

Report to Civic Works Committee

To: Chair and Members
Civic Works Committee

From: Kelly Scherr, P.Eng., MBA, FEC
Deputy City Manager, Environment and Infrastructure

Subject: Appointment of Consulting Engineers for Contract
Administration Services: Vauxhall Wastewater Treatment
Plant Refurbishment Stage 1

Date: July 18, 2023

Recommendation

That on the recommendation of Deputy City Manager, Environment and Infrastructure, the following actions **BE TAKEN** with respect to the appointment of consulting engineers for Contract Administration services for Vauxhall Wastewater Treatment Plant Refurbishment Stage 1:

- (a) The following consulting engineers **BE APPOINTED** to carry out consulting services for the identified wastewater treatment operations infrastructure project, at the upset amounts identified below, in accordance with the estimate on file, and in accordance with Section 15.2(g) of the City of London's Procurement of Goods and Services Policy:
 - (i) Dillon Consulting Limited **BE APPOINTED** consulting engineers to complete part time inspection and contract administration of Vauxhall WWTP Refurbishment Stage 1 in the total amount of \$133,515 (including contingency), excluding HST;
 - (ii) AECOM Canada Ltd. **BE APPOINTED** consulting engineers to complete part time inspection and contract administration support to Dillon for Vauxhall WWTP Refurbishment Stage 1, in the total amount of \$40,000 (including contingency), excluding HST;
- (b) the financing for this project **BE APPROVED** as set out in the Sources of Financing Report attached hereto as Appendix 'A';
- (c) the Civic Administration **BE AUTHORIZED** to undertake all the administrative acts that are necessary in connection with this project;
- (d) the Mayor and City Clerk **BE AUTHORIZED** to execute any contract or other documents, if required, to give effect to these recommendations.

Executive Summary

The engineering consultants named above both independently completed design assignments for refurbishments that are urgently needed at the Vauxhall Wastewater Treatment Plant (WTP).

Dillon Consulting Ltd. was originally retained in 2015 to complete inspections of concrete infrastructure that was noted to be deteriorating due to its age. Dillon has now completed a subsequent design assignment to refurbish and repair the 80 year old tanks. AECOM Canada Ltd. completed the design to replace the ultraviolet disinfection system that has also reached end of life. The replacement also provides an increase in capacity that will allow more treatment capacity at Vauxhall to be realized and ensure efficient and effective disinfection of wastewater treated at the plant prior to discharge to the Thames River.

A construction tender for the this work is anticipated to be posted in early summer and each firm will provide contract administration and inspection services for their respective design scopes, with Dillon identified as the lead consultant.

Linkage to the Corporate Strategic Plan

This recommendation supports the following 2023-2027 Strategic Plan areas of focus:

- Climate Action and Sustainable Growth:
 - London is more resilient and better prepared for the impacts of a changing climate; and
 - Infrastructure is built, maintained, and secured to support future growth and protect the environment.

Analysis

1.0 Background Information

1.1 Previous Reports Related to this Matter

- CWC – October 20, 2020 – Vauxhall WWTP Upgrades – Engineering Design Consultant Award
- CWC – October 22, 2019 – East London Sanitary Servicing Study Municipal Class Environmental Assessment: Issuance of Addendum

2.0 Discussion and Considerations

2.1 Work Description

The East London Sanitary Servicing Strategy (ELSS) was completed in 2019 as a planning exercise for future wastewater servicing in the east end of London. As part of this process, the Vauxhall WWTP was identified as having additional treatment capacity which could be utilized if selected process upgrades were undertaken. This additional capacity could be used to service growth in east London over the next 15 to 20 years.

Growth in the east end is anticipated to primarily occur within the adjoining Pottersburg WWTP sewershed, while the Vauxhall sewershed is expected to only experience minor infill related growth. During the development of the East London Servicing Strategy, the oldest portion of the treatment infrastructure at the Pottersburg WWTP was noted to be in poor condition and has historically been more difficult to operate than Vauxhall.

The solution developed through the ELSS was to utilize the aging and underperforming infrastructure at Pottersburg as a pumping station to pump flow received at the Pottersburg WWTP to Vauxhall WWTP for treatment and eventual discharge to the Thames River. This strategy was anticipated to result in higher quality treatment for flows discharged and would provide operational flexibility to facilitate future maintenance activities that will occur at both plants. A pipeline was constructed in 2019 in support of this strategy. Construction of a pumping station at Pottersburg, which would utilize this pipeline to send flows to Vauxhall, is currently under design and will be tendered for construction in the future.

In order to unlock the additional treatment capacity at Vauxhall, refurbishment of deteriorating tankage and replacement of equipment that has reached end of life is required. This will involve concrete tank repairs, designed by Dillon Consulting Ltd., and the replacement of the ultraviolet disinfection system, designed by AECOM Canada Ltd.

The aeration tanks, which are the subject of the concrete repairs, were constructed in the late 1940s. These repairs are required to ensure the tankage remains structurally sound for the next 20 years and to address operational staff health and safety concerns with deteriorating concrete and unsecured guardrails.

The ultraviolet disinfection system, which is over 20 years old and has reached end of life, is being replaced with a new, more efficient unit of higher capacity. This will address Ministry of the Environment, Conservation and Parks criteria that is currently limiting the permitted treatment capacity of the entire plant. Once this unit is replaced, staff will

apply to the Ministry for a treatment capacity increase allowing future east London growth to be serviced.

3.0 Financial Impact/Considerations

3.1 Consulting Engineer Services

In accordance with Section 15.2 (g) of the City of London's Procurement of Goods and Services Policy, Civic Administration recommends that the engineering services associated with the increase in design and the inspection and Contract Administration services be awarded to ensure that the City receives the product specified and associated value.

Due to the knowledge and positive performance on the detailed design assignments, each consultant was invited to submit a proposal to carry out the inspection and Contract Administration for their project. A summary of the fees is included below:

- Dillon Consulting Limited - \$133,515
- AECOM Canada Ltd. - \$40,000

All values include a minimum 15% contingency and excludes HST.

Due to the relative complexity and duration anticipated for the two work scopes, Dillon Consulting Limited will serve as the lead Contract Administrator, with AECOM Canada Ltd. acting in a supporting role, providing inspection and support to Dillon.

Staff have reviewed the fee submissions, including hourly rates and the time allocated to each project task, as provided by each consultant. The submissions were found to be consistent with other project assignments of similar scope. The continued use of the identified consultant on each project for resident inspection and contract administration is of financial advantage to the City because the firm has specific knowledge of the project and has undertaken work for which duplication would be required if another firm were to be selected.

In addition to the financial advantage, there are also accountability and risk reduction benefits. The City requires a Professional Engineer to seal all construction drawings. These 'record drawings' are created based on field verification and ongoing involvement by the Professional Engineer. This requirement promotes consultant accountability for the design of these projects, and correspondingly, reduces the City's overall risk exposure. Consequently, the continued use of the consultant who created and sealed the design drawings is preferred in order to maintain this accountability process and to manage risk.

Funds have been budgeted in Wastewater Treatment Operations capital budgets to support the recommended awards, as identified in Appendix 'A' - Sources of Financing.

Conclusion

The planned upgrades at Vauxhall WWTP involve replacing infrastructure at the end of its lifecycle and rehabilitating existing infrastructure. This will maximize its remaining life and is essential to supporting future growth in a cost effective manner. It is recommended that Dillon and AECOM continue as the consulting engineers on their respective projects for the purpose of inspection and contract administration services in accordance with Section 15.2(g) of the City of London's Procurement of Goods and Services Policy. The recommended engineering consultant assignment awards will allow the construction projects to be completed in the best financial and technical interests of the City.

Prepared by: Kirby Oudekerk, P.Eng., DPA
Division Manager, Wastewater Treatment Operations

Submitted by: Ashley Rammeloo, MMSc, P.Eng.
Director, Water, Wastewater, and Stormwater

Recommended by: Kelly Scherr, P.Eng., MBA, FEC
Deputy City Manager, Environment and Infrastructure

cc: Steve Mollon
Gary MacDonald

Appendix 'A' – Sources of Financing

Appendix "A"

#23144

July 18, 2023

(Appoint Consulting Engineer)

Chair and Members

Civic Works Committee

RE: Contract Administration Services: Vauxhall Wastewater Treatment Plant Refurbishment Stage 1

(Subledger FS20VX01)

Capital Project ES5024 - Vauxhall/Potts Capacity Upgrades & Flow EQ

Dillon Consulting Limited - 133,515.00 (excluding HST)

AECOM Canada Ltd. - \$40,000.00 (excluding HST)

Finance Supports Report on the Sources of Financing:

Finance Supports confirms that the cost of this project can be accommodated within the financing available for it in the Capital Budget and that, subject to the approval of the recommendation of the Deputy City Manager, Environment and Infrastructure, the detailed source of financing is:

Estimated Expenditures	Approved Budget	Committed To This Date	This Submission	Balance for Future Work
Engineering	487,189	287,189	176,569	23,431
Construction	3,551,952	0	0	3,551,952
Vehicles and Equipment	8,859	8,859	0	0
Total Expenditures	\$4,048,000	\$296,048	\$176,569	\$3,575,383

Sources of Financing

Drawdown from Sewage Works Renewal Reserve Fund	4,048,000	296,048	176,569	3,575,383
Total Financing	\$4,048,000	\$296,048	\$176,569	\$3,575,383

Financial Note:

	Dillon	AECOM	Total
Contract Price	\$133,515	\$40,000	\$173,515
Add: HST @13%	17,357	5,200	22,557
Total Contract Price Including Taxes	150,872	45,200	196,072
Less: HST Rebate	-15,007	-4,496	-19,503
Net Contract Price	\$135,865	\$40,704	\$176,569

Jason Davies
Manager of Financial Planning & Policy

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