REGIONAL MUNICIPALITY OF WATERLOO
SPECIAL COUNCIL AGENDA

Wednesday, July 10, 2013
9:00 a.m.
Closed Session
WATERLOO COUNTY ROOM
Regular Meeting Immediately following Closed Session
REGIONAL COUNCIL CHAMBER
150 Frederick Street, Kitchener, ON

1. MOTION TO GO INTO CLOSED SESSION
   a) THAT a closed special meeting of Council be held on Wednesday, July 10, 2013 at 9:00 a.m. 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 regarding contract negotiations
      b) receiving of legal advice that is subject to solicitor-client privilege related to a matter before an administrative tribunal
      c) receiving of legal advice that is subject to solicitor-client privilege related to an agreement
      d) proposed or pending acquisition of land in the City of Kitchener

2. MOTION TO RECONVENE IN OPEN SESSION

3. DECLARATION OF PECUNIARY INTEREST UNDER THE MUNICIPAL CONFLICT OF INTEREST ACT

4. REPORTS
   a) E-13-070/F-13-050, Stage 1 Light Rail Project – Light Rail Vehicle Procurement Process
   b) E-13-085, Conestoga Parkway (Highway 7/8) LRT Overpass Construction (to be distributed on Monday, July 8, 2013)

5. ENACTMENT OF BY-LAWS – FIRST, SECOND & THIRD READINGS
   a) A By-law to Confirm the Actions of Special Council – July 10, 2013

6. ADJOURN
TO: Regional Chair Ken Seiling and Members of Regional Council

DATE: July 10, 2013

FILE CODE: A02-30/PW

SUBJECT: STAGE 1 LIGHT RAIL PROJECT – LIGHT RAIL VEHICLE PROCUREMENT PROCESS

RECOMMENDATION:

THAT the Regional Municipality of Waterloo (the “Region”) approve, enter into, and execute the following:

1. Assignment Agreement between the Region, Metrolinx and Bombardier Transportation Canada Inc. (“Bombardier”) for the assignment by Metrolinx to the Region of the option to purchase up to twenty-eight (28) Bombardier light rail vehicles (“LRVs”);

2. Coordination Agreement between the Region and Metrolinx detailing an interagency cooperation and coordination framework on matters of LRV design, engineering and production; and

3. LRV supply terms and conditions with Bombardier based on an initial order of fourteen (14) Bombardier LRVs for the Region (“ROW LRVs”) as assigned by Metrolinx to the Region together with terms governing the future exercise by the Region of options to purchase up to an additional fourteen (14) ROW LRVs;

all as described in Report E-13-070/F-13-050, dated July 10, 2013 and in form and content satisfactory to the Commissioner of Transportation and Environmental Services, the Regional Solicitor and the Chief Financial Officer.

SUMMARY:

On June 19, 2012, Regional Council directed staff to negotiate with Metrolinx for a joint and collaborative procurement of 100% low floor LRVs from Bombardier based on a proposed assignment from Metrolinx to the Region of options to purchase LRVs held by Metrolinx (the “Metrolinx LRVs”) pursuant to an existing contract between Metrolinx and Bombardier (the “Existing Metrolinx Contract”). This approach to procuring LRVs was supported as the preferred solution for the Region’s LRV needs in connection with both Stage 1 and Stage 2 of the Light Rail Project (the “Project”).

The benefits of jointly procuring LRVs with Metrolinx under their Existing Contract include:

- a reduction in vehicle procurement costs
- a decrease in project schedule risks
- an improvement in vehicle reliability plan over a much longer period
- an opportunity to share parts and knowledge
In accordance with direction from Council, Regional staff and consultants to the Region on the Project undertook a comprehensive review of the existing technical and commercial documentation relating to the Metrolinx LRVs including the Existing Metrolinx Contract.

Regional staff have engaged in detailed negotiations with Metrolinx and with Bombardier in connection with the following agreements:

- **Assignment Agreement (AA):** Is an agreement between the Region, Metrolinx and Bombardier whereby Metrolinx agrees to assign to the Region the option for the purchase of up to 28 LRVs pursuant to the Existing Metrolinx Contract.

- **Coordination Agreement (CA):** Is an agreement between Metrolinx and the Region establishing a framework for the joint procurement of LRVs and includes commitments with respect to inter-agency collaboration and cooperation and governs the One Voice Approach (as defined hereunder).

- **LRV Supply Terms and Conditions ("ROW LRV Contract"):** Is an agreement between the Region and Bombardier based on the fundamentals of the Existing Metrolinx Contract for the immediate purchase of fourteen (14) LRVs ("ROW LRVs") and includes terms and conditions in respect of the option to purchase up to an additional fourteen (14) LRVs:
  - **Technical Specification Addendum (TS):** Forms part of the ROW LRV Contract and incorporates by reference the Metrolinx LRV technical specifications under the Existing Metrolinx Contract for the ROW LRVs subject to changes where the context so requires (e.g. alignment or vehicle differences).
  - **General Conditions (GC):** Forms part of the ROW LRV Contract and defines the commercial terms applicable to the supply of ROW LRVs by Bombardier including, without limitation, vehicle pricing, contract amendments, delivery, warranty and liquidated damages.

Regional staff have reached an agreement with Metrolinx and Bombardier on the key items pertaining to each of these agreements.

The contract price for the purchase by the Region of its initial 14 LRVs is $64.3 million ($4.59M/vehicle), plus applicable taxes. An additional contingency of $11M for potential changes to the vehicles and a letter of credit with a cost of $2M are also being provided. The Region will also purchase special tools, equipment and spare parts from Bombardier with an allowance of $7M and $6.5M respectively for each. The final list of spare parts and special tools and equipment have not been finalized and the Region will be seeking input from the DBFOM teams prior to finalizing the purchase. The Region will also have the option to purchase up to another 14 LRVs in the future.

In light of the above, it is recommended that the Region enter into the above-referenced agreements, in form and content that is satisfactory to the Commissioner of Transportation and Environmental Services, the Regional Solicitor, and the Chief Financial Officer.

The report that follows outlines in greater detail the Region’s proposed joint procurement of LRVs with Metrolinx with specific details on the following items:

- The AA, CA, TS and GC documents;
- Contract costs;
• The variation order (VO) procedure, such as changing the interior and exterior colour, seat fabric, and radio communications; and
• The reliability plan for the ROW LRVs.

REPORT:

1.0 Background

As part of the staged implementation plan for the Region of Waterloo rapid transit system, Light Rail technology will initially serve the 19 kilometre transit corridor from Conestoga Mall in Waterloo to Fairview Park Mall in Kitchener. Based on light rail ridership forecast, 14 LRVs will be required to provide service in 2017. In order to achieve the in-service date, Council directed staff in June, 2012 to enter into negotiations with Metrolinx to procure LRVs for the Stage 1 Light Rail Project based on a right of contractual assignment in respect of existing LRV purchase options that Metrolinx holds with Bombardier.

The provincial crown agency Metrolinx is currently procuring LRVs for transit system expansion in the Greater Toronto and Hamilton Area and has exercised purchase options from Bombardier for a significant number of low floor LRVs. The Metrolinx LRVs are by design and function well suited for the requirements of the Region’s rapid transit system. Under the Metrolinx Act, 2006, the objectives of this crown corporation include the responsibility “to act as the central procurement agency for the procurement of local transit system vehicles, equipment, technologies and facilities and related supplies and services on behalf of Ontario municipalities.” The Bombardier vehicle was selected by Metrolinx in a competitive procurement process run by the Toronto Transit Commission in 2008 and has a lengthy track record of performance throughout Europe. It is important to note that the procurement process was approved by the Metrolinx Board of Directors in 2009 and was also independently reviewed and approved by the Province of Ontario.

The benefits of jointly procuring LRVs with Metrolinx under their Existing Contract include:

• a reduction in vehicle procurement costs
• a decrease in project schedule risks
• an improvement in vehicle reliability plan over a much longer period
• an opportunity to share parts and knowledge

As part of the joint procurement approach with Metrolinx, it has been necessary to engage in detailed discussions with both Metrolinx and Bombardier for the completion of a number of agreements. This was done to outline the requirements and procedures to be followed throughout the various stages of joint LRV procurement. Related documentation includes:

• Assignment Agreement between the Region, Metrolinx and Bombardier
• Coordination Agreement between the Region and Metrolinx
• LRV supply details with Bombardier including technical and commercial matters that are adapted, as necessary, to the Region’s context and requirements

2.0 Agreement Documents

The following provides a brief summary of the various documents required to complete the vehicle procurement package.
2.1 Assignment Agreement (AA)

The AA:

Defines the right-of-assignment of an option to purchase up to 28 LRVs given to the Region by Metrolinx and includes Bombardier’s approval and consent thereto.

2.2 Coordination Agreement (CA)

The CA:

- Outlines the process and timelines for pilot vehicle testing.
- Establishes the framework for coordination and cooperation between the Region and Metrolinx through the vehicle supply process.
- Describes the “One Voice” approach which represents a unified Metrolinx - Region platform with regard to Bombardier on various aspects of LRV design and production. Recognizing that the Regional LRVs will be substantially similar to the Metrolinx LRVs and given that the Region’s purchase of LRVs from Bombardier is based on the Existing Metrolinx Contract, it is necessary that the vehicle manufacturer be approached in a coordinated manner during design review, pilot testing, vehicle manufacturing, inspections and technical meetings. On technical items that have commonality between the Region’s LRVs and the Metrolinx LRVs, the Region will express its position and any concerns directly to Metrolinx for consideration and communication, where appropriate, with Bombardier. On technical items that are unique to the Region’s LRV or on commercial matters, communication will be conducted by the Region directly with Bombardier. It has been agreed that Metrolinx and the Region must act in an open and transparent way with one another at all material times. The One Voice approach will end at the time of the issuance of a Preliminary Acceptance Certificate in respect of the first Regional LRV.
- Explains the process of issuing a variation order (VO) through contract amendment or change directive either by Metrolinx or the Region together with the various rights and responsibilities of the parties related thereto. Issuing a VO may have commercial impacts and therefore it is critical that this process be clearly articulated and agreed to by all parties.

2.3 General Contract (GC)

The GC governs the commercial terms of supply of LRVs to the Region by Bombardier and is based upon the Existing Metrolinx Contract. This document has been modified to suit the Region’s LRV procurement needs and includes details on items such as:

- Bombardier responsibilities
- Scope of work and deliverables
- Purchase of future option vehicles
- Project schedule
- Approach to fleet defects
- Warranties
- Insurance
- Liquidated damages
- Contract securities
The provisions within the GC were modified where required with assistance from Regional advisors to ensure that Region-specific requirements are satisfied.

2.4 Technical Specification Addendum (TS)

Acknowledging that the Region is procuring vehicles through the Existing Metrolinx Contract, the design of the LRV remains technically identical to the Metrolinx LRV. However, there are some minor differences and these are reflected in the TS addendum. These variations include, but are not limited to:

- Exterior and interior colors
- Seat fabric type and pattern
- Capital and maintenance spare part requirements
- Maintenance shop tool requirements
- Door optical sensors

The reliability plan establishes a performance threshold for the vehicles. As the fleet ages and accumulates mileage if the fleet is not meeting the reliability plan requirements then improvements are identified and implemented to achieve the required performance.

This plan will minimize LRV failures throughout the revenue service and reduce operational and maintenance risks for both the Region and the future consortium responsible for maintaining and operating the Stage 1 Light Rail Project.

3.0 Contract Price

The contract price for the initial procurement of 14 LRV is set out in Appendix “A” and detailed below.

- Recurring costs – refers to the per vehicle costs.
- Non-recurring costs – these costs are independent of the procurement size and are associated with the procurement process, design engineering, project management, design qualification, testing, manuals and training. Metrolinx has already invested significant funds towards these processes under their existing contract and therefore, the Regional contribution is reasonable.
- Vehicle spare parts – this cost estimate reflects a proposed list of spare parts that would be required in the first few years of the vehicle life cycle based on the Existing Metrolinx Contract.
- Special tools and equipment required for operations and maintenance of LRVs.
- Approved VOs – includes costs for additional modifications that have already been purchased by Metrolinx and must be cost shared by the Region.
- Project Contingency – this takes into account changes that may occur to the vehicle during the vehicle supply period and first year of operations. Currently there are a few technical modifications that have been identified by both Metrolinx and the Region, which need further discussions with Bombardier (e.g. radio communications, wheel alteration, software improvements, pilot vehicle testing). As such, staff have identified a reasonable contingency for these potential changes.
- Letter of Credit – provides security for payments that the Region has made and can be drawn upon in the case of default by Bombardier.

The contract costs are based on the Existing Metrolinx Contract and are comparable to what other transit agencies in North America (e.g. Portland, Houston and Charlotte) have recently paid to procure similar vehicles and fleet size. The Region’s advisors have also been integral to
the negotiations to ensure good value for money. A memo from Parsons Brinkerhoff Hallsall is attached as Appendix “B” detailing their position.

4.0 Foreign Exchange

The portion of the vehicle cost related to work done in Mexico and the United States is subject to change based on the rate of exchange vs. the Canadian dollar until the contract is signed. The exact price of the contract in Canadian dollars is established based on the exchange rate on the day the contract is signed. Once the contract is signed the purchase price in Canadian dollars is fixed. The cost in this report is based on the July 3, 2013 foreign exchange rates.

5.0 Contract Security

Staff have also negotiated additional security over and above what is included in the Metrolinx contract, in the form of a letter of credit. The letter of credit has a maximum value of 73% of the contract value when the 14th vehicle is supplied. The letter of credit can be drawn upon in the case of default by Bombardier. The ability to draw on the letter is not automatic or unlimited. Establishing the letter of credit adds approximately $2,000,000 to the total estimated contract price. Region staff support including a letter of credit for this agreement.

6.0 LRV Delivery Schedule and Hand Over to Project Co.

The production of LRVs for the Region will begin in 2014 with the first vehicle delivered to Regional facilities in July, 2016 and the fourteenth vehicle in December, 2016. This timing will allow the Region and Bombardier to undertake the necessary testing before the final acceptance of the LRV by the Region. Throughout this phase, Project Co will be invited to participate.

Following final acceptance of the LRVs, the Region will begin the hand-over process with Project Co. This process will consist of detailed system tests and training for operations and maintenance. Operator (driver training) and vehicle maintenance training will be provided by Bombardier.

7.0 Recommendation

Considering the advantages and disadvantages inherent in a joint procurement agreement and based on Council direction, it is recommended that the Regional Municipality of Waterloo enter into a joint agreement with Metrolinx and Bombardier for the procurement of 14 LRVs for the Stage 1 Light Rail Project, with an option for the purchase of up to an additional 14 LRVs, as necessary, subject to agreements that are, in form and content, satisfactory to the Commissioner of Transportation and Environmental Services, the Regional Solicitor and the Chief Financial Officer.

8.0 Next Steps

Pending Council’s approval of the above noted staff recommendation; two events to introduce the LRT vehicle to Regional residents have been tentatively scheduled.

A full-scale model of the LRT vehicle is scheduled to arrive in Waterloo Region for a media event at 11:30 a.m. on Friday, July 12, where Council will unveil the LRT vehicle to local media and key stakeholders in front of the Regional Headquarters.

The following day, Saturday, July 13 from 10 a.m. to 3 p.m., residents will be invited to tour the
LRT vehicle at Regional Headquarters. Staff from Rapid Transit, Grand River Transit and Planning, Housing and Community Services will also be on-site to provide residents with an overview of the Region’s transit-related initiatives, including Rapid Transit, the Grand River Transit network redesign, Transit Hub, Community Building Strategy and the Travelwise program.

CORPORATE STRATEGIC PLAN:

The report supports Focus Area 3.1 of Council’s Strategic Focus: Implement a light rail transit system in the central transit corridor, fully integrated with an expanded conventional transit system.

FINANCIAL IMPLICATIONS:

In June 2011, Council approved the implementation of the RT project, including LRT and aBRT, with estimated capital costs of $818 million, in 2014 dollars, with capital funding to be provided by the Province (up to $300 million), the federal government (one third of eligible project costs to a maximum of $265 million) and the Region ($253 million). The RT project and improvements to conventional transit are financed through an annual tax rate increase of 1.5% for a period of 7 years.

As approved by Council, the acquisition of LRVs is to be carried out by the Region outside of the DBFOM contract. The Region’s capital cost projection includes an estimate of $100 million for vehicles. Of this amount, $5 million has been allocated for aBRT buses and $95 million for LRVs.

Appendix “A” to this report details the estimated costs for the 14 LRVs required for service in 2017. The vehicle cost is approximately $64.3 million plus applicable taxes including foreign exchange rate to July 3, 2013 which together with estimated foreign exchange, plus HST (net of municipal rebate) totals $65.5 million, or $4.68 million per vehicle. Vehicle spare parts allowance, special tools and equipment, letter of credit and approved variation orders total $13.9 million, including taxes. A contingency of $11 million is provided for anticipated variation orders. Discussions are ongoing regarding contract security, with the estimated cost of a letter of credit being up to $2 million dependant on the coverage.

All costs, including vehicles, spare parts, special tools and approved variation orders for the first 14 vehicles are payable in Canadian dollars. However, the prices detailed in Appendix “A” (with the exception of the non-recurring costs) will be recalculated using foreign exchange rates in effect at the time of signing of the individual contracts for each item. For the vehicles, the foreign exchange to July 3, 2013 has been included and will be fixed shortly after July 10, 2013. For spare parts, special tools and test equipment, and variation orders allowances, these amounts will be subject to both escalation and the foreign exchange rates in effect when these items are finalized.

OTHER DEPARTMENT CONSULTATIONS/CONCURRENCE:

This report was prepared with input from Planning, Housing and Community Services, Corporate Resources and Human Resources.

ATTACHMENTS:  Appendix “A” – Light Rail Vehicle Cost Summary
Appendix “B” – Letter from Parson Brinckenhoff Hallsal

PREPARED BY:  Reza Soharbi, Project Manager (Mechanical/Electrical/Power), Rapid Transit
Darshpreet Bhatti, Director, Rapid Transit
Calvin Barrett, Director, Financial Services and Development Financing

APPROVED BY:  Thomas Schmidt, Commissioner of Transportation and Environmental Services
Craig Dyer, Chief Financial Officer
## APPENDIX “A”

### STAGE 1 LIGHT RAIL TRANSIT PROJECT

**LIGHT RAIL VEHICLE COST SUMMARY**

<table>
<thead>
<tr>
<th>Item</th>
<th>$ Cdn</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Cost– 1st 14 vehicles</td>
<td>61,129,841</td>
<td>• This amount is subject to currency exchange fluctuation to the date of contract signing</td>
</tr>
<tr>
<td>Currency exchange to July 3, 2013</td>
<td>3,206,221</td>
<td>• Additional currency exchange determined on date of contract signing</td>
</tr>
<tr>
<td>HST</td>
<td>1,132,315</td>
<td>• 13% less municipal rebate of 86.46% of HST, net 1.76%</td>
</tr>
<tr>
<td><strong>Sub-total</strong></td>
<td><strong>65,468,377</strong></td>
<td>$4,676,313 incl. HST per vehicle ($4,595,433 pre-tax per vehicle)</td>
</tr>
<tr>
<td>Vehicle Spare Parts</td>
<td>6,500,000</td>
<td>• Estimate to be finalized with Metrolinx and Bombardier</td>
</tr>
<tr>
<td>Special Tools and Equipment</td>
<td>7,000,000</td>
<td>• Estimate to be finalized with Metrolinx and Bombardier</td>
</tr>
<tr>
<td>Approved VOs</td>
<td>140,000</td>
<td>• Item previously approved by Metrolinx</td>
</tr>
<tr>
<td>Letter of Credit</td>
<td>2,000,000</td>
<td>• To be finalized at contract date</td>
</tr>
<tr>
<td>HST on additional items</td>
<td>275,264</td>
<td></td>
</tr>
<tr>
<td><strong>Sub-total</strong></td>
<td><strong>81,383,641</strong></td>
<td></td>
</tr>
<tr>
<td>Anticipated VOs and Project Contingency</td>
<td>11,000,000</td>
<td>• Estimate to be finalized with Metrolinx and Bombardier</td>
</tr>
<tr>
<td><strong>Total estimated cost of LRV contract</strong></td>
<td><strong>92,383,641</strong></td>
<td></td>
</tr>
</tbody>
</table>

(14 vehicles, special tools and equipment and spare parts)
Appendix “B” Letter from Parsons Brinckerhoff

June 14, 2013

CIN No.: GEC-RW-287

Mr. Darshpreet Bhatti, Director, Rapid Transit
Region of Waterloo
50 Queen Street North, Suite 830
Kitchener, Ontario N2H 6P4

Re: Analysis of LRV Market Prices and Region of Waterloo Negotiated Price for Fourteen (14) LRV with Bombardier Transportation

Dear Mr. Bhatti:

The GEC has prepared an analysis of Light Rail Vehicle (LRV) Market Prices and Region of Waterloo Negotiated Price for Fourteen (14) LRV with Bombardier Transportation. The following are our observations:

Background

As part of the staged implementation for the Region of Waterloo (Region) rapid transit system, Light Rail Technology will initially serve the 19 kilometer transit corridor from Conestoga Mall in Waterloo to Fairview Park Mall in Kitchener. Based on the ridership forecast and the minimum operating headway of 7.5 minutes during the peak periods, as requested by the Region, a minimum 14 light rail vehicles (LRVs) will be required to provide service when the system goes into operations in 2017.

On June 19, 2012, the Council of the Regional Municipality of Waterloo authorized the staff to negotiate with Metrolinx to secure a “right of assignment” under their existing contract with Bombardier for the delivery of the light rail vehicles. This decision was made for a number of reasons as outlined below:

1. Competition: Given the fleet size required, the number of potential railcar manufacturers capable of delivering cost effective and proven 100% low floor LRVs compliant with the current provincial domestic content and final assembly requirements was considered very small. This would also potentially limit the number of competitive DBFOM consortiums for the overall project scope.

2. Project Schedule: In order to mitigate the risk of the challenging project schedule, the Region thought it would be advantageous to advance the civil and systems design elements around an existing LRV design prior to the issuance of the Request for Proposals (RFP). This was required to ensure that civil and systems interfaces could be established and required negotiations with Canadian National could progress. Both elements represented considerable risk to the project schedule that required mitigation. The fact that Metrolinx has advanced the LRV design process to the point that prototype cars can commence manufacturing this year is another schedule risk mitigation aspect that is very significant.
3. Technology: In order to achieve compliance with AODA requirements and minimize civil impacts in urban areas, the Region opted for a 100% low floor LRV design. The LRV currently being designed and manufactured by Bombardier will be the first 100% low floor LRV design to enter the North American market. This particular LRV also has one of the lowest floor heights of any LRV being manufactured in the North American market which meets the Region’s objective of minimizing civil impacts in the downtown areas. Given the challenging schedule of the project, the likelihood of another railcar manufacturer entering the Ontario market for such a small fleet of LRVs was considered remote.

4. Maintenance Benefits: There is a tremendous benefit in having a large transit agency (Metrolinx) operating and maintaining a large fleet of identical vehicles in such proximity to the Region. The Region will benefit from “lessons learned” as well as potential shared inventory (commonality of parts) which will improve overall operational reliability and decrease initial capital costs.

Joint Negotiations with Metrolinx and Bombardier

Since the Regional Council’s authorization, Region staff has been negotiating commercial, contractual and technical terms with Metrolinx and Bombardier. The unique collaboration between Metrolinx and Bombardier, while not customary in Canada, is quite common in North America for the purchase of small quantities of train equipment. In recent years, transit authorities in Atlanta, Denver, Charlotte, Norfolk and Salt Lake City have negotiated the right of assignment from other transit agencies with existing option orders for light rail vehicles.

The Region and Metrolinx have agreed in principle to the framework for the right of assignment as well as a cooperation agreement which outlines the collaborative approach in managing the critical design, production, testing and commissioning efforts. It is fundamentally agreed that there are substantial cost, schedule and risk mitigation benefits to both parties in pursuing this collaborative approach.

While the Region and Metrolinx have been working towards the framework of our collaborative approach, the Region has been concurrently negotiating payment terms with Bombardier. It should be noted that the basis or “starting point” for the negotiated price is the existing contract between Bombardier and Metrolinx. This contract price which included a number of escalation factors was negotiated and agreed to between Metrolinx and Bombardier in June, 2010. In essence, this vehicle has already been “competitively procured”.

Region of Waterloo Negotiated LRV Price and Market Comparison

As noted, the Region and Bombardier have been negotiating a fair and reasonable price for the fourteen (14) LRVs that are required to open the Stage 1 Light Rail Transit System in 2017. The GEC has been asked to review the negotiated LRV price vis-à-vis recent LRV procurements in North America. The cost per LRV is demonstrated in the table below along with other recent LRV procurements using an assignment process for the orders in North America.
Recent Assignment LRV Orders/Region of Waterloo

<table>
<thead>
<tr>
<th>Agency</th>
<th>City/Municipality</th>
<th>Date</th>
<th># of LRVs</th>
<th>Cost Per LRV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tri-Met</td>
<td>Portland, Oregon</td>
<td>May 2012</td>
<td>18</td>
<td>$ 4,055,555 USD</td>
</tr>
<tr>
<td>MTA</td>
<td>Houston, Texas</td>
<td>October 2010</td>
<td>19</td>
<td>$ 4,368,421 USD</td>
</tr>
<tr>
<td>City of Charlotte</td>
<td>Charlotte, North Carolina</td>
<td>September 2012</td>
<td>22</td>
<td>$ 3,954,545 USD</td>
</tr>
<tr>
<td>Hampton Roads Transit</td>
<td>Norfolk, Virginia</td>
<td>September 2007</td>
<td>9</td>
<td>$ 4,001,835 USD</td>
</tr>
<tr>
<td>Region of Waterloo*</td>
<td>Kitchener, Ontario</td>
<td>March, 2013</td>
<td>14</td>
<td>$ 4,366,417 CAD</td>
</tr>
</tbody>
</table>

* Price includes recurring and non-recurring costs.

The GEC has reviewed the negotiated cost per LRV within the context of recent trends in the worldwide LRV market as well as the suitability of this LRV for the alignment envisioned for the Stage 1 LRT Project.

The functional alignment developed by the Region’s previous consultant has been advanced and refined considerably over the last year. The GEC has reviewed the alignment and appropriate LRV interfaces and have determined that the Bombardier LRV will work on the Stage 1 LRT Project from a track geometry standpoint. Bombardier has been part of this process and provided comments that the GEC has incorporated into the design of the alignment. The GEC confirms that the Bombardier LRVs and the ROW LRT system, as currently designed, are geometrically compatible and that the functional design and output specifications in the RFP have been formulated to accommodate the operation of the Bombardier LRV on the Region’s LRT system based on the Transit City Technical Specifications contained in the existing Metrolinx contract, subject to duty cycle limitations identified by Bombardier.

The GEC also feels that the price negotiated by the Region is fair and reasonable. In addition, we note that there are a number of factors which makes this procurement unique and supports the decision by the Region to have negotiated this procurement with Metrolinx and Bombardier.

First and foremost, this will be the first 100% low floor light rail vehicle to enter revenue service operations in North America. All of the LRVs noted in the table above, with the exception of the Region of Waterloo LRV, are 70% low floor vehicles. In the European market, 100% low floor vehicles, typically cost more than 70% low floor vehicles due to their technical complexity. The final assembly and Ontario domestic material requirement would add significant cost to the design and production of any alternative LRV. Consequently, the GEC has concluded the following: when fully considering schedule risk mitigation factors, Ontario provincial requirements as well as recent market trends and pricing, the price negotiated by the Region of Waterloo with Bombardier is both fair and reasonable.

Sincerely,

Joseph F. Marie
Project Director
TO: Chair Ken Seiling and Members of Regional Council

DATE: July 10, 2013

FILE CODE: A02-30/PW

SUBJECT: CONESTOGA PARKWAY (HIGHWAY 7/8) LRT OVERPASS CONSTRUCTION

RECOMMENDATION:

THAT the Regional Municipality of Waterloo take the following actions regarding the agreement with Her Majesty the Queen in Right of Ontario Represented by the Minister of Transportation for the Province of Ontario (“MTO”) in connection with the construction of the required Light Rail Transit (LRT) overpass within MTO owned lands under the Conestoga Parkway (Highway 7/8) between Homer Watson Boulevard and Courtland Avenue (the “Overpass”):

1. approve, enter into an Agreement for, and execute all documentation related to the construction of the Overpass by MTO (the “Construction Agreement”) as change order to MTO’s existing contract (the “Existing Contract”) in relation to the improvement of Highway 7/8 (the “Highway”), for a project cost not to exceed the sum of $11,000,000.00 plus applicable taxes and inclusive of all design, construction, construction impact, and contract administration costs;

as described in Report E-13-085, dated July 10, 2013 and in form and content satisfactory to the Commissioner of Transportation and Environmental Services, the Regional Solicitor, and the Chief Financial Officer.

SUMMARY: NIL

REPORT:

In June 2011, Council approved the technology, route, stations, staging and funding of Stage 1 of the Region’s rapid transit project. The Region of Waterloo is proceeding with the implementation of the rapid transit project with the objective of commencing revenue service in 2017. The approved light rail transit (LRT) alignment extends from Conestoga Mall to Fairview Park Mall via a combination of Municipal, Provincial and existing rail rights-of-way. One of the key interface points in the LRT alignment is where the LRT crosses on MTO lands under the Highway between Homer Watson Boulevard and Courtland Avenue (the “Junction”). The existing bridge carries Conestoga Parkway over one CNR track and is a single-span, rigid-frame concrete structure, built in 1967. This structure is not wide enough to accommodate CNR tracks and the planned LRT line, Hence, there is a need to build the additional overpass that is the subject of this Report.

As described in Report E-13-022, dated February 6, 2013, MTO is currently in the second year of a four year contract to rehabilitate and widen the Highway including the structures between Fisher Hallman and Courtland Avenue (the “Highway Improvement Work”). The Highway Improvement Work is currently scheduled for completion in late 2014.
Given that the Highway Improvement Work is presently underway in the vicinity of the proposed train crossing, an opportunity exists for MTO to include (for the benefit of the Region) the Overpass in MTO’s Existing Contract for the Highway Improvement Work via a Change Order to the contract.

The preliminary design documents along with performance specifications including, but not limited to, project objectives, standards, submittals, approval requirements and schedule have been provided to MTO. MTO’s design consultant for the Highway Improvement Work has brought the design of the Overpass close to completion under the direction of MTO and with input from Region staff. The design was provided to MTO’s Contractor (Dufferin Construction Company) and the Contractor has provided a detailed cost for completion of the work. MTO is currently negotiating the final details of the work and price with the Contractor. It is anticipated that some changes will be negotiated but that the price will be either the same as the current price or lower.

**Construction Agreement**

Negotiations between the Region and MTO in relation to the form and substance of the proposed Construction Contract are now entering the final stages. The Construction Agreement requires MTO to use all reasonable efforts to complete the Overpass as soon as possible. In fact, MTO is required to prescribe a completion date for the Overpass in its Change Order to the Existing Contract of no later than December 31, 2014. The completion of the Overpass within the said timeframe would be satisfactory for LRT project timeline purposes.

The Construction Agreement provides that any additional Change Orders or extra work deemed necessary during the construction of the Overpass shall be subject to agreement between the Region and MTO. MTO, however, reserves the right to determine what reasonable period of time is to be given for the Region and MTO to reach an agreement in respect of such Change Orders or extra work. In the event that there is disagreement between the Region and MTO in respect of proposed Change Orders and/or extra work during the construction of the Overpass, MTO may proceed with its preferred course of action subject to the parties resolving any remaining differences through the dispute resolution process contained in the Construction Agreement.

Under the Construction Agreement, the Region would be financially responsible for not only the construction of the Overpass, but also the cost of operating and maintaining the Overpass, as well as, the cost of any future expansion of the Overpass as required by MTO (not including costs MTO would have incurred for highway expansion purposes had the Overpass not existed).

It should be noted that under Part X, paragraph 24 of the Region’s Purchasing By-Law (04-093), the Region is authorized to enter into cooperative or joint arrangements with other governmental bodies such as the MTO for the purchase of goods and/or services where there are economic advantages to doing so, and the methods of acquisition to be used are based on competitive purchasing methods similar to those described in the Region’s Purchasing By-law. The MTO’s consultant for the Highway Improvement Work was selected using a competitive bidding process.

**Next Steps**

Once the Change Order and associated costs are finalized by MTO, Regional staff will review and assess the merits of any adjustments to the cost estimate prior to entering into a binding Construction Agreement with MTO. Regional staff will report back to Council with project and cost updates, as necessary.
CORPORATE STRATEGIC PLAN:

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

FINANCIAL IMPLICATIONS:

In June 2011, Council approved the implementation of the RT project, including LRT and aBRT, with estimated capital costs of $818 million, in 2014 dollars, with capital funding to be provided by the Province (up to $300 million), the Federal Government (one third of eligible project costs to a maximum of $265 million) and the Region ($253 million). The RT project and improvements to conventional transit are financed through an annual tax rate increase of 1.5% for a period of 7 years.

The Conestoga parkway (Highway 7/8) LRT Overpass Construction is to be carried out by MTO on behalf of the Region outside of the DBFOM contract. Based on the detailed design of the Overpass, MTO’s Contractor has provided a detailed cost estimate for the completion of the work. Together with contract administration costs and a contingency allowance the cost to complete the work, inclusive of design, construction, construction impact, and contract administration costs, is not expected to exceed $11,000,000.00 plus applicable taxes. MTO is currently negotiating the final cost with their Contractor. It is anticipated that some cost savings may be found.

The cost of $11,000,000 is approximately $2.5M higher than the February estimate. The primary reason for the change is that the current cost is based on a detailed design and a detailed price quote from the Contractor. The addition of a contingency allowance accounts for the remainder of the difference.

The cost of the project is not to exceed $11,000,000 plus applicable taxes. This has been accommodated within the overall Rapid Transit Project budget.

OTHER DEPARTMENT CONSULTATIONS/CONCURRENCE:

This report was prepared with input from Finance, from Transportation and Environmental Services, and from Corporate Resources.

ATTACHMENTS

Attachment A - Highway 7/8 Overpass Design Options

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