

REGION OF OTTAWA-CARLETON  
 RÉGION D'OTTAWA-CARLETON

REPORT  
 RAPPORT

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 Your File/V/Réf.

DATE                                13 August 1999

TO/DEST.                         Co-ordinator  
    Corporate Services and Economic Development Committee

FROM/EXP.                        Environment and Transportation Commissioner

SUBJECT/OBJET                 **SOUTH OTTAWA TUNNEL CLEANING AND  
 REMEDIAL WORK - CONTRACT CS-9884**

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### **RECOMMENDATION**

**That the Corporate Services and Economic Development Committee approve the award of Contract No. CS-9884 to Montgomery Watson Americas, Inc, Boston, MA for the design and construction services for the cleaning and remedial work of the South Ottawa Tunnel for a total contract provision of \$15,120,000.**

### **BACKGROUND**

In September 1998, Regional Council approved the recommendation of the Environment and Transportation Department to establish a \$17 million capital project for the management and implementation of the cleaning and remedial work for the South Ottawa Tunnel. The basis of this project stemmed from the findings of the South Ottawa Operational Study report, which recommended cleaning the South Ottawa Tunnel through mining and modifying the operation to enable open channel flow in the future. With the discovery in late summer 1998 of a leak in a wooded ravine, the need to proceed expeditiously was confirmed. Further review of the issues associated with the South Ottawa Tunnel confirmed that most of the risks could only be fully addressed through implementation of the remedial work.

In collaboration with the Supply Management Division, the Department proceeded with the procurement process for the implementation of the remedial measures. The outcome of this competitive process is a recommendation to award a contract to the firm of Montgomery Watson who has included in their team extensive involvement from local talent with the partnering firms of Fuller Construction, J. L. Richards and Golder Associates.

The procurement process was a two-stage process with the following objectives:

- Protection of the environment, public health and existing infrastructure
- A Technically sound sewer serving 30% of Ottawa-Carleton
- Financial accountability
- Assignment of risks to party best able to control those risks
- Competitive process, supportive of innovation and flexibility
- Timely resolution of the South Ottawa Tunnel issues

### Request for Qualifications

The open period for the first stage of the procurement process, i.e. the Request for Qualifications (RFQ), was from 12 September to 06 October 1998. The seven consortiums that responded to the RFQ were evaluated based on their project experience, client references, qualifications and availability of key team members, proposed approach, and safety program. The three short-listed firms of Agra-McNally Joint Venture, Fitzpatrick Construction Canada Ltd., and Montgomery Watson were notified in February 1999. The firm of Deloitte & Touche acted as an independent auditor and concluded that the process, completed in October 1998, was fair and consistent with good procurement practices.

### Request for Proposals

In the spirit of a true partnership for a design-build assignment, the RFP was issued in April 1999 as a draft document to the three short-listed proponents. Meetings were also held in April to review events associated with this project, ensure the RFP was clear and complete, discuss the schedule and next steps, as well as to address any concerns raised by proponents. The final RFP was issued on 03 May 1999. The RFP was structured with a focus on qualifications, technical approach, innovative opportunities and financial proposal, in a manner consistent with the objectives previously established. In light of the variables inherent in this project, the pricing methodology developed included three different cost elements: fixed cost for lump sum services, variable cost services and undetermined cost services for facility modifications. Rehabilitation work to address potential corrosion or structural problems was outside the scope of work.

After the issuance of the RFP documents on 03 May 1999, the Government of Ontario enacted the *Fairness is a Two-Way Street Act* (Construction Labour Mobility), 1999, which had the effect of prohibiting companies resident in the Province of Quebec from contracting with the Region to carry out construction work or consultant services on Regional construction projects. In light of this legislation, Fitzpatrick Construction Canada Ltd. informed Region staff, in early June 1999, that their firm was withdrawing from the South Ottawa Tunnel RFP process. The remaining two short-listed firms responded to the RFP document by submitting their proposals on 25 June 1999.

## DISCUSSION

### Evaluation Process

As part of the procurement process, a comprehensive evaluation process, under the leadership of the Supply Management Division, was developed, which included separate technical and financial evaluation teams. The two proposals were evaluated in accordance with the detailed evaluation matrices that had been previously developed. Both firms proposed a technical approach based on cleaning the South Ottawa Tunnel with mining technology and using the Robert O. Pickard Environmental Centre to treat the solids removed. While both proposals addressed the requirement to conduct a condition assessment of the South Ottawa Tunnel, the scope of work excluded the cost to perform any of the rehabilitation work on the pipe or shafts consistent with the directives contained in the RFP.

The firm of Montgomery Watson received the highest score, bringing the best value to the Region. Montgomery Watson demonstrated a comprehensive understanding of all technical issues and proposed a high level of expertise with extensive involvement of local resources, including the firms of Fuller Construction, J.L. Richards and Golder Associates. Their proposal includes a comprehensive risk management and safety program, a detailed public relations program, an effective quality assurance/quality control approach, and addresses the importance of timely resolution of the remedial work, public acceptance and defensible costs. The cleaning approach uses mining technology with solids removal at the three intermediate shafts, complete with an effective odour control system and the use of the Robert O. Pickard Environmental Centre to treat and dispose of the solids. The proposal for facility modifications, including odour control system, grits and screenings installation, a high relief overflow at the Walkley shaft, as well as pumping facilities at the downstream shaft, are consistent with the long-term operation and maintenance plan for the South Ottawa Tunnel. The proposed remedial work also includes consideration beyond the 25-year planning horizon.

In addition, the Montgomery Watson proposal includes an innovative approach with an Engineer-Procure-Construct method of contracting consistent with the provisions of the RFP and the partnering approach. This method of contracting provides for costs to be reimbursed based on a target pricing model with incentive fees to bring the project under budget with a guaranteed upper contract limit.

The evaluation team recommended proceeding with contract negotiations with Montgomery Watson, recognizing that the innovative approach presented by Montgomery Watson could result in significant savings to the Region.

The firm of Deloitte & Touche was retained by the Legal Department to act as an independent auditor during the proposals evaluation process. They concluded that the process followed by the evaluation team was consistent with good procurement practices and that the recommendations put forward by the evaluation team were reached in accordance with an objective and fair process. In addition, they concluded that the process presented each proponent with an opportunity to have its response fairly assessed and objectively reviewed.

### Contract Negotiations

The Environment and Transportation Department together with the Supply Management Division and the Legal Department structured the contract negotiations with the firm of Montgomery Watson with a view to implementing the innovative method of contracting while preserving the option of contracting under the pricing methodology included in the RFP.

Based on the pricing methodology included in the RFP, the total contract provision based on removing 2,100 dry tonnes of solids from the South Ottawa Tunnel and accounting for one conveyance of excess flow event amounts to \$15,138,167, and includes the provisions as outlined below.

Lump Sum Services	\$ 5,852,070
Allowances	230,671
Variable Cost Services (Tunnel cleaning and conveyance of excess flow)	3,515,000
10% Contingency (additional solids, temporary repairs, additional heavy-rainfall events, etc.)	959,774
Facility Modifications	2,961,220
25% Contingency as contemplated in RFP	740,305
GST @ 7% (on \$12,558,961)	<u>879,127</u>
TOTAL	<u>\$15,138,167</u>

The base target cost under the cost reimbursable approach with incentive fees is estimated at \$11,564,231, while the guaranteed upper limit cost is set at \$13,500,000. This upper limit takes into consideration removal of some additional solids and a contingency on the facility modifications. Accordingly, it is estimated that a contingency of 5% is appropriate to address scope changes, bringing the total contract provision to \$15,120,000, including GST at 7%.

A comparison of the proposed cost under the RFP pricing methodology, the target cost and the guaranteed upper limit cost is as follows:

<u>Cost Elements</u>	<u>RFP Pricing Methodology</u>	<u>Innovative Method Target Cost</u>	<u>Innovative Method Upper Limit</u>
Project Cost	\$12,558,961	\$11,564,231	\$13,500,000
Contingency	1,700,079		675,000
GST @ 7%	<u>879,127</u>	<u>809,496</u>	<u>945,000</u>
TOTAL	\$15,138,167	\$12,373,727	\$15,120,000

Under the alternative method of contracting, the target pricing model provides for savings exceeding \$2.5 million from the total contract provision under the RFP pricing methodology, mainly due to the elimination of cost premium associated with contingency pricing. The pricing

model also provides an incentive for further savings where most of the savings would remain with the Region. For instance, should the final project cost be \$1 million less than the target cost, the Region would save an additional \$770,000. Moreover, the Region's financial position is protected by a guaranteed upper limit cost for the scope of work included in the RFP.

Together with the financial firm of Raftelis Financial Consulting, the Region conducted a due diligence audit program of Montgomery Watson's accounting system to ensure all costs attributed to this project could be tracked and documented as legitimately being associated with this project. This audit program confirmed that Montgomery Watson's accounting system provides a solid foundation to implement the cost reimbursable with incentive fees approach to carrying out the remedial work.

Discussions with clients who have used this alternate method of contracting have confirmed that it provides for flexibility in dealing with changes in conditions, facilitates resolution of issues and presents significant opportunities for cost savings.

Inherent to this alternate method of contracting is the transfer of some risks to the Owner. This financial exposure is limited by the guaranteed upper limit cost and the contract negotiations have further limited the Region's exposure to the same level contemplated under the RFP pricing methodology. Accountability for the soundness of the design and the standard of care of the engineering services remains, at all times, the responsibility of Montgomery Watson. This risk allocation together with the potential financial benefits provided by this approach are consistent with the objectives of the project, which include financial accountability and allocation of risks to the party best able to manage those risks.

The cost reimbursable approach with incentive fees and guaranteed upper limit is advantageous to both the Region and Montgomery Watson. It fosters true partnering between the parties and a collaborative approach to project execution. Based on the potential for significant savings with this method of contracting, the increased flexibility in addressing project unknowns and the guaranteed upper limit cost which further limits the financial exposure of the Region, the Department recommends the award of a contract to Montgomery Watson based on the cost reimbursable with incentive fee approach.

### PUBLIC CONSULTATION

The public consultation process is not applicable to the procurement process. The detailed public relations program included in Montgomery Watson's proposal will form an integral part of the implementation of the South Ottawa Tunnel Cleaning and Remedial Work and ensure effective public relations.

## FINANCIAL IMPLICATIONS

While incentives are present to bring the project cost under the target cost of \$11,564,231, it is recommended that the Region take into consideration the guaranteed upper limit of \$13,500,000, the contingency for scope changes of \$675,000 and the GST at 7% of \$945,000, bringing the total contract provision to \$15,120,000.

This total contract provision is consistent with the budget identified in September 1998 for the cleaning and remedial work associated with the South Ottawa Tunnel and within the project authority for the management and implementation of this project. As indicated in September 1998, this budget authority covers the cost of cleaning the pipe and constructing all facilities required to operate the pipe in an open channel flow mode. It does not cover rehabilitation work that may be identified during the condition assessment.

In addition, using the Robert O. Pickard Environmental Centre as the means of treating and disposing of the solids from the South Ottawa Tunnel will increase the overall plant treatment cost by an estimated amount of \$250,000 during the duration of the project. These additional costs will be recovered from the South Ottawa Tunnel Cleaning and Remedial Work capital project.

	\$
Approved Budget to Date	17,000,000
Total Paid and Committed	<u>(473,827)</u>
Balance Available	16,526,173
THIS REQUEST	<u>(15,120,000)</u>
Balance Remaining	<u>1,406,173</u>

Funds are available in 1999 Capital Budget Account No. 932-42065-3501 (Order No. 900244-503501), South Ottawa Collector Rehabilitation Project (Reference Page 476), Purchase Requisition No. 10015998.

The procurement process has been designed in a fiscally responsible manner while ensuring the protection of the environment, public health, wastewater treatment process and integrity of the infrastructure. The contract negotiations have also been structured to achieve these objectives.

*Approved by  
M. J. E. Sheflin, P. Eng.*

FJ/ls  
Attach

SUPPLY MANAGEMENT DIVISION

I concur,

*G. Ford on behalf of  
the Finance Commissioner*

FINANCE DEPARTMENT COMMENT

Funds are available as indicated.

*Approved by T. Fedec  
on behalf of the Finance Commissioner*