

## **PART G - PROFESSIONAL ENGINEERING \_SPECIAL SERVICES**

### **G1. SUMMARY OF SERVICES**

G1.1 As part of this task, the Consultant shall provide the following services:

- (a) Project Management; and
- (b) Thermal Hydrolysis Pre-selection and Procurement Conditions.

### **G2. PROJECT MANAGEMENT**

G2.1 This section includes project management activities the City requires of the Consultant when carrying out the professional engineering Services required in this Part.

G2.2 Deliverables and Meetings

- (a) Deliverables and meetings are as described in E2.1.
- (b) The deliverables shall be submitted separately from those described in E2.1.

G2.3 The Services under G2 shall be carried out similar to those described in E2 with the following exceptions:

- (a) The firm is referred to as the Consultant instead of the OA.
- (b) The Consultant's project manager for the Special Services shall be the prime contact with the City's Project Manager for the duration of the program.
- (c) Section E2.2.2 shall not apply.
- (d) The Consultant Services Management Plan (CSMP) shall include professional engineering services for the Special Services.

G2.4 All work associated with Part G shall not be carried out in the co-location office space.

### **G3. THERMAL HYDROLYSIS PRE-SELECTION AND PROCUREMENT CONDITIONS**

G3.1 Deliverables for this section include the following

- (a) Thermal hydrolysis pre-selection strategy;
- (b) Cost estimate;
- (c) Pre-selection RFP and addenda;
  - (i) RFP shall include associate drawings, forms, specifications
- (d) Evaluation matrix;
- (e) Proposal evaluation reports and recommendation.

G3.1.1 All deliverables shall be submitted in draft and final copies with WSTP comments incorporated in final copies.

- (a) The OA shall maintain a comments log in a format acceptable to the City. The log shall include as a minimum comments on all deliverables and action on the comments.
- (b) Draft copies of all deliverables shall be provided in Native Format, PDF and seven (7) bound hardcopies.
- (c) Final copies of all deliverables shall be provided in Native Format, PDF one (1) unbound and seven (7) bound hardcopies.

G3.2 The Consultant shall investigate, prepare and develop a detailed strategy to preselect a thermal hydrolysis vendor for the NEWPCC Upgrade. The strategy shall include but not limited to

- (a) Scope of work;

- (b) Schedule such that the completion of the Thermal Hydrolysis Procurement Conditions is finalized and does not delay the completion of the WSTP Level 2 design in Part E and F;
- (c) List of potential thermal hydrolysis equipment vendors that may meet the requirements of the RFP.
- (d) Design, construction and commissioning responsibilities;
- (e) A process for adjusting vendor prices based on the final sizing of the systems by the design builder; and
- (f) Method(s) for mitigation of escalation and inflation.

G3.3 Prepare a comprehensive RFP, including forms, drawings, and specifications, for preselecting the thermal hydrolysis equipment.

- (a) Include representative process, mechanical, electrical, instrumentation, automation and structural components such that the potential thermal hydrolysis vendors are able to comprehensively provide a price for the required work.
- (b) RFP documents shall be prepared such that vendor prices could be adjusted based on the final sizing of the systems by the design builder.
- (c) Include a method(s) for escalation and inflation.
- (d) Review the following RFPs (including drawings, forms, specifications and addenda) as a guide to determine the level of effort required in providing the thermal hydrolysis pre-selection RFP.
  - (i) RFP 506-2014 Supply and Delivery of a Struvite Recovery System – Closed November 27, 2014.
  - (ii) RFP 873-2013 Supply and Delivery of High Rate Clarification Equipment for the South End Water Pollution Control Center (SEWPCC) Upgrading/Expansion Project – Closed September 29, 2014.
  - (iii) RFP 756-2013 Request for Proposal Supply of Control System and Motor Control Equipment for the Sewage Treatment Program – Closed November 29, 2013.
  - (iv) The Consultant should note that RFP 506-2014 was for pre-selection of equipment with the option of pre-purchase, RFP 873-2013 was for pre-purchased equipment while RFP 756-2013 was for pre-selection of the equipment.
  - (v) It is acknowledged that RFP 756-2013 is for Control System and Motor Control Equipment, and the RFP for the thermal hydrolysis may need to be at a different level and multidisciplinary in nature.

G3.4 Cost estimate

- (a) Provide a detailed cost estimate to an accuracy level of  $\pm 20\%$ .
- (b) The cost estimate shall be based on the EPD and shall be more accurate than a class three (3) cost estimate.
- (c) The estimate shall be prepared in accordance with AACE International Recommended Practice No. 17R-97, No.18R-97 and No. 56R-08; and include a detailed breakdown with unit cost source listed for each line item.
- (d) Cost shall include whole life cost (CAPEX, OPEX & NPV).

G3.4.1 Acceptance of this estimate by the City is a prerequisite to issuing the thermal hydrolysis RFP.

G3.5 The Consultant shall also be required to

- (a) Liaise with various City departments (such as Legal Services, Water and Waste and Corporate Finance) to carry out the work.
- (b) Provide appropriate responses to thermal hydrolysis proponents, in conjunction with the City, during the RFP period.
- (c) Prepare addenda.

- (d) Prepare a detailed evaluation matrix for preselecting the thermal hydrolysis equipment.
- (e) Coordinate and participate the proposal evaluation with the City including:
  - (i) The analysis, comparison, tabulation, calculation, and evaluation of the proposals.
  - (ii) A letter of recommendation, copies of the proposals, a tender comparison sheet, and a tender tabulation.
  - (iii) A proposal evaluation report including revised contract estimate, identifying and explaining variations from the earlier formal estimate, and containing recommendation regarding contract award identifying the reasons.
  - (iv) Participate in two (2) one day interview sessions.
- (f) Prepare recommendation for award and assist in debriefing of proponents after award.