary site investigations have been undertaken as part of the ongoing activity on the site. Given the known contamination of the groundwater from a former industry in the area (which is currently the subject of ongoing remediation efforts secured as part of the development of the former industrial site lands), development of the property will require the completion of a Risk Assessment completed in accordance with Ministry of the Environment processes. It is currently anticipated that a consultant will be hired early in the spring of 2012 to prepare and submit the risk assessment to the Ministry for approval.

4. Preliminary Design Study and Station Area Access Plan – One of the key functions of the facility is the facilitation of the movement of people between various forms of transportation. Regional staff through staff Report No. P-12-033 is recommending the selection of a consultant to undertake this work. City of Kitchener staff participated in the consultant selection process and concurs with the recommendation.

5. Temporary GO Parking - An application for site plan approval has been submitted to the City to use the site temporarily to meet parking needs in the area. This parking is currently anticipated to serve two functions. The first is for use by GO Transit riders (please see Report No. P-11-
094). GO Transit will be temporarily using the VIA rail station currently located at Weber St. and Victoria Street to facilitate the extension of GO Rail service until such time as the facility is constructed and ready for its use.

Next Steps

Regional staff will continue with the completion of Phase 1 of the project as described in this report. The initial meeting of the Project Team struck to oversee Phases 2 and 3 of the project meeting will be scheduled for March 2012. The draft Project Charter and proposed timelines for the project will be finalized through the Project Team process at that time.

Area Municipal Consultation/Coordination

City of Kitchener staff participated in a tour and workshop that explored ideas for development of the site in July 2011, including possible uses in addition to transportation facilities. City of Kitchener staff is also overseeing the review and approval of the required Planning Act applications. The City of Kitchener will be represented on the Project Team by three staff members, one each from planning, engineering and economic development, and by Councillor Dan Glenn-Graham.

CORPORATE STRATEGIC PLAN:

This initiative directly supports Strategic Action 3.4.1, “Implement the multimodal transportation hub at Victoria and King Streets”.

FINANCIAL IMPLICATIONS:

Funding for the land acquisitions and other costs for the King/Victoria Multi-Modal Hub Project transit facility was provided from the Council-approved $25,000,000 budget for property acquisitions and other project development expenditures for the RT project. Funding for the proposed consulting assignment would be provided from the project budget. Once the Project strategy is finalized and approved by Council, the costs could be transferred to that project budget.

OTHER DEPARTMENT CONSULTATIONS/CONCURRENCE:

Staff from Transportation Planning, Legal Services, Facilities Management, Finance and Rapid Transit has been consulted in the preparation of this report.

ATTACHMENTS:

NIL

PREPARED BY: Kevin Eby, Director, Multi-Modal Transit Hub

APPROVED BY: Rob Horne, Commissioner of Planning, Housing and Community Services
TO: Chair Jim Wideman and Members of the Planning and Works Committee

DATE: February 28, 2012

FILE CODE: D10-70

SUBJECT: REGION OF WATERLOO (KING/VICTORIA) TRANSIT HUB PRELIMINARY DESIGN STUDY AND STATION AREA ACCESS PLAN - CONSULTANT SELECTION

RECOMMENDATION:

THAT the Regional Municipality of Waterloo enter into a Consulting Services Agreement with IBI Group for P2012-04 Multi Modal Transit Hub to an upset limit of $313,109.44, including taxes, as described in Report No. P-12-033, dated February 28, 2012.

SUMMARY:

The work of this proposed consulting assignment is for to prepare a Preliminary Site Design and a Station Area Access Plan (Access Plan) for the Region of Waterloo’s King/Victoria Transit Hub (Multi-Modal Transit Hub). The Preliminary Site Design would determine the location and design of the entrances and concourse levels of the Transit Hub and the pedestrian and cycling requirements associated with the King Street Grade separation and the streets immediately adjacent to the facility. The Access Plan would integrate and expand on existing and planned Regional and Area Municipal active transportation routes and prioritize ways to improve the connectivity of surrounding neighbourhoods and employment areas.

The Preliminary Site Design and Access Plan would specifically meet the following objectives:

- Determine the location and the space requirements for the Transit Hub’s accesses and entrances, waiting areas, cycling and vehicle parking, and truck loading and unloading areas.
- Determine the space requirements for pedestrian and cyclist throughways inside and outside the Multi-Modal Transit Hub and the space requirements for community amenities such as gathering places, public information kiosks, public art displays and small convenience-oriented retail uses adjacent to pedestrian corridors.
- Design concepts for the Multi-Modal Transit Hub’s entrances, pedestrian throughways, and station waiting areas.
- Design concept for the King Street grade separation and Victoria Street frontages to encourage ground-level activity and to ensure a high-quality pedestrian environment.
- Determine the pedestrian and cycling facility requirements needed to accommodate intensified employment and residential uses and a higher transit mode share.
- Identify and evaluate existing accessible pedestrian and cycling paths and highly-used routes and determine the need for new or improved connections.

In consultation with City of Kitchener staff, the Region issued a Request for Proposals for the completion of a Preliminary Site Design and Access Plan in January 2012 advertised on the Region’s website, Biddingo, and Ontario Public Buyers Association website. Consultants were
short-listed based on quality factors as defined in the Region’s Consultant Selection Policy and Purchasing By-Law and then interviewed and evaluated equally on understanding and scope of the project and approach; demonstrated ability to deliver innovative and quality results; and strength of presentation. The Selection Committee recommends the contract be awarded to IBI Group as their proposal received the highest overall score.

REPORT:

Project Description

Within a multi-modal transit hub, there exists a natural tension between the transportation function—the need for quick and efficient movement—and the place-making function—the elements that make the hub a desirable and interesting destination, rather than just a place to pass through. The ability of a mobility hub to function successfully depends on the interaction and balance of these two functions.

One of the Transit Hub’s essential functions will be to foster the seamless integration of various transit systems and transportation modes. The Multi-Modal Transit Hub is expected to become a centre of activity in downtown Kitchener, with a high-quality streetscape that attracts development and new opportunities to live, work and play. The proposed site is within walking distance of existing commercial, retail and residential areas, but extensive opportunities for intensification have been identified in the station area. A safe, comfortable and vibrant public realm will encourage walking and cycling and will make transit more attractive to potential users. Providing visual interest at the pedestrian scale through thoughtful landscaping and building design is especially important to improving the comfort of the proposed King Street underpass and contributes to an active street life.

To make the Region’s vision for the Multi-Modal Transit Hub a reality, the Region and the City of Kitchener identified the need for a Preliminary Site Design and Access Plan to prioritize the movement of pedestrians and cyclists in, through and around the Transit Hub.

Preliminary Site Design

The Preliminary Site Design would determine the location, design and interconnection of the Multi-Modal Transit Hub’s entrances, pedestrian throughways, station and waiting areas, as well as cycling and vehicle parking, and truck loading and unloading areas. The successful consulting team will develop innovative solutions to address specific site constraints and to reduce conflicts and increase connections between different transportation modes. The Preliminary Site Design will incorporate the geometric design parameters found in the King Street Grade Separation Final Report (HMM, November 2011) and provide additional features including: the location of bus stops, pedestrian crossings and pedestrian refuge; design concepts for the King Street Grade Separation and Victoria Street frontage to encourage street-level activity and ensure a high-quality pedestrian environment; and flow diagrams that show clear and direct transfers between different transportation modes. This portion of the contract is anticipated to be complete by the end of August 2012 and may be used to influence the phasing of the King Street grade separation and the final design of the Multi-Modal Transit Hub and adjacent streets.

Station Area Access Plan

The Access Plan would determine the pedestrian and cycling requirements of the Transit Hub’s station area. Studies show that people are willing to walk longer distances to reach a transit station in a pedestrian-friendly public realm. In other words, Transit Oriented Development depends on the provision of pedestrian and cycling connections that people actually want to use. The Access Plan would integrate and expand on existing and planned active transportation routes and identify ways to improve the connectivity of surrounding neighbourhoods. Barriers to active transportation will be
identified during this process and the successful consulting team will recommend and prioritize solutions to these barriers. The Access Plan would also need to consider increased demand based on municipal intensification forecasts for the station area, as well as conventional transit and Light Rail Transit ridership forecasts. This portion of the contract is anticipated to be completed by the end of November 2012.

**List of Bids Received:**

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<th>Company</th>
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<tr>
<td>IBI Group</td>
<td>Toronto, ON</td>
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<tr>
<td>Stantec Consulting</td>
<td>Kitchener, ON</td>
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<tr>
<td>Brook McIlroy</td>
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A Consultant Selection Team consisting of City of Kitchener and Regional staff was established to review the submissions. The evaluation criteria used for selecting the successful consultants were in accordance with the Region’s Purchasing By-law and included price as an evaluation factor in addition to the quality factors (understanding and approach, experience, workplan and the project manager and team). The proposals submitted by the three consultants demonstrated a good understanding of the project, capable project teams and experience on a number of similar projects and were shortlisted for full evaluation.

When considering the combination of quality, equity and price criteria, IBI Group scored the highest and its upset fee was the second lowest fee submitted. Based on the above evaluation, the Consultant Selection Team recommends that IBI Group be retained to provide the work of this consultant assignment.

**Schedule**

Subject to Council’s approval of this assignment, the proposed schedule for the assignment is nine (9) months, commencing in March 2012 and ending in November 2012.

**Consultant Upset Limit**

The upset limit for consulting fees (including disbursements) for the Preliminary Site Design and a Station Area Access Plan is $313,109.44, including applicable taxes. The Consultant’s cost by Phase:

<table>
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<th>Phase Description</th>
<th>Cost</th>
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<td>1. Study Initiation</td>
<td>$15,630.00</td>
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<tr>
<td>2. Establish Baseline Information including detailed Topographical Survey and Utilities Survey</td>
<td>$34,968.00</td>
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<tr>
<td>3. Identify Multi-Modal Requirements and Site Design Parameters, including mobile workshops and on-line forums</td>
<td>$32,160.00</td>
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<td>4. Preliminary Site Design</td>
<td>$82,375.00</td>
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<td>5. Station Area Access Plan</td>
<td>$75,900.00</td>
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<td>6. Implementation Framework, including design guidelines document</td>
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<td>Total, not including taxes</td>
<td>$277,088.00</td>
</tr>
<tr>
<td>HST (13%)</td>
<td>$36,021.44</td>
</tr>
<tr>
<td><strong>Total Cost with HST</strong></td>
<td><strong>$313,109.44</strong></td>
</tr>
<tr>
<td>Less Municipal HST Rebate of 86.46% (11.24)</td>
<td>($31,144.14)</td>
</tr>
<tr>
<td><strong>Total Net Cost After HST Rebate</strong></td>
<td><strong>$281,965.30</strong></td>
</tr>
</tbody>
</table>
Area Municipal Consultation/Coordination

Staff from the City of Kitchener were consulted with regard to this initiative, have participated on the consultant selection committee and will continue with participation on the study's project team.

CORPORATE STRATEGIC PLAN:

Actions from the Corporate Strategic Plan that the Multi-Modal Transit Hub Preliminary Site Design and Station Area Access Plan will address are:

3.4.1 Implement the multimodal transportation hub at Victoria and King Streets.

3.2.1 Work with Local Municipalities and other stakeholders to develop an integrated and safe network of regional, local and off-road cycling and walking routes.

2.1.2 Work with area municipalities to develop and implement a comprehensive strategy to promote intensification and reurbanization within existing urban areas.

FINANCIAL IMPLICATIONS:

Funding for the land acquisitions and other costs for the King/Victoria Multi-Modal Hub Project transit facility was provided from the Council-approved $25,000,000 budget for property acquisitions and other project development expenditures for the RT project. Funding for the proposed consulting assignment would be provided from the project budget. Once the Project strategy is finalized and approved by Council, the costs could be transferred to that project budget.

OTHER DEPARTMENT CONSULTATIONS/CONCURRENCE:

Staff from Rapid Transit, Transportation and Environmental Services were consulted in preparation of the terms of reference for this study and were represented on the selection committee.

ATTACHMENTS:

NIL

PREPARED BY:  John Hill, Principal Planner, Transit Development

APPROVED BY:  Rob Horne, Commissioner of Planning, Housing and Community Services
RECOMMENDATION:

THAT the Regional Municipality of Waterloo adopt the amended Implementation Guideline For Road Allowance Dedications On and Adjacent to Known and Potentially Contaminated Sites, as detailed in Report P-12-025, dated February 28, 2012, as a Regional Implementation Guideline, in accordance with Section 12.2.2 of the Regional Official Policies Plan and Section 10.B of the Regional Official Plan.

SUMMARY:

As part of the development review process, the Region of Waterloo can require lands to be dedicated for Regional road allowances at no expense, pursuant to Sections 41, 51 and 53 of the Planning Act. The Regional Official Policies Plan and the Regional Official Plan make provisions for the dedication of road widenings to secure the designated Regional Road Allowance as identified in Schedule A, Designated Road Allowances, in the Regional Official Policies Plan and the Regional Official Plan. In addition, the Regional Official Plan includes the requirement that the dedications be required in accordance with the Regional Implementation Guideline for Road Allowance Dedications on or Adjacent to Known or Potentially Contaminated Sites (Guideline). Regional Council approved the Guideline on June 10, 2009.

This Guideline was intended to provide clarity to the Region’s planning requirements for road allowance dedications. The two key objectives of the Guideline were first to restore contaminated land to an environmental condition suitable for its proposed use as a public right-of-way without creating a barrier to development, and second to mitigate the risk to the Region of acquiring contaminated road allowance dedications. In the absence of guidelines to inform staff decisions, the complexities involved with providing road allowance dedications on and adjacent to potentially contaminated sites add to the uncertainty and affordability of brownfield redevelopment.

The Guideline specifically acknowledged the challenges associated with brownfield redevelopment and intensification, and offered a variety of options for these and other development conditions. Regional staff is increasingly challenged in applying the Guideline to development applications on contaminated properties, particularly in existing built-up areas. After two years of experience with the Guideline, Regional staff is now recommending a modification by replacing a section in order:

- To further facilitate brownfield remediation and intensification in built-up areas, particularly in the interests of supporting compact growth and the optimal use of existing infrastructure;
- To recognize the ability to manage contaminated properties in more economical ways; and
- To proactively plan for the numerous instances where road dedications may involve the conveyance of different, but manageable risks to the Region of Waterloo (corporately); and
- To clarify that the authority of the Commissioner of Planning, Housing and Community Services pursuant to By-Law No. 01-028, to impose conditions to the approval of various...
applications under the Planning Act, in respect of the requirement for the dedication of a road widening shall be exercised in accordance with the Implementation Guideline.

As required in Sections 10.B.11 to 10.B.14 of the Council Adopted Regional Official Plan dated June 16, 2009, and Sections 12.2.2.4 to 12.2.2.6 of the September 2006 Consolidated Regional Official Policies Plan, staff have circulated a draft of the proposed modifications to the current Guideline to the Area Municipalities, the Grand River Conservation Authority (GRCA) and other interested parties. Staff also published notice to the public in The Record, the Cambridge Times and on the Regional website. The City of Kitchener and City of Waterloo have indicated their support of the changes to the Guidelines. No other comments have been received to date.

A public meeting was held on January 31, 2012, in accordance with Regional Official Policies Plan, Section 12.2.2. and the Regional Official Plan, Section 10.B. No comments have been received as a result of the public meeting.

The proposed Implementation Guideline for Road Allowance Dedications on and Adjacent to Potentially Contaminated Sites is appended to this report as Attachment 1.

REPORT:

Intensification within the Region is continuing to increase. In 2010, over 55% of new residential development occurred within existing built-up areas of the Region. This is a significant shift, considering that in 2008, new residential development outside of built-up areas (i.e. in greenfields) was about 67%. Similarly, the percentage of new residential units built within the Central Transit Corridor increased from 10% in 2003 to over 40% in 2010.

Industrial commercial and institutional (ICI) development has occurred at significant levels within built-up areas as well. Examples include the Lang Tannery, the Centre for International Governance Innovation (CIGI), the Waterscape condominiums, and the Schools of Pharmacy and Medicine. In 2010 alone, over $400M in new ICI development occurred inside the built-up area.

New development prospects and proposals within existing built-up areas remain at a high level. This can mean the re-use of existing buildings, the remediation of contaminated sites, and full redevelopment with new buildings. These properties also front on road allowances that have been used for decades to move people and goods, and have been subjected to a variety of uses on adjacent properties.

New development on properties in built-up areas can represent the second, third (or more) generations of property use, a stark contrast to greenfield development, which does not generally involve dealing with pre-existing urban development. Consequently, greenfield lands are typically “clean” from an environment perspective, while “next generation” urban uses in built-up areas often contain a variety of contaminants at varying levels.

When development applications are made to the Region of Waterloo and the seven Area Municipalities, road dedications can be required. In the case of the Region of Waterloo, requirements for Regional road dedications are established in the Regional Official Policies Plan and the Regional Official Plan. These dedications are used for such purposes as road widening, lane additions, day lighting triangles (to protect sight lines at intersections), utilities under and above ground, transit related amenities and to establish curbs, gutters, sidewalks and street lighting.

In addition to establishing road dedication requirements, Regional Council has established an “Implementation Guideline for Road Allowance Dedications on and Adjacent to Known and Potentially Contaminated Sites”. This Guideline generally works effectively in greenfield areas;
however, Regional staff is increasingly challenged in applying the Guideline to development applications on contaminated properties, particularly in existing built-up areas. The following examples demonstrate the challenges:

- Lands to be conveyed for road dedications are frequently contaminated and may not be readily rehabilitated economically;
- Contaminants may continue to migrate from adjacent properties; and
- Contaminants may exist but remain stable if left undisturbed.

Under the current Guideline, Option 4 is as follows:

**OPTION 4 – Convey As-is**

Accept conveyance of land as-is.

This option is considered where the Region’s liability risk is low, both of encountering contamination during construction and of third party liability. Typically, this would include lands that are not environmentally impaired or lands where contamination impacts multiple properties. The Region may elect to take an impacted property where it considers it necessary.

Site conditions where lands will be considered for dedication as-is, with the Region a reliant party to all supporting documentation, include, but are not limited to, sites:

- a) where the applicant may be an innocent third party and is not considered the source of contamination;
- b) where the Region requires the property for strategic purposes and is willing to accept environmental risk on a case by case basis.

**Objectives of Proposed Implementation Guideline Modifications**

As the Region of Waterloo is expected to grow by an additional 200,000 people and 80,000 jobs in the next twenty years, at least 40% of development is mandated by the Province to occur within existing built-up areas. This recommendation is being made to address the following objectives:

- To further facilitate brownfield remediation and intensification in built-up areas, particularly in the interests of supporting compact growth and the optimal use of existing infrastructure;
- To recognize the ability to manage contaminated properties in more economical ways;
- To proactively plan for the numerous instances where road dedications may involve the conveyance of different, but manageable risks to the Region of Waterloo (corporately); and
- To clarify that the authority of the Commissioner of Planning, Housing and Community Services pursuant to By-Law No. 01-028, to impose conditions to the approval of various applications under the Planning Act, in respect of the requirement for the dedication of a road widening shall be exercised in accordance with the Implementation Guideline.

Consequently, Regional staff is now recommending amendments to the current Implementation Guideline to add under the heading “Legal Authority” a new Section 2.4, and, under the heading “Determination of Final Requirements” to replace Option 4 in Section 5.1 with the following new Option 4:

“2.4 Pursuant to Regional Municipality of Waterloo By-law No. 01-028, Council has delegated to the Commissioner of Planning, Housing and Community Services (the “Commissioner”) its authority under the Planning Act in respect of various development applications, including the authority to
impose conditions provided the exercise of such authority substantially conforms with the Region’s then current policies, standards and regulations.”

“OPTION 4 – CONVEY As - is

Accept conveyance of land as – is.

This option is considered in cases where Options 1, 2, and 3 are not appropriate, as determined by the Commissioner, and where the Region’s liability risk is low, both of encountering contamination during construction and of third party liability. Typically, this would include lands that are not environmentally impaired or lands where contamination impacts multiple properties. The Region may elect to take impacted land where it considers it necessary.

Site conditions where lands will be considered for dedication as-is, with the Region a reliant party to all supporting documentation, include, but are not limited to, sites:

a) where the Region requires the property for strategic purposes and is willing to accept environmental risk on a case by case basis, and the applicant may be an innocent third party and is not considered the source of contamination; and

b) where contamination is considered to be of lower environmental risk, including but not limited to circumstances of low, stable and/or declining concentration; low potential for migration; low potential to affect human health; low threat potential for potable groundwater; is located at significant depth; or other circumstances where the risk and potential liability to the Region of Waterloo is considered to be lower as determined on a case by case basis, and the applicant may be an innocent third party and is not considered the source of contamination.

Regional road dedications (in both greenfield and built-up areas) may be accepted in an “as-is” condition, at the discretion of the Commissioner, with the Region a reliant party to all supporting documentation, under the above circumstances.

In instances where a higher level of risk or potential liability is expected than described in this Implementation Guideline, the Commissioner shall seek direction from Regional Council, if no other options are viable under this Guideline.”

The proposed Implementation Guideline for Road Allowance Dedications on and Adjacent to Potentially Contaminated Sites is appended to this report as Attachment 1.

Consultation

As required in Sections 10.B.11 to 10.B.14 of the Council Adopted ROP dated June 16, 2009, and Sections 12.2.2.4 to 12.2.2.6 of the September 2006 Consolidated ROPP, staff have circulated a draft of the proposed modifications to the current Guideline to the Area Municipalities, the Grand River Conservation Authority(GRCA) and other interested parties. Staff also advertised notification in The Record, the Cambridge Times and on the Regional website.

The City of Kitchener and City of Waterloo have indicated their support of the changes to the Guidelines. No other comments have been received to date.

A public meeting was held on January 31, 2012, in accordance with Regional Official Policy Plan, 12.2.2. No comments have been received as a result of the public meeting.

Area municipalities within the Region of Waterloo were also canvassed to determine their current practices or policies for acquiring road widenings on and adjacent to potentially contaminated sites.
The Townships of North Dumfries, Wellesley and Wilmot do not have formal policies however, the Township of Wilmot requires demonstration that the lands are not contaminated if township staff is aware of, or suspect contamination to exist. The Township of Woolwich evaluates each situation where a road widening is required adjacent to a potentially contaminated site to determine if the need for the widening outweighs the risk. For road wideenings adjacent to known contaminated lands, the township does not accept the lands until they are remediated or alternatively, the lands could be accepted with an indemnity agreement subject to review by the township’s legal counsel.

The City of Kitchener requires a Phase I Environmental Site Assessment for all road allowance widenings regardless of known or unknown contamination on the property or surrounding lands. A Phase II ESA is required if recommended by the Phase I ESA. If a site is found to be contaminated, it would need to be remediated and a Record of Site Condition completed prior to conveying the road widening to the city.

The City of Cambridge may require evidence, as a condition of the transfer of the road widening that no environmental contamination has occurred on the lands, that the lands have been satisfactorily restored, or that a record of on-site contaminants is provided.

In addition, Region staff canvassed other nearby municipalities outside of Waterloo Region for their practices and policies.

The City of London has no written policy. If there is no knowledge that the site is contaminated, no environmental work such as a Phase I, Phase II or Record of Site Condition is requested and the road widening is accepted. For gas station sites, or lands that are known to be contaminated, staff will discuss with the City’s Legal Department and may not accept the road widening.

The City of Hamilton has no written policy. Through the development process, if the widening is suspected of being contaminated, developer would be asked to do a study (Phase I and Phase II ESA) to prove the land is not contaminated. The road widening is to be conveyed “free and clear of encumbrances”. If the property is not suspected of being contaminated, no environmental work would need to be completed to facilitate the widening.

Peel Region has no written policy. Phase I and Phase II are required on Regional Roads only for suspected and known contaminated sites. They may require a Risk Assessment or RSC. No environmental report is required for lands not suspected of being contaminated.

The City of Mississauga has a policy that states sites such as gas stations/industrial sites, will require submission of at least a Phase I ESA and possible Phase II ESA. Sites that are adjacent to residential or have been residential in the past do not require any environmental analysis. City is getting more diligent in requesting environmental reports.

**Area Municipal Consultation/Coordination**

The Area Municipalities and the GRCA have been circulated the draft Guidelines City of Kitchener and the City of Waterloo have indicated their support of the changes to the Guidelines. No other comments have been received to date.

**CORPORATE STRATEGIC PLAN:**

Clarifying Regional requirements for road allowance dedications adjacent to known and potentially contaminated land supports Strategic Focus Areas 1 and 2. As prioritized in Focus Area 1, this Guideline supports the Region’s Source Water Protection Plan and ensures reliance to all supporting documentation as to the environmental condition of dedicated lands. Consistent with
Focus Area 2, this Guideline also ensures that Regional policies and procedures support the redevelopment of brownfield sites.

FINANCIAL IMPLICATIONS:

NIL

OTHER DEPARTMENT CONSULTATIONS/CONCURRENCE:

The Guideline has been reviewed by Legal Services, Facilities and Transportation and Environmental Services staff.

ATTACHMENTS:

Attachment 1 - Proposed (updated) Implementation Guideline for Road Allowance Dedications on and Adjacent to Known and Potentially Contaminated Sites.

PREPARED BY: Bruce Erb, Supervisor, Corridor Management

APPROVED BY: Rob Horne, Commissioner of Planning, Housing and Community Services
PROPOSED (UPDATED)
IMPLEMENTATION GUIDELINE FOR ROAD ALLOWANCE DEDICATIONS ON AND ADJACENT TO KNOWN AND POTENTIALLY CONTAMINATED SITES

1.0 DEFINITIONS

1.1 For the purposes of this Guideline, definitions and requirements for environmental site assessments are adopted by reference to Part XV.1 of the Environmental Protection Act, R.S.O. 1990, c. E.19 (the “EPA”) and Parts I and II of associated O. Reg. 153/04 (the “Regulation”). Where definitions and requirements of the Guideline differ from definitions and requirements of the EPA and the Regulation, the definitions and requirements of the EPA and the Regulation shall govern.

1.2 For the purposes of this Guideline, definitions and requirements for Regional source water protection and environmental and human health protection are adopted by reference to the Guideline for the Review of Development Applications Involving Known and Potentially Contaminated Sites, 2009, and to any subsequent documents that supersede the aforementioned Guideline.

2.0 LEGAL AUTHORITY

2.1 Consistent with section 41(8)(a)(i) of the Planning Act, R.S.O. 1990, c. P.13 (the “Planning Act”), as amended, site plans shall not be approved until the Region of Waterloo (the “Region”) has been advised of the development and afforded a reasonable opportunity to require the land owner to provide to the satisfaction of and at no expense to the Region, widenings of highways that are under the jurisdiction of the Region and that abut on the land.

2.2 Consistent with section 51(25)(b) and (b.1) of the Planning Act, the Region has the legal authority to require, as a condition of approval for plans of subdivision, plans of condominium and consents, road widenings that the Region considers necessary.

2.3 Consistent with Policy 11.6.7 of the Regional Official Plan, the Region may obtain road dedications through development applications.

2.4 Pursuant to Regional Municipality of Waterloo By-law No. 01-028, Council has delegated to the Commissioner of Planning, Housing and Community Services (the “Commissioner”) its authority under the Planning Act in respect of various development applications, including the authority to impose conditions provided the exercise of such authority substantially conforms with the Region’s then current policies, standards and regulations.

3.0 IDENTIFICATION OF PROPERTIES SUBJECT TO THIS GUIDELINE

3.1 IDENTIFICATION OF KNOWN AND POTENTIALLY CONTAMINATED SITES SUBJECT TO ROAD ALLOWANCE DEDICATIONS

3.1.1 Sites subject to an official plan amendment, zoning by-law amendment, consent, plan of subdivision, or plan of condominium may be identified in the Region of Waterloo’s Threats Inventory Database (TID) as high and medium potentially contaminated and known contaminated sites through the development application review process. Sites identified during this process that abut a Regional road where a road allowance dedication is required will be subject to this Guideline.
3.1.2 Sites subject to site plan approval may be identified in the Region of Waterloo’s TID as high and medium potentially contaminated sites and known contaminated sites through the site plan review process. Sites identified during this process that abut a Regional where a road allowance dedication is required will be subject to this Guideline.

3.1.2 Sites subject to an official plan amendment, zoning by-law amendment, consent, plan of subdivision, plan of condominium, and site plan that are identified in the Region’s TID as low potential contaminated sites will not be subject to this Guideline.

3.2 IDENTIFICATION OF ROAD WIDENING REQUIREMENTS

3.2.1 For official plan amendments, zoning by-law amendments, plans of subdivision, and plans of condominium the potential requirements for road allowance widening will be identified through the pre-submission consultation meeting. For consent applications and where the pre-submission consultation meeting is waived for an application, the need for a road allowance widening will be identified as early as possible through the application review process.

3.2.2 For site plan applications, the potential requirements for a regional road allowance dedication will be identified through the site plan review process.

4.0 PRELIMINARY REQUIREMENTS

Where the Region requires a road allowance widening as a requirement/condition of approval for official plan amendments, zoning by-law amendments, plans of subdivision, plans of condominium, consent and site plan review on lands known or potentially contaminated, the Region will require that lands to be dedicated be subject to a Phase I Environmental Site Assessment (an “ESA”). If warranted by the Phase I ESA a Phase II ESA will be requested. For Regional due diligence purposes, a letter of reliance must be obtained for all supporting documentation related to the environmental condition of the lands to be dedicated. The final requirements to address the site condition of lands to be dedicated will be determined in consultation with the Region’s Transportation Planning Division.

4.1 To meet the requirements of Section 4.0, lands to be dedicated may be included in any Phase I ESA or Phase II ESA conducted for the lands subject to the Planning Act application or site plan.

4.2 Subject to Section 4.0, where lands subject to a Planning Act application have a Record of Site Condition (RSC) requirement under Ontario Regulation 153/04 of the EPA as a condition of approval for the Region.

a. that portion subject to a road allowance dedication should be excluded from the RSC requirement and thereby excluded from the requirements of any Certificate of Property Use (CPU) imposed on the subject parcel.

b. Where a CPU is already registered for the subject property (including the lands to be dedicated), the proponent will provide satisfactory assurance from the Ministry of the Environment (MOE) limiting the Region’s potential liability for CPU obligations. Assurance may include a discretionary letter of clarification from the MOE District Office.
DETERMINING FINAL REQUIREMENTS

Applicants subject to this Guideline will enter a consultation process with the Region’s Transportation Planning Division to finalize requirements for road allowance dedications on known or potentially contaminated sites.

5.1 FOUR OPTIONS

There are four options that may be considered when addressing contamination on lands to be dedicated. These are: requiring the applicant to remediate the dedicated lands; accepting the conveyance of lands with a risk assessment addressing any remaining environmental impacts; accepting conveyance of lands with suitable security; and finally, accepting the conveyance of lands as-is. The options available under various site conditions are explained below.

OPTION 1 – Remediation

Require the development proponent to remediate the dedication lands to Provincial standards for non-sensitive land uses prior to conveyance to the Region, thereby resolving the environmental impact at no cost to the Region. There may be circumstances where the Region requires remediation to a more stringent standard, such as for the installation of water mains. No RSC is required for the dedicated lands after confirmatory testing by a Qualified Person, as defined in Ontario Regulation 153/04.

Factors where remediation is the preferred alternative with the Region a reliant party to all supporting documentation include, but are not limited to, sites:

a) where remediation of the subject parcel is required prior to development;

b) where the site exposes the Region to certain liability risk; and

c) where road construction and/or utility installation will cause the migration of contaminants.

Notwithstanding a, b, and c of this option, remediation and other alternatives may be required by the Region for the purposes of clean dedications. The Region recognizes that some site conditions make remediation an impractical option. Under these circumstances the following three options apply.

OPTION 2 – Convey with Risk Assessment

Accept conveyance of lands with a risk assessment that is completed by a Qualified Person and which details the remaining contaminants, potential exposure pathways and an assessment health and safety. The Risk Assessment option will require the consent of the Region and may also require a form of security. The risk assessment must confirm that any remaining contamination is deeper than will be encountered during road construction or utility installation, or that such construction will not pose a risk to worker health and safety or the environment.

Site conditions where a risk assessment is considered with the Region a reliant party to all supporting documentation include, but are not limited to, sites:

a) where the property is the source of contamination;

b) where removal of contaminants is impractical or undesirable (buildings or utilities interfere, road work planned or just completed);

c) where road work is planned or recently completed;
d) where contaminants are deep and will not be disturbed; and

e) where remaining contaminants are inert.

OPTION 3 – Convey with Security

Accept conveyance of the lands, with an acceptable form of security. An acceptable form of security will provide the Region with full compensation for contamination associated costs, provide the Region with protection from third party claims, and from any costs related to Ministry of Environment (MOE) actions. Option 3 will only be considered in cases where the proponent has the wherewithal to meet its contractual obligations.

Site conditions requiring lands dedicated to be covered by an acceptable form of security, whereby the Region can recover costs related to contaminants encountered, be protected from third party claims, and from any costs related to MOE actions include, but are not limited to, sites:

a) where there are restrictive site conditions or remediation would be disruptive to existing buildings or infrastructure; and

b) the Region is satisfied that the risk of Regional liability is low for the dedicated lands.

OPTION 4 – Convey As-is

Accept conveyance of land as-is.

This option is considered in cases where Options 1, 2, and 3 are not appropriate, as determined by the Commissioner, and where the Region’s liability risk is low, both of encountering contamination during construction and of third party liability. Typically, this would include lands that are not environmentally impaired or lands where contamination impacts multiple properties. The Region may elect to take impacted land where it considers it necessary.

Site conditions where lands will be considered for dedication as-is, with the Region a reliant party to all supporting documentation, include, but are not limited to, sites:

a) where the Region requires the property for strategic purposes and is willing to accept environmental risk on a case by case basis, and the applicant may be an innocent third party and is not considered the source of contamination; and

b) where contamination is considered to be of lower environmental risk, including but not limited to circumstances of low, stable and/or declining concentration; low potential for migration; low potential to affect human health; low threat potential for potable groundwater; is located at significant depth; or other circumstances where the risk and potential liability to the Region of Waterloo is considered to be lower as determined on a case by case basis, and the applicant may be an innocent third party and is not considered the source of contamination.

Regional road dedications (in both greenfield and built-up areas) may be accepted in an “as-is” condition, at the discretion of the Commissioner, with the Region a reliant party to all supporting documentation, under the above circumstances.

In instances where a higher level of risk or potential liability is expected than described in this Implementation Guideline, the Commissioner shall seek direction from Regional Council, if no other options are viable under this Guideline.”
TO: Chair Jim Wideman and Members of the Planning and Works Committee

DATE: February 28, 2012

FILE CODE: D09/20-RR 70

SUBJECT: IRA NEEDLES BOULEVARD IMPROVEMENTS – HIGHVIEW DRIVE TO ERB STREET WEST

RECOMMENDATION:

THAT the Regional Municipality of Waterloo initiate the detailed design for the widening to 4 lanes of Ira Needles Boulevard and associated improvements from Highview Drive to Erb Street West in 2012 and advance construction from 2019 to 2015, to be confirmed through the 2013 budget process, all as described in Report No. P-12-026 dated February 28, 2012.

SUMMARY:

The Corridor Study for Ira Needles Boulevard was originally completed in 1988, with updates that included additional technical work and public consultation between 2002 and 2004. The construction of the road began in 2004 and Ira Needles Boulevard was fully opened in the fall of 2007. In 2009, there were two Area Municipal Official Plan Amendments that redesignated approximately 100 acres of land in the area from industrial to broader commercial uses.

Traffic volumes are higher than the 2002 traffic forecasts for some sections of Ira Needles Boulevard but consistent with traffic forecasts completed as part of the 2009 Official Plan amendments noted above.

With Phase 1 of The Boardwalk (Ira Needles Commercial Centre) nearing completion (over 600,000 ft²), operations on Ira Needles Boulevard are considered to be within acceptable limits. Short term delays in the peak hours are beginning to be experienced and minor improvements to the intersections of Ira Needles Boulevard at Highland Road, Victoria Street and Erb Street West have been recommended to accommodate future development. Ira Needles Boulevard was planned as a 4-lane road and was initially designed with flexibility to accommodate this in the future (i.e. utility location, bridge deck width).

The practical capacity of Ira Needles Boulevard can be increased by extending the entering and exiting lanes at the roundabouts because it will encourage use of both lanes in the roundabout. However, based on public feedback and in order to avoid interrupting traffic in the area twice, staff is recommending to also proceed with the completion of the detailed design in 2012 for the widening of Ira Needles Boulevard to 4 lanes, with construction in 2015 instead of the currently planned 2019 start date. A public meeting would also be required as part of detailed design prior to proceeding with the widening.

The Highway 7 & 8 construction between 2012 and 2014 will result in lane closures on Fischer Hallman Road, Westmount Road and Homer Watson Boulevard that will put additional pressure on all north/south routes in this corridor. The construction of Ira Needles Boulevard would be coordinated with this project. A marketing campaign will also be undertaken to promote alternative modes and off peak travel during construction.
REPORT:

Ira Needles Boulevard is a north-south urban arterial (Community Connector) with two through traffic lanes from Erb Street West to Highview Drive and four through traffic lanes from Highview Drive to Highway 7/8 connected through a series of modern roundabouts (Attachment A).

The Environmental Study for Ira Needles Boulevard was originally completed in 1988, recognizing the need for a west side arterial extending from Highway 7/8 to Erb Street West to serve the westerly expansion of the Cities of Kitchener and Waterloo. The Environmental Study was updated in 2002 and identified the preferred design for Ira Needles Boulevard as a 4-lane undivided urban arterial with bicycle lanes, to be constructed initially with two through traffic lanes and bicycle lanes. The road was constructed such that costs would be minimized when expanding to 4 lanes. The decision to initially construct Ira Needles Boulevard as a two lane road was based on a number of factors, including:

- The peak hour traffic forecasts for the horizon year (2017) were approaching the capacity of a traffic control signal for a two lane road but less than capacity of a roundabout;
- The use of roundabouts can increase the theoretical capacity of an intersection by up to 30% over a traffic control signal. This additional capacity extends the practical length of time a two lane road could operate;
- The overall collisions associated with a four-lane road would be higher than on a two-lane road. Collisions at the roundabouts would also be higher as a result of increased use of the curb lanes;
- The maintenance costs of a four lane road are about 60% greater than a two lane road. Generally, these cost savings are equivalent to additional costs incurred by widening a road later after a time period of 10 years;
- When determining the need for road improvements, broader transportation network characteristics are considered. In the north-south direction on the west side of Kitchener/Waterloo, there was available capacity along parallel roads such as Fischer-Hallman Road and Westmount Road; and,
- Prematurely widening a road induces travel demand. Induced demand is generally new trips created by a new road that are attracted by the new capacity in the network that would not otherwise be taken. These trips include discretionary trips (trips that don’t need to be taken during peak hours) and increased trip lengths (people are willing to drive longer as travel times are reduced). Induced travel demand can be contrary to broader objectives such as energy and greenhouse gas reductions.

Since the 2002 decision to construct Ira Needles Boulevard as a 2 lane road, there have been additional factors that have or will influence travel patterns on the west side of Kitchener/Waterloo including:

- **Changes in Designated Land Uses**
  Approximately 100 acres of land adjacent to Ira Needles Boulevard were redesignated and rezoned in 2009 from light industrial to allow over 1 million square feet of commercial development. Traffic studies completed during this land use change indicated there was sufficient capacity to accommodate this additional traffic.
- **Introduction of Fischer-Hallman Express**
  The introduction of express transit along Fischer-Hallman Road is the start of several transit enhancements that are intended to reduce single occupant vehicle travel, particularly in peak periods by offering viable transportation choices. Further transit improvements planned include the introduction of the University Avenue Express that will connect the Boardwalk at Ira Needles Boulevard and University Avenue to the University area and then to the RIM campus at Northfield Drive and University Avenue.
**Observations of Traffic Operations on Ira Needles Boulevard**

Traffic volumes are higher than the 2002 traffic forecasts for some sections of Ira Needles Boulevard but consistent with traffic forecasts completed as part of two Area Municipal Official Plan amendments in 2009.

A study was undertaken to determine the travel times on Ira Needles Boulevard compared to those on Fischer-Hallman Road. The study concluded that travel times on Ira Needles Boulevard are about 15 percent shorter on average than on the parallel, signalized road because delays are shorter at roundabouts than at traffic signals. The exception of this is during the afternoon peak hour when travel times on Ira Needles Boulevard are similar to those experienced on Fischer Hallman Road. Also, discretionary trips account for approximately 20 percent of all trips during the afternoon peak period. It is expected that less discretionary trips will be taken as delay increases. Traffic counts on parallel roads are indicating that traffic volumes have decreased, indicating a driver preference to use Ira Needles Boulevard due to the reduced delays provided by the roundabouts.

Even with the increases in traffic, there is still some spare capacity on Ira Needles Boulevard. Queues have been observed for short periods and can be a result of short term peaks in traffic demand, slower moving vehicles/trucks, temporary incidents along the road or improper use of the roundabout. It has also been observed that many drivers only use one lane through the roundabout even though two lanes are available. This also results in a reduction in the capacity of each roundabout.

**Regional Transportation Master Plan (RTMP)**

The Regional Transportation Master Plan (approved in June 2010), includes a recommendation to widen Ira Needles Boulevard to four lanes from Erb Street West to Highview Drive in the 5 to 10-year time frame. This is consistent with the 2012 Transportation Capital Program (TCP) that has the construction of the widening of Ira Needles Boulevard scheduled for completion in 2019. However, the 2012 TCP also includes budget in 2012 and 2013 to complete the necessary design requirements to allow Ira Needles Boulevard, from Highview Drive to Erb Street West, to be widened earlier than 2019.

**Development Update**

The Boardwalk is the most significant development on Ira Needles Boulevard and is located at University Avenue and will ultimately consist of approximately 1,100,000 square feet of retail/office space. Phase one of the Boardwalk development is nearing completion and includes:

- Three big box stores (open),
- Movie Theatre (open),
- Fashion Village (will start construction soon),
- Restaurants (open),
- Bank (last one will start construction soon), and
- Gym (open).

Currently, planning is underway for the office block. Construction of the office block will be required to start before more retail is permitted. This will also include approval to remove the holding symbol from the zoning on the site. The holding symbol was placed on the zoning in the Waterloo portion in order to ensure office development occurs before more retail development. As the site develops into more of a mixed-use node, increases in traffic will be partially offset by the increase in internal trips on site. There will also be trips made to the site for multiple purposes resulting in less trips on the adjacent road networks than would occur with a single purpose site.

An interim traffic report was submitted for the Boardwalk to the Region that compared the expected versus actual trips being generated by the development and analysed the operations along Ira Needles Boulevard. The results of the analysis are:
• Background traffic on Ira Needles Boulevard traffic is growing as expected, about 1 percent per annum, with the exception of the section between Victoria Street and Highland Road (1.5 percent);
• Actual trips to/from The Boardwalk are less than expected; and
• With Phase 1 of The Boardwalk nearing completion (over 600,000 ft²), the operations on Ira Needles Boulevard are considered to be within acceptable limits. Short term delays in the peak hours are beginning to be experienced and improvements to the intersections of Ira Needles Boulevard at Highland Road, Victoria Street and Erb Street West are recommended to accommodate future development.

Public Feedback
Staff has received calls asking about the operations along Ira Needles, in particular with concern about the delays between Highland Road and University Avenue and approaching Erb Street northbound.

Conclusions
• Today, Ira Needles Boulevard is not operating at capacity for the full peak hour and as people become familiar with roundabouts they will operate more efficiently.
• There has been some queuing observed at the roundabouts along Ira Needles Boulevard but has generally been intermittent in nature due to temporary events occurring within the roundabout (short term peaks in traffic demand, slower moving vehicles/trucks, temporary incidents along the road or improper use of the roundabout).
• With Phase 1 of The Boardwalk nearing completion (over 600,000 ft²), the operations on Ira Needles Boulevard are considered to be within acceptable limits. Short term delays in the peak hours are beginning to be experienced and improvements to the intersections of Ira Needles Boulevard at Highland Road, Victoria Street and Erb Street West are recommended to accommodate future development.
• Ira Needles Boulevard was planned as a 4-lane road and was designed initially with flexibility to accommodate this width in the future (i.e. utility location, bridge deck width).
• The practical capacity of Ira Needles can be increased by extending the entering and exiting lanes at the roundabouts (will encourage use of both lanes in the roundabout). This would require the interruption of traffic for 2-3 months in 2013. The widening of Ira Needles Boulevard by 2019 as outlined in the Transportation Capital Program would also require a 3-4 month interruption of traffic. Therefore, based on public feedback and not to interrupt traffic in the area twice within six years, staff is recommending proceeding with the complete widening of Ira Needles Boulevard by 2015.

Recommended Next Steps
The practical capacity of Ira Needles Boulevard can be increased by extending the entering and exiting lanes at the roundabouts because it will encourage use of both lanes in the roundabout. However, based on public feedback and in order to avoid interrupting traffic in the area twice, staff are recommending proceeding with the completion of the detailed design for the widening of Ira Needles Boulevard in 2012 (construction by 2015). A public meeting would be required as part of detailed design prior to proceeding with the widening.

Other Considerations
The construction of Highway 7 & 8 and lane closures on Fischer-Hallman Road, Westmount Road and Homer Watson Boulevard between 2012 and 2014 will put additional pressure on all north/south routes in this corridor. It is proposed that the scheduling of the widening of Ira Needles Boulevard be coordinated with this project. The widening of Ira Needles Boulevard could occur as soon as 2014 but by 2015 at the latest. It is proposed that a marketing campaign will be undertaken to promote alternative modes, alternative routes and off peak travel during construction.
Area Municipal Consultation/Coordination

A copy of this report has been forwarded to the City of Kitchener and the City of Waterloo.

CORPORATE STRATEGIC PLAN:

This project is consistent with the development of Strategic Focus Area 2 (Growth Management and Prosperity) to develop, optimize, and maintain infrastructure to meet current and projected needs.

It is also consistent with the development of Strategic Focus Area 3 (Sustainable Transportation) to promote, and integrate active forms of transportation (cycling and walking).

FINANCIAL IMPLICATIONS:

Funds are included in the 2012 Transportation Capital System Expansion Program (funded from the Development Charge Reserve) budget for design of the road widening in 2012 ($200,000) and includes $9,800,000 for the design and construction of this project in 2015 to 2019. Pending the outcome of this report, the construction budget would need to be advanced to 2014 – 2015, and would be considered as part of the 2013 Budget process.

OTHER DEPARTMENT CONSULTATIONS/CONCURRENCE:

Transportation and Environmental Services and have been consulted during the preparation of this report.

ATTACHMENTS:

Attachment A - Ira Needles Boulevard

PREPARED BY: Paula Sawicki, Manager, Strategic Transportation Planning

APPROVED BY: Rob Horne, Commissioner of Planning, Housing and Community Services
TO: Chair Jim Wideman and Members of the Planning and Works Committee

DATE: February 28, 2012
FILE CODE: A01-01

SUBJECT: CONSULTANT SELECTION RESULTS – 2007 TO 2011

RECOMMENDATION:

For information.

SUMMARY:

The 2007 to 2011 consultant selection results show that the Region is selecting the consultant with the highest quality score in the majority of selections, and on average the selected consultant’s fee is 7% lower than the average upset fee of the shortlisted consultants. The Region’s consultant selection process allows both qualification competition and price competition, is effectively guarding against excessively high consultant costs, and is resulting in selection of consultants based on quality tempered by price. During the administration of consultant services agreements, Region staff are seeing that consultants selected under the Region’s consultant selection process are working in the Region’s long term interest. They are examining best solutions fully during the design phase so that completed infrastructure projects are designed and built to optimize capital, operating and maintenance costs, resulting in low life-cycle costs for the Region’s infrastructure projects.

The Region’s consultant selection process has attracted interest from both consultants and other owners of public sector infrastructure who have heard “good things” about our procurement process. Region staff continue to receive enquiries from other municipalities across Ontario about our process for selecting consultants.

REPORT:

1. Background

At the September 6, 2011 meeting of Administration and Finance Committee, staff was requested to provide a report on consulting fees for Regional capital projects including comparison to benchmarks. In response to this request, staff has researched project files and gathered information on consultant selections approved by Regional Council for the years 2007 to 2011 inclusive. The gathered information pertains to consultant selections administered by Transportation and Environmental Services as well as consultant selections administered by Facilities Management and Fleet Services of Corporate Resources. Staff has thoroughly analyzed this information and has prepared this Report to present this analysis to Committee for its information.

2. The Region’s Consultant Selection Process

The Region’s current consultant selection process has been in place for 15 years, and was recently reviewed and updated in the 2010 update to the Region’s Purchasing Bylaw.
It is based on a Value Assessment philosophy where Value Assessment is an objective, formalized method of balancing Quality and Price with the aim of deciding which consultant proposal for a particular assignment provides best Value for Money. Value Assessment is used by organizations that need to demonstrate financial accountability consistent with public interest. Value Assessment is also used to comply with policy requiring competition, while still allowing quality to be taken into account with the objective of obtaining best value for money expended. Effective Value Assessment consultant selection processes are open, transparent, and guard against excessively high costs.

The Region’s consultant selection process was designed to be consistent and uniform across the organization, fully documented and clearly communicated to prospective consultants. It also was designed to provide fair and equitable access to assignments by all qualified consultants and to be cost-effective with respect to staff costs to administer and consultants’ cost to respond to requests for letters of interest. The objective of the selection process is for consulting assignments to be awarded on the basis of technical merit, competence, expertise and price, while at the same time achieving the “right” balance between consultant quality and price. The selection process acknowledges it is not in the Region’s interest that price be the only factor in awarding consulting services assignments.

3. Consultant Selection Results – 2007 to 2011

For the years 2007 through 2011 inclusive, Council approved 72 consultant selections related to Class Environmental Assessment, design and contract administration services for Region capital projects. The total value of these consulting assignments was approximately $32 million and represented approximately 7.5% of the estimated $420 million value of the capital projects for which these consulting services were provided. The 72 consultant selections were for the provision of consulting services for a diverse range of capital projects including roads, bridges, airport infrastructure; water treatment plants, reservoirs, pumping stations and watermains; wastewater treatment plants and forcemains; landfill cell expansions, leachate collection systems and waste transfer facilities; as well as for facilities projects related to the Region’s public buildings. After reviewing the files for these capital projects and analyzing the gathered information, staff summarizes the findings as follows:

- From a Quality assessment perspective, the selected consultant had the highest quality score for 97% of consultant selections.
- From a Price assessment perspective, the selected consultant had the lowest upset fee for 63% of consultant selections and the 2nd lowest upset fee for 34% of consultant selections.
- 80% of the time, the selected consultant’s upset fee is lower than the average upset fee for the shortlisted consultants.
- On average, the selected consultant’s upset fee is 7% lower than the average upset fee for the shortlisted consultants.

These results show the Region’s consultant selection process is selecting the consultant with the highest Quality score in the large majority of consulting assignments. Generally, the cost of consulting services accounts for only a very small percentage (typically about 1.5%) of the life-cycle cost of completed infrastructure projects; and yet the Quality of consulting services will have far reaching effects over the life-cycle of these projects. Selecting consultants with high Quality scores better assures that consulting assignments are scoped sufficiently to allow consultants to examine best solutions fully. This in turn results in designs that effectively optimize capital, operating and maintenance costs, thereby providing low life-cycle costs over the service of Region infrastructure.

Another way of reporting the 2007 to 2011 results is to state that the Region is getting the highest quality-ranked consultant at the lowest upset fee for 63% of its consultant selections. Based on the 2007 to 2011 results, staff believes the Region’s consultant selection process is working effectively and appears to be successfully balancing the benefits of one consultant’s low price with the benefits of another consultant’s strong qualifications. The 2007 to 2011 results are showing that extreme results (such as always choosing the highest quality consultant at the highest price or the lowest quality ranked consultant at the lowest price) are being avoided.
4. Performance Benchmarks for Consultant Selections

Capital projects range significantly in size and complexity from minor renovations, equipment replacements or road resurfacing projects to large and complex road grade separations, wastewater treatment plant upgrades or major building expansions in operating facilities. Because each capital project has its own unique needs and characteristics, different projects can require significantly different levels of consultant services during the planning, design and construction administration phases of a project. For projects where equipment purchases are a large part of the total construction cost, often with less design required, consulting fees tend to be considerably lower as a percentage of construction cost. Because of this, there, are significant variances in the scope and effort of consulting services required by the Region’s diverse range of capital projects. This in turn makes it very difficult to establish general performance measures that can benchmark or allow meaningful comparison of consulting costs on a project to project basis.

Rather than benchmarking on a project basis, the Region does gather performance data on a Capital Program basis that measures the cost of consulting services for the design and construction of completed capital projects. Since 1997, the Design and Construction Division has been gathering and monitoring this information annually as a component of its Division-wide Performance Management System. Facilities Management and Fleet Services has also been gathering and monitoring this type of information for its large capital projects since 2004. The results for the last 5 years are presented as follows:

Consulting Cost Performance Benchmarks for Completed Capital Projects

<table>
<thead>
<tr>
<th>Consultant Detail Design and Construction Administration Cost as a % of Construction Cost</th>
<th>Program Benchmark</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>For Transportation Base Capital Program</td>
<td>14%</td>
<td>12.4%</td>
<td>11.6%</td>
<td>N/A</td>
<td>11.9%</td>
<td>N/A</td>
</tr>
<tr>
<td>For Transportation Expansion Capital Program</td>
<td>14%</td>
<td>10.5%</td>
<td>11.7%</td>
<td>12.0%</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>For Environmental Capital Program</td>
<td>12%</td>
<td>7.0%</td>
<td>10.0%</td>
<td>8.2%</td>
<td>11.4%</td>
<td>N/A</td>
</tr>
<tr>
<td>For Facilities Capital Program</td>
<td>8%</td>
<td>7.7%</td>
<td>4.9%</td>
<td>5.4%</td>
<td>5.4%</td>
<td>7.3%</td>
</tr>
</tbody>
</table>

**Note:** N/A means no consultant-managed capital projects were completed in this year.

The program benchmarks (in the table above) were developed by gathering and analyzing the final cost of detailed design and construction administration services for numerous completed in-house and consultant-managed capital projects at the Region of Waterloo and by comparing to industry standards where applicable. For the years 2007 through 2011 inclusive, the cost of consultant services has been trending lower than the benchmarks, largely because the Region has been implementing several high-cost capital projects over this period. Because of economies of scale, high value capital projects generally result in lower consultant costs when expressed as a percentage of construction cost.

5. Consultant Selection Conclusions

The analysis of 2007 to 2011 consultant selections demonstrates that the Region is getting quality consulting services at fair prices, achieving good value for money and the consultant selection process is working effectively in the Region’s interest. The process is equitable, open and transparent, and appears to be successfully balancing the benefits of one consultant’s low price with the benefits of another consultant’s strong qualifications. The process allows both qualification and price competition.
The 2007 to 2011 consultant selection results show that 97% of the time the Region is selecting the consultant with the highest quality score, and on average the selected consultant’s fee is 7% lower than the average upset fee of the shortlisted consultants. Staff believes the Region’s consultant selection process is effectively guarding against excessively high consultant costs and is resulting in selection of consultants based on quality, tempered by price. During the administration of consultant services agreements, Region staff are seeing that consultants selected under the Region’s consultant selection process are working in the Region’s long term interest. They are examining best solutions fully during the design phase so that completed infrastructure projects are designed and built to optimize capital, operating and maintenance costs, resulting in low life-cycle costs for the Region’s infrastructure projects.

The Region’s consultant selection process has attracted interest from both consultants and other owners of public sector infrastructure who have heard “good things” about our procurement process. Region staff continue to receive enquiries from other municipalities across Ontario about our process for selecting consultants.

CORPORATE STRATEGIC PLAN:

The Region’s Value Assessment consultant selection process supports Focus Area Five – Service Excellence of the Strategic Plan by meeting the objective to ensure Regional programs and services are efficient and effective and demonstrate accountability to the public.

FINANCIAL IMPLICATIONS: nil

OTHER DEPARTMENT CONSULTATIONS/CONCURRENCE:

The Procurement and Supply Service Division of the Finance Department was consulted in the preparation of this Report.

ATTACHMENTS

NIL

PREPARED BY: Bill Brodribb, Director, Design and Construction
Charles Allen, Manager, Facilities Engineering

APPROVED BY: Thomas Schmidt, Commissioner Transportation and Environmental Services
Gary Sosnoski, Commissioner, Corporate Resources
TO: Chair Jim Wideman and Members of the Planning and Works Committee

DATE: February 28, 2012          FILE CODE: D09-01

SUBJECT: BROWNFIELDS FINANCIAL INCENTIVE PROGRAM UPDATE

RECOMMENDATION:

THAT the Regional Municipality of Waterloo take the following action regarding the Region’s Brownfields Financial Incentive Program, as described in Report No. P-12-009/F-12-016, dated February 28, 2012:

a) Direct staff to develop a framework to formalize the prioritization of financial incentives within key reurbanization areas and ensure alignment with other strategic Regional objectives;

b) Continue to work with the Area Municipalities to refine the Brownfield Financial Incentive Program’s three funding components.

SUMMARY:

In October 2006, Regional Council approved the framework for a Regional Brownfields Financial Incentive Pilot Program (now referred to as the Brownfields Financial Incentive Program (BFIP), as described in Report No. P-08-084). The goals of this Program are to encourage the remediation and redevelopment of brownfield sites, to promote reurbanization, and to reduce the outward movement of the urban area in support of the Regional Growth Management Strategy and the Province’s Places to Grow: Growth Plan for the Greater Golden Horseshoe. There has been significant interest in the program by the private sector and the program is proving to be successful in helping to achieve these goals.

Overall, 18 applications have been approved and approximately $1.7 million in assistance has been provided to date through the BFIP program’s three components (Phase II ESA Grants, RDC Exemptions and the joint Tax Increment Grant program). This has contributed to the potential remediation and redevelopment of 11 sites within the Cities of Cambridge, Kitchener and Waterloo. In addition, approximately 285 new residential units and 441,000 sq. feet of non-residential space have been redeveloped (with building permits valued at approximately $50.5 million dollars). In 2010, the Region of Waterloo was also the recipient of the ReNew 3rd Place Award for the "Best Place to Invest in Canada" as chosen by a panel of North American experts. This award was focused on the opportunities for investment particularly within the built up urban areas of municipalities and the associated programs and assistance (such as the BFIP) available to facilitate such development.

The Region and Area Municipalities have successfully approved three major joint Tax Increment Grant (TIG) applications for the projects known as The Tannery District (Kitchener), Waterscape on the Grand River (Cambridge) and 750 Lawrence St. (Cambridge). The Tannery District (winner of the 2011 CUI Brownie award for best project) is a highly successful adaptive reuse project that transformed a contaminated manufacturing facility into a mixed used complex now employing
approximately 1000 people. Waterscape on the Grand River (winner of a 2010 CUI Brownie Award) resulted in the redevelopment of an extremely challenging underutilized and environmentally impacted site into 113 new residential units and the potential for additional residential and hotel/convention space in the future. Lastly, the TIG for 750 Lawrence Street allowed for the remediation of a long-term brownfield site and its renewal as a 103 townhouse infill development.

The joint TIG program has provided bankable financial commitments to the local development industry in partnership with the Area Municipalities that have implemented the required Community Improvement Plans (Cambridge and Kitchener). The Region’s contributions to these programs are not payable until the remediation and redevelopment is completed and reassessed by the Municipal Property Assessment Corporation (MPAC). In some cases, payment may take many years, could be less than expected or may not occur at all if the remediation costs are recovered through other elements of the BFIP (i.e. Regional Development Charge exemption). This has resulted in two levels of Regional financial “commitments”: “finalized Regional TIG commitments” for completed projects where the payment schedule has been confirmed, and “potential Regional TIG commitments” for projects where the remediation and redevelopment is not yet complete and the payment schedule is not yet confirmed, or may not be required in full or in part. To date, there are only 2 finalized Regional TIG commitments totalling a value of $862,407 with a determined payment schedule beginning in the next two-years. There are potential Regional TIG commitments in the amount of $4,771,414 which are contingent upon the satisfaction of individual terms and conditions for each TIG agreement and may not be payable for many years and/or could result in a payment less than indicated (or not at all). For example, Waterscape 2 and the South Parcel is contingent upon remediation and redevelopment being completed in the future and the TIG commitment for 750 Lawrence Street will only be required if the developer is unable to obtain the development charge exemptions for brownfields currently approved for the project (e.g. a change in the by-law or the expiry of the 5 year exemption period).

One time funding for the BFIP in the amount of $2.5 million was provided for in the approved 2006 Regional budget. On October 5, 2011, Council approved a staff recommendation that the Environmental Insurance Reserve Fund be eliminated and a portion of the Reserve Fund in the amount of $2.5 million dollars be transferred to the BFIP to provide additional funding flexibility in the short-term. Consequently, a total of $5.0 million has been allocated for the implementation of this program. The $5.0 million will enable funding of $564,248 for Phase II ESA Grants, $4,298,830 for TIGS and $136,922 for program development costs including Area Municipal CIP implementation. Given the break-down of approved financial commitments to date and all the variables impacting the potential TIG commitments, sufficient funding is still available for the potential TIG commitments and to continue with the BFIP program over the short-term. New TIG applications will continue to be considered by Regional Council on a case-by-case basis, with funding sources identified as appropriate.

This report provides more detailed information regarding the status of the BFIP implementation and approved funding, and an overview of experience gained through the implementation of the BFIP to date. It also includes a summary of the collaborative efforts of the Region and Area Municipalities in terms of overall program implementation and development of Community Improvement Plans for required for the joint TIG program. Further, this report outlines a discussion of potential future directions with respect to the strategic provision of financial incentives for the purposes of promoting and facilitating reurbanization as well as next steps with respect to the development of a sustainable financial incentive funding model.
REPORT:

In October 2006, Regional Council approved the framework for a Regional Brownfields Financial Incentive Pilot Program - now referred to as the Brownfields Financial Incentive Program (BFIP) as per Report P-08-084. The goals of this Program are to encourage the remediation and redevelopment of brownfield sites, to promote reurbanization, and to reduce the outward movement of the urban area in support of the Regional Growth Management Strategy (RGMS), the Province’s Places to Grow Growth Plan and the Regional Official Plan approved by Regional Council in 2009.

The BFIP consists of four components:

1. Phase II Environmental Site Assessment (ESA) Grants - a cost sharing program which funds up to 50 percent of eligible costs associated with the completion of a Phase II ESA, to a maximum of $40,000;
2. Regional Development Charge (RDC) Exemptions – the RDC By-Law provides for development charge exemptions up to the total eligible remediation costs associated with the clean up of contaminated sites outside the core areas;
3. Tax Increment Grants (TIG) – a joint program with participating Area Municipalities to further help off-set remediation costs by providing the developer with a grant based on the increased municipal tax increment after the remediation and redevelopment is complete; and
4. Funding for Area Municipalities to assist in amending or developing Community Improvement Plans (CIPs) to provide for the implementation of the joint TIG program.

Regional Council committed $2.5 million in funding for the program through the 2006 budget process. One year later, in October 2006, the BFIP framework was approved by Regional Council. Since then, steady implementation of the program has occurred with periodic updates to Regional Council as well as a further $2.5 million of funding approved in October 2011. Consequently, the BFIP has been allocated $5 million in Regional funding. For a summary of the BFIP Implementation timeline, please see Attachment 1.

Status of the Brownfields Financial Incentive Program (BFIP)

Property Owner/Developer Interest

Since the initial implementation of the BFIP in 2007, there have been over 75 inquiries in which Regional staff have met with or provided information to those interested in participating in the program. Approximately 15 per cent of these inquiries have resulted in the submission and approval of applications to one or more components of the program (18 applications - 11 sites total). Staff provide “One Window Service” to potential applicants and are available to guide them through the various BFIP program components. Staff coordinate with Area Municipalities and meet with interested parties to discuss site challenges, environmental remediation approaches, proposed development plans and potential eligibility for the BFIP program.

Applications

As of January 2012, several applications under the first three components of the BFIP have been received and approved. The following table summarizes the number of applications as well as the approved potential financial commitments they represent.
BFIP Applications to Date

<table>
<thead>
<tr>
<th>Program Component</th>
<th>Applications Received</th>
<th>Applications Approved</th>
<th>Potential Maximum Value of Assistance</th>
<th>Actual Assistance Provided to date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase II ESA</td>
<td>17</td>
<td>11</td>
<td>$270,855</td>
<td>$270,855</td>
</tr>
<tr>
<td>RDC Exemption</td>
<td>4</td>
<td>4</td>
<td>$5,097,418*</td>
<td>$1,412,618</td>
</tr>
<tr>
<td>Joint TIG</td>
<td>7</td>
<td>3</td>
<td>$5,633,821**</td>
<td>TBD***</td>
</tr>
<tr>
<td>Total</td>
<td>28</td>
<td>18</td>
<td>$11,002,094</td>
<td>$1,683,473</td>
</tr>
</tbody>
</table>

*Final Regional Development Charges will be based on the rates in place at time of Building Permit issuance. Any Regional Development Charge assistance provided as part of the Regional DC By-Law is funded through program budgets, similar to other RDC exemptions.

**Regional contributions only, which are capped as described below.

*** No TIG payments have been made to date, however $862,407 is confirmed and expected to be paid over the next few years as redeveloped properties are re-assessed.

The potential maximum value of assistance under the Joint TIG program includes two levels of Regional financial "commitments": "finalized Regional TIG commitments" for completed projects where the payment schedule has been confirmed, and "potential Regional TIG commitments" for projects where the remediation and redevelopment is not yet complete and the payment schedule is not yet confirmed. To date, there are only 2 finalized Regional TIG commitments totalling a value of $862,407 with a determined payment schedule beginning in the next two-years. There are potential Regional TIG commitments in the amount of $4,771,414 which are contingent upon the satisfaction of individual terms and conditions for each TIG agreement and may not be payable for many years and / or could result in a payment less than indicated, or none at all. For example, Waterscape 2 and the South Parcel is contingent upon remediation and redevelopment being completed in the future and the TIG commitment for 750 Lawrence Street will only be required if the developer is unable to obtain the development charge exemptions for brownfields currently approved for the project (e.g. a change in the by-law or the expiry of the 5 year exemption period).

For both the TIG and RDC exemption program, it should be noted that there has been a difference between the maximum value of assistance approved (Regional portion only) and the actual value of assistance provide to the developer. In the case of the RDC exemptions, the final assistance provided can only be calculated after the remediation is complete and redevelopment has been initiated. The final amount of assistance provided through this program depends on the maximum eligible remediation costs (capped at approval) and the final number and type of units or square footage being developed as well as the RDC rates in place at the time of building permit issuance.

In the case of the joint TIG program, the maximum value of assistance is the total eligible remediation expenses (capped at time of Regional approval and reduced accordingly after actual costs and other incentives are determined). The actual amount of assistance and the payment schedule are determined only after the redevelopment is fully complete and one year after the property has been reassessed by the Municipal Property Assessment Corporation (MPAC). Consequently, while the total potential maximum value of the TIGS ("finalized" and "potential") is $5,633,821, it is expected that the actual maximum will be considerably less due to all the variables involved.

It should also be noted that of the 10 applications received but not approved, one was not eligible (based on the approved eligibility criteria), one was withdrawn and 8 are considered "incomplete" and still pending review once all outstanding information/requirements have been submitted. All applicants have been advised that funding is limited and that the final decision on any TIGs must be made by Regional Council.
BFIP Funding

One-time funding for the Brownfields Financial Incentive Program in the amount of $2.5 million was provided for in the approved 2006 Regional budget. Of the $2.5 million budget, actual expenditures total $357,777. A further $1,798,830 has been committed towards future TIG expenditures and another $343,393 is being held to fund potential Phase II ESA Grants as well as to provide funding for Area Municipal CIP Implementation in 2012. As per the report P-09-058, with the approval of the Regional Development Charge By-Law No. 09-024 and the inclusion of the Brownfield Regional Development Charge Exemption, any assistance provided as part of the by-law is funded through program budgets (Roads, Water, Wastewater and others), similar to other development charge exemptions. As a result, RDC exemptions have not been included in the following accounting of the original budget.

On October 5, 2011 (per Report F-11-063), Regional Council approved a staff recommendation that the Environmental Insurance Reserve Fund be eliminated and a portion of the Reserve Fund in the amount of $2.5 million dollars be transferred to the Brownfields Financial Incentive Program. This resulted in a total budget allocation to date of $5,000,000. This additional funding was provided to cover $2,000,000 of the unfunded Regional TIG Commitments made to date as well as provide $500,000 in additional funding for TIGs or other components as required. It also ensured that additional resources were available to fund the program over the short-term until a sustainable funding strategy is developed. The following table outlines the funding allocations of the overall $5.0 million BFIP budget to date.

<table>
<thead>
<tr>
<th>Funding Areas</th>
<th>Expenditures</th>
<th>Finalized TIG Commitments</th>
<th>Remaining Budget*</th>
<th>Total Allocated Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase II ESA Grant</td>
<td>$270,855</td>
<td>$293,393</td>
<td>$564,248</td>
<td></td>
</tr>
<tr>
<td>Joint TIG</td>
<td></td>
<td>$862,407</td>
<td>$4,298,830</td>
<td></td>
</tr>
<tr>
<td>Area Municipal CIP Implementation</td>
<td></td>
<td></td>
<td>$50,000</td>
<td>$50,000</td>
</tr>
<tr>
<td>Program Development</td>
<td>$86,922</td>
<td></td>
<td>$86,922</td>
<td></td>
</tr>
<tr>
<td>RDC Exemption**</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>$357,777</td>
<td>$862,407</td>
<td>$3,779,816</td>
<td>$5,000,000</td>
</tr>
</tbody>
</table>

*Set aside to cover potential applications or funding requirements in the short term (2012).
** Funded through program budgets (Roads, Water, Wastewater and others) similar to other development charge exemptions.

Given that sufficient short-term funding for the BFIP is in place, staff continue to receive, review and process BFIP applications as per the established processes and procedures. Any new TIG applications will continue to be considered by Regional Council on a case-by-case basis, with funding sources identified as appropriate pending the implementation of a permanent funding source for the program. A longer-term strategy to provide on-going funding for TIGs is currently being developed by Finance and Planning, Housing and Community Services staff and is proposed to be addressed in conjunction with the Regional Development Charge Review.

Accomplishments

Overall, there are 11 sites that have received assistance through one or more of the program components, representing approximately 16 hectares of land. Six of these sites are in the City of Cambridge, four in the City of Kitchener and one in the City of Waterloo. Many of the land owners/developers are in the process of filing a Record of Site Condition (RSC) or have already done so and received Ministry of Environment acknowledgement.
Further, several of these sites are in the process of being redeveloped, or are now complete. In total, four sites have seen building permits issued, resulting in approximately 285 new residential units (permits valued at nearly $27.8 million dollars). Building permits associated with approximately 441,000 sq footage of non-residential space (office, commercial, retail, warehousing) have also been issued (permits valued at approximately $22.7 million dollars). To date, the value of building permits issued on these 4 sites is approximately $50.5 million dollars.

Also of note is that 3 BFIP participating sites have been recognized as finalists in the Canadian Urban Institute (CUI) Brownie Awards - a national award honouring exceptional brownfield projects. Further, in 2010 the Waterscape project (130 & 170 Water Street North, Cambridge) won the Brownie Award in the Category of “Financing, Risk Management and Partnerships” and in 2011, the Tannery District (36 Francis Street, Kitchener) won a Brownie for “Best Overall Project”.

In 2010, the Region of Waterloo was also the recipient of the ReNew 3rd Place Award for the "Best Place to Invest in Canada" as chosen by a panel of North American experts. This award was focused on the opportunities for investment particularly within the built up urban areas of municipalities and the associated programs and assistance (such as the BFIP) available to facilitate such development.

**BFIP Implementation**

**Ongoing Program Administration**

The BFIP is administered through Planning, Housing & Community Services as part of the mandate of the Reurbanization Team (Community Planning). As part of the Brownfields Coordinator role, staff perform various functions including:

- Liaise with the development community, consult with potential applicants, review applications for program eligibility, coordinate with the Area Municipalities and other regional departments and provide recommendations to senior staff and Regional Council for consideration;
- Review environmental, financial and legal material in order to provide professional opinions on cost/project eligibility, prepare staff recommendations and reports, and provide input into legal agreements and other relevant documents;
- Monitor program results and provide periodic updates to Senior Staff related to program uptake, implementation progress, short-term and long-term opportunities for continued program improvement;
- Chair the Brownfields Working Group to further advance common objectives, promote education awareness and help facilitate brownfield remediation and redevelopment within the community;
- Deliver presentations to a variety of audiences including; provincial ministries, staff, local municipal partners, post-secondary students, industry members and the general public.

Each BFIP component has specific application, review and approval requirements. Given the joint nature of the TIG program, administration must be highly coordinated with the Area Municipalities that currently have a joint TIG program with the Region (i.e. Cambridge and Kitchener). Further, for the RDC exemption and TIG program, this coordination extends beyond the date applications are approved for assistance as there are several elements of ongoing follow-up required. Staff continue to develop and improve resources such as TIG legal agreement templates, program guidelines and applications.

In addition, over the past several years, considerable experience has been garnered in terms of the implementation of these programs as well as the challenges associated with brownfield projects. There have been several important lessons learned related to the administrative process, the eligibility requirements and the impacts of funding particular eligible costs. For example, it has been
found that a significant time lag between the initial inquiry and the final BFIP program application was observed in some instances, often depending on the timing of the overall remediation and redevelopment schedule for the project.

Further, staff has also been able to learn from the specific challenges encountered on each different site - further highlighting the complexity that the remediation and redevelopment of sites may entail. In addition, the implementation of the program has allowed staff to review other development review functions/process in order to ensure alignment in key objectives and to provide improved customer service to the development community.

**Brownfields Working Group**

The Brownfields Working Group (BWG), initiated in 2007, continues to meet on a quarterly basis to discuss key issues relating to the remediation and redevelopment of sites throughout Waterloo Region. The BWG, which consists of representatives from each of the seven Area Municipalities as well as the Region, serves several important functions. This includes the coordination of marketing and communication efforts, municipal incentive program coordination, and a forum for discussion on key initiatives and related issues.

In April 2011, the Region hosted, in partnership with the BLOOM Centre for Sustainability and several Area Municipal partners, a “Practical Workshop for Brownfield Redevelopment” at The Tannery District (Kitchener). Over 130 delegates attended the workshop, with approximately 70 of these participating in the interactive walking tours hosted by the Cities of Cambridge and Kitchener. The program, developed in consultation with the BWG, provided the Region and partners an excellent opportunity to engage many of the stakeholders (municipal, development and environmental) involved in the remediation and redevelopment of brownfield sites throughout the Region. Further, it served as a forum to highlight local success stories, discuss challenges, identify upcoming opportunities and generally raise the profile of Waterloo Region as a prime location for further investment.

**Joint Tax Increment Grant (TIG) Program Update**

The joint Tax Increment Grant Program is a unique component of the overall BFIP program for several reasons:

- The joint TIG program is implemented through the Area Municipalities through the development of a Community Improvement Plan (CIP);
- Coordination and frequent consultation with Area Municipalities is required at the initial enquiry stage with potential applicants and throughout the rest of the process;
- Applications are processed separately in each municipality and reviewed at both the staff and Council level. Separate approvals are required by the Region and the Area Municipalities for each respective portion of the TIG funding;
- Joint TIG funding maximums are identified before remediation and redevelopment are completed (as estimates). The confirmed TIG funding amounts and schedule may not be finalized for several years following approval;
- There is a high level of staff resources required at both the City and Region following the approval of a TIG application. These resources are required for:
  - The implementation of the Tri-Partite legal agreement between the City, Region and Developer;
  - Review of technical information (financial, environmental, development) as the project proceeds;
  - Review of the final eligible costs that will be included as part of the program;
  - Finalization of the final TIG payment schedule, which can only be completed once MPAC has reassessed the final project.
Currently, the joint Tax Increment Grant Program has been implemented on a City-Wide basis in the municipalities of Cambridge and Kitchener. To date, Regional Council has approved three joint TIG applications:

1. **36 Francis Street, Kitchener.** Known as “The Tannery District”, this highly successful adaptive reuse project transformed a contaminated manufacturing facility into a mixed used development that now employs approximately 1000 people. In 2011, this project was the winner of a Canadian Urban Institute Brownie Award for “Best Overall Project”. For more information on this application, please see Report No. F-09-016/P-09-018 and Attachment 2 of this report.

2. **130 & 170 Water Street, Cambridge.** Known as “Waterscape on the Grand River”, this project resulted in the redevelopment of an extremely challenging underutilized and environmentally impacted site into 113 new residential units. The three phased TIG agreement also provides for the remediation and redevelopment of “Waterscape 2” as well as a new hotel/convention space. In 2010, this project was the winner of the Canadian Urban Institute Brownie Award in the “Financing, Risk Management and Partnerships” category. For more information on this application, please see Report No.P-11-038/F-11-018/CR-RS-11-023 and Attachment 2 of this report.

3. **750 Lawrence Street, Cambridge.** Now known as “Carriage Lanes”, the remediation and achievement of a Record of Site Condition for this underutilized former manufacturing site, has allowed for the development of a new 103 townhouse infill project in the heart of Preston. For more information on this application, please see Report No. P-11-056/F-11-040 and Attachment 2 of this report.

These three projects are the Regional TIG commitments to date and have a finalized TIG commitment of $862,407 confirmed (actual costs have been verified or are in the process of being verified and an approximate schedule for payments has been identified) and $4,771,414 is the potential maximum funding remaining, subject to confirmation. The financial impact of these unconfirmed TIG commitments is uncertain at this time and will depend on the following:

- If the projects are actually completed as anticipated;
- If the actual remediation costs equal the estimated remediation costs or are reduced because of potential cost savings; and
- If the remediation costs are recovered earlier in the development process through other relevant brownfield incentives (such as the Regional Development Charge Exemption Program).

For example, TIG commitments for the Waterscape 2 and the South Parcel are contingent upon future remediation and redevelopment being completed and may be reduced by potential costs savings. TIG Commitments for 750 Lawrence Street will only be required if the developer is unable to obtain the development charge exemptions for brownfields which would only occur if there is a change in the by-law to remove the program or their 5 year exemption period expires before the project is built.

Currently there is $4,298,830 set aside to fund future TIG commitments. Given the amount of finalized Regional TIG Commitments ($862,407), it is staff’s opinion that the current TIG funding set aside to date will be sufficient for those commitments. Staff will continue to monitor the anticipated expenditures and payment schedules as more information becomes available and provide periodic updates to Regional Council. For more information on the joint TIG financial commitments, please see Attachment 2.
Area Municipal Community Improvement Plan Implementation

The joint TIG program is available to all Area Municipalities that have facilitated the program through the establishment of a Community Improvement Plan (CIP) in accordance with the Planning Act. At this time, the program has been implemented by the Cities of Cambridge and Kitchener.

In 2011, the Brownfields Working Group initiated discussions regarding the development of a partnership in order to complete the first step in the implementation of the joint TIG program in the four Townships (Wellesley, Wilmot, Woolwich and North Dumfries). As noted above, this includes the development and adoption of a Brownfields CIP in each respective Area Municipality. Secondly, the details of the joint TIG program must be included in the CIP - both to provide the Area Municipality with the ability to make grants and to allow for Regional participation in the joint program.

Given the limited resources of the Townships (both in terms of staff time and financial ability) to develop the requisite CIPs, the potential of issuing a joint region/township consulting contract was explored. While all four Township staff indicated that the implementation of the joint TIG program would still be subject to further review and decision by their respective Councils, it was recognized that the development of the Brownfields CIP was a necessary first step. Further, it would allow for the creation of a framework that could be utilized for the implementation of the joint TIG program in the future.

Upon consultation, this approach was found to have several benefits, including reducing the staff time associated with implementing the CIPs and overseeing individual consulting contracts. Further, the original BFIP program approved by Regional Council specified $50,000 for each Area Municipality wishing to adopt a CIP. This joint approach provided the opportunity to significantly reduce these costs while achieving the same objective.

Regional and Township staff have developed a draft Terms of Reference and Request for Proposals for the Township Brownfield CIP implementation. Discussions with Area Municipalities regarding the appropriate timing for the issuance of the RFP are ongoing. Next steps will be contingent on several factors including the timing of the overall BFIP program review and the level of priority the Townships place on the CIP implementation – and specifically the development of a joint TIG program. Consultation with City of Waterloo staff is also ongoing in order to determine whether or not the City may wish to participate in this joint initiative. If so, revisions to the scope of the project will also be required.

Future Direction for Financial Incentives in Waterloo Region

Given the recent experience and knowledge that has been garnered to date with respect to the implementation of the BFIP, staff has identified several potential options for refinements to the financial incentive framework offered by the Region of Waterloo.

It has been well established that one of the primary geographies of focus for the Region of Waterloo’s planning and reurbanization strategy has been within the area known as the Central Transit Corridor (CTC). This area was first identified in the Region of Waterloo Official Policies Plan in 1976 and most recently included in the Regional Official Plan adopted by Regional Council June 2009 (please see ROP Map 3a, Attachment 3).
With the approval of Light Rail Transit (LRT) as the preferred technology from Conestoga Mall in the City of Waterloo to the Ainslie Street Terminal in the City of Cambridge (see Report E-11-072) the integration of land use and transportation planning along this corridor is critical. As part of this, ensuring that the alignment of key objectives and resources within the CTC (including the use of financial incentives to promote appropriate development), is a key priority. As a result, staff recommend the development of a framework to formalize the prioritization of financial incentives within the key reurbanization areas such as the CTC and others (to be refined in consultation with the Area Municipalities) and to ensure alignment with other strategic Regional objectives. This is also timely given the initiation of the Corridor Development Strategy, which will examine priority areas for public and private sector investment. Further, it is recommended that staff identification a range of options for implementing a sustainable funding strategy for these financial incentives, including the joint Tax Increment Grant Program.

In addition, with the increased interest in reurbanization in existing urban areas, as well as the tightening of provincial regulations pertaining to environmentally impacted sites, staff has seen a substantial interest in the BFIP. Of note is the number of sites that have environmental issues that must be addressed as part of the redevelopment process. As such, staff must carefully consider the original intent of the BFIP program to help foster the remediation and redevelopment of the most challenging and strategically situated brownfield sites. The BFIP defines a brownfield as “a property which contained environmental contamination either in the ground or buildings due to the operational activities of a previous land use, where the extent of the contamination rendered the property vacant, under-utilized, unsafe, unproductive or abandoned.”

Given this definition, staff are cognisant that while many sites may have environmental impacts (and may be required to get a Record of Site Condition), not all sites are brownfields. In fact, there may be many instances where the contamination has little to do with the sites underutilized or vacant condition. In such cases, these sites would not likely meet the eligibility criteria for assistance under the BFIP. In order to provide direction to staff on these matters, it is recommended that staff continue to work with the Area Municipalities on the refinement of various financial incentive programs, including the joint TIG Program in order to:

- Prioritize the most challenging brownfield sites throughout the Region;
- Ensure the attainment of strategic Regional and Area Municipal objectives; and
- Continue to provide a fair, transparent and consistent framework for decision making.

This work will aid staff in ensuring that its recommendation to Council for funding available through the BFIP or any future financial incentive program are allocated appropriately.

Next Steps

Staff will continue to implement the BFIP as per the original program criteria, including the pre-consultation with the development community, and the receipt and review of applications. Staff will also continue to work with the Area Municipalities to develop the broader framework for reurbanization within Waterloo Region through the Brownfields Working Group, additional industry consultation and a review of best practices. Staff will also provide an update to Council regarding any potential options for future revisions to the overall financial incentives framework as well as options to implement a sustainable longer term funding strategy for financial incentives within Waterloo Region, including the joint Tax Increment Grant program.

Area Municipal Consultation/Coordination

Area Municipalities continue to play an important role in the implementation of the Region’s Brownfields Financial Incentive Program and were circulated as part of the preparation of this report. Communication on the status of the BFIP program is ongoing as part of the Brownfields Working
Group. Further, coordination related to the joint TIG program continues with the Cities of Cambridge and Kitchener. Regional and Area Municipal staff also continue to coordinate efforts to establish the Community Improvement Plans required to implement the joint TIG program

CORPORATE STRATEGIC PLAN:

The Regional Brownfields Financial Incentive Program directly addresses Focus Area 2: Growth Management and Prosperity (Manage growth to foster thriving and productive urban and rural communities) and the Strategic Objective 2.1. Encourage compact, livable urban and rural settlement form.

The recommendations in this report are also consistent with the 2011-2014 Corporate Strategic Plan directs that the Region:

- Implement a sustainable Brownfield Program to promote the redevelopment of previously contaminated sites (Action 2.1.1); and
- Work with area municipalities to develop and implement a comprehensive strategy to promote intensification and reurbanization within existing urban areas (Action 2.1.2).

FINANCIAL IMPLICATIONS:

One time funding in the amount of $2.5 million was provided for the Brownfields Financial Incentive Program as part of the 2006 approved budget. An additional $2.5 million was allocated to the BFIP in October of 2011 when the Environmental Insurance Reserve Fund was eliminated. Consequently, the BFIP has been allocated a total of $5.0 million in funding. Funding for Brownfield Regional Development Charge Exemptions is provided in the program budgets (Roads, Water, Wastewater and others) similar to other development charge exemptions, and is in addition to the amounts listed above. The $5.0 million will enable funding of $564,248 for Phase II ESA Grants, $4,298,830 for TIGS and $136,922 for program development costs including Area Municipal CIP implementation.

Although the potential maximum value of assistance for TIGS ($5,336,821) exceeds the current level of funding ($4,298,830) it is expected that the actual maximum value of the TIGS will be less and that current funding will be sufficient for the finalized and potential commitments. A longer term strategy to provide on-going funding for the BFIP and in particular Tax Incentive Grants is currently being developed and will be addressed over the next several months, potentially in conjunction with the next Development Charges By-law update. New TIG applications will continue to be considered by Regional Council on a case-by-case basis with funding sources to be identified as appropriate.

OTHER DEPARTMENT CONSULTATIONS/CONCURRENCE:

Staff from Transportation and Environmental Services (Water Services), Finance and Legal Services have and continue to be involved in the development of the Regional Brownfield Financial Incentives Program.

ATTACHMENTS:

Attachment 1 – Summary of BFIP Implementation
Attachment 2 - Joint TIG Regional Financial Commitment Summary
Attachment 3 – Regional Official Plan Map 3a (Identification of the Central Transit Corridor)

PREPARED BY: Brooke Lambert, Interim Manager, Reurbanization

APPROVED BY: Rob Horne, Commissioner of Planning, Housing and Community Services
Angela Hinchberger, Acting Chief Financial Officer
Attachment 1 – Summary of BFIP Implementation

- **October 2006** - Brownfields Financial Incentives Pilot Program Approved
- **February 2007** - Brownfields Coordinator position approved as part of the budget process
- **March 2007** - Regional Development Charge By-Law amended to implement the RDC Exemption programs
- **Spring 2007** - Phase II ESA Grant program implemented
- **June 2007** - Joint TIG Program was approved in principle by Regional Council
- **Fall 2007** - Development of a Community Improvement Plan (CIP) template for the implementation of the joint TIG program by Area Municipalities
- **Fall 2007** - Creation of a Brownfields Working Group consisting of all the Area Municipal partners
- **Fall 2007** - Initiation of communication and marketing efforts
- **December 2007** - Implementation of the Joint Tax Increment Grant Program in the Core Areas of the City of Cambridge
- **April 2008** - Amendments to the original eligibility requirements for the joint TIG program to allow for some administrative flexibility related to the timing of application submission
- **May 2008** - Development of draft TIG Tri-partite Legal Agreement, joint applications and administrative review procedures
- **June 2008** - Implementation of the Joint Tax Increment Grant Program in the City of Kitchener
- **September 2008** - Interim review and program refinements completed
- **March 2009** - Approval of first Joint Tax Increment Grant with the City of Kitchener - 36 Francis Street “The Tannery District”
- **June 2009** - Continuation of the RDC Exemption for Brownfields in the Regional Development Charge By-Law 09-024
- **October 2009** - Additional program refinements and funding status report
- **April 2011** - Approval of second Joint Tax Increment Grant with the City of Cambridge – 130 & 170 Water Street North “Waterscape on the Grand River”
- **April 2011** - Hosted the “Practical Workshop for Brownfield Redevelopment” in partnership with BLOOM Centre for Sustainability, at the Tannery District, in which over 130 delegates attended
- **June 2011** - Approval of third Joint Tax Increment Grant with the City of Cambridge – 750 Lawrence St.
Attachment 2 –
Joint TIG Regional Financial Commitment Summary

The following tables outline the breakdown of the potential maximum value of TIG Commitments that have been approved by Regional Council. To date, Regional Council has approved a maximum of $5,633,821 in Regional TIG Commitments (“finalized TIG commitments” for completed projects where the payment schedule has been confirmed and “potential Regional TIG commitments” for projects where the remediation and redevelopment is not yet complete and the payment schedule is not yet confirmed). Of this amount, approximately $862,407 is “finalized” or final TIG commitments (actual costs have been verified or are in the process of being verified and an approximate schedule for payments has been identified) and $4,771,414 is a “potential” maximum Regional TIG commitment subject to confirmation. The financial impact of the TIG projects identified in italics (unconfirmed potential maximum) is uncertain at this time.

<table>
<thead>
<tr>
<th>TIG Project</th>
<th>Municipality</th>
<th>Year Approved</th>
<th>“Finalized” Regional TIG Commitment</th>
<th>“Potential” Regional TIG Commitment</th>
</tr>
</thead>
<tbody>
<tr>
<td>36 Francis Street</td>
<td>Kitchener</td>
<td>2009</td>
<td>$537,410</td>
<td></td>
</tr>
<tr>
<td>170 Water St. North (Wat 1)</td>
<td>Cambridge</td>
<td>2011</td>
<td>$324,997</td>
<td></td>
</tr>
<tr>
<td>170 Water St. North (Wat 2)</td>
<td>Cambridge</td>
<td>2011</td>
<td>$605,944</td>
<td></td>
</tr>
<tr>
<td>130 Water St. North (South)</td>
<td>Cambridge</td>
<td>2011</td>
<td>$3,441,573</td>
<td></td>
</tr>
<tr>
<td>750 Lawrence Street</td>
<td>Cambridge</td>
<td>2011</td>
<td>$723,897</td>
<td></td>
</tr>
<tr>
<td><strong>Total TIG Commitments</strong></td>
<td><strong>Total</strong></td>
<td></td>
<td><strong>$862,407</strong></td>
<td><strong>$4,771,414</strong></td>
</tr>
</tbody>
</table>

*No TIG payments have been made to date.

The actual costs of remediation, the value of other incentives, the timing of project completion, and the final MPAC assessment will all have an impact on the expected funding requirements for the future or “potential” commitments. Additionally, the projects associated with the “potential” commitments may be several years away thus reducing the present value of funding required to be set aside now to ensure there are sufficient funds to cover the commitment in the future. Finally, payments only commence once the project begins to generate increased tax revenue to both the Area Municipality and the Region.

Funding for the TIG program has been allocated through the original $2.5 million dollars set aside for the original Brownfields Financial Incentive Pilot Program in 2006. An additional $2.5 million was allocated in 2011 for TIGs or other components as needed. Currently there is $4,298,830 available to fund TIG commitments. Given the amount of confirmed Regional TIG Commitments ($862,407), and all the variables impacting the “potential” TIGs, it is staff’s view that the current TIG funding set aside to date will be sufficient for both the “finalized” and “potential” TIG commitments. Staff will continue to monitor the anticipated expenditures and payment schedules as more information becomes available and provide periodic updates to Regional Council.
Attachment 3 –
Regional Official Plan Map 3a
(Identification of the Central Transit Corridor)
TO: Chair Jim Wideman and Members of the Planning and Works Committee

DATE: February 28, 2012

FILE CODE: D07-20/SRAAR

SUBJECT: INVESTIGATING SUSTAINABLE APPROACHES TO SOIL AND SEDIMENT MANAGEMENT

RECOMMENDATION:

That the Regional Municipality of Waterloo direct staff to take the following action regarding investigating sustainable approaches to soil and sediment management, as described in Report No. P-12-011/E-12-020, dated February 28, 2012:

a) Initiate a broader stakeholder consultation to generate discussion, share information and ideas and identify opportunities for partnership related to the concept of a Soil Remediation and Aggregate Recycling Facility;

b) Enter into any agreements with the City of Kitchener related to the Victoria Park Rehabilitation Project as may be required per the Ministry of Environment (MOE) Showcasing Water Innovation Grant Funding, announced on January 13, 2012;

c) Utilize the funds identified in the MOE Showcasing Water Innovation Grant toward the undertaking of a more detailed feasibility study relating to a Soil Remediation and Aggregate Recycling Facility, for inclusion as part of the Region’s Waste Management Master Planning process; and,

d) Direct the revenue from tipping fees related to the Victoria Lake Park Rehabilitation project into the Waste Management Reserve Fund to be used for costs associated with the management/handling of the sediment over the two-year sediment rehabilitation trial program and to fund initiatives from the outcome of the Waste Management Master Planning process.

SUMMARY:

Since the implementation of the Region’s Brownfields Financial Incentives Pilot Program in 2006, staff has gained considerable insight into the challenges of remediating and developing key brownfield sites throughout the Region. One of the most costly challenges relates to the disposal of impacted or contaminated soil at landfill sites, either locally or within the larger Southern Ontario community.

More broadly, how impacted soils and other materials are managed so that they are not treated as waste, but as a material that could have potential beneficial end uses – is indeed a larger question with significant implications. To address some of the broader issues raised by this question, staff have begun to explore possibilities for a more sustainable approach to the management of environmentally impacted soils as well as other materials associated with development. One alternative under consideration by staff is the concept of a Soil Remediation and Aggregate Recycling Facility (Soil Recycling Facility), which has been researched and has resulted in the report from the Bloom Centre for Sustainability (attached).
It should be noted that staff are not proposing to develop such a facility, but rather initiate a dialogue on the merits of such a concept. Any considerations relating to the ownership, operation, and location of such a facility would be subject to further study and review. The development of such a facility, either locally or within the Southern Ontario area, could have wide ranging benefits for Waterloo Region, including the development industry, municipal agencies, and the broader community.

The concept of a Soil Recycling Facility differs from typical industry “dig and dump” practices, which have significant environmental, economic and social impacts. There are also several other reasons why it is felt that an alternative solution needs to be identified:

- The “dig and dump” approach is costly both in economic and environmental terms, including increased Green House Gas (GHG) emissions associated with trucking materials long distances to disposal facilities;
- The new Provincial Regulation 153/04, as amended by 511/09, outlines new Site Condition Standards (SCS) which came into effect July 2011. It is expected that the challenges faced by the industry will continue, as many sites will not be able to meet the generally more stringent standards;
- Reurbanization is anticipated to increase (especially along the Rapid Transit Corridor) both due to changing trends and policy shifts, resulting in more redevelopment, underground excavation for parking garages, and soil removal from sites. In 2010, the number of reurbanization units as a percentage of total new units constructed was approximately 50%;
- Soil is not the only material that may be contaminated; there is a recognized need for approaches to deal with other impacted materials, such as storm water pond sediment and aggregate materials; and,
- Public investment has been directed towards soil management (e.g. via the joint tax increment grant program), and might not be required if other, more sustainable approaches are identified.

Further, it is anticipated that a substantial portion of the sites adjacent to the Region’s future Rapid Transit System will have soil management issues that must be addressed as part of any future redevelopment proposals. Many will also likely be required to obtain a Record of Site Condition (RSC) - thus, the removal and/or treatment of contaminated soil is anticipated to remain as one of the key issues impeding the redevelopment of the corridor.

To date, several preliminary steps have been taken to investigate this concept. Staff has engaged in several partnerships to better understand the issues at hand and the economic, technical and environmental realities. The current Victoria Park Lake rehabilitation project is a prime example of such a partnership to trial an “outside of landfill” approach whereby the pond sediment is being received at the Region’s Cambridge Landfill facility and will be stockpiled, mixed and periodically tested over a period of about two years. Ultimately, it is anticipated that this material will be reused in a productive manner such as a topsoil amendment. Further, staff has commissioned a background and scoping report to provide an initial review of key resources, stakeholders and information that may be pertinent to future discussions.

Staff is now seeking Council direction to pursue further investigation within the context of the Victoria Park Rehabilitation trial project and the Region’s Waste Management Master Planning process. Next steps include initiating a broader public consultation process and more detailed feasibility studies.

REPORT:

In 2006, the Region approved the Brownfields Financial Incentives Pilot Program (known as the Brownfields Financial Incentive Program (BFIP) in order to assist with the remediation and redevelopment of brownfield sites throughout Waterloo Region. Since that time there has been significant interest in the program from the private sector and the Region has provided 11 Phase 2 Environmental Site Assessment (ESA) Grants, 4 Regional Development Charge (RDC) Exemptions
and 3 Joint Tax Increment Grants (TIGs) with a total maximum value of over $11 million (please see Report P-12-009/F-12-011).

One of the key issues that has emerged as a result of this program is the significant costs associated with the disposal of impacted and/or contaminated (non-hazardous) soils (for more description and a definition of this distinction, please see Attachment #1). While there are several techniques that allow for the on-site remediation of soil, there is often time constraints, uncertainty or prohibitive costs that make them not feasible or less desirable within the context of a brownfield redevelopment project. As a result, traditional approaches to managing contaminated soil often involve its removal from the site and disposal at a licensed facility - otherwise known as the “dig and dump” approach. While this approach allows the redevelopment to proceed, it can be a costly and an inefficient process from an environmental, economic and social perspective. Further, given that the soil is often times simply relocated to a landfill site, there is no actual “remediation” or rehabilitation taking place. Further, the dig and dump approach absorbs landfill capacity (if the soil is not suitable or required for daily cover), representing a lost opportunity to use that space for disposal of other waste materials. Overall, as a result of these and several other factors, soil management is becoming a more pressing issue across the province with more attention being focused on various best practices that could be employed in the future.¹

In Waterloo Region, the remediation and redevelopment of key sites is often costly, challenging and time-consuming. As noted above, and confirmed by recent experience with the Region’s BFIP, one of the largest costs associated with these sites is the remediation or disposal of impacted or contaminated soil. This soil must either be removed at great cost (including the trucking and tipping fees at a licensed facility) or remediated/managed on-site (often over the long-term). Average costs for disposal range from $30-60/tonne, which includes both the tipping fees and trucking costs involved in removing impacted soil from a site and transporting to a licensed facility (usually outside the Region) for disposal. For example, as part of the joint TIG application for 130 & 170 Water Street North (Waterscape) project in Cambridge, soil disposal costs on 130 Water Street North (the south parcel) were estimated at nearly $3 million dollars.²

Further, it is anticipated that a substantial portion of the sites adjacent to the Region’s future Rapid Transit System will have soil management issues that must be addressed as part of any future redevelopment proposals. This includes the large quantities of soil that will have to be managed as sites are redeveloped to include underground parking structures, thus allowing for the provision of parking in a more transit-supportive form compared with surface lots. Many will also likely be required to obtain a Record of Site Condition (RSC) - thus, the removal and/or treatment of contaminated soil is anticipated to remain as one of the key issues impeding the redevelopment of the corridor.³

With the updates to Provincial Regulation 153/04, as amended by 511/09 and the new Site Condition Standards (SCS) standards being implemented by the Ministry of Environment (new standards come into effect July 2011), the challenges associated with impacted/soil are expected to grow.

**Identifying a Broader Need**

Soil from brownfield sites and other urban redevelopment projects is not the only material that requires remediation or disposal. Soil from regional and area municipal infrastructure projects, including various transportation projects (road widening, grade separation projects and the construction of rapid transit) may also need to be managed due to impacts from salt and environmental contaminants.

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¹ One example of this work is the draft Soil Management – A Guide for Best Management Practices first presented in June 2011 by the Ministry of the Environment.
² 65,300 tonnes at $45/tonne including trucking fees.
³ Some of the most common soil contaminants found in the Region due to past industrial activities include: Coal related Polycyclic Aromatic Hydrocarbons (PAHs) – for example coal tar, Petroleum related Polychlorinated Compounds (PHCs), Petroleum/Solvent Related Volatile Organic Compounds (VOCs) – for example TCE, and Heavy Metals.
Another related issue is the question of how municipalities can manage storm water pond sediment, which often does not meet the background standards set out by the Ministry of the Environment (thus also requiring disposal at a licensed facility). Recent estimates suggest that there could be upwards of 500,000 tonnes of potentially impacted sediment from the Cities of Kitchener, Cambridge and Waterloo that will require disposal in the future.¹

Another possible connection is the wider discussion underway to encourage more sustainable approaches within the aggregate industry, and an increased focus on aggregate recycling and conservation. Aggregate recycling, which can be accomplished by mixing aggregate with other recycled materials such as concrete, crushed brick and other materials, is one of the means that can be used to reduce the demand for virgin aggregate material. By reusing materials through more effective soil brokering, banking and treatment, demand for virgin material is lessened and could reduce or defer impacts to farmland and the rural landscape. While aggregate recycling is largely undertaken on an ad-hoc basis, current industry information suggests that it is not happening to the extent that may be desirable. Like the other materials noted above, there might be further opportunities to explore the beneficial end use of these materials so that they do not end up in a landfill once their original purpose was fulfilled.

The Waste Management Connection- Impacts to Regional Landfill Capacity

In 1998, the Region of Waterloo approved provisions for allowing soil disposal at the Regional Landfill facility for a reduced tipping fee of $5.00 per tonne (see report E-97-088) if it met certain conditions and there was a need for "Daily Cover Material". While this approach has been successful in helping to facilitate the redevelopment of some brownfield sites, it is not sustainable over the long term, particularly given the fixed capacity of the landfill.

Over the past several years, requests made to the Region have grown substantially. A preliminary review of the inquiries received suggests that area municipalities, local developers and other industry stakeholders are interested in disposing of impacted soil, sediment and other construction materials at the Regional Landfill site. Since 2009, over 70 inquiries pertaining to various redevelopment and infrastructure projects have resulted in requests made for the disposal of approximately 940,000 tonnes of materials including:

- Broken bricks/blocks, concrete and asphalt;
- Organic potato sand;
- Dewatered street sweepings;
- Dewatered pond sediment;
- Soil with petroleum impacts and other contaminants; and,
- Foundry sand.

While some of these materials were never received, several thousand tonnes of soil/sediment were in fact landfilled at the Regional Facility. The inquiries noted do not include those projects where the quality of the soil is impacted to a greater degree than what can be accepted by the Regional Landfill, and thus would have been transported further afield for disposal.

Within the past year, there have been two notable examples, where it was determined that a more active role might be played by the Region’s Waste Management Facility in order to help meet several larger, Regionally significant priorities.

¹ Approximate estimate provided as part of the background work for the Victoria Park Rehabilitation Project.
1. **Waterscape Redevelopment Soil Disposal Partnership**

As part of the Region’s Joint TIG program and the Brownfield RDC exemption, disposal of impacted/contaminated soils are considered an eligible remediation cost and are thus eligible for assistance. As a result, it is in the best interest of the Region to consider ways to potentially reduce these costs. In the case of the Waterscape TIG agreement (as per Report No. P-11-038/F-11-018/CR-RS-11-023), an arrangement was made as part of the TIG legal agreement to allow for the potential disposal of approximately 83,000 tonnes of impacted soils related to the project at the Regional Landfill site for a reduced tipping fee (of approximately $10/tonne).

With the inclusion of trucking fees, it is estimated that this arrangement could potentially reduce the overall soil disposal costs on the future development of the Waterscape South Parcel by approximately $1.8 million dollars. While it was recognized at the time that this soil disposal arrangement would be beneficial to both the City and the Region in the short-term (to reduce potential eligible costs), it is also acknowledged that this approach is neither desirable nor sustainable over the long-term. There is an “opportunity cost” that must be considered, including both operational and financial costs. Not only does it reduce the ability of the Region to charge the typical market rate tipping fees (to cover operational expenses), it reduces the landfill capacity and shortens the lifespan of the facility. For example, in this case, the amount of soil noted above (i.e. 83,000 tonnes) is equivalent to more than a third of the total annual landfill tonnage typically received at the site.

2. **Victoria Park Rehabilitation Partnership**

In 2011, the City of Kitchener commenced a project to improve Victoria Park including the lake and surrounding areas. This work includes the excavation and dewatering of portions of the lake to improve long-term storm water management. It also includes the off-site management of approximately 30,000 cubic metres of pond sediment and approximately 10,000 cubic meters of native underlying soils. Given the material does not meet Ministry of Environment standards for unrestricted use, management of this material has typically consisted of disposal in a landfill facility.

In order to avoid the material being sent at great cost to an end of life disposal facility, the Region partnered with the City of Kitchener to trial an “outside of landfill” approach whereby the pond sediment is being received at the Region’s Cambridge Landfill facility (at a reduced tip fee of $30/tonne) where it will be stockpiled, mixed and periodically tested over a period of about two years (as described in a September 9, 2011 email from Jon Arsenault to Council). Ultimately, it is anticipated that this material will be reused in a productive manner such as a topsoil amendment. The amount of material being managed outside of traditional landfill represents roughly 25% of the total annual landfill tonnage received.

Of note, this partnership was recently awarded $1,000,000 in funding under the Ministry of Environments Showcasing Water Innovation Grant program. Of this total, approximately $250,000 is projected to be used by the Region to undertake a feasibility study investigating the merits of a sustainable soil and aggregate recycling facility (as outlined below). In this regard, Staff will continue to work with the City of Kitchener to advance the initiative.

While each of these partnerships highlight different aspects of the broader issue facing the private and public sector with respect to soil and sediment management, they also demonstrate some of the challenges and opportunities that exist. In the first example, costs associated with the traditional “dig and dump” approach are highlighted. In the second, new solutions are being “tested” in order to initiate a discussion on possible alternatives.
Investigating Sustainable Solutions - Finding a New Approach

In addition to the experience and information that has been garnered as part of the Region’s Brownfield Financial Incentive Pilot program, Waste Management Staff have received an increasing volume of inquiries by developers looking to obtain similar authorization to dispose of soils and other materials at the Regional facility. For the reasons noted above, it has become evident that a more comprehensive and sustainable approach may be beneficial.

Building on the context of the Victoria Park Rehabilitation “trial” project, one alternative being considered by staff is the concept of a **Soil Rehabilitation and Aggregate Recycling Facility** that would allow for the treatment and productive re-use of soil and other materials throughout Waterloo Region (and possibly beyond).

While the details of such a campus or facility have yet to be more formally defined, the key elements include a consolidated location (with the required environmental protections, risk mitigation measures and approvals) where impacted soil and other materials could be sorted, tested, monitored and rehabilitated - and made available for beneficial re-use to an appropriate end user. Also intrinsic to this concept is the incorporation of best practices related to soil management as well as the investigation of opportunities related to soil banking and brokering – which provides a framework to address both the demand and supply requirements associated with soil in a coordinated and managed approach.

Depending on how the facility is structured, there may also be several other potential benefits, including:

- The creation of a new, more sustainable option for developers and municipalities working on local/regional redevelopment and infrastructure projects with a need to dispose of contaminated soil and sediment at an economically viable cost;
- Opportunities for private partnerships with potential revenue stream generation;
- Opportunities for partnerships with local post-secondary institutions and regulatory agencies to facilitate research and a practical learning environment;
- The development of new remediation or recycling technologies and firms by the creation of an “Accelerator” type environment;
- A more coordinated approach to soil and other construction material management throughout the Region, simplifying the “ad hoc” approach currently required;
- Development of more sustainable approaches to soil remediation and to aggregate recycling; and
- Reduce the need to consume valuable landfill capacity both locally and further afield and promote changes to the current regulatory framework that discourages the beneficial reuse of environmentally treated soils.

It should be noted that staff are not proposing to develop such a facility, but rather is hoping to initiate a dialogue on the merits of such a concept. Any considerations relating to the ownership, operation, location of such a facility would be subject to further study, review and available funding. The development of such a facility, either locally or within the Southern Ontario area, could have wide ranging benefits for Waterloo Region, including the development industry, municipal agencies, and the broader community.

Staff discussions to date have been preliminary in nature and have included a high level characterization of the potential need, a review of some of the trends in sustainable brownfield remediation techniques, and identified possible synergies between this initiative and issues in the aggregate industry and as part of a wider dialogue at the provincial level.\(^5\) Staff has also received

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5 Staff from Planning, Housing and Community Services Transportation and Environmental Services (Water Services, Waste Management) and Corporate Resources (Facilities Management and Legal).
several inquiries from firms in the private sector interested in locating some type of soil remediation facility in the region.\(^6\) Further the Brownfields Working Group (including staff representation from each of the Area Municipalities) has also participated in these preliminary discussions, providing input on the potential benefits a more comprehensive approach could potentially yield more broadly.

In addition, the Waste Management Division is in the process of developing a new Waste Management Master Plan (WMMP) that will provide a renewed long term strategic direction with a focus on finding innovative solutions for managing post-diversion residual waste over the next 20 years. In alignment with the Region’s municipal focus toward a more liveable and sustainable community, initiatives and priorities identified in the WMMP must consider the economic, environmental and social consequences (i.e. triple bottom line). In this regard, the inclusion of a feasibility study related to the sustainable management of mildly impacted soils and sediment would integrate well with the Waste Management Master planning process.

**Background Research**

In the fall of 2012, staff retained the Bloom Centre for Sustainability to undertake a preliminary scoping and research study for the concept noted above. In December 2012, staff received a completed draft of the report entitled “Sustainable Solutions: Investigation the Concept of a Soil Remediation and Aggregate Recycling Campus” (Please see Attachment #2).

This report was commissioned as a first step in identifying the key issues regarding the management of impacted soil and other materials, as well as the general feasibility of the concept of a more strategic and sustainable approach to dealing with these materials in Waterloo Region. It was intended to provide an introduction and overview of the existing status of these issues within the broader provincial context as well as serve as a key resource/background document.

The scoping study consisted of two primary components:

- A literature review; and,
- Stakeholder interviews with industry experts.

The study concludes that there is an opportunity to establish a more strategic regional approach but that additional feasibility analysis is required. For example more work is required to better understand the potential connections with the aggregate industry, as well as more detailed economic, regulatory and environmental requirements.

It is also recommended that the concept be presented to a broader range of stakeholders (industry, government, post-secondary, private sector and the public) for a more in-depth discussion about the opportunities and challenges associated with this alternative approach.

**Area Municipal Consultation/Coordination**

Area Municipalities continue to play an important role in the Region’s Brownfields Strategy through their involvement in the Brownfields Working Group (BWG). Discussion, consultation and research on this concept has been coordinated through the BWG with Area Municipal feedback providing invaluable insight and direction. Staff will continue to work with the BWG to further develop this concept, including any future stakeholder consultation programs or feasibility studies.

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6 Staff representing the Township of North Dumfries have also received inquiries and have participated in preliminary discussions related to the overall concept outlined. These inquiries indicate that there is interest in Waterloo Region as a strategic location within Southern Ontario.
Next Steps

While there seems to be some rationale behind pursuing the concept of a more strategic and sustainable approach to managing soils and other environmentally impacted materials, it is recognized that there are still several questions outstanding. More work is needed to better understand the possible synergies, connections and opportunities that exist within the broader development, environmental community, and post-secondary community. Key to the objective of finding a beneficial end use for these materials is the issue of completing a more detailed feasibility analysis (technical, economic, regulatory) in order to work towards the development of a solid business case.

Staff now seek Council direction to undertake further steps to investigate this issue, specifically:

1. Initiate broader stakeholder consultation to generate discussion, sharing of information and ideas and identify opportunities for partnership;

2. Enter into any agreements with the City of Kitchener related to the Victoria Park Rehabilitation Project as may be required per the Ministry of Environment Showcasing Water Innovation Grant Funding;

3. Utilize the funds identified in the MOE Showcasing Water Innovation Grant toward the undertaking of a more detailed feasibility study relating to a Soil Remediation and Aggregate Recycling Facility, for inclusion as part of the Region’s Waste Management Master Planning process; and,

4. Direct the revenue from tipping fees related to the Victoria Lake Park Rehabilitation project into the Waste Management Reserve Fund to be used for costs associated with the management/handling of the sediment over the two-year sediment rehabilitation trial program and to fund initiatives from the outcome of the Waste Management Master Planning process.

CORPORATE STRATEGIC PLAN:

This initiative is related to Focus Area 1: Environmental Sustainability (Protect and Enhance the Environment), Strategic Objective 1.3. Reduce the amount of waste going to landfill.

It is also addresses Focus Area 2: Growth Management and Prosperity (Manage growth to foster thriving and productive urban and rural communities) and the Strategic Objective 2.1. Encourage compact, livable urban and rural settlement form.

FINANCIAL IMPLICATIONS:

It is expected that funding for the broader stakeholder consultation and feasibility studies associated with the facility concept will be covered by the Region’s anticipated portion (approximately $250,000) of the total $1,000,000 associated with the Ministry of Environment’s Showcasing Water Innovation Grant program received by the City of Kitchener. Region and City staff are working together to formalize a Memorandum of Understanding with respect to this funding. Revenue from tipping fees is anticipated to be in the range of $1.5 to $2.0 million dollars less the costs associated with management of the sediment.

OTHER DEPARTMENT CONSULTATIONS/CONCURRENCE:

Staff from Transportation and Environmental Services (Water Services), Finance and Legal Services have and continue to be involved in the development of the Regional Brownfield Financial Incentives Program.
ATTACHMENTS:

Attachment 1 – Soil Definitions and Description
Attachment 2 – Sustainable Solutions: Investigating the Concept of a Soil Remediation and Aggregate Recycling Campus

PREPARED BY: Brooke Lambert, Interim Manager, Reurbanization
Jon Arsenault, Director, Waste Management

APPROVED BY: Rob Horne, Commissioner of Planning, Housing and Community Services
Thomas Schmidt, Commissioner of Transportation and Environmental Services
Attachment 1
Soil Definitions and Description

Definitions:

**Impacted Soil** - Generally defined as soil that does not meet the revised Ontario Ministry of the Environment Table 1 “Full Depth Background Site Condition Standards” BUT does meet the applicable generic MOE site condition standards (SCS) as defined in Ontario Regulation 153/04 (as amended) under the Environmental Protection Act of Ontario OR the lowest effects-based property specific standards (“PSS”) developed through the use of a risk assessment in accordance with Ontario Regulation 153/04 (as amended) for the purposes of filing of a RSC with the MOE in accordance with Ontario Regulation 153/04, whichever is less stringent.

**Contaminated Soil** - Generally defined as soil that does not meet the applicable generic Ontario Ministry of Environment (MOE) site condition standards (SCS) for soil as defined in Ontario Regulation 153/04 (as amended) OR the lowest effects-based property specific standards (PSS) developed through the use of a risk assessment approach completed in accordance with Ontario Regulation 153/04 (as amended), whichever is less stringent.
Attachment 2
Sustainable Solutions: Investigating the Concept of A
Soil Remediation and Aggregate Recycling Campus

Summary Report

SUSTAINABLE SOLUTIONS:
INVESTIGATING THE CONCEPT OF A
SOIL REMEDIATION AND AGGREGATE
RECYCLING CAMPUS

Phase 1 - Project Scoping and Research Study

Project Number: 4024-01-001

Prepared for:
The Region of Waterloo

Prepared by:
The Bloom Centre for Sustainability

JANUARY 2012 (V. 1.5)
THE BLOOM CENTRE FOR SUSTAINABILITY – ABOUT US

The Bloom Centre for Sustainability (BLOOM) is a leading authority in the area of applied sustainability. For nearly two decades we have developed a successful track record of bringing together public and private sector interests to drive change, and implement sustainability initiatives that deliver economic, environmental and social benefit.

Our name is derived from the organization’s desire to see a return on sustainability investments. We view sustainability through the lens of “best use, best return” and take a pragmatic approach that leverages our business skills, technical knowledge, passion and established connections to get things done. Our greatest strengths include our ability to think holistically and to discover new opportunities by applying “what if” scenarios.

BLOOM understands that to reap tangible benefits, sustainability concepts must become real sustainable solutions. Yet despite the benefits, for many organizations, sustainability remains an elusive goal with no clear path on how to get there. We empower organizations to embed sustainability into both their business model, and their investment, procurement and policy decision-making.

To inspire change, build capacity and guide actions, we host and deliver an annual Sustainability Applied conference. Grounded in practicality, this dynamic, interactive event brings together leaders and experts to demonstrate the business value of sustainability, and to share the paths they have navigated on their sustainability journey.

Acknowledgements:
This Soil Remediation and Aggregate Recycling Campus – Project Scoping and Research Study Report was developed by The Bloom Centre for Sustainability. BLOOM would like to express our sincere gratitude to everyone who supported and participated in the study and the assistance provided by the Region of Waterloo’s Brownfield Coordinator and Brownfield Working Group. We would also like to thank the individuals who provided their collective comments and insights through the interview process. These included: Alan J. Durand, Bruce Tucker, David Harper, Denise Lacchin, Frank Ierino, Grant Walsom, Janet Bobechko, John Tidball, Jonathan Fernandes, Kathleen Anderson, Moreen Miller, Steven Desrocher, Tamara Farber, and Tony DiFruscio.

Disclaimer:
Interpretation and opinions of regulations and policies expressed in this review are not to be construed as legal advice. Any references to legal requirements are the responsibility of the Region and must be investigated by the Region’s legal counsel and other experts in conjunction with the relevant Ontario government authorities.

January 2012
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ABBREVIATIONS

Acronyms and Abbreviations used or referenced in this report:

- aBRT: adaptive Bus Rapid Transit (Waterloo Region)
- AMO: Association of Municipalities of Ontario
- BMP: Best Management Practices
- C of A: Certificate of Approval
- CIELAP: Canadian Institute for Environmental Law and Policy
- EPA: Environmental Protection Act
- ESA: Environmental Site Assessment
- FCM: Federation of Canadian Municipalities
- GMF: Green Municipal Fund
- GRCA: Grand River Conservation Authority
- HWIN: Hazardous Waste Information Network
- LRT: Light Rail Transit
- MOE: Ontario Ministry of the Environment
- MNR: Ontario Ministry of Natural Resources
- MTO: Ontario Ministry of Transportation
- NAPL: Non-aqueous Phase Liquid
- NMA: Nutrient Management Act
- ONEIA: Ontario Environmental Industry Association
- OSSGA: Ontario Stone, Sand & Gravel Association
- OWRA: Ontario Water Resources Act
- PWGSC: Public Works Government Services of Canada
- RCA: Recycled Concrete and Aggregate
- RBCA: Risk Based Corrective Action
- RCCAO: Residential and Civil Construction Alliance of Ontario
- ROP: Regional Official Plan (Waterloo Region)
- RSC: Record of Site Condition
- RT: Rail Transit System (Waterloo Region includes LRT and aBRT)
- SAROS: State of the Aggregate Resource in Ontario Study
- SERA: Socially and Environmentally Responsible Aggregates
- SIA: Sustainability Impact Assessment
- TOARC: The Ontario Aggregate Resource Corporation
EXECUTIVE SUMMARY

The Region of Waterloo (the Region) is exploring options for a more sustainable approach to the management of environmentally impacted soils as well as other materials associated with development. One alternative under consideration by the Region is the concept of a Soil Remediation and Aggregate Recycling Campus (Soil Campus).

The concept of a Soil Campus differs from typical industry “dig and dump” practices, which have significant environmental, economic and social impacts. In Waterloo Region the issue of soil management has become increasingly critical within the overall context of reurbanization, brownfield remediation and redevelopment along the Rapid Transit corridor.

It should be noted that the Region of Waterloo is not proposing to develop such a facility, but rather is hoping to initiate a dialogue on the merits of such a concept. Any considerations relating to the ownership, operation, location of such a facility would be subject to further study and review. The development of such a facility, either locally or within the Southern Ontario area, could have wide ranging benefits for Waterloo Region, including the development industry, municipal agencies, and the broader community.

The Bloom Centre for Sustainability (BLOOM) conducted a Project Scoping and Research Study for the Region to support its decision-making process on whether to proceed with further efforts to explore the feasibility of the Soil Campus concept. The study focused on approaches to soil movement, recycling (soil banking and treatment,) and reuse, by interviewing key stakeholders and conducting an internet search and literature review.

Based on the findings of the Phase 1 Study, there is an opportunity to further develop the Soil Campus concept, but additional analysis of the key issues and their impacts is required.

In terms of immediate next steps, it is recommended that the Region liaise with the Ontario Ministry of the Environment (MOE) to clarify and determine the regulatory approvals and permits that would be required for the establishment and operation of such a facility.

As part of a next phase, the Region could host stakeholder engagement sessions, which would bring together the right mix of stakeholders including the MOE, to further discuss the key issues identified in this report and to lay out an action plan for moving the concept forward.

The findings from this Phase 1 Scoping Study can be converted into a Briefing Paper to provide background and context for the sessions. BLOOM has identified an initial list of key stakeholders that should be invited to participate in the next phase.
1.0 INTRODUCTION

The Region of Waterloo (the Region) is exploring options for a more sustainable approach to the management of environmentally impacted soils as well as other materials associated with development and infrastructure projects. Currently, typical industry practices (known as the “dig and dump” approach) consist of the removal of impacted (or excess) materials from a site, which is then disposed of at a designated landfill or other appropriate waste management facility. Unfortunately, significant negative environmental, economic and social impacts are associated with this approach.

In Waterloo Region there are several reasons why a new approach may be warranted:

- The issue of soil management has become increasingly critical within the overall context of reurbanization, brownfield remediation and redevelopment along the Rapid Transit corridor. With an increase in the need for subsurface soil excavation, construction and other infrastructure projects that result in impacted or excess soils, finding more sustainable solutions is a high priority.
- Municipalities are also facing challenges associated with the need to deal with other impacted materials such as sediment that result from stormwater management facilities, the majority of which have historically not been adequately maintained due to funding impediments.
- Redevelopment projects within the Region could generate excess aggregate materials that could be reused, and the aggregate industry in Ontario is currently taking a closer look at opportunities to encourage the use of recycled aggregate materials.

One alternative under consideration by the Region is the concept of a Soil Remediation and Aggregate Recycling Campus (Soil Campus). It should be noted that the Region of Waterloo is not proposing to develop such a facility, but rather is hoping to initiate a dialogue on the merits of such a concept. Any considerations relating to the ownership, operation, location of such a facility would be subject to further study and review. The development of such a facility, either locally or within the Southern Ontario area, could have wide ranging benefits for Waterloo Region, including the development industry, municipal agencies, and the broader community.

Some of the potential benefits include:

- Addressing challenges with the management of impacted (non-hazardous, contaminated) soil and sediment in a cost-effective, innovative, and productive manner;
- Allowing for the development of more sustainable approaches to aggregate recycling;
- Reducing the impact to valuable Regional landfill capacity and other waste disposal sites;
- Providing for the remediation and re-use of soil and other materials throughout the Region;
- Fostering an environment for the use of sustainable remediation techniques;
- Demonstrating innovative remediation technologies/approaches in conjunction with private partners and local post-secondary institutions (i.e., providing a regional “Soil Hospital”); and
- Creating a model/approach that could be replicated by other jurisdictions.
The Bloom Centre for Sustainability (BLOOM) conducted a Project Scoping and Research Study (Phase 1) for the Region to obtain information on soil management, focusing on approaches to soil movement, recycling (soil banking and treatment) and reuse. The Region intends to use this report to determine the economic, social, and environmental feasibility (the triple-bottom-line) of a Soil Campus concept.

2.0 BACKGROUND

Reurbanization, through the intensification, adaptive reuse, infill, and redevelopment of sites within existing built-up areas is a viable alternative that complements traditional greenfield development. This trend has gained increasing attention across the Region and the Province of Ontario; and is complemented by supportive policy frameworks that have been developed over the last decade.

The Regional Official Plan (ROP) is a key policy document that makes the connection between sustainable modes of transportation and land use. In June 2011, Regional Council approved the implementation of a Rapid Transit (RT) System with the dual objective of moving people efficiently and providing an opportunity for greater investment in the built-up area and transit corridors (shaping the community). In its first phase, this system will include both Light Rail Transit (LRT) and adaptive Bus Rapid Transit (aBRT) that will connect the cities of Cambridge, Kitchener and Waterloo.

It is anticipated that many of the key development opportunities along the RT corridor will have environmental issues associated with former site activities. As a result, there may be large quantities of environmentally impacted soil and other excess materials that will require management through reuse, recycling, treatment or disposal. Furthermore, remediation and redevelopment of these sites is often costly, challenging and time-consuming. Given that these sites will likely be required to obtain a Record of Site Condition (RSC) as part of any redevelopment the sustainable management of these materials is one of the key issues that needs to be addressed at a more strategic level.

3.0 STUDY METHODOLOGY

This preliminary study was a high-level review to inform the Region as to possible next steps. It was not intended to be a comprehensive analysis of the detailed issues and opportunities to establish a Soil Campus. The findings from this report could be used in subsequent studies to qualify and quantify the risks, constraints, opportunities and benefits of the Soil Campus concept.

As part of this Project Scoping and Research Study, information on soil management of existing regulations, policies and initiatives was obtained through two major activities:

1. Interviews with Key Stakeholders to identify:
   - Current legislation and regulations in the Province of Ontario in relation to soil management;
   - Proposed guidance documents and resources for soil management in Ontario;
   - Current industry practices;

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2. **Internet Search and Literature Review** to supplement the interviews and obtain additional information on:
   - Legislation, regulations, policies and programs in the Province of Ontario and other select jurisdictions; and
   - Current/proposed soil management projects or facilities in the Province of Ontario.

### 3.1 INTERVIEWS WITH KEY STAKEHOLDERS

Interviews were conducted to obtain input from a representative mix of stakeholder organizations and experts. Interviews were conducted with 14 representatives from the following 10 organizations: Ontario MOE, Miller Thomson LLP, Blaney McMurtry LLP, Kilmer Brownfield Equity Fund L.P., XCG Consultants Ltd., Golder Associates, TetraTech Inc., Associated Brownfields Inc., Town of Whitchurch-Stouffville, and the Canadian Brownfields Network. A listing of the participants and interview questions is available in Appendix 2. Interviewees provided their expert opinions on potential issues related to the establishment of a Soil Campus, and their advice on key components and success factors the Region should consider in moving this concept forward. The following four topic areas guided the interviews:

1. **Relevant Ontario Legislation and Policies** that would affect the approval and operation of the Soil Campus.

2. **Proposed Guidance and Resource Documents** in Ontario such as best management practices for soil management that could assist with the development of the Soil Campus.

3. **Current Industry Practices and Initiatives** related to soil and sediment movement, disposal and management.

4. **Key Success Factors for a Soil Campus** that should be considered.

A summary of the interviewee responses in each of these topic areas is provided in Section 4.0.

### 3.2 INTERNET SEARCH AND LITERATURE REVIEW

An internet search and literature review was conducted to identify key Ontario legislation, policies, programs, and guidelines that may be applicable to the establishment of a Soil Campus. Further details on relevant legislation are provided in Appendix 3.

Disclaimer: Interpretation and opinions of regulations and policies expressed in this review are not to be construed as legal advice. Any references to legal requirements are the responsibility of the Region and must be investigated by the Region’s legal counsel and other experts in conjunction with the relevant Ontario government authorities.
4.0 DISCUSSION OF MAJOR TOPIC AREAS

4.1 RELEVANT ONTARIO LEGISLATION AND POLICIES

The following provides a summary of the interviewee responses in relation to Ontario legislation and policies for soil management.

- The major soil management issues relate to the definition of clean versus impacted soil; temporary storage and stockpiling ("soil banking"); and reuse of treated/remediated soil and material for different end-use applications. Comments included:
  - There is a gap between the legislation and policy direction regarding soil treatment and reuse of materials treated.
  - The current process does not appear to support the reuse of end-products (soils and aggregates) from a treatment facility that do not meet Table 1: Full Depth Background Site Condition Standards of the Soil, Ground Water and Sediment Standards for use under Part XV.1 of the EPA (Table 1).
  - There are concerns with how to obtain sign-off or to obtain approval for the reuse (beneficial use) of the treated materials that do not meet Table 1 on a site that is different than the one that produced the soil/material.
  - Interviewees indicated that clarification regarding end-product use is required either through a guidance document or with amendments to the Brownfield Regulation (O. Reg. 153/04).

- The application of soils from a treatment technology is permitted if the soil is treated (remediated) to standards and reused on the same site. This refers to "like for like" soils in O. Reg. 153/04. However, this section of the Brownfield Regulation is considered vague by some of the interviewees and may require clarification from the Ontario MOE.

- However, if a Soil Campus was established to receive impacted (contaminated) materials from off-site sources, and to treat these materials for subsequent reuse in different end-use applications, the materials could be defined as a "waste" and a Soil Campus itself may be classified as a "waste management system". This would require appropriate approvals and certifications/permits to operate in accordance to Part V of the EPA, O. Reg. 347 (General) Waste Management. For example, the Soil Campus operator may be required to obtain the following Certificates of Approval (CoA's):
  - CoA for a Waste Management System (on-site storage, treatment and handling of materials classified as wastes);
  - CoA for individual soil treatment technologies and equipment utilized;
  - CoA for Air (discharge of pollutants to the atmosphere);
  - CoA for Industrial Sewage Works (discharge of effluent to stormwater and sewage systems) under the Ontario Water Resources Act; and possibly;
  - Permit to Take Water (PTTW) required for facility operations that require water to be extracted from surface water bodies and/or groundwater sources.

It should be noted that the Ontario Government has the authority to exempt a Soil Campus from being classified as a "waste management system". The Region would need to obtain a legal review on how such an exemption could be obtained.
Records of Site Condition (RSC)

If treated material from the Soil Campus were to be reused on a brownfield redevelopment project (i.e., site along the RT corridor), a Qualified Person (QP) would be required to validate all materials delivered to the site as fill, as well as to prepare and submit a Record of Site Condition (RSC). Many of those interviewed commented that there was an issue with process delays and constraints for sites “with a RSC” versus sites “without a RSC”.

- For brownfield sites where a RSC is being obtained, the Brownfield Regulation sets out the specific requirements for bringing soil back to the property as fill. Placing material on a RSC site requires extensive sampling requirements (during filling operation or construction) and sign-off by a QP on the receiving site, which would be in addition to the required sign-off by the QP from the source site or treatment facility.
- There is a concern that the proposed MOE guidance document, *Soil Management – A Guide for Best Management Practices*¹ (discussed further in Section 4.2), may create the perception that treated material is not clean and should not be used as fill (which may not support the concept of a Soil Campus and reuse of treated materials).
- “Soil”, as defined in the Brownfield Regulation (refer to Glossary), is material that is smaller than 2 millimetres, and material that meet this soil classification must follow regulatory requirements for accepted end-land use. If treated material is not considered a “soil”, then the engineered product must be reviewed by a QP to determine if it has the potential to cause an adverse effect (impair water quality), which requires sampling and filling of a RSC.
- The facility operator would need to clarify with the MOE whether the “non-soil” material is considered “clean” and therefore not be classified as a “waste” under EPA Part V.

New changes to the Brownfield Regulation² came into force on July 1, 2011. To support the changes to the Regulation and Standards, a number of Technical Guidance Documents have been published by the MOE intended to provide greater clarity and direction as to the requirements that must be met to file a RSC under this amended Regulation (available on the MOE Website)³.

Municipal Site Alteration and Fill By-Laws

Ontario municipalities and conservation authorities can regulate the placement of fill through their site alteration by-laws and have the authority to issue permits under Section 142 of the Municipal Act, 2001. Based on site specific conditions for designated end land use, the Ontario MOE may permit fill that meets Table 1, 2 or 3 soil standard criteria under O.Reg. 153/04 (as amended). However, it was noted that some municipalities are using Table 2 criteria in their site alteration and fill by-laws, while other stakeholders reported that some property owners will only accept soils that meet Table 1 standards, which are often more stringent than required for a specific site.

² *Ontario Regulation Reg 153/04, amending regulations O. Reg. 179/11 and O Reg 519/09
³ *Ontario Ministry of the Environment Guidelines: Online Resources*

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Summary Report (4624-01-001) – Soil Remediation and Aggregate Recycling Campus – Phase 1: Project Scoping and Research Study
January 2012 (V. 1.5)
Findings from a survey of Ontario municipalities that have site alteration by-laws was conducted in early 2011\(^4\) (updated on August 3, 2011\(^5\)), showed that of the 85 municipalities that responded to the survey, only 25 indicated that their relevant site alteration and fill by-law has a section or reference to soil quality criteria guidelines. Twelve municipalities provided a description of what is considered unacceptable material in their municipality as fill, but do not refer to either the EPA or specific soil quality criteria under O.Reg. 153/04. Thirteen municipalities do make reference to the EPA, and of these, only three had specific reference to soil criteria guidelines under the Reg. (i.e., Georgina Township\(^6\), Scugog Township\(^7\), and Uxbridge Township\(^8\)). It should be noted that two municipalities in the Region of Waterloo (City of Kitchener\(^9\) and the City of Waterloo\(^10\)) were not part of this survey, but do have applicable site alteration by-laws that reference the soil quality criteria under O.Reg. 153/04.

The survey findings demonstrate a level of inconsistency and lack of coordination for fill-quality criteria across Ontario municipalities. This is of concern to developers as it introduces uncertainty as to whether a particular municipality will accept excess construction soils or recycled material as fill. In the absence of a clear direction, receiving sites across Ontario typically only accept treated soils that meet the most stringent criteria soil standards (i.e., Table 1), even where Table 2 or Table 3 soils would be acceptable under site specific conditions. Generators of soils typically dispose of excess construction soils as waste at landfills.

A letter from Durham Region to the Association of Municipalities of Ontario (January 19, 2011)\(^11\) identified issues and concerns brought forward by a Durham Region Citizens’ Group regarding soil management policies and regulations.\(^12\) Some of their key messages were as follows:

- Although local municipalities have the ability to regulate commercial fill activities, small municipalities (e.g., Scugog and Uxbridge) often lack the resources to deal with operators who may not be in compliance with their fill permits.
- Activities that fall under federal jurisdiction (e.g., construction of a heliport and/or airstrip) do not have to comply with local fill by-laws and or Provincial guidelines.

\(^4\) Hatch Mott MacDonald Project MEMO (PM282685.001 Rev.2): Municipal By-Law Review for the Excess Construction Soils Management Group (June 28, 2011)
\(^6\) Georgina Township – Municipal Site Alteration By-Law 2011-044
\(^7\) Township of Scugog Site Alteration By-Law 52-10
\(^8\) Uxbridge Township – Municipal Site Alteration By-Law 2010-84
\(^9\) City of Kitchener – Site Alteration By-law 633 (April 2010)
\(^10\) City of Waterloo – Site Alteration By-law 10-066 (May 2010)
\(^12\) Top Ten Risks of the Commercial Fill Dump-site Deputation Report for Council and Staff (February 28th, 2011), by Carmella Marshall on behalf of LakeRidge Citizens for Clean Water, STORM Coalition
The Ontario EPA and the accompanying regulations do not define what is “clean fill”, “contaminated fill” or “contaminated soil”.

- Ontario MOE has no jurisdiction over commercial fill operations or “clean fill” dump sites.

A recommendation by the Durham Region Citizens Group was for municipalities to declare fill operations as a type of land use and zone for them (i.e., not requiring site-alteration), which is permitted through the Planning Act.

To further complicate matters, some municipalities identified in the survey defined a “qualified person” under their municipal site alteration by-law\(^\text{12}\) (e.g., Township of Scugog\(^\text{13}\)), which may be interpreted differently from the accepted definition of a “Qualified Person” under O. Reg. 153/04.

It is suggested that within Waterloo Region there be some level of consistency amongst local municipalities’ site alteration by-laws, as well as consistency with the regulatory regime and soil quality criteria as stated in Brownfield Regulation.

Further details on legislation and policies are provided in Appendix 3.

### 4.2 PROPOSED GUIDANCE AND RESOURCE DOCUMENTS

For the past six months, the Province of Ontario has been developing a guidance document, *Soil Management – A Guide for Best Management Practices*\(^\text{14}\) (BMPs). This document (first draft) was released for discussion purposes amongst stakeholders at a MOE public consultation session in July, 2011. The intent of the document is to provide guidance for the management of excess soils generated from large-scale construction projects including brownfield sites. The Guide is not intended to apply to small scale construction activities or construction activities at single-dwelling residential properties.

The following points are some of the major comments provided by interviewees on the draft guidance document:

- The document focuses on soil movement of impacted soils with known characteristics and contaminants (i.e., soil analysis and QP sign-off required at source and receiving sites), but does not specifically address the reuse of soil and materials following treatment;
- Early public consultation is recommended for all soil movement sites, even if the material is considered “clean” or a final land end-use has not been determined;
- Introduces additional requirements and responsibility for QP sign-off, even if material is reused on sites that do not require a RSC (e.g., roads);

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\(^{12}\) Use of wording and terminology by a municipality in its by-law that has a different definition, as stated in a Regulation, can inadvertently complicate potential transactions or be an unnecessary cause for confusion with stakeholders inexperienced with the different terminologies (e.g., developers, councillors or general public).

\(^{13}\) Township of Scugog – Site Alteration By-Law 52-10

o Onus is on QP to ensure that new brownfields are not created, but would increase project approval times and costs.
  o Concern as several QPs would be involved from source site, to stockpiling, to receiving site. May be difficult for a QP to manage all aspects of projects that may span several years and include several sites.
    • BMPs are applicable only to RSC sites, but not all sites require RSC (this may create a two-tiered system for soil movement and management within brownfields);
    • The proposed BMPs by MOE are not dovetailed with requirements in the Aggregate Industry (recommended for aggregate recycling); and
    • The BMP was developed by MOE Central Region and there is uncertainty as to whether this document will be accepted in other regions (if not incorporated into a regulation).

All of the interviewees agreed that a revised version of a Soil Management Guide for Best Management Practices is needed to provide greater clarity and guidance. The MOE has publicly stated that it plans to address stakeholder comments, and to issue a second draft; however, the timing of this is uncertain.

4.3 INDUSTRY PRACTICES AND INITIATIVES

Current Situation in Ontario

One example of a soil management and treatment operation in Ontario that is similar to the Soil Campus concept was an initiative undertaken by Waterfront Toronto.

Waterfront Toronto completed a soil recycling pilot project in Toronto’s Port Lands area during the fall of 2010 and winter of 2011. The objective was to demonstrate the on-site treatment of contaminated soils by testing two mobile soil washing technologies. The following comments were provided by interviewees familiar with the pilot:
  • Soil washing technologies are, in general, cost competitive to traditional dig-and-dump;
  • A soil treatment facility can only be economically viable if there is a confirmed use for the end-product (i.e., supply must be matched by demand);
  • For the pilot, receiving sites could not be aligned with resulting treated soil and materials (i.e., the end-product did not meet MOE Table 1 or 2 standards for potable groundwater at a Parkland/Residential land use, and therefore could not be reused on-site); and
  • Further guidance is needed on how to incorporate risk assessment on sensitive locations for the purpose of reusing treated soils on-site.

In a letter from the Ontario MOE to Waterfront Toronto, the MOE indicated that the reuse of aggregate-type materials recovered from the piloted soil washing technologies would not have been classified as a waste under Part V of the EPA, if the by-product would not cause an adverse effect or impair water quality.16 The Region would need to clarify with the MOE if this type of exemption would be applicable to end-products from the potential Soil Campus.

16 MOE Letter to Waterfront Toronto dated June 29, 2011

Summary Report (4024-01-001) — Soil Remediation and Aggregate Recycling Campus — Phase 1: Project Scoping and Research Study
January 2012 (V. 1.5)
One interesting aspect of the Waterfront Toronto Pilot Project was the completion of a Sustainability Impact Assessment (SIA). The SIA involved identification and quantification of the net impacts to the triple-bottom-line (economic, environmental, and social) of the project for the two soil washing technologies used in the pilot, which were compared to the baseline. In this case, the dig-and-dump approach\textsuperscript{17}. This provided Waterfront Toronto with relevant data on the net impacts of expanding the pilot to a permanent soil recycling facility.

Waterfront Toronto issued a Request for Proposal in August 2011 to establish and operate a permanent soil treatment facility in the Port Lands (RFP #2011-38)\textsuperscript{18}. The RFP is for a facility that would accept materials from various locations, which can be treated and reused in the Port Lands and on other external sites as per regulatory approval for end-use.

BLOOM identified several Soil Recycling Facilities currently operating in Ontario (e.g., Pickering\textsuperscript{19}, Sarnia\textsuperscript{20}, Moose Creek\textsuperscript{21}, and Sudbury\textsuperscript{22}) that remediate non-hazardous, petroleum contaminated soils (typically through bioremediation and/or landfarming). According to operators of these facilities, most of the soil and treated end-products meet Table 1 or 2 Standards, and based upon specified end use would not be classified as “waste” under Part V of the EPA.

Other facilities under construction or being proposed were also identified, which as part of their operations, would involve the treatment and management of impacted soils. For instance, the Township of Amaranth is partnering with Amaranth Soil Management Facility Inc. to convert the municipality’s former landfill site to a soil treatment and disposal facility capable of accommodating up to five million cubic metres of non-hazardous waste. The operation plans to use bioremediation and landfarming for the treatment of non-hazardous, impacted soils. A Capital Region Resource Recovery Centre in North Russell Township is being proposed, as a waste processing facility in Eastern Ontario located on a former industrial site and shale quarry. The proponent, Taggart Miller Environmental Services, is proposing to operate a facility that would recover approximately 250,000 tonnes of commercial and demolition waste currently shipped to New York, and would allow for treatment of non-hazardous contaminated construction materials (e.g., concrete, clean wood, asphalt paving materials, soil) and biopile treatment for soils to be reused on-site as cover in the residual disposal cells, or be taken off-site\textsuperscript{23}.

\textsuperscript{17} Although the methodology of all SIA’s are based on the principles of net impacts to the triple-bottom-line, the end products (what is measured) are tailored to the customer needs (i.e., each SIA is unique to the project).

\textsuperscript{18} Waterfront Toronto RFP #2011-38, Waterfront Soil Recycling Facility – Design, Build, Finance & Operate

\textsuperscript{19} Green For Life (GFL), Liquid Waste Division Ex-situ Biological Treatment Facility for petroleum hydrocarbon and road salt impacted soils in Pickering, Ontario.

\textsuperscript{20} Curran Recycling - Remediation and Contaminated Soil Management in Sarnia, Ontario

\textsuperscript{21} Lallemche Leblanc Soil Recycling Inc. – Soil Remediation Facility

\textsuperscript{22} Sudbury Soil Treatment Facility – Sudbury (Falconbridge), Ontario, by Solution STF

\textsuperscript{23} Environmental Assessment of the Proposed Capital Region Resource Recovery Centre (November, 2011)

Summary Report (4024-01-001) – Soil Remediation and Aggregate Recycling Campus – Phase 1: Project Scoping and Research Study
January 2012 (V. 1.5)
Other Jurisdictions Outside of Ontario

Three other jurisdictions outside of Ontario were identified by the interviewees as having successful approaches and models for soil movement, treatment and reuse. These are briefly summarized below.

- Nova Scotia: The movement of impacted soil for effective treatment and reuse is successful because the Province has integrated their approach of soil treatment with the regulatory regime and an accepted risk assessment process, the Atlantic Risk Based Corrective Action (RBCA). Impacted soil is cleaned to a certain standard that is defined as “clean enough” and reused for market end-use.
- Netherlands: The Dutch model for soil reuse emphasizes beneficial reuse (e.g., road beds, berms) and incorporates a risk based approach to soil remediation and reuse. A key success factor is there is no commitment to move forward with a project until a receiving site has been identified and all parties have entered into a “supply-buy” agreement.
- United Kingdom: A centralized soil treatment and reuse approach is being used as part of the activities to remediate the lands for the 2012 London Olympics. Soil recycling was built into the business case for all site projects where treated soils are being reused for landscaping uses, road beds and berms.

A listing of other jurisdictions with regulatory regimes or policies related to soil management and treatment facilities is provided as a reference source in Appendix 3.

Aggregate Industry

The aggregate industry in Ontario recognizes the need to conserve virgin aggregate resources for infrastructure projects and encourage the reuse/recycling of aggregates. The Ontario Ministry of Natural Resources (MNR) released a report entitled the State of the Aggregate Resource in Ontario Study (SAROS) in February of 2010, which provided a province wide assessment of the present status and characteristics of aggregate resources. Aggregate supplies in Ontario are limited with a strong demand for new construction activities. In some cases, the need for “virgin” aggregate extracted from pits and quarries can be reduced through the use of recycled material such as industrial by-products (e.g., fly ash, slag or mine waste rock). Approximately seven percent of the annual demand for aggregates in Ontario is met through the use of recycled concrete and aggregates (RCA). The SAROS study included a paper on “Reuse and Recycling”, which noted a lack of municipal awareness and acceptance of aggregate recycling technologies for RCA, with a recommendation for a provincial policy for aggregate recycling.

The Soil Campus could promote and demonstrate effective reuse and recycling of aggregate resources from brownfield sites and the RT corridor, but would require additional feedback from the aggregate industry on new and current initiatives.

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24 State of the Aggregate Resource in Ontario Study (Feb. 2010)
25 CIELAP Briefing Note: Aggregate Extraction in Ontario (May 2011)
The aggregate industry, which includes pits and quarries, closure and rehabilitation are under the jurisdiction of the MNR. The Aggregate Resources Act (ARA)\(^26\) and corresponding Ontario Regulation 244/97\(^27\) provides a definition for “aggregates” and other prescribed material. Soils and other materials produced by a Soil Campus would fall under jurisdiction of the EPA. Clarification would be required by the MNR and the MOE for materials not classified as “soils” produced by a Soil Campus for materials such as sand and gravel.

- MNR requires pit operators to establish a rehabilitation fund to ensure that the site is rehabilitated. MNR also requires that material used as cover or for erosion control meet the MOE Table 1 standards for soil quality.
- It was noted by interviewees that at times “clean” soil may have elevated levels of naturally occurring metals (e.g., barium) and are not impacted by external contamination (i.e., soils from a brownfield), but would not be accepted on the site. MNR can refer to the local MOE Municipal Services Officer for technical guidance on soil quality and has the authority to provide exceptions.
- Once rehabilitation is completed and the site is closed, the property owner surrenders the Aggregate license, and the property owner no longer falls under MNR jurisdiction.
- A municipality under their by-law (if they have one) can start to fill the quarry with approved soils and materials (that meet Table 1 or 2 standards depending on the site), which could create a demand for excess soils and materials from a Regional Campus.

A number of organizations such as the Ontario Stone, Sand and Gravel Association (OSSGA) and municipal governments are actively pursuing the Province to develop consistent standards and approaches for the Aggregate Industry and for Pit/Quarry fill operations. One example is the Town of Whitchurch-Stouffville in the Region of York that has developed and implemented requirements for pit fill operations. These include:

- A credit note from property owner (insurance);
- Fill license to assist in road maintenance costs associated with increased truck traffic;
- Analysis of materials from the source for a suite of contaminants to meet Table 1 or 2;
- Monitoring wells both inside and outside the quarry and;
- Spot checks of the trucks and material (conducted periodically).

Additional research would be required to understand the market dynamics of the Aggregate Industry and the movement and reuse of recycled aggregate product to determine how to incorporate aggregate recycling into a potential Soil Campus.

### 4.4 KEY SUCCESS FACTORS FOR A SOIL CAMPUSS

Interviewees suggested that the Region consider the following key success factors and components to establish and operate a potential Soil Campus.

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\(^{26}\) Aggregate Resource Act (RSA 1990, Chapter A.8)

\(^{27}\) Ontario Regulation 244/97 (General)
One Centralized Facility versus Multiple Regional Sites

The Region and community would need to conduct a cost-benefit analysis to determine the use of one centralized Soil Campus (for treatment and stockpiling) versus a network of soil campuses and/or soil banking sites. Interviewees suggested the following:

- Group material by quantity and quality for treatment to optimize reuse;
- Consolidate material at one central location for treatment, which may require separation and segregation for different treatment trains (systems); and
- Create several soil banking sites to stockpile both untreated and treated along the LRT corridor, which could reduce transportation requirements.

Supply and Demand

For a Soil Campus to be operated in a cost-effective manner, there will be a requirement for both a sufficient supply of material to be treated, and sufficient demand for the end product. In addition, the movement of materials will need to be done in a coordinated manner (i.e., involve soil brokering). Some of the key areas identified by the interviewees to address include:

- Identify and quantity supply sources by soil quantity and quality;
- Identify and secure end-use product applications;
- Investigate the potential for formalized or organized approach where “fill” brokers (private or public) could be used to coordinate supply with demand;
- In terms of the RT corridor, some interviewees indicated coordination of supply and demand would be easier if the Region had some ownership of sites within the corridor. It was suggested that the Region consider pursuing the sale and/or acquisition of properties along the RT corridor. Notes: a municipality can receive special provisions for ownership of a contaminated property under specific conditions, such as a failed tax sale (EPA section 168.13 - Ownership by Vesting); and
- As a next step, the Region could map the RT corridor in terms of current property ownership, and information on quantity and quality of impacted materials.

Public Consultation

The general public typically has concerns related to soil management and waste management approaches - especially when proposed within their own community. The Region would need to engage in early public education and consultation to alleviate any issues and concerns, and to obtain acceptance and support for a potential Soil Campus if one were to be located within Waterloo Region.

The use of a Sustainability Impact Assessment (SIA), which quantifies the economic, environmental and social benefits of different approaches, is a valuable tool the Region can use to build the case for remediation, recycling and reuse of materials over the traditional dig-and-dump approach, which could help garner public and other stakeholder support for a Soil Campus.

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Note: The term “soil brokering” is not defined by any regulatory or guidance documents in Ontario or Canada, and is a general industry term that is used for the coordination of soil for use in construction projects.
Regional Framework for Soil Management

Interviewees suggested that if a Soil Campus were established, a regional framework to facilitate soil management should also be considered that would:

- Outline the relevant regulatory policies and procedures;
- Streamline regional and municipal by-laws and permitting approvals; and
- Establish a coordinated supply and demand process.

Legal Advice

As part of any further investigation of the feasibility of this concept, the Region should include a legal review of the following issues:

- Required Certificate of Approvals and Permits;
- Exemptions for materials that would otherwise be classified a “waste” (Part V of EPA);
- Potential liability implications regarding cross-boundary movement of impacted soils; and
- Any municipal regulatory or policy changes required to move the concept forward.

5.0 NEXT STEPS

The main objective of this Project Scoping and Research Study was to support the Region of Waterloo with examining the concept of a Soil Campus and whether to proceed with further efforts to determine its feasibility. Based on the findings of the study, there is an opportunity to establish a Soil Campus, but further analysis of the key issues and their impacts is required.

In terms of immediate next steps, it is recommended that the Region liaise with the Ontario Ministry of the Environment (MOE) to clarify and determine the regulatory approvals and permits that would be required to establish and operate a Soil Campus (regardless of ownership structure).

As part of a next phase, the Region should host stakeholder engagement sessions, which would bring together the right mix of stakeholders including the MOE, to further discuss the key issues identified in this report and to lay out an action plan for moving the concept forward.

The findings from this Phase 1 Study can be converted into a Briefing Paper to provide background and context for the sessions. BLOOM has identified an initial list of key stakeholders that should be invited to participate in the next phase.
APPENDIX

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APPENDIX I: GLOSSARY OF TERMS

Definitions and Acronyms used or referenced in this report:

a) “adverse effect” (as defined by the EPA) means, (a) impairment of the quality of the natural environment for any use that can be made of it, (b) injury or damage to property or to plant or animal life, (c) harm or material discomfort to any person, (d) an negative effect on the health of any person, (e) impairment of the safety of any person, (f) rendering any property or plant or animal life unfit for human use, (g) loss of enjoyment of normal use of a property, and (h) interference with the normal conduct of business.

b) “aggregate” (as defined in the Ontario Aggregate Resources Act (ARA) and Regulation 244/97 amended to 209/04), means gravel, sand, clay, earth, shale, stone, limestone, dolostone, sandstone, marble, granite, “rock” or other prescribed material. Note: the term “Earth” does not include topsoil and peat.

c) “CBO” (as defined by Municipal Site Alteration By-Laws) means, the Chief Building Official of the Municipal Corporation and shall include any person authorized by the Chief Building Official to carry out any of the powers or duties of the Chief Building Official pursuant to Municipal By-laws;

d) “contaminated fill” (as defined by the City of Kitchener site-alteration by-law 5.633.1.5) means material which contains any solid, liquid, gas, odour, waste product, radioactivity or any combination thereof which is present in a concentration greater than that which naturally occurs in the location of the site in question and which has the potential to have adverse effect on the natural environment, human activity, and/or health and safety as defined under the EPA.

e) “commercial fill operation” (as defined by Municipal Site Alteration By-Laws) means, the placing or dumping of fill involving remuneration paid, or any other form of consideration provided, to the owner or occupier of the land, whether or not the remuneration or consideration provided to the owner is the sole reason for the placing or dumping of the fill;

f) “contamination” (as defined by O.Reg. 153/04) means, the presence of a contaminant in soil, sediment or ground water at the property, in concentrations that exceed the maximum concentrations set out in the applicable site condition standards prescribed under Part IX (Site Condition Standards and Risk assessments) of O. Reg. 153/04;

g) “contaminants” (as defined by the EPA) means, any solid, liquid, gas, heat, sound, vibration, radiation or combination of any of them resulting directly or indirectly from human activities that may cause an adverse effect;

h) “contaminants of concern” (as defined by O.Reg. 153/04) means, (a) one or more contaminants found on, in or under a property at a concentration that exceeds the applicable site condition standards for the property, or (b) one or more contaminants found
on, in or under a property for which no applicable site condition standard is prescribed under Part IX (Site Condition Standards and Risk Assessment) and which are associated with potentially contaminating activity;

i) "fill"

i. "fill" (as defined by Municipal Site Alteration By-Laws) means, any type of material placed or dumped on land and includes soil, stone, concrete, asphalt, dirt, sod or turf either singly or in combination;

ii. "inert fill" (as defined by the EPA), means a designation is administered in accordance with Table 1: Full Depth Background Site Condition Standards of the Soil, Ground Water and Sediment Standards for use under Part XV.1 of the EPA (See Section 3.1.5) except in some cases on a case-by-case basis where other site specific criteria may be considered. If the concentrations of chemical contaminants in excavated soil are less than the background criteria listed in Table 1 of the Soil, Ground Water and Sediment Standards for the land use of the receiving site, then the soil can be considered as "inert fill" at that site.

j) "grade" (as defined by Municipal Site Alteration By-Laws):

iii. "existing grade" means, the elevation of the existing ground surface of the lands upon which dumping and/or placing of fill or other site alteration is proposed and of abutting ground surface up to 3 metres wide surrounding such lands, except that where placing or dumping of fill or other site alteration has occurred in contravention of this By-law, existing grade shall mean the ground surface of the lands as it existed prior to the dumping or placing of fill or to any other site alteration requiring a permit under this By-law;

iv. "finished grade" means, the approved elevation of ground surface of lands upon which fill has been placed in accordance with this By-law;

v. "proposed grade" means, the proposed elevation of ground surface of land upon which fill is proposed to be placed;

k) "landfarming" (as defined by O. Reg. 347) means the biodegradation of petroleum refining wastes by naturally occurring soil bacteria by means of controlled application of the wastes to land followed by periodic tilling;

l) "natural environment" (as defined by the EPA) means, air, land, and water, or any combination or part thereof, of the Province of Ontario;

m) "qualified person" or "Qualified Person" or "QP"

i. "Qualified Person" or "QP", other than risk assessment (as defined by O.Reg. 153/04, Part II, Section 5) means,
i. A person referred to in subsection (2) means the qualifications to be a qualified person for the purposes of, (a) conducting or supervising a phase one environmental site assessment; (b) conducting or supervising a phase two environmental site assessment; and (c) completing the certifications that must be completed by a qualified person in a record of site condition in respect of a property. (O. Reg. 66/08, s. 2.); and

ii. A person meets the qualifications to be a qualified person for the purposes of subsection (1) if, (a) the person holds a licence, limited licence or temporary licence under the Professional Engineers Act; or (b) the person holds a certificate of registration under the Professional Geoscientists Act, 2000 and is a practising member, temporary member or limited member of the Association of Professional Geoscientists of Ontario. (O. Reg. 66/08, s. 2.)

ii. “qualified person” (as defined by Township of Scugog Municipal Site Alteration By-Law 52-10) means, a licensed professional engineer in the Province of Ontario or an environmental consultant approved by the CBO possessing expert or special knowledge in regards to matters contained within specific Municipal By-laws;

n) “rock” (as defined by O.Reg. 153/04) means, a naturally occurring aggregation of one or more naturally occurring minerals that is 2 millimetres or larger in size or that does not pass the US #10 sieve;

o) “site alteration” (as defined by Municipal Site Alteration By-Laws) means, dumping, the removal of topsoil from land, or the alteration of the grade of land by any means including placing fill, clearing and grubbing, the compaction of soil or the creation of impervious surfaces, or any combination of these activities;

p) “soil”

i. “soil” (as defined by O.Reg. 153/04) means, except for the purposes of shallow soil property as defined in section 41, unconsolidated naturally occurring mineral particles and other naturally occurring material resulting from the natural breakdown of rock or organic matter by physical, chemical or biological processes that are smaller than 2 millimetres in size or that pass the US #10 sieve;

ii. “soil” (as defined by Municipal Site Alteration By-Laws) means material commonly known as earth, topsoil, loam, clay, sand or gravel;

q) “soil campus” or a “Soil Remediation and Aggregate Recycling Campus” (as defined by the Region Waterloo) is the concept of a facility that would allow for the collection, treatment, and reuse of contaminated soil, sediment and excess materials at an economically viable cost to developers and the municipalities. Impacted materials from brownfield sites could be disposed of at a facility with the purpose of reusing the treated end-products on redeveloped sites or other construction projections (e.g., fill and grading).
r) “soil mixture” (as defined by O.Reg. 347) includes a mixture of soil and liquids, sludges or solids, where,
   (a) the mixture cannot be separated by simple mechanical removal processes; and
   (b) based on visual inspection, the volume of the mixture is made up primarily of soil or other finely divided material that is similar to soil;

s) “subsurface soil” (as defined by O.Reg. 153/04) means, soil that is more than 1.5 metres beneath the soil surface, including the bottom .5 metres of any non-soil surface treatment such as asphalt, concrete or aggregate above the soil surface, but excluding the thickness of any such non-soil surface treatment that is greater than .5 metres;

t) “surface soil” (as defined by O.Reg. 153/04) means, soil that is no more than 1.5 metres beneath the soil surface, including the bottom .5 metres of any non-soil surface treatment such as asphalt, concrete or aggregate above the soil surface, but excluding the thickness of any such non-soil surface treatment that is greater than .5 metres;

u) “thermal treatment” (as defined by O.Reg. 347) includes incineration, gasification, pyrolysis or plasma arc treatment;

v) “waste disposal site” (as defined by O.Reg. 347) means, (a) any land upon, into, in or through which, or building or structure in which, waste is deposited, disposed of, handled, stored, transferred, treated or processed, and (b) any operation carried out or machinery or equipment used in connection with the depositing, disposal, handling, storage, transfer, treatment or processing referred to in clause (a);

w) “waste management system” (as defined by O.Reg. 347), means any facilities or equipment used in, and any operations carried out for, the management of waste including the collection, handling, transportation, storage, processing or disposal of waste, and may include one or more waste disposal sites;
APPENDIX 2: INTERVIEW PARTICIPANTS & QUESTIONS

The following participants were interviewed for Phase 1:

<table>
<thead>
<tr>
<th>Representative</th>
<th>Title</th>
<th>Organization</th>
<th>Industry Sector</th>
</tr>
</thead>
<tbody>
<tr>
<td>David Harper</td>
<td>Managing Partner - Environmental Risk Management</td>
<td>Kilmer Brownfield Equity Fund L.P. &amp; CBN</td>
<td>Brownfield Developer / Private Equity Financing</td>
</tr>
<tr>
<td>Denise Lacchin &amp; Bruce Tucker</td>
<td>Manager, Business Development – Environmental Sr. Vice President, Infrastructure &amp; Environmental Division</td>
<td>TetraTech</td>
<td>Consultant, Qualified Person (QP)</td>
</tr>
<tr>
<td>Frank Ierfino</td>
<td>Manager of Engineering Services – Engineering Department CEO</td>
<td>Town of Whitchurch-Stouffville</td>
<td>Government – Municipal</td>
</tr>
<tr>
<td>Grant Watson</td>
<td>Partner</td>
<td>XCG Consultants Ltd.</td>
<td>Consultant / QP</td>
</tr>
<tr>
<td>Janet Bobechko</td>
<td>Partner</td>
<td>Blaney McMurtry LLP</td>
<td>Legal</td>
</tr>
<tr>
<td>Moreen Miller</td>
<td>President</td>
<td>Ontario Stone Sand and Gravel Association (OSSCA)</td>
<td>Industry Association</td>
</tr>
<tr>
<td>Steven Desrocher</td>
<td>Sr. Contaminant Hydrogeologist</td>
<td>Golder Associates Ltd.</td>
<td>Consultant / QP</td>
</tr>
<tr>
<td>Tamara Farber &amp; John Tidball</td>
<td>Partners, Certified Specialists + Environmental Law</td>
<td>Miller Thomson LLP</td>
<td>Legal</td>
</tr>
<tr>
<td>Tony DiFruscio</td>
<td>Principal</td>
<td>Associated Brownfields Inc.</td>
<td>Brownfield Developer</td>
</tr>
</tbody>
</table>

Introduction for Interview

The Region of Waterloo’s Official Plan (ROP) has incorporated sustainable modes of transportation (i.e., i.e., rapid transit system that connects the cities of Cambridge, Kitchener and Waterloo). In June 2011, Regional Council approved a light rail transit (LRT) to be implemented through a staged approach. With this initiative, it is anticipated that large quantities of soil from along the corridor will need to remediated or disposed of in a landfill or hazardous waste site. The Region is exploring a more sustainable approach for the management of impacted and contaminated non-hazardous, soils and other materials from brownfield redevelopment projects and stormwater basins throughout the Region - development of a Soil Remediation/Rehabilitation and Aggregate Recycling Campus (Soil Campus) is a possible option, although such a facility is not planned to be built by the Region of Waterloo.

Possible benefits from a Soil Campus may include

- Address challenges with the treatment of impacted (non-hazardous, contaminated) soil and sediment in a cost-effective, innovative, and productive manner;
- Allow for the development of more sustainable approaches to aggregate recycling;
Reduce the impact to valuable Regional landfill capacity;
- Provide treatment and re-use of soil and other materials throughout Region;
- Demonstrate innovative remediation technologies/approaches in conjunction with private partners and local post-secondary institutions (i.e., i.e., provide a regional “Soil Hospital”);
- Foster an environment for the use of sustainable remediation techniques; and
- Create a model/approach that could be replicated by other jurisdictions.

Interviewees were asked to provide their opinions on developing a potential Soil Remediation and Aggregate Recycling Campus and any considerations that the Region should address if the project were to move forward. Key issues, barriers and solutions for soil management, including policies and initiatives relevant for a potential Soil Campus were explored. The following topic areas and questions were designed to assist in guiding the discussions:

- **Current Ontario Legislation/Regulations** that affect soil movement/recycling/reuse (approach and issues related to Waterloo Region’s proposed initiative) including:
  - Regulations; Permitting for the site; Permitting for various treatment technologies;
  - Mitigation measures; Liability Protection;
  - Ability to export processed material from the site; and
  - Ability to place exported material at non-permitted receiving sites.

- **Proposed guidance document** – Best Management Practices (BMP) for Soil Management in Ontario (to assist Ontario stakeholders for soil movement and reuse)
  - Key features – overview of Ontario’s proposed approach
  - Issues/gaps related to Waterloo Region’s proposed initiative

- **Current industry practices**
  - What is the state of soil and sediment movement, disposal and management?
  - What is being done? Who are the major players (Organizations)?
  - How does the Aggregate Industry fit in? Are there synergies with aggregate recycling?
  - What research is available and who is working on the issues?

- **Does the concept of a Soil Campus have merit?**
  - Is there a need for something like this in the industry already?
  - What are the gaps that are not being met?
  - Has a Pilot Project been conducted in Ontario? What were the obstacles?
  - Why isn’t the private sector more involved?
  - Is there an immediate need for soil banking/brokering? Who plays this role?
  - What are the benefits of soil management (movement/recycling/reuse)?
  - What are the beneficial end uses? What are the potential end uses?

- **What are the main issues that the Region of Waterloo should consider?**
  - Definitions of soil (contaminated, impacted, clean); Regulations
  - Soil/Sediment management, disposal, technology, reuse
  - Ability to place exported material at non-permitted receiving sites.
  - Economic Feasibility - What are the key points (factors) to consider?
  - Environmental Requirements (permitting, etc.)
  - Liability - What are the concerns/perspectives from the public vs. private?
  - What tools and risk mitigation measures are available or required? Insurance?
  - Other issues that need to be considered and explored further.
APPENDIX 3: LEGISLATION AND POLICIES

A brief summary of relevant Legislation (Acts and Regulations) and Policies (Programs and Guidance), as interpreted during the review is provided below. These may be applicable to soil management (movement, treatment and recycling), and reuse of contaminated materials (soils, sediments and aggregates) and the development of a potential Soil Campus.

ENVIRONMENTAL PROTECTION ACT (EPA)

In Ontario, the Environmental Protection Act is the key legislation for environmental protection. The act grants the Ontario Ministry of the Environment (MOE) broad powers to deal with the discharge of contaminants that may cause negative effects.

The act specifically:
- Prohibits the discharge of any contaminants into the environment which causes or are likely to cause negative effects, and in the case of some approved contaminants requires that they must not exceed approved and regulated limits; and
- Requires that any spills of pollutants be reported and cleaned up in a timely fashion.

The act also deals with commercial transactions involving contaminated land. Ontario’s EPA has the authority to establish liability on the party which is at fault, including liability for corporate officers or directors who have failed to take all reasonable care to prevent unlawful discharges of contaminants into the environment. Within the Environmental Protection Act (EPA) (Chapter E-19), the following regulations and guidance pieces may be relevant to a Soil Campus.

Air Pollution Regulation (O.Reg. 346)

Regulation 346, under the EPA, controls the discharge of air contaminants to the atmosphere. Requirements apply to the discharge of contaminants to the air from contaminated sites, for on-site treatment (mobile system) and for fixed treatment systems (i.e., ex-situ remediation technologies), such as those which might be incorporated at a potential Soil Campus.

Record of Site Condition Regulation (O. Reg. 153/04)

The Record of Site Condition (RSC) Regulation, also referred to the Brownfield Regulation, made pursuant to the EPA sets out the process and standards to be used for the purposes of determining whether a property is “clean”. Using the procedures and standards, an owner may file a RSC on the Environmental Site Registry. The effect of filing a RSC on the Registry is that, subject to the information in the RSC being accurate and subject to no new information coming forward indicating that site conditions are different than as reported in the RSC, no order shall be issued by the MOE in respect of the contaminants discharged into the natural environment on the property.

Ontario Ministry of the Environment (MOE) Website and e-Laws
City of Hamilton - Contaminated Sites Management Program for Municipal Works (V.1. 2004), S. 3.1.2

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before the certification date where that contaminant was on, in or under the property as of the certification date.\(^\text{31}\)

New change to the Brownfield Regulation (O. Reg. 153/04)\(^\text{32}\) came into force on July 1, 2011. In addition to updates to the Reg, the following changes also came into effect:

- New numerical Standards for different property uses and different site conditions (in the majority of cases, more stringent). There are also new Standards for Background Site Conditions, shallow soils and for use within 30 metres of a water body.
- The requirements for a Phase I Environmental Site Assessment have been revised and have become more extensive, where a Phase I Environmental Site Assessment is to be used in support of a RSC.
- The requirements for a Phase II Environmental Site Assessment have been revised and have become more extensive, where a Phase II Environmental Site Assessment is to be used in support of a RSC.
- The amended Brownfield Regulation also now mandates the completion of a Phase II Environmental Site Assessment where a property has been used for an industrial use or certain specified commercial uses.

Recent amendments to the section in the EPA on CoA (EPA Section 9.1 and 9.2 - Approval of Director), clarifies plant or production processes and alterations that may require Approval of the Director (comes into force October 31, 2011).

Waste Management Regulation (O. Reg. 347)

Regulation 347\(^\text{33}\), Ontario's general waste management regulation, specifies how all wastes in the province are to be managed. Impacted (contaminated) materials classified as a “soil mixture” are defined as a waste by the EPA O. Reg. 347\(^\text{34}\) and must be treated at a facility designated as a “waste management system”. A Soil Campus would be classified as such a facility and would require a corresponding Certificates of Approval (CoA). Examples of treatment systems designated under this regulation include operations such as “landfarming” or “thermal treatment” systems.

In addition, where waste is determined to be liquid or “hazardous wastes”, special provisions apply. The wastes must be registered on the MOE’s Hazardous Waste Information Network (HWIN) before they can be removed. In addition, records must be maintained and the waste disposed of at a specified hazardous waste treatment facilities.

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\(^{31}\) Environment \& Cowlings: August 5, 2011 - Volume 8, Number 5

\(^{32}\) Ontario Regulation Reg 153/04, amending regulations O. Reg. 179/11 and O Reg 519/09

\(^{33}\) City of Hamilton Contaminated Sites Management Program for Municipal Works (V.1. 2004), S 3.1.1

\(^{34}\) Environmental Protection Act (EPA) R.R.O. 1990, Regulation 341 – General – Waste Management

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January 2012 (V. 1.5)
Landfilling Sites Regulation (O. Reg. 232/98)

The Landfilling Regulation 232/98 deals with the operation and maintenance of landfilling sites, including leachate and migratory gas management requirements. This regulation also calls for reporting measures upon closure of landfilling sites. This Regulation would be applicable if the Region and/or its partners were to operate a Regional owned landfill, or if the Region considered building and integrating the Soil Campus as part of the Regional Landfill operations.

Municipal Provisions (EPA Part XV.2) - Special provisions applicable to municipalities, secured creditors, receivers, trustees in bankruptcy, fiduciaries and property investigators

Part XV.2 allows a municipality or municipal representative to perform certain actions on potential contaminated sites (e.g., investigation and remediation) without becoming statutorily liable for existing contamination. This provides protection against MOE orders issued pursuant to specified sections of the EPA; however, this protection is subject to certain provisions (i.e., such as emergency situations, dangers to health and safety and spills). This provision may allow a municipality to investigate potential contaminated sites along the LRT corridor that may pose a threat to human health and safety, without having to acquire said properties.

Ownership by Vesting (EPA Section 168.13)

EPA Section 168.13 (1) provides protection to a municipality if it becomes the owner of a potential contaminated property by virtue of a failed tax sale or registration of a notice under the Municipal Act, 2001. This provision would allow the Region to pursue the sale and or acquisition of properties along the LRT corridor.

ONTARIO MUNICIPAL ACT

The Municipal Act authorizes local Municipalities to regulate commercial fill activities and sewage discharge through creation of fill and site alteration by-laws and sewer use by-laws. Municipalities with such by-laws may require Municipal Permits for related activities.

Site Alteration and Fill By-Laws

Ontario’s municipalities regulate the placement of fill through their site alteration by-laws, as permitted under Section 142 of the Municipal Act, 2001. It has been noted by the MOE that some municipalities are using O.Reg. 153/04 (as amended) Table 2 criteria in their site alteration and fill by-laws, however stakeholders reported that some property owners will only accept soils that meet Table 1 standards, which are more stringent, which indicates a level of Inconsistency across Ontario municipalities.

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35 City of Hamilton Contaminated Sites Management Program for Municipal Works (V.1. 2004), § 3.1.2
36 Ibid. § 3.1
37 Environmental Protection Act (EPA) R.S.O. 1990, Chapter E.19 (c-Laws)
City Sewer Use By-Laws

A municipality or region may implement a sewer use by-law that would regulate discharges to the storm, sanitary and combined sewer systems. The by-law may include concentration limits for chemical parameters in water that can be discharged into the sewer system. Remediation technologies that do not have a close-looped water system (e.g., soil washing) will require discharge into the municipal sewer system, and should be monitored so that it does not to exceed sewer discharge limits. The by-law may also contain information about spills to sewers or other municipal drainage features including notification and fines for non-compliant sewer use.²⁶

ONTARIO WATER RESOURCES ACT (OWRA)

Regulation 903 – Wells²⁹ under the OWRA outlines procedures for drilling, installing and decommissioning groundwater wells. It also requires that anyone drilling, installing, or decommissioning a well must be licensed by the MOE. These requirements would apply to groundwater sampling wells drilled at contaminated sites and may be applicable to monitoring wells at a Regional Campus.

ENVIRONMENTAL ASSESSMENT ACT (EA ACT)

All municipal projects, which would include a Soil Campus, are required to comply with the Environmental Assessment Act and Regulation 334⁴⁰. The EA Act outlines how proponents must assess projects. In general, it specifies that the environmental assessment must consist of a description of the environment, the effects that will be caused or that might reasonably be caused to the environment and the actions to prevent, change, mitigate or remedy the effects upon the environment. This would include the need to establish the environmental condition of the site affected by or with the potential to be affected by a project in order to be able to assess/evaluate alternatives, define the effect of the preferred alternative on the environment and to develop suitable mitigation measures.

AGGREGATE RESOURCE ACT (ARA)

The Aggregate Resources Act (ARA)⁴¹ and corresponding Ontario Regulation 244/97⁴² provides a definition for “aggregates” and other prescribed material. Materials defined as “aggregates” that fall under this definition would not be required to follow the more stringent regulations for materials defined as “soils” under the EPA for transportation, disposal and/or reuse. Clarification is required to determine if the “aggregate” definition would apply to materials produced from a soil remediation and aggregate recycling campus.

²⁶ City of Hamilton Contaminated Sites Management Program for Municipal Works (V.1. 2004), S 3.7
²⁹ Ibid. S. 3.3
³⁰ Ontario’s Environmental Assessment Act: Overview and Linkages to Act and Regulations.
⁴¹ Aggregate Resource Act (RSO 1990, Chapter A.8)
⁴² Ontario Regulation 244/97 (General)
OTHER JURISDICTIONS WITH SOIL MANAGEMENT REGULATIONS OR POLICIES

The following is a list of select jurisdictions with regulatory regimes or policies related to soil management and treatment facilities.

Canadian Provinces

- Alberta: Code of Practice for Land Treatment of Soil Containing Hydrocarbons (2005)
- Quebec: Bill 88 entitled An Act to amend the Environment Quality Act as regards Residual Materials Management (June 2011)
- Manitoba: Guideline 96-05: Treatment and Disposal of Petroleum Contaminated Soil  (April 2002)

International Jurisdictions

- Florida: Soil Treatment Facilities Chapter 62-713 (1999)
- Indiana: Spill Management Guide, Handling oil and saltwater spill in Indiana (2001)
- United Kingdom: A review of soil waste guidance was conducted by Diane Saxe Environment Law, The European Union Waste Framework Directive (Directive 2008/98 EC)43. Most jurisdictions in the UK treated surplus soils from construction sites as waste, whether contaminated or not, with some exceptions, such as Northern Ireland. Guidance such as the documents published includes the Construction Code of Practice for the Sustainable Use of Soils on Construction Sites and “Toolbox Talks” on managing surplus soils.

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January 2012 (V. 1.5)
APPENDIX 4: POTENTIAL COLLABORATORS TO ESTABLISH A SOIL CAMPUS

The following is a listing of stakeholder organizations that can collaborate in the discussion surrounding the establishment of a potential Soil Campus serving Waterloo Region.

- Academia (University/College)
  - University of Guelph
  - University of Waterloo
  - Wilfrid Laurier University

- Aggregate Industry
  - Aggregate Recycling Council
  - Ontario Stone, Sand & Gravel Association (OSSGA)
  - Socially and Environmentally Responsible Aggregates (SERA)
  - The Ontario Aggregate Resource Corporation (TOARC)

- Associations
  - Association of Municipalities of Ontario (AMO)
  - Association for Professional Geoscientists of Ontario (APGO)
  - Ontario Environmental Industry Association (ONEIA)
  - Ontario Professional Planners Institute (OPPI) – Policy Committee
  - Professional Engineers Ontario (PEO)
  - Residential and Civil Construction Alliance of Ontario (RCCAO)
  - Waterloo Region Home Builders Association (WRHBA)

- Conservation Authorities
  - Grand River Conservation Authority (GRCA)

- Environmental Engineering and Consulting Firms (and Remediation Firms/Contractors)

- Legal Firms

- Ontario Municipal and Regional Governments
  - Waterloo Region – Area Municipalities and the Region of Waterloo

- Private Non-Governmental Organizations
  - The Bloom Centre for Sustainability (BLOOM)
  - Canadian Urban Institute (CUI)
  - Federation of Canadian Municipalities (FCM)
  - Ontario Centers for Excellence (OCE)
  - Pembina Institute
  - Sustainable Development Technology Canada (SDTC)

- Regulatory Agencies
  - Ontario Ministry of Municipal Affairs and Housing (MMAH)
  - Ontario Ministry of Natural Resources (MNR)
  - Ontario Ministry of the Environment (MOE)
  - Ontario Ministry of Transportation (MTO)
  - Public Works Government Services of Canada (PWGSC)
  - Transport Canada
APPENDIX 5: LITERATURE AND INTERNET REFERENCES

- Aggregate Resource Act (RSO 1990, Chapter A.8)
- Amaranth Soil Management Facility: Conceptual Project Overview (version 3.0)
- British Columbia Draft Protocol 15 For Contaminated Sites: Soil Treatment Facility Design and Operation for Bioremediation of Hydrocarbon Contaminated Soil (February 27, 2009)
- Certificate of Approval Air (#9610-84YLE3) to Toronto Waterfront Revitalization Corporation for Waterfront Toronto Soil Management Facility issued June 18, 2010.
- CIELAP Briefing Note: Aggregate Extraction in Ontario (May 2011)
- City of Hamilton - Contaminated Sites Management Program for Municipal Works (V.1, 2004)
- City of Hamilton Land Banking Study - Meeting Summary of Economic and Planning Development Department (December 12, 2007)
- City of Hamilton Report to Land Banking Study – Letter and Report by CRA (February 27, 2008)
- City of Kitchener – Site Alteration By-law Chapter 633 (April 2010)
- City of Waterloo – Site Alteration By-law 2010-066 (May 2010)
- Curan Recycling - Remediation and Contaminated Soil Management in Sarnia, Ontario (Website)
- Dump the dump – article by Tom van Dusen, Ontario Farmer article, November 30, 2011
- E-Laws – Government of Ontario (Website)
- Environment & Gowling Newsletter - August 5, 2011 - Volume 8, Number 3
- Environmental Assessment of the Proposed Capital Region Resource Recovery Centre (2011)
- Environmental Protection Act (EPA) R.S.O. 1990, Chapter E.19 (e-Laws)
- Green For Life (GFL) Liquid Waste Division Ex-situ Biological Treatment Facility for petroleum hydrocarbon and road salt impacted soils in Pickering, Ontario.
- Lafieche Leblanc Soil Recycling Inc. – Soil Remediation Facility

Summary Report (4021-01-001) – Soil Remediation and Aggregate Recycling Campus – Phase 1: Project Scoping and Research Study
January 2012 (V. 1.5)
- Ontario Ministry of the Environment Letter (by Greg Sones, Regional Director) to Waterfront Toronto (David Kustruin, VP Program Development) dated June 29, 2011
- Ontario Ministry of the Environment Website – Guidelines & Environmental Legislation
- Ontario Regulation 153/04, amending regulations O. Reg. 179/11 and O Reg 519/09
- Ontario Regulation 244/97 (General)
- Ontario Regulation 347 (General) Waste Management (EPA) R.R.O. 1990
- Orangeville, Ontario landfill to be converted to soil-treatment facility. Article by Dan Pelton, Correspondent at Daily Commercial News (July 6, 2011)
- Protocol for the Management of Excess Soil from CPPI Member Properties (February 15, 2005)
- Provisional Certificate of Approval for Waste Management System (44410-851/85) to Toronto Waterfront Revitalization Corporation for Waterfront Toronto Soil Management Facility (Pilot Project), issued June 19, 2010.
- Provisional Certificate of Approval for Waste Management System (#1342-88Q7/N) to Stuyvesant Environmental Contracting Inc. for the Waterfront Toronto Soil Management Facility, and including the equipment listed in attached Schedule "B", issued August 30, 2010.
- Quebec - Bill 88 entitled An Act to amend the Environment Quality Act as regards Residual Materials Management and to amend the Regulation respecting compensation for municipal services provided to recover and reclaim residual materials (June 2011)
- State of Florida, Chapter 62-713 Soil Treatment Facilities
- State of the Aggregate Resource in Ontario Study (Feb. 2010)
- Sudbury Soil Treatment Facility – Sudbury (Falconbridge), Ontario, by Solution STF
- Top Ten Risks of the Commercial Fill Dump-site Deputation Report for Council and Staff (February 28th, 2011), presentation by Carmella Marshall on behalf of Lake Ridge Citizens for Clean Water
- Town of Whitchurch-Stouffville – Site Alteration By-Law 2008-016-RE
- Township of Scugog – Site Alteration By-Law 52-10
- Uxbridge Township – Municipal Site Alteration By-Law 2010-84
- Waterfront Toronto RFP 2011-38, Soil Recycling Facility – Design, Build, Finance & Operate

Summary Report (0210.01.001) – Soil Remediation and Aggregate Recycling Campus – Phase 1 Project Scoping and Research Study
January 2012 (V. 1.5)
RECOMMENDATIONS:

That The Regional Municipality of Waterloo take the following action regarding the Transit Supportive Strategy to enhance transit ridership in the City of Cambridge, as described in P-12-023/E-12-028, dated February 28, 2012:

a) Approve the 2012 Implementation Plan and allocation of $1,000,000, as described in Report No. P-12-023/E-12-028 and summarized in Attachment 1, subject to the acceptance by the City of Cambridge and finalizing an agreement between the Region of Waterloo and the City of Cambridge;

b) Formalize and execute a Memorandum of Understanding for the administrative and financial management of the program between the Region of Waterloo and City of Cambridge;

c) Authorize any unspent funds in a calendar year to be carried over for future initiatives as part of the Transit Supportive Strategy, with any changes in the use of these funds to be agreed upon by both the Region of Waterloo and the City of Cambridge.

SUMMARY:

On June 15, 2011, Regional Council approved Light Rail Transit (LRT) as the preferred technology from Conestoga Mall in the City of Waterloo to the Ainslie Street Terminal in the City of Cambridge, to be implemented in a staged approach, for the Region of Waterloo’s Rapid Transit system (see Report E-11-072). More specifically, the Region approved the implementation of LRT from Conestoga Mall to Fairview Park Mall, and adapted bus rapid transit (aBRT) from Fairview Park Mall to the Ainslie Street Terminal as Stage 1, with Stage 2 including the extension of LRT to Cambridge.

As part of the rapid transit project, Council also approved an allocation of $1,000,000 annually, for a 10-year period, to implement transit-supportive strategies in Cambridge, subject to annual budget deliberations during that 10-year period. Details of the program were to be developed in conjunction with the City of Cambridge and to be presented to Regional Council for consideration.

In response to this direction, City of Cambridge and Region of Waterloo staff has collectively developed a strategy consisting of both short and longer-term initiatives. Short-term initiatives include those that can be implemented within the 2012-2013 timeframe (Year 1 and 2 of the strategy). Longer-term initiatives could be implemented in subsequent years within the overall 10-
year timeframe identified by Regional Council. City staff is supportive of the strategy proposed in this report for the 2012-2013 timeframe. Each yearly implementation plan will be forwarded to Regional Council for consideration. This report outlines the proposed use of the 2012 funds only.

The four key areas of focus recommended for the 2012-2013 timeframe consist of:

- Funding for the City of Cambridge Core Areas Parking Master Plan;
- Funding to expand the TravelWise TMA and TDM Program in the L.G Lovell Industrial Park in Cambridge;
- Funding for Strategic Pedestrian and Transit Infrastructure Investments within the City of Cambridge, including new transit shelters and improvements to the Ainslie Street Terminal; and
- Funding for a TDM Coordinator/Station Area Planner in the City of Cambridge.

If approved, Region and City staff will move to implement the action items identified for 2012 only. Regional staff will provide periodic updates on the status of the program. Details of the longer-term strategy will continue to be developed in conjunction with the City of Cambridge staff and will be presented to Regional and City Councils in subsequent annual reports for consideration.

REPORT:


The Region’s ultimate goal is to implement a full LRT system, however given the differences in ridership, development potential and capital and operating costs along the route, Regional Council has endorsed a staged implementation. The first stage is the implementation of LRT north of Fairview Park Mall and adapted Bus Rapid Transit (aBRT) south of Fairview Park Mall in Kitchener to the Ainslie Street Terminal in downtown Cambridge (Galt). The second stage is the completion of the LRT system from Fairview Park Mall to the Ainslie Street Terminal.

As part of the rapid transit project, staff was directed to undertake measures to encourage transit-supportive development, to enhance transit ridership, and to expedite the development of LRT in Cambridge, including (but not limited to) the following:

- Develop incentives for transit-oriented developments; and
- Support and develop transportation demand management (TDM) strategies for new and existing business and residents.

As detailed in Report E-11-072, Regional Council approved an allocation of $1,000,000 annually, for a 10-year period to implement transit-supportive strategies in Cambridge such as the ones noted above. Details of the program were to be developed in conjunction with the City of Cambridge and presented to Regional Council for consideration.

Strategy Development

In response to this direction, City of Cambridge and Region of Waterloo staff met to collectively develop a potential strategy consisting of both short and longer-term initiatives. It was agreed that the objective of the strategy would be to expedite the development of LRT in Cambridge by enhancing transit ridership and/or encouraging transit-supportive development. Further, it was determined that initiatives would focus specifically on areas within and connecting to the Central Transit Corridor (CTC) where the implementation of rapid transit is planned.
As part of the initial staff discussions, several conclusions were reached:

- Opportunities to build on existing information and data regarding the factors that influence transit usage in Cambridge should be explored;
- There must be an appropriate balance between short and long term initiatives;
- The money should not be used to fund an initiative that could or should otherwise be funded through an alternative budget source;
- The sustainability of funding should be considered. There may be opportunities where funds could expedite a capital initiative that would otherwise take longer to implement from another budget source;
- Part of the funding allocated in each year should result in some tangible/visible improvements to the built environment and/or transit ridership;
- Opportunities to leverage private sector investments should be investigated;
- Lessons learned through this process have the potential to inform future transit-supportive initiatives region-wide;
- Action items and results should be measurable and monitored; and
  There should be a direct connection between each action item and potential to increase ridership along the CTC.

It was recognized that the strategy would consist of both short- and longer-term initiatives. Short-term initiatives would include those that could be implemented within the first two years of the strategy (2012-2013). Longer-term initiatives would be implemented in subsequent years within the overall 10-year timeframe identified by Regional Council.

Staff also recognized that it was important that this strategy compliment the work already underway by both the Region and the City related to both land use and transportation planning. For a list of some of the key transit-supportive and reurbanization related projects, please see Attachment 2.

**Identification of Strategic Themes**

Four key themes emerged in the discussion surrounding the potential components of the strategy. These theme are as follows:

1. **Research/Marketing Initiatives** - Examples of this include detailed surveys/research with employers, workers and students to increase data on current transit usage and demand. Further, this information could lead to targeted education and TDM individualized marketing campaigns to help overcome barriers to transit usage.

2. **Physical Infrastructure Improvements** - Examples include improvements to pedestrian amenities that could be made relatively quickly and have a tangible benefit in the short term. It could also include funding to help the City implement various transit supportive initiatives such as the Core Areas Parking Master Plan.

3. **Transit Related** - Free transit passes, subsidies or other improvements, modifications or acceleration of transit service provision may be considered as part of this strategy in order to accelerate ridership increases in target market segments.¹

¹ Regional and Cambridge City Staff have determined that a more detailed evaluation framework should be developed for the consideration of any transit related initiatives as part of this strategy. This framework will be presented to Regional Council for consideration as part of future updates on the program.
4. **Studies** - Studies related to transportation, land use, infrastructure requirements as well as environmental conditions will all be required in order to realize the reurbanization potential along the rapid transit corridor.

Based on the above discussions, staff developed a list of potential initiatives for further evaluation as part of the strategy. Several initiatives were also identified and further developed for consideration as part of Year 1 and 2 of the strategy.

**Proposed 2012 and 2013 Implementation Plan**

*Please Note: Funding for 2013 projects will be considered by Regional Council in a future report.*

Based on a review of the options considered for short-term implementation, City of Cambridge and Regional staff agreed that the following initiatives be recommended for the first two years (2012 and 2013) of the 10-year Transit Supportive Strategy. For a summary of the proposed 2012 Implementation Plan, please see Attachment 1. For the proposed 2013 Implementation Plan, please see Attachment 3.

Based on an evaluation of the potential action items, staff recommends that the short-term implementation of the Cambridge Transit Supportive Strategy during 2012 and 2013 timeframe focus on the four following areas:

1. **Funding for the City of Cambridge Core Areas Parking Master Plan**

   In March 2009, City of Cambridge Council approved the Core Areas Parking Master Plan (see Cambridge Report TPW-17/09). A key objective of the Master Plan was to assess existing and future parking needs and develop a forward-looking and sustainable parking framework for a 15-20 year period.

   The Master Plan was developed through extensive consultation with various stakeholders and technical agencies. Further, the process involved close collaboration between the City of Cambridge and the Region of Waterloo – thus resulting in a Master Plan that addresses many joint interests.

   Research has indicated that a strong but complex relationship exists between parking management policies and decisions on urban development and travel mode choice. As communities focus on reurbanization and making the most efficient use of existing land and infrastructure, ensuring that there is an appropriate supply of parking at the right price and in the right form is becoming an increasing priority. In urban areas, land used for extensive surface parking represents lost opportunities for other uses, such as housing, employment or recreation. It may also translate into lost tax revenue for the community and an increase in development costs due to the high cost of providing parking facilities.

   Where rapid transit systems exist, parking management can play a critical role in the success of the system. For example, if too much parking is provided at low (or no) cost to the end user, the relative attractiveness of public transit or other active forms of transportation may be diminished.

   Reflecting the growing understanding of using parking management to achieve a more sustainable and transit-oriented community, the Master Plan is one example of a complimentary initiative that supports the overall objective of the rapid transit project. A key theme of the Master Plan is that parking operations in the core areas of Cambridge transition
from one that is currently heavily subsidized, to a “user pay” model that shifts the costs of providing and operating parking to those that use it. This will help to provide a more level playing field for development and travel mode choices within the Core Areas of Cambridge.

Due to 2010 and 2011 budget limitations, the City of Cambridge had to delay implementation of all Master and Strategic Plans, including the Parking Master Plan. Consequently, the implementation of the action items would not occur until sometime in the future. Given the momentum originally generated by the development of the Master Plan, it is expected that a delay of this type could be detrimental to the achievement of the goals of the Master Plan. For this reason, it is recommended that funds available through the Transit Supportive Strategy for Cambridge be used to fund the immediate implementation of the Cambridge Core Areas Parking Master Plan. Some key recommendations of the Parking Master Plan include implementing a new parking pricing strategy, planning for a future parking structure, promoting active transportation and transportation demand management, among others. The City’s plan identified several action items, most of which were to take place within the 2009-2012 timeframe. For a summary of these action items and preliminary implementation plan, please see Attachment 4.

Cambridge staff then presented several options for implementation of the Master Plan over the course of two years. With the intent of implementing the major capital installations associated with the Master Plan, it is recommended that funding for several one-time expenditures be provided in the amount of approximately $760,000 in 2012 and approximately $380,000 in 2013. This approach has the potential to accelerate positive cash flow in the short term and can then be used to financially sustain Cambridge’s Core Areas Parking Master Plan as additional implementation occurs. Ongoing expenses for the implementation of the Parking Master Plan would be allocated through the City of Cambridge’s own budget. For a breakdown of the one-time expenditures that these funds will cover, please see Attachment 5.

2. Funding to expand the TravelWise Transportation Management Association and associated Transportation Demand Management (TDM) services to the L.G. Lovell Industrial Park

Transportation demand management (TDM) is the use of policies, programs and services to influence why, when, where and how people travel. TDM strategies are designed to increase the efficiency and use of the transportation system by influencing travel behaviour, as well as through travel incentives and disincentives. TDM is used to support investments being made in the transit and active transportation system.

A Transportation Management Association (TMA) is a public-private partnership that provides transportation services and TDM programs to organizations in a particular area. The Region of Waterloo has developed a TMA called TravelWise to serve the businesses and commuters of the Region of Waterloo. Comprised of businesses, developers, City governments and the University of Waterloo, Wilfrid Laurier University, the mission of the TMA is to “bring together public and private interests to support and promote alternatives to single occupancy vehicle travel.”

As a primary step in the development of appropriate TDM programs, it is important to understand the existing context in which travel decisions are made. There are several barriers to transit use in Waterloo Region’s large employment areas, especially in Cambridge. The L.G. Lovell Industrial Park (Lovell Industrial Park) is one example which is located within the CTC. The Lovell Industrial Park employs approximately 6000+ people and is currently served by two Grand River Transit Routes (67 and 53). There are several challenges common to both routes when serving this area:
Limited operating budget has restricted Route 67 to one direction which increases trip length;
New development on the eastern portion of the industrial park is not within a reasonable walking distance from the nearest bus stop;
No sidewalks on Regional and City streets in the area, which reduces pedestrian access to existing stops;
Poor quality waiting areas on grass boulevards;
Poor connections to sites where berms or swales separate large facilities from the street. It can be difficult to walk from the building to the bus stop; and
A trend to staggered shift times, overtime and 24/7 operations which transit is not currently equipped to fully serve.

Given these challenges, it is recommended that part of the available funding be allocated to expanding the TravelWise TMA and associated TDM services to the Lovell Industrial Park. The first step in the process is to gather information from the employers and employees related to shift times, parking availability, travel patterns and barriers to transit usage. This information will be gathered through a survey in early 2012 at a cost of $5,000. Based on the results of the information, a TDM program will be developed and implemented within the Lovell Industrial Park in the following year(s). While the details of the program will be finalized based on the survey results, some examples of possible actions include:

- The expansion of the TravelWise TMA to help leverage resources across the Lovell Industrial Park and make more transit options available;
- Pedestrian improvements such as sidewalks and bus shelters to make transit a more attractive option;
- The provision of reduced-fare transit passes (similar to the Corporate Pass or U-Pass program) or free bus tickets on a pilot basis to encourage modal shift;
- The implementation of a Individualized Marketing (IM) Campaign that highlights enhancements to transit service to those most open to trying it; and
- The implementation of some form of shared private or public “shuttle service” on a pilot basis that would increase connectivity to the iXpress at specific shift times and improve transit capacity by building ridership.

Results of the TDM initiatives will be monitored and analysed for their applicability to other areas within the Region, especially along the CTC. It is anticipated that minimal resources will be required in the first year of the program to implement the required survey (2012). Additional funding can be allocated in the 2013 budget year to implement the various components of the TDM program.

3. **Funding for Strategic Pedestrian and Transit Infrastructure Investments in the City of Cambridge**

As part of the development of this strategy it is recommended that some of the funding be allocated towards physical infrastructure projects that will improve the pedestrian environment in the City of Cambridge. To this end, pedestrian and transit amenities were examined for any gaps or areas where improvements could be made.

Two key areas for strategic investment were identified at this time.

1. **The Ainslie Street Terminal Pedestrian Environment**

   The Ainslie Street Terminal was built in the 1990s to serve Cambridge Transit, before Grand River Transit assumed operations in 2000. With over 4,000 passenger boardings
per day, the terminal represents one of the busiest locations of transit passenger activity in Cambridge. Transit passengers can use the terminal to access the iXpress, Cambridge-area trunk routes such as Route 51 Hespeler Road, Route 52 Fairview Mall/Ainslie St, and Route 53 Franklin Boulevard, and local routes serving West Galt and South Galt. Currently, transit service is available at the terminal approximately from 6:00 am to 12:00 midnight on Monday through Saturday and from 10:00 am to 6:00 pm on Sundays.

The Ainslie Street Terminal is also a major location of passenger transfer activity given that the schedules of routes serving it are coordinated to reduce passenger wait times. Convenient passenger facilities are essential to facilitating passenger trips which require transfers. Some challenges that exist at the terminal include its size (which can be an obstacle to passengers with personal mobility issues), and the distance between bus platforms (located up to 80m apart). Furthermore, most of the passenger waiting area is outdoors and exposed to the elements.

Given the importance of the Ainslie Street Terminal to the existing Grand River Transit service as well as for the future rapid transit system, it is recommended that $35,000 in 2012 be allocated to the initiation of a plan for the identification and implementation of various pedestrian and transit infrastructure improvements at, and around, the terminal. Improvements may include additional bus shelters, benches, landscaping, streetscaping, and bicycle parking. Regional and City Staff will work with Grand River Transit to develop a plan for the improvements (identification of priorities and implementation strategy), including public consultation to determine what would best serve the needs of existing and future transit users. In addition, consultation with the public will be co-ordinated with the 2012 Service Improvement in the Cambridge Service Area planned for March 2012.

2. Transit Shelters for the City of Cambridge

While Grand River Transit has seen substantial increases in service levels and ridership since it assumed the operations of the regional transit system in 2000, it has not been able to keep up with the demand for the implementation of new bus shelters. In 2011, following a presentation from a City of Cambridge resident, Regional Council indicated to staff that the provision of additional shelters for Cambridge transit users should be considered as part of the Cambridge Transit Supportive Strategy.

To this end, staff undertook a review of the current supply of bus shelters in relation to users and stop locations in the City of Cambridge. The analysis suggested that an additional 30 shelters would greatly improve the transit shelter amenities serving transit users along various Cambridge routes – all of which have the potential to impact ridership within the Central Transit Corridor.

Based on this information, City and Regional staff agree that the implementation of these shelters would be an appropriate capital expenditure as part of the Cambridge Transit Supportive Strategy. It is also recommended that the implementation these shelters be phase over a period of 3 years, with 10 shelters constructed per year at a cost of $130,000 in 2012, $133,000 in 2013 and $136,000 in year 2014. These figures have been estimated based on the cost of shelters recently implemented in other areas across the region.

The locations of these shelters will be finalized through a collaborative process, utilizing several means:

- Reviewing past shelter location requests currently on file with GRT planning staff;
- Consultation with Area Municipal staff;
A public process coordinated with Public Consultation for 2012 Transit Service Improvements in the Cambridge Service Area planned for March 2012; and Consultation and identification of potential partnership opportunities with a private advertisement provider.

4. Funding for a Transportation Demand Management Coordinator/Station Area Planner in the City of Cambridge

A dedicated staff person is a key resource to ensure the implementation of the above action items. Thus, it is recommended that part of the available funding be allocated to fund the first year of a phased-in full-time position at the City of Cambridge for a Transportation Demand Management (TDM) Coordinator/Station Area Planner. Following the first year, the City of Cambridge would assume some responsibility for the cost of the position. Anticipated funding for this position, through this strategy, is approximately $70,000 for the first 9 months including benefits and associated overhead (assuming an April 1, 2012 start), $60,000 for the second year.

Working closely with Regional and City staff, the TDM Coordinator/Station Area Planner would be responsible for the further development, implementation, monitoring and reporting of the Transit Supportive Strategy in the City of Cambridge. It is anticipated that the workplan for 2012 and 2013 timeframe would consist mostly of the implementation of the Cambridge Core Area Parking Master Plan. Additional duties would include the development of the TDM program in the Lovell Industrial Park, station area planning and any others deemed appropriate as part of this strategy or the rapid transit project. This role would provide a consistent liaison between the City and the Region and would play a key part in ensuring that the intent of the overall strategy is met and goals achieved.

**Longer-Term Implementation (Years 3 - 10)**

*Not recommended in this report, but provided for information at this time.*

This strategy is also intended to address challenges associated with lower-density, non-transit-supportive land use. As a result, the need for longer-term initiatives related to the development of transit-oriented development has also been identified. Longer-term initiatives are defined to include specific strategies or policy measures to increase transit-oriented development within key intensification areas, thus building ridership potential.

While the implementation of these initiatives is expected to occur in subsequent years (beyond the 2013 timeframe), development of the various components is anticipated to proceed concurrently with the implementation of the short-term initiatives associated with this strategy. Further, any long-term initiatives will be coordinated with the ongoing land-use planning associated with the rapid transit project.

While staff has yet to determine the specifics of the longer term initiatives, several possibilities exist and will be evaluated as the strategy develops. It is anticipated that many of these initiatives will focus on Hespeler Road given the various opportunities that exist for intensification and redevelopment. Examples include:

- Improvements to the Cambridge Centre Transit Terminal;
- Groff Mill Creek Watershed Study for the reurbanization of Hespeler Road;
- Exploring the possibility of a shared parking structure in Galt;
- Exploring the possibility of creating a Park n’ Ride facility near the Ainslie Street Terminal;
- Utilizing the tools/programs provided for in the Region’s Reurbanization Community Improvement Plan;
- Infrastructure improvements; and
- Station Area Plans; Transit-Oriented Development Policy Development, financial incentives and/or Guidelines.

Regional and City staff will continue to develop the strategy and recommend specific initiatives for implementation as appropriate. In addition, in order to assist with the consideration of potential action items and the development of the strategy, staff have developed a two-step evaluation process. This evaluation process has the primary objective of ensuring that the action items/initiatives selected are appropriate as part of the overall strategy. For more information of the evaluation process please see Attachment 6.

**Next Steps**

If approved, Region and City staff will move to implement the action items identified for 2012. Further, it is recommended that Senior Staff at both the City of Cambridge and Region of Waterloo formalize and execute a Memorandum of Understanding (MOU) to come to an agreement on how the funding currently held in a Region of Waterloo capital account, will be managed. The MOU will be negotiated and approved by the Chief Financial Officers (CFOs) at each municipality and should address the following general categories of terms and conditions:

- Payment schedules and milestones;
- Eligible Expenses;
- Invoicing/supporting documentation requirements;
- Eligible expense audit/review requirements;
- Monitoring and reporting of results; and
- Provisions for funds not spent.

It is also recommended that any unspent funds in a calendar year shall be carried over in a capital account, as is typical Regional practice, for future initiatives as part of the Transit Supportive Strategy, to be agreed upon by both the Region and the City.

Details of the longer-term initiatives of the strategy will continue to be developed in conjunction with the City of Cambridge staff and will be presented to Regional Council for consideration in subsequent reports. Staff will prepare an issue paper to address the proposed action items for 2013 and beyond. Staff will also include progress reports highlighting key evaluation metrics so that the incremental improvements related to this strategy can be identified.

**Area Municipal Consultation/Coordination**

This strategy has been developed by staff of the City of Cambridge and the Region of Waterloo. Given the various interests involved and the multi-disciplinary nature of the exercise, several different departments at both the City and Region have been involved as required. Representation from the City of Cambridge has included senior staff from Planning Services as well as from Transportation and Public Works, who are supportive of the recommended strategy for 2012.

**CORPORATE STRATEGIC PLAN (2011 – 2014):**

The Cambridge Transit Supportive Strategy is consistent with Focus Area 2: **Growth Management and Prosperity:** Manage growth to foster thriving and productive urban and rural communities.

Relevant Strategic Objectives include:

- 2.1. Encourage compact, livable urban and rural settlement form; and
- 2.2. Develop, optimize and maintain infrastructure to meet current and projected needs.
It is also consistent with Focus Area 3: **Sustainable Transportation**: Develop greater, more sustainable and safe transportation choices.

Relevant Strategic Objectives include:

- 3.1 Implement a Light Rail Transit System in the Central Transit Corridor fully integrated with an expanded conventional transit system.
- 3.2 Develop, promote and integrate active forms of transportation (cycling and walking).

**FINANCIAL IMPLICATIONS:**

The Cambridge Transit Supportive Strategy was identified as part of the Preferred Rapid Transit System Implementation Option and Staging Plan approved June 15, 2011, including an allocation of $1,000,000 annually, for an initial 10-year period, subject to budget approval. Staff will prepare an issue paper to address the Cambridge Transit Supportive Strategy action items and associated funding source for 2013 and beyond. The proposed 2012 detailed financial itemization is provided in Attachment 1 of this report.

**OTHER DEPARTMENT CONSULTATIONS/CONCURRENCE:**

Staff from Planning, Housing and Community Services, Transportation and Environmental Services, Corporate Resources (Legal) and Finance, Grand River Transit and the Rapid Transit Project Team continue to be involved with the development, implementation and monitoring of the Cambridge Transit Supportive Strategy.

**ATTACHMENTS:**

Attachment 1 - Proposed 2012 Transit Supportive Strategy for Cambridge-Implementation Plan
Attachment 2 - Transit Supportive and Reurbanization Related Initiatives
Attachment 3 - Proposed 2013 Transit Supportive Strategy for Cambridge - Implementation Plan Summary
Attachment 4 - City of Cambridge Core Areas Parking Master Plan Preliminary Implementation Plan (March 2009)
Attachment 5 - 2 Step Evaluation Process

**PREPARED BY:**  *Brooke Lambert*, Interim Manager, Reurbanization  
*Danielle Tobey*, Planner, Rapid Transit

**APPROVED BY:**  *Rob Horne*, Commissioner of Planning, Housing and Community Services  
*Thomas Schmidt*, Commissioner, Transportation and Environmental Services
Attachment 1 – Proposed 2012 Transit Supportive Strategy for Cambridge Implementation Plan Summary

The following tables provide a summary of how the $1,000,000 annual budget for the Cambridge Transit Supportive Strategy is recommended to be allocated in 2012.

2012 Strategy Budget Allocation  
(Recommended by Regional and City Staff)

<table>
<thead>
<tr>
<th>Initiative</th>
<th>Focus</th>
<th>Estimated Budget *</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cambridge Core Area Parking Master Plan</td>
<td>One Time Expenditures (i.e. Off-street pay-and-display equipment and bicycle parking)</td>
<td>$760,000</td>
</tr>
<tr>
<td>TravelWise Program</td>
<td>Employer/Employee Surveys L.G Lovell Industrial Park</td>
<td>$5,000</td>
</tr>
<tr>
<td>Pedestrian and Transit Infrastructure Investments</td>
<td>Ainslie Street Terminal Improvements - Study</td>
<td>$35,000</td>
</tr>
<tr>
<td></td>
<td>Transit Shelters (10)</td>
<td>$130,000</td>
</tr>
<tr>
<td>TDM Coordinator/Station Area Planner</td>
<td>Strategy Implementation – Parking Master Plan and TDM</td>
<td>$70,000*</td>
</tr>
<tr>
<td>Other Associated Costs</td>
<td>To Be Determined</td>
<td>Dependant on savings</td>
</tr>
<tr>
<td>(to be agreed upon by the Region of Waterloo and the City of Cambridge)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>$1,000,000</td>
</tr>
</tbody>
</table>

*Specific allocations may vary slightly in order to provide for the implementation of complementary programs, cost efficiencies or other variables that may be identified in collaboration with Area Municipal and Regional staff.

**Funding for initial length of 12-month commitment – assuming contract begins April 1, 2012. The allocation between 2012 and 2013 will depend on the commencement date of the contract. Any additional funds available in 2012 due to a later contract commencement will be reallocated to the Pedestrian and Transit Infrastructure Improvements.
Attachment 2 – Transit-Supportive and Reurbanization Related Initiatives

Key transit-supportive and reurbanization related projects at the Region of Waterloo include:
- Regional Official Plan;
- Region of Waterloo Strategic Focus 2011-2014;
- Active Transportation Master Plan;
- Brownfield Financial Incentive Program;
- Central Transit Corridor Development Strategy (CDS);
- Context Sensitive Regional Transportation Corridor Design Guidelines;
- Commuter Parking Lot Feasibility Study;
- GRT Business Plan;
- GRT Service Expansion and realignment;
- Regional Cycling Master Plan;
- Regional Reurbanization Community Improvement Plan (RRCIP);
- Regional Transportation Master Plan;
- TDM Parking and Trip Generation Reduction Strategy;
- Regional Parking Management Strategy;
- Waterloo Region Parking Coordinating Committee;
- The New Regional Official Plan and associated Implementation Guidelines;
- The Region of Waterloo (King/Victoria) Transit Hub; and
- Travelwise Transportation Management Association/Marketing.

Key transit-supportive and reurbanization initiatives at the City of Cambridge include:
- Core Areas Parking Master Plan;
- TravelWise Transportation Management Association (participant);
- City of Cambridge Transportation Master Plan;
- New City of Cambridge Official Plan;
- City of Cambridge Zoning Bylaw Update;
- TDM Parking and Trip Generation Reduction Strategy; and
- City of Cambridge Bikeway Network Master Plan.
Attachment 3 – Proposed 2013 Transit Supportive Strategy for Cambridge Implementation Plan Summary

### 2013 Strategy Budget Allocation
(Scheduled to be considered by Regional Council in 2012 through a separate report)

<table>
<thead>
<tr>
<th>Initiative</th>
<th>Focus</th>
<th>Estimated Budget*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cambridge Core Area Parking Master Plan</td>
<td>One Time Expenditures (i.e. Off-street pay-and-display equipment and bicycle parking)</td>
<td>$380,000</td>
</tr>
<tr>
<td>Pedestrian and Transit Infrastructure Investments</td>
<td>L.G. Lovell Industrial Area (Initiatives based on 2012 surveys)</td>
<td>$200,000</td>
</tr>
<tr>
<td></td>
<td>Transit Shelters (10)</td>
<td>$133,000</td>
</tr>
<tr>
<td></td>
<td>Ainslie Street Terminal Improvements</td>
<td>$227,000</td>
</tr>
<tr>
<td>TDM Coordinator/Station Area Planner</td>
<td>Strategy Implementation – Parking Master Plan</td>
<td>$60,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>$1,000,000</strong></td>
</tr>
</tbody>
</table>

* Specific allocations may vary slightly in order to provide for the implementation of complementary programs, cost efficiencies or other variables that may be identified in collaboration with Area Municipal and Regional staff.

** Exact initiatives and budget required will be determined by 2012 surveys/Ainslie Street Terminal Plan and included for consideration in the issue paper for the 2013 implementation plan.
### Attachment 4 – City of Cambridge Core Areas Parking Master Plan
#### Preliminary Implementation Plan

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Action</th>
<th>Timing</th>
<th>Capital Cost</th>
<th>Core Area</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Parking Management and Operations</strong></td>
<td>Establish central municipal parking website for all parking-related information</td>
<td>2009-2010</td>
<td>$5,000</td>
<td>All</td>
</tr>
<tr>
<td></td>
<td>Create new parking system brochure</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Improve signage to municipal lots</td>
<td>2010</td>
<td>$20,000</td>
<td>All</td>
</tr>
<tr>
<td>Improve Parking Permit Management and Enforcement Practices</td>
<td>Phase out existing multiple permits with reduced payment</td>
<td>2010</td>
<td>Nil</td>
<td>All</td>
</tr>
<tr>
<td></td>
<td>Implement monthly parking permits tied to holder</td>
<td>2010</td>
<td>Nil</td>
<td>All</td>
</tr>
<tr>
<td></td>
<td>Increase monthly permit availability and rates</td>
<td>2010</td>
<td>Nil</td>
<td>All</td>
</tr>
<tr>
<td></td>
<td>Remove ability of City’s Department Heads to cancel parking tickets</td>
<td>2010</td>
<td>Nil</td>
<td>All</td>
</tr>
<tr>
<td><strong>Optimize Parking Supply</strong></td>
<td>Promote free parking in peripheral lots</td>
<td>2010</td>
<td>$5,000</td>
<td>All</td>
</tr>
<tr>
<td></td>
<td>Remove no-reparking policy</td>
<td>2009</td>
<td>Nil</td>
<td>All</td>
</tr>
<tr>
<td></td>
<td>Remove two hour free parking policy</td>
<td>2010-2011</td>
<td>Nil</td>
<td>All</td>
</tr>
<tr>
<td></td>
<td>Change existing drive-up pay and display configuration to walk-up operation</td>
<td>2010</td>
<td>$20,000</td>
<td>All</td>
</tr>
<tr>
<td></td>
<td>Implement pay and display in off-street lots, with maximum of $1.00 per hour at high demand lots</td>
<td>2010</td>
<td>$196,000</td>
<td>All</td>
</tr>
<tr>
<td></td>
<td>Implement pay and display for on-street parking, with maximum of $1.00 per hour at high demand locations</td>
<td>2010</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Galt implementation first year, Preston and Hespeler</td>
<td>2011-2012</td>
<td>$994,000</td>
<td>All</td>
</tr>
<tr>
<td></td>
<td>Add one full-time position to the parking program</td>
<td>2010</td>
<td>$60,000</td>
<td>All</td>
</tr>
<tr>
<td><strong>Operational improvements</strong></td>
<td>Remove parking spaces from one side of Queen Street east of Guelph Avenue</td>
<td>2010</td>
<td>$5,000</td>
<td>Hespeler</td>
</tr>
<tr>
<td><strong>Parking Supply</strong></td>
<td>Expand Accessible Parking to all off-street lots</td>
<td>2010-2011</td>
<td>$30,000</td>
<td>All</td>
</tr>
<tr>
<td></td>
<td>Planning and design of future parking structure in Galt - alternatives for location and size</td>
<td>2011-2012</td>
<td>$200,000</td>
<td>Galt</td>
</tr>
<tr>
<td><strong>Supporting Strategies</strong></td>
<td>Amend by-law to include parking maximums and minimums in Core Areas</td>
<td>2010-2012</td>
<td>$20,000</td>
<td>All</td>
</tr>
<tr>
<td></td>
<td>Amend by-law to reduce parking requirements in close proximity to planned Rapid Transit stations</td>
<td>2010-2012</td>
<td></td>
<td>All</td>
</tr>
<tr>
<td></td>
<td>Review Cash-in-lieu of parking program</td>
<td>2010-2012</td>
<td>Nil</td>
<td>All</td>
</tr>
<tr>
<td><strong>Travel Demand Management</strong></td>
<td>Work with Region to promote transit usage</td>
<td>2010-2012</td>
<td>Nil</td>
<td>All</td>
</tr>
<tr>
<td><strong>Promote Active Transportation</strong></td>
<td>Amend Zoning By-law to require bicycle parking/storage and shower and locker facilities for new developments</td>
<td>2012</td>
<td>Nil</td>
<td>All</td>
</tr>
<tr>
<td></td>
<td>Install additional bicycle parking in core areas</td>
<td>2009-2014</td>
<td>$10,000</td>
<td>All</td>
</tr>
<tr>
<td><strong>Implement Parking Design Standards</strong></td>
<td>Incorporate parking design standards in City’s Urban Design Guidelines</td>
<td>2011</td>
<td>Nil</td>
<td>All</td>
</tr>
<tr>
<td><strong>Funding</strong></td>
<td>Establish reserve fund to manage revenues for use for new parking and Core Area streetscaping projects</td>
<td>2010</td>
<td>Nil</td>
<td>All</td>
</tr>
<tr>
<td><strong>Monitoring and Measurement</strong></td>
<td>Update to Master Plan</td>
<td>Every 5 years</td>
<td>$150,000</td>
<td>All</td>
</tr>
<tr>
<td></td>
<td>Set and measure performance indicators e.g. violations, parking occupancy, revenues</td>
<td>Annual</td>
<td>Nil</td>
<td>All</td>
</tr>
<tr>
<td></td>
<td>Parking occupancy surveys for all Core Area parking</td>
<td>Annual</td>
<td>$10,000</td>
<td>All</td>
</tr>
</tbody>
</table>

---

2 Prepared by IBI Group, March 2009 for the City of Cambridge. This table includes the implementation plan in its entirety. Any implementation items not listed in Attachment 5 (as part of this strategy) will remain the responsibility of the City of Cambridge.
Attachment 5 – 2 Step Evaluation Process

Step 1: Pass/Fail Screening

The screening criteria listed will be applied to each of the potential action items. Any action item that fails on one or more of these criteria will be screened out from further consideration as part of this strategy. The yes/no response in the last column, indicates the response that will receive a “Pass”.

<table>
<thead>
<tr>
<th>Screening Criteria</th>
<th>Pass/Fail Question</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Strategic Alignment</strong></td>
<td>Is this action item consistent with the goal of the Cambridge Transit Supportive Strategy to expedite the development of LRT in the City of Cambridge by enhancing transit ridership and/or encouraging transit supportive development, specifically within the Central Transit Corridor?</td>
<td>Yes = Pass</td>
</tr>
<tr>
<td><strong>Budgetary Considerations</strong></td>
<td>Can this action item be funded in the short-term (1 to 2 years) through another, more appropriate, budgetary source?</td>
<td>No = Pass</td>
</tr>
<tr>
<td><strong>Rapid Transit Infrastructure</strong></td>
<td>Is this action item part of the infrastructure improvements required as part of the rapid transit project (ie. design, utility/infrastructure relocations, or construction of the physical RT corridor/stations)?</td>
<td>No = Pass</td>
</tr>
</tbody>
</table>

Step 2: Ranking of Potential Action Items

The purpose of the following criteria is to provide a basis to rank different action items proposed. The purpose of this evaluation is not to eliminate action items, but rather to determine the relative rankings of each option (and priority). Action Items will be ranked “High, Medium and Low”. The factor and criteria proposed are as follows:

<table>
<thead>
<tr>
<th>Criteria Group</th>
<th>Criteria</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Transportation</strong></td>
<td>Ridership Potential</td>
<td>Has the potential to support improved ridership along the rapid transit corridor and feeder routes in Cambridge.</td>
</tr>
<tr>
<td></td>
<td>Connectivity</td>
<td>Improves the connectivity of the rapid transit corridor with the overall transportation system (including active forms of transportation).</td>
</tr>
<tr>
<td><strong>Land Use</strong></td>
<td>Supports Reurbanization</td>
<td>Supports reurbanization adjacent to the rapid transit corridor and/or within in the broader station areas (including residential and institutional uses).</td>
</tr>
<tr>
<td></td>
<td>Supports Employment</td>
<td>Has the potential to generate employment along the rapid transit corridor and/or within in the broader station areas.</td>
</tr>
<tr>
<td><strong>Implementation</strong></td>
<td>Feasible</td>
<td>Can be feasibly implemented within the context of existing City/Regional work plans and available staff resources (if additional support is required).</td>
</tr>
<tr>
<td></td>
<td>Reproducible</td>
<td>Has the potential to serve as a pilot (with lessons learned) for future application elsewhere along the RT corridor.</td>
</tr>
</tbody>
</table>
Step 1: Eligibility Screening Process

**Strategic Alignment:** Is this action item consistent with the goal of the Cambridge Transit Supportive Strategy to expedite the development of LRT in the City of Cambridge by enhancing transit ridership and/or encouraging transit supportive development, specifically within the Central Transit Corridor?

- Yes
- No → Not Eligible

**Budgetary Considerations:** Can this action item be funded *in the short-term (1 to 2 years)* through another, more appropriate, budgetary source?

- No
- Yes → Not Eligible

**Rapid Transit Infrastructure:** Is this action item part of the infrastructure improvements required as part of the rapid transit project (i.e., design, utility/infrastructure relocations, or construction of the physical RT corridor/stations)?

- No
- Yes → Not Eligible

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

DATE: February 28, 2012

FILE CODE: T04-20, 7294

SUBJECT: CONSULTANT SELECTION – DETAILED DESIGN AND CONTRACT ADMINISTRATION SERVICES; OTTAWA STREET INTERSECTION IMPROVEMENTS FROM ALPINE ROAD TO HOMER WATSON BOULEVARD, CITY OF KITCHENER

RECOMMENDATION:

THAT the Regional Municipality of Waterloo enter into a Consulting Services Agreement with MTE Consultants Inc. to provide consulting engineering services for Detailed Design, Contract Administration and Construction Inspection Services associated with intersection improvements on Ottawa Street from Alpine Road to Homer Watson Boulevard in the City of Kitchener at an upset limit of $404,922 plus applicable taxes for the design phase, with construction administration services to be paid on a time basis.

SUMMARY:

The Region of Waterloo intends to proceed with the reconstruction of Ottawa Street from Alpine Road to Homer Watson Boulevard in the City of Kitchener. A Class Environmental Assessment and Preliminary Design Study for the proposed improvements were completed and approved by Council in 2011. The estimated total cost of the improvements is $5.1 million.

- Roundabouts including some 3-lane approaches at Ottawa Street/Homer Watson Boulevard and at Ottawa Street/Alpine Road;
- Relocate eastbound Highway 7/8 on-ramp terminal from Homer Watson Boulevard between Ottawa Street and Highway 7/8 to the intersection of Ottawa Street/Alpine Road; and
- Provide off-road multi-use trails on both sides of Ottawa Street from Strasburg Road to Imperial Drive with plans for future extension to connect with existing and proposed pedestrian and cycling facilities at McLennan Park.

An invitation for Letters-of-Interest to provide engineering services was advertised in the Waterloo Region Record. Seven (7) firms submitted proposals and three (3) firms were short-listed and invited to submit detailed work plans and fee estimates.

The selection process for this assignment included price as an evaluation factor. Based on the evaluation criteria and review of the submitted work plans and fee estimates, the Consultant Selection Team recommends that MTE Consultants Inc. be retained to undertake this assignment. The MTE upset limit of $404,922 for the Detailed Design is approximately 8% of the estimated $5.1 million cost of the project, which is considered appropriate for a project of this complexity and magnitude. Sufficient funds have been allocated in the 2012 Ten Year Transportation Capital Program to accommodate the detailed design.
REPORT:

1. Background

The Region of Waterloo intends to proceed with the reconstruction of Ottawa Street from Alpine Road to Homer Watson Boulevard in the City of Kitchener. Funding is currently available in the approved 2012 Ten Year Transportation Capital Program for construction of the proposed works in 2015 and 2016. The estimated total project cost is $5.1 million. The proposed works include:

- Roundabouts including some 3-lane approaches at Ottawa Street/Homer Watson Boulevard and at Ottawa Street/Alpine Road;
- Relocate eastbound Highway 7/8 on-ramp terminal from Homer Watson Boulevard between Ottawa Street and Highway 7/8 to the intersection of Ottawa Street/Alpine Road; and
- Provide off-road multi-use trails on both sides of Ottawa Street from Strasburg Road to Imperial Drive with plans for future extension to connect with existing and proposed pedestrian and cycling facilities at McLennan Park.

A Class Environmental Assessment study for the development of an operational and safety improvement strategy for the Ottawa Street Corridor between Elmsdale Drive and Imperial Drive, in the City of Kitchener for the proposed improvements was undertaken by Delcan Corporation under the direction of the Region. The study was completed and the recommendations of the Study were approved by Regional Council in 2011.

The study area has three locations along Ottawa Street which have regularly ranked in the Region’s 10 worst collision locations. This section of Ottawa Street experiences unusual collision patterns resulting from congested peak hour operations, extensive queuing, weaving and high vehicle delays west of Homer Watson Boulevard. A key contributor to this congestion is traffic attempting to access the Highway 7/8 eastbound on–ramp. The resulting long eastbound queue was found to be a major contributor to the unusual collision patterns along Ottawa Street.

The Ministry of Transportation (MTO) has commenced construction of a project to widen Highway 7/8 from west of Fischer Hallman Road to Courtland Avenue. The Ministry’s project commenced in November 2011 and is planned to continue until mid 2015. Construction of the proposed improvements to Ottawa Street during the construction period on Highway 7/8 would result in unacceptable delays, congestion, and safety concerns in south west Kitchener. Region staff will be monitoring and coordinating with the Ministry’s Highway 7/8 project and will undertake the required design, property acquisition and important utility relocation work in order to start the Ottawa Street Intersection Improvements Contract at the earliest opportunity following completion of the Ministry’s Highway 7/8 reconstruction project.

A consultant selection process has been undertaken in order to retain an engineering consulting firm to complete the Detailed Design process and provide Construction Administration services. One of the requirements of this assignment is that the consultant must be able to provide sufficient resources to ensure that the Detailed Design is completed and all approvals obtained to allow construction to potentially start in 2015.

Regional staff is fully committed to other capital projects and therefore staff recommends that an external consultant be hired to undertake this assignment.

In August, 2011, the Region of Waterloo implemented its first roundabout with a 3 lane approach at the intersection of Homer Watson Boulevard and Block Line Road. Soon after opening of the roundabout, there was a higher-than-expected number of fail-to-yield collisions at the roundabout as well as a serious pedestrian collision involving a Grand River Transit (GRT) bus.
Members of the public including students and officials at the Waterloo District Catholic School Board expressed concern regarding pedestrian safety at the roundabout. Staff conducted a safety review of the Homer Watson/Block Line roundabouts utilizing a specialized road safety consultant and staff submitted a report with safety countermeasure recommendations to the Region’s Planning and Works Committee on January 31, 2012. At the January 31, 2012 meeting, the Region’s Planning and Works Committee received delegations from the Grand River Accessibility Advisory Committee (GRAAC), the Canadian National Institute for the Blind (CNIB) and members of the public about the challenges experienced by persons who are visually impaired when crossing at roundabouts and other intersections on Regional and local roads in Waterloo Region.

At the January 31, 2012 meeting the Region’s Planning and Works Committee approved the countermeasures recommended for the Homer Watson/Block Line roundabouts, directed staff to prepare a report for the March 20, 2012 meeting on the practical and financial implications of a lane reduction for the south bound approach, and also directed staff to consult with GRAAC and the CNIB to identify ways to address the crossing challenges at all intersections within the Region.

As a result of the problems encountered and lessons learned from the Homer Watson/Block Line roundabouts, staff incorporated additional tasks into the scope of work for this assignment, as detailed in Section 3 of this report.

2. Consultant Selection

An invitation for Letters-of-Interest to provide engineering services for this project was advertised in the Record. Seven (7) consultants submitted Letters-of-Interest. From a review of the submissions, three firms were shortlisted based on their understanding of the project and qualifications, and these consultants were asked to submit detailed work plans and upset fees for the detailed design and estimated fees for the contract administration and inspection phases.

The three shortlisted consultants were:

- MTE Consultants Inc.;
- R.J. Burnside and Associates; and
- Stantec Consulting

The Project Team involved with the consultant selection consisted of:

- Wayne Cheater, Senior Project Manager, Design and Construction Division
- Frank Kosa, Senior Project Manager, Design and Construction Division
- Mike Jones, Supervisor, Traffic Engineering, Transportation Division
- Paula Sawicki, Manager, Strategic Transportation Planning, Transportation Planning Division

The evaluation criteria used for selecting the successful consultant were consistent with the Region’s Purchasing By-law and includes price as a factor in the selection process. These evaluation criteria and their respective weightings were as follows:

**Quality Factors**

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Weighting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Approach and Understanding</td>
<td>25%</td>
</tr>
<tr>
<td>Experience of the Project Manager</td>
<td>20%</td>
</tr>
<tr>
<td>Experience of the Project Support Staff</td>
<td>15%</td>
</tr>
<tr>
<td>Experience on Similar Projects</td>
<td>20%</td>
</tr>
</tbody>
</table>
Equity Factors

Current Workload for Region 3%
Local Office 2%

Price Factor

Upset Price 15%

When considering the combination of quality, equity, and price factors described above, MTE Consultants Inc. scored the highest of the three shortlisted consultants due to its clear understanding of the project requirements, its superior approach to the assignment, and extensive knowledge and understanding gained from completion of similar work. Although the upset fee limit submitted by MTE Consultants Inc. was the highest of the three submissions received, the proposal submitted by MTE Consultants Inc. contained the best combination of experience and approach to develop and implement a design focused on operational safety for all road users.

3. Scope of Work

The consultant selected for this assignment will be required to complete the following tasks:

- Data collection and review
- Detailed design
- Tendering Services
- Contract administration and full-time inspection of construction
- Post construction services

As a result of the problems encountered and “lessons learned” at the Homer Watson Boulevard/Block Line Road roundabout, staff has included the following items in the detailed design of this project:

1) Monitor and assist with discussions between Regional staff and members of the GRAAC and CNIB to explore ways to accommodate pedestrian crossing challenges at roundabouts and incorporate into the design of this project whatever measures are approved;
2) Conduct an initial review to re-confirm the ultimate need for 3 lane approaches at each of the roundabouts and to consider the possibility of initially constructing only 2 lanes and phasing in a third lane at a future date, when needed; and
3) Incorporate into the design all applicable countermeasures that have resulted in a reduction in collisions at the Homer Watson Boulevard/Block Line Road roundabout.

In addition to the tasks identified above, staff will also look to incorporate other measures as a result of “lessons learned” at the Homer Watson Boulevard/Block Line Road roundabout, including:

1) Explore alternative methods during construction of the roundabouts to condition drivers not to expect free-flow conditions and to expect a yield condition upon the opening of the roundabouts;
2) Explore new ways to better direct motorists’ attention to roundabout education and awareness when roundabouts are under construction;
3) Anticipate those legs of the roundabouts that might involve drivers unfamiliar with roundabouts and adjust public education initiatives accordingly;
4) Develop a comprehensive roundabout education and awareness campaign timed for implementation just in advance of opening the roundabouts within the project limits;
5) Enhance immature landscaping within the central island to increase the visible presence of new roundabouts.

4. Schedule
The MTO project to widen Highway 7/8 from Fischer-Hallman Road to Courtland Avenue is planned to extend from the present to mid-2015. Due to lane reductions and ramp closures as part of the Ministry’s Highway 7/8 project, the capacity of Highway 7/8 will be reduced during construction. This will in turn place additional demands on Ottawa Street. Therefore it is necessary to coordinate the construction of the proposed improvements to Ottawa Street from Alpine Road to Homer Watson Boulevard with the MTO project so that the Ottawa Street project is not under construction at the same time as Highway 7/8. Subject to Council’s approval of the consultant assignment, the proposed project schedule is now as follows:

- Detailed Design 2012 - 2014
- Property Acquisition 2012 - 2014
- Utility Relocates Autumn 2015
- Construction 2016

5. Consultant’s Upset Fee
The short-listed consultants were requested to submit a fee quotation for the required scope of work. These quotations were based on an upset limit fee for services required to complete the Detailed Design process. The upset limit for consulting fees and disbursements proposed by MTE Consultants Inc. for the Ottawa Street from Alpine Road to Homer Watson Boulevard Improvements is $404,922 plus applicable taxes. This represents approximately 8% of the estimated $5.1 million construction cost of the project, which is considered appropriate for a project of this complexity and magnitude.

For road reconstruction and widening projects such as Ottawa Street, the fees required for construction administration and inspection services can vary significantly depending on the final design, weather conditions, unforeseen conditions during construction, contractor performance, and other unknown variables. Since an upset limit fee does not lend itself well to these types of services, it has been the Region’s practice to pay for construction administration and inspection services on a time basis. The short-listed consultants were required to submit estimated construction administration and inspection fee’s based on a fixed construction period. The estimated fee proposed by MTE Consultants Inc. for construction administration and inspection services is $215,992 plus applicable taxes. This is within the consulting fee allowance for this project as per the approved 2012 Ten Year Transportation Capital Program.

A breakdown of the successful consultant’s upset fee is included in Appendix B attached to this report.

CORPORATE STRATEGIC PLAN:
The consultant selection process supports Focus Area 5 – Service Excellence of the Strategic Plan by meeting the objective to ensure services are responsive, efficient, effective, and accountable. The selection process is both accountable and transparent.

The reconstruction of Ottawa Street between Alpine Road and Homer Watson Boulevard, when complete will support Focus Area 3 – Sustainable Transportation by optimizing existing road capacity to safely manage traffic and Focus Area 2 – Growth Management and Prosperity by optimizing infrastructure to meet current and projected needs.
FINANCIAL IMPLICATIONS:
The Region’s approved 2012 Ten Year Transportation Capital Program includes a total of $5.1 million for this project in the years 2012 to 2015 funded from the Development Charges Reserve Fund. This estimated cost includes the cost of property acquisition and consulting services. The upset limit fee proposed by MTE Consultants Inc. of $404,922 plus HST to complete the Detailed Design process is within the consulting fee allowance provided for in the total budget for this project.

OTHER DEPARTMENT CONSULTATIONS/CONCURRENCE:
NIL

ATTACHMENTS

Appendix “A” – Key Plan
Appendix “B” – MTE Consultants Inc., Upset Fee Breakdown

PREPARED BY: Wayne Cheater, Senior Project Manager

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

Project Key Plan
OTTAWA STREET (Regional Road No. 4) INTERSECTION IMPROVEMENTS
FROM ALPINE ROAD TO HOMER WATSON BOULEVARD, CITY OF KITCHENER
Appendix B

MTE CONSULTANTS INC., UPSET FEE BREAKDOWN

OTTAWA STREET INTERSECTION IMPROVEMENTS
FROM ALPINE ROAD TO HOMER WATSON BOULEVARD,
CITY OF KITCHENER

<table>
<thead>
<tr>
<th>UPSET LIMIT FEE FOR DETAILED DESIGN AND RELATED SERVICES BASED ON DETAILED TERMS OF REFERENCE</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Survey, data collection and preliminary design</td>
<td>$161,177</td>
</tr>
<tr>
<td>2 Detailed Design</td>
<td>$138,025</td>
</tr>
<tr>
<td>3 Agency consultation and submissions for approval</td>
<td>$37,764</td>
</tr>
<tr>
<td>4 Preparation of Contract Documents and Cost Estimates</td>
<td>$19,956</td>
</tr>
<tr>
<td>5 Project Management</td>
<td>$40,000</td>
</tr>
<tr>
<td>6 Disbursements</td>
<td>$8,000</td>
</tr>
<tr>
<td><strong>TOTAL UPSET LIMIT FEES AND DISBURSEMENTS (excluding HST)</strong></td>
<td><strong>$404,922</strong></td>
</tr>
</tbody>
</table>
TO: Chair Jim Wideman and Members of the Planning and Works Committee

DATE: February 28, 2012

FILE CODE: L07-90

SUBJECT: AUTHORIZATION TO EXPROPRIATE LANDS (1ST REPORT) FOR RAPID TRANSIT PROJECT STAGE 1 FOR PROPERTY AND INTERESTS ON KING STREET SOUTH FROM JOHN STREET IN THE CITY OF WATERLOO TO KING STREET WEST AT VICTORIA STREET, IN THE CITY OF KITCHENER

RECOMMENDATION:

THAT The Regional Municipality of Waterloo direct and authorize the Regional Solicitor to take the following actions with respect to the expropriation of lands for the construction of the Rapid Transit Project Stage 1 on King Street South, from John Street, in the City of Waterloo to King Street West, at Victoria Street, in the City of Kitchener, in the Region of Waterloo as detailed in Recommended Rapid Transit Implementation Option Report E-11-072 dated, June 15, 2011:

1. Complete application(s) to the Council of the Regional Municipality of Waterloo, as may be required from time to time, for approval to expropriate land, which is required for the Rapid Transit Project Stage 1 and described as follows:

Fee Simple Partial Takings:

a) Part Lot 287, Plan 385 being Part 1 on 58R-17317, City of Waterloo, Regional Municipality of Waterloo (238 King Street South, Waterloo)
b) Part Lot 288, Plan 385 being Parts 3 & 4 on 58R-17317, City of Waterloo, Regional Municipality of Waterloo (242 King Street South, Waterloo)
c) Part of Lots A and C, Plan 437; Part of Lots 53 and 54, Plan 376 being Part 4 on 58R-17368, City of Kitchener, Regional Municipality of Waterloo (618 King Street West, Kitchener)
d) Part of Lots 37 and 38, Plan 377 being Part 14 on 58R-17368, City of Kitchener, Regional Municipality of Waterloo (687 King Street West, Kitchener)
e) Part of Lots 36 and 37, Plan 377 being Parts 12 and 13 on 58R-17368, City of Kitchener, Regional Municipality of Waterloo (683 King Street West, Kitchener)
f) Part Lot 36, Plan 377 being Parts 10 & 11 on 58R-17368, City of Kitchener, Regional Municipality of Waterloo (679 King Street West, Kitchener)
g) Part of Lot 401, Plan 376 being Part 10 on 58R-17373, City of Kitchener, Regional Municipality of Waterloo (698 King Street West, Kitchener)
h) Part Lot 401, Plan 376 being Part 9 on 58R-17373, City of Kitchener, Regional Municipality of Waterloo (702 King Street West, Kitchener)
i) Part of Lots 43 and 44, Plan 377 being Parts 15 and 16 on 58R-17373, City of Kitchener, Regional Municipality of Waterloo (737 King Street West, Kitchener)
j) Part of Lots 29 and 30, Plan 377 being Part 7 on 58R-17368, City of Kitchener, Regional Municipality of Waterloo (637-641 King Street West, Kitchener)
k) Part of Lots 21, 29 and 30, Plan 413 being Part 8 on 58R-17373, City of Kitchener, Regional Municipality of Waterloo (730 King Street West, Kitchener)

l) Part of Lot 95, Plan 385 being Part 2 on 58R-17316, City of Waterloo, Regional Municipality of Waterloo (209 King Street South, Waterloo)

m) Part of Lots 368 and 369, Plan 376 being Part 1 on 58R-17368, City of Kitchener, Regional Municipality of Waterloo (682-688 King Street West, Kitchener and 690 King Street West, Kitchener)

n) Part of Lot 21, Plan 413 being Part 7 on 58R-17373, City of Kitchener, Regional Municipality of Waterloo (742 King Street West, Kitchener)

o) Part of Lots 44 and 45, Plan 377 being Part 17 on 58R-17373, City of Kitchener, Regional Municipality of Waterloo (741 King Street West, Kitchener)

p) Part of Lot 32, Plan 377 being Part 9 on 58R-17368, City of Kitchener, Regional Municipality of Waterloo (655 King Street West, Kitchener)

q) Part of Lot C, Plan 9 being Part 18 on 58R-17373, City of Kitchener, Regional Municipality of Waterloo (765 King Street West, Kitchener)

r) Part of Lot 15, GCT and Part of Lot 25, Subdivision of Lot 15,GCT being Part 1 on 58R-17373, and Part of Lot 25, Subdivision of Lot 15, GCT, being Part 2 on 58R-17373, City of Kitchener, Regional Municipality of Waterloo (800 King Street West, Kitchener)

s) Part of Lots 13 and 14 Subdivision of Lot 15 GCT; Part of Linwood Avenue, Plan 413; Part of Lot 29, Subdivision of Lot 15 GCT and Part of Linwood Avenue, Plan 413 being Parts 3, 4, 5 and 6 on 58R-17373, City of Kitchener, Regional Municipality of Waterloo (760 King Street West, Kitchener)

t) Part of Lot 26, Municipal Complied Plan of Lot 15, GCT being Part 4 on 58R-17367, City of Kitchener, Regional Municipality of Waterloo (824 King Street West, Kitchener)

u) Part of Lot 16, Plan 376 Part 2 on 58R-17368, City of Kitchener, Regional Municipality of Waterloo (670 King Street West, Kitchener)

v) Part of Lot 38 Plan 377 being Part 15 on 58R-17368, City of Kitchener, Regional Municipality of Waterloo (5 Agnes Street, Kitchener)

w) Part of Mount Hope Cemetery, Plan 385 being Part 1 on 58R-17367, City of Kitchener, Regional Municipality of Waterloo (835 King Street West, Kitchener)

x) Part of Lane, Plan 385 Abutting Lot 311, being Part 3 on 58R-17367, City of Kitchener, Regional Municipality of Waterloo (King Street at Green Street, Kitchener)

y) Part of Lots 39, 40 and 41, Plan 377 being Parts 11 & 12 on 58R-17373, City of Kitchener, Regional Municipality of Waterloo (709 King Street West, Kitchener)

z) Part of Lots 309, 310 and 311, Plan 385 being Part 2 on 58R-17367, City of Kitchener, Regional Municipality of Waterloo (828 King Street West, Kitchener)

aa) Part of Lots 8, 9, and 12, Subdivision of Lot 15, GCT and part Lot D, Registered Plan 9, being Parts 19, 20 and 21 on 58R-17373, City of Kitchener, Regional Municipality of Waterloo (787 King Street West, Kitchener)

bb) Part of Lots 42 and 43, Plan 377 being Part 14 on 58R-17373, City of Kitchener, Regional Municipality of Waterloo (727 King Street West, Kitchener)

cc) Part of Lot 53, Plan 376 being Part 3 on 58R-17368, City of Kitchener, Regional Municipality of Waterloo (624 King Street West, Kitchener)

dd) Part of Lots 41 and 42, Plan 377 being Part 13 on 58R-17373, City of Kitchener, Regional Municipality of Waterloo (723 King Street West, Kitchener)
ee) Part of Lots 31 and 32, Plan 377 being Part 8 on 58R-17368, City of Kitchener, Regional Municipality of Waterloo (647 King Street West, Kitchener)

f) Part of Lots 22, 23, 24, and 25, Plan 377 and Part of Lot 112, Streets and Lanes being Part 5 on 58R-17368, City of Kitchener, Regional Municipality of Waterloo (607 King Street West, Kitchener)

gg) Part of Lot 25, Plan 377 being Part 6 on 58R-17368, City of Kitchener, Regional Municipality of Waterloo (617-621 King Street West, Kitchener)

hh) Part of Lots 287 and 288, Plan 385 being Part 2 on 58R-17317, City of Waterloo, Regional Municipality of Waterloo (240 King Street South, Waterloo)

ii) Part of Lots 34 and 35, Plan 377, being Part 16 and 17 on 58R-17368, City of Kitchener, Regional Municipality of Waterloo (667 King Street West, Kitchener)

2. Serve notices of the above application(s) required by the Expropriations Act;

3. Forward to the Chief Inquiry Officer any requests for a hearing that may be received;

4. Attend, with appropriate Regional staff, at any hearing that may be scheduled;

5. Discontinue expropriation proceedings or any part thereof, in respect of the above described lands, or any part thereof, upon the registration on title of the required documentation to complete a transaction whereby the required interests in the lands are conveyed; and

6. Do all things necessary and proper to be done, and report thereon to Regional Council in due course.

SUMMARY: NIL

REPORT:

On June 15, 2011 Regional Council approved light rail transit (LRT) as the preferred transit technology from Conestoga Mall in the City of Waterloo to the Ainslie Street Terminal in the City of Cambridge. The approved Stage 1 of the project will include LRT service from Conestoga Mall in the City of Waterloo to Fairview Park Mall in the City of Kitchener.

The Region of Waterloo initiated the Transit Project Assessment (TPA) in November of 2011, which has the following steps remaining:

- Notice of Completion for the TPA will be issued in late March 2012, and;
- A 30 day public review which is followed;
- A 35 day review by the Ministry of Environment.

These steps follow each other and are anticipated to conclude by late May or early June of 2012.

The functional design of the project is presently underway. Construction of the rapidway is proposed to commence in mid 2014. However, certain utility works are proposed to commence as early as late 2012. Regional staff is presently in the process of acquiring all required lands for Stage 1 of the Rapid Transit project, which is from Conestoga Mall in the City of Waterloo to Fairview Park Mall in the City of Kitchener. Property acquisitions for Stage 1 of the Rapid Transit Project will be undertaken in 3 phases in accordance with the required possession dates for the lands and interests. The first phase entails partial takings from 36 properties. It is noted that 2 of these properties are owned by the City of Kitchener and, as such, acquisition will be through negotiation.
To date, dialogue and negotiations have commenced with all property owners impacted by the required land acquisitions which are in the first phase of land acquisitions. Should a negotiated settlement be reached with any of the property owners and a conveyance of the required acquisition be completed before the expropriation process is complete, the expropriation process will be discontinued by the Regional Solicitor in respect of such property(ies).

The Commissioner of Transportation and Environmental Services has, in order to meet the Rapid Transit Project timelines, authorized the utilization of the revised land acquisition process for infrastructure projects regarding the prerequisites for commencement of expropriation process. Accordingly, all of the affected property owners, or their representatives, have been contacted by Legal Services Real Estate staff by one or more of the following means: in-person meeting, telephone, written correspondence and/or email, to discuss the required land acquisitions and all have been informed of the Region’s intention to proceed with the expropriation process, including this Report going forward, to ensure project timelines are met. All property owners have been provided with the Region’s Expropriation Information Sheet explaining the expropriation process. A copy of the Expropriation Information Sheet is attached as Appendix “B” and, as well, each owner has been provided a copy of the Property Acquisition Process Information Sheet and a Property Impact Plan (PIP) illustrating the required taking for each particular property. The owners have further been advised it is the Region’s intent to seek a negotiated settlement prior to completion of the Expropriation process and that the process has been commenced only to ensure possession of the required lands by the date set by Project staff in order to meet the project timeline.

The expropriation of the lands is on an “as is” basis and upon acquisition the Region assumes all responsibility for the lands.

The Project Area is shown attached as Appendix “A”.

CORPORATE STRATEGIC PLAN:

One of the focus areas of the Corporate Strategic Plan is to develop greater, more sustainable and safe transportation choices

FINANCIAL IMPLICATIONS:

Funding for the property acquisitions related to the Rapid Transit project are included in the approved 2012 ten year capital program for Rapid Transit.

OTHER DEPARTMENT CONSULTATIONS/CONCURRENCE:

Transportation and Environmental Services and Rapid Transit staff have been consulted in the preparation of this Report.

ATTACHMENTS

Appendix “A” - Project Area
Appendix “B” – Copy of Expropriation Information Sheet

PREPARED BY:  Tom Penwarden, Manager, Real Estate Services
               Fiona McCrea, Solicitor

APPROVED BY:  Gary Sosnoski, Commissioner, Corporate Resources
Appendix “B”

The following information is provided as a general overview of the expropriation process and is not legal advice. For complete information, reference should be made to the Ontario Expropriations Act as well as the more detailed information in the Notices provided under that Act.

Expropriation Information Sheet

What is Expropriation?

Governmental authorities such as municipalities, school boards, and the provincial and federal governments undertake many projects which require them to obtain land from private property owners. In the case of the Regional Municipality of Waterloo, projects such as the construction or improvement of Regional Roads sometimes require the purchase of land from private property owners. In many cases, the Region of Waterloo only needs a small portion of the private property owner’s lands or an easement for related purposes such as utilities, although in certain instances, entire properties are required.

Usually the governmental authority is able to buy the land required for a project through a negotiated process with the affected property owners. Sometimes, however, the expropriation process must be used in order to ensure that the land is obtained within a specific timeline. Put simply, an expropriation is the transfer of lands or an easement to a governmental authority for reasonable compensation, including payment of fair market value for the transferred lands, without the consent of the property owner being required. In the case of expropriations by municipalities such as the Region of Waterloo, the process set out in the Ontario Expropriations Act must be followed to ensure that the rights of the property owners provided under that Act are protected.

IMPORTANT NOTE: The Region of Waterloo tries in all instances to obtain lands needed for its projects through a negotiated agreement on mutually acceptable terms. Sometimes, the Region of Waterloo will start the expropriation process while negotiations are underway. This dual approach is necessary to ensure that the Region of Waterloo will have possession of all of the lands needed to start a construction project on schedule. However, it is important to note that Regional staff continues to make every effort to reach a negotiated purchase of the required lands on mutually agreeable terms while the expropriation process is ongoing. If agreement is reached, expropriation proceedings can be discontinued and the land transferred to the Region of Waterloo in exchange for payment of the agreed-upon compensation.

What is the process of the Region of Waterloo under the Expropriations Act?

- Regional Council considers a request to begin an application under the Expropriations Act to obtain land and/or an easement for a specific Regional project. No decision is made at this meeting to expropriate the
land. This step is simply direction for the Region of Waterloo to provide a “Notice of Application for Approval to Expropriate” to affected property owners that the process has started to seek approval to expropriate the land.

- As stated in the Notice, affected property owners have 30 days to request a Hearing to consider whether the requested expropriation is “fair, sound and reasonably necessary in the achievement of the objectives” of the Region of Waterloo. This Hearing is conducted by a provincially-appointed Inquiry Officer. Prior to the Hearing, the Region of Waterloo must serve the property owner with a Notice setting out its reasons or grounds for the proposed expropriation. **Compensation for lands is not determined at this Hearing.** The Inquiry Officer can order the Region of Waterloo to pay the property owner up to $200.00 as compensation for the property owner’s costs in participating in this Hearing, regardless of the outcome of the

- If a Hearing is held, a written report is provided by the Inquiry Officer to the property owner and the Region of Waterloo. Council must consider the Report within 90 days of receiving it. The Report is not binding on Council and Council may or may not accept the findings of the Report. After consideration of the Report, Council may or may not approve the expropriation of the land or grant approval with modifications. A property owner may wish to make written and/or verbal submissions to Council at the time that it is considering the Report.

- If no Hearing is requested by the property owner, then Council may approve the expropriation of the land after expiry of a 30 day period following service of the Notice of Application for Approval to Expropriate.

- If Council approves the expropriation then, within 3 months of this approval, the Region of Waterloo must register a Plan at the Land Registry Office that describes the expropriated lands. The registration of this Plan automatically transfers title of the lands to the Region of Waterloo, instead of by a Deed signed by the property owner.

- Within 30 days of registration of the Plan, the Region of Waterloo must serve a Notice of Expropriation on the affected property owner advising of the expropriation. Within 30 days of this Notice, the property owner may serve the Region of Waterloo with a Notice of Election selecting the valuation date under the *Expropriations Act* for calculation of the compensation.

- In order to obtain possession of the expropriated lands, the Region of Waterloo must also serve a Notice of Possession setting out the date that possession of the land is required by the Region of Waterloo. This date has to be 3 months or more from the date that this Notice of Possession is served on the affected property owner.

- Within 3 months of registration of the Plan, the Region of Waterloo must provide the affected property owner with payment for the full amount of the appraised fair market value of the expropriated land or easement and a copy of the appraisal report on which the value is based. If the property owner disagrees with this amount, and/or claims other compensation and/or costs under the *Expropriations Act*, the compensation and/or costs matter may be referred to a provincially-appointed Board of Negotiation in an effort to reach a mediated settlement and/or an appeal may be made to the Ontario Municipal Board (OMB) for a decision. In any event, the Region of Waterloo continues in its efforts to reach a negotiated settlement with the affected property owner prior to the OMB making a decision.
TO: Chair Jim Wideman and Members of the Planning and Works Committee

DATE: February 28, 2012      FILE CODE: T08-70/ITS

SUBJECT: INTELLIGENT TRANSPORTATION SYSTEMS (ITS)

RECOMMENDATION:

For information.

SUMMARY:

NIL

REPORT:

At a previous Planning and Works Committee meeting, Committee members asked staff about new technology relating to traffic signal control and directed staff to bring back a report regarding emerging and current technology being used.

There is no one device or technology that can provide a panacea to eliminate traffic congestion. Today’s traffic professionals are focused on optimizing the transportation system by improving the way the components (i.e. traffic signals, roundabouts, pedestrian and cycling facilities, transit priority, Intelligent Transportation Systems (ITS), intersection improvements, etc.) work together to reduce delays and best use available capacity. Promoting transportation choice also maximizes the use of space within the transportation corridor by increasing transit use, walking, cycling and car occupancy. A Traffic Signal Control System (TSCS) is just one of the many tools available. Incorporating some of the technologies identified below with a TSCS will provide traffic professionals with tools to better manage congestion and traffic flow.

The Region uses and is investigating various ITS technologies within the Transportation Division. The best way to identify and implement the various technologies is by developing an ITS strategic plan. An ITS strategic plan is identified as an action item in the approved Regional Transportation Master Plan with a proposed schedule of 2012 – 2014. As part of the Strategic Planning effort a regional ITS architecture will be defined for the Region. The ITS architecture represents the roadmap for how various ITS elements can work together without unnecessary redundancy. All of the ITS elements would be integrated and administered through the Integrated Traffic Systems Management Centre (ITSMC). An ITSMC is intended to provide traffic analysts the ability to manage real-time traffic ITS tools such that the information can be used to make changes on the fly to improve traffic conditions on the road network. ITSMC functional elements typically include:

- Real-time traffic monitoring;
- Incident monitoring by automated equipment reporting back to the ITSMC;
- Traffic camera monitoring using closed circuit television (CCTV);
- Active traffic management changing signal timing for both planned and non planned events;
- Traffic signal control and monitoring by automated equipment;
- Automated warning systems by changeable message signs, warning flashers; text, e-mail and internet web sites; and
Centre to Centre (C2C) distribution of information and data to internal and external agencies.

In addition to the Traffic Control System, Transit Signal Priority and Pre-emption System upgrades, the Region plans to investigate the following ITS elements in 2012.

- ITS Strategic Plan - ITS Architecture;
- ITS and Traffic System Communication Network Study;
- Incident Management Plan; and
- Integrated Traffic Systems Management Centre.

The Minister of Transport, Infrastructure and Communication has approved the Region’s proposal for cost-shared funding of the above listed ITS elements up to $202,000 under the ITS components of their Strategic Highway Infrastructure Program. A letter from Transport Canada is attached as Appendix A.

In addition, the Ministry of Transportation Ontario (MTO) has committed to providing $50,000 of in kind services for the ITS Strategic Plan - ITS Architecture proposal. A letter from MTO is attached as Appendix B.

The work for these initiatives will be achieved through participation by different levels of government including Transport Canada, MTO, GO Transit, Region of Waterloo, area municipalities, private sector stakeholders and selected consultants.

**ITS Strategic Plan**

An ITS Strategic Plan is a cooperatively developed planning document that encapsulates ITS related efforts of public and/or private stakeholders in a defined geographic area. The resultant plan represents a guide that stakeholders can then use to guide their internal decision making as it relates to transportation system investment. ITS Strategic Plans typically are of sufficient detail so as to identify specific individual and collaborative projects envisioned by the various stakeholders.

The goal of an ITS Strategic Plan is to provide a vision through which a Region prospers with improved transportation of people and goods. Transport Canada and MTO will be partners with the Region for this project. The ITS Strategic Plan will cover all modes of land transport within the Region, including cyclists, pedestrians, private auto, public transportation, emergency services, etc.

**ITS and Traffic Systems Communication Network Study**

The Region of Waterloo and area municipalities have a range of wireline and wireless communication system assets. The Region is continuing to deploy ITS technologies, which rely on communication systems for their operations. The objective of this review is to identify and assess the existing communication systems in the Region, identify new ITS applications and new communication system technologies to support these applications and develop a communication system implementation plan.

**Incident Management Plan**

In 2009 the Region of Waterloo in cooperation with Transport Canada and the MTO conducted a feasibility study for the implementation of a regional Incident Management System (IMS). The objective of the IMS feasibility study was to develop a strategic IMS Implementation Plan along with an institutional framework for completing the implementation plan. Of particular concern to the Region are the highways, arterials and Regional roads, and how the road network operates in conjunction with MTO freeways and highways during congestion and planned and unplanned incidents. An IMS is a system that can detect an occurrence and automatically notify road users and...
emergency response personnel. Effective incident detection and response can save time, unnecessary fuel consumption and frustration for the road user.

The scope of work of the proposed incident management plan will focus on C2C communications for stakeholders for incident management.

The IMS will focus on building on initiatives already underway within the Region to gather on-street conditions and disseminate the information to emergency service providers. The functionality will improve the emergency response capabilities. Future expansion may include transmitting video data to mobile EMS and the Region’s traffic operation service vehicles.

**Integrated Traffic Systems Management Centre**

The ITSMC could include a on-screen system to monitor real-time traffic applications including the TSCS, IMS, CCTV monitoring, transit and transit signal priority treatments, network level of service (LOS), travel time estimate along arterials and other future ITS applications based on the recommendations from the ITS Strategic Plan. This would provide the information to make real-time adjustments to traffic signals etc.

An accurate and consistent time is essential to making an integrated traffic system work. A Global Positioning System (GPS) clock would be implemented as a central time reference for the TSCS. This will provide a reliable and accurate time reference for coordination of traffic signals.

Use of mobile technology could improve how system changes are made. Staff will be investigating using smart cell phone technology to be able to remotely access ITS application software running at the ITSMC from remote locations. This will be achieved by interfacing the existing regional network and the internet.

**Current Technology**

Staff also stay educated regarding current technology through contact with other transportation professionals, the internet, membership in related organizations, attending conferences, seminars and manufacturer workshops and demonstrations. Staff also work with local technology companies such as Miovision by providing input and consultation through their product development.

In addition to what is noted above the current technology in use includes:

- Traffic Signal Control System;
- Pre-emption System;
- Dedicated Communication (Cellular, Radio, Wireline);
- CCTV;
- State of the Art Traffic Signal Controllers;
- Detection Sensors: (GPS; Microwave, Radio, Inferred, inductive loops and video); and
- Transit Signal Priority.

The major focus of the transportation engineering industry is the implementation or expansion of the use of ITS technology. Other emerging technology that staff continue to monitor include:

- Smart phone blue tooth – use of cell phones to track vehicle flow;
- Adaptive control – implement signal timing changes automatically based on input from other devices such as incident management system and or detection sensors;
- Sensors – used to detect vehicles (Radar, Laser, Sonar);
- Real-time Traveller Information – receive traveler information via e-mail and text messaging;
- Machine-to-machine communication - vehicles communicating with the traffic signal; and
- Connected Vehicle – use of cellular and satellite to provide information to the vehicle i.e. GPS, congestion and traveler information data directly to the vehicle.

Some of the ITS applications noted above can be implemented to modify signal operation by interacting with the TSCS directly or providing notification or warning of an event or occurrence taking place in which the appropriate stakeholder would be notified. For example an IMS detects an unusually high traffic volume queuing on the off-ramp of Highway 401. The IMS would contact Traffic Systems Management staff and would also send an alarm message to other appropriate stakeholders that there may be a collision or other event causing the congestion. The traffic analyst would be able to use the traffic cameras to verify the problem. ITS applications can also provide travel data and congestion levels to assist the traffic analyst in developing improved signal timing and coordination plans. The information can then be automatically disseminated via the internet, email, text message etc. to Regional groups such as transit, Emergency Medical Service, Waterloo Regional Police Services and outside agencies such as MTO, OPP and other municipalities, etc.

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 for development of the ITS applications is $404,000. The Region’s portion of this amount is $152,000 which is included in the 2012 Transportation Capital Program.

OTHER DEPARTMENT CONSULTATIONS/CONCURRENCE:

Planning, Housing and Community Services.

ATTACHMENTS:

Appendix A - Letter from Transport Canada
Appendix B - Letter from Ministry of Transportation Ontario

PREPARED BY: Egerton Heath, Supervisor, Traffic Systems Management

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

Transport
Canada

Assistant
Deputy Minister

Sous-ministre
adjoint

Policy

Politiques

DEC 16 2011

Mr. E. Heath, CET
Supervisor, Traffic Systems Management
Regional Municipality of Waterloo
150 Frederick Street, 7th Floor
Kitchener, Ontario
N2G 4J3

Dear Mr. Heath:

I am pleased to advise you that the Minister of Transport, Infrastructure and Communities has approved your proposal for cost-shared funding under the Intelligent Transportation Systems (ITS) component of the Strategic Highway Infrastructure Program.

The funding is conditional upon the successful conclusion of a funding agreement. In that regard, a draft agreement is attached for your review and comment. Under the terms of the agreement, Transport Canada will contribute up to fifty percent (50%) of total eligible costs, to a maximum of $202,000, for the purpose of undertaking a number of projects, including the development of an ITS Strategic Plan and a Traffic Systems Communication Study; and implementing a Traffic Systems Management Control Centre that includes centre-to-centre incident management, GPS clock technology for traffic control, and remote access to the traffic control system via Smart Phones.

Stimulating deployment of ITS through partnerships among the public, private and academic sectors is an important step forward in demonstrating how Canada can benefit from these innovative advances in transportation technology. The Government of Canada is proud to foster interest in helping Canadians deploy and integrate ITS across the country.

Canada

03-01-01 (v1.0)
I would like to take this opportunity to thank you for your interest in accelerating ITS deployment in Canada and wish you great success with your initiative.

If you require further information, or have any questions, please do not hesitate to contact Ms. Melody Miller at (613) 998-9834 (melody.miller@ic.gc.ca).

Yours sincerely,

Kristine Burr

Attachment
January 4, 2012

Egerton Heath, CET,
Supervisor, Traffic Systems Management
Regional Municipality of Waterloo
150 Frederick Street, 7th Floor
Kitchener, ON, N2G 4J3

Dear Mr. Heath:

Re: Intelligent Transportation Systems (ITS) Strategic Plan for the Region of Waterloo

The ITS Program Section of the Ministry of Transportation, Ontario is pleased to hear that the Region of Waterloo is undertaking an assignment to complete an ITS Strategic Plan for the Region of Waterloo. The Ministry is very supportive of your initiative as we recognize the needs for ITS within the Region.

This is to inform you that, as part of our normal ITS planning efforts across the province, the Ministry will be undertaking a $50k consultant assignment for the preliminary design of ITS deployments on Hwy. 8 and on Hwy. 401 within the Region of Waterloo. The timing is opportune as these projects appear to be proceeding in parallel. As such, we will have our consultant coordinate efforts with your project team to ensure that a complete complementary system is being proposed for ITS deployments in this area.

We look forward to working with you collaboratively to deploy much needed ITS to help in managing traffic and mitigating the impacts of traffic incidents within this area.

Yours Sincerely,

Roger Browne, M.A.Sc., P. Eng.
Senior Project Engineer
ITS Program Section

cc: P. Masters, MTO
R. Chan, MTO
S. Erwin, MTO
A. Bacchus, MTO
FOUNTAIN STREET NORTH AND MAPLE GROVE ROAD AREA WATER SUPPLY CLASS ENVIRONMENTAL ASSESSMENT STUDY

PUBLIC INFORMATION CENTRE #2
MARCH 1, 2012 5pm – 8pm
Water Services Operations Center
100 Maplegrove Road, Cambridge

DOCS 1111878
FOUNTAIN STREET NORTH AND MAPLE GROVE ROAD AREA WATER SUPPLY CLASS ENVIRONMENTAL ASSESSMENT STUDY

PUBLIC INFORMATION CENTRE #2

MARCH 1, 2012
PROJECT BACKGROUND

• Region’s Updated Water Supply Master Plan (2007) concluded that an additional 22.7 million litres per day was required

• earlier studies identified possible water supplies in the Fountain Street and Maple Grove Road

• supplies consisted of existing well P-16 and new sources

This study will determine the optimal water supply strategy in the area.
**PHASE 1: PROBLEM STATEMENT:**

“This project will study the effects of collecting and distributing groundwater from the Fountain Street and Maple Grove Road Area within the Waterloo Regional Integrated Water System and identify the preferred water supply configuration.”

**PHASE 2: DEVELOP ALTERNATIVES:**

- Review of all available studies and data
- Desktop Hydrogeological Review
- Well Survey
- Construction of a test well (FSTP1-10) and a 40-day pump test, including monitoring local private wells and monitoring wells
- Ecological Survey
- Desktop Archaeological Review
HYDROGEOLOGY OF STUDY AREA
HYDROGEOLOGY OF STUDY AREA

Figure 2: REGIONAL CROSS - SECTION B-B'

LEGEND:
- Shallow Overburden Aquifer
- Deep Overburden Aquifer
- Maryhill/Catfish Creek Till (Aquitard)
- Bedrock

KEY MAP (Scale 1:100,000)

Project Name: Maple Grove - 40 Day Pumping Test

MTE
ENVIRONMENTAL DIVISION

City of Cambridge, Ontario
Regional Municipality of Waterloo

Scale: 1:20,000
MTE Project No.: 33591-100
Date: February 2012

EV21.2
• New test well (FSTP1-10) constructed at 100 Maple Grove Road in December 2010
• Purpose of test was to determine the optimal production rate of FSTP1-10 and monitor environmental response to pumping both FSTP1-10 and P-16
• 40-day pump test conducted on FSTP1-10. P-16 was included for last 25 days of testing.
• Monitoring of 12 Region owned monitoring wells, 26 private residential wells, and 2 wetland mini-piezometers
• Groundwater levels reached steady state conditions and stabilized near the end of the test.
• The tested combined pumping rate of 83 L/sec is a sustainable pumping rate in the long-term in the aquifer.
• Drawdown mainly limited to deep aquifer over an extensive area.
• Shallow aquifer demonstrated negligible response during the pumping test.
Both groundwater sources meet health-based parameters in the Ontario Drinking Water Quality Standards (ODWS).

Iron and manganese treatment required.
Archaeological
• Assessment was completed in 2009
• 46 archaeological registered sites within 1km radius of study area
• The preferred site(s) and watermain routes are located in previously disturbed areas where no impact anticipated.

Ecological
• New well is located near large stormwater facility
• Freeport Creek runs through the study area
• Water level monitoring during the pump test illustrated that the test had no effect on surface water levels
• Construction of the preferred alternative would be contained within the existing Operations Centre, roadways and P-16 site therefore, no expected negative impacts to the natural environment
## Alternatives

<table>
<thead>
<tr>
<th>Alternative</th>
<th>Description</th>
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</table>
| **Alternative 1**<sup>*</sup>  
Do Nothing | No improvements or changes would be undertaken. Represents what would occur if none of the alternative solutions were implemented. |
| **Alternative 2 - PREFERRED**  
Rehabilitate P-16 and Complete FSTP1-10 as a Supply Well | Upgrade P16 and combine FSTP1-10 for a total supply of 83 L/s. Provide treatment for both sources. |
| **Alternative 3**  
Complete FSTP1-10 as a Supply Well | Decommission P-16 in accordance with all current regulations and complete FSTP1-10 as a supply well for a total supply of 60 L/s. |
| **Alternative 4**  
Upgrade P-16 | Decommission FSTP1-10 in accordance with all current regulations and complete P-16 as a supply well for a total supply of 23 L/s. |

* Although the “Do Nothing” alternative does not address the problem statement, it has been included as one of the potential solutions since the Municipal Engineers Association Class EA document (as amended 2007) states that it should be considered in all cases. The “Do Nothing” alternative provides the benchmark for evaluating all other alternative solutions.
## EVALUATION OF ALTERNATIVES

### Evaluation criteria:

<table>
<thead>
<tr>
<th>Natural Environment</th>
<th>Protection of the natural and physical components of the environment (i.e. air, land, water and biota) including the natural heritage-environmentally sensitive areas</th>
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<tr>
<td>Social/Cultural</td>
<td>Potential affects on residents, neighbourhoods, businesses, community character, social cohesion, community features, and historical/archaeological and heritage components in addition to municipal development objectives.</td>
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<td>Economic/Financial</td>
<td>Comparison of the potential costs.</td>
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<tr>
<td>Legal/Jurisdictional</td>
<td>Land requirements, permit requirements and the potential legal implications for each alternative.</td>
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<tr>
<td>Technical</td>
<td>Technical suitability and other engineering aspects of the alternatives.</td>
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# EVALUATION MATRIX

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<thead>
<tr>
<th>Evaluation Criteria</th>
<th>Alternative #1</th>
<th>Alternative #2</th>
<th>Alternative #3</th>
<th>Alternative #4</th>
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<tr>
<td>Natural Environment Impacts:</td>
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<td>Vegetation</td>
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<td>Available Water Supply</td>
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<td>Ability to meet Ontario Drinking Water Objectives for Water Quality:</td>
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<td>Usable Land for New Infrastructure:</td>
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**OVERALL Rating:** Preferred Option

**Rating Legend:**
- Very Good
- Good
- Fair
- Poor
- Very Poor
PREFERRED ALTERNATIVE
PHASE 3: DEVELOPMENT OF PREFERRED ALTERNATIVE

- Preferred alternative will be developed and presented at a Public Information Centre in Spring 2012.

PHASE 4: ENVIRONMENTAL STUDY REPORT (ESR)

- Findings of entire project including public feedback to be published in Summer/Fall 2012 with notification to all stakeholders
- Public and commenting agencies will have 30 days to provide comments to the project team and/or the Ministry of the Environment.

PHASE 5: IMPLEMENTATION OF THE PREFERRED ALTERNATIVE

- If there are no outstanding issues the Region will proceed with detailed design of the Preferred Alternative as outlined in the ESR.
- A review of the Water Supply Master Plan will be complete by end 2012. The results may affect implementation timing of the preferred alternative.
The EA Process encourages public participation. If you have comments or would like more information about the project or the EA process please contact one of the project team members listed below.

Ms. Amy Domaratzki, M.A.Sc., P.Eng.
Senior Hydrogeologist – Water Services
Region of Waterloo
150 Frederick Street, 7th Floor
Waterloo, ON N2G 4J3
Phone: 519-575-4829
Fax: 519-575-4452
Email: adomaratzki@regionwaterloo.ca

Mr. Chris Spere, C.E.T.
Project Manager
MTE Consultants Inc.
520 Bingemans Centre Drive
Kitchener, ON N2B 3X9
Phone: 519-743-6500
Fax: 519-743-6513
Email: cspere@mte85.com

Thank you for your participation in this important project.
TO: Chair Jim Wideman and Members of the Planning and Works Committee

DATE: February 28, 2012

FILE CODE: E20-40

SUBJECT: CONSULTANT SELECTION FOR THE WASTE MANAGEMENT MASTER PLAN

RECOMMENDATION:

THAT the Regional Municipality of Waterloo enter into a Consulting Services Agreement with Golder Associates Ltd. of Whitby, Ontario, to provide consulting services for the Waste Management Master Plan (WMMP), at an upset limit of $402,081 plus applicable taxes, as per Report E-12-023, dated February 28, 2012.

SUMMARY:

The Region’s existing WMMP was completed in 1986, and last updated in 2011. Numerous changes in the planning, regulatory, and technical environment have occurred since the WMMP was first approved over 25 years ago. The majority of the waste management program expansion and diversion initiatives recommended in the current WMMP have been implemented, resulting in a more than threefold increase in the amount of material diverted from landfill between 1995 and 2010. Further, the most recent projected remaining capacity at the Regional Landfill site is approximately 20-25 years; coincident with the typical planning horizon for a master plan. A new WMMP will document the current status of the Region’s waste management practices, programs, operations and facilities, provide projections of future diversion rates and residual waste generation volumes, and establish a preferred waste management strategy that is aligned with the planning, regulatory and technical context.

The primary objective of this assignment is to prepare a new long term WMMP that will be flexible in nature and will recommend appropriate post-diversion residual waste management strategies that are environmentally sustainable, economically viable and socially responsible. As part of the master planning process, Waste Management staff will work concurrently with the consultant to review and identify opportunities for expansion to existing diversion programs as part of the overall WMMP study.

The principles described in the Region’s Environmental Sustainability Strategy, which provides a framework for incorporating environmental considerations into decision making, will form a cornerstone of the evaluation process developed during the master plan study. The new WMMP plan shall meet existing regulatory requirements and encourage meaningful stakeholder involvement throughout the process, including Regional Council, area municipalities, the general public, private entities, and federal, provincial, and municipal government agencies.

The plan will identify the timing, financial resources, approval requirements and conceptual design details associated with a post-diversion residual waste management strategy over the master plan planning period of the present to 2031. These may include new, upgraded or expanded regional infrastructure and programs.

A Request for Letters of Interest to provide consulting services for the WMMP was advertised in the Waterloo Region Record, Daily Commercial News and on the Region’s Purchasing web site. Consultants
were short-listed based on the Region’s Consultant Selection Policy and Purchasing By-Laws. Following review and assessment of the detailed submissions, the Project Team recommends that Golder Associates Ltd. of Whitby, Ontario be retained to undertake this assignment at an upset fee limit of $402,081 plus applicable taxes.

REPORT:

Background

The Region’s current WMMP was completed in 1986, and has been updated on a five year basis, with the last review occurring in 2011. The Region has now implemented the majority of the available low to mid cost expansion and diversion programs, as recommended in the current WMMP. This has resulted in a more than threefold increase in the amount of material diverted from landfill between 1995 and 2010. Additionally, numerous changes in the planning, regulatory and technical environments have occurred since the WMMP was first approved twenty five years ago. Further, the most recent projected remaining capacity at the Regional Landfill site is approximately 20-25 years; coincident with the typical planning horizon for a master plan.

The new WMMP will establish a long-term strategic direction for sustainable post-diversion residual waste disposal options that are consistent with the Region’s corporate and strategic vision over the next 20 years. The new WMMP will recommend appropriate residual management strategies that are environmentally sustainable, economically viable and socially responsible, and can be maintained in the long-term. The WMMP will be flexible to allow for adaptation to changing legislation and provincial policy, changes in waste composition, and to accommodate population and employment increases and embody sustainability.

Planning

The Region’s Planning, Housing and Community Services Department has updated the Region’s growth strategy in the new Regional Official Plan to meet the province of Ontario Places to Grow forecasts. Therefore, there is a need to coordinate investment in waste management infrastructure to support future growth and to foster sustainability within existing systems and facilities.

The Region has also developed an Environmental Sustainability Strategy (ESS), which provides a framework for incorporating environmental considerations into the Region’s decision making, and outlines a process for establishing targets in all program areas which have a significant impact on the environment. The principles of the ESS will be incorporated into the evaluation methodology that will be developed as part of the WMMP.

Technical/Operational

The Region of Waterloo is currently responsible for the collection and disposal of the Region’s residential waste, and operation of the residential waste reduction, green bin organics diversion and recycling programs. The Region operates an engineered landfill at the Waterloo Waste Management Centre. A bulk waste transfer facility is located at the Cambridge Waste Management Facility, and six small vehicle transfer stations are located throughout the Region.

A range of residuals management technologies, including mechanical, biological and thermal technologies will be identified, reviewed and evaluated during the WMMP study. The hierarchy described in the Waste Value Chain, as outlined in the Ministry of the Environment’s (MOE) Policy Statement on Waste Management Planning (2007) shall be considered in the development of alternatives.
In accordance with the recommendations contained in E-10-073 (June 22, 2010) regarding the proposed WMMP, the following technologies and alternatives shall be considered, at a minimum:

- Conventional incineration with heat recovery;
- Plasma reduction (e.g. Plasco pilot plant in Ottawa);
- Advanced shredding with mechanical sorting and separation of residuals;
- Continued incremental approach to diversion by targeting individual materials;
- Co-process green bin organic material with biosolids; and
- Process green bin organics at a Region-owned plant.

The review shall include estimates of greenhouse gas emissions and the respective carbon footprint of each technology/process deemed feasible for implementation.

Waste Management staff will work concurrently with the consultant to review and identify opportunities for expansion of existing diversion programs as part of the overall WMMP study, and to provide input to assist with the determination of future residuals volumes.

**Regulatory**

A number of provincial policies and regulations inform the delivery of waste management services and program structure. The province has proposed changes to certain regulations, including the *Waste Diversion Act*, which provides the legislative framework under which Waste Diversion Ontario develops, implements, and operates waste diversion programs for those materials (Blue Box waste, tires, electronic waste etc.) designated by the Minister of the Environment.

The WMMP shall be developed to align with the applicable current and future provincial and federal policies and regulatory direction. Key policies and regulations that will be reviewed during the WMMP study include:

- Status of the *Waste Diversion Act*;
- MOE *Policy Statement on Waste Management Planning*;
- MOE *Waste to Worth Discussion Paper*;
- *Green Energy Act*; and
- Status of the *Composting Guidelines*.

**Consultant Selection**

A Request for Letters of Interest to provide consulting services for the WMMP was advertised in the Waterloo Region Record, Daily Commercial News, and on the Region’s Purchasing web site on Tuesday, November 8, 2011. Six (6) consulting firms responded to the advertisement by submitting Letters of Interest. Two (2) firms were short listed based on the Quality and Equity Factors as defined in the Region’s Consultant Selection Policy and Purchasing By-Law as follows:

- CH2M Hill; and
- Golder Associates Ltd.

The two (2) short-listed consultants were requested to submit detailed work plans and upset fees for the assignment.

The Project Team involved in the consultant selection consisted of:

Jon Arsenault, Director, Waste Management
Linda Churchill, Senior Environmental Engineer, Waste Management
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 letters of interest and detailed work plans submitted by the short-listed consultants demonstrated a good understanding of the project, capable project teams and experience on similar projects. After reviewing the letters of interest, detailed work plans, schedules, and upset fees, Golder Associates Ltd. had the higher overall score and the lower upset fee. Based on this evaluation, the project team recommends that Golder Associates Ltd be retained to undertake this assignment at an upset fee limit of $402,081 plus applicable taxes.

**Scope of Work**

The scope of work for this assignment includes:

- Document the Region’s current waste generation patterns, diversion rates, and volumes of residual waste that is landfilled;
- Assess and refine projections for diversion rates and diversion streams, residual waste production and landfill capacity;
- Identify and evaluate a range of alternatives to meet the waste management needs of the Region including innovative technologies (e.g. mechanical, biological and thermal technologies, co-processing with municipal biosolids, soil/sediment rehabilitation, energy and resource recovery) and program delivery systems, including Public-Private partnerships (P3) alternatives (e.g. design-build, design-build-operate etc.) for residuals processing and disposal based on greenhouse gas emission inventories and life cycle assessments;
- Develop a communication and consultation plan to provide sufficient and meaningful public, stakeholder, and agency consultation throughout the master plan study so that the preferred strategy has the support of the public, Regional Council, regulatory agencies and local municipalities;
- Determine a preferred approach to managing residual waste within the Region. Sustainability and flexibility will be desirable attributes of the preferred approach(es) so that unforeseen future changes may be reasonably accommodated. The WMMP will build upon waste reduction, diversion and recycling programs currently in place or to be implemented, and identify upgrades or expansions to existing Regional facilities and any new Regional residual waste processing facilities that will be required;
• Develop a high level conceptual design of the preferred approach, complete with implementation plan.

Schedule

Subject to Council’s approval of this assignment, the WMMP Study will be completed in approximately 18 months from April 2012 to October 2013.

Consultant Upset Limit

The upset limit for consulting fees and disbursements for the update to the WMMP is $402,081 plus applicable taxes. A breakdown of the successful consultant’s upset fee is included in Appendix A attached to this report.

CORPORATE STRATEGIC PLAN:

The new WMMP supports the Corporate Strategic Plan Objective 1.3 of “Reducing the Amount of Waste Requiring Landfill”.

FINANCIAL IMPLICATIONS:

The Council-approved 2012 Waste Management Ten Year Capital Program includes a total budget of $429,000 over the years 2012 to 2013 for the new WMMP. The consultant’s fee is within the project allowance in the current budget.

OTHER DEPARTMENT CONSULTATIONS/CONCURRENCE:

NIL

ATTACHMENTS

Appendix A: Breakdown of Consultant’s Upset Fee

PREPARED BY: Donna Serrati, Manager Engineering & Programs, Waste Management

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

<table>
<thead>
<tr>
<th>Task</th>
<th>Description</th>
<th>Fees</th>
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<tr>
<td>Task 1</td>
<td>Master Plan Initiation</td>
<td>$13,702.25</td>
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<td>Task 2</td>
<td>Project future residuals generation and assess landfill capacity</td>
<td>$12,479.80</td>
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<td>Task 3</td>
<td>Document current waste management profile</td>
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<td>Task 4</td>
<td>Review and evaluate residual waste management technologies</td>
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<td>Task 5</td>
<td>Identify constraints and opportunities</td>
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<td>Task 6</td>
<td>Define sustainability framework and criteria for evaluation of alternatives</td>
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<td>Task 7</td>
<td>Life cycle assessment and evaluate short-listed alternatives</td>
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<td>Task 8</td>
<td>Confirm preferred alternatives</td>
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<td>Task 9</td>
<td>Stakeholder consultation and study communication plan</td>
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<td>Task 10</td>
<td>Master plan final report</td>
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<td><strong>Total Consultant Upset Fee</strong></td>
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<td><strong>$402,081.00</strong></td>
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To: Chair Jim Wideman and Members of the Planning and Works Committee
From: Keren Adderley, Coordinator of Communications and Marketing, PHCS
Subject: DELEGATION FROM THE ACCELERATOR CENTRE

On February 28, 2012, a delegation from the Accelerator Centre is scheduled to appear before the Planning and Works Committee meeting.

Tim Jackson, Chief Executive Officer, and Tim Ellis, Chief Operating Officer at the Accelerator Centre, will provide an update on the Centre’s many accomplishments since it opened five years ago.

The Accelerator Centre is located in a privately owned office building at the David Johnston Research and Technology Park of the University of Waterloo. In 2004, Regional Council made a contribution of approximately $4 million toward the capital costs for construction of the building, which was part of a larger $40M partnership with the Region, the Federal and Provincial governments, and the City of Waterloo to establish the University of Waterloo’s David Johnston Research and Technology Park. The Region of Waterloo is the lessee of 22,700 square feet in the building that is subleased to the Accelerator Centre. The Commissioner of Planning, Housing and Community Services represents the Region as a member of the Board of Directors.

The Accelerator Centre provides unique mentoring and education programs and networking opportunities to new technology businesses, in addition to office space and administrative services, to help them grow and develop into successful technology start-up companies. Today, the Accelerator Centre is currently home to 45 new technology start-ups.

Additional information is attached that further describes the many and varied contributions made by the Accelerator Centre to our community. On February 28, Committee will hear more about the world-renowned and award-winning programs and services being offered at the Accelerator Centre, as well as the companies that have already ‘graduated’ from the Centre, creating more than 600 jobs and $43-million in revenue.
A MESSAGE FROM OUR CEO & COO

Tim Jackson, left Tim Ellis, right

In this Report to Stakeholders, we are pleased to look back upon our successes of the past year and to share with our community of clients, supporters, funders and volunteers some of the key performance indicators that showcase our continued success in fostering early-stage technology start-ups.

 Expansion of Services and the Accelerator Program

In October 2010, we entered into an agreement with Communitech to extend the award-winning membership and advisory services that have traditionally been made available at the Accelerator Centre (AC) to start-up companies located at The Communitech Hub. With our program no longer being fixed to a specific location, our unique service offering was rebranded as the “Accelerator Program,” a move that offers us greater flexibility to serve a broader number of start-ups in multiple locations and markets.

 Growth and Momentum

Year over year, our key performance indicators show dramatic growth for the Accelerator Program, as evidenced by the metrics highlighted in this report. In just one year, the AC and Hub companies collectively have more than doubled our metric for revenue generated since inception from $20 million to $43 million. With five full years of operation now under our belt and both facilities at full capacity, we are turning out an ever-growing number of graduates from the Program. At the end of 2010, we had graduated 9 companies in total. One year later, our graduate number sits at 19. Our in-residence and graduate companies are responsible for the creation of more than 600 jobs.

Of particular note is the success achieved by one of the first companies to graduate from our Accelerator Program: Mission Technologies, a provider of intelligent solutions for the global transportation market, now employs more than 70 people with plans to add more. The company serves more than 260 customers worldwide and opened its first international office in Cologne, Germany in 2011. It is also exciting to see Mission’s CEO Kurtis McRitchie giving back to the Accelerator Program in a mentorship role and as a member of our board of directors.

 Recognition at Home and on the World Stage

The international recognition we spoke about in last year’s stakeholder report continued through 2011. As word of our success in Canada has grown, we find our expertise in cultivating technology start-ups to be in great demand across North America and around the world. We have received invitations from England, France, Russia, China, Mexico, Japan and Scotland to share our best practices and experience with academic institutions and emerging incubation facilities. In early summer, Accelerator Program CEO Tim Ellis spent several weeks with counterparts in Wellington, Australia doing knowledge transfer. With international interest in our expertise growing by leaps and bounds, we can readily see a future where “Accelerator Programs” prosper around the world, founded on the best practices developed and refined here in Waterloo Region. These future initiatives directly feed our long-term strategy for sustainability—allowing the Accelerator Program to partner with government, rather than be sustained solely through subsidy.

However, our outreach efforts are not preserved solely for the rest of the world. At home, we embarked on a unique coaching effort with the Grand Valley Institution for Women where Accelerator Program advisors and Waterloo technology leaders engaged in four half day workshops on entrepreneurship, delivered to 12 women inmates to provide them with the tools to start their own business upon release.

Finally, in November 2011, we were proud to have three of our resident companies selected to represent Canada at the $20 Million Entrepreneurial Summit (20WES) held in Nice, France concurrent with the world’s CEO40 Young Leaders Summit. Accelerator Centre residents Avenir Medical, 1Think Security, and Qwality joined Canada’s 35-person delegation at the conference. The Accelerator Centre was also prominently featured in a report titled at the 20WES entitled “The Power of Many.” In the report, prepared by leading business consulting firm McKinsey & Company, the Accelerator Centre was identified as one of 22 critical initiatives instrumental in shaping a “tenable entrepreneurial ecosystem” for starting and developing companies.

 A Paul Reed

The momentum and success we have experienced over the last five years of operation would not have been possible without the hard work of our Accelerator Program team, and our supportive community of executive advisors, mentors and volunteers.

The fact that the Accelerator Program’s work is being recognized internationally as best in class can be directly attributed to the efforts of these individuals. As you can see from the metrics included in this report, more than 250 volunteers have delivered upward of 15,000 hours of service to our Program since inception—a monumental contribution by any standard.

Tim Jackson, CEO
Tim Ellis, COO
“The Accelerator Program is a hugely stimulating and exciting ecosystem, filled with fascinating people and technologies. As an early-stage company, we are able to tap into networking opportunities here that simply do not exist elsewhere.”

– Ben Bitroff, CFO, Cyborg Trading Systems

100% graduate companies have remained in Ontario, 84% graduate companies have remained in local community

19 graduate companies to December 31, 2011

45 companies currently in residence

15,000 hours of mentorship provided by 250+ volunteer advisors & mentors

Eighty-four client companies to date

$72 million external funding received by client companies

$43 Million revenue generated by client companies

MORE THAN 600 jobs created by client companies

1400 plus hours of educational services delivered
Services
- On-site management expertise
- Membership
- Administration and infrastructure
- Education
- Networking
- Research support

Sectors Served
- Cloud computing
- Computer gaming
- Green energy
- Digital content delivery
- eCommerce
- Healthcare technology
- Human resource software
- Mobile phone applications
- MGM technology
- Robotics
- Knowledge management
- Security
- Medical devices
- Web 3.0 communities

Facilities and Locations
50,000 square feet of space available for Accelerator Program clients divided between two facilities located within the Accelerator Centre in Waterloo's David Johnston Research and Technology Park and The Communitech Hub in Kitchener's historic Tannery Building.

About the Accelerator Program
Through the Accelerator Program, early-stage companies located at the Accelerator Centre and The Communitech Hub receive seamless support services, including access to office facilities, coaching and mentoring, education, connections to capital, networking, R&D support and outreach, talent recruitment, technology transfer assistance, and commercialization expertise, enabling technology start-ups to move to market faster, create jobs and stimulate economic activity.

the
accelerator
program
Tel: 519.342.2400
Fax: 519.513.2421
www.acceleratorcentre.com
285 Hagey Boulevard
Waterloo, Ontario, Canada
N2L 6G5

“From day one, we have been immersed in an entrepreneurial atmosphere populated by growing and successful companies that is both infectious and motivating. We are constantly learning from our mentors, advisors and the other start-ups.”
— Jay Bi-Kaako, CEO, Sweet Tooth

“We have a wealth of resources at our fingertips. The Accelerator Program and its advisors and mentors are providing us with invaluable support, allowing us to quickly focus and refine our product and growth strategies.”
— Jad Saident & Adam Betheh, JADsoftware Inc.
<table>
<thead>
<tr>
<th>Meeting date</th>
<th>Requestor</th>
<th>Request</th>
<th>Assigned Department</th>
<th>Anticipated Response Date</th>
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<tr>
<td>16-Aug-11</td>
<td>P&amp;W</td>
<td>One year review of Report E-11-085 re: Parking on Bleams Road</td>
<td>Transportation and Environmental Services</td>
<td>14-Aug-2012</td>
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<td>16-Aug-11</td>
<td>G. Lorentz</td>
<td>Staff report back to Committee regarding how many gravel pits in the Region have not been restored.</td>
<td>Planning, Housing &amp; Community Services</td>
<td>Spring 2012</td>
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<td>18-Oct-11</td>
<td>C. Millar</td>
<td>Staff review the aesthetics of the bridge repairs to the Main Street, Cambridge</td>
<td>Transportation and Environmental Services</td>
<td>Spring 2012</td>
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<td>10-Jan-12</td>
<td>P&amp;W</td>
<td>Update report on proposed Source Protection Policies after GRCA Source Protection Committee public consultation is completed</td>
<td>Transportation and Environmental Services</td>
<td>Summer of 2012</td>
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<tr>
<td>31-Jan-12</td>
<td>P&amp;W</td>
<td>Staff to report back to the Committee on the practical and financial implications of a lane reduction for the southbound approach for the Roundabout located at Homer Watson Blvd and Block Line Road.</td>
<td>Transportation and Environmental Services</td>
<td>20-Mar-2012</td>
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<tr>
<td>31-Jan-12</td>
<td>P&amp;W</td>
<td>That staff meet with representatives of the Canadian National Institute for the Blind and the Grand River Accessibility Advisory Committee to develop solutions for the visually- and hearing-impaired at all roundabouts and intersections in the Region of Waterloo.</td>
<td>Transportation and Environmental Services</td>
<td>Fall - 2012</td>
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