



Report to: General Committee

Report Date: April 23, 2012

SUBJECT: Award of RFP #247-R-11 Consulting Engineering Services for West Thornhill Flood Control Implementation Alternative Refinement, Preliminary and Final Design

PREPARED BY: Robert Muir, Ext. 2894/ Prathapan Kumar, Ext. 2989/
Patti Malone x 2239

RECOMMENDATION:

- 1) THAT the report entitled "Award of RFP #247-R-11 Consulting Engineering Services for West Thornhill Flood Control Implementation Alternative Refinement, Preliminary and Final Design" be received;
- 2) AND THAT staff be authorized to award RFP #247-R-11 to the highest ranked and sixth lowest priced bidder R.V. Anderson Associates Limited to an upset fee limit of \$789,614.86 inclusive of disbursements and HST impact;
- 3) AND THAT a contingency amount of \$118,442.23 inclusive of disbursements and HST impact be established to cover any additional design and that the Director of Asset Management be authorized to approve expenditure of this contingency amount up to the specified limit in accordance with the Expenditure Control Policy;
- 4) AND THAT the award be funded from the Capital Budget accounts 058-6150-8530-005 and 058-6150-9330-005 as outlined under the financial template section of the report;

AND THAT staff be authorized and directed to do all things necessary to give effect to this resolution.

EXECUTIVE SUMMARY:

Not applicable

PURPOSE:

The purpose of this report is to obtain Council approval to award Request for Proposal (RFP) 247-R-11 for Consulting Engineering Services for West Thornhill Flood Control Implementation Alternative Refinement, Preliminary and Final Design.

BACKGROUND:

On October 14, 2011, the Staff presented a report to General Committee on West Thornhill Stormwater Flood Control Implementation Strategy requesting authorization to retain consultants to refine West Thornhill Phase 1 and 2 solutions, conduct value engineering, and complete preliminary and final design. The West Thornhill Flood Control Implementation Strategy is intended to implement recommendations of the West Thornhill Stormwater Flood Remediation Class Environmental Assessment (Class EA Study).

The Class EA recommended solution includes storm sewer improvements within thirteen (13) separate networks within the proposed four phases (refer to Attachment "A") that can be

implemented independently of each other. Phasing of improvements will be based on prioritization of flooding risks and the need to coordinate storm system improvements with improvements to other services, particularly the wastewater (sanitary) system. Improvements within a particular network may be staged beginning with outfall works and downstream segments, and proceeding upstream. The Phase 1 stormwater implementation area is within the Bayview Glen area and the Phase 2 implementation area is within the Grandview area. The phasing of potential new storm sewer infrastructure areas is shown on Attachment "A". The estimated total cost to provide the 100 year level of protection for West Thornhill Area is \$40 million. The schedule of works within the Phases is contingent upon the availability of funding. In 2008, a budget of \$500,000 was approved (account #058-6150-8530-005) to carry out West Thornhill Class EA study, which was completed in 2011 with a balance of \$89,100 remaining in this account. As approved at its Council meeting November 8, 2011, capital project accounts 058-6150-9330-005 (Thornhill Storm Sewer Upgrades, budget of \$2 million) and 058-5350-10281-005 (Storm Sewer Upgrades, budget of \$2 million) were consolidated to support the West Thornhill Phase 1 improvements (total \$4 million). The balance remaining after this Award for future construction work will be \$3.2 million.

Background data collection activities (e.g., archaeological and engineering surveys) have been identified to support design and construction for initial improvement works and have been completed. The design consultant will collect and incorporate this data, conduct the Value Engineering exercise, refine Class EA alternatives and complete preliminary design for Phase 1 and 2 works. The consultant will also evaluate the implementation of cost-effective, short-term local improvements and controls both within and beyond the priority capital improvement areas. The consultant will complete final design for Phase 1 works and prepare the tender for the first stage of Phase 1 construction works for which funding is available. The construction tender for stage 1 of Phase 1 works is expected by end of 2012.

The Consultant will complete value engineering to review the Town's flood risk reduction activities, the West Thornhill flood remediation strategy and methods which will reduce construction costs by 1) optimizing the design solution (e.g., can road grading be added to the solution eliminate the need for extensive sewer upgrades, or to limit the size (costs) of the proposed sewers), and 2) identifying the most costs effective way to implement the solution (e.g., does it cost less to install another parallel sewer to the existing, or replace the existing sewer with a larger one). Value engineering sessions will be incorporated into the planning and design process and will engage experts in technical fields including design and construction. The purpose is to 'brainstorm' and investigate methods to reduce overall life-cycle costs while achieving design objectives. Results of the session will guide the refinement of storm improvement alternatives and their design.

Beyond capital-intensive sewer capacity improvements, the Class EA recommended solution includes several low-cost elements such as the installation of inlet control devices and extensive roof downspout disconnection. Where these elements are not contingent on related storm sewer capacity improvements to convey additional flows, and where overland flow capacity is available, they may proceed in the short term. The consultant will evaluate these measures for implementation throughout the whole Class EA study area.

Bid Information:

Advertised	ETN (Electronic Tendering Network)
Bids closed on	January 25, 2012
Number picking up bid documents	15
Number responding to bid	7

Proposal Evaluation:

The evaluation team was comprised of staff from the Asset Management and Engineering with purchasing staff acting as the facilitator. The evaluation was based on pre-established evaluation criteria as listed in the Request for Proposal: 20% for past experience of consulting firm, 20% for qualifications and experience of the lead consultant and project team, 30% for project delivery and 30% for price, totalling 100%, with resulting scores as follows:

Consulting Firm	Total Score (Out of 100)	Ranking*
R.V. Anderson Associates Limited	71.9	1
Cole Engineering Group Ltd.	64.0	2
Genivar	63.5	3
Stantec	59.6	4
AECOM	49.9	5
Schaeffers	40.5	6
Aquafor Beech & Tetra Tech	40.4	7

**The prices including HST impact ranged from \$475,137.79 to \$915,077.82.*

The highest ranked bidder was considerably high in price even though they were ranked # 1 following the evaluation process. The Town, in its sole discretion as identified within the RFP bid document had the option to either award a contract to the highest ranked bidder or enter into contract negotiations with one or more of the highest ranked bidders. Staff decided to undertake negotiations with the highest ranked bidder (R.V. Anderson Associates Limited) and through these negotiations achieved a fee reduction in the amount of \$125,463 from their original proposal through refinements in scope, reallocation of staff, and elimination of material testing, as this will be done by another consultant.

OPTIONS/ DISCUSSION:

R.V. Anderson Associates Limited (RVA) has completed 10 design and contract administration projects with similar scope for various municipalities within the last 10 years with satisfactory results.

While a detailed scope of work was provided in the RFP and in addenda in response to bidder's questions, a significant range in bid prices was received (highest bidder nearly twice the lowest bidder). The low technical ranking group of four bidders had the lowest prices, which largely reflected a limited understanding of the level of effort required to meet the study requirements and in most cases omitted scope requirements.

In comparing the recommend proponent to these bidders, the number of hours that RVA proposed was reflective of the effort required and was 95% (3,000) more hours than these four low priced bidders. These four bidders did not meet prescribed study requirements for

subsurface engineering (utility locates), topographic surveys, or use the of the Town's standard model (InfoWorks). These omissions contributed to significantly lower bid prices due to inadequate understanding of study requirements.

Further, RVA has provided an experienced team which supports a proper scoping of efforts and budget, and whose work plans meets the scope requirements. Also, the RVA proposal was adequate in terms of efforts and budgets for:

- i) value engineering/alternative refinement to identify costs savings or reduced social impacts,
- ii) model recalibration to address overestimation of risks and overdesign of remediation,
- iii) reporting,
- iv) meetings, and
- v) Preliminary design/drawing preparation.

The first two items reduce the risk of higher capital costs associated with the refined Class EA alternatives.

Additionally, RVA (one of only two consultants to do so) identified the need to recalibrate the Class EA model as a result of the substantial updates in Task 1. Inadequate recalibration efforts by others may lead to overestimation of flood risks and remediation costs, and inadequate recognition of other factors including risk due to the sanitary sewer system.

Contingency

A contingency is requested for the unforeseen costs and to cover additional cost for designing non-standard flow balancing features, inlet and junction chambers, storage facilities and related Class EA addendum if required, and other storm system components that may arise from the Value Engineering exercise or the refinement of alternatives.

FINANCIAL TEMPLATE:

Account Name	Budget	Budget Available for this Award	Award	Contingency	Total Cost	Budget available after this Award
Thornhill Stormwater Flood Remediation Study 058-6150-8530-005	\$500,000	\$89,100	\$89,100	\$0	\$89,100	\$0
Thornhill Storm Sewer Upgrades 058-6150-8330-005	\$4,000,000	\$3,970,888	\$700,515	\$118,442	\$818,957	\$3,151,931
Total	\$4,500,000	\$4,059,988	\$789,615	\$118,442	\$908,057	\$3,151,931

Note: The remaining budget will be used for construction of Phase 1, Stage 1 works

ALIGNMENT WITH STRATEGIC PRIORITIES:

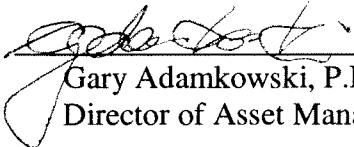
The proposed flood remediation program is in line with Town's goal to provide better quality services to the public and is consistent with the Building Markham's Future Together strategic priority on the "Growth Management" and "Environment" as it considers sustainability on the built environment.

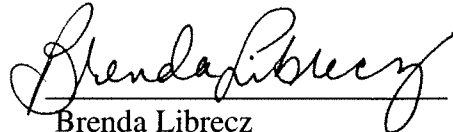
DEPARTMENTS CONSULTED AND AFFECTED:

The Finance Department has been consulted, provided input and reviewed this report.

RECOMMENDED:

BY:


Gary Adamkowski, P.Eng.
Director of Asset Management


Brenda Librecz
Commissioner, Community & Fire Services

ATTACHMENTS:

Attachment "A" - Phasing of Potential New Storm Sewer Infrastructure

247-R-11 Attachment A.docx

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