



**REPORT TO REGIONAL WATER SUPPLY COMMISSION  
MEETING OF WEDNESDAY, 18 MARCH 2009**

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**SUBJECT**      MAIN NO. 2 REPLACEMENT – AWARD OF CONSULTING ENGINEERING SERVICES

**PURPOSE**

To recommend award of the contract for the provision of engineering design and construction administration services for the Main No. 2 Replacement Project.

**BACKGROUND**

Main No. 2 totals 8.5 km in length and is aligned through View Royal, Esquimalt and Victoria. Previous capital upgrades have replaced all but the remaining 2.2 km of pipe that dates back to the 1930's, which has been experiencing failures. Two segments of main replacement are proposed on either side of the Port Ellice Bridge, but not including the segment currently located on the bridge, which has been upgraded more recently.

The two sections scheduled for replacement are described as follows:

Section 1 – Between the east end of the Port Ellice Bridge and the valve station at the intersection of David and Gorge Streets (approximately 1,000 m in length); and

Section 2 – Between the west end of the Port Ellice Bridge and the valve control station at the intersection of Craigflower Road and Burleith Street (approximately 1,200 m in length).

The capital work has been included in the Regional Water Supply Commission's budget for 2009, with \$3.813 M to be expended in each of the years 2009 and 2010. It is proposed to hire an engineering consultant to oversee the design and construction of both sections. Further, it is proposed to tender and construct the work under two separate construction contracts, one contract to commence in the fall of 2009 and the second contract to commence in the fall of 2010.

In January 2009, a Request for Proposals was issued by the Capital Regional District (CRD) related to consulting engineering services, and seven proposals were received from consultants before the closing time on February 19, 2009, as follows:

	<b>CONSULTING ENGINEERING COMPANY</b>
1.	Focus Corporation
2.	Associated Engineering (BC) Ltd.
3.	Stantec Consulting Ltd.
4.	AECOM Canada Ltd.
5.	Chatwin Engineering Ltd.
6.	Delcan
7.	Genivar Consultants Limited Partnership

In accordance with the CRD's policy regarding hiring Consultants, the proposals for the work were reviewed and evaluated by Scott Mason, Manager of Supply Engineering, Tim Tanton, Senior Manager, Engineering and Planning, and Jack Hull, General Manager, Water Services for both technical and financial merits. The consultant with the best combination of technical expertise and fees was AECOM Canada Ltd. Further, it should be noted that AECOM scored the highest in both the technical and financial portions of the evaluation.

AECOM and their local staff are experienced in this type of work having provided consulting services for several sections of the Main No. 1 replacement program.

## ALTERNATIVES

Alternative 1 - Award the contract for the provision of engineering design and construction administration services to AECOM Canada Ltd.

Alternative 2 - Award the contract for the provision of engineering design and construction administration services to one of the other firms.

### Design and Construction Considerations

The consultants were requested to consider various options of alternate materials, alignment, operating conditions, methods of construction and related costs, essentially considering options from a triple bottom line perspective.

The route of the No. 2 Main Replacement Project experiences high traffic volumes during the morning and evening rush hours.

An alternate method of construction using trenchless technology was identified, whereby existing pipes are rehabilitated in place by inserting a new pipe material within the old pipe. This is a newer technology developed from sewer rehabilitation work and is increasingly being used in water distribution systems. The City of Victoria is currently conducting this work on its distribution system this year. Although it is not truly trenchless, excavations are still required at entry and exit points, as well as changes in grade, and at points of connection or valve chambers. Further, the specialized materials and work are installed by contractors from outside of the area and warranty work could be an issue. The CRD operations staff had reservations regarding future maintenance work and connection details, especially with the higher operating pressure on the main. While trenchless technology would result in lower green house gas emissions during construction, this construction technique is not recommended at this time due to the lack of local experience and expertise.

The general consensus is that the project would most successfully proceed as a traditional open cut construction method. Issues would be mitigated through a public consultation process, development of a traffic management plan, and engagement of arborists and environmental specialists. Staff and the consultant will work closely with the City of Victoria to minimize the disruption to traffic along the construction route.

## FINANCIAL IMPLICATIONS

### Alternative 1

The 2009 Capital Budget includes \$3,813,000 in each of the budget years of 2009 and 2010 (total \$7.626 M) for the replacement of Main No. 2 (Item #18), which includes both engineering and construction. AECOM Canada Ltd.'s fee estimate is \$305,147.08, plus GST for a total of \$320,404.43. This estimate includes design and construction services for the entire project.

The construction services estimate is based on a 16 week construction period for both construction contracts (total of 32 weeks) at \$4,140.00 per week (plus GST). If the actual construction period is different, the engineering fees would be adjusted accordingly.

The estimated amount of \$320,404.43 proposed by AECOM Canada Ltd. is within the budget amount for engineering services for the project.

### Alternative 2

Given the recommended consultant also had the lowest fee proposal, awarding the contract to another consultant would result in higher costs.

SUMMARY

The proposal by AECOM Canada Ltd. has been reviewed by staff and has been judged to represent the best combination of experience and price.

RECOMMENDATION

That the Regional Water Supply Commission award the contract for consulting engineering services for Supply Main No. 2 Replacement to AECOM Canada Ltd. in the amount of \$320,404.43 (including GST).

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S. Mason, P.Eng.  
Manager, Supply Engineering

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J.A. (Jack) Hull, MBA, P. Eng.  
General Manager, Water Services  
Concurrence

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T. Tanton, P.Eng.  
Senior Manager, Engineering and Planning