

TO:	CHAIR AND MEMBERS BUILT AND NATURAL ENVIRONMENT COMMITTEE MEETING ON AUGUST 15, 2011
FROM:	RON STANDISH, P. Eng. DIRECTOR, WASTEWATER AND TREATMENT PLANNING, ENVIRONMENTAL AND ENGINEERING SERVICES
SUBJECT:	CONTRACT AWARD – TENDER NO. T11-12 STONEY CREEK EROSION CONTROL WETLAND STORMWATER MANAGEMENT FACILITY CONSTRUCTION (ES2477)

RECOMMENDATION

That, on the recommendation of the Director, Wastewater and Treatment, Planning, Environmental and Engineering Services, the following action **BE TAKEN** with respect to the award of a contract for the Stoney Creek Erosion Control Wetland Stormwater Management Facility construction:

- (a) the bid submitted by Bre-Ex Limited at its tendered price of \$1,726,679.88 excluding H.S.T., for the Stoney Creek Erosion Control Wetland Stormwater Management Facility Construction contract, **BE ACCEPTED**; it being pointed out that the bid submitted by Bre-Ex Limited was the lowest of seven (7) pre-qualified bids received and meets the City's specifications and requirements in all areas;
- (b) the Delcan Consulting **BE AUTHORIZED** to carry out the Inspection and General Construction Administration for the Stoney Creek Erosion Control Wetland Stormwater Management Facility Construction in accordance with the estimated amount of \$195,000 including contingency, excluding HST based upon the Fee Guideline for Professional Engineering Services, 2006, recommended by the Ontario Society of Professional Engineers;
- (c) the financing for this work **BE APPROVED** as set out in the Sources of Financing Report attached hereto as Appendix "A";
- (d) the Civic Administration **BE AUTHORIZED** to undertake all the administrative acts that are necessary in connection with this work;
- (e) the approvals given herein **BE CONDITIONAL** upon the Corporation entering into a formal contract with the consultant for the work; and
- (f) the Mayor and City Clerk **BE AUTHORIZED** to execute any contract or other documents, if required, to give effect to these recommendations.

PREVIOUS REPORTS PERTINENT TO THIS MATTER
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ETC – February 27, 2006 – Approval of the Appointment of the Consulting Engineer for the Municipal Class Environmental Assessment (EA), Schedule 'B' for the storm/drainage and SWM servicing works for Stoney Creek Undeveloped Lands.

ETC – February 26, 2007 – Approval of the Municipal Class EA Study Progress Report for storm/drainage and SWM servicing works for Stoney Creek Undeveloped Lands.

PC – June 18, 2007 – Stoney Creek Area Update

ETC – September 24, 2007 – Acceptance of the study report of the Municipal Class EA for the proposed storm/drainage and SWM servicing works for Stoney Creek Undeveloped Land.

PC – December 10, 2007 – Implementation Strategy for the recommended erosion control remediation and servicing works for the Stoney Creek Drainage Area

ETC – January 28, 2008 - Approval of the Appointment of the Consulting Engineer for the erosion control remediation and servicing works for the Stoney Creek system.

PC – June 16, 2008 – Approval of the Funding Implementation Strategy for the Stoney Creek System Erosion Remediation/Reclamation and Servicing Works

PC – July 14, 2008 – Erosion Remediation/Reclamation Works for the Stoney Creek System Subdivision Agreement – Z Group Inc. (39T-05510)

City Council – December 1, 2008 – Erosion Remediation/Reclamation Works for the Stoney Creek System Under Subdivision Agreement with 2047790 Ontario Incorporated (39T-05510)

ETC – May 11, 2009 – Appointment of Consulting Engineer for Engineering Services Related to the Stormwater Management Erosion Control Wetland for the Stoney Creek System Phase 3 Project.

BACKGROUND

Purpose:

The purpose of this report is to award the construction contract to undertake the construction of the Stoney Creek Erosion Control Wetland Stormwater Management Facility (ES2477) and to authorize the City's consultant (Delcan) to carry out the inspection and contract administration necessary to complete and construct the project (location map is shown in Appendix B). The proposed project represents the final phase (Phase 3) of the proposed Implementation Strategy for the erosion control remediation and servicing works for the Stoney Creek system. Upon the construction of the facility approximately 1600 to 1900 lots will be opened for land development, it being noted that upon the construction of Phase 1 and 2 works (completed in 2009) allowed for approximately 650 lots or equivalent to be released for land development.

Context:

In 2006, the City of London initiated the Stoney Creek Municipal Class Environmental Assessment (EA) study for Storm/Drainage and SWM Servicing for Undeveloped Lands to address the servicing and erosion remediation/reclamation requirements for this system. This Municipal Class EA was completed and accepted by Council, the public and approval agencies in February 2008.

In December 2007, Council approved the Stoney Creek Implementation Strategy for erosion control remediation and servicing works. This Implementation Strategy recommended that the works be completed in three phases as per the Municipal Class EA and proposed to encompass the following:

- Erosion control storages within all proposed off-line SWM Facilities (private lands);
- Remediation/reclamation works of approximately 1700 m of the Stoney Creek Main Channel and its tributaries (Phase 1 and 2); and
- On-Line Stoney Creek Erosion Control Wetland SWM facility (Phase 3).

The estimated costs associated with the three phases of the erosion control works identified in the EA and subsequently updated in the Growth Management Implementation Strategy are approximately \$5.7 M, of which the estimated non-growth cost is approximately \$1 M. The Environmental and Engineering Services Department (EESD) recommended that these works be done as a Development Charges project and be managed by EESD.

In March 2009, the City completed the major construction of remediation/reclamation works of approximately 1730 linear meters in Stoney Creek and Powell Drain (Phase 1 and 2) in accordance with the Council approved Implementation Strategy for the Stoney Creek erosion control remediation/reclamation and servicing works. Phase 1 and 2 project construction allowed for approximately 650 lots or equivalent to be released for land development. The total costs for Phase 1, 2 and 3 works for design and construction are approximately \$4.54 M (excluding HST) resulting in a savings of approximately \$1.2 M.

Discussion:

The construction objective of the Stoney Creek Erosion Control Wetland Stormwater Management Facility project (Phase 3) of the Stoney Creek remediation/reclamation erosion works is to minimize or eliminate the erosion control deficiencies within the Stoney Creek System and provide sustainable conditions for the post-development flows. Following the construction of this project, an additional 1,600 to 1,900 lots or equivalent can be released for land development.

The primary design objective was to control erosion within the downstream reaches of Stoney Creek and provide sustainable channels under the proposed post-development conditions in combination with the other components such as the Off-line SWMFs as identified in the approved Implementation Strategy. The design of these components was aided by the use of continuous simulation modeling of the entire watershed using 20 years of input data. Significant efforts were also made during the design process to understand the behavior of the proposed wetland using Delcan's proprietary water balance software to simulate its effects on flow attenuation. Delcan's modelling efforts were also supported by a Creek Monitoring program to understand the stage-discharge behavior and variability of the creek that contains in-stream obstructions (beaver dams) and low-lying areas that flood and provide additional storage. The Stoney Creek Erosion Control Wetland SWM facility represents the City's first green infrastructure.

The secondary objective of the design of the facility was to reclaim natural heritage features previously lost through development of the Stoney Creek basin and construct this wetland as green infrastructure. Unlike traditional stormwater management facilities, this 'green' infrastructure was designed to:

- Integrate closely with the surrounding natural environment and include micro-topography such as roughened surfaces, shrub beds, pools, and meandering fish passageways to mimic a natural environment;
- Include aquatic, terrestrial, and avian habitat while maintaining existing linkages;
- Diversify and enhance vegetation communities and fish and wildlife habitat; and
- Reclaim wetland area previously lost through development of the Stoney Creek basin and restore hydrologic functions previously provided by wetlands.

The design addressed significant site-specific challenges including preservation of the Stoney Creek channel and banks, preservation of adjacent unevaluated wetland areas, preservation of adjacent spawning areas, preservation of the adjacent Environmentally Significant Area (ESA), integration and preservation of existing vegetation within the limits of work, and preservation of existing vegetation by transplanting vegetated sod blocks.

The original scope of work for the functional and detailed design was based on the preparation and submission of a Category 2 Permit to Take Water (PTTW) to the MOE. Based on further detailed geotechnical investigation completed during the functional design it was determined that a Category 3 PTTW was necessary for the project. Additional fees associated with the Category 3 PTTW application were approximately \$14,000.

The detailed design works were completed in July 2010 with construction anticipated to be completed by the end of 2010. However, due to difficult negotiations with the adjacent landowner increased engineering costs were incurred and ultimately the loss of a construction year.

In addition to full time inspection, the complexity of the project warrants specialized assistance to the Contractor in the Contract Administration work for:

- Preservation of the numerous ecological sensitivities adjacent to the project area;
- Geotechnical concerns including unstable wetland base;
- Monitoring the impacts of dewatering on sensitive human and ecological receptors;
- Protection of species at risk;
- A high degree of erosion, sediment, and pollution control during construction;
- Minimizing impacts of temporary creek crossings required for construction;
- Challenges associated with construction access and egress; and
- Fine grading and the creation of a variety of habitat types.

Delcan will provide specialists in contract administration, geotechnical engineering, hydrogeology, water resources, biology, ecology, fisheries, landscaping, and erosion control to assist in the construction of the facility. Delcan has extensive knowledge of the Stoney Creek infrastructure and system requirements within the drainage area as this Consultant has recently completed the Municipal Class EA study for Stoney Creek for Undeveloped Lands and the Detailed Design of the Erosion Control Wetland for the Stoney Creek System. Based on the previously completed works within Stoney Creek by Delcan, the consultant demonstrated competency and expertise in completing multi-disciplinary water resources projects that meet PEESD's requirements.

This construction project implemented a pre-qualification process which closed on Wednesday February 2, 2011, in which the City received a total of seventeen (17) responses from various contractors throughout Ontario. Out of the seventeen (17) interested contractors;

- Five (5) specialized in this type of environmental construction;
- Nine (9) are general contractors who have limited wetland experience; and
- Three (3) had incomplete submissions

After a thorough review of the documentation received, eight (8) qualified contractors were selected based on previous relevant work experience with similar construction projects which allowed them to submit bids for the construction of the Stoney Creek Erosion Control Wetland Stormwater Management Facility.

Tenders for the Stoney Creek Erosion Control Wetland Stormwater Management Facility construction were opened on Wednesday, July 20, 2011.

Eight (8) contractors were provided the opportunity to submit bids for the project and two (2) selected did not submit a bid.

Six (6) pre-qualified contractors submitted tenders as follows. (Prices exclude 13% H.S.T.)

CONTRACTOR		TENDER PRICE SUBMITTED
1.	Bre-Ex Ltd.	\$1,726,679.88
2.	J-AAR Excavating Ltd.	\$1,811,476.45
3.	L-82 Construction	\$2,120,852.77
4.	R & M Construction	\$2,368,912.00
5.	BF Environmental Consultants Ltd.	\$2,479,908.00
6.	Goodreau Excavating Ltd.	\$2,811,637.45

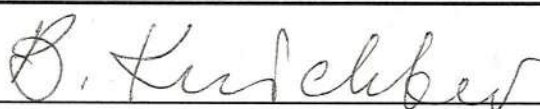
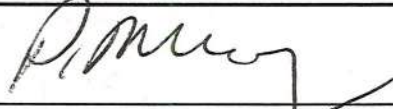
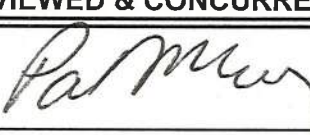
All tenders have been checked by the Finance and Corporate Services Department, the Planning, Environmental and Engineering Services Department and the top three tenders were checked by Delcan Consulting. The tender estimate prior to tender opening was \$2.6 M (excluding 13% H.S.T.). All tenders include a contingency allowance of \$220,000 (excluding 13% H.S.T.).

Conclusions:

It is recommended that Bre-Ex Limited be awarded the Construction of the Stoney Creek Erosion Control Wetland Stormwater Management Facility construction contract and authorize the City's consultant (Delcan Consulting) to carry out the inspection and contract administration for this project.

Acknowledgements:

This report was prepared within the Planning, Environmental Engineering Services Department, Stormwater Management Unit by Billy Haklander, P.Eng., Environmental Services Engineer and Paul Titus, C.E.T., Senior Engineering Technologist.

SUBMITTED BY:	RECOMMENDED BY:
	
BERTA KRICKER, M.Eng., F.E.C., P. Eng. MANAGER OF STORMWATER STORMWATER MANAGEMENT UNIT	RON STANDISH, P.ENG. DIRECTOR, WASTEWATER AND TREATMENT – PLANNING, ENVIRONMENTAL AND ENGINEERING SERVICES
REVIEWED & CONCURRED BY:	
	
PAT MCNALLY, P.ENG. EXECUTIVE DIRECTOR OF PLANNING, ENVIRONMENTAL AND ENGINEERING SERVICES	

August 4, 2011

/PT

Attach: Appendix "A" – Sources of Financing
Appendix "B" – Location Map

c.c. John Braam, City Engineer
Carolyn Malott, Budget Analyst
Bre-Ex Limited
Delcan

Chair and Members
 Built and Natural Environment Committee

August 5, 2011
 (Award Contract)

Stoney Creek Erosion Control Wetland Stormwater Management Facility Construction
Capital Project ES2477 - Stoney Creek Remediation and Slope Stability
Bre-Ex Limited - \$1,726,679.88 (excluding H.S.T.)
Delcan - \$195,000 (excluding H.S.T.)

FINANCE DEPARTMENT REPORT ON THE SOURCES OF FINANCING:

Finance Department confirms that the cost of this project can be accommodated within the financing available for it in the Capital Works Budget and that, subject to the adoption of the recommendations of the Director, Wastewater and Treatment, the detailed source of financing for this project is:

ESTIMATED EXPENDITURES	Approved Budget	Committed to Date	This Submission	Balance for Future Work
Engineering	\$1,512,214	\$1,079,910	\$198,432	\$233,872
Construction	4,150,154	1,417,878	1,757,069	975,207
City Related Expenses	67,632	32,645		34,987
NET ESTIMATED EXPENDITURES	\$5,730,000	\$2,530,433	\$1,955,501 1)	\$1,244,066

SOURCE OF FINANCING:

Drawdown from Sewage Works Reserve Fund	\$377,000	\$104,000	\$80,371	\$192,629
Drawdown from City Services-Major SWM R.F. 2) (Development Charges)	3,021,500	2,426,433	595,067	0
Debenture By-law No. W.-2038-351 3) (Serviced through City Services - Major SWM Reserve Fund - Development Charges)	2,331,500		1,280,063	1,051,437
TOTAL FINANCING	\$5,730,000	\$2,530,433	\$1,955,501	\$1,244,066

1) **FINANCIAL NOTE:**

	Engineering	Construction	Total
Contract Price	\$195,000	\$1,726,680	\$1,921,680
Add: HST @13%	25,350	224,468	249,818
Total Contract Price Including Taxes	220,350	1,951,148	2,171,498
Less: HST Rebate	21,918	194,079	215,997
Net Contract Price	\$198,432	\$1,757,069	\$1,955,501

NOTES:

2) Development charges have been utilized in accordance with the underlying legislation and the Development Charges Background Studies completed in 2009.

3) **NOTE TO CITY CLERK:**

The City Clerk be authorized to increase Debenture No. W.-2038-351 by \$1,331,100 from \$1,000,400 to \$2,331,500.

EH



Alan Dunbar
 Manager of Financial Planning & Policy

APPENDIX 'B' - LOCATION MAP

