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HALIFAX
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**Halifax Regional Council**
**September 5, 2006**

**TO:** Mayor Kelly and Members of Halifax Regional Council

**SUBMITTED BY:** Dan English, Chief Administrative Officer

Wayne Anstey, Deputy Chief Administrative Officer

**DATE:** August 22, 2006

**SUBJECT:** **Award of RFP 06-331 Engineering Study - Sonar & CCTV Inspection and Sewer Condition Assessment; North West Arm Sewer, Freshwater Brook Sewer and Bedford/Sackville Trunk Sewer**

## ORIGIN

2005/06 Capital Budget

## RECOMMENDATIONS

It is recommended that Regional Council award the engineering study, Sonar & CCTV Inspection and Sewer Condition Assessment; North West Arm Sewer, Freshwater Brook Sewer and Bedford/ Sackville Trunk Sewer, as called for in RFP#06-331, to Andrews Infrastructure for a total cost of $257,996 including net HST, with funding authorized as per the Budget Implications section of this report.

## BACKGROUND

In July 2005, the Halifax Wastewater Management Study was awarded. An important component of that study was to determine the structural and functional condition of two major combined sewer systems in HRM. These sewer systems are (1) the North West Arm Sewer, which was constructed around 1920 and is 4.7 km in length; and (2) the Freshwater Brook Sewer, which was constructed around 1900 and is 2.6 km in length. Based on the ages of these systems, as well as the number of leaks and required repairs over the past few years, staff believe that the conditions of both of these systems have deteriorated to the point where a major rehabilitation is likely required.

The Bedford / Sackville Sanitary Trunk Sewer was constructed in approximately 1970 and is 10.5 km in length. This system has never been fully inspected since it was built and it is subject to capacity problems during wet weather events. Staff believe that a full length inspection of this system is required which could reveal defects in the system or areas where debris may be collecting, either of which may be contributing to the wet weather flow problems. It was decided to add this sewer to those to be inspected for the Halifax Wastewater Management Study in order to reduce the equipment mobilization and de-mobilization costs by amortizing them over more projects.

In order to make a fully informed analysis of rehabilitative options for each of these three sewers, a condition assessment and a mapping of the locations of all incoming pipes and connections is required. Two previous attempts were made to obtain this information by issuing the work as a tender. Both times, the bids received far exceeded the available budget and the tenders were subsequently cancelled.

In researching alternative sewer inspection techniques, staff became aware of Sonar Inspection which provides information about the system below the waterline in the pipe. Conventional CCTV inspection provides visual information above the waterline only and requires expensive de-watering and cleaning of the sewer prior to the inspection. By using a combined Sonar and CCTV inspection technique, it is possible to get a complete picture of the pipe under 'live' operating conditions. As a result, evidence of locations with operational issues (for example where debris collects) can be discovered and resulting cleaning or rehabilitative efforts can be more specifically directed, resulting in substantial cost savings.

The required work was therefore re-issued, this time as an RFP. The RFP approach allows the proposer the flexibility to examine other alternate or innovative means to perform the inspection. Moreover, as an RFP, the proposer provides to HRM a full condition assessment and engineering analysis of the system. Staff felt that this approach would yield the best results while providing the best possible price, thereby optimizing the cost benefit value to HRM taxpayers.

## DISCUSSION

The RFP for Sonar & CCTV Inspection and Sewer Condition Assessment; North West Arm Sewer, Freshwater Brook Sewer and Bedford/Sackville Trunk Sewer closed on August 11, 2006 and two proposals were received. These proposals were evaluated by three staff members from Environmental Engineering Services. The following proposals were received and evaluated:

| | | Average Score (/1000) |
|---|---|---|
| 1. | Andrews Infrastructure | 900 |
| 2. | AquaCoustic | 795 |

Based on the results of the evaluation, it is recommended that this work be awarded to Andrews Infrastructure for an estimated cost, exclusive of taxes, of $ 249,443. The detailed breakdown of the scoring is included as an attachment (see Attachment 1). The project cost including net HST is $257,996. The estimated cost for this work was $360,000.

The project is expected to last approximately sixteen (16) weeks and a final report will be delivered to HRM in early 2007.

## BUDGET IMPLICATIONS

Based on the proposal price of $ 249,443, the total project cost, including net HST, is $257,996. Funding is available in the Capital Budget from three separate accounts; Account No.CGU00686 for the North West Arm Sewer; Account No.CSU00117 for the Freshwater Brook Sewer, and Account No.CGI00610 for the Bedford/Sackville Trunk Sewer . The budget availability has been confirmed by Financial Services.

**Budget Summary:**

| | **Account No. CGU00686** | **North West Arm Sewer** |
|---|---|---|
| | Cumulative Unspent Budget; | $ 619,341 |
| less: | RFP#06-331 | $ 68,684 |
| | Balance of Account | $ 550,657 |

| | **Account No. CSU00117** | **Freshwater Brook Sewer** |
|---|---|---|
| | Cumulative Unspent Budget; | $ 233,246 |
| less: | RFP#06-331 | $ 39,587 |
| | Balance of Account | $ 193,659 |

| | **Account No.CGI00610** | **Bedford/Sackville Trunk Sewer** |
|---|---|---|
| | Cumulative Unspent Budget; | $ 668,308 |
| less: | RFP#06-331 | $ 149,726 |
| | Balance of Account | $ 518,582 |

The $360,000 estimate for the work included $100,000 for the North West Arm Sewer, $60,000 for the Freshwater Brook Sewer and $200,000 for the Bedford / Sackville Trunk Sewer. The balance of the funds remaining in these accounts will be used for contingencies and other future work on these sewer systems.

## FINANCIAL MANAGEMENT POLICIES/BUSINESS PLAN

This report complies with the Municipality's Multi-Year Financial Strategy, the approved Operating, Capital and Reserve budgets, policies and procedures regarding withdrawals from the utilization of Capital and Operating reserves, as well as any relevant legislation.

## ALTERNATIVES

Council could choose to reject the recommendation to have these sewers inspected. However, proceeding with necessary rehabilitation work or sewer replacement without information concerning structural condition, the locations of incoming pipes or possible flow impediments would involve greater risk and would ultimately result in higher costs.

## ATTACHMENTS

1. Detailed Evaluation form

Copies of this report, and information on its status, can be obtained by contacting the Procurement Dept. at 490-4170, or Fax 490-6425.

Report Prepared by: Barbara MacLean, P.Eng., Environmental Engineer, EES at 490-3685

Report Approved by: John Sheppard, P.Eng. Manager, Environmental Engineering Services at 490-6958

Report Approved by: Brad Anguish, P.Eng., Director, Environmental Management Services at 490-4825

Financial Review: for Ferdinand Makani, MBA, CMA, Financial Consultant at 490-6902

Procurement Review: Anne Feist, Operations Manager, Procurement at 490-4200

Report Approved by: for Catherine Sanderson, Senior Manager, CMA, Financial Services at 490-1562

**Attachment 1**

# DETAILED RFP #06-331 EVALUATION

| Criteria | Max Score | Andrews Infrastructure | AquaCoustic |
|---|---|---|---|
| Expertise of Firm and Project Team | 250 | 213 | 198 |
| Methodology | 550 | 492 | 418 |
| Fee Schedule | 150 | 150 | 147 |
| Overall Proposal Quality & TOR Compliance | 50 | 45 | 32 |
| | | | |
| **TOTAL** | **1000** | **900** | **795** |
| **RANKING** | | **1** | **2** |
| **COST (including net HST)** | | **$257,996** | **$262,586** |