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# The Regional Municipality of Durham Report

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To: Works Committee  
From: Acting Commissioner of Works  
Report: #2023-W-24  
Date: June 7, 2023

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**Subject:**

Sole Source Procurement of Engineering Services and Equipment for Various Water Supply and Sanitary Sewerage Projects and Approval of Additional Project Financing

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**Recommendations:**

That the Works Committee recommends to Regional Council:

A) That staff be authorized to negotiate:

- i) A sole source agreement with SCG Process for the provision of ProMinent sodium hypochlorite pumps and accessories at the Ajax Water Supply Plant (WSP) for the sodium hypochlorite system relocation, project ID (D1844) in the amount of \$300,771\* to be financed through the approved project budget;
- ii) A sole source agreement with SCG Process for the provision of ProMinent chemical feed pumps and accessories at the Duffin Creek Water Pollution Control Plant (WPCP) for the Stage 3 Liquids Remediation and Miscellaneous Works project (Contract D2023-24, Project ID Y2001) in the amount of \$1,097,000\* (of which Durham's 20 percent share is \$219,400\*) to be financed through the approved project budget;
- iii) A sole source agreement with the supplier providing the lowest compliant quotation following a competitive quotation for the ongoing provision of magnetic flow meters throughout the Whitby Water Supply Plant expansion project to be financed through the approved project budget;
- iv) A sole source amendment to the existing contract (RC00002421) with Black and Veatch for costs associated with additional engineering and inspection

services required during the construction of the zebra mussel chlorine line replacement capital projects (D2019 and D1930) at Ajax and Beaverton Water Supply Plants in the amount of \$159,362\* to be financed through the approved project budgets; and

- v) A sole source engineering services agreement with AECOM Canada Ltd. for engineering services for the realignment of the 750 millimetres (mm) and 1200 mm diameter feeder mains on Wilson Road South in the amount of \$515,430\*.
- B) That additional capital financing for the funding shortfall associated with the realignment of feeder mains on Wilson Road South in the amount of \$300,000 be provided as follows:

Previously Approved Financing

Watermain replacement at Highway 401 and Wilson Rd., in conjunction with the MTO, Oshawa

User Rate (Project ID: D2221)	\$250,000
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Additional Financing

2023 Water Supply Capital Budget

Replacement of watermain on Pickering Beach Rd. from Foord Road to Hewitt Crescent, Ajax

User Rate (Project ID: A1906)	<u>\$300,000</u>
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<b>Total Revised Project Financing</b>	<b><u>\$550,000</u></b>
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**Report:**

**1. Purpose**

1.1 The purpose of this report is to:

- a. Obtain authorization to negotiate sole source contracts for engineering services and the supply of equipment for various projects; and
- b. Obtain Regional Municipality of Durham (Region) Council approval for additional funding for capital work to undertake detailed design for the realignment of feeder mains required as a result of the proposed Wilson Road South Highway 401 Overpass replacement, in the City of Oshawa.

- 1.2 Dollar amounts followed by an asterisk (\*) are before applicable taxes.

## **2. Background**

- 2.1 The detailed design of the Ajax WSP sodium hypochlorite relocation and Duffin Creek WPCP Stage 3 Liquids Remediation projects are nearing completion. To finalize the design and to address specific safety, operational and maintenance needs related to the facilities, the sole sourcing of ProMinent sodium hypochlorite pumps and accessories is required. ProMinent is a manufacturer of metering pumps and metering technology.
- 2.2 The Region requested proposals for engineering services to conduct the detailed design only for the replacement of the zebra mussel chlorine lines at the Ajax and Beaverton Water Supply Plants (WSP). Black and Veatch submitted the highest scoring compliant proposal and was awarded the design contract. Engineering and inspection services are required by the Region during the construction of both projects which were not reflected in the original scope of work.
- 2.3 The Ministry of Transportation (MTO) has retained AECOM Canada Ltd. (AECOM) for engineering services to conduct detailed design for the Highway 401 Wilson Road South Overpass replacement in the City of Oshawa. To accommodate the new infrastructure, the Region is required to relocate 750 millimetre (mm) and 1050 mm diameter feeder mains.
- 2.4 Awarding the engineering services to different consulting firms would require the Region to coordinate multiple engineering services contracts resulting in additional time and resources, which would cause operational challenges to meeting regulatory requirements. Staff recommend sole sourcing to avoid duplication of effort.

## **3. Justification for the Sole Source and Procurement of Equipment**

- 3.1 As part of the detailed design for the Ajax WSP sodium hypochlorite relocation project, various sodium hypochlorite pumps and accessories were assessed by reviewing safety requirements, adherence to Regional standards, and operational and maintenance needs. The sodium hypochlorite lines all have different objectives, including zebra mussel control, pre-treatment and disinfection, which have varying design parameters including flow rates and pressure requirements.
- 3.2 York Region issued contracts T-08-03 and T-07-57 for the construction of the Stage 3 headworks and Liquid modules respectively, which yielded chemical feed

pumps from a different supplier. These pumps have proven to be maintenance intensive. Since 2010, the pumps supplied under contract T-07-57 have collectively experienced 57 instances of breakdown recorded in the work history, averaging 5 per year, and requiring seventeen (17) pump replacements. In recognition of the above, more recent York Region contracts T-13-50 and T-12-92 for the replacement of the Stage 1 and 2 Headworks and Disinfection facilities respectively, identified alternative chemical pump suppliers within the contract specifications. SCG Process supplied pumps that were competitively bid and supplied under the York Region issued contracts for the Duffin Creek facility. This has created an installed base of over 20 pumps demonstrated to operate at varying capacities and operating requirements. Maintenance intervention requirements for these pumps have been minimal.

- 3.3 The Duffin Creek application requires pumps capable of distributing chemical to six different process locations with varying capacities and head requirements. Equipment sizing is of critical importance as equipment retrofits must occur within an already existing building envelope. The physical size of the pump and its accessories are fundamental to proper operational access for future maintenance.
- 3.4 For both projects, the pumps and accessories also require alignment with Regional Supervisory Control and Data Acquisition standards to ensure that the system can be operated remotely and maintained by Regional staff.
- 3.5 SCG Process has exclusive municipal rights in Ontario to supply ProMinent Metering Pumps for sodium hypochlorite that meet the varying design parameters, physical space limitations and maintenance and safety requirements of the Region. As indicated, these pumps are currently in operation at other Regional facilities with a proven history of performance. Standardizing to Prominent sodium hypochlorite pumps and accessories for the Ajax WSP and Duffin Creek WPCP would ensure adherence to Regional standards, provide operational familiarity, the potential to efficiently utilize spare parts and provides fewer operational and maintenance requirements. A service agreement with SCG Process will be negotiated to ensure support is available when required.

#### **4. Proposed Additional Engineering Services**

##### **Black and Veatch**

- 4.1 Black and Veatch have become intimately familiar with the specific details, site constraints and technological needs of the zebra mussel chlorine line replacement projects at Ajax and Beaverton WSP. The project knowledge retained by Black

and Veatch provides significant benefits to the construction inspection staff deployed on the project from the perspectives of contractual continuity, knowledge transfer and resolution of site-specific issues sometimes experienced during construction. The Region and Black and Veatch have also gained a fulsome understanding of the engineering and inspection services required during construction after reviewing similar project experiences with City of Toronto staff.

- 4.2 Awarding the engineering services to different consulting firms would require the Region to coordinate multiple engineering services contracts resulting in additional time and resources, which would cause operational challenges to meeting regulatory requirements. Staff recommend sole sourcing to avoid duplication of effort.

## **AECOM**

- 4.3 The future widening of Highway 401 at the Wilson Road South Overpass, as well as the existing age and condition of the structure, requires the removal and replacement of the existing structure. As a result of the MTO's proposed Wilson Road South Overpass replacement, the vertical profile of Wilson Road South will be lowered which triggers the need for the Region to relocate the existing 750mm and 1050mm diameter feeder mains. Due to the significant time constraints imposed by the MTO, the Region's feeder main works are expected to be undertaken within the MTO construction contract. Combining these efforts will mitigate the duration of construction impacts on residents, businesses, and roadway users. AECOM has undertaken all investigations and commenced with the detailed design for the bridge structure.
- 4.4 Awarding the engineering services to different consulting firms would require the Region to coordinate multiple engineering services contracts resulting in additional time and resources, which would cause operational challenges to meeting regulatory requirements. Staff recommend sole sourcing to avoid duplication of effort.
- 4.5 Additional financing will be required for the engineering services associated with this project.

## **5. Financial Implications**

- 5.1 Section 7.2 of the Region's Purchasing By-law permits:
- The sole sourcing of goods and services under specific circumstances, including where additional deliverables were not included in the initial

- procurement and where a change of supplier is not recommended due to compatibility/continuity concerns and cost impacts; and
  - The acquisition of goods and services through sole source negotiations under specific circumstances outlined in Appendix 'C'. Section 1.1 of Appendix 'C' permits negotiations for goods or services to be supplied only by a particular supplier if no reasonable alternative or substitute goods exist due to the absence of competition for technical reasons.
- 5.2 The Region's Purchasing By-law also requires Regional Council approval for any negotiated purchases of \$100,000 and greater in value.
- 5.3 Section 17.1 of the Region's Budget Management Policy requires the approval of the applicable Standing Committee and Regional Council for the reallocation of capital funding exceeding \$250,000.
- 5.4 Financing for the additional commitments required for the realignment of the existing water supply feedermain to accommodate the Ministry of Transportation's reconstruction of the Wilson Road South Overpass can be provided from the following source:

#### Previously Approved Financing

Watermain replacement at Highway 401 and Wilson Rd., in  
conjunction with the MTO, Oshawa

User Revenue (Project ID: D2221)	\$250,000
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#### Additional Financing

2023 Water Supply Capital Budget

Replacement of watermain on Pickering Beach Rd. from Foord  
Road to Hewitt Crescent, Ajax

User Rate (Project ID: A1906)	<u>\$300,000</u>
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<b>Total Revised Project Financing</b>	<b><u>\$550,000</u></b>
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## **6. Relationship to Strategic Plan**

- 6.1 This report aligns with the following strategic goals and priorities in the Durham Region Strategic plan:
- a. Service Excellence Goal #5.1: Optimize resources and partnerships to deliver exceptional quality services and value.

- b. Service Excellence Goal #5.4: Drive organizational success through innovation, a skilled workforce and modernized services.

## **7. Previous Reports and Decisions**

- 7.1 There have been no previous reports related to these contracts.

## **8. Conclusion**

- 8.1 It is recommended that authorization be approved for the sole source contracts of additional engineering services and equipment for various water supply and sanitary sewerage projects be approved.
- 8.2 This report has been reviewed by the Finance Department and the Commissioner of Finance concurs with the recommendations.
- 8.3 For additional information, contact: Mike Hubble, Director of Environmental Services, at 905-668-7711, extension 3460.

Respectfully submitted,

Original signed by:

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Ramesh Jagannathan  
MBA, M.Eng., P.Eng., PTOE  
Acting Commissioner of Works

Recommended for Presentation to Committee

Original signed by:

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Elaine C. Baxter-Trahair  
Chief Administrative Officer