Regional Municipality of Waterloo

Planning and Works Committee

Agenda

Tuesday, November 1, 2016

10:00 a.m. (Time is approximate, immediately following A&F)

Regional Council Chamber

150 Frederick Street, Kitchener

1. Declarations of Pecuniary Interest under the Municipal Conflict Of Interest Act

2. Delegations

Consent Agenda Items

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

3. Request to Remove Items from Consent Agenda

4. Motion to Approve Items or Receive for Information

4.1 PDL-CPL-16-45, An Update on the Implications of Smart Growth for Our Communities Act, 2015 (Bill 73) (Information) 7


Recommendation:

4.3 Reconstruction of Church Street East, 120 meters East of Spruce Lane to Arthur Street, Town of Elmira, Information Package in advance of Public Consultation Centre (Information)

4.4 Ottawa Street / Bleams Road Improvements, Fischer-Hallman Road to Knechtel Court, City of Kitchener / Township of Wilmot, Information Package in advance of Public Consultation Centre (Information)

4.5 Weber Street Improvements, Blythwood Road to Northfield Drive, City of Waterloo, Information Package in advance of Public Consultation Centre (Information)

4.6 East Side Lands Wastewater Servicing Class Environmental Assessment, Information Package in advance of Public Consultation Centre (Information)

4.7 TES-WAS-16-24, Additional Consultation for William and Strange Street Water Supply Class Environmental Assessment (Information)

4.8 TES-TRS-16-22, University of Waterloo Transit Plaza Public Information Centre (Information)

**Regular Agenda Resumes**

5. **Reports – Planning, Development and Legislative Services**

Community Planning

5.1 **PDL-CPL-16-47**, Draft Wetland Strategy for Ontario, 2016-2030

**Recommendation:**

That the Regional Municipality of Waterloo take the following actions with respect to the Ministry of Natural Resources and Forestry’s document “Draft: A Wetland Conservation Strategy for Ontario 2016-2030”:

a) Endorse the seven guiding principles in the document, but request that greater emphasis be given to the role of wetlands in adapting to the effects of climate change;

b) Request the Province to initiate extensive and detailed consultations with the scientific and ecological planning community

Docs #2227248
prior to further consideration of a “no net loss” approach to wetland conservation policy in Ontario; and

c) Forward Report PDL-CPL-16-47, dated November 1, 2016 to the Ministry of Natural Resources and Forestry for consideration in the ongoing consultation on wetland conservation policies.

5.2 PDL-CPL-16-48, Breslau (Greenhouse Road) GO Station

Recommendation:

That the Regional Municipality of Waterloo take the following actions regarding the development of a new GO Station at Greenhouse Road, Breslau in the Township of Woolwich:

(a) Endorse the location of the GO station as identified in Attachment "B" to Report PDL-CPL-16-48.

(b) Request the Ministry of Transportation and Metrolinx to fully fund all costs associated with the new GO station as part of the Regional Express Rail 10-Year Program.

(c) Forward Report PDL-CPL-16-48, dated November 1, 2016, to Metrolinx, the Ontario Ministry of Transportation, and the Township of Woolwich.

Airport

5.3 PDL-AIR-16-06, Airport Master Plan Update (Information)

Reports – Transportation and Environmental Services

Design and Construction

5.4 TES-DCS-16-18, Fall 2016 Construction Update (Information)

5.5 PDL-LEG-16-74, Authorization To Expropriate Lands (1st Report) for Improvements to Fountain Street (Regional Road 17) City of Cambridge from Kossuth Road / Fairway Road to Cherry Blossom Road (Phase 1) – 1105 Fountain Street North, City of Cambridge

Recommendation: See page 171-173

Transportation

5.6 TES-TRP-16-23, Turtle Mortality Issue on Roseville Road (Regional Road 46) Township of North Dumfries (Information)
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<th>5.7</th>
<th><strong>TES-TRP-16-24</strong>, LED Street Light Conversion – Update (Information) (Staff Presentation)</th>
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<td><strong>Waste Management</strong></td>
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<td>5.8</td>
<td><strong>TES-WMS-16-07</strong>, Progress Report: Curbside Waste Collection Policy Changes Implementation Plan (Information) (Staff Presentation)</td>
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<td><strong>Water Services</strong></td>
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<td>5.9</td>
<td><strong>TES-WAS-16-19.1</strong>, Outdoor Water Conservation Program Update <em>Recommendation:</em> That the Region of Waterloo distribute 2,400 rain barrels at a cost of $40 per unit, promote low water use landscaping, and enforce By-law 07-069, A By-law Respecting the Conservation of Water in 2017; as detailed in Report TES-WAS-16-19.1.</td>
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<td>5.10</td>
<td><strong>TES-WAS-16-22</strong>, Hidden Valley Low Lift Pumping Station - Pump Acquisition (Information)</td>
<td>219</td>
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<td>5.11</td>
<td><strong>TES-WAS-16-23</strong>, Negotiation of Risk Management Plans for Existing Activities under the Source Protection Plan <em>Recommendation:</em> That the Regional Municipality of Waterloo approve amendments to the Source Water Protection Incentive Program maximum grants as outlined in report TES-WAS-16-23 dated November 1, 2016; And that The Regional Municipality of Waterloo approve amendments to the proposed Clean Water Act Risk Management By-law as outlined in report TES-WAS-16-23 dated November 1, 2016.</td>
<td>222</td>
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<td>6.</td>
<td><em>Information/Correspondence</em></td>
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<td>6.1</td>
<td>Correspondence from Shawn Nielsen re: TES-TRP-16-24, LED Street Light Conversion – Update</td>
<td>226</td>
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<td>6.2</td>
<td>News Release: Ontario Introduces Aggregate Resources and Mining Modernization Act</td>
<td>230</td>
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<td>6.3</td>
<td>Council Enquiries and Requests for Information</td>
<td>232</td>
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<td>7.</td>
<td><em>Other Business</em></td>
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Doms #2227248
8. **Next Meeting – November 22, 2016**

9. **Motion to go into Closed Session**

That a closed meeting of Planning and Works Committee be held on Tuesday, November 1, 2016 immediately following Planning and Works Committee in the Waterloo County Room in accordance with Section 239 of the Municipal Act, 2001, for the purposes of considering the following subject matters:

a) labour relations

b) receiving of advice that is subject to solicitor-client privilege and proposed or pending acquisition of land in the Cities of Kitchener and Waterloo

10. **Adjourn**

### Next Meetings

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<th>Time</th>
<th>Description</th>
<th>Location</th>
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<tr>
<td><strong>Planning and Works Committee</strong></td>
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<tr>
<td>November 22, 2016</td>
<td>1:00 p.m.</td>
<td>Planning and Works Committee</td>
<td>Council Chamber 2nd Floor, Regional Administration Building 150 Frederick Street Kitchener, Ontario</td>
</tr>
<tr>
<td>December 6, 2016</td>
<td>1:00 p.m.</td>
<td>Planning and Works Committee</td>
<td>Council Chamber 2nd Floor, Regional Administration Building 150 Frederick Street Kitchener, Ontario</td>
</tr>
</tbody>
</table>

<p>| <strong>Transportation and Environmental Services</strong>                  |            |                                                                            |                                                                          |
| Tuesday, November 8, 2016 | 5:00 p.m.–8:00 p.m. | Weber Street Improvements, Blythwood Road to Northfield Drive, City of Waterloo, Public Consultation Centre | Rotary Adult Centre Wing 404 510 Dutton Drive Waterloo, Ontario |
| Tuesday, November 8, 2016 | 5:00 p.m.–7:30 p.m. | East Side Lands Wastewater Servicing Class Environmental Assessment, Public Consultation | Deer Ridge Golf Club 200 Deer Ridge Drive, Kitchener, Ontario |</p>
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<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Description</th>
<th>Location</th>
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<tbody>
<tr>
<td>Thursday, November 10, 2016</td>
<td>6:00 p.m.– 8:00 p.m.</td>
<td>Reconstruction of Church Street East, 120 meters of Spruce Lane to Arthur Street, Town of Elmira, Public Consultation Centre</td>
<td>St. Paul's Lutheran Church 27 Mill Street Elmira, Ontario</td>
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<tr>
<td>Wednesday, November 16, 2016</td>
<td>2:00 p.m.– 8:00 p.m.</td>
<td>University of Waterloo Transit Plaza Public Information Centre</td>
<td>University of Waterloo Davis Centre Room 1301 200 University Avenue West Waterloo, Ontario</td>
</tr>
<tr>
<td>Tuesday, November 22, 2016</td>
<td>6:00 p.m.– 8:00 p.m.</td>
<td>Ottawa Street / Bleams Road Improvements, Fischer-Hallman Road to Trussler Road, City of Kitchener / Township of Wilmot, Public Consultation Centre #1</td>
<td>Chartwell Westmount Retirement Home 190 David Bergey Drive Kitchener, Ontario</td>
</tr>
<tr>
<td>Tuesday, November 22, 2016</td>
<td>5:00 p.m.– 7:00 p.m.</td>
<td>William and Strange Street Water Supply Class Environmental Assessment – Public Information Centre</td>
<td>Region of Waterloo Room 508 99 Regina Street Waterloo, Ontario</td>
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</tbody>
</table>
Region of Waterloo
Planning, Development and Legislative Services
Community Planning

To: Chair Tom Galloway and Members of the Planning and Works Committee

Date: November 1, 2016 File Code: D16-60

Subject: An Update on the Implications of Smart Growth for Our Communities Act, 2015 (Bill 73)

Recommendation:

For information.

Summary:

NIL

Report:

The Smart Growth for Our Communities Act, 2015, known as Bill 73, received Royal Assent on December 3, 2015. The purpose of this Act is to make changes to the Development Charges Act and the Planning Act for the following reasons:

- Allow for more effective citizen engagement in the planning process.
- Provide more stability for municipal planning documents and increase municipal accountability.
- Strengthen the protection of provincial interests.
- Encourage more up-front planning.
- Provide enhanced tools at the local level.

This report will review the implications of the changes to the Planning Act and the associated regulations. Report COR-FSD-16-02, dated January 12, 2016, addressed the changes to the Development Charges Act (DCA) as a result of the passing of Bill 73. The most substantive changes to the DCA were the implementation of a forward-looking service level for transit and removal of the mandatory 10% capital cost reduction.
for transit, as well as the inclusion of waste diversion as an eligible service.

Regional staff previously reported to Council on Bill 73 and the proposed amendments to the Planning Act through Report No. PDL-LEG-15-45/PDL-CPL-15-33 in May 2015, and Report No. COR-FSD-15-14/PDL-LEG-15-49 in August 2015. These reports requested that the Province consider the following:

- Comprehensive reform of the Ontario Municipal Board, particularly as it pertains to the Board’s operations, practices, procedures and reporting requirements.
- The unappealability of conformity updates in that these updates to official plans approved by the Province be exempt from appeals in their entirety.
- A ten year review cycle for official plans rather than a five year interval.

When Bill 73 came into force and effect, some of the amendments to the Planning Act included:

- An extension of the review cycle of the Provincial Planning Statement from 5 to 10 years.
- An extension of the review cycle of new Official Plans from 5 years to 10 years.
- Limited ability of ministries, beyond the Ministry of Municipal Affairs, to be added as a party to an Ontario Municipal Board appeal.
- Removal of the ability for an appellant to appeal an entire official plan
- Requiring appellants to provide clearer reasons for appeals with respect to provincial/local policies.
- Allowing municipalities to either amend an official plan, and still be subject to a 5-year review cycle, or prepare a new official plan and be subject to a 10-year review cycle
- Requiring both municipalities and the Ontario Municipal Board to have enhanced regard for public input on planning decisions.
- Requiring public consultation policies in official plans that explain how and when the public will be consulted.
- Requiring the submission of a public consultation strategy with development applications.

Attachment 1, A Summary of the Changes to the Planning Act, lists and describes, in greater detail, the changes to the Planning Act that are currently in force and effect and identifies implications for the Region. The majority of amendments to the Planning Act do not require immediate changes to the Region’s planning processes. For more information regarding the Smart Growth for Our Communities Act, 2015, please visit the Province’s website: http://www.mah.gov.on.ca/Page11014.aspx.
Corporate Strategic Plan:

This report supports strategic objectives found in the Corporate Strategic Plan, and particularly Focus Area 2: Growth Management and Prosperity.

Financial Implications:

The potential financial implications regarding implementing the changes to the Planning Act are yet to be determined. The implementation option as presented in Attachment 1 can be achieved primarily though current staff resources.

Potential financial implications regarding the implementation of the Development Charges Act, 2015, will be introduced and described in a further report to Committee.

Other Department Consultations/Concurrence:

Staff from Legal Services and Council and Administrative Services have been consulted in the preparation of this report.

Attachments

Attachment 1: A Summary of the Changes to the Planning Act

Prepared By: Cushla Matthews, Principal Planner

Michelle Sergi, Director, Community Planning

Approved By: Debra Arnold, Acting Commissioner, Planning Development and Legislative Services
Attachment 1: A Summary of the Changes to the Planning Act

<table>
<thead>
<tr>
<th>Change to the Planning Act</th>
<th>Regional Implications</th>
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<tbody>
<tr>
<td>1. Planning Advisory Committees (PACs)</td>
<td>No immediate action required.</td>
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<tr>
<td>- All upper and single tier municipalities in Southern Ontario are required to establish PACs</td>
<td>The Region currently has two Advisory Committees that satisfy this requirement – the Ecological and Environmental Advisory Committee (EEAC) and the Heritage Planning Advisory Committee (HPAC).</td>
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<td>- All PACs must have one citizen member (excluding Regional Councillors)</td>
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<td>2. Enhanced Requirements for Input</td>
<td>No immediate action required.</td>
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<td>- The Ontario Municipal Board (OMB) is now required to have regard to all information received by the municipality for non-decision appeals</td>
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<td>- This applies to both written and oral submissions in its decision-making</td>
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<td>- Although optional, this change allows municipalities to tailor their notice procedures for a broader list of processes and application types (e.g., notices of complete application and open houses)</td>
<td>The Region’s Official Plan (ROP) currently includes public consultation policies and notice procedures.</td>
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<tr>
<td>- Alternative provisions include notice by email, request owners of multi-tenant (7+) buildings to post notice in highly visible and accessible area</td>
<td>Staff to consider additions to the ROP through the Municipal Comprehensive Review, which will be initiated in 2019.</td>
</tr>
<tr>
<td>4. Requirement to Explain Effect of Public Input</td>
<td>The ROP policy section 10.A satisfies the intent of this requirement. However, staff have introduced a clause to all notices of decision explaining the effect of public input for each applicable planning matter.</td>
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<tr>
<td>- Municipalities and approval authorities are required to explain the effect, if any, on planning decisions</td>
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<tr>
<td>- The Notice of Decision must now include explanation of effect of public input on Council’s decision</td>
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<tr>
<td>5. Requirement to Include Public Consultation Policies in Official Plans</td>
<td>The ROP polices 10.B.12-14 satisfies the intent of this requirement with respect to Implementation Guidelines. ROP policy section 10.A satisfies this requirement in a general manner. Staff have also introduced a</td>
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<tr>
<td>- Officials Plans must include a description of measures and procedures for informing and obtaining views of the public</td>
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<td>- Requirement applies to OPAs, zoning by-laws, plans of subdivision and consents</td>
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<tr>
<td>Clause to all decision notices explaining the effect of public input for each applicable planning matter.</td>
<td>Staff to consider additions to the ROP through the Municipal Comprehensive Review.</td>
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</table>
- The PPS review cycle changed from 5 to 10 years | No immediate action required. |
| 7. Requirement to Submit Draft OP/OPA to the Ministry of Municipal Affairs (MMA)  
- Must be submitted at least 90 days prior to notice of public meeting (when the MMA is the approval authority) | No immediate action required. |
| 8. Upper and Lower Tier Conformity  
- Requirement that lower tier OPs/OP Updates must conform with Upper tier in effect/adopted OP | No immediate action required. |
| 9. 10-Year Review Cycle for New Official Plans  
- New Official Plans must be reviewed and revised, as necessary, within 10 years of coming into effect  
- A 5-year review cycle continues to apply in situations where an official plan is being updated and not replaced in its entirety | No immediate action required. |
| 10. 2-Year “Time-out” – New Official Plans and Zoning By-laws  
- No privately-initiated applications to amend a new official plan or zoning by-law for 2 years, unless supported by a municipality  
- Does not apply to OP changes through a 5-year review  
- Municipality must pass a motion to allow to proceed within 2 years; motion can be site-specific, a specific class of application or all applications | No immediate action required. |

Staff to consider future additions to the ROP to satisfy this requirement during the future Municipal Comprehensive Review.
### 11. New Provincial Interest – Built Form
- New provincial interest in built form that “is well designed, encourages a sense of place, provides for public spaces that are of high quality, safe, accessible, attractive and vibrant”

The ROP currently identifies the importance of built form through some general language. Staff to consider future additions to the ROP to satisfy this requirement during the future Municipal Comprehensive Review.

### 12. Built Environment Policies in Official Plans
- Municipalities are required to include built environment policies in official plans

The ROP currently identifies the importance of built environment through some general language. Staff to consider future additions to the ROP to satisfy this requirement during the Municipal Comprehensive Review.

### 13. Protection of Employment Lands
- Municipalities no longer required to revise their employment land policies/designations at time of official plan update

No immediate action required.

- Approval authority and adopting municipality/applicant can agree to a pause of up to 90 days in 180-day decision timeline for approving Official Plan/OPA
- Either party can initiate a “time-out” but both parties must agree
- “Time-out” starts once either party gives written notice to the other before the expiry of the 180-day timeline; either party can terminate “time-out” at any time by giving notice of intention
- 90 days is the maximum length of “time-out” and can only be applied once

No immediate action required. Staff to consider future additions to the ROP during the future Municipal Comprehensive Review.

### 15. Renaming of Development Permit System (DPS)
- DPS name changed to Community Planning Permit system (CPPS)

N/A – The Region does not have a DPS

### 16. 5-Year “Time-Out” for CPPS
- No privately-initiated amendments to CPPS for 5 years, unless supported by municipality

N/A – The Region does not have a CPPS
17. Requiring Use of CPPS  
- New authority authorizing the Ministry of Municipal Affairs Minister or upper-tier municipality to require local municipality to establish CPPS for purposes specified by regulation  
No immediate action required.

18. Complete Application Requirements for Official Plan Amendments  
- Changes to clarify transition applications for OPAs are subject to previous policies/legislation only if the complete application was made prior to transition date  
Applications submitted after July 1, 2016 are subject to the revised legislation. Applications submitted after July 1, 2016 must include a public consultation strategy as a required part of a complete application.

19-21. Changes to Appeal Rights  
- No appeal of OPs/OPAs for specific Provincial Approvals  
- No appeal of second unit policies  
- No ability to appeal entire new OP  
No immediate action required.

22. Limit Open-Ended Appeals for Non-Decisions  
- Changes allow approval authorities to establish optional time limit for additional appeals, following an appeal of a non-decision of OPs/OPAs  
- Notice needs to be provided to all those who would receive Notice of Decision  
No immediate action required. Staff to consider for future non-decision appeals; a notice would need to be established for this purpose.

23. Clearer Reasons for Appeals  
- Appellants need to explain the reasons for an appeal in respect of provincial/local policies – failure to do so means that appellant may not be able to argue issue before OMB; OMB has ability to dismiss all or parts of an appeal without holding a hearing, if the issues have not been previously identified in appeal letter  
No action required.

- Allow council or approval authority to determine, after an appeal is made, if ADR is appropriate prior to sending the appeal record to the OMB and extend time for sending record where pursuing ADR  
No immediate action required. Staff will consider this option for future appeals, in consultation with Area Municipalities.
- ADR includes conciliation and mediation in order to avoid a hearing
- Notice must be given to all appellants

25-29. These changes (e.g., criteria for minor variances, reporting for bonusing and parkland fees) to the Planning Act are local in nature and do not reflect action required at the Regional level.

N/A
Region of Waterloo
Planning, Development and Legislative Services
Community Planning

To: Chair Tom Galloway and Members of the Planning and Works Committee

Date: November 1, 2006                File Code: D18-01


Recommendation:


Summary:

In accordance with the Regional By-law 01-028, as amended, and By-law 16-031 the Acting Commissioner of Planning, Development and Legislative Services has:

- Accepted the following draft plan of condominium application; and
- Draft approved the following plans of condominium.

Report:

City of Waterloo

Plan of Condominium Application 30CDM-16413

Applicant: 2314176 Ontario Inc.

Location: 222 King Street South

Proposal: To permit the development of a six-storey mixed-use building containing 49 residential condominium apartment units and 3 commercial units.

Processing Fee: Paid September 29, 2016
Draft Approval of Plan of Condominium 30CDM-16405

Applicant: 2273090 Ontario Inc.
Location: 112 Union Street East
Proposal: To permit the development of 33 residential stacked townhouse condominium units within two separate buildings.
Processing Fee: Paid August 9, 2016
Commissioner’s Approval: September 6, 2016
Came Into Effect: September 27, 2016

Draft Approval of Plan of Condominium 30CDM-16404

Applicant: IN8 (Sage 5) Developments Inc.
Location: 280 Lester Street
Proposal: To permit the development of an eight storey mixed-use building comprised of 16 commercial units and 167 residential condominium apartment units.
Processing Fee: Paid August 29, 2016
Commissioner’s Approval: September 8, 2016
Came Into Effect: September 29, 2016

Draft Approval of Plan of Condominium 30CDM-16402

Applicant: Quiet Place Holdings Inc.
Location: 507, 508, 509 and 513 Quiet Place
Proposal: To permit the conversion of an existing townhouse complex containing 26 units to condominium ownership.
Processing Fee: Paid September 16, 2016
Commissioner’s Approval: September 26, 2016
Came Into Effect: October 18, 2016
Area Municipal Consultation/Coordination:

These planning approvals and releases, including consultations with Area Municipalities, have been completed in accordance with the Planning Act. All approvals included 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. Strategic objective: Improve environmental sustainability and livability intensifying urban and rural settlement areas.

Financial Implications:

Nil.

Other Department Consultations/Concurrence:

Nil.

Prepared By: Andrea Banks, Program Assistant

Approved By: Debra Arnold, Acting Commissioner, Planning, Development and Legislative Services
Church Street East Road Improvements
Town Of Elmira

What: Reconstruction of Church Street East
New curbs, sidewalks, cycling/buggy lanes

Where: 120m East of Spruce Lane to Arthur Street

Why: To repair deteriorated pavement, curbs, sidewalk and storm sewer
To replace aging watermain and sanitary sewers on behalf of the Township of Woolwich
To add new pedestrian and cycling facilities

When: Construction in 2019

Who: Region of Waterloo Project Manager
Mr. Boris Latkovic, P.Eng.
Phone: (519) 575-4457
Email: BLatkovic@regionofwaterloo.ca

Public Consultation Centre #1
Thursday, November 10, 2016
6:00 p.m. to 8:00 p.m.
St. Paul’s Lutheran Church
27 Mill Street, Elmira

We Want Your Input! There is a comment sheet at the back of this package. Please fill it out and share your comments with us.
Information Package

Church Street E. Improvements

120m East of Spruce Lane to Arthur Street

Key Plan of Project Limits

PUBLIC CONSULTATION
CENTRE LOCATION:
ST. PAUL'S LUTHERAN CHURCH
27 MILL STREET, ELMIRA

ROAD IMPROVEMENTS
REGIONAL ROAD No. 86 (CHURCH STREET EAST)
APPROX. 120m EAST OF SPRUCE LANE TO ARTHUR STREET
ELMIRA, TOWNSHIP OF WOOLWICH
1. **Why is the Region Doing This Project?**

The Region of Waterloo is currently considering improvements on Church Street East from approximately 120m east of Spruce Lane to Arthur Street in the Town of Elmira.

This project has been initiated to:

- Address the deteriorated pavement condition;
- Replace aging underground infrastructure and install new infrastructure as required, including watermains and sanitary sewers for the Township of Woolwich;
- Improve the current lane configuration to better accommodate cycling;
- Urbanize the rural part of the corridor to improve drainage and help reduce traffic speeds;
- Replace and widen existing sidewalk where required to provide snow storage space and more comfort for pedestrians; and
- Install new sidewalk where none exists today, to the east town limit.

2. **Who is Directing this Project?**

The planning for this project is being undertaken by a Project Team consisting of staff from the Region of Waterloo and the Township of Woolwich, as well as Township of Woolwich Councillors Patrick Merlihan and Scott Hahn.

3. **What is the Purpose of this Public Consultation Centre?**

The public is invited to this Public Consultation Centre (PCC) to:

- review the improvements being considered for this project;
- ask questions of staff from the Region of Waterloo and Township of Woolwich; and
- provide comments and input regarding the planning and design of the improvements being considered.

A Comment Sheet is attached to the back of this Information Package. Interested members of the public are requested to fill out this Comment Sheet and put it in the box at the Consultation Centre, or send it to the address indicated on the Comment Sheet. All comments received will be considered along with other
information received over the course of the project to assist the Project Team in completing the planning and design for this project.

4. **How is This Project Being Planned?**

This project is classified as a Schedule A+ undertaking in accordance with the Municipal Class Environmental Assessment planning process. Consequently, the preparation of a design concept for the construction of any improvements is subject to a screening process whereby potentially impacted members of the public and approval agencies have an opportunity to review and comment on the alternative solutions being considered.

The proposed schedule includes the following milestones:

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<th>Public Consultation</th>
<th>November 2016</th>
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<tr>
<td>Council Approval of Recommended Alternative, Detail Design</td>
<td>Spring 2017 to Spring 2018</td>
</tr>
<tr>
<td>Property Acquisition, Utility Relocations, Final Design and Tendering</td>
<td>Spring 2018 to Spring 2019</td>
</tr>
<tr>
<td>Construction</td>
<td>Summer to Fall 2019</td>
</tr>
</tbody>
</table>

5. **What Improvements are Being Considered?**

Based on technical studies and investigations completed, the Project Team is proposing the following improvements on Church Street East:

- Full reconstruction of the pavement structure;
- Wider pavement to accommodate bicycles and buggies;
- Replacement and upsizing of sanitary sewers, watermains and cellar drains on behalf of the Township of Woolwich;
- Replacement and upsizing of storm sewers;
- Replacement and widening of existing sidewalk from Memorial Avenue to east of Duke Street;
- Installation of 600 meters of new sidewalk on the north side of Church Street from east of Duke Street to the east project limits;
- Urbanization of the north side of Church Street from east of Duke Street to the east project limits to improve drainage and help reduce traffic speeds; and
Information Package
Church Street East Improvements
120m East of Spruce Line to Arthur Street, Elmira

- New watermain and water services to Region’s property line from George Street easterly to the Elmira Union Cemetery.

Please refer to Appendix “A” for the Project Team’s preferred cross-sections throughout the project limits.

6. How Do the Improvements Being Considered Relate to the Objectives of the Regional Transportation Master Plan, the Regional Active Transportation Master Plan and the Regional Transportation Corridor Design Guidelines?

The Region of Waterloo’s Transportation Master Plan (TMP) is a high-level strategic plan that assesses existing and future traffic patterns and volumes throughout the entire Regional road network to determine the short and long-term needs for road improvements. Church Street East provides an important transportation link within the Town of Elmira. The TMP, through its vision of sustainability, also supports measures that will improve the cycling and pedestrian networks in the project area.

The Regional Active Transportation Master Plan (ATMP) identifies Church Street East as a “Constrained Corridor” where active modes of transportation such as sidewalks and bike lanes are preferable, but can be challenging to implement due to existing road constraints, such as lack of property width or the close proximity of existing buildings, as is the case on Church Street East. As a result, the Project Team proposes a range of sidewalk treatments on this section of Church Street, with narrow hard-surfaced boulevards 0.3m in width to wider grassed boulevards where space permits. The on-road cycling lanes proposed for this project range from separate designated 1.5m cycling lanes to a narrower shared space in the lane for cars and bicycles. (See Appendix “A” for cross-sections of these various treatments.)

The Region’s Context Sensitive Transportation Corridor Design Guidelines (CDG) is a planning policy document that guides the design of Regional Roads. The CDG identifies design parameters for necessary features within road allowances such as vehicular lanes, cycling lanes, sidewalks and boulevards. According to the CDG, Church Street East is classified as a “Neighbourhood Connector- Avenue” from Arthur Street to the Canagagigue Creek Bridge, and as “Rural Village – Main Street” from the Canagagigue Creek Bridge easterly. As a fundamental part of these CDG classifications, Church Street East should be designed to support active transportation modes including walking and cycling.

The implementation of the features identified in the Active Transportation Master Plan and the Corridor Design Guidelines will enable all road users, including...
cyclists and pedestrians, an opportunity to travel without obstructions within this community and beyond.

7. **Who Will be Responsible for Winter Maintenance of the New Sidewalks?**

The Township of Woolwich is responsible for winter maintenance and the removal of snow on all sidewalks in the Town of Elmira.

8. **Is Any Private Property Required for This Project?**

The intent of the design process is to minimize the need to acquire property; however, in order to implement the proposed improvements on Church Street East, the Region will need to acquire some property from several abutting property owners.

In areas where property is required, the property owner will be contacted directly by the Region of Waterloo’s Land Purchasing Officer. Compensation will be provided at fair market rates based on recent similar area sales. The plans presented at this Consultation Centre show the proposed property acquisition that will likely be required. Please refer to Appendix “B” for further information on the property acquisition process.

9. **How Will Existing Trees, Driveways, Retaining Walls and Lawns be Affected?**

It is expected that some existing trees would have to be removed during construction to accommodate the proposed improvements. The plans presented at this Consultation Centre show trees that likely will require removal or trimming. It is the Region’s practice to plant two replacement trees for each tree removed where space permits in the road allowance. Any grassed areas disturbed during construction will be repaired to equal or better condition with topsoil and sod. In addition to replacing any trees removed on a 2-for-1 basis, new boulevard landscaping, including salt resistant trees and shrubs, will be included as part of the project where feasible. Any new landscaping typically occurs in a separately tendered landscaping contract in the year following construction. Driveways will be re-graded as necessary in order to blend smoothly with the newly constructed roadway.

Some residential/commercial properties along Church Street East may currently have hard landscaping features such as rock gardens, ornamental lights, underground sprinkler systems or similar landscape features which are currently situated on the road right-of-way rather than on private property. If your property is identified as having these types of features on the roadway right-of-way, you
will be contacted well in advance of construction and be requested to relocate these items from the right-of-way prior to construction.

10. **Will Any Heritage Resources be Impacted by this Project?**

Numerous properties within the project limits were constructed prior to 1900 and as such are considered to be potential heritage resources. Construction of the proposed improvements however will be confined to the roadway corridor and is therefore not expected to adversely impact any abutting properties.

11. **When Will Construction Occur? Will there be Detours?**

Construction on Church Street East is tentatively scheduled to occur over the 2019 construction season from May to October. The six (6) month construction duration is primarily due to underground infrastructure work required, in particular the replacement and/or addition of watermains, sanitary sewers and cellar drains on behalf of the Township of Woolwich. The Region’s Transportation Capital Program is reviewed annually and the timing of projects may change depending on several factors. The timing of this Church Street East work is being coordinated with all planned Township of Woolwich underground infrastructure work within the project limits.

In certain sections, Church Street East will require full closure to through traffic to facilitate the installation of deep underground sewer pipes and watermains. During these closures, detours will be set up along adjacent area streets and Regional roads (for larger vehicles). The construction will occur in separate stages to minimize the overall disruption to the adjacent homes, businesses, and commuters. Construction will not be allowed to start on any stage until the previous stage is re-opened to traffic. Pedestrian access will be maintained at a minimum on one side of Church Street East. Where the sidewalk is close to deep excavations, the sidewalk will be separated from the work area by temporary fencing. Signage will be erected in order to direct pedestrians through the project area.

The Woolwich Fire Department, Waterloo Regional Police and Ambulance Services will all be advised of the traffic restrictions during the construction period. Currently there is no Grand River Transit service along Church Street East and as such GRT routes will not be affected.

As is customary during Regional Road reconstruction projects, motorists will be advised of the construction timing and traffic restrictions through advance signage and through information on the Region’s website.
12. **How Will Access to Properties be Maintained During Construction?**

Access to residential/commercial driveways will be maintained to the greatest extent possible during construction. The Contractor will be required to temporarily block access to and from driveways on Church Street East and side streets for short-term periods when completing certain construction operations. Where a disruption to your driveway is expected, the Contractor is required to hand-deliver a notice at least 48 hours in advance advising you of the time and duration of the driveway disruption. If necessary, alternate parking arrangements will be made, such as provision for temporary parking on adjacent side streets.

For commercial properties, access for customers will be maintained at all times. If only one driveway access exists, the Contractor will endeavour to complete the work across the driveway in two stages where feasible in order to maintain customer access.

Property and business owners are asked to contact the site supervisor if they have any concerns in relation to access, signage or other issues during the project so it can be determined if reasonable changes or modifications can be made.

13. **Will There be Water Service Shutdowns During Construction?**

In order to make connections to the existing system, temporary water service interruptions will be required as part of this work. Water service interruptions will likely be less than half a day in duration and will likely occur between 9:00 am and 2:30 pm Monday to Friday unless other arrangements have been made. "Notices of Water Service Interruption" will be delivered to your front door a minimum of 24 hours before any required water service shutdown.

14. **Can my Existing Water and Sanitary Services be Upgraded?**

Replacement of the existing distribution watermain is being proposed within Church Street East from Memorial Avenue to Riverside Drive and from George Street to the Elmira Union Cemetery. Existing water service lateral pipes will be replaced from the main pipe to the property line at no cost to the owner. However, if property owners wish to increase the size of the water service to their property beyond the standard 19mm size (i.e. to achieve increased flow) they may choose at their own cost to have this work included during this project.

Replacement of the existing sanitary sewer and cellar drains is being proposed within Church Street East from Memorial Avenue to Riverside Drive. Existing sanitary service and cellar drain lateral pipes will be replaced from the main pipe to the property line at no cost to the owner. However, if property owners wish to
increase the size of the sanitary service to their property beyond the standard 100mm size (i.e. to achieve increased flow) they may choose at their own cost to have this work included during this project.

Undertaking these improvements in conjunction with the proposed construction typically results in cost savings to the property owner as compared to undertaking the work independently at another time in the future. Subject to a mutual agreement between the Township of Woolwich and the property owner, existing water and sanitary services may be upgraded from the mains under the road to the property line at the property owner’s expense.

If you do wish to discuss an increase in the size of your water or sanitary service, please indicate so on your comment sheet. From this information, staff will contact you at a later date to discuss your plans and any further requirements.

Additionally, property owners may wish to consider replacing the water or sanitary service on their private property (i.e. between the property line and their building) during the construction activities. Property owners can inquire to arrange this work directly with the Region’s Contractor on-site during construction but it cannot be guaranteed that the Contractor will be able to accommodate this additional work request.

15. **How Will Garbage / Recycling be Collected During Construction?**

During construction we ask that you continue to place your garbage and recycling boxes at the end of your driveway for pick-up as usual. When work is occurring in front of your home and garbage collection vehicles do not have access to your driveway, our Contractor will deliver your garbage and recyclables to an adjacent side street and return the empty containers afterwards. We ask that all residents mark their containers with their address for easy identification.

16. **How Will Dust be Managed During Construction?**

The Region will be monitoring the amount of dust generated by construction activities on a daily basis. When necessary, the Region will ensure that the contractor uses proper dust suppression measures (i.e. the application of water and/or calcium chloride) in accordance with the Region’s standard practice.

17. **What are the Expected Working Hours During Construction?**

In general, construction working hours are from 7:00 a.m. to 7:00 p.m. Monday through Friday, although the Contractor may also work on Saturdays from time to time. There may also be occasions where the Contractor is required to complete a critical work item outside of these normal working hours. Work outside normal
Information Package
Church Street East Improvements
120m East of Spruce Line to Arthur Street, Elmira

working hours must be approved by the Region, the Town of Elmira, and/or the Township of Woolwich.

18. **What is the Estimated Cost of this Project? How will it be Funded?**

The Region of Waterloo and the Township of Woolwich are funding the road improvements on this project. The estimated project cost for the Region’s share of the proposed Church Street East improvements is approximately $2,630,750. The Township’s share of the proposed Church Street East improvements is approximately $181,450 for the sanitary sewer, watermain replacement, and sidewalk east of Riverside Drive.

19. **Will the Posted Speed be Changed?**

The posted speed of 50km/h will not change.

20. **What are the Next Steps?**

Prior to finalizing the recommended design concept for the Church Street East Improvements for Regional Council’s approval, the Project Team is asking for the public’s input on the proposed improvements. This Public Consultation Centre is your opportunity to ask questions, provide suggestions, and make comments. Once your input is received, it will be used by the Project Team, in conjunction with all other relevant information, to finalize the recommended design.

21. **When Will a Final Decision be Made?**

The Project Team will review the public comments received from this evening’s Public Consultation Centre and use them as input for recommending a final Design Concept for the Church Street East improvements. The Final Recommended Design Concept will be presented to Regional Planning and Works Committee and Council in the spring of 2017 for approval. In advance of these meetings, letters will be sent to all adjacent property owners and tenants (as well as to all members of the public specifically registering at this Public Consultation Centre or with the listed contacts) so that anyone wishing to speak to Committee or Council about this project can do so before final approval.

22. **How Will I Receive Further Notification Regarding this Project?**

Adjacent property owners and members of the public registering at this Public Consultation Centre, or with the listed contacts, will receive all forthcoming public correspondence, and will be notified of any future meetings.
Information Package
Church Street East Improvements
120m East of Spruce Line to Arthur Street, Elmira

23. How Can I Provide My Comments?

In order to assist the Project Team in addressing any comments or concerns you might have regarding this project, we ask that you fill out the attached Comment Sheet and leave it in the comment box provided at the registration table. Alternatively you can mail, fax or e-mail your comments to the Project Team member listed below, no later than \textbf{November 28, 2016}.

We thank you for your involvement and should you have any questions or concerns please contact:

Mr. Boris Latkovic, P.Eng.
Project Manager
Region of Waterloo
150 Frederick Street, 6th Floor
Kitchener, ON N2G 4J3
Phone: (519) 575-4457
Fax: (519) 575-4430
Email: BLatkovic@regionofwaterloo.ca

24. How Can I View Project Information Following the PCC?

All of the PCC display materials and other relevant project information, notifications of upcoming meetings and contact information are available for viewing at the Region of Waterloo municipal office as identified above. Alternatively, you may visit the Region’s website at

\url{www.regionofwaterloo.ca/en/gettingAround/FutureConstructionProjects.asp}
Information Package
Church Street E. Improvements
120m East of Spruce Lane to Arthur Street

Appendix A

Proposed Cross – Sections of Church Street East
Information Package
Church Street East Improvements
120m East of Spruce Line to Arthur Street, Elmira

Approx. 120m East of Spruce Lane to Larry's Lane (Section A-A)

Regional Road No. 86 (Church Street East)
Approx. 120m East of Spruce Lane to Arthur Street
Elmira, Township of Woolwich
Larry's Lane to George Street (Section B-B)

Right of Way Width: 54.66m

- 4.05m (E/B & Buggy/Bike Lanes)
- 4.05m (W/B & Buggy/Bike Lanes)

**Proposed Pavement Markings**

- 1.5m ASPHALT SHOULDER
- 1.5m ASPHALT PAVEMENT
- 1.0m SCG BOULEVARD

**New Steel Beam Guardrail to Replace Existing Guardrail**

**Larry's Lane to George Street (Section B-B)**
- Two 3.35m lanes with 1.5m Buggy/Bike lanes, 1.5m Sidewalk (North Side), New Steel Beam Guardrail (South Side)

**Regional Road No. 86 (Church Street East)**
- Approx. 120m East of Spruce Lane to Arthur Street, Elmira, Township of Woolwich
George Street to 50m East of Duke Street (Section C-C)

EXISTING 0.5m CURB AND GUTTER
5.45m (E/B & BUGGY/Bike Lanes)
4.65m (W/B & BUGGY/Bike Lanes)

PROPOSED PAVEMENT MARKINGS
2.1m BUGGY/Bike Lane
3.35m TRAVEL LANE
3.35m TRAVEL LANE
1.5m BUGGY/Bike Lane

GEORGE STREET TO 50m EAST OF DUKE STREET (SECTION C-C)
- TWO 3.35m LANES WITH 1.5m (NORTH SIDE) AND 2.1m (SOUTH SIDE) BUGGY/BIKE LANES.
- 1.5m SIDEWALK ADJACENT TO 0.3m COLOURED IMPRESSED CONCRETE BOULEVARD (NORTH SIDE).

REGIONAL ROAD No. 86 (CHURCH STREET EAST)
APPROX. 120m EAST OF SPRUCE LANE TO ARTHUR STREET
ELMIRA, TOWNSHIP OF WOOLWICH
50m East of Duke Street to Riverside Drive (Section D-D)

Regional Road No. 86 (Church Street East)
Approx. 120m East of Spruce Lane to Arthur Street
Elmira, Township of Woolwich
Riverside Drive to Memorial Avenue (Section E-E)

- Two 4.2m lanes, 1.5m (varies) sidewalk adjacent to 0.3m colored impressed concrete boulevard (both sides), maintain existing hydro poles on south side, property acquisition required (north side)

REGIONAL ROAD No. 86 (CHURCH STREET EAST)
APPROX. 120m EAST OF SPRUCE LANE TO ARTHUR STREET
ELMIRA, TOWNSHIP OF WOOLWICH
Memorial Avenue to Arthur Street (Section F-F)

- Remove and replace asphalt pavement, remove and replace curbs and gutter and sidewalk as required (same locations)

Regional Road No. 86 (Church Street East)
Approx. 120m East of Spruce Lane to Arthur Street
Elmira, Township of Woolwich
Appendix B

Property Acquisition Process Information Sheet
Information Package
Church Street East Improvements
120m East of Spruce Line to Arthur Street, Elmira

The following information is provided as a general overview of the property acquisition process and is not legal advice. Further, the steps, timing and processes can vary depending on the individual circumstances of each case.

Once the Class Environmental Assessment is complete and the Environmental Study Report outlining the Recommended Design Concept has been approved, the property acquisition process and the efforts of Regional Real Estate staff will focus on preparation for acquiring the required lands to implement the approved design. Regional staff cannot make fundamental amendments or changes to the approved design concept.

**Property Impact Plans**
After the project has been approved and as it approaches final design, the project planners will generate drawings and sketches indicating what lands and interests need to be acquired from each affected property to undertake the project. These drawings are referred to as Property Impact Plans (PIP).

**Initial Owner Contact by Regional Real Estate Staff**
Once the PIPs are finalized and available, Regional Real Estate staff will retain an independent appraiser to provide preliminary valuations of the land requirements and their effect on the value of the property. As this process nears completion Real Estate staff will contact the affected property owners by telephone and mail to introduce themselves and set-up initial meetings to discuss the project, appraisals and proposed acquisitions.

**Initial Meetings**
The initial meeting is attended by the project engineer and the assigned real estate staff person to brief the owner on the project, what part of their lands are to be acquired or will be affected, what work will be undertaken, when, with what equipment, etc and to answer any questions. The primary purpose of the meeting is to listen to the owner and identify issues, concerns, effects of the proposed acquisition on remaining lands and businesses that can be feasibly mitigated and/or compensated, and how the remaining property may be restored. These discussions may require additional meetings. The goal of staff is to work with the owner to reach mutually agreeable solutions.
Goal – Fair and Equitable Settlement for All Parties
The goal is always to reach a fair and equitable agreement for both the property owner and the Region. Such an agreement will provide compensation for the fair market value of the lands and address the project impacts (such as repairing or replacing landscaping, fencing, paving) so that the property owner will receive the value of the lands acquired and the restoration of their remaining property to the condition it was prior to the Project.

The initial meetings will form the basis of an initial offer of settlement or agreement of purchase and sale for the required lands or interests.

Steps Toward Offer of Settlement or Agreement of Purchase and Sale
The general steps towards such an offer are as follows;

1) the Region will obtain an independent appraisal of the fair market value of the lands and interests to be acquired, and an appraisal of any effect on the value of the rest of the property resulting from the acquisition of the required lands and interests;
2) compensation will be estimated and/or works to minimize other effects will be defined and agreed to by the property owner and the Region;
3) reasonable costs of the owner will be included in any compensation settlement;
4) an offer with a purchase price and any other compensation or works in lieu of compensation will be submitted to the property owner for consideration; and
5) an Agreement will be finalized with any additional discussion, valuations, etc as may be required.

Depending on the amount of compensation, most agreements will require the approval of Council. The approval is undertaken in Closed Session which is not open to the public to ensure a level of confidentiality.

Expropriation
Due to the time constraints of these projects, it is the practice of the Region to commence the expropriation process in parallel with the negotiation process to insure that lands and interests are acquired in time for commencement of the Project. Typically, over 90% of all required lands and interests are acquired through the negotiation process. Even after lands and interests have been acquired through expropriation an agreement on compensation can be reached through negotiation. This is usually referred to as a 'settlement agreement'.
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.
Comment Sheet

Regional Municipality of Waterloo
Church Street East Improvements
120m East of Spruce Lane Street to Arthur Street
Town of Elmira

Public Consultation Centre

Please complete and hand in this sheet so that your views can be considered for this project. If you cannot complete your comments today, please take this home and mail, fax or e-mail your comments by November 28, 2016 to:

Mr. Boris Latkovic, P.Eng.
Project Manager
Region of Waterloo
150 Frederick Street, 6th Floor
Kitchener, ON N2G 4J3
Phone: (519) 575-4457
Fax: (519) 575-4430
Email: BLatkovic@regionofwaterloo.ca

Are you interested in upgrading your water service as part of this project?

☐ YES  ☐ NO

Are you interested in upgrading your sanitary service as part of this project?

☐ YES  ☐ NO

Comments or concerns regarding this project:

_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________
Information Package
Church Street East Improvements, 120m East of Spruce Line to Arthur Street, Elmira

Name: ________________________________________________________________
Address: ______________________________________________________________
Postal Code ___________________________________________________________
Phone: _________________________ Email: ________________________________

Collection Notice

All comments and information received from individuals, stakeholder groups and agencies regarding this project are being collected to assist the Region of Waterloo in making a decision. Under the “Municipal Act”, personal information such as name, address, telephone number, and property location that may be included in a submission becomes part of the public record.
Ottawa Street / Bleams Road Improvements

City of Kitchener / Township of Wilmot

What: Various Road Improvements to Ottawa Street / Bleams Road including new sanitary sewer, watermain, storm sewers, multi-use trails, and concrete curb and gutters.

Where: Fischer-Hallman Road to Knechtel Court (west of Trussler Road)

Why: To provide new sanitary services to proposed development, upgrade existing watermain and storm sewers, install new storm sewers, add cycling and pedestrian facilities, upgrade the road to an urban cross section, and repair deteriorated pavement.

When: Construction Spring to Fall 2018 and 2019

Who: Region of Waterloo Project Manager
Mr. Boris Latkovic, P.Eng.
Phone: (519) 575-4457
Fax: (519) 575-4430
Email: BLatkovic@regionofwaterloo.ca

Public Consultation Centre #1
Tuesday, November 22, 2016, 6:00 p.m. to 8:00 p.m.
Chartwell Westmount Retirement Home
190 David Bergey Dr, Kitchener, ON N2E 0E7

We Want Your Input! There is a comment sheet at the back of this package. Please fill it out and share your comments with us.
Key Plan of Project Limits

OTTAWA STREET / BLEAMS ROAD
(REGIONAL ROAD No. 4)
FISCHER–HALLMAN ROAD TO KNECHTEL COURT
CITY OF KITCHENER, TOWNSHIP OF WILMOT
1. **Why is the Region Undertaking this Project?**

New Residential development is scheduled to occur in the area east of Trussler Road and north of Ottawa Street in the City of Kitchener (Please refer to Key Plan). In advance of this new development, the Region of Waterloo and the City of Kitchener plan to install new sanitary sewer and watermain infrastructure under Ottawa Street to provide service to the proposed new subdivision. The roadway itself is also in need of reconstruction, so it is proposed that road improvements also occur in conjunction with the development servicing. Planned roadway improvements include an upgrade from the existing rural cross-section to an urban cross-section complete with concrete curb and gutter, storm sewers where applicable, enhanced cycling and pedestrian facilities throughout the corridor, and improvements to transit stops.

2. **Who is Directing this Project?**

The planning for these infrastructure improvements is being undertaken by a “Project Team” consisting of staff from the Region of Waterloo, MTE Consultants Inc. (the Region’s engineering consultant), City of Kitchener and Township of Wimot staff, City of Kitchener Councillor Kelly Galloway-Sealock, and Township of Wilmot Councillor Al Junker.

3. **How is the Project Being Planned?**

The Ottawa Street / Bleams Road project is classified as a Schedule A+ undertaking in accordance with the Municipal Class Environmental Assessment planning process. Consequently, the preparation of a design concept for the construction of any improvements is subject to a screening process whereby potentially impacted members of the public and approval agencies have an opportunity to review and comment on the alternative solutions being considered.

The proposed schedule includes the following milestones;

<table>
<thead>
<tr>
<th>Public Consultation</th>
<th>November 2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Council Approval of Recommended Alternative</td>
<td>Spring 2017</td>
</tr>
<tr>
<td>Utility Relocations, Final Design and Tendering</td>
<td>Spring 2017 to Spring 2018</td>
</tr>
<tr>
<td>Construction</td>
<td>Spring to Fall 2018 and 2019</td>
</tr>
</tbody>
</table>
4. **What is the Purpose of this Public Consultation Centre?**

The public is invited to this Public Consultation Centre (PCC) to:

- Review the improvements being considered for this project;
- Ask questions of staff from the Region of Waterloo, City of Kitchener and Township of Wilmot.
- Provide comments and input regarding the planning and design of the improvements being considered.

A Comment Sheet is attached to the back of this Information Package. Interested members of the public are requested to fill out this Comment Sheet and put it in the box at the Consultation Centre, or send it to the address indicated on the Comment Sheet. All comments received will be considered along with other information received over the course of the project to assist the Project Team in completing the planning and design for this project.

5. **What Improvements are being Considered on Ottawa Street?**

Based on technical studies and investigations completed, the Project Team has identified the need for the following repairs and upgrades on Ottawa Street from Fischer Hallman Road to Knechtel Court in Kitchener.

- Complete replacement of the deteriorated pavement structure.
- The addition of curb and gutter to provide an urban style road cross-section.
- Upsizing the existing 450mm diameter watermain to a 600mm diameter watermain for a length of 3.0km.
- The addition of a new 150mm diameter local watermain to provide services previously connected to the 450mm diameter watermain for a length of 300m.
- Installation of new 250mm diameter sanitary forcemain from the proposed subdivision at Trussler Road and Ottawa Street to the outlet at David Bergey Drive for a length of 1.2km.
- Installation of a new 3.0m Multi-use trail on both sides of Ottawa Street from International Place to Trussler Road for a length of 2.2km.
- Installation of a new storm sewer system in various locations along the corridor.
- Replacement of aging storm sewer system throughout the corridor as required.
• Installation of Detectable Warning Plates to facilitate barrier-free access at all sidewalk ramp and road crossing locations;

• Improvements/enhancements to existing Grand River Transit (GRT) bus stops, as well as possible new stops west of David Bergey Drive for a future route.

• The construction of left turn lanes for two existing/proposed residential developments between Prosperity Drive and Trussler Road. These lanes are requirements of the subdivision agreements for each and have been funded by the developers.

Please refer to Appendix “A” for drawings of the Project Team’s Preferred Design for Ottawa Street through the project limits.

6. How Does This Project Relate to the Objectives of the Regional Transportation Master Plan, the Regional Active Transportation Master Plan and the Regional Transportation Corridor Design Guidelines?

The Region of Waterloo’s Transportation Master Plan (TMP), is a high-level strategic plan that assesses existing and future traffic patterns and volumes throughout the entire Regional road network to determine the short and long-term needs for road improvements. Ottawa Street provides an important east-west transportation link within the City of Kitchener and a connection to the Township of Wilmot. The TMP, through its vision of sustainability, also supports measures that will improve the cycling and pedestrian networks in the project area.

The Regional Active Transportation Master Plan (ATMP) identifies Ottawa Street as a core cycling route through its entire length within the City of Kitchener. In this section of Ottawa Street there are mainly back-lotted residential properties and large developments and limited accesses. This is an ideal location to consider multi-use trails as the mode of transit for cyclists and pedestrians. The ATMP also identifies the need for continuation of sidewalks along Bleams Road.

The Context Sensitive Regional Transportation Corridor Design Guidelines (CDG) is a planning policy document that guides the design of Regional Roads. The CDG identifies design parameters for necessary features within road allowances such as vehicular lanes, cycling lanes, sidewalks and boulevards. According to the CDG, Ottawa Street is classified as a Neighborhood Connector – Avenue (NAV). As a fundamental part of this classification, Ottawa Street / Bleams Road should be designed to support active transportation modes including walking and cycling.
The implementation of the features identified in the Active Transportation Master Plan and the Corridor Design Guidelines will enable all road users, including cyclists and pedestrians, an opportunity to travel without obstructions within this community and beyond.

7. **Who will be responsible for the Winter Maintenance of New Sidewalk/Multi-Use Trails?**

Kitchener and/or Wilmot Operations staff will provide winter maintenance on any new sidewalk or multi-use trail installed as part of this project. Snow clearing on multi-use trails may not always be to the full width of the multi-use trail due to equipment limitations.

8. **Will Property Acquisition be Required for this Project?**

We do not anticipate the need to acquire property to implement the design changes along this corridor.

9. **How will Trees, Driveways and Lawns be Affected?**

It is expected that some existing trees would have to be removed during construction to accommodate the proposed improvements. It is the Region’s practice to plant two replacement trees for each tree removed as a result of any road projects. In addition to replacing any trees removed on a 2-for-1 basis, new boulevard landscaping, including salt-resistant trees and shrubs, will be included as part of the project where feasible. Any new landscaping typically occurs in a separately tendered landscaping contract in the year following construction. Any grassed areas disturbed during construction will be repaired to equal or better condition with topsoil and sod. Driveways will be re-graded as necessary in order to blend smoothly with the newly constructed roadway.

10. **How is the Natural Environment Being Considered?**

As part of the design and approvals process, the Grand River Conservation Authority (GRCA) will review our design with respect to the existing wetland features along Ottawa Street. Any activity within their Regulatory Boundary will require an Alteration to Wetland Permit. Sediment and erosion control features will be designed, implemented and maintained throughout construction. Key measures of this sediment and erosion control plan will include silt fencing, temporary sediment basins and other Best Practice measures. As noted previously, the proposed improvements will include new boulevard landscaping where feasible in order to enhance the natural environment and to provide a more appealing setting for pedestrians and other right-of-way users.

This project is near Regional groundwater supply wells and as such is within the...
Source Water Protection Zone. The Region will investigate options to protect the groundwater with measures such as clay capping boulevards to inhibit the road salt migration into the groundwater. In addition, the Region will take all measures necessary during construction work to ensure drinking water supplies are not affected.

11. **When will Construction Occur and will there be Detours?**

Construction on Ottawa Street / Bleams Road is tentatively scheduled to commence in 2018 and would occur over the 2018 and 2019 construction seasons from April through to November. The Region’s Transportation Capital Program is reviewed annually and the timing of projects may change depending on several factors. The timing of this Ottawa Street / Bleams Road work will also be coordinated with all planned GRT improvements along the corridor.

In certain sections, Ottawa Street will require full closure to through traffic to facilitate installation of deep underground sewer pipes and watermains. Detour routes around closed construction areas will be available via Bleams Road or Highway 7/8. It is tentatively proposed that construction would be accomplished in three (3) separate stages, to minimize the overall disruption to the adjacent homes and businesses and commuters. Construction would not be allowed to start on any stage until the previous stage has been open to traffic. Bleams Road will also have short duration lane and road closures as a result of this construction.

Pedestrian access will be maintained on one side of Ottawa Street for the duration of the construction. Where close to deep excavations, the pedestrian area will be separated from the work area by temporary fencing. Signage will be erected in order to direct pedestrians through the project area.

Fire Departments, Waterloo Regional Police and Ambulance Services will all be advised of the traffic restrictions during the construction period. Grand River Transit service (Route 22) will be maintained during construction through the detour route and implementation of temporary bus stop locations as required.

As is customary during Regional Road reconstruction projects, motorists will be advised of the construction timing and traffic restrictions through advance signage and through information on the Region’s web site.

12. **How will Access be maintained to Properties During Construction?**

Access to residential/commercial driveways will be maintained to the greatest extent possible during construction. The Contractor will be required to temporarily block access to and from driveways on Ottawa Street / Bleams Road as well as
side streets for short-term periods when completing certain construction operations. Where a disruption to your driveway is expected, the Contractor is required to hand-deliver a notice at least 48 hours in advance advising you of the time and duration of the driveway disruption. If necessary, alternate parking arrangements will be made, such as provision for temporary parking on adjacent side streets.

For commercial properties, access for customers will be maintained at all times. If only one driveway access exists, the Contractor will endeavour to complete the work across the driveway in two stages where feasible in order to maintain customer access.

Property and business owners are asked to contact the site supervisor if they have any concerns in relation to access, signage or other issues during the project so it can be determined if reasonable changes or modifications can be made.

13. **Will there be Water Service Shutdowns During Construction?**

In order to make connections to the existing system, temporary water service interruptions will be required as part of this work. Water service interruptions will likely be less than half a day in duration and will likely occur between 9:00 am and 2:30 pm Monday to Friday unless other arrangements have been made. "Notices of Water Service Interruption" will be delivered to your front door a minimum of 24 hours before any required water service shutdown.

14. **Can my Existing Water and Sanitary Services be Upgraded?**

Replacement of the existing distribution watermain within Ottawa Street / Bleams Road is being proposed as part of this project and water service replacements, from the main pipe to the property line, are also planned at no cost to the owner. If property owners wish to increase the size of the water service to their property beyond the standard 19mm size (i.e. to achieve increased flow) they may choose at their own cost to have this work included during this project.

This project also provides a good opportunity for property owners to upgrade their existing sanitary services. If property owners wish to increase the size of the sanitary service to their property beyond the standard 100mm size (i.e. to achieve increased flow) they may choose at their own cost to have this work included during this project.

Undertaking these improvements in conjunction with the proposed construction typically results in cost savings to the property owner as compared to undertaking the work independently at another time in the future. Subject to a
mutual agreement between the City of Kitchener, Township of Wilmot and the property owner, existing water services may be upgraded from the mains under the road to the property line at the property owner’s expense.

If you do wish to discuss an increase in the size of your water and sanitary services, please indicate so on your comment sheet. From this information, staff will contact you at a later date to discuss your plans and any further requirements.

Additionally, property owners may wish to consider replacing the water service on their private property (i.e. between the property line and their building) during the construction activities. Property owners can inquire to arrange this work directly with the Region’s Contractor on-site during construction but it cannot be guaranteed that the Contractor will be able to accommodate this additional work request.

15. How will Garbage / Recycling be Collected During Construction?

During construction we ask that you continue to place your garbage and recycling boxes at the end of your driveway for pick-up as usual. When work is occurring in front of your home and garbage collection vehicles do not have access to your driveway, our Contractor will deliver your garbage and recyclables to an adjacent side street and return the empty containers afterwards. We ask that all residents mark their containers with their address for easy identification.

16. How will dust be managed during Construction?

The Region will be monitoring the amount of dust generated by construction activities on a daily basis. When necessary, the Region will ensure that the contractor uses proper dust suppression measures (i.e. the application of water and/or calcium chloride) in accordance with the Region’s standard practice.

17. What are the Expected Working Hours During Construction?

In general, construction working hours are from 7:00 a.m. to 7:00 p.m. Monday through Friday, although the Contractor may also work on Saturdays from time to time. There may also be occasions where the Contractor is required to complete a critical work item outside of these normal working hours. Work outside normal working hours must be approved by the Region, the City of Kitchener, and/or the Township of Wilmot.

18. Will the Posted Speed Limit on Ottawa Street be Changed?

Following construction, the Region will retain the posted speed limit of 60 km/hr on Bleams Road and Ottawa Street within the limits of this project.
19. **What is the Estimated Cost of this Project and How will it be Funded?**

The Region of Waterloo and the City of Kitchener are funding the road improvements on this project. The estimated project cost for the Region's share of the proposed Ottawa Street / Bleams Road improvements is approximately $7,675,000. The City of Kitchener’s share of the proposed Ottawa Street improvements project is approximately $1,200,000 for the sanitary sewer and local watermain replacement as well as their share of the storm sewer replacements.

20. **What are the Next Steps?**

Prior to finalizing the recommended design concept for Regional Council's approval, the Project Team is asking for the public’s input on the proposed improvements. This Public Consultation Centre is your opportunity to ask questions, provide suggestions, and make comments. Once your input is received, it will be used by the Project Team, in conjunction with all other relevant information, to finalize the recommended design for the Ottawa Street / Bleams Road improvements.

21. **When will Final Decisions be made for this Project?**

The Project Team will review the public comments received from this evening's Public Consultation Centre and use them as input for recommending a final Design Concept for the Ottawa Street / Bleams Road project. This Final Recommended Design Concept will be presented to the Regional Planning and Works Committee and Council in the spring of 2017 for approval. In advance of these meetings, letters will be sent to all adjacent property owners and tenants (as well as to all members of the public specifically registering at this Public Consultation Centre or with the listed contacts) so that anyone wishing to speak to the Committee or Council about this project can do so before final approval.

22. **How will I receive further notification regarding this project?**

Adjacent property owners and members of the public registering at this Public Consultation Centre or with the listed contacts will receive all forthcoming public correspondence, and will be notified of any future meetings.

23. **How Can I Voice My Comments at this Stage?**

In order to assist the Project Team in addressing any comments or concerns you might have regarding this project, we ask that you fill out the attached Comment Sheet and leave it in the comment box provided at the registration table.
Alternatively you can mail, fax or e-mail your comments to the Project Team member listed below, no later than December 15, 2016.

We thank you for your involvement and should you have any questions or concerns please contact one of the following:

Ms. Dot Roga, C.E.T.  
Senior Project Manager  
MTE Consultants Inc.  
520 Bingemans Centre Drive  
Kitchener, ON N2B 3X9  
Phone: (519) 743-6500  
Fax: (519) 743-6513  
Email: droga@mte85.com

Mr. Boris Latkovic, P. Eng.  
Senior Project Manager  
Region of Waterloo  
150 Frederick Street, 6th Floor  
Kitchener, ON N2G 4J3  
Phone: (519) 575-4457  
Fax: (519) 575-4430  
Email: Blatkovic@regionofwaterloo.ca

24. How Can I View Project Information Following the PCC?

All of the PCC display materials and other relevant project information, notifications of upcoming meetings and contact information are available for viewing at the Region of Waterloo municipal office as identified above. Alternatively, you may visit the Region’s website at

Appendix A

Typical Cross Section

TYPICAL CROSS SECTION
MULTI-USE TRAIL OPTION
Comment Sheet

Regional Municipality Of Waterloo

Ottawa Street / Bleams Road Improvements

Fischer-Hallman Road to Knechtel Court

City of Kitchener / Township of Wilmot

Public Consultation Centre

Please complete and hand in this sheet so that your views can be considered for this project. If you cannot complete your comments today, please take this home and mail, fax or e-mail your comments by December 15th, 2016 to:

Mr. Boris Latkovic, P. Eng.
Senior Project Manager
Region of Waterloo
150 Frederick Street, 6th Floor
Kitchener, ON N2G 4J3
Phone: (519) 575-4457
Fax: (519) 575-4430
Email: Blatkovic@regionofwaterloo.ca

Are you interested in upgrading your water service as part of this project?
☐ YES ☐ NO

Are you interested in upgrading your sanitary service as part of this project?
☐ YES ☐ NO

Comments or concerns regarding this project:

_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________

Are you interested in upgrading your water service as part of this project?
☐ YES ☐ NO

Are you interested in upgrading your sanitary service as part of this project?
☐ YES ☐ NO

Comments or concerns regarding this project:
All comments and information received from individuals, stakeholder groups and agencies regarding this project are being collected to assist the Region of Waterloo in making a decision. Under the “Municipal Act”, personal information such as name, address, telephone number, and property location that may be included in a submission becomes part of the public record.
Weber Street Improvements
City of Waterloo

What: Various Road Improvements to Weber Street from Blythwood Road to Northfield Drive including storm sewers, new cycling facilities, multi-use trails, and concrete curb and gutters.

Where: Blythwood Road to Northfield Drive

Why: To rehabilitate the deteriorated road surface and storm sewers and improve cycling and pedestrian facilities.

When: Construction Spring to Fall 2019

Who: Region of Waterloo Project Manager
Mr. Dave Brown, C.E.T.
Phone: (519) 575-4757 ext. 3686
Fax: (519) 575-4430
Email: DaBrown@regionofwaterloo.ca

Public Consultation Centre #1
Tuesday, November 8th, 2016, 5:00 p.m. to 8:00 p.m.
Wing 404 Rotary Adult Centre
510 Dutton Drive, Waterloo

We Want Your Input! There is a comment sheet at the back of this package. Please fill it out and share your comments with us.
1. **What is the Purpose of this Public Consultation Centre?**

The Region of Waterloo is currently undertaking a Class Environmental Assessment (Class EA) Study to consider road improvements to Weber Street from Blythwood Road to Northfield Drive in the City of Waterloo. Please refer to Appendix ‘A’ for a Key Plan. Weber Street is a four-lane arterial roadway under the jurisdiction of the Regional Municipality of Waterloo.

The section of Weber Street between Blythwood Road and Northfield Drive is in need of improvements to address its deteriorating infrastructure, including the pavement structure, the bridge over the Waterloo Spur/ION tracks, the Cedar Creek culvert south of Albert Street and storm sewers. The purpose of this Class EA Study is to identify recommendations for improvements to Weber Street which best address its deteriorating infrastructure as well as to consider enhancements, consistent with Regional policies, practices and guidelines, that will better facilitate all modes of travel, improve the landscape/streetscape, and meet operational requirements while minimizing adverse impacts to adjacent properties and the environment. Construction of the proposed improvements to Weber Street is tentatively scheduled for 2019 and 2020 in the Region’s 10-year Transportation Capital Program.

Improvements currently under consideration include:

- Reconstruction or rehabilitation of the roadway to address the deteriorated pavement condition;
- Rehabilitation of the bridge over the Waterloo Spur/ION tracks;
- Extension and rehabilitation of the culvert carrying Cedar Creek beneath Weber Street;
- Construction of on-road cycling lanes on each side of Weber Street within the project limits;
- Construction of a new boulevard multi-use trail on the east side of Weber Street to connect to the Waterloo trail.
- Construction of new designated left-turn lanes on Weber Street at Albert Street, Dutton Drive, Parkside Drive and Glen Forrest Boulevard;
- A reduction in the number of through travel lanes on Weber Street from Parkside Drive to Albert Street to accommodate the proposed on-road cycling lanes within the existing carriageway of the bridge over the Waterloo Spur/Ion tracks;
- Enhanced Boulevard streetscaping and landscaping where space permits; and
- Upgrades to the roadway street lighting.
This Public Consultation Centre is a forum for you to:

- Become informed of the current and future traffic operational issues;
- Review the design alternatives that have been developed;
- Learn how these are being evaluated by the Project Team; understand how a preferred design alternative is being identified; and how a recommended design alternative will ultimately be established;
- Ask questions of Regional staff; and
- Provide comments on the design alternatives under consideration and indicate which alternative you prefer.

We encourage you to provide comments on the improvements under consideration and request that you fill out the Comment Sheet attached to the back of this Information Package and place it in the box at this Consultation Centre or send it to the address indicated on the Comment Sheet. Your comments will be considered by the Project Team, in conjunction with all of the other relevant information, in establishing a preferred alternative design for improvements to Weber Street from Blythwood Road to Northfield Drive.

2. **What is the Class Environmental Assessment Process?**

The Class Environmental Assessment Process is a formal planning process approved under the *Ontario Environmental Assessment Act* for the planning of municipal infrastructure projects. Under the Class EA process, consultation with the public and stakeholders is a key component. Please refer to Appendix ‘B’ for more information about the Class EA process. This planning study is being carried out in accordance with Schedule “B” requirements under the Municipal Class Environmental Assessment.

3. **Who is Directing this Class Environmental Assessment Study?**

This Class EA Study is being directed by a “Project Team” consisting of staff from the Region of Waterloo, the City of Waterloo, and City of Waterloo Councillor Angela Vieth.

4. **What Design Alternatives are Being Considered?**

Prior to this Public Consultation Centre, a series of design alternatives were developed by the Project Team to consider alternative means of addressing the needs and opportunities for this section of Weber Street.

The following four (4) design alternatives were developed and considered by the Project Team in advance of this Public Consultation Centre (The ‘Do Nothing’
Alternative is always considered in Class EA Studies to establish a baseline for comparison to other design alternatives being considered. These design alternatives provide different potential roadway configurations with respect to traffic lanes, cycling lanes and pedestrian facilities. Each design alternative, except Design Alternative 1 (Do-Nothing), also includes a number of common elements including storm sewer repairs, rehabilitation of the bridge over the Waterloo Spur/ION tracks, rehabilitation of the Cedar Creek culvert, enhanced boulevard streetscaping and landscaping where feasible and upgrades to the roadway street lighting.

**Design Alternative 1** - ‘Do Nothing’ – Reconstruct the road in its current configuration.

**Design Alternative 2** - ‘4 Lanes with Bike Lanes’ - Reconstruct Weber Street with on-road cycling lanes on each side of the roadway, new designated left-turn lanes at Albert Street, Parkside Drive, and Glen Forrest Boulevard and with a new boulevard multi-use trail on the east side of the road from Albert Street to the Waterloo Inn property.

**Design Alternative 3** - ‘2 Lanes on Bridge Deck with Bike Lanes’ - Reconstruct Weber Street with on-road cycling lanes on each side of the roadway with two (2) through lanes in each direction from Northfield Drive to Parkside Drive and from Albert Street to Blythwood Road and with one (1) through lane in each direction from Parkside Drive to Dutton Drive, and construct new designated left-turn lanes at Albert Street, Parkside Drive, Dutton Drive and Glen Forrest Boulevard, and a new boulevard multi-use trail on the east side of the road from Parkside Drive to the Waterloo Inn property.

**Design Alternative 4** - ‘3 Lanes on Bridge Deck with Bike Lanes’ - Reconstruct Weber Street with on-road cycling lanes on each side of the roadway with two (2) through lanes in each direction from Northfield Drive to Parkside Drive and from Albert Street to Blythwood Road and with 2 northbound through lanes and 1 southbound through lane from Parkside Drive to
In developing the various design alternatives, the Project Team also considered alternatives that included on-road cycle tracks (segregated cycling lanes) in lieu of on-road cycling lanes. The Project Team screened out alternatives including cycle tracks for this project for the following reasons:

- On-road cycle tracks would require more space to implement than on-road cycling lanes, resulting in additional property and utility impacts on some sections of Weber Street, as well as a higher capital cost;
- On-road cycling lanes on Weber Street would tie-into existing or proposed on-road cycling lanes north and south of the project limits;
- The Region’s Active Transportation Master Plan (ATMP) recommends on-road cycling lanes for this section of Weber Street; and
- The design alternatives under consideration include varying extents of boulevard multi-use trail which provide an off-road option for cyclists.

Please refer to Appendix ‘C’ for drawings of each of the design alternatives.

5. How are the Design Alternatives Being Evaluated?

The following criteria are being used by the Project Team to evaluate the design alternatives:

Transportation/Traffic: How does the alternative affect traffic capacity, traffic operations and access to abutting properties? How does the alternative facilitate cycling and pedestrian travel?

Natural Environment: How does the alternative affect the natural environments, including trees, watercourses, wildlife and air quality?

Social Economic Environment: How does the alternative affect abutting properties?

Environment: How does the design alternative provide for enhanced landscape and/or streetscape opportunities?
Technical: How does the design alternative affect winter snow clearing operations? What is the extent of impacts on existing municipal services and/or utilities for the alternative? What is the total cost of the alternative including the cost for road construction, utility and street lighting, property acquisitions, intersection improvements and landscaping?

Each design alternative has been preliminarily evaluated by the Project Team using the aforementioned criteria. Note that all design alternatives remain under consideration and are being presented for public comment at this Public Consultation Centre. Upon receiving input from the public and technical agencies, the Project Team will re-assess the design alternatives before confirming the Project Team’s Recommended Design Alternative for approval by Regional Council. Please refer to Appendix ‘D’ for the Evaluation of Alternative Design Concepts.

6. Which Design Alternative is Preferred by the Project Team?

Prior to this Public Consultation Centre, the Project Team has identified Design Alternative No. 4 as its Preferred Design Alternative. The Project Team assessed that Design Alternative 4 provides the following advantages:

- Improved traffic operations at intersections via the addition of new designated left-turn lanes at Albert Street, Dutton Drive, Parkside Drive and Glen Forrest Boulevard. The removal of one through lane in the southbound direction Albert Street to Parkside Drive under Design Alternative 4 does not appreciably affect traffic capacity or travel times on Weber Street;

- Improved traffic operations compared to Design Alternative 3 through the provision of two northbound through lanes from Albert Street to Parkside Drive since northbound through traffic does not have to yield to slower moving vehicles (heavy trucks accelerating up hill) entering Weber Street from Dutton Drive;

- No change in access to abutting properties;

- Sidewalks and on-road cycling lanes can be constructed on each side of the roadway without widening the bridge across the Waterloo Spur/Ion Track as is required under Design Alternative 2;

- A new multi-use trail connection is provided between Albert Street and the Waterloo Inn Property;
- Fully aligns with the Region’s Active Transportation Master Plan (ATMP); and
- Fully Aligns with the Region’s Pedestrian Charter through the provision of sidewalks or multi-use trail on each side of Weber Street.

7. **How Does this Project Relate to the Objectives of the Regional Official Plan, the Regional Transportation Master Plan and the Regional Transportation Context Sensitive Corridor Design Guidelines?**

The Project Team is planning road improvements within the project limits to address the deteriorated roadway condition as well as to include enhancements to the roadway corridor consistent with Regional Bylaws, policies, plans and practices. The Regional Official Plan gives the direction to balance new and retrofitted roads for all modes of transportation including walking, cycling, automobiles and transit.

The Regional Active Transportation Master Plan (ATMP) identifies Weber Street as a core cycling route north and south within the City of Waterloo. In this section of Weber Street there are mainly back-lotted residential properties and limited accesses. The ATMP recommends on-road cycling lanes for this section of Weber Street.

The Context Sensitive Regional Transportation Corridor Design Guidelines (CDG) is a planning policy document that guides the design of Regional Roads. The CDG identifies design parameters for necessary features within road allowances such as vehicular lanes, cycling lanes, sidewalks and boulevards. According to the CDG, Weber Street is classified as a Neighborhood Connector – Avenue (NAV). As a fundamental part of this classification, Weber Street should be designed to support active transportation modes including walking and cycling.

The implementation of the features identified in the Active Transportation Master Plan and the Corridor Design Guidelines will enable all road users, including cyclists and pedestrians, an opportunity to travel without obstructions within this community and beyond.

This project supports the Regional Transportation Master Plan (RTMP) goals of optimizing our transportation system, promoting transportation choice and supporting sustainable development.

The design alternatives developed for the proposed improvements to Weber Street include measures to improve transportation operations and to enhance...
pedestrian and cycling facilities through the addition of new on-road cycling lanes, multi-use trails and wider sidewalks.

8. **How will the Proposed Improvements Enhance the Pedestrian Environment on this Project?**

The improvements proposed under Design Alternative 4 enhance the pedestrian environment through the following means:

- Where feasible, sidewalks will be made wider than their current 1.50 metres width;
- Raised tactile domes will be provided at all intersection sidewalk ramps to assist visually impaired pedestrians;
- A new 3.0 metre wide asphalt multi-use trail is proposed along the east side boulevard of Weber Street from Albert Street to the Waterloo Inn property, completing the connection of the Waterloop trail on the east and west sides of Weber Street;
- Enhanced boulevard streetscaping and landscaping will be provided where feasible; and
- Street lighting will be upgraded to provide lighting on both sides of the roadway.

9. **Who is Responsible for Clearing Snow from Sidewalks and Multi-Use Trails on Weber Street?**

The City of Waterloo will continue to remove all snow from sidewalks along Weber Street adjacent to Sugar Bush Park (west side of Weber Street between Albert Street and Blythwood Road) and between Albert Street and Parkside Drive. The City will also remove snow from the new boulevard asphalt multi-use trail proposed under Design Alternative 4 if implemented.

Snow removal from the sidewalk in all other areas will continue to be the responsibility of the adjacent property owners including areas where sidewalk did not exist prior to construction (east side of Weber Street between Belcan Place and Blythwood Road).

10. **Will Property be Required from Abutting Property Owners?**

Implementation of the Project Team’s Preferred Design Alternative No. 4 would require that the Region acquire property from a small number of abutting property owners. These property purchases generally consist of small 'strips' or 'parcels'
of land immediately adjacent to the existing roadway right-of-way and at intersections to provide room for proposed additional left-turn lanes. In areas where property is required, the property owner will be contacted directly by the Region of Waterloo’s Land Property Agent. Compensation will be provided at fair market rates based on recent similar area sales.

Please refer to Appendix ‘F’ for the list of potentially impacted property locations.

11. **Will the Improvements Impact Heritage Features?**

Heritage resources, including buildings, can be designated or listed under the Ontario Heritage Act. The Project Team has not identified any Heritage Features adjacent to Weber Street within the project limits. Construction of the proposed improvements will be confined to the roadway corridor and is therefore not expected to adversely impact any abutting properties.

12. **Will the Improvements Impact Natural Environment Features?**

The two most significant environmental features within the project limits are Cedar Creek and the City of Waterloo’s Sugar Bush Park. The culvert that allows the Cedar Creek to pass underneath Weber Street will be extended and/or replaced under most design alternatives. As part of the design and approvals process, the Grand River Conservation Authority (GRCA) will review our plans and ensure that the work on the culvert minimizes the potential impact to the Cedar Creek.

Construction will be confined to the Region’s road allowance and therefore is not expected to impact the City of Waterloo’s Sugar Bush Park in any way.

13. **How will Private Property, Trees, Driveways and Lawns be Affected?**

Construction will be confined to the Region’s road allowance (following the Region’s acquisition of property from abutting owners as described above). Disturbed driveways, lawns and boulevard areas will be fully restored to preconstruction conditions or better. Driveways will be regraded as necessary to blend smoothly with the reconstructed roadway.

Construction will require the removal of approximately 25 trees within the road allowance. These trees require removal for various reasons including conflicts with new sidewalks (509 – 517 Weber Street), conflicts with new road alignment (500 – 510 Weber Street) and conflicts with new grading to permit left turn lanes.
(576 and 564 Weber Street). New boulevard trees will be replaced as described in Section 15 of this Information Package.

14. **Will the Posted Speed Limit be Changed or Parking Restrictions be Implemented?**

Weber Street is currently posted at 60 km/hr from Blythwood Road to Northfield Drive. No change to the posted speed limit is proposed. Parking is currently prohibited on this section of Weber Street and no changes are proposed.

15. **Will New Landscaping be Provided?**

As part of this project, the Project Team is proposing that new trees be planted in boulevard areas along Weber Street where space permits. Additionally, where boulevard room is limited at intersections, the use of enhanced hard surface features, such as coloured impressed concrete, will be considered in order to improve the aesthetics of the roadway corridor.

16. **When will Construction Occur and how will Construction Staging and Traffic be Managed?**

Subject to completion of this Class EA Study and receipt of all technical and financial approvals and acquisition of any required property, construction is tentatively scheduled for 2019 and 2020 in the Region’s Ten-Year Transportation Capital Program. The timing of construction will be confirmed upon completion of this Class EA Study and through future annual updates to the Region’s 10-year Transportation Capital Program.

It is anticipated that two-way traffic on Weber Street will be maintained at most times during construction although it may be necessary to reduce the road to a single lane with flagging operations for short periods. During paving and waterproofing operations on the bridge deck, it may be necessary to fully close the road for approximately one (1) week, in which case the Region will provide a signed detour route.

Temporary fencing will be erected to separate pedestrians from the construction zone. Grand River Transit Service will be maintained during construction through the implementation of temporary transit stop locations as required.

Signage will be erected during construction in order to direct pedestrians through the construction area.
As is customary through Regional Road construction zones, the public will be advised of the construction timing and traffic restrictions through advance signage, the Region’s website, and radio and newspaper notices.

17. **How will Access be Maintained to Properties during Construction?**

Access for pedestrians will be maintained at all times. Vehicular access will be maintained to the greatest extent possible during construction. Commercial deliveries and pick-ups will be coordinated with the Contractor during construction to minimize disruption in service. If two driveways exist, the Contractor will close one driveway at a time to maintain access to the property. If only one driveway access exists, the Contractor will complete the work across the driveway in two stages where feasible in order to maintain access. Some commercial businesses have access to their parking lots from adjoining streets which will help to minimize parking access inconveniences. For commercial properties within the work zone, additional signage will be provided during construction to direct customers to their businesses.

Where a disruption to the driveway is expected, the Contractor is required to hand-deliver a notice at least 48 hours in advance advising you of the time and duration of the driveway disruption. If necessary, alternate parking arrangements will be made, such as provision for temporary parking.

Special attention will also be given to ensure access is maintained for emergency vehicles during and after construction hours.

All abutting property owners will receive a notice in advance of construction with more details pertaining to the construction and with contact information for the Region, the contractor and site personnel.

18. **What is the estimated Cost of this Project?**

The preliminary estimated Region’s share of the Project Team’s Preferred Design Alternative No. 4 is $6.4 Million.

19. **How will this Project Be Funded?**

Funding of $5.19 Million for the proposed road improvements on Weber Street is included in the years 2016 – 2020 of the Region’s approved 2016 Ten-Year Transportation Capital Program (TCP). The source of the project funding is the Region’s Roads Rehabilitation Reserve Fund and the Development Charge
Reserve Fund. The TCP will be adjusted following the selection of the Recommended Design Alternative.

The Project Team is proposing the construction of a new asphalt multi-use trail on the east side of Weber Street from Albert Street to the Waterloo Inn property under the Preferred Design Alternative. Since the cost to construct the new asphalt boulevard multi-use trail is approximately the same as the cost to construct new sidewalk in this location, the Region will be funding the full cost to construct the multi-use trail.

The City of Waterloo is responsible for the cost of replacing any damaged sidewalk section that will not be disturbed by the road reconstruction as well as some cost sharing for the replacement of the storm sewers in accordance with Region policy.

20. **What is the next Step in Choosing a Recommended Design Alternative?**

Prior to making a final decision on the Preferred Design Alternative, the Project Team is asking for the public’s input. This Public Consultation Centre is your opportunity to ask questions, provide suggestions, and indicate which design alternative you prefer. Any public input received by the Region will be given careful consideration and will be documented as part of the Class EA Process.

We will advise all those who attended the Public Consultation Centre as well as adjacent property owners and tenants of future opportunities to comment on this project.

Once your input is received, it will be used by the Project Team, in conjunction with the other relevant information, to re-assess the design alternatives and establish a Recommended Design Alternative for this project.

21. **When will a Final Decision be made for This Project?**

The Project Team intends to review the public comments received from today’s Public Consultation Centre and use them as input for developing a Recommended Design Alternative for this project. The Recommended Design Alternative will be presented to the Region’s Planning and Works Committee for their endorsement in early 2017. At this meeting, members of the public will be given another opportunity to provide comments on this project. Pending Committee endorsement, final approval of the Recommended Design Alternative
for this project will be considered by Regional Council, which will make the final
decision regarding the proposed improvements.

When Regional Council has made its decision as to which design alternative will
be constructed for this project, the Project File will be filed on the public record
for a period of thirty (30) days. At that time, anyone with unresolved concerns
about the Recommended Design Alternative is encouraged to contact the Region
to discuss their concerns. If the concerns cannot be addressed, they would have
thirty (30) days, after the notice of filing of the Project File is advertised, to make
an order for the project to comply with Part II of the Environmental Assessment
Act. Such requests must be received, in writing by the Ontario Minister of
Environment, with a copy sent to the Region’s Commissioner of Transportation
and Environmental Services. If there are no Part II Order requests received in the
30-day period, the Recommended Design Alternative can proceed to design and
construction in accordance with the concepts prescribed in the Project File.

22. How will I Receive Further Notification Regarding this Project?

Adjacent property owners and tenants, as well as members of the public
registering at this Public Consultation Centre, will receive further information and
will be notified of future meetings via mail and/or hand delivered notices.

23. How can I Voice my Comments at this Stage?

In order to assist us in addressing any comments or concerns you might have
regarding this project, we ask that you please fill out the attached Comment
Sheet and leave it in the box provided at the registration table. Alternatively, you
can mail, fax or email your comments to the Region of Waterloo, not later than
December 16th, 2016.

We thank you for your involvement and should you have any questions, please
contact:

Mr. Dave Brown, C.E.T.  Mr. Garry Leveck, P.Eng.
Project Manager  Project Manager
Region of Waterloo  Stantec Consulting Ltd.
150 Frederick Street, 6th Floor  100-300 Hagey Boulevard
Kitchener, ON N2G 4J3  Waterloo, ON N2L 0A4
Telephone: (519) 575-4757 x3686  Telephone: (519) 585-7316
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Email: DaBrown@regionofwaterloo.ca  Email: Garry.Leveck@stantec.com
24. **How can I view project information following the PCC?**

All of the PCC display materials and other relevant project information, notifications of upcoming meetings and contact information are available for viewing at the Region of Waterloo municipal office as identified above. Alternatively, you may visit the Region’s website at: [http://www.regionofwaterloo.ca/en/gettingAround/FutureConstructionProjects.asp](http://www.regionofwaterloo.ca/en/gettingAround/FutureConstructionProjects.asp)
Appendix A

Key Plan Map
Municipal Class Environmental Assessment Process

Ontario Environmental Assessment Act

The purpose of the Ontario Environmental Assessment Act (EA Act) is to provide for “the betterment of the people of the whole or any part of Ontario by providing for the protection, conservation and wise management of the environment in Ontario”. Environment is applied broadly and includes the natural, social, cultural, built and economic components.

The key principles of successful environmental assessment planning include:

- Consultation with stakeholders and affected members of the public;
- Consideration of a reasonable range of alternatives;
- Assessment of the environmental impacts for each alternative;
- Systematic evaluation of alternatives; and
- Clear documentation of the process followed.

Municipal Class Environmental Assessment (EA)

The Municipal Class Environmental Assessment (EA) is a planning process approved under the Environmental Assessment Act that is used by municipalities to plan infrastructure enhancement projects while satisfying the requirements of the Environmental Assessment Act. Under the Class EA process, projects are planned in one of three ways depending on their scope, complexity, and potential for adverse environmental impacts.

Schedule “A” - Includes routine maintenance, operation and emergency activities.

- The Municipality can proceed with this work without further approval or public consultation.

Schedule “B” - Includes projects with the potential for some adverse environmental effects.

- These projects are subject to a screening process that includes consultation with directly affected public and agencies.

Schedule “C” - Includes larger, more complex projects with the potential for significant environmental affects.

- These projects are subject to all phases of the Class EA and require a minimum of 3 points of public contact.
Public Involvement

Members of the public that have a stake in the project are encouraged to provide comment throughout the Class EA process. For Schedule “C” projects there are a minimum of three (3) opportunities for public contact. These typically include two Public Information Centers and the Notice of Study Completion.
Class EA Process for Schedule “B” or “C” Projects

Change in Project Status – Appeal Provision

It is recommended that all stakeholders (including the proponent, public and review agencies) work together to determine the preferred means of addressing a problem or opportunity. If you have any concerns, you should discuss them with the proponent and try to resolve them. In the event that there are major issues which cannot be resolved, you may request the Minister of the Environment by order to require a proponent to comply with Part II of the EA Act before proceeding with a proposed undertaking which has been subject to Class EA requirements. This is called a “Part II Order”. This Minister will make one of the following decisions:

1. Deny the request (with or without conditions);
2. Refer the matter to mediation; or
3. Require the proponent to comply with Part II of the EA Act, ordering a full Environmental Assessment.

All stakeholders are urged to try to resolve issues since it is preferable for them to be resolved by the municipality in which a project is located, rather than at the provincial level.

To request a Part II order, a person must send a written request to:

Minister of the Environment
135 St. Clair Avenue West
12th Floor
Toronto, ON M4V 1P5

The request must address the following with respect to the identified concerns:

- Environmental impacts and specific concerns;
- Adequacy of the planning and public consultation process;
- Involvement of the person in the planning process; and
- Details of discussions held between the person and the proponent.
Information Package
Weber Street Improvements
Blythwood Road to Northfield Drive

[Diagram of the phase planning process for Weber Street Improvements, detailing steps from identifying the problem or opportunity to implementing the preferred solution, including phases for alternative solutions, design concepts, environmental study reports, and implementation.

Appendix C

Drawing of Design Alternative No. 1 “Do Nothing”

WEBER ST - PARKSIDE DR TO NORTHERD DR
AND ALBERT ST TO BLYTHWOOD RD
TYPICAL CROSS SECTION

WEBER ST - ALBERT ST TO PARKSIDE DR
(BRIDGE DECK) TYPICAL CROSS SECTION
Appendix C

Drawing of Design Alternative No. 2 "4 Lanes with Bike Lanes"

WEBER ST - PARKSIDE DR TO NORTHFIELD DR
AND ALBERT ST TO BLYTHWOOD RD
TYPICAL CROSS SECTION

WEBER ST - ALBERT ST TO PARKSIDE DR
(BRIDGE DECK) TYPICAL CROSS SECTION

EXISTING HYDRO POLES
AND MOUNTED STREETLIGTING
0.5m WIDE CURB AND GUTTER

NEW TREES WHERE SPACE PERMITS

3.0m MULTI-USE TRAIL BETWEEN ALBERT ST AND WATERLOO INN PROPERTY

0.5m WIDE CURB AND GUTTER

STREETLIGHTS ON BOTH SIDES EXCEPT ACROSS BRIDGE DECK

STREET LIGHT
Appendix C

Drawing of Design Alternative No. 3 “2 Lanes on Bridge Deck with Bike Lanes”

WEBER ST - PARKSIDE DR TO NORTHFIELD DR
AND ALBERT ST TO BLYTHWOOD RD
TYPICAL CROSS SECTION

WEBER ST - ALBERT ST TO PARKSIDE DR
(BRIDGE DECK) TYPICAL CROSS SECTION
Appendix C

Drawing of Design Alternative No. 4 “3 Lanes on Bridge Deck with Bike Lanes”
## Appendix D – Preliminary Evaluation of Alternative Designs

### WEBER STREET CLASS ENVIRONMENTAL ASSESSMENT: Blythwood Road to Northfield Drive

#### Alternative Design Concepts Evaluation Matrix

<table>
<thead>
<tr>
<th>STUDY ELEMENT</th>
<th>CRITERIA</th>
<th>DESIGN ALTERNATIVE 1: DO NOTHING</th>
<th>DESIGN ALTERNATIVE 2:</th>
<th>DESIGN ALTERNATIVE 3:</th>
<th>DESIGN ALTERNATIVE 4:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Reconstruct Weber Street in its current configuration.</td>
<td>Reconstruct Weber Street with on-road cycling lanes on each side of the roadway, new designated left-turn lanes at Albert Street, Parkside Drive, and Glen Forest Road, and a new boulevard multi-use trail on the east side of the road from Albert Street to the Waterloo Inn property. No sidewalks on the west side of the road from Albert Street to Parkside Drive.</td>
<td>Reconstruct Weber Street with on-road cycling lanes on each side of the roadway with two (2) through lanes in each direction from Northfield Drive to Parkside Drive and from Albert Street to Blythwood Road and with one (1) through lane in each direction from Parkside Drive to Albert Street. and construct new designated left-turn lanes at Albert Street, Parkside Drive, Durton Drive, and Glen Forest Road, and a new boulevard multi-use trail on the east side of road from Parkside Drive to the Waterloo Inn property.</td>
<td>Reconstruct Weber Street with on-road cycling lanes on each side of the roadway with two (2) through lanes in each direction from Northfield Drive to Parkside Drive and from Albert Street to Blythwood Road and with one (1) through lane in each direction from Parkside Drive to Albert Street. and construct new designated left-turn lanes at Albert Street, Parkside Drive, Durton Drive, and Glen Forest Road, and a new boulevard multi-use trail on the east side of road from Albert Street to the Waterloo Inn property.</td>
</tr>
<tr>
<td>Problem Statement</td>
<td>The section of Weber Street, between Blythwood Road and Northfield Drive, is in need of improvements to address its deteriorating infrastructure, including the pavement structure, the bridge over the Waterloo Spur/IQN tracks, the Cedar Creek culvert south of Albert Street, and Storm sewers. The purpose of this Class EA Study is to identify recommendations for improvements to Weber Street which best address its deteriorating infrastructure as well as to consider enhancements, consistent with Regional policies, practices and guidelines, that will better facilitate all modes of travel, improve the landscape/visual scope, and meet operational requirements while minimizing adverse impacts to adjacent properties and the environment.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1) Transportation/Traffic</td>
<td>Traffic Capacity, Operations and Access to Abutting Properties</td>
<td>How does the alternative affect traffic capacity, traffic operations and access to abutting properties?</td>
<td>No change in traffic capacity, traffic operations or access to abutting properties.</td>
<td>Improved traffic operations at intersections via the addition of new designated left-turn lanes. Except at Durton Drive where no left-turn lane is provided.</td>
<td>Improved traffic operations at intersections via the addition of new designated left-turn lanes. The removal of one through lane in each direction from Albert Street to Parkside Drive does not appreciably affect traffic capacity or vehicular travel times.</td>
</tr>
<tr>
<td></td>
<td>Cycling and Pedestrian Needs</td>
<td>How does the alternative facilitate cycling and pedestrian travel?</td>
<td>Does not improve cycling or pedestrian facilities.</td>
<td>Provides improved cycling facilities via the addition of on-road cycling lanes.</td>
<td>Provides improved cycling facilities via the addition of on-road cycling lanes.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Since the existing bridge on Weber Street over the Region's IQN rail tracks is impractical and extremely costly to widen, the sidewalk on the west side of Weber Street from Parkside Drive to Albert Street would be eliminated under this Design Alternative to accommodate the new on-road cycling lanes.</td>
<td>The reduction of 1 through lane from Parkside Drive to Albert Street allows for wider sidewalks to be constructed under this Design Alternative.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Provides a Multi-Use Trail connection between Albert Street and the Waterloo Trail as well as a Multi-Use Trail on the east side of Weber Street, from Albert Street to Parkside Drive. Multi entrances off-road cycling.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Fully aligns with the Region's Active Transportation Master Plan and Pedestrian Charter.</td>
</tr>
</tbody>
</table>
## Appendix D - Preliminary Evaluation of Alternative Designs

### WEIDER STREET CLASS ENVIRONMENTAL ASSESSMENT: Blythwood Road to Northfield Drive

### Alternative Design Concepts Evaluation Matrix

<table>
<thead>
<tr>
<th>STUDY ELEMENT</th>
<th>CRITERIA</th>
<th>DESIGN ALTERNATIVE 1: DO NOTHING</th>
<th>DESIGN ALTERNATIVE 2: Reconstruct Weber Street with on-road cycling lanes on each side of the roadway, new designated left-turn lanes at Albert Street, Parkside Drive, and Glen Forest Road, and with a new boulevard multi-use trail on the east side of the road from Albert Street to the Waterloo Inn property. No sidewalk on the west side of the road from Albert Street to Parkside Drive.</th>
<th>DESIGN ALTERNATIVE 3: Reconstruct Weber Street with on-road cycling lanes on each side of the roadway with two (2) through lanes in each direction from Northfield Drive to Parkside Drive and from Albert Street to and Blythwood Road and with one (1) through lane in each direction from Parkside Drive to Albert Street, and construct new designated left-turn lanes at Albert Street, Parkside Drive, Dutton Drive, and Glen Forest Road, and a new boulevard multi-use trail on the east side of the road from Parkside Drive to the Waterloo Inn property.</th>
<th>DESIGN ALTERNATIVE 4: Reconstruct Weber Street with on-road cycling lanes on each side of the roadway with two (2) through lanes in each direction from Northfield Drive to Parkside Drive and from Albert Street to and Blythwood Road and with 2 northbound through lanes and 1 southbound through lane from Albert Street to Parkside Drive and construct new designated left-turn lanes at Albert Street, Parkside Drive, Dutton Drive, and Glen Forest Road, and a new boulevard multi-use trail on the east side of road from Albert Street to the Waterloo Inn property.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2) Natural Environment</td>
<td>How does the design alternative affect the natural environment, including trees, watercourses, wildlife and air quality?</td>
<td>No change</td>
<td>Requires the removal of 18 stand-alone trees between Parkside and Northfield as well as 11 Cedar Creek.</td>
<td>Requires the removal of 25 stand-alone trees between Parkside and Northfield as well as 9 Cedar Creek.</td>
<td>Requires the removal of 25 stand-alone trees between Parkside and Northfield as well as 9 Cedar Creek.</td>
</tr>
<tr>
<td>3) Social Environment</td>
<td>How does the design alternative affect abutting properties? How does the design alternative provide for enhanced landscape and/or streetscape opportunities?</td>
<td>No impacts to private property. Limited opportunity for enhanced landscape/streetscape features.</td>
<td>Property is required from 11 abutting property owners to accommodate the on-road cycling facilities and new designated left-turn lanes. (Total area of property purchase is 1,487.8 m²).</td>
<td>Property is required from 10 abutting property owners. (Total area of property purchase is 1,487.8 m²).</td>
<td>Property is required from 10 abutting property owners. (Total area of property purchase is 1,487.8 m²).</td>
</tr>
<tr>
<td>4) Technical</td>
<td>Winter Operations</td>
<td>No change.</td>
<td>The addition of on-road cycling lanes and new designated left-turn lanes, reduces available space for snow storage.</td>
<td>Wider boulevards provide more space for snow storage.</td>
<td>Wider boulevards provide more space for snow storage.</td>
</tr>
<tr>
<td></td>
<td>Municipal Services and Utilities</td>
<td>What is the extent of impacts on existing municipal services and/or utilities for the alternative?</td>
<td>Minor impacts to municipal services and/or utilities.</td>
<td>Significant impacts to municipal services and/or utilities.</td>
<td>Moderate impacts to municipal services and/or utilities.</td>
</tr>
</tbody>
</table>
## Appendix D – Preliminary Evaluation of Alternative Designs

### WEBER STREET CLASS ENVIRONMENTAL ASSESSMENT: Blythwood Road to Northfield Drive

#### Alternative Design Concepts Evaluation Matrix

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<th>DESIGN ALTERNATIVE 3:</th>
<th>DESIGN ALTERNATIVE 4:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Reconstruct Weber Street with on-road cycling lanes on each side of the roadway, new designated left-turn lanes at Albert Street, Parkside Drive, and Glen Forest Road, and, with a new boulevard multi-use trail on the east side of the road from Albert Street to the Waterloo Inn property. No sidewalk on the west side of the road from Albert Street to Parkside Drive.</td>
<td>Reconstruct Weber Street with on-road cycling lanes on each side of the roadway with two (2) through lanes in each direction from Northfield Drive to Parkside Drive and from Albert Street to and Blythwood Road and with one (1) through lane in each direction from Parkside Drive to Albert Street, and construct new designated left-turn lanes at Albert Street, Parkside Drive, Dutton Drive and Glen Forest Road, and a new boulevard multi-use trail on the east side of road from Parkside Drive to the Waterloo Inn property.</td>
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</tr>
</tbody>
</table>

#### Estimated Construction costs

- **Preliminary Construction Estimate:**
  - Construction Base Cost (Including Property)
  - Contingencies (15%)
  - Utility Relocations

<table>
<thead>
<tr>
<th>DESIGN ALTERNATIVE 1: DO NOTHING</th>
<th>DESIGN ALTERNATIVE 2:</th>
<th>DESIGN ALTERNATIVE 3:</th>
<th>DESIGN ALTERNATIVE 4:</th>
</tr>
</thead>
<tbody>
<tr>
<td>$5,100,000</td>
<td>$6,600,000</td>
<td>$6,500,000</td>
<td>$6,500,000</td>
</tr>
</tbody>
</table>

#### Overall Ranking of Alternative Design Concepts

- Preferred
- Not Preferred
- TBC
Appendix F

List of Potentially Impacted Property Locations
Potentially Impacted Properties for Design Alternative No. 4

<table>
<thead>
<tr>
<th>ADDRESS</th>
<th>PIN</th>
<th>REQUIRED PROPERTY AREA (m²)</th>
<th>PURPOSE FOR ACQUISITION</th>
</tr>
</thead>
<tbody>
<tr>
<td>576 AND 564 WEBER ST</td>
<td>222800015</td>
<td>538.1</td>
<td>ROAD WIDENING</td>
</tr>
<tr>
<td>560 WEBER ST</td>
<td>222800016</td>
<td>283.1</td>
<td>ROAD WIDENING</td>
</tr>
<tr>
<td>550 WEBER ST</td>
<td>222800024</td>
<td>24.4</td>
<td>DAYLIGHTING TRIANGLE</td>
</tr>
<tr>
<td>510 WEBER ST</td>
<td>222800029</td>
<td>96.8</td>
<td>ROAD WIDENING, DAYLIGHTING TRIANGLE</td>
</tr>
<tr>
<td>500 WEBER ST</td>
<td>222800149</td>
<td>252.3</td>
<td>ROAD WIDENING</td>
</tr>
<tr>
<td>496 WEBER ST</td>
<td>222800036</td>
<td>4.3</td>
<td>ROAD WIDENING</td>
</tr>
<tr>
<td>725 GLEN FORREST BLVD</td>
<td>222640277</td>
<td>35.9</td>
<td>DAYLIGHTING TRIANGLE</td>
</tr>
<tr>
<td>509 WEBER ST</td>
<td>230830000</td>
<td>100.1</td>
<td>ROAD WIDENING, DAYLIGHTING TRIANGLE</td>
</tr>
<tr>
<td>499-507 WEBER ST</td>
<td>222730005</td>
<td>27.9</td>
<td>DAYLIGHTING TRIANGLE</td>
</tr>
<tr>
<td>66 BLYTHWOOD DR</td>
<td>222730186</td>
<td>28.1</td>
<td>DAYLIGHTING TRIANGLE</td>
</tr>
</tbody>
</table>

TOTAL PROPERTY ACQUISITION 1391.0

PROPERTIES IMPACTED 10
Appendix G

Property Acquisition Process Information Sheet

The following information is provided as a general overview of the property acquisition process and is not legal advice. Further, the steps, timing and processes can vary depending on the individual circumstances of each case.

Once the Recommended Design Concept has been approved and final design is near completion, the property acquisition process and the efforts of Regional Real Estate staff will focus on acquiring the required lands to implement the approved design. Regional staff cannot make fundamental amendments or changes to the approved design concept.

**Property Impact Plans**

After the project has been approved and as it approaches completion of final design, the project planners will generate drawings and sketches indicating what lands and interests need to be acquired from each affected property to undertake the project. These drawings are referred to as Property Impact Plans (PIP).

**Initial Owner Contact by Regional Real Estate Staff**

Once the PIPs are available, Regional Real Estate staff will contact the affected property owners by telephone and mail to introduce themselves and set-up initial meetings to discuss the project and proposed acquisitions.

**Initial Meetings**

The initial meeting is attended by the project engineer and the assigned real estate staff person to brief the owner on the project, what part of their lands are to be acquired or will be affected, what work will be undertaken, when, with what equipment, etc. and to answer any questions. The primary purpose of the meeting is to listen to the owner and identify issues, concerns, effects of the proposed acquisition on remaining lands and businesses that can be feasibly mitigated and/or compensated, and how the remaining property may be restored. These discussions may require additional meetings. The goal of staff is to work with the owner to reach mutually agreeable solutions.

**Goal – Fair and Equitable Settlement for All Parties**

The goal is always to reach a fair and equitable agreement for both the property owner and the Region. Such an agreement will provide compensation for the fair market value of the lands and address the project impacts (such as repairing or replacing landscaping, fencing, paving) so that the property owner will receive the value of the lands acquired and the restoration of their remaining property to the condition it was
prior to the Project. The initial meetings will form the basis of an initial offer of settlement or agreement of purchase and sale for the required lands or interests.

**Steps Toward Offer of Settlement or Agreement of Purchase and Sale**

The general steps towards such an offer are as follows;

1) The Region will obtain an independent appraisal of the fair market value of the lands and interests to be acquired, and an appraisal of any effect on the value of the rest of the property resulting from the acquisition of the required lands and interests;

2) Compensation will be estimated and/or works to minimize other effects will be defined and agreed to by the property owner and the Region;

3) Reasonable costs of the owner will be included in any compensation settlement;

4) An offer with a purchase price and any other compensation or works in lieu of compensation will be submitted to the property owner for consideration; and

5) An Agreement will be finalized with any additional discussion, valuations, etc. as may be required.

Depending on the amount of compensation, most agreements will require the approval of Council. The approval is undertaken in Closed Session which is not open to the public to ensure a level of confidentiality.

**Expropriation**

Due to the time constraints of these projects, it is the practice of the Region to commence the expropriation process in parallel with the negotiation process to insure that lands and interests are acquired in time for commencement of the Project. Typically, over 90% of all required lands and interests are acquired through the negotiation process. Even after lands and interests have been acquired through expropriation an agreement on compensation can be reached through negotiation, this is usually referred to as a 'settlement agreement'.

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.
Comment Sheet

Regional Municipality of Waterloo

Weber Street Improvements

Blythwood Road to Northfield Drive, City of Waterloo

Public Consultation Centre

Please complete and hand in this sheet so that your views can be considered for this project. If you cannot complete your comments today, please take this home and mail, fax or e-mail your comments by December 16th, 2016 to:

Mr. Dave Brown, C.E.T.  Mr. Garry Leveck, P.Eng.
Project Manager  Project Manager
Region of Waterloo  Stantec Consulting Ltd.
150 Frederick Street, 6th Floor  100-300 Hagey Boulevard
Kitchener, ON N2G 4J3  Waterloo, ON N2L 0A4
Telephone: (519) 575-4757 x3686  Telephone: (519) 585-7316
(519) 575-4430  Fax: (519) 579-6733
Email: DaBrown@regionofwaterloo.ca  Email: Garry.Leveck@stantec.com

Please indicate your preferred Design Alternative:

- Design Alternative No. 1  □
- Design Alternative No. 2  □
- Design Alternative No. 3  □
- Design Alternative No. 4  □

Comments or concerns regarding this project:

_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________
Name: ________________________________________________________________
Address: ______________________________________________________________
Postal Code: _____________________ Phone: _______________________________
Email: ________________________________________________________________

Collection Notice:

All comments and information received from individuals, stakeholder groups and agencies regarding this project are being collected to assist the Region of Waterloo in making a decision. Under the “Municipal Act”, personal information such as name, address, telephone number, and property location that may be included in a submission becomes part of the public record.
East Side Lands
Wastewater Servicing Class EA

Public Consultation Centre

November 8, 2016
5:00pm ~ 7:30pm

Deer Ridge Golf Club
200 Deer Ridge Drive, Kitchener
**East Side Lands**

The **East Side Lands** is an area of growth in the Region of Waterloo primarily for employment development with some residential growth. Wastewater servicing is required to support this planned development.

Initially, wastewater flows will be treated at the Preston Wastewater Treatment Plant (WWTP).

In the long term, wastewater from the broader East Side Lands will all be treated at the Kitchener WWTP.

In early 2014, the East Side Lands Master Environmental Servicing Plan (MESP) was completed.

The focus of the MESP was on the future development areas in Cambridge, referred to as the "Stage 1" lands.

The East Side Lands is an area of growth in the Region of Waterloo primarily for employment development with some residential growth. Wastewater servicing is required to support this planned development.
What is this project about?
Determining the long-term wastewater servicing solution to support growth in the East Side Lands.

What is the short term strategy?
To make the best use of existing infrastructure until the long term solution is needed. Initially, wastewater from the East Side Lands will be treated at the Preston Wastewater Treatment Plant (WWTP).

What is the long term strategy?
Ultimately, wastewater from the East Side Lands will be treated at the Kitchener WWTP.

What is the focus of this study?
How the wastewater flows will reach the Kitchener WWTP.

We would like your input on the proposed wastewater servicing strategy.
EA Planning Process

This study is being completed as a Schedule ‘B’ Class EA.

It builds on the previous work of the East Side Lands Master Environmental Servicing Plan (MESP).

- Identify the problem and complete an inventory of existing conditions
- Develop alternative solutions
- Evaluate the alternatives
- Select a preferred solution

We Are Here

Stakeholder Consultation
Project Approach

The project approach is to divide the servicing strategy into two parts:

Part 1: Route
- Considers the alignment of the sanitary servicing infrastructure (pipeline) from the East Side Lands to the Kitchener Wastewater Treatment Plant (WWTP)

Part 2: Wastewater Transfer
- Considers options for gravity or pumped wastewater flows
- and -
- Options for crossing the Grand River to reach the Kitchener WWTP.
A preferred solution for the sewer pipe route was identified first (Part 1), then a preferred solution for transferring wastewater was identified (Part 2).
Part 1 - Route Options

Five options were evaluated for the route of the sewer pipe.
Part 1
Evaluation of Routes

<table>
<thead>
<tr>
<th>Pipeline Route</th>
<th>Length (km)</th>
<th>Natural Impacts</th>
<th>Social Impacts</th>
<th>Technical Impacts</th>
<th>Total Length Weighted Impact Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>5.3</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>B</td>
<td>4.1</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>C</td>
<td>5.8</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>D</td>
<td>5.8</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>E</td>
<td>6.2</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
</tbody>
</table>

Pipeline Route B is currently the preferred option

Key advantages include:
- Shortest overall length (and therefore cost)
- Avoids impacts to important natural features
- Mostly located within existing public utility corridors and roads to minimize impacts to the community
Part 2
Wastewater Transfer Options

Three wastewater transfer options were evaluated:

**Option 1**
Gravity sewer and pumping station in the Deer Ridge Subdivision

**Option 2**
Gravity sewer and pumping station at Kitchener Wastewater Treatment Plant

**Option 3**
Gravity sewer only with a dedicated service bridge across the Grand River
Part 2 - Evaluation of Wastewater Transfer Options

Option 3 is currently the preferred solution

- Key advantages include:
  - No pumping station required
  - Lower capital and operating cost
  - Lower risk of impacts to the Grand River

<table>
<thead>
<tr>
<th>Wastewater Transfer Options</th>
<th>Natural Environment</th>
<th>Social Environment</th>
<th>Technical Environment</th>
<th>Economic Environment</th>
<th>Overall Evaluation</th>
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<tr>
<td>OPTION #1 Gravity Sewer &amp; Pumping Station in Deer Ridge Subdivision</td>
<td>![Diagram]</td>
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<td>$37.0</td>
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<tr>
<td>OPTION #2 Gravity Sewer &amp; Pumping Station at the Kitchener Wastewater Treatment Plant</td>
<td>![Diagram]</td>
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<td>$36.8</td>
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<tr>
<td>OPTION #3 Gravity Sewer Only with a dedicated Service Bridge Across the Grand River</td>
<td>![Diagram]</td>
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<td>$28.9</td>
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Score | Impact Ranking Scale
--- | ---
0 | Beneficial Impact / Ideal Conditions
1 | No Adverse Impacts
2 | Low Impact / Neutral After Mitigation
3 | Medium Impact
4 | High Impact
Preferred Solution
Crossing the Grand River

A new service bridge across the Grand River is proposed to carry the sewer pipe to the treatment plant.
Proposed Timing

- **Fall 2016**
  - Finalize the Environmental Study Report
  - Request Council Approval
  - 30-Day Public Review Period
  - Finalize the Class EA

- **Winter 2017**
  - Complete the Wastewater Treatment Master Plan

- **Fall 2017**
  - Construct the East Side Lands Long Term Servicing Solution

**Future** (to be confirmed)
Factors Affecting Timing

- The timing for construction will depend on:
  - rate of population growth; and
  - wastewater flows

- The Wastewater Treatment Master Plan is currently underway to estimate the timing for construction of the long term solution
Thank You for Participating

Please deposit your comment sheet in the box provided or forward to the Region.

For more information, please contact:

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Region of Waterloo
Transportation and Environmental Services
Water Services

To: Chair Tom Galloway and Members of the Planning and Works Committee
Date: November 1, 2016
File Code: E03-20/4160
Subject: Additional Consultation for William and Strange Street Water Supply Class Environmental Assessment

Recommendation:
For information only.

Summary:
The Region’s Water Supply and Distribution Operations Master Plan (WSDOMP) completed in 2014 examined options for optimizing water distribution in the cities of Cambridge, Kitchener, and Waterloo. One recommendation was the concept of combining water from the William Street Water Supply System (WSS) in Waterloo with the Strange Street WSS in Kitchener. These two systems have similar water treatment requirements (iron and manganese), and combining them would centralize treatment at one single location. The combined system will also increase flexibility to transfer water to the cities of Kitchener and Waterloo.

The William Street and Strange Street Water Supply Class Environmental Assessment (Class EA) Study was undertaken with the main focus on the following three points:

- water treatment plant location
- watermain route connecting both Water Supply Systems
- layout of the water treatment plant

The Class EA phase of the consulting assignment has now been completed by the Consultant, including the required 30 day filing of the Environmental Study Report for comment.
The recommended alternative for the William Street WSS and Strange Street WSS is a single treatment facility located at the site of the Strange Street WSS. Water from the William Street WSS will be pumped to the common Water Treatment Plant (WTP) at the Strange Street WSS by a watermain along Herbert Street, John Street, the Iron Horse Trail and Glasgow Street. At the intersection of Glasgow Street and Belmont Avenue, a connection will be made to the existing watermain that leads to the Strange Street WSS. The layout of the WTP at Strange Street involves building the WTP connected to and in behind the existing pumping station building, thereby preserving heritage attributes while maintaining the original purpose of the building. The details of this project scope and the process followed are documented in Report TES-WAS-16-16.

The project structure involved a working team with staff from the Region Water Services and Design and Construction to provide technical input related to the project. For strategic direction, a steering committee was established with members from the City of Kitchener and Waterloo council and staff, Region council and staff, staff from the Grand River Conservation Authority, and the Ministry of the Environment and Climate Change (see Appendix A for members). The steering committee meetings were normally held at strategic milestones in the project to ensure an opportunity to comment on the project approach and preferred approach. There were some general comments on the display boards; however, the steering committee was generally supportive of the preferred approach.

There were three Public Consultation Centres (PCCs) held in both the cities of Kitchener and Waterloo during the project in September 2014, October 2015, and May 2016. Notification for the PCCs was published in the local papers, provided on the Region’s website, and mailed to landowners adjacent to the William Street WSS and Strange Street WSS, as well as along the proposed watermain route alignment. Feedback received was generally supportive of the implementation of the WTP and the watermain alignment. In addition, there were comments reflecting the understanding of the need to balance various priorities and interests involved at the Strange Street WSS and William Street WSS sites.

Subsequent to the filing of the Environmental Study Report, the Region has received additional feedback more specific to the alignment of the watermain from William Street to Strange Street relating to the following:

Impact to the William Street WSS property: The pump station building on the William Street WSS property is designated under the Ontario Heritage Act by the City of Waterloo and will continue to maintain its heritage status. There will be other modifications at the property related to the water supply equipment but it would not affect the heritage building, or the overall property zoning. The William Street WSS will continue to be used for water supply.
Road access during watermain construction: The watermain construction along John Street would be a standard water main installation. The watermain is to be installed by the open cut method, mostly to one side of the road right of way so that vehicle access is maintained during construction.

Impact on homes, sidewalk and trees: The construction will be mainly in the road right of way and therefore, there should be no impact. As a precautionary measure, mitigation measures such as fencing off trees in the boulevard will be carried out.

Duration of construction: The estimated duration of the overall watermain construction is expected to be four to six months. The local section along John Street would be around one month of construction, given good soil conditions.

In response to the feedback, a Public Consultation Centre #4 has been scheduled for November 22, 2016 at 99 Regina Street in Room 508 from 5:00 to 7:00 p.m. to provide information and response to this feedback. Additionally, the comment period for the Environmental Study Report will be extended to the end of November (to November 30, 2016). The PCC will be advertised in the local papers in Kitchener and Waterloo, published on the Region’s website, emailed to the Project contact list and mailed to landowners along the watermain.

Corporate Strategic Plan:

The William Street – Strange Street Water Supply Class EA supports the Corporate Strategic Focus Area: Thriving Economy, Section 1.2: “Plan for and provide the infrastructure and services necessary to create the foundation for economic success.”

Financial Implications:

The 2016 Ten Year Water Capital Forecast includes $25.8 million between 2017 and 2020 for the William Street – Strange Street Water Supply System. Upon completion of the Class EA study for the preferred alternative, the cost of the required work has been revised to $22.3 million, and will be used in the preparation of the 2017 Water Capital Forecast. More detailed cost estimates will be developed during the preliminary and detailed design phases of the project, and will be used for updating future Water Capital Forecasts.

Other Department Consultations/Concurrence:

The Planning, Development and Legislative Services Department has been consulted during the Class EA on the heritage aspects of the Strange Street Pumping Station.

The Rapid Transit Division has been consulted during the Class EA on possible water main crossings of the LRT tracks.
Attachments

Nil

Prepared By: Kaoru Yajima, Senior Project Engineer, Water Services

Approved By: Thomas Schmidt, Commissioner, Transportation and Environmental Services
Appendix A

Steering Committee Members for the
William Street and Strange Street Water Supply Class Environmental Assessment

<table>
<thead>
<tr>
<th>Member</th>
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<tr>
<td>Councillor Melissa Durrell</td>
<td>City of Waterloo</td>
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<td>Councillor Frank Etherington</td>
<td>City of Kitchener</td>
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<td>Councillor Jane Mitchell</td>
<td>Region of Waterloo</td>
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<tr>
<td>Nancy Kodousek</td>
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<td>Eric Hodgins</td>
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<td>Michelle Sergi</td>
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<td>John Hill</td>
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<td>Wendy Fisher</td>
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<td>Stephanie Meades</td>
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<td>Greg Proctor</td>
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<td>Richard Pinder</td>
<td>Region of Waterloo</td>
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<tr>
<td>Dino Masiero (replacing Denise McGoldrick and Mike Mortimer)</td>
<td>City of Waterloo</td>
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<tr>
<td>Steve Allen</td>
<td>City of Kitchener</td>
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<tr>
<td>James Etienne</td>
<td>Grand River Conservation Authority</td>
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<td>Amaraine Laven</td>
<td>Grand River Conservation Authority</td>
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<tr>
<td>Barb Slattery</td>
<td>Ministry of the Environment and Climate Change</td>
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Region of Waterloo

Transportation and Environmental Services

Transit Services

To: Chair Tom Galloway and Members of the Planning and Works Committee

Date: November 1, 2016

File Code: D28-20(A)

Subject: University of Waterloo Transit Plaza Public Information Centre

Recommendation:

For information.

Summary:

On Wednesday, November 16, at the Davis Centre at the University of Waterloo the public will be invited to provide comments on the proposed 2017 and 2018 GRT Service Improvement Plans and the new “Transit Plaza” roadway and passenger facility planned to be constructed on campus adjacent to the ION LRT station.

Report:

Pending confirmation of the design details by the University, a Public Information Centre (PIC) will be held on Wednesday, November 16, at the Davis Centre at the University of Waterloo on Grand River Transit (GRT) plans for a new “Transit Plaza” roadway and passenger facility on campus. Staff will present conceptual design plans and the GRT route plans in order to inform the public of the planned transit passenger facility and take feedback on route changes proposed under the Draft GRT Business Plan 2017-2021.

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<th>Date</th>
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<tr>
<td>Wednesday, November 16</td>
<td>Davis Centre Room 1301</td>
<td>2:00 PM - 8:00 PM</td>
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<td>University of Waterloo</td>
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The public will be invited to provide comments on the proposed 2017 and 2018 GRT Service Improvement Plans and the passenger shelters proposed for the new transit facility. As shown in Figure 1, five routes in Waterloo would be modified in 2017 to serve the new Transit Plaza roadway at the University of Waterloo: Routes 9, 13, 31, 200 iXpress and 201 iXpress. Upon launch, ION LRT would replace the existing 200 iXpress between Conestoga Mall and Fairview Park Mall, and the Route 7 Mainline branches that serve the University of Waterloo. Subject to Regional Budget approval, the associated resources (service hours and peak buses) from the 200 and 7D and 7E branches would be redeployed to restructure and improve service on other routes, including those that serve UW, in conjunction with the start of ION revenue service as outlined in the Interim GRT Business Plan Report TES-TRS-16-17.

The planned “Transit Plaza” roadway, as shown in Figure 2, would provide the opportunity to integrate GRT, ION, GO Transit, and active transportation links into one mobility hub within the centre of the growing university campus. The roadway connection would allow GRT routes on nearby corridors to serve the interior of campus and connect to ION LRT with an efficient route pattern. New GRT and GO stops on the roadway would bring bus service to the centre of campus and provide additional transit access to the large development projects on Phillip St. The stops would have large passenger shelters along with real time departure information.

The PIC will be advertised with a print ad in Imprint, posters displayed on campus, display boards on public streets around campus, notices on the GRT website, Rider Alert emails, social media and a media advisory.

Following the PIC, Regional staff would finalize the detailed design of the Transit Plaza based on feedback from the public, the Project Team, and with the approval of the University. In early 2017 Regional staff would prepare a construction tender. Work would begin at the start of the construction season in 2017 and be completed by fall 2017. GRT routes would change to use the Transit Plaza soon after.

**Corporate Strategic Plan:**

The implementation of the University of Waterloo Transit Plaza supports the Focus Area of “Sustainable Transportation” through Corporate Strategic Objective 2.1: “Create a public transportation network that is integrated, accessible, affordable and sustainable.”

**Financial Implications:**

The approved 2016 GRT Capital Plan includes $5,062,000 in 2016 – 2017 for the Region’s share of this project to be funded from development charges (18.2%) and debentures (81.8%). The Region is currently in negotiation with Metrolinx to provide additional funding to provide infrastructure to facilitate the integration of GRT service with GO service at this site.
The UW Transit Plaza project has been approved for submission under the Public Transit Infrastructure Fund (PTIF) program with eligible Regional costs, estimated to be $4,000,000, funded 50% by federal subsidy. The 2017 GRT Capital Plan has been developed to include the PTIF subsidy.

Other Department Consultations/Concurrence:

Staff from Corporate Services (Facilities Management, Finance), Transportation & Environmental Services (Rapid Transit, Design & Construction), as well as Planning, Development and Legislative Services (Community Planning, Legal Services) have (or will be) involved in reviewing this report, collaborating on the development of detailed designs and site plan submissions, or on the Transit Plaza operating agreement with the University of Waterloo.

City of Waterloo staff are included in Project Team, along with University of Waterloo representatives.

Attachments

Figure 1: GRT Route Changes to Serve Transit Plaza

Figure 2: Planned University of Waterloo Transit Plaza

Prepared By: Reid Fulton, Project Manager, Transit Network Integration

Approved By: Thomas Schmidt, Commissioner, Transportation and Environmental Services
Figure 1: GRT Route Changes to Serve Transit Plaza
Figure 2: Planned University of Waterloo Transit Plaza
Region of Waterloo
Planning, Development, and Legislative Services
Community Planning

To: Chair Tom Galloway and Members of the Planning and Works Committee
Date: November 1, 2016
File Code: D05-20
Subject: Draft Wetland Strategy for Ontario, 2016-2030

Recommendation:

That the Regional Municipality of Waterloo take the following actions with respect to the Ministry of Natural Resources and Forestry’s document “Draft: A Wetland Conservation Strategy for Ontario 2016-2030”:

a) Endorse the seven guiding principles in the document, but request that greater emphasis be given to the role of wetlands in adapting to the effects of climate change;

b) Request the Province to initiate extensive and detailed consultations with the scientific and ecological planning community prior to further consideration of a “no net loss” approach to wetland conservation policy in Ontario; and

c) Forward Report PDL-CPL-16-47, dated November 1, 2016 to the Ministry of Natural Resources and Forestry for consideration in the ongoing consultation on wetland conservation policies.

Summary:

In 2015, the Province initiated a review of wetland policy in Ontario to identify opportunities to strengthen policies and stop the net loss of wetlands. Staff have reviewed a recent draft document “Draft: A Wetland Conservation Strategy for Ontario 2016-2030” (EBR 012-7675). The strategy is intended to “serve as a launching point for new, innovative conservation commitments and actions that can improve Ontario’s wetland conservation efforts.”
Wetlands cover approximately one-third of Ontario, and fulfill many valuable ecological functions. Apart from sustaining biodiversity, they are increasingly appreciated for their role in moderating the effects of climate change by sequestering enormous quantities of carbon, regulating temperature, reducing flood risks, and helping maintain water quality. Since 1992, Ontario has had strong provincial and municipal policies to protect wetlands. The draft strategy is proposed to serve as a “15-year blueprint” to achieve an overall vision: “Ontario’s wetlands and their functions are valued, conserved, and restored to sustain healthy and resilient ecosystems, and to provide ecosystem services for present and future generations.”

Building on existing legislative, policy, programmes, and inter-agency agreements, the strategy comprises numerous specific actions that the Ontario government is considering for natural resource and biodiversity conservation. The draft strategy is built upon the following seven principles:

1. Wetlands should be regarded as integral components of their watersheds, as part of a system of natural heritage and hydrologic features and areas, and as part of the larger landscape.

2. Wetlands and the ecological functions they perform provide important benefits (ecological, economic, cultural, spiritual and social) that are vital to the health and well-being of all Ontarians. Efforts to sustain these benefits should be a priority.

3. Wetlands should be conserved based on three hierarchical priorities:
   Protection – retain existing wetlands,
   Mitigation – minimize further damage to wetlands, and
   Restoration – improve wetland function on the landscape.

4. Wetlands should be conserved based on a precautionary approach, and using the best available science, information and traditional knowledge.

5. Protection of provincially significant wetlands is a priority, but conservation of all wetlands is encouraged.

6. Wetlands should be conserved in a manner that recognizes, and is informed by, the rights and interests of Indigenous communities.

7. Wetlands should be conserved in strong partnership with other levels of government, private landowners, Indigenous communities, non-government organizations and other stakeholders involved in wetland conservation.

It is recommended that the principles be expanded to emphasise the role of wetlands in moderating some of the effects of climate change.

The strategy is also considering a significant shift in wetland policy from the long-standing “no loss” to a “no net loss” approach such as that used in other jurisdictions, particularly in the United States. This change can create valuable opportunities for the restoration and consolidation of wetlands, but great caution is required to ensure that any new policy contains safeguards to prevent wetlands being regarded as expendable.
and readily replaceable. A significant policy change such as this would need to be reflected in a future Provincial Policy Statement which is issued under the Planning Act to guide land use planning decisions. Before such change is initiated, however, it is recommended that wide consultation with the ecological community occur to develop rigorous scientific guidelines to inform any future “no net loss” policy.

Report:

On August 8, 2016, a document titled Draft: A Wetland Conservation Strategy for Ontario 2016-2030 was placed on the Environmental Registry (EBR 012-7675) for review and comment. This is the latest step in an extensive review of the Province’s wetland conservation framework that commenced in 2014 with a mandate to identify opportunities to strengthen policies and stop the net loss of wetlands. On July 27, 2015, an earlier document titled Wetland Conservation in Ontario: A Discussion Paper was posted on the Environmental Registry for comment. Over 286 comments were received during that process. Regional staff submitted comments on November 16, 2015. Based on the response to the 2015 Discussion Paper, the Ministry released the draft Wetland Conservation Strategy for review. The strategy is intended to “serve as a launching point for new, innovative conservation commitments and actions that can improve Ontario’s wetland conservation efforts.”

Wetlands cover approximately one-third of the more than one million square kilometre landmass of Ontario. Of that, about 10,000 km$^2$ are located in Southern Ontario. Since European settlement began over two centuries ago, many of the wetlands of Southern Ontario have been removed by agriculture, urbanisation, transportation corridors, and other uses. Beginning in the mid-1980s, the role of wetlands in maintaining healthy landscapes and native biodiversity, coupled with their alarming disappearance from those landscapes, led the provincial government to develop policies and programmes to conserve wetlands. The Wetland Policy Statement of 1992 established strong new policies to protect wetlands. Those policies were carried forward in successive Provincial Policy Statements and are now reflected in municipal Official Plan policies and regulations applied by conservation authorities as well as federal-provincial and international agreements. Over and above their natural heritage values, however, wetlands, as the draft strategy frequently mentions, moderate the effects of climate change by sequestering enormous quantities of carbon, regulating temperature, reducing flood risks, and helping maintain water quality. In the words of the strategy, “investing in wetland conservation is for more than just the conservation of wildlife. It is also about ensuring the protection of these natural assets that are essential to ensuring quality of life now and in the future.”

The strategy is guided by an overall vision: “Ontario’s wetlands and their functions are valued, conserved, and restored to sustain healthy and resilient ecosystems, and to provide ecosystem services for present and future generations.” The strategy is
proposed to serve as a “15-year blueprint” to improve wetland conservation. Building on existing legislative, policy, programmes, and inter-agency agreements, it comprises numerous specific actions that the Ontario government will undertake for natural resource and biodiversity conservation. The strategy contains the following seven principles:

1. Wetlands should be regarded as integral components of their watersheds, as part of a system of natural heritage and hydrologic features and areas, and as part of the larger landscape.

2. Wetlands and the ecological functions they perform provide important benefits (ecological, economic, cultural, spiritual and social) that are vital to the health and well-being of all Ontarians. Efforts to sustain these benefits should be a priority.

3. Wetlands should be conserved based on three hierarchical priorities:
   - Protection – retain existing wetlands,
   - Mitigation – minimize further damage to wetlands, and
   - Restoration – improve wetland function on the landscape.

4. Wetlands should be conserved based on a precautionary approach, and using the best available science, information and traditional knowledge.

5. Protection of provincially significant wetlands is a priority, but conservation of all wetlands is encouraged.

6. Wetlands should be conserved in a manner that recognizes, and is informed by, the rights and interests of Indigenous communities.

7. Wetlands should be conserved in strong partnership with other levels of government, private landowners, Indigenous communities, non-government organizations and other stakeholders involved in wetland conservation.

Comment: It is suggested that the importance of wetlands in mitigating the effects of climate change be explicitly acknowledged in principle 2, or perhaps better, in another principle altogether. This will link wetland conservation to the government’s other climate change initiatives.

The vision and principles will be pursued through four strategic directions:

1. **Awareness:** Develop and advance public awareness of, appreciation for, and connection to Ontario’s wetlands. The expected outcome is that “People are inspired and empowered to value and conserve Ontario’s wetlands.”

   Comment: Twelve actions are proposed to increase communication and public education, all of which are supported. The role of wetlands in mitigating the effects of climate change needs to be emphasised. There is particular support for the action to “analyse and describe practical opportunities for industry to undertake wetland conservation projects, including development and communication of best management practices.” Making such information
available can guide development proponents, municipalities, and conservation authorities in the design and operation of stormwater management facilities and wastewater treatment plants in relation to wetland elements.

2. Knowledge: Increase knowledge about Ontario’s wetlands, including their status, functions and vulnerability, to inform and improve conservation. The expected outcome is that “Essential knowledge for conserving Ontario’s wetlands is available and used to make decisions.”

Comment: Staff endorse seventeen actions that are proposed to promote improved wetland mapping, and research into invasive non-indigenous species and the implications of climate change for wetlands. Research into the efficacy of wetland and riparian buffers of varying widths and designs as well as wetland monitoring will help inform efforts by municipalities and conservation authorities to protect wetlands.

3. Partnership: Establish and strengthen partnerships to focus and maximize conservation efforts for Ontario’s wetlands. The expected outcome is that “People and organizations collaborate and work together to improve wetland conservation.”

Comment: Twelve actions are recommended to strengthen collaboration among agencies involved in wetland conservation. Mention of provincial funding assistance to wetland conservation projects and land securement agencies is very welcome. The recommendation to “further develop conservation partnerships with the agricultural community, Indigenous communities, private landowners and industry to promote wetland values, encourage conservation, implement best management practices and identify restoration opportunities” can assist the development industry, municipalities, and landowners wishing to be good stewards of their wetlands. Working with the agricultural community can build on the wetland conservation and restoration successes achieved by the ALUS (Alternative Land Use Services) programme now operating in parts of Ontario.

4. Policy: Develop policy approaches and improve policy tools to protect, restore and enhance the extent and quality of Ontario’s wetlands. The expected outcome is that “Ontario has a strong and effective policy foundation to conserve and stop the net loss of wetlands.”

Comment: The development of wetland policy will have significant implications for municipal government, and thus many of the 19 recommendations in this section will be addressed in detail below.
• Continue to review provincial laws, regulations and policies as opportunities arise, with the goal of strengthening Ontario’s wetland policies, e.g. Co-ordinated Land Use Planning Review.

**Comment:** This review will complement the ongoing review of the *Conservation Authorities Act*. It is hoped that the emerging body of knowledge relating to wetland research and monitoring will inform future provincial and municipal policy development.

• Integrate a clear and consistent definition of wetlands across policy.

**Comment:** The definition of “wetland” in section 28 (25) of the *Conservation Authorities Act* is not consistent with that in the Provincial Policy Statement (PPS). The definition in the Act stipulates that a “wetland” must meet four criteria:

a) is seasonally or permanently covered by shallow water or has a water table close to or at its surface,
b) directly contributes to the hydrological function of a watershed through connection with a surface watercourse,
c) has hydric soils, the formation of which has been caused by the presence of abundant water, and
d) has vegetation dominated by hydrophytic plants or water tolerant plants, the dominance of which has been favoured by the presence of abundant water.

The PPS definition does not contain a criterion equivalent to item b). Without this restriction, it encompasses kettle wetlands dependent on sheet flow or wetlands sustained by groundwater discharge neither of which may be associated with a watercourse. Removal of item b) from the definition in the Conservation Authorities Act will result in a consistent definition of wetlands across policy documents.

• Support the development of policy tools to improve the conservation of all wetlands.

**Comment:** This is generally supported, although the “all” needs to be qualified with an appropriate cut-off for small, isolated, and/or very degraded wetlands.

• Develop policy approaches and tools to prevent the net loss of wetlands in Ontario, focusing on areas where wetland loss has been greatest.

**Comment:** Preventing further loss of wetlands is strongly supported. Nevertheless, the presence of the word “net” introduces what may be a significant shift in Ontario’s wetland policy framework. Since the original Wetland
Policy of 1992, the guiding principle has been “no loss” or no “development or site alteration” in wetlands. This was the outcome of several years of prior discussion between “no loss” and “no net loss” proponents. In the light of 25 years of experience gained by municipalities, conservation authorities, and the development industry, and advances in planning policy and ecological restoration practice in Ontario, it may be appropriate that the issue is being opened for further discussion at this time. While the “no loss” approach has unquestionably protected many Provincially Significant Wetlands from development, (and helped minimise impacts from the construction of new public infrastructure), there has often been little differentiation between significantly different ecological communities within a given wetland. For example, a Provincially Significant Wetland may comprise expanses of low quality Reed Canary Grass monoculture along with rarer or late successional wetland communities, yet all portions of the wetland are equally protected. As planning authorities seek to balance ecological conservation with efficient use of urban land, they may at times have to preserve lower quality wetland lobes or disjunct patches of wetland complexes to the potential detriment of good community design. If the PPS were to be amended to allow consideration of a no net loss approach, planners could consider removing low-quality peripheral or isolated wetland areas and replacing them with restored or created wetland greater in extent, with higher native biodiversity values, situated to bulk up or link existing wetlands, all within a reasonable time frame.

A recent workshop sponsored by Ontario Nature on “off-setting” or “ecological compensation” has added to a broader conversation among practitioners about a potential move to a “no net loss” approach. Before any such change is implemented, however, it cannot be too strongly emphasised that great care needs to be taken to ensure that it does not become a slippery slope leading to further wetland loss and degradation, or an assumption that any wetland is expendable and can be replaced. A no loss or avoidance approach should always be the preferred position. A no net loss mitigation/compensation alternative should only be allowed under very specific circumstances, and then only for peripheral and readily replicable wetland communities such as shallow ponds, marshes, wet meadows, and thicket swamps. Considerable discussion must also ensue with respect to replacement ratios and the function, location, and design of compensatory wetland habitat in relation to the affected wetland.

As the current PPS was issued only two years ago, there should be ample time over the coming years to involve affected stakeholders in a larger conversation about a potential new policy framework based on lessons learnt from the no loss approach in Ontario, the no net loss policies in other jurisdictions, and the growing body of wetland research in Ontario. It is recommended that if the Province eventually determines to pursue a no net loss approach, that a wide
range of stakeholders be involved in drafting the policy and the associated
detailed implementation guidelines.

- Review and improve the method by which provincially significant wetlands are identified.

  **Comment:** The Ontario Wetland Evaluation System (OWES) has been
developed over many years and has been a valuable tool. Nevertheless,
improvements in mapping technology and evaluation techniques should be
continually applied. In delineating wetland boundaries, it is recommended that
the exclusion of farmed wet areas associated with wetlands be re-visited. This
exclusion is justified in an agricultural context when such lands may be used for
pasture or perhaps even limited crop production in dry years. When such lands
are proposed for development, however, wetland boundaries should reflect the
hydrology and soil characteristics of the area as well as vegetation.

- Promote and expand opportunities to enhance wetland conservation and
  restoration through the Drainage Act.

  **Comment:** Natural wetlands have been destroyed or severely altered by artificial
  drains. Aligning or rehabilitating drains provides an opportunity to enhance
  wetland conservation and build more sustainable drainage systems.

- Strengthen provincial level guidance for integrating wetland values in
  Environmental Impact Statements.

  **Comment:** Detailed guidance can be reflected in future iterations of the *Natural
  Heritage Reference Manual* or similar guides and provide valuable guidance to
  practitioners and agencies. This will be especially crucial in the event the
  Province introduces a no net loss principle into a future Provincial Policy
  Statement.

- Review and enhance guidance for wetland conservation on Crown lands.

  **Comment:** It would be appropriate for the Province to set a good example of
  enlightened wetland stewardship.

- Develop and ensure that adequate policy guidance is available on incorporating
  wetland protection strategies in local planning (e.g., natural heritage system
  planning).
Comment: Detailed science-based guidance can be provided through future iterations of the Natural Heritage Reference Manual or similar guides.

- Continue and enhance protection of wetlands through the provincial Protected Areas System and other effective area-based conservation measures.

Comment: Acquiring significant wetlands as provincial parks or reserves is supported. Consideration should also be given to assisting conservation authorities or land trusts to bring such wetlands under long term protection.

- Continue to support and strengthen Great Lakes policies, initiatives and other efforts for wetland conservation aligning with commitments made in domestic and binational agreements (e.g., Canada-Ontario Agreement on Great Lakes Water Quality and Ecosystem Health) and strategies (e.g., Ontario’s Great Lakes Strategy).

Comment: As well as conserving the important wetlands on the Great Lakes, it is also necessary to protect wetlands along the tributaries to the Great Lakes which play an important role in maintaining water quality.

- Ensure that wetland conservation strategies and tools integrate climate change adaptation and mitigation considerations.

Comment: Tying wetland conservation to climate change mitigation in public policy and in the public mind will help ensure that adequate resources are devoted to protecting and maintaining our wetlands.

- Develop best management practices for activities in proximity to wetlands (e.g., establish limits for surface and groundwater withdrawals, draining or infilling of vulnerable wetlands in order to enhance the resiliency of these wetlands to change).

Comment: Basic research of this nature will greatly assist public agencies and development proponents. Large water-taking projects are of concern when they are proposed in proximity to wetlands, as they may have the potential to draw down water levels. It would also be helpful to have sound technical guidance on discharging stormwater into various types of wetlands.

- Support the identification of additional candidate wetlands for international recognition under the Ramsar Convention and/or other national/international programs (e.g., UNESCO Biospheres, Important Bird Areas, Western Hemisphere Shorebird Reserve Network, etc.).
**Comment:** Such recognition has the potential to bring such wetlands under better protection and stewardship.

- Integrate wetland restoration and planning efforts with other watershed planning efforts.

  **Comment:** Watershed studies, master drainage plans, or natural heritage strategies for future development areas would be appropriate vehicles to identify needs and opportunities for wetland conservation and restoration. In particular, it would be advantageous to integrate this with planning for stormwater management.

- Include Indigenous knowledge, where available and feasible, in wetland conservation strategies and best management practices.

  **Comment:** Traditional knowledge of wetlands and wetland flora and fauna can benefit wetland conservation.

- Explore improvements to incentive programs to encourage wetland conservation on private land.

  **Comment:** Existing programmes have assisted in protecting wetland area, but could be enhanced with incentives to control invasive non-indigenous species or remove debris or improperly-placed fill.

- Develop and implement policies and strategies to mitigate the effects of climate change by sequestering and storing carbon in wetlands.

  **Comment:** The cap-and-trade system that Ontario is embarking upon may create opportunities and resources to transform marginal farmland, floodplains, low quality wetlands, or potentially even stormwater management facilities into wetlands capable of sequestering significant quantities of carbon in saturated peaty soils and sediments.

- Integrate the economic value and the value of the ecosystem services provided by wetlands into decision-making.

  **Comment:** There is a growing appreciation by decision-makers and the general public about the significant contributions of ecosystem services to economic prosperity and human well-being. To implement carbon off-setting and other wetland conservation and restoration projects, it would be helpful for the Province to provide periodic updated guidance on monetary equivalents of ecosystem services.
services by type and area of wetland. Nevertheless, such calculations should not be allowed to become a rationale for depreciating wetlands against proposed development applications having a higher cash value.

**Area Municipal Consultation/Coordination:**

A draft of this report was reviewed by the Ecological and Environmental Advisory Committee on September 26, 2016 (Report EEAC-16-09). It was also circulated to Area Municipal environmental planning staff for review and comment.

**Corporate Strategic Plan:**

This review supports Strategic Objective 3.5 – Preserve, protect and enhance green space, agricultural and environmentally sensitive lands, and Regionally owned forests.

**Financial Implications:**

NIL

**Other Department Consultations/Concurrence:**

The Regional Clerk’s Office would forward this report to the Province, if it is endorsed by Council.

**Attachments**

NIL

**Prepared By:** Chris Gosselin, Manager of Environmental Planning and Stewardship

**Approved By:** Debra Arnold, Acting Commissioner of Planning, Development, and Legislative Services
Region of Waterloo
Planning Development and Legislative Services
Community Planning

To: Chair Tom Galloway and Members of the Planning and Works Committee

Date: November 1, 2016  File Code: D10-00

Subject: Breslau (Greenhouse Road) GO Station

Recommendation:

That the Regional Municipality of Waterloo take the following actions regarding the development of a new GO Station at Greenhouse Road, Breslau in the Township of Woolwich:

(a) Endorse the location of the GO station as identified in Attachment “B” to Report PDL-CPL-16-48.

(b) Request the Ministry of Transportation and Metrolinx to fully fund all costs associated with the new GO station as part of the Regional Express Rail 10-Year Program.

(c) Forward Report PDL-CPL-16-48, dated November 1, 2016, to Metrolinx, the Ontario Ministry of Transportation, and the Township of Woolwich.

Summary:
Nil.

Report:

Regional Council has been asked to endorse the recommendation adopted by Metrolinx for a new GO station location in the Region of Waterloo on the Kitchener Line at Breslau (Greenhouse Road) in the Township of Woolwich.
On June 28, 2016, the Metrolinx Board of Directors adopted the Metrolinx GO Regional Express Rail Update report. This report recommended that the proposed Breslau (Greenhouse Road) Station in the Township of Woolwich be included in the GO Regional Express Rail (RER) 10 year program. The Breslau (Greenhouse Road) location was originally identified as the preferred alternative through the “Georgetown to Kitchener Rail Expansion Environmental Study Report, GO transit, 2009”.

As part of the approval of the new GO Station, Metrolinx requires the Township of Woolwich to provide a Council resolution that indicates that they are in agreement with the station location and that demonstrates their commitment to implementing transit supportive planning regimes around the station and sustainable station access solutions. This requirement was conveyed to the Township through a letter from Metrolinx dated August 4, 2016 (Attachment A). Similarly, Metrolinx staff have asked the Region of Waterloo to provide a resolution that supports the GO Station location. Both resolutions must be provided to Metrolinx by November 30, 2016.

**Breslau (Greenhouse Road) GO Station**

The proposed station is located on the west side of Greenhouse Road, south of the rail corridor in the Township of Woolwich (Attachment B). This commitment by Metrolinx to enhance connections to Waterloo Region is encouraging and supports the Toronto-Waterloo Region Technology Corridor. The new station is a positive step toward all day GO transit service to the Region and provides an opportunity for future connection to the Region of Waterloo International Airport. Therefore staff are supportive of the new GO station being recommended at Breslau (Greenhouse Road).

**Transit Supportive Planning Regime**

The Township of Woolwich has adopted the Breslau Settlement Plan. The Plan is currently with the Region for approval, which is anticipated this fall. The settlement plan recognized and planned for the Breslau (Greenhouse Road) GO Station as the preferred station location.

Recognizing that this station is within, but approaching the edge of the urban area, the settlement plan provides for an appropriate mix of land uses including some medium density residential, commercial and employment uses in the vicinity of the station. In addition, a draft plan of subdivision has been approved by the Ontario Municipal Board for the area north of and including the proposed station. Regional staff will work with Township staff if and when new opportunities for additional transit supportive uses and densities are presented.

**Sustainable Station Access Solutions**

Sustainable station access solutions refers to the provision of multi-modal access to the GO Station including walking, cycling, transit and auto access. Walking and cycling access was considered in both the development of the Settlement Plan and the approved draft plan of subdivision. Active transportation connections to other developed areas of Breslau, as well as direct access to the GO station are planned.
Currently, the site has access off Greenhouse Road from the north. As identified in the Settlement Plan, the intent is to provide a secondary access to the station from the north via a new collector road referred to as Street A. It should be noted that full access from Street A cannot be provided until the new Highway 7 is operational and Victoria Street (current Highway 7) is assumed by the Region. In addition, the Township has committed to initiating an Environmental Assessment to consider a new local road connection to the GO Station from the south from Fountain Street.

With only the current road access from the north and the site's location approaching the edge of the urban area, the provision of transit service to the station will be challenging from an operational perspective. However, transit service to the station will be provided to support the level of GO service provided to the station. Opportunities for increased transit service will be considered upon access to the site being provided from the south and GO service to the station is increased. Connections to the airport will also be explored.

Next Steps:

Metrolinx has asked both the Township and the Region to participate in a working group to develop a work plan and undertake the next level of due diligence for the new station. Metrolinx is working with Regional and Township staff to confirm the process, roles and responsibilities of each party to advance the station to procurement including local community consultations, the Transit Project Assessment Process (TPAP), the preparation of bid documents, and potential partnerships with developers. The Breslau (Greenhouse Road) GO Station is intended to be part of larger Regional Express Rail procurement package. As details emerge, staff will provide an update to Regional Council and seek direction as required.

Area Municipal Consultation/ Coordination:

The Township of Woolwich has been directly involved in the meetings with Metrolinx regarding the new station and has been consulted during the preparation of this report. A draft copy of the report was provided for comment.

Corporate Strategic Plan:

The Breslau (Greenhouse Road) GO Station supports the Region's priorities with respect to focus area 1 Thriving Economy (1.2 Plan for and Provide the infrastructure and services necessary to create the foundation for economic success), and focus area 2, Sustainable Transportation (2.1 Improve inter-city rail transportation service to and from Waterloo Region).
Financial Implications:

The approval of this report does not have any immediate financial implications, however, it is anticipated that there will be costs associated with the provision of transit services to the new GO station.

Metrolinx has informed staff that separate discussions are underway between Metrolinx and the Ontario Ministry of Transportation to determine full cost impacts of new GO stations and potential additional funding requirements. As a result, funding arrangements are not clear at this time. It is recommended that Metrolinx and the Ontario Ministry of Transportation fully fund all costs associated with the new GO station at Breslau (Greenhouse Road) as part of the Regional Express Rail 10-Year Program.

Other Department Consultations/Concurrence:

Transportation and Environmental Services participated in the review of the station and consulted in the preparation of this report.

Attachments

Attachment A: Letter from Metrolinx to the Township of Woolwich dated August 4, 2016
Attachment B: Breslau GO Station Location Map: Township of Woolwich Adopted Transportation Network - Breslau

Prepared By: Michelle Sergi, Director, Community Planning

Approved By: Debra Arnold, Acting Commissioner, Planning Development and Legislative Services
Attachment “A”

August 4, 2016

David Brenneman
Chief Administrative Officer
Township of Woolwich
24 Church Street West
P.O. Box 158
Elmira, ON
N3B 2Z8

Dear Mr. Brenneman,

RE: GO Regional Express Rail Proposed New Station

On Tuesday June 28, 2016, the Metrolinx Board of Directors met to discuss several planning projects, including the GO Regional Express Rail 10-year Program: New Stations Analysis (Appendix 2).

At this meeting, the Board adopted a number of recommendations that specifically require action from those municipalities where recommended GO RER stations are proposed. This correspondence is to confirm the Board’s adopted recommendations and the subsequent follow up required.

First, I want to thank you and your staff for your cooperation in providing input into the Business Case analysis that has led to a list of recommended New Stations that could be part of the GO RER Program. In total, the Board accepted staff recommendations to include 12 new stations.

I am now writing to confirm that a new station location at Breslau (near Greenhouse Road) has undergone Initial Business Case (IBC) analysis and has been recommended as part of the GO RER 10-year program. Please note that the new station is still subject to further detailed analysis and conditions to address contextual issues.

As listed in Recommendation 1.1 of the Board report, the Province and Metrolinx require the Township of Woolwich to provide to Metrolinx, by November 30, 2016, a Council-approved resolution that commits the Town to the following conditions:

- agreement with the station location;
- commitment to implementing transit supportive planning regimes around the station, if such does not already exist; and
- sustainable station access solutions.

.../2
Next Steps

In order to meet our timelines, commitments to the transit investments are necessary. We will work closely with you over the coming months to establish a work plan and working group to undertake the next level of due diligence. The next steps will include establishing a New Stations Working Group to:

- Finalize the station site selection (Greenhouse Road or Fountain Street);
- Define the station scope and site plan, including multi-modal access;
- Define the related incremental costs to the current GO RER program;
- Review the current land use policies in the Breslau station area, and update as necessary any local policies, guidelines or bylaws to ensure transit supportive uses.
- Confirm the process, roles and responsibilities to advance Breslau station to procurement including local community consultations, TPAPs, the preparation of Bid Documents, and potential partnerships with developers.

Should you need more information, please do not hesitate to contact Leslie Woo, Chief Planning Officer at Leslie.Woo@metrolinx.com or Lorna Day, Director of Project Planning and Development at Lorna.Day@metrolinx.com. Please also identify an internal point of contact on behalf of Woolwich.

Metrolinx is committed to working with the Township of Woolwich to achieve an integrated and seamless transportation network throughout the Greater Toronto and Hamilton Area. The Metrolinx Board expressed its pleasure on June 28th to see that the working relationship with the Township of Woolwich continues to be collaborative and delivering progress. I look forward to a continued positive and productive relationship as we progress to the next phase of this work with the Township.

Sincerely,

Bruce McCuaig
President and Chief Executive Officer

c. Mike Murray, Chief Administrative Officer, Regional Municipality of Waterloo
   Leslie Woo, Chief Planning Officer, Metrolinx
Region of Waterloo
Planning Development and Legislative Services
Region of Waterloo International Airport

To: Chair Tom Galloway and Members of the Planning and Works Committee
Date: November 1, 2016   File Code: L04-20
Subject: Airport Master Plan Update

Recommendation:
For Information

Summary:

Airports around the world rely on Master Plans to help guide their growth decisions, as airport infrastructure takes time to plan, construct and commission. The Region of Waterloo International Airport commenced an update to the 2000 Master Plan in 2012. The Master Plan has now progressed to the point of developing draft recommendations, which will be presented at a Public Consultation Centre (PCC) on November 10, 2016. Attached to this report is a copy of the information that will be presented at the November 10, 2016 PCC.

The recommendation from staff and the Master Plan Steering Committee is to prepare the airport for growth relying on a series of "triggers" which are based primarily on the number of passengers using the airport. It is expected that passenger volumes at the Region of Waterloo International Airport and at other regional airports in Southern Ontario will increase as Toronto Pearson International Airport becomes increasingly constrained. A recent study commissioned by the Greater Toronto Airports Authority (GTAA) estimated that Pearson Airport will reach its capacity limit by approximately the mid-2030s, and that demand could exceed airport capacity by about 20 million passengers by 2043.
The Region of Waterloo International Airport is well positioned geographically and from a governance perspective to capture some of this growth and play a larger role in the system of airports, reaping major economic benefits for our community.

The strategy proposed in the Airport Master Plan is to provide just-in-time delivery of airport infrastructure, and try to match the expansion of infrastructure with the timeline of when airlines and passengers will make decisions to relocate from Pearson.

Report:

At the end of 2012, the Region of Waterloo retained an aviation consulting firm, MMM Group Limited (currently WSP Canada Inc.) to develop a new Airport Master Plan ('Master Plan'). The Master Plan is intended to provide guidance for future development of the Region of Waterloo International Airport (YKF) which is owned and operated by the Region of Waterloo. The last Master Plan for YKF was completed in April of 2000 and set the stage to build the airport we have today.

In December 2012, the Region of Waterloo initiated the development of a new YKF Master Plan, establishing a Project Team consisting of Council and staff representatives from the Region of Waterloo, the Cities of Cambridge, Kitchener and Waterloo, the Township of Woolwich, and the Grand River Conservation Authority. As part of the initial process, stakeholder meetings were completed (including area businesses, aviation associations, and airlines), and two public consultation sessions were held in an effort to obtain input from the community on future options for YKF over the next 20 years.

In late 2014, Regional Council provided interim direction to staff to: optimize the existing capacity of YKF; attract new air service; build out the YKF Business Park; protect for future growth; increase community awareness about noise mitigation measures; and develop YKF in conjunction with the adjacent East Side Employment Lands. Staff have made some progress on these initiatives, and are continuing with this mandate.

In 2015, Regional Council received new information from the KPMG Region of Waterloo Service Review, and the Greater Toronto Airports Authority released a study entitled “Growth, Connectivity, Capacity – The Future of a Key Regional Asset” which identified that by the mid-2030s Southern Ontario’s airports, including Toronto Pearson International Airport (TPIA) will start to approach a capacity milestone, and upwards of 20 Million passengers could ultimately go unserved. The GTAA has actively worked with all airports in Southern Ontario to help solve this capacity issue. In late 2015, Regional Council recommended the final completion of the YKF Master Plan (as part of the recommendation from the KPMG Service Review) and adopted the following recommendation:
“That the Regional Municipality of Waterloo direct staff to complete the Airport Master Plan and associated Business Plan by the end of 2016, which would include recommendations regarding increasing revenue, managing operational and capital expenses and a net levy target for airport management to budget against to control operating and capital expenditures.”

This triggered a renewed phase of the Airport Master Plan which would combine all data from the earlier work, and include new input from the second phase to produce the ultimate direction for the Airport moving forward. Council recommended an updated Steering Committee be established to guide the completion of the draft YKF Master Plan and the creation of a Business Plan. The Steering Committee includes: the Chair of the Planning and Works Committee; the Chair of the Administration and Finance Committee; the Regional Council representative to the Aeronautical Noise Advisory Committee; and a local Council representative from the Cities of Cambridge, Kitchener, and Waterloo, and the Township of Woolwich. The Steering Committee was chaired by the Commissioner of Planning, Development, and Legislative Services (until his departure) and also includes the Commissioner of Transportation and Environmental Services, the Commissioner of Corporate Services/Chief Financial Officer, the Director of Corporate Communications, and the General Manager of the airport. Additional staff from the Region of Waterloo and the Area Municipalities serve as resources to the Steering Committee.

The Steering Committee has also consulted with the YKF Business Advisory Council and the Waterloo Region Economic Development Corporation. A third Public Consultation Centre was held on May 25, 2016 to update the status of the Master Plan, and the fourth (and Final) Public Consultation Centre is now scheduled for November 10, 2016. Following the Public Consultation Centre, staff will consider all of the input received, and will incorporate it into the final Airport Master Plan and associated Airport Business Plan which will be presented to Council in early 2017.

The purpose of this Master Plan is to guide the future of YKF over the next 20 years. This Master Plan includes elements that address the following:

- Identify and evaluate a range of development triggers that will inform and guide growth opportunities for the Airport.
- Stakeholder consultation and additional Public Information Centres.
- Develop a comprehensive development plan that is flexible and will allow for rapid changes in both demand and opportunities available within the next 10-20 years.
- Commercial Carrier Service – Explore opportunities to respond to growing desire to provide air carrier service at YKF and anticipate future community needs.
• Development of the Airport Business Park and East Side Employment Lands – Further examine the creation of employment opportunities through the development of leased lands for aviation and aerospace related industrial and commercial undertakings on the adjacent East Side Lands.

• Business Plan – Develop an associated Business Plan to link the Master Plan with an efficient and effective financial plan, and address the recommendations from the KPMG Service Review.

• Support for Business – To ensure current and future demand from area businesses are being met, identify opportunities to align the future of YKF with future needs of emerging sectors in Waterloo Region; and

• Changes in the Aviation Industry – The ever-changing nature of the aviation industry will affect the future growth of YKF. Currently, Toronto Pearson International Airport is reviewing its existing capacity and future growth demands. As part of that review, neighbouring airports, including YKF, are being considered as potential options for “spill-over” service.

According to a study commissioned by the GTAA, “by 2043, a staggering 90 million people will be looking to travel through southern Ontario by air; yet the capacity across the region’s airports is estimated to be around 65-70 million passengers per year. With no plan in place to increase the region’s air travel capacity, that is a gap of more than 20 million passengers by 2043.” An opportunity is now available which could see an “integrated multi-airport system for southern Ontario” that could help offload capacity from Toronto Pearson to other airports in the region in a complementary fashion. The Region of Waterloo International Airport is one of three facilities that could, over the planning period of the next 20 years, play a major role to meeting aviation demands in the Greater Toronto Area for scheduled passenger service. The others being Hamilton and Pickering, should the federal government plan to build an airport there.

This is a new dynamic that has been reviewed and considered as part of this Master Plan. It is challenging to “Master Plan” for this type of scenario without carefully factoring in both YKF and ultimately GTAA’s growth strategies such that they can potentially align with the development options put forward.

This Master Plan is intended to be an action-oriented, working document that identifies the future development of the Airport in a practical, fiscally responsible, environmentally-sustainable, ‘just-in-time’ manner. Development triggers will be outlined and implemented to allow YKF the ability to grow if and when the current and future demands dictate. Subsequent phases of development will only be implemented when measured criteria are met and growth at the Airport is warranted. As each pre-determined criteria (or “trigger”) is reached, the Airport will seek Regional Council approval before proceeding with the next phase of development.
The “triggers” are based on passenger volumes at the Airport. As each “trigger” is reached, the Region would decide whether to proceed with the next phase of Airport planning and development. Although the triggers are based on measured passenger volumes at YKF, passenger volumes at YKF may be influenced by Pearson Airport reaching or exceeding its capacity limits. Monitoring the activity and capacity at Pearson may provide an indication of if and when certain triggers may be reached at YKF. In this way, the Master Plan prepares the Airport for future growth and development, but does not commit to such development in advance of demonstrated increase in demand.

Development Opportunities

The ultimate goal of this proposed Master Plan is to optimize the use of the existing infrastructure and to prepare for airport expansion if and when passenger volumes increase. Given the current ability to expand services at the airport without significant capital expansion, this would allow the airport to continue to add service and passengers and increase revenue in the short term, prior to investing in the next phases of development. It is imperative that the Airport be prepared for future growth with a plan that would allow subsequent phases of development to be implemented quickly once passenger numbers reach certain thresholds. There are many dynamics in play (i.e. low cost carriers, reliever to Toronto Pearson, etc.) that could drastically alter the landscape at YKF and the Airport should be prepared to quickly accommodate this likely growth if and when it occurs.

A very similar recent example can be found at Billy Bishop Toronto City Centre Airport where a new Airline (Porter Airlines) launched service in 2006 and passenger traffic has increased from 68,000 Annual Passengers in 2005 to over 2,500,000 Annual Passengers less than 10 years later. After Porter launched in 2006, passenger volumes increased to the point that airport operations became self-sufficient by 2010. This growth was all completed with many constraints in play including limited runway lengths, access to the Island, tripartite agreement governing usage and noise limits, and significant political objection.

The following sections will outline the Development Triggers that will be put in place to allow the Region of Waterloo International Airport to grow at a rate that is responsive to potential increase in scheduled service and related passenger volumes.

Development of Trigger Points

The Region of Waterloo International Airport staff, along with members of the Steering Committee, are engaged with GTAA on a regular basis to better understand the needs of Toronto Pearson International Airport related to future relief of air traffic.
Development of our airport will be influenced by the actual growth in passenger traffic experienced over the 20-year planning period of this Master Plan. The trigger point elements are based on passenger numbers of scheduled service (for example 250,000, 500,000, 1,000,000 annual passengers) as well as improvements to existing and future infrastructure supporting safety, utility and efficiency.

It is important to note that timing of these triggers are estimates only. Ultimately, the airport expansion to support future air and passenger traffic should be predicated by future demand.

This approach will provide the Region of Waterloo International Airport with an advantage of having development plans in hand when a certain level of service has been achieved. This allows the airport the opportunity to plan ahead accordingly to secure potential future land area expansion, size and geographical direction of growth. The same is applicable to protect and maintain existing and future airspace from potential obstacles. These efforts will be coordinated with local community planners, city planners, surface transportation planners and decision makers to better facilitate a unified approach to the chosen development strategy.

**Trigger Points Summary**

**Trigger No. 1 – Upon Approval of Master Plan (2017)**

<table>
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<tr>
<td>- Initiate Zoning Study for 3rd Runway.</td>
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<td>- Environmental Assessment for Runway 32 End Extension.</td>
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<td>- Review of Federal, Provincial and Other Sources of Funding to Support Short-term Capital Projects.</td>
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<td>- Design Runway 14-32 for Precision Approach.</td>
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<tr>
<td>- Commence Concept/Design of Terminal Expansion to 500,000 Passengers.</td>
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<tr>
<td>- Continue to Develop Existing Serviced Lands on Airport Property Based on Demand (Apron VII Extension).</td>
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<tr>
<td>- Assess Need to Purchase Additional Land for Future Development.</td>
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<tr>
<td>- Commence Master Land Use and Servicing Plan for Airport.</td>
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Trigger No. 2 – YKF Hits 250,000 Passengers

**ACTION**

- Purchase Land Identified as Required (i.e. for Future Vehicle Parking).
- Construct Runway 14-32 Extension (Including Taxiway Extensions and Approach Lighting).
- Design Runway 08-26 Extension to 8737 Feet (including Associated Taxiways and Approach Lighting).
- Review Shantz Station Road Reconfiguration Options.
- Design Runway/Taxiway/ Apron Clearances and Widths to Accommodate AGN-IV Aircraft.
- Design and Construct Apron ‘II’ Expansion.
- Construct New Terminal Building Expansion (up to 500,000 Passengers) including Associated Apron Expansion.
- Design New Terminal Building Expansion (including Associated Apron Expansion) to Accommodate 1,000,000 Passengers.
- Increase Available Surface Parking.
- Reassess Feasibility of Expanding Existing Terminal Building vs. Relocating Terminal Building to New Site.
- Continue to Develop Existing Serviced Lands on Airport Property Based on Demand.
- Fountain Street Utility Relocations.

Trigger No. 3 – YKF Hits 500,000 Passengers

**ACTION**

- Purchase Land Identified as Required (i.e. for Future Landside Development).
- Construct Approved Shantz Station Road Reconfiguration (Based on 2-Lane Road Realignment Around Runway 26 Extension.
- Construct Partial Taxiway ‘B’.
- Construct Runway 08-26 Extension to 8737 Feet (including Associated Taxiways and Approach Lighting).
- Widen Existing Taxiways to Accommodate AGN-IV Aircraft.
### ACTION

- Construct New Terminal Expansion (up to 1,000,000 Passengers).
- Begin Negotiations with Existing Tenants in Vicinity of Terminal Expansion for Future Relocation.
- Design New Terminal Building Expansion (including Associated Apron Expansion) to Accommodate 2,000,000 Passengers (in 2 – 500,000 Passenger increments).
- Design New Landside Configuration (Roads and Parking).
- Continue to Develop Existing Serviced Lands on Airport Property Based on Demand (Southeast Development – New Taxiway, Road and Utilities).

### Trigger No. 4 – YKF Hits 1,000,000 Passengers

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<tr>
<td>- Review Additional Land Acquisition Requirements.</td>
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<td>- Relocate Existing Tenants Within Terminal Expansion Footprint.</td>
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<tr>
<td>- Construct New Terminal Building Expansion and Associated Apron to Accommodate Additional 500,000 Passengers.</td>
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<tr>
<td>- Construct New Landside Configuration (Roads and Parking).</td>
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<tr>
<td>- Design New Parking Structure.</td>
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<tr>
<td>- Commence Negotiations with Tenant for Relocation to New Facility.</td>
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<tr>
<td>- Design New South Terminal Building Expansion and Associated Apron (Additional 500,000 Passengers).</td>
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<tr>
<td>- Develop Newly Purchased Lands Based on Demand (Southwest Development – Road and Utilities).</td>
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### Trigger No. 5 – YKF Hits 1,500,000 Passengers

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<tr>
<td>- Construct New South Terminal Building Expansion and Associated Apron (Additional 500,000 Passengers – 2,000,000 Total Passengers).</td>
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<tr>
<td>- Construct New Parking Structure.</td>
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<tr>
<td>- Construct New Terminal Building Expansion and Associated Apron (Additional 500,000 Passengers – 2,500,000 Total Passengers).</td>
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Corporate Strategic Plan:

The Airport Master Plan aligns with the 2015-2018 Corporate Strategic Plan objective to plan for and provide the infrastructure and services necessary to create the foundation for economic success under Strategic Focus Area 1, Thriving Economy.

Financial Implications:

A 20 year financial forecast has been prepared which is based on projected revenue, expenses and debt service costs incorporating each Trigger Point for various capital funding scenarios to determine the tax levy impact and cost to the average household. At each Trigger Point there are increased passenger volumes which generate more revenue and generally results in a cost to the average household that on average is not higher than the existing tax levy impact. Additional analysis will be presented in the Airport Master Plan and associated Business Plan. As previously noted in this report, the Region would decide whether to proceed with the next phase of Airport planning and development as each Trigger Point is reached.

Other Department Consultations/Concurrence:

This report was prepared with input from Corporate Services staff (Finance and Facilities Management) and Economic Development staff.

Attachments:

November 10, 2016 Public Consultation Centre Display Boards.

Prepared By: Chris Wood, Airport General Manager

Approved By: Debra Arnold, Acting Commissioner of Planning, Development and Legislative Services
Public Consultation Centre
November 10, 2016

- Please sign in on the sheet provided.
- Browse display materials.
- Questions? Ask an Airport representative at one of the stations.
- Provide Your Feedback:
  - Online: Log on to engage.regionofwaterloo.ca
  - Email Us: AirportMasterPlan@regionofwaterloo.ca

Visit waterlooairport.ca/masterplan for more information.

Thank you for your involvement in this project.
The Master Plan is being developed to help guide the future of the Region of Waterloo International Airport (YKF) for the next 20 years (2016 - 2035).

The plan will take into consideration the opportunities and challenges the Airport will face including how to best meet the travel and connectivity needs of our growing community.

The Airport Master Planning Process:

- Project Commencement - April 2016
- Public Information Centres
  - #1 - May 25, 2016
  - #2 - November 10, 2016
- Region of Waterloo Planning & Works Committee Update - Q1 2017
- Project Completion - Q1 2017
Under the direction of Regional Council, the Airport has initiated the process to create a new Master Plan and Business Plan.

Work to develop a series of recommendations for the next 20 years (2016-2035) and how to best meet the travel and connectivity needs of our growing airport community.

Seek input from stakeholders and the community-at-large.

Ensure a continued safe, efficient and environmentally-sustainable airport.

Spring 2016
Establish Airport Steering Committee

May 25, 2016
Public Information Centre #1
Online Engagement

November 10, 2016
Public Consultation Centre #2
Online Engagement

Spring 2017
Recommendation to Regional Council
Prepare a written plan with a series of recommendations for implementation starting in 2017.
The Region of Waterloo International Airport will contribute to the economic prosperity and competitive advantage of Waterloo Region by connecting this innovative community to the world.

This will be achieved through managed growth, customer service excellence, passenger convenience and community responsiveness.
Under the direction of Regional Council, the Airport has initiated the process to update the Master Plan & Business Plan with specific direction to:

- Attract new air service
- Build out the Airport Business Park
- Protect for Future Growth
- Increase community awareness about noise mitigation measures
- Develop the Airport in conjunction with adjacent East Side Employment Lands
<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>CURRENT STATUS</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Maximize the existing capacity of the Airport</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>• WestJet adds 18% to Calgary Service = 16,780 additional seats (Feb 2015)</td>
<td>✓</td>
</tr>
<tr>
<td>B</td>
<td>Attract additional passenger service to maximize the capacity of the existing Air Terminal Building</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>• WestJet Announcement Seasonal Orlando Service (July 2015)</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>• Sunwing Seasonal Weekly Punta Cana Service (Dec 2016)</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>• Chartright Air Group (Apr 2015)</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>• NAV CANADA Ground-breaking on New Control Tower (June 2015)</td>
<td>✓</td>
</tr>
<tr>
<td>C</td>
<td>Attract aviation-related businesses to the Airport’s Aviation Business Park Development</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>• Chartright Air Group (Apr 2015)</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>• NAV CANADA Ground-breaking on New Control Tower (June 2015)</td>
<td>✓</td>
</tr>
<tr>
<td>D</td>
<td>Co-ordinate resources and strategies required for air service development and business attraction with the Region’s broader economic development plans - including the East Side Lands</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>• YKF Economic Impact Awareness Campaign &amp; Increased Public Consultation</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>• Update 2013 Economic Impact Study (April 2016)</td>
<td>✓</td>
</tr>
<tr>
<td>E</td>
<td>Consider additional opportunities to increase awareness concerning aeronautical noise and its mitigation</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>• Restructured Aeronautical Noise Advisory Committee (Dec 2014)</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>• Website Content Updated to Better Inform the Community</td>
<td>✓</td>
</tr>
<tr>
<td>F</td>
<td>Prepare a 2015-2024 Airport Capital Plan to reflect the plan for maximizing the existing Airport infrastructure</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>• Installation of New Signs in Subdivisions Located in Proximity</td>
<td>✓</td>
</tr>
<tr>
<td>G</td>
<td>Review of the Airport Master Plan, once approved, at regular intervals or upon the Airport achieving passenger and financial objectives</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>• Airport Capital Plan Completed (Feb 2015)</td>
<td>✓</td>
</tr>
<tr>
<td>H</td>
<td>Evaluate further actions, such as Federal zoning protections or designation of reserve lands to ensure opportunities for future growth</td>
<td>✓</td>
</tr>
</tbody>
</table>
Airport Overview
YKF Economic Impact 2007 to 2015

In 2015 the Airport contributed an estimated $90 million to the Region’s economy*

* Wilfrid Laurier University 2015 Economic Impact Study

Canadian Airports: Passenger Traffic & Economic Impact
Passenger Traffic

YKF Passenger Traffic 2005 to 2015

Passenger traffic at YKF is up 694% since 2005

Source: Region of Waterloo International Airport

2016 Route Map

Route Map
- Non-Stop Flights
- Connecting Flights

- Kitchener (YKF)
- Orlando
- Punta Cana
- Dominican Republic
- United States
- Canada
- WestJet Airlines
- Sunwing Airlines

Comox, Victoria, Vancouver, Calgary, Edmonton, Saskatoon, Kelowna, Abbotsford
Where do YKF Passengers Come From

- The Airport’s primary catchment area (within 35km of the Airport) represents a market of slightly over 2 million passengers annually:
  - 696,000 trips to Domestic destinations;
  - 746,000 trips to the U.S.; and
  - 589,000 trips to International and Sun destinations
- YKF only captures 4% of traffic from catchment area
- 87% of passengers use Toronto Pearson
- Approximately 31% of passengers at YKF come from outside catchment area

Region of Waterloo International Airport (YKF) Catchment Area Map

Legend
- Primary Catchment Area (within 35km of YKF)
- Secondary Catchment Area
Airport Facts

- Aircraft always operate into the wind
- Region of Waterloo International Airport (YKF) is located in the busiest Canadian airspace: southwestern Ontario
- There are over 100,000 aircraft movements (take-offs or landings) annually
- In February 2016 Nolinor ceased operations from YKF
- In October 2016 American Eagle ceased operations from YKF
- There is no curfew in place for operations at YKF - we are open 24 hours a day
- With improved technology, aircraft today are 75% quieter than 50 years ago

Aircraft That Typically Fly From YKF

**Boeing 737 Scheduled** (136 Seats)
Daily WestJet flight to Calgary
Daily Service: 75,000 - 100,000 Annual Passengers

**Boeing 737 Charter** (189 Seats)
Weekly flights to Punta Cana, Dominican Republic
Seasonal Once a Week Service: 10,000 Annual Passengers

**Dash-8 Q400** (74 Seats)
Daily Service: 40,000 Annual Passengers
Noise Complaint Trends 2013 to 2016 (YTD)

- Noise warning clauses and signage have been implemented for new subdivisions in Kitchener and Woolwich in proximity to the Airport

Existing No Development Zone Plan

- Since 2000, no new residential development has been approved in the “No Development Zone” as depicted above
Planning for the Future
By 2043 southern Ontario will be home to 15.5 million people & regional air travel volume is expected to reach more than 90 million passengers annually.

Air travel demand over the next two decades puts Toronto Pearson at roughly 65 million passengers annually by the mid 2030’s with no signs of slowing down.

The creation of an integrated airport system is a possible solution.

There is also a future need to connect air travel passengers to airports.

What could this mean for YKF?...
GRCA Flood Plain & Environmental Features

GRCA Regulation Map

Source: GRCA Web-GIS Viewer (grims.grandriver.ca). Map produced May 2016. N.T.S.

Legend:

- Parcels - Assessment (MPAC)
- Flood Plain (GRCA)
- Engineered
- Approximate
- Estimated
- Roads-Addressed (MNR)

- Wetland (GRCA)
- Regulation Limit (GRCA)
- Slope Erosion (GRCA)
- Slope Valley (GRCA)
- Drainage - Poly (MNRF)

Imagery Source: 2010 Ortho (ONT)

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Produced using information under License with the Grand River Conservation Authority. © Grand River Conservation Authority, 2016.

This map is for illustrative purposes only. Information contained herein is not a substitute for professional review or a site survey and is subject to change without notice. The Grand River Conservation Authority takes no responsibility for, nor guarantees, the accuracy of the information contained on this map. Any interpretations or conclusions drawn from this map are the sole responsibility of the user. Some regulated features, such as surface hydrology (watercourses), are NOT included in the Regulation Limit shown on the map.
The Master Plan
The Goal of this Master Plan is to prepare the Region of Waterloo International Airport (YKF) for future growth and development over the next 20 years (2016 - 2035).

- This is an action-oriented, working document that identifies future development of the Airport in a practical, fiscally-responsible, and environmentally-sustainable manner.

- The plan is flexible. It allows for rapid changes in the aviation industry and additional commercial carrier service that could be available within the next 10-20 years.

- The plan has been developed to allow for a ‘just-in-time’ approach to potential development. It identifies a series of triggers and corresponding actions to allow for budgeting and long-term planning.

- Triggers are outlined and will be implemented to allow YKF to grow if-and-when the current and future demands dictate.

- Triggers are based on passenger volume at YKF; however, triggers may also be influenced by Toronto Pearson International Airport reaching or exceeding its capacity limits.

- Phases of development will only be implemented when measured criteria are met and growth at the Airport is required.

- As each pre-determined trigger point is reached, the Airport will seek approval from Regional Council before proceeding with the next phase of development.

This approach will allow YKF to plan ahead and the advantage of having development plans in hand when predetermined levels of service have been achieved.
Development Trigger #1

The Airport needs to plan now and prepare for potential future growth and development over the next 20 years.

Development will be influenced by actual growth in passenger traffic

Upon Approval of the Airport Master Plan by Regional Council in Spring 2017, the Airport will need to:

1. Protect for future growth:
   - Ongoing airport improvements to enhance safety and reliability
   - Zoning updates for Runway 14-32 and 08-26 extensions; possible 3rd runway
   - Environmental assessment for Runway 14-32 extension

2. Investigate federal, provincial and other funding opportunities to support new capital projects

3. Initiate an Air Terminal Expansion design to accommodate for potential passenger growth

4. Continue to build out the Airport’s Business Park and develop in conjunction with the adjacent East Side Lands Development

Financial Implications for Trigger #1:

Estimated Region of Waterloo Capital Cost = $1,462,000
Estimated Impact on an Average Household is $22 per year
(Equal to the 2016 average cost per household of $22 per year)

Forecast Assumptions:
Region of Waterloo capital cost is based on 50% funding from other sources
Costs and revenues have been adjusted for future inflation and expected growth in passenger traffic
When the Air Terminal Building reaches its current capacity of 250,000 passengers annually, the Airport needs to prepare for the next stage of development which is to accommodate for 500,000 passengers annually.

The following activities need to be initiated:

1. Runway 14-32 should be extended (including taxiway & approach lighting)
2. Design Runway 08-26 to 8737’ (including associated taxiways & approach lighting)
3. Assessment of land surrounding YKF and continue to protect for future growth
4. Review Shantz Station Road reconfiguration options
5. Design runway/taxiway/apron clearances and widths to accommodate AGN-IV aircraft
6. Design and construct Apron II expansion
7. Construct new Air Terminal Building for up to 500K passengers; associated apron expansion
8. Continue to develop existing serviced lands on Airport property based on demand

Financial Implications for Trigger #2:

Estimated Region of Waterloo Capital Cost = $28,464,000
Estimated Impact on an Average Household is $15 per year
(A $7 per year decrease from the 2016 average cost per household of $22 per year)

Forecast Assumptions:
Region of Waterloo capital cost is based on 50% funding from other sources
Costs and revenues have been adjusted for future inflation and expected growth in passenger traffic
Development Trigger #3

When the Air Terminal Building reaches its current capacity of 500,000 passengers annually, the Airport needs to prepare for the next stage of development which is to accommodate for 1,000,000 passengers annually.

The following activities need to be initiated:

1. Runway 08-26 should be extended (including taxiway and approach lighting)
2. Construct new Air Terminal Building expansion for up to 1M passengers; associated apron expansion
3. Continue to develop existing serviced lands on Airport property based on demand

Financial Implications for Trigger #3:

Estimated Region of Waterloo Capital Cost = $66,094,000
Estimated Impact on an Average Household is $10 per year
(A $12 per year decrease from the 2016 average cost per household of $22 per year)

Forecast Assumptions:
Region of Waterloo capital cost is based on 50% funding from other sources
Costs and revenues have been adjusted for future inflation and expected growth in passenger traffic
When the Air Terminal Building reaches its current capacity of 1,000,000 passengers annually, the Airport needs to prepare for the next stage of development which is to accommodate for 1,500,000 passengers annually.

The following activities need to be initiated:

1. Construct new Air Terminal Building expansion for up to 1.5M passengers; associated apron expansion
2. Construct new landside configuration (roads & parking)

Financial Implications for Trigger #4:

Estimated Region of Waterloo Capital Cost = $41,413,000
Estimated Impact on an Average Household is $3 per year
(A $19 per year decrease from the 2016 average cost per household of $22 per year)

Forecast Assumptions:
Region of Waterloo capital cost is based on 50% funding from other sources
Costs and revenues have been adjusted for future inflation and expected growth in passenger traffic
When the Air Terminal Building reaches its current capacity of 1,500,000 passengers annually, the Airport needs to prepare for the next stage of development which is to accommodate for 2,500,000 passengers annually.

The following activities need to be initiated:

1. Construct new Air Terminal Building expansion for up to 2.5M passengers; associated apron expansion

2. Construct new parking structure

Financial Implications for Trigger #5:

Estimated Region of Waterloo Capital Cost = $99,832,000
Estimated Impact on an Average Household is $14 per year
(A $8 per year decrease from the 2016 average cost per household of $22 per year)

Forecast Assumptions:
Region of Waterloo capital cost is based on 50% funding from other sources
Costs and revenues have been adjusted for future inflation and expected growth in passenger traffic
The Airport needs to plan now and prepare for potential future growth and development over the next 20 years.

This approach will allow YKF to have development plans in hand when predetermined levels of service have been reached.

**The Airport Master Planning Process:**
- Project Commencement - April 2016
- Public Information Centre #1 - May 25, 2016
- Public Consultation Centre #2 - November 10, 2016

**Next Steps:**
- Master Plan Submitted to Region of Waterloo Planning & Works Committee - Spring 2017
- Master Plan Submitted to Regional Council - Spring 2017

Upon Approval of the Airport Master Plan by Regional Council in Spring 2017, the Airport will need to begin to prepare for potential future growth and development over the next 20 years.
Region of Waterloo
Transportation and Environmental Services
Design and Construction

To: Chair Tom Galloway and Members of the Planning and Works Committee
Date: November 1, 2016  File Code: C04-30, 5555
Subject: Fall 2016 Construction Update

Recommendation:
For Information.

Summary:
This report provides a status update for the major transportation, water, wastewater and waste management construction contracts that were under construction and/or were awarded by Council in 2016. Another update is planned for early 2017.

Three major road projects were planned to be constructed over two years in 2016 and 2017: Ottawa Street (Highway 7 to Lackner) in Kitchener; King Street and Fountain Street in Cambridge; and King Street in St. Jacobs. All remaining major road projects are expected to be substantially performed or completed by the end of 2016.

The most up-to-date information about active, ongoing construction contracts affecting Regional roads is available on the Region’s website and on the Ping Street mobile application (“app”).

Report:
Every year, the Region undertakes numerous construction contracts to rehabilitate, upgrade and expand its infrastructure, including roads, bridges, water and wastewater treatment plants, watermains, and waste management facilities. This report provides a status update for the largest transportation, water, wastewater and waste management construction contracts that were under construction and/or were awarded by Council in 2016. Smaller projects, generally less than $1,000,000 in value, are also completed.
each year for asset maintenance, repairs or replacement and are not summarized in this report.

Many road and bridge contracts are planned to be completed during a single construction season, typically between May and November each year. Larger-scale road and bridge contracts may be planned for several consecutive construction seasons. Road contracts often include work for local municipalities (sewers and watermains) and require coordination of work with local utilities (electricity, gas, and communications). Many water and wastewater treatment contracts require multiple years of construction and work is often carried out in all seasons.

Sometimes, construction contracts are not completed as planned. Reasons for delays can include, for example: unplanned site conditions that require additional work; delays experienced by third-party utilities when completing preparatory or concurrent work to the Region’s contracts; or a failure by the construction contractor to meet schedule milestones specified in the contract. The Region employs a variety of tools to manage the costs associated with unplanned work or other delays to construction contracts, such as, for example: including contingency allowances in the contract to address unplanned site conditions that require additional work; and specifying liquidated damages for contractors that fail to meet specified milestones without valid reasons.

A key milestone date for construction contracts is “substantial performance”, which is defined in Ontario legislation (the Construction Lien Act). A construction contract is “substantially performed” when the improvement to be made under that contract or a substantial part thereof is ready for use or is being used for the purposes intended and when the value of remaining work is less than the specified percentage (between one and three percent of the contract price). When a contract is “substantially performed”, there may still be work required for items like landscape restoration or deficiency repairs. A construction contract is deemed to be “completed” under the Construction Lien Act when the price to complete all remaining work is less than $1,000.

For some road contracts, the Region completes the surface asphalt under a separate contract the year after construction. This is done in an effort to ensure that any deficiencies from the original construction are identified and repaired before the surface asphalt is placed. The Region also completes landscape plantings for some contracts under a separate landscape contract either in the fall of the construction year or the following year. This is done in an effort to achieve economies of scale for landscape planting, improve the chances for successful establishment of new plantings, and provide enhanced maintenance and care of new plantings.

The status of the major road construction contracts in 2016, not including ION construction, is summarized in Appendix A. Three major road contracts were planned to be constructed over two years in 2016 and 2017:
1. Ottawa Street (from Highway 7 to Lackner Boulevard) in Kitchener;
2. King Street and Fountain Street (from Eagle Street to Shantz Hill and Cherry Blossom) in Cambridge; and
3. King Street (from Printery Road to Sawmill Road) in St. Jacobs.

All remaining major road projects are expected to be substantially performed or completed by the end of 2016. Appendix B summarizes the status of major non-road Region of Waterloo construction contracts that are underway in 2016. Another update is planned for early 2017.

The most up-to-date information about active, ongoing construction contracts affecting Regional roads is available on the Region’s website and on the Ping Street mobile application (app), which is available for free. The Region’s website provides a map and an alphabetical listing of Regional roads that are subject to active lane closures or road closures, together with links to local municipal road information. The Ping Street mobile application illustrates similar information about Regional and local municipal lane and road closures on a map of the Region.

Corporate Strategic Plan:

The contracts described in this report meet one or more of the Strategic Objectives under the Region’s Corporate Strategic Plan Focus Areas “Thriving Economy”, “Sustainable Transportation” and “Environment and Sustainable Growth”.

Financial Implications:

Funding for the contracts listed in this report was included in the Region’s approved Ten Year Capital Programs.

Other Department Consultations/Concurrence:

NIL

Attachments:

Appendix A – Fall 2016 Major Regional Road Construction Project Status
Appendix B – Fall 2016 Non-Road Major Construction Project Status

Prepared By: Phil Bauer, Director, Design and Construction

Approved By: Thomas Schmidt, Commissioner, Transportation and Environmental Services
# Appendix A-1, Fall 2016 Major Regional Road Construction Project Status – Kitchener

<table>
<thead>
<tr>
<th>Project</th>
<th>Limits</th>
<th>Actual (or Estimated) Substantial Performance</th>
<th>Approximate Contract Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fischer-Hallman Road Widening</td>
<td>North of Bleams Road to Ottawa Street</td>
<td>October 2016</td>
<td>$4,160,000</td>
</tr>
<tr>
<td>Manitou Drive Reconstruction</td>
<td>Homer Watson Boulevard to Bleams Road</td>
<td>(December 2016)</td>
<td>$4,300,000</td>
</tr>
<tr>
<td>Manitou Drive Widening</td>
<td>Fairway Road to Bleams Road</td>
<td>July 2016</td>
<td>$9,320,000</td>
</tr>
<tr>
<td>Miscellaneous Intersection Improvements</td>
<td>New Dundee Road at Blair Valley Drive; Fairway Road at Wabanaki Drive, King Street at Deer Ridge Drive</td>
<td>(November 2016)</td>
<td>$1,740,000</td>
</tr>
<tr>
<td>Ottawa Street Reconstruction</td>
<td>Highway 7 to Lackner Blvd</td>
<td>(Fall 2017)</td>
<td>$7,680,000</td>
</tr>
<tr>
<td>Victoria Street Urbanization and Multi-Use Trail and Asphalt Resurfacing</td>
<td>Victoria Street, Fischer-Hallman Road to Eastforest Trail; Highland Road, Patricia Ave. to Westmount Road; King Street, Freeport Bridge to River Road; Bridgeport Road, Lancaster Street to Highway 86</td>
<td>July 2016</td>
<td>$1,180,000</td>
</tr>
</tbody>
</table>
## Appendix A-2, Fall 2016 Major Regional Road Construction Project Status – Waterloo

<table>
<thead>
<tr>
<th>Project</th>
<th>Limits</th>
<th>Actual (or Estimated) Substantial Performance</th>
<th>Approximate Contract Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Erb Street Roundabouts</td>
<td>At new Costco development, opposite Waste Management Centre</td>
<td>October 2016</td>
<td>$3,230,000</td>
</tr>
<tr>
<td>Ira Needles Boulevard Widening and Thorndale Drive Roundabout</td>
<td>University Avenue to Erb Street</td>
<td>(November 2016)</td>
<td>$3,820,000</td>
</tr>
<tr>
<td>Westmount Road Retaining Wall</td>
<td>From University Avenue northerly 300 metres</td>
<td>(December 2016)</td>
<td>$1,100,000</td>
</tr>
</tbody>
</table>
## Appendix A-3, Fall 2016 Major Regional Road Construction Project Status – Cambridge

<table>
<thead>
<tr>
<th>Project</th>
<th>Limits</th>
<th>Actual (or Estimated) Substantial Performance</th>
<th>Approximate Contract Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bishop Street Reconstruction</td>
<td>Conestoga Boulevard to Concession Road</td>
<td>(December 2016)</td>
<td>$5,790,000</td>
</tr>
<tr>
<td>Cedar Street Reconstruction</td>
<td>Osborne Street westerly to Cambridge city limit</td>
<td>October 2016</td>
<td>$4,160,000</td>
</tr>
<tr>
<td>Franklin Boulevard Improvements Contract One</td>
<td>Main Street to Clyde Road</td>
<td>September 2016</td>
<td>$10,240,000</td>
</tr>
<tr>
<td>Franklin Boulevard Improvements Contract Two</td>
<td>Highway 401 to north of Can-Amera Parkway</td>
<td>September 2016</td>
<td>$12,680,000</td>
</tr>
<tr>
<td>King Street and Fountain Street Improvements</td>
<td>King Street, Eagle to Fountain and Fountain Street, Shantz Hill to Cherry Blossom</td>
<td>(November 2017)</td>
<td>$12,110,000</td>
</tr>
</tbody>
</table>
## Appendix A-4, Fall 2016 Major Regional Road Construction Project Status – Townships

<table>
<thead>
<tr>
<th>Project</th>
<th>Limits</th>
<th>Actual (or Estimated) Substantial Performance</th>
<th>Approximate Contract Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hawkesville Road Bridge Rehabilitations, Township of Woolwich</td>
<td>At Conestogo River</td>
<td>(November 2016)</td>
<td>$2,340,000</td>
</tr>
<tr>
<td>Hutchison Road Reconstruction, Crosshill, Township of Wellesley</td>
<td>Crosshill west limits to south limits</td>
<td>August 2016</td>
<td>$1,980,000</td>
</tr>
<tr>
<td>King Street Reconstruction, St. Jacobs, Township of Woolwich</td>
<td>Printery Road to Sawmill Road</td>
<td>(Fall 2017)</td>
<td>$5,660,000</td>
</tr>
<tr>
<td>Nafziger Road Bridge Rehabilitation, Township of Wilmot</td>
<td>At Nith River</td>
<td>September 2016</td>
<td>$890,000</td>
</tr>
<tr>
<td>Rural Resurfacing</td>
<td>Nafziger Road, Shantz Station Road, Branchton Road</td>
<td>(November 2016)</td>
<td>$3,330,000</td>
</tr>
</tbody>
</table>

## Appendix A-5, Fall 2016 Major Regional Road Construction Project Status – Other

| Miscellaneous Road Works at Various Locations | (November 2016) | $1,660,000 |
## Appendix B - Fall 2016 Non-Road Major Construction Project Status

<table>
<thead>
<tr>
<th>Project</th>
<th>Actual (or Estimated) Substantial Performance</th>
<th>Approximate Contract Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Galt WWTP - Plant B Secondary Clarifier Mechanism Replacements</td>
<td>(November 2016)</td>
<td>$2,860,000</td>
</tr>
<tr>
<td>Heidelberg Wastewater Treatment Plant Upgrades</td>
<td>(March 2017)</td>
<td>$1,730,000</td>
</tr>
<tr>
<td>Kitchener WWTP, Contract 2, New Energy Centre and Digestion Upgrades</td>
<td>(February 2017)</td>
<td>$43,330,000</td>
</tr>
<tr>
<td>Kitchener WWTP, Contract 3, New Headworks and Secondary Treatment</td>
<td>(December 2018)</td>
<td>$119,700,000</td>
</tr>
<tr>
<td>Kitchener WWTP, Contract 4, Tertiary Treatment &amp; New Outfall</td>
<td>(August 2017)</td>
<td>$28,970,000</td>
</tr>
<tr>
<td>Preston WWTP Odour Control Upgrades</td>
<td>(December 2016)</td>
<td>$4,000,000</td>
</tr>
<tr>
<td>Southern Ayr Wastewater System Upgrades</td>
<td>(December 2017)</td>
<td>$3,370,000</td>
</tr>
<tr>
<td>Waterloo WWTP Contract 4 Completion</td>
<td>(December 2017)</td>
<td>$6,770,000</td>
</tr>
<tr>
<td>Project</td>
<td>Actual (or Estimated) Substantial Performance</td>
<td>Approximate Contract Value</td>
</tr>
<tr>
<td>------------------------------------------------------------------------</td>
<td>-----------------------------------------------</td>
<td>---------------------------</td>
</tr>
<tr>
<td>Cambridge Waste Management Facility - Landfill Gas Control Plant Upgrades</td>
<td>July 2016</td>
<td>$800,000</td>
</tr>
<tr>
<td>Cambridge Waste Management Facility – Purge Well System</td>
<td>(May 2017)</td>
<td>$970,000</td>
</tr>
<tr>
<td>Waterloo Waste Management Facility NEA Final Capping</td>
<td>(November 2016)</td>
<td>$1,570,000</td>
</tr>
<tr>
<td>Waterloo Waste Management Facility Pumping Station 1 Replacement</td>
<td>October 2016</td>
<td>$1,440,000</td>
</tr>
<tr>
<td>Waterloo Waste Management Facility South Boundary Well Pumphouse and SWP3 Modifications</td>
<td>(January 2017)</td>
<td>$1,470,000</td>
</tr>
<tr>
<td>Waterloo Region International Airport Infrastructure Improvements</td>
<td>(June 2017)</td>
<td>$3,050,000</td>
</tr>
</tbody>
</table>
Report: PDL-LEG-16-74

Region of Waterloo
Planning Development and Legislative Services
Legal Services

To: Chair Tom Galloway and Members of the Planning and Works Committee

Date: November 1, 2016 File Code: L07-90

Subject: Authorization To Expropriate Lands (1st Report) for Improvements to Fountain Street (Regional Road 17) City of Cambridge from Kossuth Road / Fairway Road to Cherry Blossom Road (Phase 1) – 1105 Fountain Street North, City of Cambridge

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 reconstruction of Fountain Street North, City of Cambridge, in the Region of Waterloo as detailed in report PDL-LEG-16-74 dated November 1, 2016:

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 improvements to Fountain Street North and described as follows:

Temporary Easement Partial Taking:

The right and easement, being a temporary easement in gross, for the free and unobstructed, right, interest and easement terminating on the 31st day of December, 2021, for itself, its successors and assigns, and anyone authorized by it, on over, under and through the following properties for the purposes of excavation, construction, installation, replacement, alteration, grading, and landscaping as required in connection with road widening improvements to Fountain Street (Regional Road 17) from Kossuth Road / Fairway Road to Cherry Blossom Road, City of Cambridge, Regional Municipality of Waterloo, and all related improvements works ancillary thereto and for such purposes, the free, unimpeded and unobstructed access to the lands at all times.
by employees, agents, contractors, workers and anyone authorized by it, and vehicles, supplies and equipment at all times and for all purposes and things necessary for or incidental to the exercise and enjoyment of the right and easement:

a) Part of Lot 18, Beasley's Broken Front Concession being Parts 1, 2, 3 and 4, on 58R-19087 being Part of PIN 03755-0043 (LT) (Part of 1105 Fountain Street N.) all in the City of Cambridge, Regional Municipality of Waterloo;

b) Part of Lots 18 and 19, Beasley's Broken Front Concession being Part 1 on 58R-19088 being Part of PIN 03755-0043 (LT) (Part of 1105 Fountain Street N.) all in the City of Cambridge, Regional Municipality of Waterloo;

c) Part of Lot 19, Beasley's Broken Front Concession being Part 2 58R-19089 being Part of PIN 03755-0043 (LT) (Part of 1105 Fountain Street N.) all in the City of Cambridge, Regional Municipality of Waterloo;

Temporary Easement Partial Taking:

The right and easement, being a temporary easement in gross, for the free and unobstructed, right, interest and easement terminating on the 31st day of December, 2021, for itself, its successors and assigns, and anyone authorized by it, on over, under and through the following properties for the purposes of construction and installation of alterations to an existing Storm Water Management Facility and appurtenances thereto as required in connection with road widening improvements to Fountain Street (Regional Road 17) from Kossuth Road / Fairway Road to Cherry Blossom Road, City of Cambridge, Regional Municipality of Waterloo, and all related improvements works ancillary thereto and for such purposes, the free, unimpeded and unobstructed access to the lands at all times by employees, agents, contractors, workers and anyone authorized by it, and vehicles, supplies and equipment at all times and for all purposes and things necessary for or incidental to the exercise and enjoyment of the right and easement:

a) Part of Lot 19, Beasley's Broken Front Concession, being Part 1, on 58R-19089 being Part of PIN 03755-0043 (LT) (Part of 1105 Fountain Street N.) all in the City of Cambridge, Regional Municipality of Waterloo;

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 or if determined by the Commissioner of Transportation and Environmental Services that such lands, or any part or interest thereof, are not required for the subject project; and

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

Summary: NIL

Report:

Regional Council approved roadway improvements to Fountain Street from Kossuth Road / Fairway Road to Cherry Blossom Road on April 1, 2015 as detailed in Report TES-DCS-15-04. The project improvements include widening Fountain Street from Kossuth Road / Fairway Road to Maple Grove Road from two lanes to four lanes with centre median, re-paving the existing four lanes on Fountain Street from Maple Grove Road to Cherry Blossom Road, constructing a new roundabout at the intersection of Fountain Street and Maple Grove Road, and adding new boulevard multi-use trails on both sides of Fountain Street through the entire project limits.

Construction of Phase 1, which includes construction of the roundabout at Fountain Street and Maple Grove Road, the resurfacing of Fountain Street from Maple Grove Road to Cherry Blossom Road and construction of new boulevard multi-use trails, is currently scheduled for 2018. Reconstruction of Fountain Street from Cherry Blossom Road to Highway 401, including construction of new boulevard multi-use trails, previously approved separately by Council on November 4, 2014 in Report E-14-120, will also be undertaken under the same contract in 2018.

Construction of Phase 2 of Fountain Street, from north of Maple Grove Road to Kossuth Road / Fairway Road will be completed after 2018, based on ongoing coordination with planned commercial development on Fountain Street.

On June 22, 2016, Council approved the Application to Expropriate land acquisitions for Phase 1 as outlined in Report PDL-LEG-16-45. The acquisitions included fee simple partial takings from seven (7) properties and temporary easements from two (2) of these seven properties, for construction of the new roundabout and new boulevard multi-use trails. Since that time, Region Staff have identified the need for additional temporary easements from the lands known as 1105 Fountain Street, Cambridge as described in the Recommendations of Report PDL-LEG-16-74. These additional temporary easements are for grading and landscaping to tie-in the road works with the abutting property and to complete alterations to the existing Storm Water Management Facility on the property required as a result of the Region’s fee simple partial taking (as outlined...
in Report PDL-LEG-16-45).

The affected Phase 1 property owner, or its 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 e-mail, to discuss the required acquisitions and have been informed of the Region’s intention to commence the expropriation process, including this Report going forward, to ensure project time lines 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 “C”. 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 keep the project timeline in place. Should a negotiated settlement be reached with property owners and a conveyance of the required acquisition be completed before the Expropriation process is complete, that property will be dropped from the Expropriation process by the Regional Solicitor.

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

The subject lands are shown on the sketch attached as Appendix “A”.

A separate Expropriation Report for Phase 2 of the Fountain Street project from north of Maple Grove Road to Fairway Road/Kossuth Road is currently scheduled for late 2016 or early 2017.

Corporate Strategic Plan:

This Project supports the following two strategic objectives of the Corporate Strategic Plan: to optimize existing and new road capacity to safely manage traffic throughout Waterloo Region, and to develop, promote and integrate active forms of transportation (cycling and walking).

Financial Implications:

The Region’s approved 2016 Transportation Capital Budget also includes $500,000 in 2016 and $13,350,000 in 2017-2020 for Fountain Street North from Maple Grove Road to Kossuth Road (Project 07303) to be funded from the Development Charge Reserve Fund. Sufficient funding for the acquisitions outlined within this report is available in the 2016 project budget.
Other Department Consultations/Concurrence:

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

Attachments

Appendix “A” - Map of subject lands

Appendix “B” – Corporate Profiles

Appendix “C” – Copy of Expropriation Information Sheet

Prepared By: Fiona McCrea, Solicitor, Property

Approved By: Richard Brookes, Acting Regional Solicitor, Director of Legal Services
Appendix “B”

1. 1105 Fountain Street North, Cambridge
   Owner: CP REIT Ontario Properties Limited
   Annual Return: July 30, 2015
   Directors/Officers: John Morrison, Bart Munn, Adam Walsh
   Fee Simple Partial Taking
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 Hearing.

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.
Region of Waterloo
Transportation and Environmental Services
Transportation

To: Chair Tom Galloway and Members of the Planning and Works Committee
Date: November 1, 2016
File Code: T02-01
Subject: Turtle Mortality Issue on Roseville Road (Regional Road 46), Township of North Dumfries

Recommendation: For Information.

Summary:

Barrie’s Lake is a waterbody that is situated in North Dumfries, south of Regional Road 46, Roseville Road, west of Cambridge (Figure 1). Turtles emerge from Barrie’s Lake between April and June of each year and either attempt to lay eggs along the shoulder of the road, or cross Roseville Road. Following nesting, female turtles cross back to Barrie’s Lake, followed by hatchlings later in the season. As a result of the proximity of Barrie’s Lake to the road, a significant number of turtle fatalities are occurring each year. The Region and public are concerned about the turtle mortality along Roseville Road.

In recent years, the Region has implemented a number of mitigation measures to reduce wildlife mortality, including a reduced speed limit, “Wildlife Crossing” signs, installation of turtle nesting beds and the installation of exclusionary fabric fencing. Unfortunately, these measures have had only limited success. In 2016, staff hired a consultant to undertake a comprehensive study to develop a long-term, cost-effective solution to this problem. The consultant’s work plan includes a two-season study to assess existing conditions and will include the development and analysis of various designs for a long-term solution. Prior to finalizing the study and making a recommendation to Council, staff will consult with various stakeholders on the options being considered. Staff plan to present a recommended solution for Council’s consideration in early 2018.
1.0 Background

Barrie’s Lake is a waterbody that is situated in North Dumfries, south of Regional Road 46, Roseville Road, and west of Cambridge (Figure 1). The lake is part of a provincially significant wetland complex (ESPA 57), home to many species of aquatic and terrestrial wildlife and is identified as a Core Environmental Feature in the Region’s Official Plan. Turtles emerge from Barrie’s Lake between April and June of each year and either attempt to lay eggs along the shoulder of the road, or cross Roseville Road. Following nesting, female turtles cross back to Barrie’s Lake, followed by hatchlings later in the season. As a result of the proximity of Barrie’s Lake to the road, a significant number of turtle fatalities are occurring each year. The Region and the public are concerned about the turtle mortality along Roseville Road. While several mitigation measures have been put in place by the Region to reduce wildlife mortality, staff believes that more steps are required over the next few years to deliver a cost effective, long-term solution to further reduce the mortality rate of turtles.

![Figure 1 - Map of Study Area](image-url)
The issue of turtle road mortality along Roseville road was presented to the Planning and Works (P&W) Committee on May 28, 2013 (Report E-13-068/P-13-059). At that time, Council supported recommendations to investigate the feasibility of erecting temporary exclusion fencing and creating suitable turtle breeding habitat along the south side of Roseville Road. A follow-up report was brought to P&W Committee on April 1, 2014 (Report P-14-037) that recommended the construction of eco-passages beneath Roseville Road to allow wildlife to cross in greater numbers when future road improvements are implemented. Road rehabilitation improvements are not planned on Roseville Road in this vicinity within the next 10 years.

To try to address the turtle mortality issue, the Region implemented the following mitigation measures:

- A speed reduction on Roseville Road from 80km/hr to 60km/hr (2013);
- Installation of 4 turtle nesting beds between Barrie’s Lake and the south side of Roseville Road (2014);
- Installation of “Wildlife Crossing” road signage (2014); and

In the spring and summer of 2016, improvements were made to the nesting beds and existing fencing. Staff is aware that these measures have not resolved the issue, but rather are part of a phased approach to reducing wildlife mortality along Roseville Road.

Research conducted by Region staff into wildlife crossing implementations by other agencies, including the Ministry of Transportation, have highlighted several significant findings:

- **Baseline biological data is key:** wildlife crossing solutions need to be based on scientific data, collected at the project site over a few seasons, to accurately determine species present, migration patterns and prevalent crossing locations. While other studies have been completed in the area of Barrie’s Lake (eg. Cambridge West Master Environmental and Servicing Plan, the Laurel Creek Headwaters Environmentally Sensitive Landscape Case Study, there has not been a detailed, site specific analysis of turtle migration patterns between Barrie’s Lake and the lands to the north.

- **Installing wildlife fences and passages does not guarantee success:** In some other installations, the mortality rate actually increased. This was found to have been caused by the type of fencing used and the terrain of the area. The turtles breached the fence in numerous locations, which led to them becoming trapped between the fences on the roadway. By basing the design of potential culverts and fences on site specific data, the effectiveness of wildlife crossings is increased.
- **Ministry Best Practices**: The Ministry of Natural Resources and Forestry (MNRF) is currently working on a Best Practices manual for wildlife crossings, which is expected to be completed in the next year. Staff will continue to work with the Ministry and other subject experts to ensure best practices are incorporated into any mitigation recommendations.

The turtle crossing issue along Roseville Road also has a unique set of circumstances that must be carefully considered and planned for to achieve success:

- Barrie’s Lake is privately owned, as well as other properties in the project area; much of the land believed to be used by turtles during migration and for nesting is also actively farmed;
- Potential solutions could require installation of a large length of fence (2.5 km) which would be difficult and costly to maintain in working order;
- The roadside elevations along Roseville Road make effective fencing installation challenging and drainage issues could potentially flood culverts at crossing times, rendering them ineffective;
- The proposed long-term solution needs to consider potential impacts on other species in the general project area.

Consultation with experts, including MNRF staff, has highlighted the need to have good biological data as a first step to any solution. This need to have good data has guided the Region’s approach to address the issue.

### 2.0 Region Approach to Address the Turtle Mortality Issue

Staff’s approach includes hiring a consultant to conduct a two season study, over the late summer of 2016, and the spring and summer of 2017. This study was initiated on August 15, 2016 and will include:

- Determining what Species at Risk may be present at this specific section of Roseville Road;
- Identifying the exact location of turtle nesting area’s being used;
- Completing terrain and habitat classification mapping;
- Identifying the “hot spots” for turtle road crossings;
- Answering key questions regarding the ability to change turtle migration/road crossing patterns;
- Recognizing and enhancing the current volunteer efforts to assist with turtle road crossings; and

...
• Delivering a final report that will recommend an implementable, long term and cost effective solution.

Prior to finalizing the study and making a recommendation to Council, staff will consult with various stakeholders including local and interested residents, and the MNRF.

3.0 Conclusions and Next Steps

The Region has taken several reasonable steps to address the issue of turtle mortality on Roseville Road near Barrie’s Lake. Staff wish to ensure that any recommended infrastructure implemented such as fencing and or wildlife crossings have the best chance of success in terms of reducing turtle mortality. Over the next two years:

• Detailed studies will be completed (2016/2017);
• A feasibility analysis of various designs, solutions, and costs will be developed. (late 2017);
• Consultation with various stakeholders will be undertaken; and
• Staff will develop a recommended solution for Regional Council consideration.

Staff plan to present the recommended solution to Council in a future report planned for early 2018.

Corporate Strategic Plan:

This project supports the Environment and Sustainable Growth focus area of the Strategic Plan, and in particular strategic objective 3.5 (to preserve, protect and enhance green space, agricultural and environmentally sensitive lands, and Regionally owned forests).

Financial Implications:

The 2016 Transportation Capital Program includes $30,000 for this initial consultant study funded from the Roads Rehabilitation Reserve Fund. Based on the recommendations, timing, and implementation costs for the long term solution from this study, additional funds will be added to the Transportation Capital Program as per Council’s direction as part of future budget deliberations.

Other Department Consultations/Concurrence:

The Planning, Development, and Legislative Services Department and Design and Construction Division were consulted during the preparation of this report.
Attachments

Nil

Prepared By: Rick Nesbitt, Transportation Infrastructure Analyst

Approved By: Thomas Schmidt, Commissioner, Transportation and Environmental Services
Region of Waterloo  
Transportation and Environmental Services  
Transportation

To: Chair Tom Galloway and Members of the Planning and Works Committee  
Date: November 1, 2016  
File Code: T12-30  
Subject: LED Street Light Conversion - Update

Recommendation:
For information

Summary:

The Region is working collaboratively, as part of a Working Group of all eight municipalities, to undertake the conversion of all 43,000 existing High-Pressure Sodium (HPS) standard street lights on Region and area municipality roads to state-of-the-art Light Emitting Diode (LED) street light technology.

The Working Group developed an implementation and procurement plan for the project, with the Region taking the lead on the design and contract administration. Prior to tendering this conversion contract, the Region undertook a pre-qualification of luminaire vendors to ensure that only luminaires that met stringent specifications of design and shielding could be considered as part of the tenders for the conversion contract. The specifications used to define the fixture to be used in this contract meet the International Dark-Sky Associations (IDA) definition for shielding.

During the design phase, staff received concerns about potential night-time light pollution and potential negative effects on human health associated with LED lights. Through discussions with some of the concerned residents and consultation with the Region’s Public Health Department, and based on staff’s review of the specifications used for this contract, staff is confident that the issues raised have been adequately addressed.
LED street lights use far less energy than conventional HPS lights and the fixtures last longer before they require replacement. As a result of the conversion of the Region’s 8300 street lights, the Region is expected to save $550,000 annually.

The tender for this contract closed on October 18, 2016. Staff is currently reviewing the bid submissions and plan to recommend a contract award to Regional Council in November, 2016. Construction is planned to commence in late 2016 and be completed by December 31, 2017.

Report:

1.0 Background

In January 2016, Regional Transportation staff presented Report TES-TRP-16-02 to the Regional Planning and Works Committee to update the Committee on the process to convert 43,000 standard street lights on area municipality and Regional roads in the Region of Waterloo to more efficient Light Emitting Diode (LED) street light technology. The project does not include converting specialized decorative street lighting that is typically owned and maintained by the area municipalities at this time. The conversion of decorative street lighting will occur at a later date and will be administered by local area municipality staff. Currently area municipality and Regional roads are illuminated using high-pressure sodium (HPS) street light technology. The current wattage used to energize HPS street lights typically ranges between 70 and 400 watts per light depending on the roadway configuration and or type of roadway. The Region owns approximately 8,300 of the 43,000 street lights throughout the Region. The remaining 35,000 street lights are split between the 7 area municipalities, with the highest proportion of street lights being owned and situated on local roadways within the three cities of Kitchener, Cambridge and Waterloo.

LED street lights use far less energy than conventional HPS street lights and the fixtures last longer before they require replacement. The Region is collaborating with the area municipalities to convert the entire complement of standard street lights in the region to LED technology to reduce energy consumption, energy costs and maintenance costs. The reduction in energy consumption will result in a significant reduction in greenhouse gas emissions associated with the street light network. In late 2015, the Region and area municipalities formed a Working Group and jointly decided to collaborate on this project to optimize economy of scale, and to ensure that a consistent street light technology would be used throughout the Region. The Working Group also jointly decided that the Region of Waterloo would take the lead on this project including the tendering and administration of the illumination conversion contract.

LED technology has been evolving over the last 10 to 15 years and the cost of the technology is now attractive enough to “pay itself back” in 6 to 8 years through energy
cost savings. The technology has been evolving rapidly in terms of efficiency, reliability and the way the light is broadcasted. The “colour” of light has been a particular focus of LED street lights development and has also been evolving over time.

Lighting “colour” is an important aspect of specifying lighting. All white light includes a spectrum of red, yellow and blue lights. This can be observed when a rainbow appears in the sky. Different luminaries will produce light with different proportions of each of these three primary colours. This proportion of red, yellow and blue light is characterized by the Correlated Colour Temperature (CCT) index and is measured on the Kelvin (K) scale. The Kelvin scale reflects the equivalent colour of a metal object heated to that temperature. The LED’s are cool to the touch and the Kelvin scale has nothing to do with the operating temperature of the LED itself. The first generation of LED outdoor lighting are “4000K” LED units. By comparison, the CCT associated with daylight is 6500K and current High-Pressure Sodium (HPS) units have a CCT of 2100K. Please refer to the diagram in Appendix A for a graphic representing the CCT “colour” scale.

As part of the project, adaptive street light technology is also being planned to be used within the boundary of the City of Kitchener. The Region did include adaptive street light technology as a provisional item for Regional roads within the boundary of Kitchener in the tender. Regional staff is currently contemplating including this technology on Regional roads in the City of Kitchener and will advise Regional Council accordingly as part of the contract award recommendation. The other local municipalities have opted not to acquire the adaptive street light technology at this time, however the project provides these municipalities the ability to retrofit the LED luminaires with adaptive control in the future. Adaptive street light technology would allow the street lights to function as a communication network by supplementing street lights with communication devices that can be used to transmit data across the geographic area. This technology is expandable to other areas of the Region, but requires the street lights to be furnished with appropriate communication devices and other infrastructure to enable the transmission of data. Once in place, the network of adaptive street lights can be monitored for failures, energy use, and each street light can be configured independently, including the ability to be dimmed. The network can also be used to monitor independent household gas and water meters. The street light network may also be used for future Internet applications. This is known as the Internet-of-Things (IOT) which can include but not be limited to monitoring traffic and weather conditions, assisting emergency services, and monitoring traffic control devices, etc.

2.0 Procurement Strategy

The Region, on behalf of the Working Group, undertook a prequalification phase prior to issuing a tender in order to prequalify both the street light fixtures and the adaptive
street light technology. Prequalifying vendors was viewed by the Working Group as the best way to determine if there were a sufficient number of vendors that could meet the specifications developed by the Working Group to ensure the Region would receive a sufficient number of competitive bids. The prequalification process yielded a sufficient list of qualified street light and adaptive street light technology vendors. The tender has now been issued and allows any contractor to submit a tender to the Region as long as it includes one of the prequalified street light and one of the prequalified adaptive street light vendors. In addition to the supply and installation cost of the new luminaries, the tender evaluation will also consider the overall energy consumption cost of the street light network over its anticipated lifecycle. This strategy will help procure an LED street light network that results in the overall lowest cost over the lifetime of the network.

3.0 Concerns Received from Local Residents

3.1 General

During the planning and design phases of this project, staff received concerns from local residents regarding the potential negative impacts of LED street lighting. The concerns primarily came from members of the Kitchener-Waterloo Royal Astronomical Society of Canada (KWRASC). Some of these concerned residents referred to published material from the International Dark-Sky Association (IDA).

Staff had numerous discussions and met with some of the individuals to understand their concerns. Based on staff’s understanding, the prime concerns of these individuals are as follows:

1. The LED street lights could increase light pollution into the sky and degrade the ability to observe the night-time sky;

2. Light emitted from LED street lights could trespass onto adjacent homeowner property and interfere with sleep patterns; and

3. LED street lights could increase glare at night which could lead to increased traffic collisions.

In addition, some residents also expressed concerns about the amount of blue light emitted by LED street lights and how excessive amounts of blue light could have negative health effects on humans and animals. Some residents cited a recent American Medical Association (AMA) study of the potential health effects of LED street lighting and these residents expressed concerns that the Region’s LED street lights would not be in conformance with the recommendations of the recent AMA study. Some of the residents cited recent LED street lighting conversions in US cities where post-construction retrofits were required by the municipalities to address resident concerns about light trespass and glare.
3.2. Staff Responses to Residents Concerns

As part of the development of the light specifications for this project, staff included the following requirements for the pre-qualification of luminaire vendors for this project:

1. Acceptable LED luminaires are to have a maximum 3000K CCT to minimize the amount of blue light generated. 3000K LED’s are considered to be second-generation technology and generate a lower concentration of blue light when compared to the 4000K LED’s that have been installed as part of many recent retrofit projects in North America;

2. Lighting fixtures are to be fully “shielded” so as not to emit any light above 90 degrees to the horizontal. Lighting fixtures are to be configured to limit the amount of light trespassing onto private property; and

3. Luminaire designs are to minimize “over-lighting” and glare.

Measures 1 and 2 noted above are consistent with requirements of the IDA “Fixture Seal of Approval” to help mitigate night-time light pollution. In addition to the measures noted above, the adaptive control feature for the luminaries in the City of Kitchener would also provide the ability to dim lights during non-peak periods. In addition to the potential dimming to address light trespass and glare, concerns could also be addressed in other ways including tilting the luminaire head or specific additional shielding.

3.3. Region of Waterloo Public Health Review of AMA study

The Region’s Public Health staff reviewed the AMA Study and noted the following recommendations therein:

- “That our American Medical Association (AMA) support the proper conversion to community-based Light Emitting Diode (LED) lighting, which reduces energy consumption and decreases the use of fossil fuels.

- That our AMA encourage minimizing and controlling blue-rich environmental lighting by using the lowest emission of blue light possible to reduce glare.

- That our AMA encourage the use of 3,000K or lower lighting for outdoor installations such as roadways. All LED lighting should be properly shielded to minimize glare and detrimental human and environmental effects, and consideration should be given to utilize the ability of LED lighting to be dimmed for off-peak time periods.”

Based on the review of the AMA study, Public Health staff advised that the Region’s planned LED conversion appears to meet the intent of AMA recommendations. Please refer to Appendix B for Public Health Briefing Note.
3.4. Region LED Pilot Project

In 2014, the Region converted 29 street lights on Frederick street between Lancaster Street and Edna Street from HPS to 4000K LED luminaries. After installation of the new LED luminaires, adjacent residents were surveyed to assess any concerns about the new lighting and no concerns were noted. During the nearly two years since the conversion to LED’s the Region has received no concerns from the public regarding light pollution, light trespassing or glare. Staff also monitored collisions along this stretch of Frederick Street over the last two years and found no evidence of increased collisions due to glare.

3.5. Other Municipality Experience

The Region of Waterloo and its partnering area municipalities would not be the first agencies to convert an HPS street light network or portion of a network to LED technology. Other municipalities in Ontario having done so already include the City of Mississauga, the Town of Halton Hills, the City of Ottawa, the City of Hamilton, the City of London, the Town of Welland and the City of St. Catharines. In almost every case, the preceding conversions involved using LED Street lights with CCT of 4000K or higher. Regional staff consulted with staff from these municipalities and was advised that complaints concerning light trespass, glare or biological concerns were very limited. Most agreed that light trespass issues were significantly reduced when compared to the existing HPS lights and in rare circumstances light trespass issues were easily resolved through the tilting of the fixture or customized shielding. One municipality advised that it received a complaint that the project resulted in less consistent levels of illumination over the length of a roadway which was attributed to how LED fixtures cast light in more concentrated areas as opposed to casting it more outward like HPS street lights.

3.6. Davis, California Experience

The City of Davis, California, originally made a decision to retrofit its network of approximately 2600 street lights with LED fixtures that produced CCT of 4000K. Installation of the new LED street lights began in January 2014. By May of that year, following the installation of approximately 1400 luminaires, City officials received sufficient complaints from the public to warrant a review by City Council which voted to put the project on hold. The majority of complaints were focused on the new fixtures being too bright, producing too much glare and light trespass, increasing sky glow and light pollution and resulting in potential negative impacts on human health and wildlife. In October 2014 a decision was made to retrofit 650 fixtures in residential areas and all remaining LED fixtures with LED fixtures having a 2700 CCT.

3.7. Conclusions

Based on the specifications developed for the prequalification of LED luminaries,
reviews by Region Public Health staff, consultation with concerned residents, the experience of the Region and other municipalities and the mitigation measures available to address concerns, staff are confident that it has minimized the potential negative impacts of light pollution, light trespass, glare and health affects of the proposed conversion to LED street lights. Through the construction phase of this project, staff will continue to work with concerned residents to address the above-noted and any additional concerns.

4.0 Estimated Cost, Financial Incentives and Project Schedule

Table 1 below summarizes the current annual operating and maintenance costs of 8,300 HPS street lights on Regional roads and the future anticipated annual operating and maintenance costs per year of future LED street lights. Regional staff also anticipates that the Region would be eligible to receive an Ontario Power Authority incentive of $190,000 in 2017 for its proportion of the conversion program. It is estimated that the overall costs to the Region to retrofit all 8,300 street lights would be approximately $4,100,000.

Table 1 – Current and Future Anticipated Operating and Maintenance Costs

<table>
<thead>
<tr>
<th></th>
<th>Operating Costs per Year</th>
<th>Maintenance Costs per Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current (HPS)</td>
<td>$1,200,000</td>
<td>$300,000</td>
</tr>
<tr>
<td>Future (LED)</td>
<td>$750,000</td>
<td>$200,000</td>
</tr>
<tr>
<td>Anticipated Savings</td>
<td>$450,000</td>
<td>$100,000</td>
</tr>
</tbody>
</table>

The estimated overall cost savings is expected to be approximately $550,000 per year. Based on the estimated cost savings per year, it is anticipated that the program would pay itself back in approximately 8 years. The estimated lifespan of the LED luminaries is 15 years.

The tender for the Region-wide LED conversion contract was issued on September 12, 2016 and closed on October 18, 2016. Staff are currently reviewing the bid submissions and are planning to recommend a contract award to Regional Council in November, 2016. Construction start is anticipated in December, 2016 with an anticipated completion by December 31, 2017.

Corporate Strategic Plan:

Conversion of the Region’s HPS street lights to LED technology supports the following objectives of the Corporate Strategic Plan:

2.1 Create a public transportation network that is integrated, accessible, affordable
and sustainable.

3.3. Enhance efforts to improve air quality

5.4 Ensure Regional programs and services are efficient, effective and provide value for money.

Financial Implications:

The cost to convert the Region’s 8,300 HPS luminaires is estimated to be approximately $4,100,000. $4,100,000 has been included in the 2016 Transportation Capital Program to be 100% funded from the Region’s Road Rehabilitation Reserve Fund.

Other Department Consultations/Concurrence:

This report has been shared with staff from Public Health and Emergency Services.

Attachments

Appendix A – CCT Colour Scale

Appendix B - Public Health Briefing Note

Prepared By: Bob Henderson, Manager, Transportation Engineering

Approved By: Thomas Schmidt, Commissioner Transportation and Environmental Services
Region of Waterloo
Public Health and Emergency Services
"Building Healthy and Supportive Communities in Partnership"

BRIEFING NOTE

To: Dr. Liana Nolan
From: Health Protection and Investigation
Date: July 28th, 2016
Re: LED (Light Emitting Diode) lights and health effects

TOPIC AND PURPOSE

- Region of Waterloo Transportation and Environmental Services Department is planning on replacing conventional street lights (i.e. high pressure sodium lights) in the Region with LED lights
- LED are more efficient than the street lights in use currently, and have the potential for significant cost savings
- High amounts of blue light emitted from LED lights can cause retinal damage and discomfort, and disturb the circadian rhythm, including sleep
- The American Medical Association (AMA) has released a position paper concerning LED lighting, and Region of Waterloo Councilors are seeking the Public Health Department’s perspective on this issue

RECOMMENDATION

- 3000K or lower LED lights that are shielded and dimmed during off-peak times are acceptable for use as street lights based on available health evidence
- Updates in the research evidence should be monitored and considered as it becomes available

KEY CONSIDERATIONS

Key considerations include economic/financial, environmental and health implications. LED lights are 50% more energy efficient and last 2-4 times longer than conventional street lights (i.e. high pressure sodium lights).\(^1\) This creates a financial incentive for people, governments and businesses to move towards replacing incandescent or high pressure sodium lights with LEDs. An indirect benefit to health is associated with the reduced carbon emissions of LED lighting relative to current lighting.

LED lights emit large amounts of blue light, which passes through a yellow phosphor coating to create the white light that we see.\(^2\) Despite the white appearance, LED lights emit a strong peak at blue wavelengths. In contrast, high pressure sodium light bulbs emit warmer colours from the red spectrum. Human eyes are more sensitive to blue lights because they scatter more within the eye and cause glare effects, which has implications for road safety.\(^3\),\(^4\) High intensity blue light also affects the retina and alters the circadian rhythm (i.e. sleep patterns) with the potential to contribute to chronic diseases.\(^1\),\(^5\) The likelihood of adverse effects depends on several factors.

Document Number: 2177189
such as length and frequency of exposure. For example, truck drivers who drive long distances at night for a prolonged period are more likely to see circadian rhythm disruptions than a person who occasionally drives at night.

Discomfort experienced by citizens from 4000K unshielded LEDS lights in Davis, Ca and Seattle, WA has been reported in the media. Some described the lighting as having a “prison atmosphere” and some reported that they needed to buy thicker curtains to block the street lights. These effects can be minimized by proper shielding and using 3000K or lower colour temperature for LED lights. Increased light pollution from the use of LED lights can also negatively impact the environment, depending on characteristics of the light such as colour and degree of shielding. For example, it has been reported that excessive lighting can interfere with the ability of birds and turtle hatchlings to use moonlight to navigate.

The negative health and environmental effects of LED lighting can be reduced by proper design, engineering and use. Some characteristics of LED lights that can be manipulated are colour temperature, amount of shielding, and brightness.

- **Correlated Color Temperature**: Colour emitted by any light source is often expressed as a measure of temperature in Kelvin. Light sources with higher temperatures (or higher Kelvin value) emit more blue light than light sources with lower temperatures, which emit more red light. Current street lights, made up of high pressure sodium lights, are 2100K (considered low Kelvin value) and emit light that is in the red spectrum. First generation LED lights are 4000K and emit high amounts of blue light. Recently LED lights were created with colour temperature of 3000K or lower. 3000K LED lights emit slightly less (9%) blue light and are 3% less energy-efficient than 4000K lights. The AMA recommends the use of 3000K or lower LED lights for streets.

- **Shielding**: Shielding (Figure 2) is a technique that allows the light to be directed and maintained at ground level. Looking directly at the glare from an unshielded LED light, which is a bright point source, can cause significant fatigue and glare. Further, unshielded lights send much of their light away from the ground, and contribute to light pollution. The AMA recommends shielding be designed to ensure that no light shines above 80° degrees from the horizontal (Figure 2).

- **Brightness (Lumen output)**: When replacing light fixtures, an important consideration would be to ensure the new LED fixture is not brighter than necessary for the intended purpose. If available, guidelines or standards addressing acceptable levels of brightness should be consulted.

- **Adaptive controls**: Dimmers, timers and motion sensors can be used to trigger lights to come on only when they are needed (for example, between evening and morning twilight, when traffic is approaching, or when motion is detected at night in a parking lot). The AMA recommends that road lights must be dimmed off during off-peak periods.
FIGURES

**Figure 1**: Relationship between colour emitted and temperature in Kelvin scale. Modified from http://darksky.org/lighting/led-practical-guide/

**Figure 2**: Effects of shielding on light transmission. Modified from http://www.goldendaleobservatory.com/light-pollution-backup.html
References


Region of Waterloo
Transportation & Environmental Services
Waste Management

To: Chair Tom Galloway and Members of the Planning and Works Committee
Date: November 1, 2016  File Code: E33-30A
Subject: Progress Report: Curbside Waste Collection Policy Changes Implementation Plan

Recommendation: For Information

Summary: Nil

Report:

In April 2016, to support the launch of the new curbside waste collection changes, Regional Council approved report TES-WMS-16-03, Curbside Waste Collection Policy Changes Implementation Plan. This plan includes a significant public outreach and education plan, a garbage tag program and additional resources to support the transition to the new services that come into effect March 2017. Regional Council requested that staff provide updates on the various elements of the plan.

Blue box giveaway and continued distribution

To support citizen transition to the new curbside waste collection services, Council approved the purchase of approximately 60,000 large (89 litre) “Containers Only” blue boxes to provide to interested residents. To launch their availability, a blue box giveaway event was held on Saturday, September 17, 2016 at the Cambridge Centre Mall, Conestoga Mall in Waterloo, and the Kitchener Memorial Auditorium. This event was modelled after the successful rain barrel and composter giveaways of the past which has attracted between 1,000 and 5,000 citizens. Anticipating significant interest, staff ordered 17,000 blue boxes for the event however a last minute equipment failure at the manufacturer resulted in 5,000 fewer boxes being delivered to the event locations.
In spite of this, the event was a success with all 12,000 available boxes distributed and cash donations in excess of $11,000 and food in excess of 8,000 pounds donated to the two local food banks.

Staff has now received the first of several shipments of blue boxes, and they are available for free pick-up at the Cambridge and Waterloo Waste Management sites. A portion of the blue box shipments are also being made available to the four Townships, and the next shipment will be delivered to them in early November for distribution as they deem appropriate. Communication of the availability of the blue boxes will be provided through the Region’s website, the Service First Call Centre and social media, as long as supplies last.

It is specifically noted that these larger blue boxes are *not* mandatory. Many households recycle fully and already have sufficient blue boxes, and can continue to use their existing blue boxes as they transition to the new waste collection services. While garbage collection is moving to every two week collection in March 2017, blue box and green bin collection continues to be collected every week.

**Education and promotion campaign**

The education and promotion Rethink Waste campaign follows the concept of “get ready, get set, go”, with the campaign just completing the get ready phase of providing general information on the new services, updating the current website pages, and responding to general questions. The second “get set” phase launches this week, and will include the following components:

- New website pages have been developed specific to the changes to help citizens find the information they need to be successful, including responses to frequently asked questions and blue box availability;

- Located on the new website pages, a geographic information system (GIS) locator specific to the March 2017 new services launch. Citizens can type in their individual property address, search to see if their collection day of the week changes, and what curbside services they will receive;

- Newspaper ads in local papers highlighting the service level changes, how to find out if your collection day changes, and information on the new website pages;

- Radio spots across several stations letting citizens know of the changes;

- Direct mail delivered to each eligible household in Waterloo Region;

- Floor model pop-up banners at some municipal facilities highlighting new service information and where to find more details; and

- Facebook and social media updates.

Staff is also working with area municipal colleagues to use their public communication channels to promote the upcoming changes to citizens.
The final “go” phase will begin in January 2017 and continues the above-mentioned activities, and launches the following:

- Videos on the Region’s website demonstrating new services, proper placement, what to do with diapers, and details of the garbage tag program; and
- Delivery of annual calendars to every eligible household in Waterloo Region. Similar to what has been available in the townships for several years, this calendar will include all the necessary information for successful waste collection, including monthly calendar pages specifying the every two week garbage collection schedule and collection day maps.

Attachment A provides a draft page of the collection calendar. This format was preferred by focus groups to show the service and collection day changes.

**Garbage tag program**

Regional Council recognized that there are occasions when citizens may want to place more than the allowable garbage bag/container limit out for curbside collection and therefore approved a garbage tag program. This garbage tag program provides the convenience of curbside collection, and places the cost on the generator of the waste, rather than spreading the collection cost across all tax payers in Waterloo Region. Initially, all eligible households will receive ten free garbage tags with their collection calendar to assist with the transition to the new service levels.

At the April 12, 2016 Planning and Works Committee, Regional Councillors recommended that staff approach area municipalities to sell the tags through their local municipal facilities. In this regard, the Region has partnered with all area municipalities and garbage tags will be more readily available at numerous locations across Waterloo Region. Each garbage tag will be $2 and will be sold in sheets of five, have instructions/education information on the back of each sheet, have no expiry date, be individually numbered for inventory control and be a neon orange colour for visibility. They will be available for purchase approximately two weeks before the new services begin. Attachment B outlines where garbage tags will be available for purchase in each municipality, as well as provides a sample of a sheet of garbage tags.

Regional Council also encouraged an online purchase option, and Corporate Services has committed to having a system in place before the March 2017 launch. Details of the online option will be presented in a future report.

**Service expansion in the townships**

Integral to the new waste collection services is that all eligible citizens have access to the same collection services, no matter where they live in Waterloo Region. While all citizens in the townships currently receive garbage collection, some other services vary
such as blue box collection every two weeks and no access to green bin or yard waste collection. Beginning in March 2017, all townships residents will have weekly blue box and green bin collection and seasonal yard waste and Christmas tree collection. In January 2017, a green bin kit which includes a green bin, a kitchen catcher, education materials and sample paper and compostable plastic bag liners will be delivered to each home that currently does not receive green bin service. Addressed mail notices and advertisements in the local papers will announce the details on the new services and delivery schedules.

Changes to collection days and schedules

To encourage efficiency and cost savings, the waste collection tender included the option of changing the days of the week when collection services take place. Miller Waste Systems, the company that will be providing collection services in the cities of Cambridge, Kitchener and Waterloo, has opted to keep the existing days of collection with the exception of a small area in Kitchener. In March 2017, approximately 3,000 homes in Kitchener will have their collection day change from Wednesday to Friday. Citizens will be encouraged to use the new GIS locator to see if they are impacted by the changes, and the new waste collection calendars will include maps that clearly indicate the collection day changes. Maps will also be available on the Region’s website.

Emterra Environmental, the company that will be providing collection services in the townships of North Dumfries, Wellesley, Wilmot and Woolwich, will be changing collection days, affecting all citizens in those municipalities. The new days, effective March 2017, are as follows:

<table>
<thead>
<tr>
<th>MUNICIPALITY</th>
<th>CURRENT COLLECTION DAYS</th>
<th>NEW DAY(S), EFFECTIVE MARCH 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>North Dumfries</td>
<td>Wednesday, Thursday, Friday</td>
<td>Monday only</td>
</tr>
<tr>
<td>Wellesley</td>
<td>Monday, Tuesday</td>
<td>Wednesday only</td>
</tr>
<tr>
<td>Wilmot</td>
<td>Monday, Tuesday, Wednesday, Thursday, Friday</td>
<td>Monday, Tuesday and Wednesday *</td>
</tr>
<tr>
<td>Woolwich</td>
<td>Monday, Tuesday, Wednesday, Thursday, Friday</td>
<td>Thursday and Friday*</td>
</tr>
</tbody>
</table>

*Note: the current collection day of the week does not necessarily equate to the same collection day with the new services (i.e. a citizen currently with Monday collection will likely not have Monday collection with the new services).
As township citizens will be most affected by changes to collection days, staff will use newspaper ads in local papers to ensure citizens are informed of the changes. As well, collection days will be clearly laid out in the 2017 collection calendars and in the new GIS system.

Appendix C maps out the affected area in the city of Kitchener and the changes in the four townships.

The every two week collection of garbage and bulky items will begin March 6, 2017 with the city of Kitchener and the four townships. The cities of Cambridge and Waterloo will begin garbage and bulky item collection the week of March 13, 2017.

A key message to citizens will be to check their collection days and schedule by visiting the new GIS system and typing in their address. The system will clearly detail the collection day and the waste collection services available to their property. Should citizens decide to call the Region, our 24/7 Service First Call Centre is able to respond to inquiries on the new service levels and programs, including changes to the collection days.

Other updates

- Staff has contacted area municipalities to schedule presentations to their Councils over the next few months on the waste collection changes.
- Staff is working on a draft waste management bylaw in cooperation with Legal Services and plans to present it to this Committee in advance of the new contract start.
- Staff is developing contractor and driver education programs on curbside collection services and performance expectations.

Staff intend to provide another progress report in January 2017.

Corporate Strategic Plan:

This Report has been prepared to be consistent with the Corporate Strategic Objective of Environment and Sustainable Growth, particularly 3.1 Increase the amount of waste diverted from the landfill, and Corporate Strategic Objective of Responsive and Engaging Government Services, particularly 5.2 Provide excellent citizen centred services.

Financial Implications:

One-time start-up costs to provide support to citizens with the transition to the new service levels at the start of the new collection contract will be funded from the tax
stabilization fund in 2016. The 2017 and 2018 costs will be funded from the savings relating to the new waste collection contract as outlined in report TES-WMS-16-03 titled “Curbside Waste Collection Policy Changes Implementation Plan”.

Other Department Consultations/Concurrence:

Staff from the Corporate Services and Planning, Development & Legislative Services were consulted in the preparation of this report.

Attachments

Attachment A - Sample page of the waste collection calendar
Attachment B - Locations to purchase garbage tags, sample garbage tag sheet
Attachment C - City of Kitchener – map of affected area (from Wednesday to Friday collection)

Collection day changes in the four Townships

Prepared By: Susan White, Manager of Waste Collection and Diversion

Approved By: Thomas Schmidt, Commissioner, Transportation and Environmental Services
APPENDIX A – Sample page of the waste collection calendar

June 2017

<table>
<thead>
<tr>
<th>SUNDAY</th>
<th>MONDAY</th>
<th>TUESDAY</th>
<th>WEDNESDAY</th>
<th>THURSDAY</th>
<th>FRIDAY</th>
<th>SATURDAY</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Invite green bin to your backyard BBQ. Green bin food scraps and paper plates/napkins and let them be recycled into compost. Reducing waste is easy!</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
<td>10</td>
</tr>
<tr>
<td>CW</td>
<td>Garbage, bulky items/appliances, green bin, blue box</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>KT</td>
<td>Yard waste, green bin and blue box only</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>12</td>
<td>13</td>
<td>14</td>
<td>15</td>
<td>16</td>
<td>17</td>
</tr>
<tr>
<td>CW</td>
<td>Yard waste, green bin and blue box only</td>
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<tr>
<td>KT</td>
<td>Garbage, bulky items/appliances, green bin, blue box</td>
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<tr>
<td>18</td>
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<td>Yard waste, green bin and blue box only</td>
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</tr>
<tr>
<td>CW</td>
<td>Yard waste, green bin and blue box only</td>
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<tr>
<td>KT</td>
<td>Garbage, bulky items/appliances, green bin, blue box</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Cambridge and Waterloo

Kitchener, North Dumfries, Wellesley, Wilmot and Woolwich Townships
APPENDIX B – Locations – sale of garbage tags and sample sheet of five bag tags

Cambridge

Cambridge City Hall
John Dolson Centre (pool)
W.G. Johnson Centre (pool, part of the Senior’s Rec. Centre)
Allan Reuter Centre
David Durward Centre
GE (Ted) Wake Lounge
William E. Paulter Centre
Cambridge Waste Management Centre
Ainslie Street Transit Terminal
Region of Waterloo, Public Health

Kitchener

Kitchener City Hall
Breithaupt Centre
Bridgeport Community Centre
Centreville Chicopee Community Centre
Chandler Mowat Community Centre
Country Hill Community Centre
Doon Pioneer Park Community Centre
Downtown Community Centre
Forest Heights Community Centre
Kingsdale Community Centre
Mill Courtland Community Centre
Rockway Community Centre
Stanley Park Community Centre
Victoria Hills Community Centre
Williamsburg Community Centre
Charles Street Transit Terminal
Region of Waterloo Headquarters

North Dumfries

North Dumfries Community Complex
Regional Library, Ayr Branch
Waterloo

Waterloo City Hall
RIM Park
Waterloo Memorial Recreation Complex
Waterloo Service Centre
Region of Waterloo Public Health
Waterloo Waste Management Centre

Wellesley

Wellesley Township Office
Regional Libraries
  - Linwood Branch
  - St. Clements Branch
  - Wellesley Branch

Wilmot

Wilmot Township Office
Wilmot Recreational Complex
Regional Library
  - Baden Branch
  - New Dundee Branch
  - New Hamburg Branch

Woolwich

Woolwich Township Office
Woolwich Memorial Centre Recreation Complex
Regional Library
  - Bloomingdale Branch
  - Elmira Branch
  - St. Jacobs Branch
Sample sheet of five garbage tags and education information on the back of the sheet

The Garbage Tag program

Tags will allow you to set out garbage for curbside collection that is over the limit. Please know your limit and tag each additional bag/can. See table below:

<table>
<thead>
<tr>
<th>Type of property</th>
<th>Set out maximum limit every two weeks (does not require a tag)</th>
<th>Put a tag on...</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single family homes and each unit in a duplex</td>
<td>Four* untagged garbage bags/cans per property</td>
<td>The 5th, and each additional bag/can</td>
</tr>
<tr>
<td>Small apartment buildings (three to six units)</td>
<td>Ten* untagged bags per property</td>
<td>The 11th, and each additional bag/can</td>
</tr>
</tbody>
</table>

How to use:

**Garbage bags:** Tie your garbage bag closed. **Wrap** the garbage tag around the neck of the bag and stick tag ends together.

**Garbage cans:** Place the garbage tag on the very top item in your garbage can, not on the can. If a tag is directly on your garbage can, it will not be collected.

**Not for use in any other program.** Please do not apply to your blue box, bulky item, green bin, or yard waste.

*Garbage set out limits may be reduced in the future.

Tags do not expire and are non-refundable. For more information visit www.regionofwaterloo.ca/waste or call 519-575-4400  TTY 519-575-4608
APPENDIX C – City of Kitchener – map of affected area (from Wednesday to Friday collection)
Appendix C - Collection day changes in the four Townships
Region of Waterloo
Transportation and Environmental Services
Water Services

To: Chair Tom Galloway and Members of the Planning and Works Committee
Date: November 1, 2016
File Code: E07-40
Subject: Outdoor Water Conservation Program Update

Recommendation:
That the Region of Waterloo distribute 2,400 rain barrels at a cost of $40 per unit, promote low water use landscaping, and enforce By-law 07-069, A By-law Respecting the Conservation of Water in 2017; as detailed in Report TES-WAS-16-19.1.

Summary:
The Outdoor Water Conservation Program saves an average 400 million litres of water per year, which is enough drinking water to supply the needs of nearly 2,000 households in Waterloo Region. Current programs delivered under this project include rain barrel distribution, landscaping promotion, and the Water Conservation By-law. A staff recommendation to continue the program in 2017 was endorsed by the Water Efficiency Advisory Committee on September 27, 2016. The comprehensive program will include the sale of 2,400 rain barrels at a cost of $40 each.

Report:
The Region of Waterloo has been delivering water conservation and efficiency programs since 1974. Since the first Water Efficiency Master Plan (WEMP) in 1998, aggressive water saving goals and targets for all sectors of the community were set and exceeded. Under the third WEMP, 2015 – 2025, the goal is to reach 1,370 million litres per year of water savings through a variety of programs and incentives that target commercial, industrial, institutional (CII), and residential sectors. An important part of the WEMP is to promote outdoor water conservation.
Reducing Peak Demands through Water Conservation

Drinking water demands increase during the warmer months as property owners irrigate lawns and gardens, do household maintenance, and fill swimming pools. When left unchecked, maximum water demands have exceeded average demand days by 45 per cent. High peak demands will reduce water in reservoirs and tax water supply infrastructure that draws from the Grand River and a complex network of wells. In order to reduce peak demands, Water Services has employed three main tactics:

1. Distributing discount cost rain barrels.
2. Promoting landscapes that require less irrigation.
3. Implementing the Water Conservation By-law.

Rain Barrel Distribution

Since 2001, the Region has distributed more than 50,000 rain barrels through annual sales. Residents using these barrels save an estimated 55 million litres of drinking water each year.

In addition to water savings, rain barrel distributions benefit the community by:

- Increasing public awareness about the importance of water conservation;
- Encouraging and supporting participation in the Water Conservation By-law;
- Promoting a conservation ethic that leads to other water saving practices;
- Helping to slow storm water flows going to sewer during rainfall events.

With Council approval, a sale of 2,400 200-litre rain barrels was held Saturday, May 14, 2016 at Cambridge Centre, Fairview, and Conestoga Malls (TES-WAS-15-38.1). All but 80 units were sold that Saturday at a cost of $40 each. The remaining units were sold soon after from Waterloo Region Operations Centre on Maple Grove Road. The use of 2,400 barrels will save an estimated 2.9 million litres of drinking water per year.

With the success and positive public response from the 2016 rain barrel distribution, it is recommended that Waterloo Region exercises the option to purchase and sell another 2,400 200-litre rain barrels in 2017 at a cost of $40 each. The contractor, price, and distribution method will be the same as in 2016 (TES-WAS-15-38.1).

Promoting Water Efficient Landscaping

Waterloo Region encourages residents to adopt water efficient landscapes that need less irrigation. Often referred to as Xeriscaping or Naturescaping, these methods encourage the use of alternative ground covers, plantings, designs, and watering practices that save water.
Waterloo Region delivered its 10th annual Naturescaping seminar series during April 2016. These popular seminars were offered at five locations across the Region and attracted a record 592 people. The free seminars feature well-known gardening experts that focus on a variety of topics. Water Services staff also attend the events to provide information about all Water Efficiency programs.

**Table 1: 2007 – 2016 Naturescaping Seminar Totals**

<table>
<thead>
<tr>
<th>Venue Locations</th>
<th>Number of Seminars</th>
<th>Number of Attendees</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kitchener</td>
<td>22</td>
<td>1,324</td>
</tr>
<tr>
<td>Townships</td>
<td>19</td>
<td>1,028</td>
</tr>
<tr>
<td>Cambridge</td>
<td>10</td>
<td>687</td>
</tr>
<tr>
<td>Waterloo</td>
<td>8</td>
<td>879</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>59</strong></td>
<td><strong>3,918</strong></td>
</tr>
</tbody>
</table>

As detailed in Table 1, a total of 3,918 residents have attended naturescaping seminars since 2007. Annual attendance has more than doubled since 2007, when there were 244 registrants. To accommodate the growth in attendance, seminar venues have been shifted away from garden centres to larger community centres. The 2016 seminars were held at Lion’s Arena, Kitchener; RIM Park, Waterloo; Stanley Park Community Centre, Kitchener; St. Jacobs Country Gardens; and Cambridge Centre for the Arts. These popular naturescaping seminars will continue in 2017 and beyond.

**Water Conservation By-law Update**

The most effective outdoor water conservation program delivered by Waterloo Region is “By-law 07-069, A By-law Respecting the Conservation of Water” (with amendments). The by-law was written and approved by Council in 2003, was tested for two weeks in 2004 and has been in effect from May to September every year since 2005. The Water Conservation By-law allows property owners to water lawns only once per week on designated weekdays, during specific times, and sets out rules for other discretionary uses like vehicle washing, pool filling and decorative fountain usage (see Attachment A).

The Water Conservation By-law was brought into effect for the following reasons:

- Very high peak water demands in the summer
• Reservoirs being drained quickly, posing risks to fire fighting and drinking water supply
• Limited sources of new water
• Ineffective local lawn watering by-laws
• Stressed water supply systems

The Water Conservation By-Law is a three-stage by-law. Stage 1 defers to local municipal lawn watering by-laws that limit lawn watering to every second day, with odd numbered homes allowed to irrigate on odd calendar dates and even numbered homes allowed to irrigate on even calendar dates. Stage 2 restrictions, which are now referred to as “water conservation measures,” come into effect, Region-wide, from May 31, to September 30, each year as detailed in Attachment A. These conservation measures are considered “normal” for Waterloo Region, and surveys indicate broad public support.

A property owner’s lawn watering day is based on the last digit of his/her address:
• Addresses ending in numbers 0 or 1 can water on Mondays
• Addresses ending in numbers 2 or 3 can water on Tuesdays
• Addresses ending in numbers 4 or 5 can water on Wednesdays
• Addresses ending in numbers 6 or 7 can water on Thursdays
• Addresses ending in numbers 8 or 9 can water on Fridays

No lawn watering is allowed during weekends, which allows time for refilling reservoirs. If there is a severe drought or water supply emergency, the Commissioner of Transportation and Environmental Services has the authority to declare Stage 3 restrictions under the by-law. During a Stage 3 emergency, lawn watering and most other discretionary water uses outdoors would be prohibited. Despite drought conditions some years, including 2016, the Stage 2 water conservation measures have been enough to prevent any moves to Stage 3.

Measuring By-law Success

Keys to the Water Conservation By-law success are education and enforcement. By automatically bringing conservation measures into effect on May 31 each year, people know when their lawn watering day is. Three Water Efficiency Students and up to three Licensing and Enforcement staff patrol and enforce the Water Conservation By-law each year. All staff educate the public and issue warnings as needed, while charges are exclusively laid by the By-law Enforcement Officers.
As Table 2 indicates, an average of 278 warnings and four charges per year have been issued since 2012.

Surveys in 2009 and 2013 revealed that over 90 per cent of home owners are aware of the Water Conservation By-law and all but five per cent conform. Even those who did not consider water efficiency to be important supported the by-law.

Staff, consultants and academics have employed several methods to measure water savings that have been achieved since the by-law came into effect. Generally, the methods compare pre- and post by-law weather and water demands. A model is then developed to predict what the summer water demands would have been without the by-law, compared to actual demands with the by-law in place. The prediction models confirm the following:

- Average summer peak water demands have been reduced significantly since 2005
- The Water Conservation By-law is most effective at reducing peaks during drought (compared to cooler, wetter summers when people will normally use less water outdoors)
- The average water savings during the maximum demand by-law month is an estimated 400 million litres of water. That is enough drinking water to supply 2,000 Region of Waterloo households each year.

**Water Efficiency Advisory Committee Endorsement**

The Water Efficiency Advisory Committee (WEAC) reviewed and endorsed the recommendations detailed in this report at a meeting held September 27. An action item coming from the discussion was for staff to include a fall advertising campaign that reminds residents to winterize rain barrels to avoid damage from freezing.

**Corporate Strategic Plan:**

Delivery of the Outdoor Water Conservation Program supports strategic objective 3.2, to “Protect the quality and quantity of our water resources.”
Financial Implications:

2016 Year-to-Date

As of August 25, 2016, year-to-date Capital expenditure for the Outdoor Water Use Program was $118,294. The program cost breakdown is as follows:

- Naturescaping Promotion: $14,863
- Rain Barrel Program: $32,277
- Water Conservation By-law: $71,154

The approved 2016 Water Capital Budget for the Outdoor Water Use Program (Project 4943) is $180,000. Final costs for the 2016 project will not exceed the budgeted amount.

Proposed 2017 Budget

The proposed 2017 Water Capital Budget for the Outdoor Water Use Program (Project 4943) is $180,000 and will cover costs to implement the Water Conservation By-law, rain barrel distribution and landscaping promotion.

Water Efficiency capital projects are 100 per cent financed through Regional Development Charges.

Other Department Consultations/Concurrence:

Enforcement of the Water Conservation By-law is carried out in cooperation with Licensing and Enforcement Services; Planning, Development and Legislative Services.

Attachments

Attachment A - Region of Waterloo By-law 07-069, A By-law Respecting the Conservation of Water: Water Conservation Measures, May 31 – September 30 Annually

Prepared By: Steve Gombos, Manager, Water Efficiency

Approved By: Thomas Schmidt, Commissioner, Transportation and Environmental Services
Region of Waterloo By-law 07-069,
A By-law Respecting the Conservation of Water:
Water Conservation Measures, May 31 – September 30 Annually

<table>
<thead>
<tr>
<th>Water Use Activity</th>
<th>Water Conservation Measure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wasting Water</td>
<td>Prohibited</td>
</tr>
<tr>
<td>Watering Lawns</td>
<td>Once Per Week With Time Restrictions*</td>
</tr>
<tr>
<td>Watering Treated Lawns</td>
<td>Water Within 24 Hours</td>
</tr>
<tr>
<td>Watering New Sod/Seeded Lawns</td>
<td>Daily first 7 days; alternating to day 14*</td>
</tr>
<tr>
<td>Watering Trees, Shrubs, Flowers, Gardens</td>
<td>Alternate Day With Time Restrictions*</td>
</tr>
<tr>
<td>Watering Sports Fields</td>
<td>No Restrictions</td>
</tr>
<tr>
<td>Top-Ups, Permanent Residential Swimming Pools</td>
<td>Alternate Days with Time Restrictions*</td>
</tr>
<tr>
<td>Residential Vehicle Washing</td>
<td>Alternate Days With Time Restrictions</td>
</tr>
<tr>
<td>Decorative Fountains</td>
<td>Must Recirculate Water</td>
</tr>
<tr>
<td>Washing Streets, Driveways, Walkways, Buildings</td>
<td>Prohibited</td>
</tr>
<tr>
<td>Fines</td>
<td>$150 - $5,000</td>
</tr>
</tbody>
</table>

*Permitted outdoor water use must be done in the time between 5:30 – 10:00 a.m. and 7:00 – 11:00 p.m.
Region of Waterloo
Transportation and Environmental Services
Water Services

To: Chair Tom Galloway and Members of the Planning and Works Committee
Date: November 1, 2016  File Code: C04-30
Subject: Hidden Valley Low Lift Pumping Station - Pump Acquisition

Recommendation: For Information

Summary:

The failure of one of two pumps at the Hidden Valley Low Lift Pumping Station required immediate action to ensure a reliable water supply. Two new, more efficient and less expensive pumps were purchased as the older (operating) pump would be used as a standby. The new pumps were purchased using emergency clauses of the Purchasing By-law. This report provides Council the details of the purchase.

Report:

Background on the Hidden Valley Low Lift

The Mannheim Water Treatment Plant (MWTP) supplies water to approximately 25 per cent of the Region’s Integrated Urban System (IUS), which includes the cities of Cambridge, Kitchener, and Waterloo, and the towns of Elmira and St. Jacobs. The MWTP was designed in the late 1980s based on design standards of that time and was commissioned in June 1992. The facility operates as a conventional water treatment process to treat Grand River water with a design capacity of 72.7 million litres per day (MLD). Water supply from this facility is critical to maintaining an adequate water supply for the communities noted above.

Water collected at the Grand River intake is pumped by the Hidden Valley Low Lift Pumping Station (HVLL) to a four-cell open-air reservoir. From the reservoir, water is pumped by the Hidden Valley High Lift Pumping Station (HVHL) to the MWTP.
The pumping station consists of two wet wells; each wet well is equipped with one travelling screen to remove debris from the river water and one submersible pump to transfer raw water to the Hidden Valley reservoirs.

**Operations Strategy Two Services Pump with one Spare**

The original pumps were manufactured by Xylem, the parent company to Flygt, each one with a capacity of 72.6 MLD capable of supplying the current MWTP. These older style pumps are customized for the Region’s Hidden Valley facility and require four to six months for delivery or major service from Europe. To ensure the reliability of the water supply from Hidden Valley, the operating strategy was to have two pumps in service and a third pump available as a standby.

**Condition Assessment Recommends More Efficient Pumps**

A condition assessment and operating strategy review in 2015 resulted in a recommendation to replace the existing pumps with new updated pumps. The benefits of these new pumps include greater energy efficiency as well as a shorter delivery time, (15 weeks) and a universal mounting system. These pumps can be serviced locally which provides greater operating and maintenance flexibility. As these new pumps are more energy efficient and provide greater operating and maintenance flexibility, only two pumps were recommended to be purchased and the one existing pump would remain as a standby.

While this recommendation was being evaluated, one of the pumps failed in late summer and a repair was carried out. The Hidden Valley low lift was left with one service pump and a spare with only limited operational capability.

**Two Efficient Pumps Purchased To Ensure Reliable Water Supply**

To ensure a reliable water supply to the Mannheim Water Treatment Plant (MWTP) the acquisition of the pumps had to be expedited as soon as possible. The standard tendering process for replacing the pumps and associated equipment would likely have taken from four to five months to prepare the tender packages, advertise, prepare the bids, award, and undertake the work. During this period, supply to the MWTP is vulnerable.

Through discussions with Finance it was determined that the purchase of two new pumps and associated mounting system would be considered an emergency under Purchasing By-law 16-032 and that the best and most economical approach would be to go directly to a Request for Proposal with known suppliers, to purchase the pumps and associated equipment.

Water Services staff worked with a consultant to prepare specifications and engineering requirements to meet the recommendations from the energy audit. This Request for Proposal went out to the known suppliers. Upon the review of the technical and price
proposals, the recommendation was to purchase two Xylem pumps at a total cost of $245,000. In addition, the estimated installation cost is $150,000 and a contractor will be retained in accordance with Purchasing By-law.

**Corporate Strategic Plan:**

Strategic Focus Area 1: Thriving Economy 1.2 Plan for and provide the infrastructure and services necessary to create the foundation for economic success.

**Financial Implications:**

The approved 2016 Water Capital Program includes funding of $4,190,000 for Facilities Upgrades in 2016 (Project # 04893) to be funded from the Water Reserve Fund and Regional Development Charges. The cost to purchase two new submersible pumps complete with guide bracket units is $245,000 plus installation estimated at $150,000 excluding all applicable taxes and can be accommodated within the approved capital budget. The installation cost is separate from the above price and will require a contractor to be retained in accordance with the Purchasing By-law.

**Other Department Consultations/Concurrence:**

Corporates Services, Financial Services and Development Financing were consulted during the preparation of this report.

**Attachments**

Nil

**Prepared By:** Olga Vrentzos, Manager, Water Operations and Maintenance, Water Services

**Approved By:** Thomas Schmidt, Commissioner, Transportation and Environmental Services
Region of Waterloo
Transportation and Environmental Services
Water Services

To: Chair Tom Galloway and Members of the Planning and Works Committee
Date: November 1, 2016 File Code: E06-05/RMP/P&W
Subject: Negotiation of Risk Management Plans for Existing Activities under the Source Protection Plan

Recommendation:

That the Regional Municipality of Waterloo approve amendments to the Source Water Protection Incentive Program maximum grants as outlined in report TES-WAS-16-23 dated November 1, 2016;

And that The Regional Municipality of Waterloo approve amendments to the proposed Clean Water Act Risk Management By-law as outlined in report TES-WAS-16-23 dated November 1, 2016.

Summary:
Nil

Report:

The Source Protection Plan came into effect on July 1, 2016

To protect the quality and quantity of drinking water sources, the ‘Clean Water Act’ (2006) established a process to create locally-developed Source Protection Plans (SPP) for each watershed in Ontario. The Grand River SPP contains policies to protect Waterloo Region drinking water sources and became effective on July 1, 2016. The status of implementation preparation was presented to Region Council on March 22, 2016 (TES-WAS-16-09).
The Region is responsible for negotiating risk management plans

The Region is responsible for implementing a range of policies, including negotiating Risk Management Plans (RMPs). RMPs are intended to manage drinking water threats through improved management practices. They are legally binding agreements negotiated between the person engaged in the activity and Region of Waterloo’s Risk Management Official (RMO) which describe how an activity is managed on a specific property. RMPs allow activities that are drinking water threats to continue to occur if the relevant measures agreed upon in the RMP are followed. A bylaw which outlines the administration of the risk management process was presented to Region Council on May 11, 2016 (TES-WAS-16-15). Details of an incentive program to assist private land owners with the cost of implementing their RMPs were also presented to Region Council on May 11, 2016 (TES-WAS-16-14).

The Region has been negotiating with property owners for new activities

Since July 1, the focus of implementation has been on ensuring the process is working for new activities created through development approval and building permit applications. Three RMPs have been negotiated (two for winter salting and one for storm water management). In addition, approximately 120 Notices of Source Protection Compliance have been issued to accompany development approvals and building permit applications. The notices are issued to the applicant by the Region’s online TAPS system located on the website at www.taps.regionofwaterloo.ca. The notices are required to be submitted to the area municipalities to ensure applications have been screened against the policies in the Source Protection Plan.

Property owners with existing activities will begin negotiating RMPs

Starting in November, the Region will begin notifying property owners with existing activities that they need to negotiate RMPs. The initial focus will be on winter salting on municipal roads and parking lots.

Region staff has developed worksheets for property owners and tenants to complete that describe both the risk management measures they are currently implementing as well as any new ones they propose. In accordance with Bylaw 14-051, the worksheets have been approved by the Commissioner of Transportation and Environmental Services.

The RMO will identify the properties that require an RMP and mail the owners/tenants the worksheets relevant to their operations. The completed worksheets will be returned to the RMO and become the basis for negotiation of the RMP. The time it will take to negotiate the contents of an RMP will depend on the number and complexity of the activities on a site and the number of RMPs being negotiated at any given time.
Consultants will be hired to complete technical review

Up to three consultants will be retained to assist the RMO in the first three years of implementation following the Region’s procurement process in the Purchasing Bylaw. The consultants will provide a technical review of completed worksheets in three categories: agricultural, chemical storage, and winter salting. The consultants will review each completed worksheet and provide recommendations to the RMO regarding appropriate risk management measures. These recommendations will be considered by the RMO in the negotiation process.

One final category of RMPs, stormwater management, will be reviewed by existing Region staff.

Areas closest to municipal wells will be prioritized during implementation

Region staff estimates that almost 700 RMPs will need to be negotiated under the Source Protection Plan. The first year of implementation will focus on properties within 100m of municipal supply wells. Subsequent years will focus on properties further away.

The anticipated schedule of worksheet review and RMP negotiation in the first three years and beyond is in the table that follows:

<table>
<thead>
<tr>
<th>Activity</th>
<th>Year 1 RMPs</th>
<th>Year 2 RMPs</th>
<th>Year 3 RMPs</th>
<th>Years 4+ RMPs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agricultural</td>
<td>24</td>
<td>11</td>
<td>9</td>
<td>42</td>
</tr>
<tr>
<td>Chemical Storage</td>
<td>30</td>
<td>20</td>
<td>6</td>
<td>17</td>
</tr>
<tr>
<td>Winter Salting</td>
<td>43</td>
<td>89</td>
<td>155</td>
<td>183</td>
</tr>
<tr>
<td>Stormwater Management</td>
<td>5</td>
<td>0</td>
<td>4</td>
<td>45</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>102</strong></td>
<td><strong>120</strong></td>
<td><strong>174</strong></td>
<td><strong>287</strong></td>
</tr>
</tbody>
</table>

To be consistent with the approved incentive program, staff will undertake a comprehensive review of the RMP program arising from the first three years of implementation and will present any proposed changes to Regional Council.

Modifications needed to incentive program and risk management by-law

On May 3, 2016, Council approved the Clean Water Act Risk Management Bylaw (TES-WAS-16-15) and the Source Water Protection Incentive Program (TES-WAS-16-14). As staff finalized implementation details, two minor amendments were identified:
Clean Water Act Risk Management By-law: Add “Pesticide Application” as an additional class of Risk Management Plans in Schedule A of the bylaw. Pesticide application was previously only included if associated with farming activities. This change will allow for the inclusion of pesticide application for other land uses.

Source Water Protection Incentive Program: Revise the maximum grant for the Application of Pesticides project category from $3,000 to $300. The final eligible project list for this activity includes only pesticide application training. $300 reflects a more realistic estimate of the costs for this training.

Corporate Strategic Plan:

The implementation of the Grand River SPP is an action item in the Region’s 2015-2018 Strategic Plan in Focus Area 3: Environmental and Sustainable Growth to protect the quality and quantity of our water resources.

Financial Implications:

The approved 2016 Water Capital Budget includes $275,000 for ‘Clean Water Act’ implementation which is funded from Regional Development Charges $71,500 (26%) and by the Water Reserve Fund $203,500 (74%). The budget also includes $210,000 for Clean Water Act Incentives which is funded 100 per cent by the Water Reserve Fund.

Other Department Consultations/Concurrence:

Nil

Attachments

Nil

Prepared By: Amy Domaratzki, Risk Management Official

Approved By: Thomas Schmidt, Commissioner of Transportation and Environmental Services
Oct 27, 2016

To: Region of Waterloo Council
Planning and Works Committee, November 1, 2016 meeting.

Re: Region of Waterloo LED conversion

Dear Councillors,

It has come to my attention by way of responses to my emailed questions of October 21, 2016, to each of you, that some and perhaps all of you, are outside of your expertise and lack a full understanding of the technical with regards to ongoing communications of the LED conversion which you have been copied on.

It has also been presented to me, that a number of you support the LED conversion based on what you perceive to be environmental benefits. I submit though that a conversion of our current HPS street lighting to LED is not automatically environmentally friendlier simply because of energy savings and carbon reductions. In fact, if the LED conversion is not implemented correctly we will in fact be creating new long term negative impacts on our night ecology. This can also spread to daytime ecology problems.

It is a false notion, lighting industry hype that says that converting to LED in general, is better for our environment.

It also concerns me greatly that I was told by a Councillor “Council will rely on the expertise of staff in technical matters like this, unless we have definite reasons not to.”

If Councillors do not understand the full implications of LED artificial lighting at night, the impacts and the technical, beyond what is often presented to the public (ie: energy savings, cost savings) then how can you be absolutely sure, without any doubt, that Region staff have everything correct to which you will use in your decision making process? You can't.

On many occasions, within numerous emails sent by myself, Kitchener-Waterloo RASC, Waterloo Region Nature (WRN) and even residents over the past year, you have been provided “definite reasons” to proceed with caution with the LED conversions specifications being presented by Region staff.

Links to peer-reviewed literature, scientific, medical and even reputable news organizations have been provided to each and every one of you on more than one occasion over the past year within these emails.

The suggestions deemed critical by myself and the KW RASC and Waterloo Region Nature are:

- For lowest possible CCT (correlated colour temperature) of LED, this being <3000K. The CCT and light quality needs to be confirmed with spectrum reports from the suppliers/manufacturers. Not guessed at as Region staff have stated has been done. Region staff confirmed in emails that they did not request and will not request the spectrum reports. So how can staff definitively know the true CCT and blue light amount in the chosen LED. They can't.

The discussion to lower the target CCT to 3000K (from staff original target of 4000K) of our LED
conversion, which began for myself, KW RASC and WRN almost a year ago with Region and Municipal staff, is now old technology.

New LED technology exist to see even lower and safer CCT <2700K while still maintaining reasonable efficacy. This would provide even better balance between energy/cost savings and protecting our night ecology while helping to prevent added light pollution.

Also strongly recommended on numerous occasions is shielding (aka drop shields or baffles) to prevent glare for motorists and pedestrians and light trespass/intrusion for home owners.

Shielding was also a recommendation of the Region of Waterloo Public Health (WRPH) in the briefing note issued July 2016. It did not stipulate back-side shielding only.

The recommendation by WRPH stated “shielding” to prevent glare. Glare occurs also from the sides and forward light spill. This becomes potentially dangerous for drivers and pedestrians, especially residents aged 40 years and older. Side and forward glare is also the cause of light trespass issues.

Shielding and light trespass has been dismissed several times by Region staff when asked to include stronger control measure in the LED conversion. An engineered solution for full surround shielding should be part of the LED conversion, even in small inventory form. This would allow complaints to be addressed properly and not left to an “if or when” approach as Region staff have suggested in previous email communications.

The Region of Waterloo Public Health briefing note on LED also stated:

“3000K or lower LED lights that are shielded and dimmed during off-peak times are acceptable for use as street lights based on available health evidence.”

“LED lights emit a strong peak at blue wavelengths. In contrast, high pressure sodium light bulbs emit warmer colours from the red spectrum. Human eyes are more sensitive to blue lights because they scatter more within the eye and cause glare effects, which has implications for road safety. High intensity blue light also affects the retina and alters the circadian rhythm (i.e. sleep patterns) with the potential to contribute to chronic diseases.”

Further dimming technology improves the quality and care of our night environment. Dimming technology allows for up 50% is energy and cost savings. Without dimming you cannot achieve the full benefits of converting to LED street lighting.

LEDs are far more bright and intense than our current HPS street lights. Blinding is a word often used to describe looking at LED lights. Proper full shielding (surrounding drop shields) along with dimming would significantly reduce glare and visual negative impacts.

I am left with the sense that lighting is always viewed as a technical issue even though it is primarily an environmental issue - because you are changing the natural environment for one reason or another and nature is qualitative, not quantitative.

Consider:
• The LED conversion needs to be a win-win for not only energy savings but also the environment.
  • Engineers rarely think about environment. Over-lighting impacts nature; stress all living organisms: trees, birds, bugs etc. including people.
  • Safety needs to be factored in: over-lighting creates glare which creates safety issues, traffic accidents/fatalities.
  • Full shielding needs to addressed and not left to an if and when approach. LED lighting and increases in glare and light trespass is a proven fact.
  • Well-being of community needs to be factored in: over-lighting disrupts the quiet of the night and with that the well-being of the community & nature.

If we do not lower the CCT to 2700K or less, and confirm by way of spectrum reports for the lowest level of blue light component in the chosen LED, and have a full surround shielding solution ready, it would not be in accordance with the Region of Waterloo Official Plan, section 3.D.8 which states “The Region will, wherever feasible and appropriate, use technology that supports dark-sky lighting in all new street lighting”.

The technology does exist and is feasible right now for an even lower CCT and with less blue light. Full surround shielding solutions can be engineered. This would support further reductions in light pollution and skyglow in keeping with the statement of dark-sky lighting for all new street lighting.

Also consider:

• Council should be deferring immediate action in that the next generation luminaires (coming quickly, next year) will be much more efficient due to technical and manufacturing improvements, and "lessons learned" from the problems in performance of current LED luminaires.

• It will also give Council time to get up to speed. If they do not know what they are voting on at council, it would be irresponsible to support the motion. Abstain or vote "no" if it is not understood or to technical.

• Council must not accept the argument that "it is too complicated for them to understand" as an excuse to ignore negative arguments, common sense and definite reasons I have presented to each of you, as well as the KW RASC and WRN have presented in communications.

• Although the RFP is closed, spending has to be passed by a vote of Council. So there is always a caveat in the RFPs that says the contract may not be awarded.

In the 1970s a 'crazy' bunch of environmentalists sounded the alarm about the dangers of prolonged low-level lead exposure. They faced ridicule and were treated as crackpots but they persevered. The LED street lighting conversion, the altering of our nocturnal environment is not that different really.

I still have a tiny bit of faith that Councillors and the Region staff will fully and properly acknowledge the recommendations, concerns and facts I have presented prior to moving forward with the LED conversion.
Thank you for your time.

Shawn Nielsen
Kitchener, Ontario
Member Royal Astronomical Society of Canada (RASC)
Past Chair, Kitchener-Waterloo RASC LPA
Member Bluewater Astronomy Society
News Release

Ontario Introduces Aggregate Resources and Mining Modernization Act

Legislation Would Balance Environmental Protection with Economic Growth and Modernize Mining Claims

October 6, 2016 3:00 P.M. | Ministry of Natural Resources and Forestry

Ontario has introduced legislation that would modernize the management of resource extraction in the province to help increase growth and competitiveness in the mining sector and improve environmental accountability and oversight in the aggregates industry.

The Aggregate Resources and Mining Modernization Act, if passed, would create a modern framework to help aggregate companies and communities across the province to continue building roads, hospitals, schools and other vital infrastructure projects with these resources by:

- Better outlining and overseeing regulations for aggregate companies
- Updating fees and royalties on aggregates to ensure fairness to companies while supporting communities
- Increasing public participation in the extraction application process

The legislation would also enhance environmental accountability in the aggregates sector by balancing economic growth and job creation with the protection of vital resources like farmland, groundwater and air.

In the mining industry, the bill, if passed, would enhance the province's global competitiveness by allowing claims to be made online and improving how claims are registered through the modernization of the electronic mining lands administration system. Online claims registration would also make boundaries more precise.

These changes would boost growth and competitiveness in Ontario's mining sector by making it easier to prospect, register claims and conduct exploratory mining.

Strengthening and modernizing the management of Ontario's natural resources is part of our plan to create jobs, grow the economy and help people in their everyday lives.

Quick Facts

- The Aggregate Resources and Mining Modernization Act will make amendments to modernize both the Aggregate Resources Act and Mining Act.
- Aggregate resources include sand, gravel, clay, earth and rock extracted from pits and quarries.
- Ontario's population is expected to grow by 4.2 million people by 2041. The infrastructure needed for this growth requires aggregate resources.
The majority of Ontario's aggregate is used for public works projects such as roads, schools and hospitals.

- In 2015, Ontario's mining sector supported 26,000 direct jobs, 50,000 additional jobs in processing and manufacturing, and produced $10.8 billion in minerals.

- The amendments to the Mining Act support Ontario's Mineral Development Strategy.

**Additional Resources**

- Comment on the amendments to the ARA
- Aggregate Resources
- Find Pits and Quarries Online
- Ontario Mining Act

**Quotes**

"Aggregate resources are used to build our roads, schools and hospitals and as Ontario makes the largest infrastructure investment in this province's history there is an ongoing need for this important resource. The proposed bill would create a modern regulatory framework for aggregate resources, and help companies and communities benefit from this important resource as we continue building these vital infrastructure projects."

Kathryn McGarry
Minister of Natural Resources and Forestry

"Ontario is continuing to modernize the Mining Act to ensure that we remain a global leader in mineral exploration and development. If passed, the Aggregate Resource and Mining Modernization Act will enable the province to implement a contemporary and efficient system to register mining claims."

Michael Gravelle
Minister of Northern Development and Mines

**Media Contacts**

Media Calls Only: Emily Kirk
Minister's Office
416-314-2206

Media Calls Only: Media Desk
Communications Services Branch
416-314-2106
<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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<tbody>
<tr>
<td>09-Aug-16</td>
<td>J. Nowak</td>
<td>Report on installing Roundabouts at rural intersections (Ament Line/Herrgott Road)</td>
<td>TES</td>
<td>Nov-2016</td>
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