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CONSULTANT SELECTION FOR ENGINEERING SERVICES MAJOR MACKENZIE WATERMAINS PROJECTS 74070, 74080 AND 76240 NEWMARKET EQUALIZATION TANK, PROJECT 75170 AURORA EQUALIZATION TANK, PROJECT 70340

The Transportation and Works Committee recommends the adoption of the recommendations contained in the following report, December 22, 2003, from the Commissioner of Transportation and Works:

1. RECOMMENDATIONS

It is recommended that:

1. The consulting engineering firm of MacViro Consultants Inc. be engaged to undertake the Class Environmental Assessment (Class EA), Detailed Design, Contract Administration, and full time Site Supervision for the Major Mackenzie Watermains from Woodbine Avenue to Markland Avenue, from Pugsley Avenue to Markland Avenue, and from Kennedy Road to McCowan Road as outlined in this report, at an upset limit cost of \$539,772.20, including GST.
2. The consulting engineering firm of R.V. Anderson Associates Limited be engaged to undertake the Detailed Design, Contract Administration, and full time Site Supervision for the Newmarket Equalization Tank as outlined in this report, at an upset limit cost of \$654,634.56, including GST.
3. The consulting engineering firm of R.V. Anderson Associates Limited be engaged to undertake the Class Environmental Assessment (Class EA), Detailed Design and Contract Administration, and full time Site Supervision for the Aurora Equalization Tank as outlined in this report, at an upset limit cost of \$579,426.40, including GST.
4. The funding for these assignments be approved, 80% from the Development Charge Reserve and 20% from the Rate Capital Reserve prior to the approval of the 2004 Budget and Business Plan.

2. PURPOSE

The purpose of this report is to engage qualified consultants as soon as possible to ensure timely completion of Regional works in Richmond Hill, Markham, Newmarket, and Aurora. This report recommends the retention of consulting engineering firms to carry out the following projects:

- Class Environmental assessment, detailed design, contract administration, and full time site supervision services for the Major Mackenzie Watermains in the Town of Markham and Richmond Hill.

- Detailed design, contract administration, and full time site supervision services for the Newmarket Equalization Tank in the Town of Newmarket.
- Class Environmental assessment, detailed design, contract administration, and full time site supervision services for the Aurora Equalization Tank in the Town of Aurora.

3. BACKGROUND

Brief details of the three projects are provided below. The design and construction phases of all three projects have been included within the 10 year Capital Plan for 2004.

3.1 Major Mackenzie Drive Watermain

The update to the Long Term Water Master Plan has identified the following projects along Major Mackenzie Drive to improve water transmission and service growth within the Town of Markham:

- Major Mackenzie Watermain from Woodbine Avenue to Markland Avenue:
This watermain is approximately 0.5 km of new 1050 mm diameter watermain and will connect to a watermain at Woodbine that is currently under design under a separate project. The estimated construction cost is \$0.8 million.
- Major Mackenzie Watermain from Pugsley Avenue to Markland Avenue:
This watermain is approximately 4.8 km of new 1050 mm diameter watermain and includes a crossing of Highway 404. The estimated construction cost is \$6.9 million.
- Major Mackenzie Watermain from Kennedy Road to McCowan Road:
This watermain is approximately 2.0 km of new 1050 mm diameter watermain. This watermain will connect to a watermain at Kennedy Road that is currently under design under a separate contract. The estimated Construction Cost is \$3.4 million. The Class EA for this section of the pipe has been completed. Engineering services would be limited to design and contract administration services. The design of this phase of the work will proceed immediately after award of the assignment. A separate consultant was retained to design the road improvements. The watermain consultant will be required to prepare the combined contract documents for the watermain and the road improvements.

A Class EA is required for the watermain between Pugsley Avenue and Woodbine Avenue.

3.2 Newmarket Equalization Tank

In 2002, the Region retained Connestoga Rovers and Associates to undertake a preliminary engineering design for the Newmarket Equalization Tank. This assignment was completed and the Region now intends to proceed with detailed design of a 10,700 m³ equalization tank to provide storage for the wastewater flows at an estimated construction cost of \$13.2 million.

The Newmarket Equalization Tank was identified as a priority project and is required to be in service by 2006. In order to extend the capacity of the Newmarket Pumping Station to the year 2021, and satisfy environmental concerns, two flow equalization storage tanks will be constructed.

Flows from the equalization tank will be detained during high flow events and allowed to flow into the Newmarket Pumping Station (PS) and subsequently into the YDSS when the peak event is over.

A Class Environmental Assessment (Class EA) study was initially filed in April 2000 for this project.

An addendum was filed in May 2002 that reviewed alternate placements of the storage facility (Equalization Tank) with the preferred option being equalization tanks at both the Newmarket PS and Aurora PS. The two tank alternative provides an increased level of security (spill protection) at both the Newmarket and Aurora PS sites, increases operational flexibility for both sites, and mitigates construction and environmental impacts.

3.3 Aurora Equalization Tank

A 6,500 m³ equalization tank is required to provide storage for the wastewater flows that exceed the Aurora Pumping Station capacity. The Class EA discussed in section 3.2 anticipated construction in 2012. In 2003, the preliminary engineering studies related to the East Holland Trunk Sewer identified the need for this tank in 2007. As such, the Region is initiating this project in 2004. The estimated Construction Cost is \$5.4 million.

3.4 Scope of Services

Generally speaking, the scope of services for the three projects are as follows:

- Complete engineering services throughout the environmental assessment, preliminary engineering, detailed design and contract administration phases of the project.
- Specialist services including geotechnical and hydrogeological consultants.
- Co-ordination with local agencies, municipalities and regulatory agencies.

It should be noted, however, that for the Newmarket Equalization Tank, Class EA requirements and the preliminary engineering design phases have been completed.

4. ANALYSIS AND OPTIONS

4.1 Submission of Proposals

The following ten firms submitted written proposals in response to the request for proposal advertized on September 29, 2003, for the Major Mackenzie Watermains:

- URS Canada Incorporated.
- Chisholm, Fleming and Associates / CH2MHill.
- Trow Associates Incorporated.
- MacViro Consultants Incorporated.
- TSH Associates.

- MMM Limited.
- R.V. Anderson & Associates Limited.
- KMK Consultants Limited.
- MHA & Associates Incorporated.
- AWS Engineers & Planners Corporation.

The Region posted an Expression of Interest (EOI) Request (P-02-63) for a number of projects in 2002. The following three firms were short listed and were invited to submit written proposals for the Newmarket Equalization Tank.

- Conestoga Rovers and Associates.
- R.V. Anderson Associates Limited.
- Stantec Consulting Ltd.

Two firms submitted written proposals in response to the request for proposal issued October 23, 2003, for the Newmarket Equalization Tank.

The following firms submitted written proposals in response to the request for proposal issued November 11, 2003, for the Aurora Equalization Tank:

- Conestoga Rovers and Associates.
- R.V. Anderson Associates Limited.
- MacViro Consultants Inc.
- Giffels Associates Limited.

The request for proposal for the Aurora Equalization Tank stipulated that only teams with past experience in the design and construction of sewage equalization or storm flow equalization tanks would be considered. Proposals not meeting the requirement were to be disqualified.

Of the four firms that submitted proposals the following firms met the above mandatory requirement:

- Conestoga Rovers Associates.
- R.V. Anderson Associates Limited.

The proposals from the other two firms did not meet the mandatory requirement.

4.2 Proposal Evaluation

The submission deadline for technical and price proposals were as follows:

- Major Mackenzie Watermains - October 23, 2003.
- Newmarket Equalization Tank - November 13, 2003.
- Aurora Equalization Tanks - December 1, 2003.

The technical proposals were evaluated using the following criteria:

- Project team qualifications.
- Project Implementation (including project understanding, approach and methodology, project management and Quality Assurance and Quality Control).

The price proposals were opened. Once the technical evaluations were complete, the prices were factored into the proposal evaluation using standard procedures, as summarized in Table 1, 2, and 3.

Table 1
Consultant Proposal Evaluation Summary-Major Mackenzie Watermains

Firm	Technical Score (Out of 60)	Upset Fee (including GST)	Financial Score (Out of 40)	Total Score (Out of 100)
MacViro Consultants Incorporated	40.83	\$539,772.20	40.00	80.83
R.V. Anderson & Associates Limited	42.13	\$581,791.10	37.11	79.24
Trow Associates Incorporated	39.35	\$581,921.85	37.10	76.45
URS Canada Incorporated	41.35	\$794,063.00	27.19	68.54
TSH Associates	40.25	\$794,718.96	27.17	67.42
MMM Limited	40.30	\$977,873.00	22.08	62.38
KMK Consultants Limited	35.5	\$805,282.00	26.81	62.31
Chisholm, Fleming and Associates / CH2MHill	38.55	\$951,701.87	22.69	61.24
MHA & Associates Incorporated	36.53	\$919,130.00	23.49	60.02
AWS Engineers & Planners Corp	32.95	\$1,330,465.82	16.23	49.18

For the Major Mackenzie Watermain project, the MacViro Consultants Inc. proposal provided the lowest price and ranked very high in most technical categories including Team Experience, Project Understanding, Approach and Project Management and Team Organization.

The MacViro Consultants Inc. proposal therefore, ranked highest in the overall evaluation and represents the best value to the Region.

Table 2**Consultant Proposal Evaluation Summary-Newmarket Equalization Tank**

Firm	Technical Score (Out of 60)	Upset Fee (including GST)	Financial Score (Out of 40)	Total Score (Out of 100)
R.V. Anderson Associates Limited	34.9	\$654,634.56	40.0	74.9
Conestoga Rovers Associates	33.3	\$848,746.47	30.9	64.2

For the Newmarket Equalization tank, the R.V. Anderson's proposal provided the lowest price, and ranked higher in the overall technical score.

R.V. Anderson's proposal therefore, ranked highest in the overall evaluation and represents the best value to the Region.

Table 3**Consultant Proposal Evaluation Summary-Aurora Equalization Tank**

Firm	Technical Score (Out of 60)	Upset Fee (including GST)	Financial Score (Out of 40)	Total Score (Out of 100)
R.V. Anderson Associates Limited	30.9	\$579,426.40	40.0	70.90
Conestoga Rovers Associates	33.5	\$853,564.20	27.2	60.70
MacViro Consultants Incorporated	Disqualified			
Giffels Associates Limited	Disqualified			

For the Aurora Equalization tank, the R.V. Anderson Associates proposal provided the lowest price, however, Conestoga Rovers Associates proposal ranked higher in most technical categories including Project Understanding, Approach and Methodologies and Quality Assurance/Quality Control. The R.V. Anderson Associates proposal ranked slightly higher in the team experience category.

The R.V. Anderson Associates proposal ranked highest in the overall evaluation and represents the best value to the Region

5. FINANCIAL IMPLICATIONS

The upset limit fees for the individual projects are as follows:

- Major Mackenzie Watermains: \$539,772.20, including GST.
- Newmarket Equalization Tank: \$654,634.56, including GST.

- Aurora Equalization Tank: \$579,426.40, including GST.

The fee for the contract administration services for these projects was based on the assumed contract duration as follows:

- Major Mackenzie Watermains: 100 weeks.
- Newmarket Equalization Tank: 50 weeks.
- Aurora Equalization Tank: 45 weeks.

The consultant quoted on the contract administration based on the assumed duration. The proposals provided the Region with a “per-week” cost to establish a pro-rata cost if the contract varies from the assumed durations and approvals for any adjustments would be obtained through a Council approved process.

Sufficient funds are included in the draft 2004 Budget and Business plan for these assignments. Funding will be 80% from Development Charges and 20% from rates for the three projects with the exception of the Class Environmental Assessment (Class EA) for the Aurora Equalization Tank. This Class EA will be funded 100% by the developers.

6. LOCAL MUNICIPAL IMPACT

The Major Mackenzie Watermains will be constructed in the Town of Markham. They are required to ensure the integrity of the water supply system and accommodate growth in the Town of Markham.

The Newmarket and Aurora Equalization Tanks will be constructed in the Towns of Newmarket and Aurora. They are required to accommodate future sewage flows through the YDSS.

7. CONCLUSION

Regional staff selected the proposal by MacViro Consultants Inc. as the preferred proposal for the Major Mackenzie Watermains. The proposal represents the best overall value to York Region.

Regional staff selected the proposal by R.V. Anderson Associates Limited as the preferred proposal for the Newmarket Equalization Tank. The proposal represents the best overall value to York Region.

Regional staff selected the proposal by R.V. Anderson Associates Limited as the preferred proposal for the Aurora Equalization Tank. The proposal represents the best overall value to York Region.

The Senior Management Group has reviewed this report.