

<b>TO:</b>	<b>CHAIR AND MEMBERS CIVIC WORKS COMMITTEE MEETING ON AUGUST 29, 2017</b>
<b>FROM:</b>	<b>KELLY SCHERR, P.ENG. MANAGING DIRECTOR OF ENVIRONMENTAL AND ENGINEERING SERVICES AND CITY ENGINEER</b>
<b>SUBJECT</b>	<b>SINGLE SOURCE ELECTRICAL AND MECHANICAL SERVICES FOR THE TURBO BLOWER INSTALLATIONS AT THE GREENWAY WASTEWATER TREATMENT PLANT</b>

**RECOMMENDATION**

That on the recommendation of the Managing Director of Environmental and Engineering Services and City Engineer, the following actions **BE TAKEN** with respect to a single source award of electrical and mechanical installation services for the three remaining turbo blowers at the Greenway Wastewater Treatment Plant:

- (a) The price submitted by Tim Lovett Installations Incorporated., 600 Newbold Street., Unit 13, London, ON N6E 2T6 of \$90,303.00 excluding HST, to supply electrical services for the installation of three blowers and associated components **BE ACCEPTED** in accordance with Section 14.4(d) of the City of London's Procurement of Goods and Services Policy;
- (b) The price submitted by BGL Contractors Corporation., 608 Colby Drive, Waterloo, ON N2V 1A2 of \$268,520.00, excluding HST, to supply mechanical services for the installation of three blowers and associated components **BE ACCEPTED** in accordance with Section 14.4(d) of the City of London's Procurement of Goods and Services Policy;
- (c) The financing for these acquisitions **BE APPROVED** as set out in the Sources of Financing Report attached, hereto, as Appendix 'A';
- (d) The Civic Administration **BE AUTHORIZED** to undertake all administrative acts that are necessary in connection with this project;
- (e) The approvals given, herein, **BE CONDITIONAL** upon the Corporation entering into a formal contract, or issuing a purchase order, for the work to be done relating to this project; and,
- (f) The Mayor and City Clerk **BE AUTHORIZED** to execute any contract or other documents, if required, to give effect to these recommendations.

**PREVIOUS REPORTS PERTINENT TO THIS MATTER**

- Civic Works Committee - August 22, 2016 - Single Source Purchase of Turbo Blowers for the Greenway Wastewater Treatment Plant as reported to Civic Works Committee

**2015-19 STRATEGIC PLAN**

This project supports the Wastewater Business Plan and the Strategic Plan with respect to building a sustainable city and robust infrastructure through investments in energy reduction.

**BACKGROUND**

**Purpose**

To award the single source electrical and single source mechanical installation services contracts for three wastewater treatment turbo blowers and associated components to Tim Lovett Installations Incorporated and BGL Contractors Corporation.

## Context

Large volumes of air are used in the wastewater treatment process to provide oxygen that promotes the microbial growth in the wastewater. The microbes feed on the organic material, which easily settles out, removing contaminants from the wastewater.

The large volume of air is supplied by wastewater treatment blowers. These blowers are the largest single source of hydro consumption in a wastewater treatment plant. The Independent Electricity System Operator has implemented a program that provides funding to organizations that upgrade to more energy efficient equipment.

## DISCUSSION

A key strategy of the Corporate Energy Conservation and Demand Management Plan is to identify opportunities to improve energy efficiencies within corporate operations and infrastructure. The primary goal of the City's Plan is to reduce the corporation's annual energy use by 30 million equivalent kilowatt-hours (ekWh) by 2020.

Wastewater treatment blowers are the largest single source of hydro consumption in a wastewater treatment plant. The installation of turbo blowers at the Greenway Wastewater Treatment Plant will contribute to 11 percent (3.38 million ekWh/year) of the energy savings required to meet the corporate energy-saving goal. The recently completed turbo blower installations at Adelaide, Oxford and Vauxhall Plants represent another 6.1 percent (1.83 million ekWh/year) of the plan. These Turbo blower installations, along with the proposed Organic Rankine Cycle (ORC) installation at the Greenway Wastewater Treatment Plant, will contribute approximately 37 percent of the City's 30 million ekWh goal.

Three of the Greenway Wastewater Treatment Plant's blowers have been commissioned with three more units onsite awaiting installation. The installation of the turbo blowers requires the services of both electrical and mechanical contractors

### **Procurement Process: Electrical Services**

The electrical services for the first three turbo blowers at the Greenway Wastewater Treatment Plant were awarded through a competitive process. In January of 2017 a formal Request for Quotation (RFQ17-04) was issued for the electrical installation services for the first three blowers. All six blowers could not be installed at the same time due to plant renovations/construction for the first half of 2017. Only one bid was received through this process from Tim Lovett Installations Incorporated. This work was subsequently awarded in accordance with the Procurement of Goods and Services Policy, Section 19.4 and Schedule A. The electrical services work on the first three blowers was completed successfully in August.

City staff have obtained a time and material based quote from Tim Lovett Installations Incorporated to provide electrical services required to install the last three blowers at the Greenway Wastewater Treatment Plant. Due to the electrical contractor's experience with the first phase, the work will be performed efficiently leading to cost savings. The quote provided by Tim Lovett Installations was reviewed by City staff and is in line with their initial unit pricing provided through the competitive process. It is recommended that Tim Lovett Installations be awarded this work in accordance with Section 14.4(d) of the City of London's Procurement of Goods and Services Policy.

### **Procurement Process: Mechanical Services**

The mechanical services for the first three turbo blowers at the Greenway Wastewater Treatment Plant were also awarded through a competitive process. A Request for Quotation (RFQ17-05) was issued in Q1 2017 and five bids were received. The project was awarded to the low compliant bid from BGL Contractors Corporation. The mechanical services work on the first three blowers was also completed successfully in Q3 2017

Similar to the electrical service, City staff have obtained a time and material based quote from BGL Contractors Corporation to provide the mechanical services required to install the last three blowers at the Greenway Wastewater Treatment Plant. Due to the mechanical contractor's experience with the first phase, the work will be performed efficiently leading to cost savings. The quote provided by BGL Contractors Corporation

was reviewed by City staff and is in line with their initial unit pricing provided through the competitive process. It is recommended that BGL Contractors Corporation be awarded this work in accordance with Section 14.4(d) of the City of London's Procurement of Goods and Services Policy.

**Project Funding**

The costs related to the purchase and installation of the turbo blowers have been heavily funded through the Clean Water Wastewater Fund and an application has been submitted through the Electricity System Operator's Process and System Upgrade Program. The City was successful in acquiring \$1.42 M towards the purchase of the turbo blowers. London also expects to receive a one-time incentive of \$200/MW or \$900,000 from the Electricity System Operator's Process and System Upgrade Program. In addition, with the installation of the six new turbo blowers, it is estimated that the energy savings at the Greenway Wastewater Treatment Plant will result in an annual operational savings of \$664,068. The total cost to install the turbo blowers is approximately \$535,070.

<b>CONCLUSIONS</b>
--------------------

The installation of the remaining three new turbo blowers at the Greenway Wastewater Treatment Plant is an extremely beneficial project with a return on investment of less than one year. Direct single sourcing for the balance on the installation services for the three remaining turbo blowers will save the City time and money. This project will help bring us significantly closer to our Corporate Energy Conservation and Demand Management Plan energy-saving goal.

**Acknowledgements**

This report was prepared within the Wastewater Treatment Operations Division by Mark Spitzig, Operations Manager, with assistance from Sneha Madur, Corporate Energy Management Engineer, Environmental Programs, and Chris Ginty, Procurement Officer, Purchasing and Supply.

<b>PREPARED BY:</b>	<b>REVIEWED &amp; CONCURRED BY:</b>
<b>GEORDIE GAULD DIVISION MANAGER WASTEWATER TREATMENT OPERATIONS</b>	<b>SCOTT MATHERS, MPA, P.ENG. DIRECTOR-WATER AND WASTEWATER</b>
<b>RECOMMENDED BY:</b>	
<b>KELLY SCHERR, P.ENG. MANAGING DIRECTOR OF ENVIRONMENTAL &amp; ENGINEERING SERVICES &amp; CITY ENGINEER</b>	

Attachment: Appendix 'A' – Sources of Financing  
 Cc: Chris Ginty, CPPB  
 Sneha Madur  
 Mark Spitzig