

**REGION OF OTTAWA-CARLETON**  
**RÉGION D'OTTAWA-CARLETON**

**REPORT**  
**RAPPORT**

Our File/N/Réf.                   **50 19-97-0013-V**  
Your File/V/Réf.

DATE                                28 April 2000

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

FROM/EXP.                        Environment and Transportation Commissioner

SUBJECT/OBJET                 **RICHMOND PUMPING STATION UPGRADES**  
**DESIGN AND CONSTRUCTION SERVICES**  
**CONSULTANT APPOINTMENT (ETL00-2033)**

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**DEPARTMENTAL RECOMMENDATION**

**That the Corporate Services and Economic Development Committee and Council approve the appointment of David McManus Engineering Ltd., Nepean, to provide preliminary design, detailed design and construction services for the Richmond Pumping Station Upgrades for a total contract provision of \$232,305.**

**RATIONALE**

Sewage in the Village of Richmond is collected through local gravity sewers which discharge to a pumping station where it is pumped through approximately 13.5 km of 500 mm diameter forcemain to the Regional Glen Cairn Trunk Sewer at Hazeldean Road in Kanata. From the Glen Cairn Trunk, sewage flows by gravity to the Regional sewage treatment plant in Gloucester. Prior to the construction of the pumping station and forcemain in 1983, sewage from the Village of Richmond was pumped to a lagoon system for treatment and eventual discharge to the Jock River. The Ministry of Environment Certificate of Approval for the 1983 pumping station specifies that emergency by-pass should be directed to the lagoons. Successful operation of the pumping station and forcemain system led to the Region's decision in 1986 to abandon the lagoons and the Township's subsequent decision to include them in the Richmond Conservation Area. Once approximately every two years the capacity of the pumping station can be exceeded during very large snowmelt and rainfall events. Maximum wet weather flows during these events can exceed the typical dry weather flows by a factor of 4 to 5 times. Sewage in these rare events is discharged to the Jock River.

In 1999, the Region completed the Environmental Assessment Phase of the Richmond Pumping Station Upgrade project with reports to Planning and Environment Committee on 8 June 1999 and 13 July 1999, and to Council on 23 June 1999 and 14 July 1999.

The purpose of the Richmond Pumping Station Upgrade project is to implement the recommendations of the Environmental Assessment process and of Council, specifically to allow use of the existing lagoons to provide back-up in the event of an emergency at the pumping station or in the event of major maintenance. This will include the following:

1. Reconfigure the existing lagoon cells to accommodate the infrequent sewage discharge and to allow for their use as wildlife and wetland habitat in accordance with the Richmond Conservation Area Management Plan;
2. Improve the reliability of the pumping station and forcemain to reduce the dependency on the lagoons and to eliminate discharges to the Jock River.

The subject of this report is to retain a Consultant to undertake the preliminary design, detailed design and construction services required to implement the upgrades.

The Consultant Selection Process was carried out in accordance with the Department's Guidelines for Procurement of Consulting Engineering Services.

In the first step, a Request for Qualifications (RFQ) was issued on the open Internet-based MERX bid distribution system by Supply Management Division of the Finance Department in conjunction with staff of the Environment and Transportation Department. A total of nine Consultants submitted Statements of Qualifications in response to the RFQ. These submissions were evaluated by a panel comprised of staff from the Environment and Transportation Department.

In the second step, a Request for Proposal (RFP) was issued to each of the short-listed Consultants. Three proposals were submitted and evaluated by a panel which was facilitated by the Supply Management Division. The proposals were rated using the following evaluation criteria:

- Experience, qualifications and availability of team members;
- Understanding of objectives;
- Quality of approach and methodology;
- Proposed work plan, schedule and level of effort;
- Creativity, innovation and vision;
- Financial.

The evaluation concluded that the proposal submitted by David McManus Engineering Ltd. represented best overall value to the Region.

The work programme includes the following elements:

#### Preliminary Design

- Determine the piping requirements to allow the use of the Lagoon Cells 'A', 'B' and 'C';
- Determine the piping requirements to extend the 200 mm forcemain from its existing terminus to Cell 'C';
- Determine the piping requirements to twin the 500 mm forcemain under the Jock River;
- Determine the piping requirements to construct a by-pass link from the 500 mm forcemain to Cell 'C';
- Determine the necessary rehabilitation upgrades to the pumping station/forcemain system including, but not limited to, review of pump hydraulics, installation of a wet well agitator, modifications to valve chambers to provide sealing, provision of a potable water service to the station, odour and control measures at the station;
- Determine the safety measures around Cell 'C' to satisfy all affected parties;
- Identify and finalize the method of decommissioning the old lagoon pumping station;
- Liaise with the Township of Goulbourn to address the requirements of the associated environmental groups;
- Ensure that the proposal will meet the requirements of the Richmond Conservation Area Management Plan;
- Prepare a design brief outlining the tasks and how they address the objectives of the project.

#### Detailed Design

- Carry out a detailed design of the components of the facility;
- Assist in securing from authorities the necessary approvals and permits;
- Develop training, and operation and maintenance programmes for operators of the facility;
- Assist in the tendering process up to award of the construction contract;

#### Construction Services

- Review all submittals, including shop drawings;
- Monitor the Contractor's work with respect to their proposed work schedule;
- Prepare record drawings of all components of the work and incorporate existing infrastructure;
- Carry out the commissioning plan.

#### Project Management

- Prepare a project schedule and budget for all components of the assignment including all the key components and tasks included in the scope of this work;
- Review the schedule and budget on a monthly basis and provide a monthly written status report.

The assignment is scheduled for completion on 31 December 2000.

The Department recommends the award of Contract ETL00-2033 to David McManus Engineering Ltd., Ottawa, with a contract provision of \$197,173 plus a contingency of \$19,934 plus G.S.T. of \$15,198 for a total contract amount of \$232,305.

### CONSULTATION

The Region has completed the “Richmond Pumping Station Forcemain Study” (May 1999) and the “Richmond Pumping Station and Forcemain Study - Environmental Screening Report” (June 1999) and have been advised by the Ministry of the Environment that the Environmental Assessment process has been carried out for the project and that any bump-up requests have been denied.

### EXPENDITURE JUSTIFICATION

Implementation of this project is required to allow use of the existing lagoons to provide back-up in the event of an emergency at the pumping station or in the event of major maintenance.

### FINANCIAL STATEMENT

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Approved Budget to Date	1,034,666
Total Paid and Committed	<u>(218,495)</u>
Balance Available	816,171
THIS REQUEST	<u>(232,305)</u>
Balance Remaining	<u><u>583,866</u></u>

Funds are available in the 2000 Capital Budget, Order No. 900235, Richmond Pumping Station Upgrade, (Reference page 448), Purchase Requisition No. 10057222.

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

BCA/jw

SUPPLY MANAGEMENT DIVISION

I concur,

*G. Ford on behalf of  
the Finance Commissioner*