Introduction

In April 2010, the City of Kitchener initiated a class environmental assessment (EA) study for the extension of Strasburg Road, from approximately 500 metres north of Stauffer Drive southerly to New Dundee Road.

The city retained SNC-Lavalin Inc. (SLI) to lead the study. The study process and results are documented in the draft environmental study report (ESR) and summarized in this project overview.

City council received the draft ESR on May 7, 2012, before referring the report to a special meeting of the planning and strategic initiatives (PSI) committee on Nov. 27, 2012 and directing staff to release the report to the public for review and comment, with a deadline for feedback set for Sept. 26, 2012. The findings of the additional public consultation will be shared with the PSI committee on Nov. 27, 2012.

In the interest of openness and transparency, the committee also endorsed reducing the fee to obtain a copy of the Strasburg Road extension draft ESR in DVD format from $150 to $25; and asked staff to compose a summary of the Strasburg Road extension draft ESR in plain language for ease of comprehension by the general public to be made available on the city’s website, in print format on request and in other appropriate media formats.

The following information summarizes the information contained in the draft ESR.

To review the full draft ESR, please visit: http://www.kitchener.ca/en/businessinkitchener/Environmental_assessments.asp. A DVD format is also available for $25 at the Engineering Division, 9th Floor, City Hall.

Glossary of Terms

Clear-span structure: A type of bridge, consisting of vertical supports (columns or abutments) with clear spaces that span a sensitive feature.

Corridor: A belt of land between two other areas, typically having a particular feature or giving access to a particular area.
Environmentally sensitive landscape (ESL): Areas that have significant environmental features, such as wetlands, rivers and creeks, groundwater recharge areas and the habitat of endangered and threatened species. They also include farms, villages, small towns and outdoor recreation areas.

Environmentally sensitive policy area (ESPA): A designation under a municipal Official Plan that may be given to one or more features within an ESL in order to protect it. An ESPA designation places restrictions on the activities or development that are allowed within or near the designated ESPA.

Ecopassage: A series of guidewalls and under-road tunnels that allow wildlife to safely cross roadways.

Groundwater recharge areas: The area where an aquifer is replenished from (a) natural processes, such as the infiltration of rainfall and snowmelt and the seepage of surface water from lakes, streams and wetlands.

Master plan: A long-term outline of a project.

Municipal Class Environmental Assessment (Class EA): An approved planning document prepared by the Municipal Engineers Association that describes the process proponents of municipal infrastructure/service projects must follow in order to meet the requirements of the Environmental Assessment Act (EA Act). This process allows for the evaluation of the environmental effects of the proposed alternatives to a project and alternative methods of carrying out a project and includes the mandatory requirements for public input, while expediting the environmental assessment of smaller recurring projects.

Municipal Class EA - Schedule C undertaking: Such projects have the potential for significant environmental effects and must proceed under the full planning and documentation procedures specified in this Class EA document. Schedule C projects require that an Environmental Study Report (ESR) be prepared and filed for review by the public and review agencies.

Vegetation community: A collection of plant species within a designated geographical unit, which forms a relatively uniform assemblage, distinguishable from neighbouring assemblages of different vegetation types.

Vegetative screening: The planting of trees, shrubs, grasses and other vegetation to serve as a visual screen to obstruct view.

Wetlands: Wetlands are defined as lands that are saturated with water long enough to cause the formation of waterlogged (hydric) soils and the growth of water-loving (hydrophytic) or water-tolerant plants. Wetlands are transitional habitats, often forming the connection between aquatic and terrestrial ecosystems. They can occur where the water table is at or close to the surface, in low-lying locations, or along the edges of lakes and rivers. Many wetlands are permanently flooded, while others flood only periodically in the spring or fall.

Wetlands (provincially significant): A designation that comes from studies done by the Ministry of Natural Resources and determined by the plants and animals found there, along with the functional importance it has to the watershed.

Project Overview

The extension of Strasburg Road has been divided into two sections: the north section, beginning at Rush Meadow Street to north of Stauffer Drive; and the south section, which is the focus of the class EA study.
Based on approvals under the Planning Act, the north section has been deemed by the city to be an established corridor. The city has acquired lands to accommodate this portion of the road extension. Detail design work was initiated at the same time as the class EA study.

The class EA study will look at the south section of the road extension. Figure ES.1 shows the conceptual alignment of the established Strasburg Road corridor. Detailed designs for the north section of this area and the limits of the Strasburg Road extension class EA study (south section) in relation to the adjacent Huron, Brigadoon and Doon South communities are in development.

**Figure ES.1: Strasburg Road Extension Project Area - Community Context and Scope**

### Project Need and Study Purpose

**North Section**

The approved alignment of the Strasburg Road extension, from Rush Meadow Street to 500 metres north of Stauffer Drive has been developed based on recommendations from a number of community and transportation network planning studies that were completed between 1981 and 2008.

The primary studies that established the alignment are:

- 1982 Huron Industrial Development Transportation Planning and Engineering Study
- 1994 Doon South – Brigadoon Transportation Network and Corridor Study
These studies are summarized in the body of the environmental assessment report and can be found at [www.kitchener.ca/en/businessinkitchener/ Environmental assessments.asp](http://www.kitchener.ca/en/businessinkitchener/Environmental_assessments.asp). They also form the basis for this environmental study.

**South Section**

The purpose of this class EA study is to determine the most appropriate alignment for the south section of the Strasburg Road (from north of Stauffer Drive to New Dundee Road), and to identify potential future collector road intersection(s), in compliance with the planning and design process set out in the Municipal Engineers Association *Municipal Class Environmental Assessment*.

The 1994 Doon South - Brigadoon Transportation Network and Corridor Study provided the need and justification for future transportation improvements in a study area bounded by the Conestoga Parkway, Highway 8, Highway 401 and Trussler Road. The study concluded that the existing road network would not be able to support the increased traffic demand associated with projected growth without a number of network improvements, including the extension of Strasburg Road from Rush Meadow Street to New Dundee Road.

Additional need and justification for the project is documented in the Region of Waterloo’s *Regional Transportation Master Plan* (RTMP). The master plan states that the extension of Strasburg Road, from Rush Meadow Street to New Dundee Road, is required to relieve future demand on Homer Watson Boulevard, Huron Road and Fischer Hallman Road, and support the future growth and approved development in the Doon South community and other areas in southwest Kitchener. The RTMP also indicates the Strasburg Road extension (Huron Road to New Dundee Road) has been recognized as an integral part of the region’s strategic road network improvement approach, with implementation required within five to 10 years (second highest level of priority).

**ES.3 Project Approach**

This study was conducted as a Schedule C undertaking in accordance with the Municipal Engineers Association *Municipal Class Environmental Assessment* (October 2000, as amended in 2007) (“municipal class EA”). Schedule C undertakings are projects that may have significant effects on the environment and must proceed under the full planning and documentation procedures outlined in the municipal class EA document, including preparation of an environmental study report (ESR) that must be filed in the public record.

The class environmental assessment study included a comprehensive set of integrated environmental and engineering investigations, including inventories, an impact assessment and mitigation recommendations. These were conducted by independent specialists using established/approved methods and protocols, and included consultation with technical staff of regulatory agencies and other stakeholders with knowledge of the study area. The City of Kitchener established a project team to provide technical input and direction on the project. The multi-agency, multi-disciplinary project team, representing a broad range of mandates and interests, included staff from the following groups:

- City of Kitchener
- Regional Municipality of Waterloo
- Grand River Conservation Authority
- Consultant team management group

In addition to providing technical input and direction, the project team was responsible for selecting the technically preferred alignment for the Strasburg Road extension.
A comprehensive communications program was conducted by the city for engaging and consulting with known stakeholders and potentially interested parties at both mandatory and discretionary points in the environmental assessment process. Table ES.1 identifies the communication/consultation mechanisms employed and the various stakeholders that participated in the study.

Table ES.1: Consultation Activities and Mechanisms Summary

<table>
<thead>
<tr>
<th>Consultation Element</th>
<th>Municipal Class EA Study Phase</th>
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<tbody>
<tr>
<td></td>
<td>Identify/Assess Planning Solutions</td>
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<tr>
<td>Consultation</td>
<td></td>
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<tr>
<td>Project Team Meeting</td>
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<tr>
<td>Mayor/Senior Mgmt. Briefing</td>
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<tr>
<td>Public Information Centre (PIC)</td>
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<tr>
<td>Face-to-Face Meeting</td>
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<td>Property Owner Meeting</td>
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<td>Utility Coordination Liaison</td>
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<tr>
<td>Agency Consultation</td>
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<tr>
<td>Aboriginal Consultation</td>
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<tr>
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<td>Other Public Forum</td>
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<td>Communications</td>
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<tr>
<td>Notice of Commencement (newspaper ad; letters)</td>
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<tr>
<td>Meeting Notification</td>
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</tr>
<tr>
<td>Public Information Centre (newspaper ad; letters; displays; handouts,</td>
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The principal mechanism for gauging public interest and related questions and concerns was a series of public information centres (PIC). PIC dates and the most relevant comments received in relation to the alternative alignments study are summarized in Table ES.3. A detailed summary of comments received and responses provided is included in the consultation record in Appendix A of the draft ESR.

<table>
<thead>
<tr>
<th>Public Information Centre</th>
<th>Major Comments Received</th>
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| Public Information Centre No. 1 - Introduction and Background (June 10, 2010) | • Scope of the environmental assessment investigations.  
• Length of the study timeframe.  
• Effects on property values.  
• Environmental impacts of noise, pollution and traffic on wildlife, wetlands, groundwater recharge areas, designated environmentally sensitive policy areas and the community. |
| Public Information Centre No. 2 Short-Listed Alignment Alternatives (June 1, 2011) | • Retain countryside and select an east alternative; there should be an option east of Reidel Drive.  
• Preference for “no road” option or W1.  
• Recognized service/cost advantages of east series, but concern over potential impacts to natural and cultural heritage features; noise impacts to existing residents.  
• C1 and C2 represent best balance between east and west series.  
• Safety (lack of sight distance) concern |
Public Information Centre

Major Comments Received

over existing Reidel Drive-Cameron Road/New Dundee Road intersection and potential traffic impacts on Cameron Road.

• Protection of Stauffer Drive as a walking trail.

Public Information Centre No. 3 Technically Preferred Alignment (October 26, 2011)

• There were expressions of interest in seeing the project proceed to construction as soon as possible.

• About half of the comment sheets specified a preference for alignment W1 either as the best option, or the best option, understanding that they prefer the road not be built at all.

• A number of comments focused on impacts to the property at 500 Stauffer Dr., protection of the farm pond and preservation of the bed and breakfast business on the property.

• There were continued concerns about the safety (lack of sight distance), concern over existing Reidel Drive-Cameron Road/New Dundee Road intersection and potential traffic impacts on Cameron Road.

Using its existing database of contacts, as well as information provided by government agencies with mandates related to constitutionally protected Aboriginal or treaty rights, the city also contacted select First Nations communities/groups. To date, no responses have been received.

ES.4 Existing Conditions

The study area is situated in the southwest corner of Kitchener, on the edge of the urban area, and extends into lands designated as rural and agricultural by the city and countryside by the Region of Waterloo (refer to Figure ES.2). Most of the lands in the study area are owned by development interests and are used for agricultural purposes. There are three residences in the immediate study area.

The study area is bisected by the Upper Blair Creek corridor (headwater area), which includes deciduous forests, cultural vegetation communities and areas designated as provincially significant wetland as part of the Roseville Swamp/Cedar Creek complex - but with limited sensitivity from a fisheries perspective. Other vegetation communities within the general study area are characteristic of areas in southern Ontario that have been heavily influenced by historical clearing for agriculture and residential development. The study area is also located in an upland area associated with the Waterloo Moraine Complex, an important groundwater recharge source. An overarching constraint to the project in the study area is the regulated habitat for the Jefferson Salamander, which is listed as an endangered species under Ontario Regulation 230/08. The salamander receives individual species protection and regulated habitat protection pursuant to Sections 9 (1) and 10 (1) of the *Endangered Species Act*. 
From a cultural heritage perspective, the study area contains seven (7) cultural heritage landscapes, including the historic roadscapes along Stauffer Drive and Reidel Drive and two (2) farmscapes (500 Stauffer Dr. and 271 Reidel Dr.). The study area also exhibits potential for the identification of both Aboriginal and Euro-Canadian archaeological sites.

The existing road network in the study area is limited to New Dundee Road (a Region of Waterloo arterial roadway), and Reidel Drive and Stauffer Drive, which are local roads under the jurisdiction the City of Kitchener.

**Figure ES.2: Strasburg Road Extension Study Area**

ES.5 Development and Evaluation of Alignment Alternatives

The development of the alignment alternatives was based on the designation of the Strasburg Road extension as a four-lane secondary arterial road with an urban (curb and gutter) cross-section and 30-metre right-of-way platform.
Nine (9) alignment alternatives (referred to as the long list of alignment alternatives) were initially developed and categorized under three series, based on their geographical location, as described below:

- **East alignments (E1, E2, E3, E4)** – These alignments are based on the Strasburg Road extension designated in the Kitchener Municipal Plan (which is retained as an option – Alignment E1). They reduce impacts to the bed and breakfast/agricultural operation at 500 Stauffer Dr. to the east side of property (compared to the Municipal Plan alignment), avoid the Stauffer Woods ESPA; retain varying lengths of the Reidel Drive scenic-heritage route; and/or relocate the existing Reidel Drive-Cameron Road/New Dundee Road intersection to a location that may provide better sight distance.

- **Central alignments (C1, C2)** – These alignments limit impacts to the bed and breakfast/agricultural operation to the west side of the property; and/or relocate the existing Reidel Drive-Cameron Road/New Dundee Road intersection to a location that may provide better sight distance.

- **West alignments (W1, W2, W3)** – These alignments minimize or avoid impacts to the bed and breakfast operation, the most sensitive groundwater recharge area, as well as the Roseville Swamp/Cedar Creek provincially significant wetland and the large woodlot at the west end of the Blair Creek corridor; and/or relocate the existing Reidel Drive-Cameron Road/New Dundee Road intersection to a location that may provide better sight distance.

It is important to note that two designated future east-west collector roads (Robert Ferrie Drive and Blair Creek Drive) will intersect with the Strasburg Road extension alignment. Both were accounted for in the development and assessment of the alignment alternatives.

The long list of alignment alternatives was evaluated against the following project objectives and a related set of evaluation criteria to arrive at the short-listed alignment alternatives:

**Primary objective**
- Provide for approved development and future growth (Doon South and other areas in southwest Kitchener), including traffic service and municipal services.

**Secondary objectives**
- Relieve future demand on Homer Watson Boulevard, Huron Road and Fischer Hallman Road.
- Achieve compatibility with city and regional policies for future growth and development, and the location of any related road intersections.
- Minimize impacts to natural heritage features and other important environmental resources.

The following alignment alternatives were presented at PIC No. 2 as the options the project team recommended for more detailed assessment.

- Alignment E2
- Alignment E3
- Alignment E4
- Alignment C2
- Alignment W1

The long list and short-listed alignment alternatives are shown in Figure ES.3
Following a detailed assessment of the short-listed alignment alternatives, the project team concluded that a combination of alignments E3 and E4 (alignment E4 modified – refer to Figure ES.3: Long List and Short-Listed Alignment Alternatives)
ES.4) represents an acceptable balance of advantages and disadvantages across the spectrum of evaluation criteria and should be adopted as the technically preferred alignment.

**Figure ES.4: Technically Preferred Alignment (E4 Modified)**
The summary rationale for selection of alignment E4 modified is as follows:

- It is adequate for meeting traffic operations, transit, and servicing requirements.
- It represents the shortest crossing of the Blair Creek corridor, minimizing impacts to natural heritage features, including wetlands, streams and fish habitat, groundwater resources and wildlife.
- It exhibits relatively high overall conformance with Region of Waterloo and City of Kitchener planning policies, including an acceptable level of intrusion on the protected countryside and impacts to agricultural resources/operations. In this regard, it avoids the potential of more westerly alignments to result in a shift in the urban envelope, including the western boundary of the Brigadoon South and Doon South Phase 2 community areas, if the Strasburg Road extension is retained as the north-south limit of the countryside line. If this shift occurs, the natural heritage features in the Blair Creek corridor, as well as additional areas within the regional recharge area initially avoided with the alignment, may ultimately come under increased pressure from urban development, thereby compromising the rationale for developing alignment W1 in the first place.
- It results in an acceptable balance of impacts to and preservation of cultural heritage resources; and provides an opportunity to enhance the scenic heritage road and trail network in the Doon South community.
- It has the second lowest capital cost and private-property requirements.

The disadvantages of the west and central alignment alternatives are of particular concern to the Region of Waterloo (refer to Sept. 6, 2011 and April 19, 2012 correspondence from the Region of Waterloo to the City of Kitchener in Appendix B of the draft ESR). The region will not support these options. The region has indicated that, although it prefers alignment E2, it is prepared to support alignment E4 modified.

Table ES.3 presents a graphic summary of how alignment E4 modified compares with the other alignments, exhibiting the preferred attributes of alignments E3 and E4.
Table ES.3: Summary Comparison of Alignment Alternatives

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<tr>
<th>EVALUATION FACTOR</th>
<th>ALIGNMENT ALTERNATIVE</th>
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<tr>
<td></td>
<td>EAST</td>
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<td></td>
<td>E2</td>
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<tr>
<td>Socio-Economic Environment</td>
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<tr>
<td>Cultural Environment</td>
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<tr>
<td>Transportation/Utilities</td>
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<td>Financial/Technical</td>
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**ES.6 ENVIRONMENTAL IMPACTS ASSOCIATED WITH PROPOSED ALIGNMENT, PROPOSED MITIGATION MEASURES AND OTHER REQUIREMENTS**

The technically preferred alignment has been developed to the preliminary design (30 per cent) level of design. This includes design of the proposed regional watermain that will be carried within the Strasburg Road extension corridor from north section of the study area into the Doon South community - phase 2.

The proposed design has the potential to result in environmental condition changes within the project area and will require the implementation of mitigation treatments and additional environmental and engineering investigations. Commitments in these regards are described in Section 5.2 and summarized in table 5.5 of the draft ESR. The principal mitigation treatments incorporated in the preliminary design scheme at this time include:

- A clear-span structure over Blair Creek, to avoid relocation of the watercourse, and additional investigations to assess the feasibility of spanning the full width of the provincially significant wetland feature at the creek crossing.
- Provision for wildlife movement/protection within the Blair Creek corridor, including through the Blair Creek structure, and possibly a separate/dedicated ecopassage for Jefferson Salamander movement. Wildlife movement/protection options will be investigated further during the detail design phase.
• Provision for wildlife movement/control in proximity to the dug pond (candidate Significant Wildlife Habitat) at 500 Stauffer Dr., including dedicated ecopassage.

• Protection of vegetation communities not scheduled for removal, and ecological restoration of disturbed areas of the Blair Creek corridor using compatible vegetation species.

• Minimizing the potential impacts of the watermain construction by employing a horizontal directional drilling construction method, rather than open trench.

• Collection of roadway runoff by storm sewers and direction of runoff to stormwater treatment facilities (ponds, oil/grit separators, enhanced/grassed swales) prior to discharge to receiving watercourses.

• Maintenance of natural surface drainage and groundwater flow across the road corridor to retain downstream baseflow contributions.

• Introduction of vegetative screening adjacent to cultural heritage landscapes immediately adjacent to the road corridor (Stauffer Drive/Reidel Drive intersection; 500 Stauffer Dr. and 271 Reidel Dr.);

• Conducting heritage impact assessments for directly affected cultural heritage landscapes/historic features (farmscapes, roadscapes) during the detail-design phase to determine the need for additional mitigation treatment.

• Maintenance of access to affected residential accesses (500 Stauffer Dr.; 271 Reidel Dr.) through reconfigured intersections (500 Stauffer Dr.) or driveways (271 Reidel Dr.)

• Maintenance of access for large agricultural vehicles to areas currently used for crop production through intersection and field entrance design.

• Conducting strategic pre-construction baseline surveys (e.g., potable water wells), construction phase environmental compliance monitoring (inspection), and appropriate post-construction environmental effects monitoring.

The project will also require various municipal, provincial and possibly federal approvals, permits or authorizations, some of which will present significant challenges to the implementation of the proposed design.

Significant modifications to the project proposals or changes in the environmental setting that occur after the filing of the ESR will require preparation of an addendum to the ESR. A review of the project and changes to the project proposals may also be required if there is a significant lapse of time between the filing of the ESR and the start of construction (10 years). Where an ESR addendum is issued, only the project elements in the addendum (the proposed changes to the recommended undertaking) are open for review. The city intends to implement the project in accordance with MEA Class EA process in these regards.

**Next Steps**

The city will continue to facilitate public consultation, in an effort to obtain feedback on the draft ESR by the Sept. 26, 2012 deadline.

The findings of the public consultation will be shared with the planning and infrastructure services committee on Nov. 27, 2012.
More Information

For more information on the draft environmental study report, please contact Binu Korah, manager of development engineering, City of Kitchener, at 519-741-2974 or e-mail binu.korah@kitchener.ca.