

NO: R155

COUNCIL DATE: July 22, 2019

REGULAR COUNCIL

TO: Mayor & Council **DATE: July 17, 2019**

FROM: Acting General Manager, Engineering **FILE: 1218-005/11**

SUBJECT: Award of Contract No. 1218-005-11
Bridgeview Water Main and Storm Sewer Replacement

RECOMMENDATION

The Engineering Department recommends that Council:

1. Award Contract No. 1218-005-11 to Richco Contracting Ltd. in the amount of \$3,068,059.05 (including GST) for the construction of the Bridgeview Water Main and Storm Sewer Replacement project (using Pipe Alternative B, TR-Extreme);
2. Set the expenditure authorization limit for Contract No. 1218-005-11 at \$3,375,000.00 (including GST and contingency); and
3. Authorize the General Manager, Engineering to execute Contract No. 1218-005-11.

SCOPE OF WORK

As identified in the City's 10-Year Servicing Plan, there are water mains in Bridgeview area that are at the end of their service life and in need of replacement. The water mains in these locations are installed in soft ground conditions and are vulnerable to seismic activity.

The City recently conducted a study to investigate water main products currently used in seismic zones throughout the world. This study concluded that earthquake resistant ductile iron pipe ("ERDIP") performed best both in lab simulations and actual earthquake events. ERDIP is specialized pipe which meets current earthquake design guidelines established by the International Organization for Standardization ("ISO") in ISO Standard No. 16134. Based on the recommendations of this study, the City is piloting the use of this material before establishing it as a required material for use in seismically vulnerable areas.

At its Regular Council Meeting on February 25, 2019, Council authorized the purchase, supply and delivery of 2,270 metres of ERDIP for use in a first pilot project by the City's Engineering Operations Division in the replacement of aging water mains in North Surrey.

This Contract represents a second pilot project. The construction package related to this Contract consists of the installation of water mains and storm sewer replacements at the locations listed in the following table, which are also illustrated on the map attached to this report as Appendix “I”:

Map Reference Number	Project #	Project Description	Location
1	D-16897	155m of 675mm diameter	126A Street: 112A Avenue to 114A Avenue
2	D-16897	80m of 500mm diameter	112A Avenue: 126A Street to Bridgeview Drive
2	W-15211	70m of 300mm diameter ERDIP	126A Street: 112A Avenue to 112B Avenue
3	W-15210	1,000m of 300mm diameter ERDIP	112A Avenue: Highway 17 to 126A Street
4	W-12614	270m of 300mm diameter ERDIP	112B Avenue: 126A Street to 128 Street
5	W-11520	110m of 350mm diameter ERDIP	Timberland Road: Tannery Road to Pine Road

In order for the Engineering Department to evaluate the construction industry’s response to installing the ERDIP product, as compared to current standard materials, the Contract allowed contractors to submit tenders for the Engineering Department’s current standard for water main pipe and two alternative products (Pipe Alternative A and Pipe Alternative B) that increase the seismic resiliency of our water distribution system. While the Pipe Alternative A (TR-Flex) product provides greater seismic resiliency over the Engineering Department’s current standard for water main pipe, the Pipe Alternative B (TR-Extreme) product is expected to provide even greater seismic resiliency as it is recognized as ERDIP as per ISO Standard No. 16134.

The Contract also included an optional item for contractors to indicate the increase or decrease in construction schedule that would result in utilizing the two alternative pipe products, as these products are considered to be easier to install than the Engineering Department’s current standard for water main pipe. Furthermore, in an effort to increase the number of contractors participating in the tender, the Contract allows a flexible construction start date to provide contractors greater flexibility in the scheduling their work.

The Contract permits construction between 7:00 a.m. and 10:00 p.m. but does not include an option for contractors to work 24-hours a day, 7-days a week, given that the majority of the work is located in a residential area.

The storm sewer work is expected to start in August 2019, and the water main work is anticipated to commence in mid-September 2019. Work is expected to be completed by Spring 2020. There are no planned road closures or prolonged impacts to any residences or businesses resulting from any of the Contact work.

TENDER RESULTS

Tenders for the subject contract were opened on July 4, 2019 with the following tender amounts including GST:

<i>Contractor</i>	<i>Current Standard Water</i>		<i>ERDIP</i>
	<i>Main Pipe</i>	<i>Pipe Alternative A</i>	<i>Pipe Alternative B</i>
1. Richco Contracting Ltd.	\$3,054,766.05	\$2,994,244.05	\$3,068,059.05
2. Sandpiper Contracting LLP	\$3,398,404.80	\$3,370,650.15	No submission
3. Pedre Contractors Ltd.	\$3,682,350.00	\$3,654,735.00	\$3,810,135.00
4. J. Cote & Son	\$4,010,960.10	\$3,879,876.00	\$4,022,180.40
5. Tybo Contracting Ltd.	\$4,956,479.85	\$4,937,516.85	\$5,150,017.95
6. Hyland Excavating	No Submission	No Submission	\$5,677,250.25

The Engineer's (WEB Engineering) pre-tender estimate, including GST, for the current standard water main pipes was \$2.80 million, \$2.73 million for Pipe Alternative A, and \$2.91 million for Pipe Alternative B.

EVALUATION

The City's consultant reviewed the tender submissions for accuracy and completeness. No errors were found. All submissions included the required 10% bid bond, were signed on the Tender Form, and were initialed on the Summary Sheet of the Schedule of Quantities and Prices.

Regardless of the pipe material used, Richco Contracting Ltd. provided the lowest tender price for all pipe material options. Richco Contracting Ltd. indicated a time savings of three days (3%) with Pipe Alternative A and no time savings with Pipe Alternative B.

The low bidder, Richco Contracting Ltd., has provided a Consent of Surety for a Performance Bond and a Labour & Materials Bond, and agreed to complete the work within 100 working days, as stipulated in the contract. Richco Contracting Ltd.'s past performance on similar work has been satisfactory. They have no outstanding legal claims against the City.

As Pipe Alternative B (TR-Extreme) provides the most resilient pipe system during a seismic event and represents a nominal increase in cost over Pipe Alternative A (2.5%) and the Current Standard Water Main Pipe (0.4%), it is recommended that Richco Contracting Ltd. be awarded Contract No. 1218-005-11 using Pipe Alternative B (TR-Extreme).

SUSTAINABILITY CONSIDERATIONS

The work of this contract supports the objectives of the City's Sustainability Charter 2.0. In particular, this work relates to the Sustainability Charter 2.0 theme Infrastructure. Specifically, this Contract supports the following Desired Outcomes ("DO") and Strategic Direction ("SD"):

- All Infrastructure Do1: City facilities and infrastructure systems are well managed, adaptable and long lasting, and are effectively integrated into regional systems;
- All Infrastructure Do2: Infrastructure systems provide safe, reliable and affordable services; and
- All Infrastructure SD2: Develop and manage out assets to adapt to technological change.

FUNDING

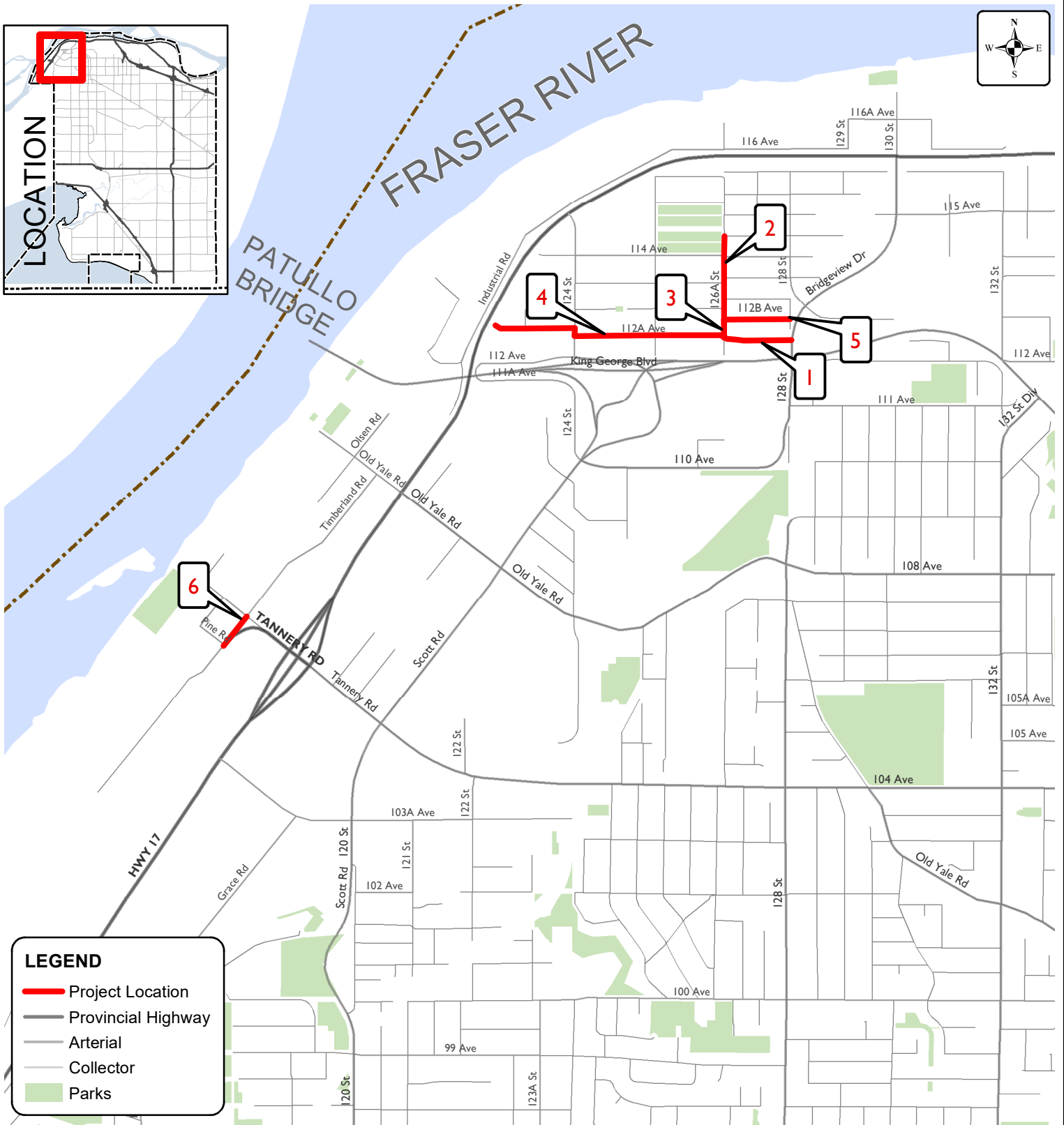
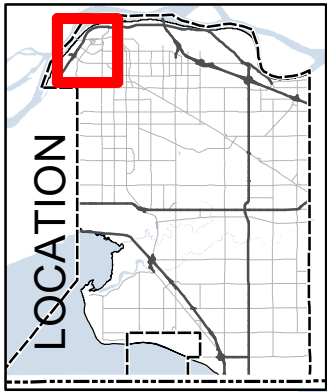
Funding for this contract is available in the approved 2019 Utilities Budget.

Scott Neuman, P.Eng.
Acting General Manager, Engineering

JA/VJ/NC/cc

Appendix "I" – Map of Locations – Contract No, 1218-005-11

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CONTRACT No. 1218-005-11 Bridgeview Water Main and Storm Sewer Replacement

ENGINEERING
DEPARTMENT

The data provided is compiled from various sources and IS NOT warranted as to its accuracy or sufficiency by the City of Surrey. This information is provided for information and convenience purposes only. Lot sizes, Legal descriptions and encumbrances must be confirmed at the Land Title Office.