

REGION OF OTTAWA-CARLETON
RÉGION D'OTTAWA-CARLETON

REPORT
RAPPORT

Our File/N/Réf. Your File/V/Réf.	50 19-97-0013-V
DATE	4 May 2000
TO/DEST.	Co-ordinator Corporate Services and Economic Development Committee
FROM/EXP.	Environment and Transportation Commissioner
SUBJECT/OBJET	FLEET STREET PUMPING STATION - SLUICE GATE REPLACEMENT AND STRUCTURAL MODIFICATION CONTRACT ETL00-3033 - CONSULTANT APPOINTMENT

DEPARTMENTAL RECOMMENDATION

That the Corporate Services and Economic Development Committee and Council approve the appointment of Delcan Corporation, Ottawa, to prepare a condition assessment of the sluice gates, provide a structural evaluation of the forebay and bulkheads and prepare the pre-design, detailed design and construction specification for the replacement of the sluice gates and the associated structural modifications at the Fleet Street Pumping Station, for a total contract amount of \$306,012.

BACKGROUND

The Fleet Street Pumping Station operates using water driven turbines to provide direct drive power to each of the five high lift pumps to deliver potable water to the distribution system and has been in service since it was constructed in 1874. Due to its age and unique mechanical systems, the station has been designated as both a heritage facility within the City of Ottawa and a facility of historical water treatment and distribution significance by the American Water Works Association. The station has undergone several structural additions and extensive renovations including: tailrace abutment repairs; west aqueduct retaining wall repairs; site security and lighting upgrades; window replacement; and header and discharge piping replacement.

The existing sluice gates at the turbine inlets are inoperable, cannot be repaired and must be replaced. Proper operation of the gates is needed to be able to isolate the pumping units for maintenance and in the event of mechanical or leakage problems while maintaining pumping at the station. Structural repairs in the turbine forebays are also required to prevent potential damage to the turbines and pumping units 1 and 5.

DISCUSSION

With the assistance of the Supply Management Division, a Request for Proposal (RFP) was posted on MERX electronic internet based bid distribution site on 21 September 1999 with a due date of 18 October 1999. Four submissions from engineering firms were received. The proposals were evaluated according to a ranking system outlined in the RFP. The Selection Committee, consisting of staff from the Engineering and Water Divisions, evaluated the proposals on the basis of:

- Previous experience on similar projects;
- Understanding of the scope of work;
- Proposed approach and methodology;
- Project management team;
- Financial
- Proposed schedule and level of effort by key staff.

Delcan Corporation is recommended for this assignment since their proposal received the highest ranking overall and provides the best value to the Region.

The work programme includes the following elements:

- Plan for the removal of the existing gates and frames;
- Modifications to the bedrock headwall for new wall thimbles;
- Floor modifications for the electric actuators;
- New sluice gates for the openings for the five turbines;
- New controls and instrumentation compatible with the SCADA system;
- New electrical service;
- Repair of the turbine forebays.

In their proposal, Delcan outlined several issues that could effectively be addressed in addition to the work outlined in the RFP. Since they were deemed to be the most appropriate candidate, Delcan was requested to add to their scope of work a geotechnical/structural investigation of the bulkheads and their foundations, a hydraulic evaluation of the turbine inlet passages, and bulkhead air release/vacuum relief and drain improvements.

The Consultant will be expected to undertake the following:

- Evaluate the existing sluice gates location;
- Evaluate the turbine forebays;
- Recommend a new sluice gate type;
- Undertake a geotechnical/structural investigation of the bulkheads and their foundations;
- Provide a hydraulic evaluation of the turbine inlet passages;
- Identify bulkhead air release/ vacuum relief and drain improvements;
- Prepare a design report addressing all issues for review by Regional staff;
- Provide final engineering design drawings, contract specifications;

- Provide all documentation required to tender the work;
- Obtain the necessary permits to undertake the construction (i.e., Rideau Valley Conservation Authority, etc.).

The assignment is scheduled for completion on 31 December 2001.

The Department recommends the award of Contract ETL00-3033 to Delcan Corporation, with a contract provision of \$259,992, a contingency of \$26,000, plus G.S.T. of \$20,020, for a total contract amount of \$306,012.

CONSULTATION

No public consultation is required for this project. However, during the course of the design project, the Consultant will be required to liaise with Regional staff, approval authorities, NCC, Ottawa River Runners Kayak Club, and others that may be affected by the construction.

EXPENDITURE JUSTIFICATION

Implementation of this project is required to maintain the existing facility and to replace existing obsolete, unreliable equipment.

FINANCIAL STATEMENT

	\$
Approved Budget to Date	2,918,661
Total Paid and Committed	<u>(118,094)</u>
Balance Available	2,800,567
THIS REQUEST	<u>(306,012)</u>
Balance Remaining	<u><u>2,494,555</u></u>

Funds are available in the 2000 Capital Budget, Order No. 900166, Fleet Street Pumping Station Sluice Gates Replacement, (Reference page 332), Purchase Requisition No. 10059187.

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

BCA/jw

SUPPLY MANAGEMENT DIVISION

I concur,

*G. Ford on behalf of
the Finance Commissioner*