



CITY OF VANCOUVER

A24

ADMINISTRATIVE REPORT

Report Date: July 11, 2008
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VanRIMS No.: 08-2000-20
Meeting Date: July 22, 2008

TO: Vancouver City Council
FROM: General Manager of Engineering Services
SUBJECT: Request for Proposal - Vancouver Citywide Hydraulic Water Model

RECOMMENDATION

- A. THAT, subject to the conditions set out in Recommendations B, C and D, Council authorize a contract with Dayton and Knight Ltd. to provide professional engineering services for the demand allocation and calibration of the Hydraulic Water model at a maximum cost of \$143,805 including disbursements plus applicable taxes; source of funding to be the 2008 Waterworks Capital Budget for the Site Investigation Program.
- B. THAT the Director of Legal Services be authorized to execute and deliver on behalf of the City all legal documents required to implement Recommendation A.
- C. THAT all such legal documents be on terms and conditions satisfactory to the General Manager of Engineering Services, the Manager of Materials Management, and the Director of Legal Services.
- D. THAT no legal rights or obligations will be created or arise by Council's adoption of Recommendations A, B and C above unless and until such legal documents are executed and delivered by the Director of Legal Services.

GENERAL MANAGER'S COMMENTS

The General Manager of Engineering Services and the Manager of Materials Management recommend approval of Recommendations A through D.

COUNCIL POLICY

Consultant agreements exceeding \$30,000 require Council authorization. Contracts are to be awarded on the basis of best overall value for the City.

PURPOSE

The purpose of this report is to seek Council authority to engage Dayton and Knight Ltd. to conduct Professional Engineering Services for demand allocation and calibration of the Hydraulic Water Model at a maximum cost of \$143,805 including disbursements plus applicable taxes. The Hydraulic Water Model will be used as a planning tool for Capital projects which involves determining the annual replacement program for the transmission and distribution network and for analysis of system pressure and fire flow deficiencies.

BACKGROUND

The first hydraulic water model was developed in the early 1990's and was converted into the current water model in 2001. The current water model is run on the EPANet program. Some demands and pipe networks have been updated in the model along the way, but generally the current model's pipe network and assigned demands are out of date. Also, the EPANet model was never calibrated.

The main purpose of a water model of the City's water system is to study different scenarios that represent various impacts of development and changes on the City's water system. EPANet does not offer that ability to run multiple scenarios. Because the EPANet hydraulic water modelling program does not offer the functionality, a new modelling software package called MWHsoft INFOwater was purchased earlier this year.

It is the City's goal to build a brand new model using current City of Vancouver GIS data and current demands with the technologically advanced, MWH Soft INFOwater hydraulic modelling program. Also, the model will be calibrated by the consultant to accurately represent the operational reality of the distribution system.

DISCUSSION

The Request for Proposal for the demand allocation and calibration of the Citywide Hydraulic Model was released in May 7, 2008. The RFP was posted publicly on the City of Vancouver public website and on the BC Bid website. The RFP required the consultant to provide deliverables including the following;

- Demand Study,
- Hydrant Flow and Pressure Field Tests,
- Data Analysis and Model Validation and Calibration,
- Existing conditions and Scenarios, and
- Documentation and Reporting

The RFP closed on June 17, 2008 and was opened publicly.

The City received proposals from four proponents,

- Earth Tech Inc. ,
- Kerr Wood Leidal Associates,
- Delcan Corporation, and
- Dayton and Knight Ltd.

The proposals were evaluated by Waterworks design staff and Materials Management using a comparative and consistent matrix format. The matrix compared the proponent team's knowledge, project experience, references, project methodology and work program, project team organization and personnel, timelines, and cost. Through the evaluation process it was determined that the proposal Dayton and Knight Ltd. submitted offered best value to the City.

FINANCIAL IMPLICATIONS

The recommended professional service contract with Dayton and Knight Ltd. at a maximum cost of \$143,805 including disbursements plus applicable taxes will be funded from the 2008 Waterworks Capital Budget from the Investigation for Design Program (order group CC3EE4B)

CONCLUSION

Staff recommends that the contract for Consulting Services for the Citywide Hydraulic Water Model be awarded to Dayton and Knight Ltd. The Dayton and Knight Ltd. proposal and consultant team provides the overall best value to the City for the required scope of work.

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