



**RETURN BIDS TO:  
RETOURNER LES SOUMISSIONS À:**

Regional Manager/Real Property  
Contracting/PWGSC  
Ontario Region, Tendering Office  
12th Floor, 4900 Yonge Street  
Toronto, Ontario  
M2N 6A6  
Ontario

**REQUEST FOR PROPOSAL  
DEMANDE DE PROPOSITION**

**Proposal To: Public Works and Government  
Services Canada**

We hereby offer to sell to Her Majesty the Queen in right of Canada, in accordance with the terms and conditions set out herein, referred to herein or attached hereto, the goods, services, and construction listed herein and on any attached sheets at the price(s) set out therefor.

**Proposition aux: Travaux Publics et Services  
Gouvernementaux Canada**

Nous offrons par la présente de vendre à Sa Majesté la Reine du chef du Canada, aux conditions énoncées ou incluses par référence dans la présente et aux annexes ci-jointes, les biens, services et construction énumérés ici sur toute feuille ci-annexée, au(x) prix indiqué(s).

**Comments - Commentaires**

Address Enquiries to - Adresser toutes questions à  
Lauren Woodhall  
4900 Yonge St., Toronto ON  
416-512-5873  
lauren.woodhall@pwgsc-tpsgc.gc.ca

<b>Title - Sujet</b> Randle Reef Stage 2 Consultant	
<b>Solicitation No. - N° de l'invitation</b> EQ447-181122/A	<b>Date</b> 2017-10-20
<b>Client Reference No. - N° de référence du client</b> R.050927.204	
<b>GETS Reference No. - N° de référence de SEAG</b> PW-\$PWL-035-2331	
<b>File No. - N° de dossier</b> PWL-7-40058 (035)	<b>CCC No./N° CCC - FMS No./N° VME</b>
<b>Solicitation Closes - L'invitation prend fin</b> <b>at - à 02:00 PM</b> <b>on - le 2017-12-05</b>	<b>Time Zone</b> <b>Fuseau horaire</b> Eastern Standard Time EST
<b>F.O.B. - F.A.B.</b> <b>Plant-Usine:</b> <input type="checkbox"/> <b>Destination:</b> <input checked="" type="checkbox"/> <b>Other-Autre:</b> <input type="checkbox"/>	
<b>Address Enquiries to - Adresser toutes questions à:</b> Woodhall, Lauren	<b>Buyer Id - Id de l'acheteur</b> pwl035
<b>Telephone No. - N° de téléphone</b> (416) 512-5873 ( )	<b>FAX No. - N° de FAX</b> (416) 512-5862
<b>Destination - of Goods, Services, and Construction:</b> <b>Destination - des biens, services et construction:</b> Randle Reef Hamilton Harbour Hamilton, ON	

Instructions: See Herein

Instructions: Voir aux présentes

**Vendor/Firm Name and Address**

**Raison sociale et adresse du  
fournisseur/de l'entrepreneur**

**Issuing Office - Bureau de distribution**

Regional Manager/Real Property Contracting/PWGSC  
Ontario Region, Tendering Office  
12th Floor, 4900 Yonge Street  
Toronto, Ontario  
M2N 6A6  
Ontario

<b>Delivery Required - Livraison exigée</b>	<b>Delivery Offered - Livraison proposée</b>
<b>Vendor/Firm Name and Address</b> <b>Raison sociale et adresse du fournisseur/de l'entrepreneur</b>	
<b>Telephone No. - N° de téléphone</b> <b>Facsimile No. - N° de télécopieur</b>	
<b>Name and title of person authorized to sign on behalf of Vendor/Firm</b> <b>(type or print)</b> <b>Nom et titre de la personne autorisée à signer au nom du fournisseur/ de l'entrepreneur (taper ou écrire en caractères d'imprimerie)</b>	
<b>Signature</b>	<b>Date</b>

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**REQUEST FOR PROPOSAL (RFP)**  
**(ONE PHASE PROCEDURE)**

**RANDLE REEF SEDIMENT REMEDIATION  
PROJECT**

**STAGE 2 – CONSTRUCTION ENGINEERING  
SERVICES**

Hamilton, Ontario

Solicitation No. EQ447-181122/A

Project No. R.050927.204

PWGSC Contracting Authority:

Lauren Woodhall  
PWGSC, Real Property Contracting  
4900 Yonge Street  
Toronto, Ontario M2N 6A6  
Telephone: 416-512-5873  
Facsimile: 416-512-5862  
Email: lauren.woodhall@pwgsc-tpsgc.gc.ca

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## REQUEST FOR PROPOSAL (RFP)

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## **SUPPLEMENTARY INSTRUCTIONS TO PROPONENTS (SI)**

### **SI1 INTRODUCTION**

1. Public Works and Government Services Canada (PWGSC) intends to retain an individual consulting firm or joint venture to provide the professional services for the project as set out in this Request for Proposal (RFP).
2. This is a single phase selection process. The nature of the requirement and the anticipated limited number of responses by the industry leads PWGSC to believe that this approach will not unduly force a large number of firms to expend an overall unreasonable amount of effort in response to PWGSC.
3. Proponents responding to this RFP are requested to submit a full and complete proposal. The proposal will cover not only the qualifications, experience and organization of the proposed Consultant Team, but also the detailed approach to the work, and the pricing and terms offered. A combination of the technical and price of services submissions will constitute the proposal.

### **SI2 PROPOSAL DOCUMENTS**

1. All instructions, general terms, conditions and clauses identified in the RFP by number, date and title, are hereby incorporated by reference into and form part of this solicitation and any resultant contract.

All instructions, general terms, conditions and clauses identified in the RFP by number, date and title, are set out in the Standard Acquisition Clauses and Conditions Manual (<https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual>) issued by Public Works and Government Services Canada.

2. The following are the proposal documents:
  - (a) Supplementary Instructions to Proponents (SI);  
R1410T (2017-08-17), General instructions (GI) – Architectural and/or Engineering services – Request for Proposal;  
Submission Requirements and Evaluation (SRE);

Subsection 2.b. of section GI16, Submission of proposal of R1410T, incorporated by reference above, is deleted in its entirety and replaced with the following:

- b. send its proposal only to Public Works and Government Services Canada (PWGSC) Bid Receiving Unit specified on page 1 of the RFP;

- (b) the general terms, conditions and clauses, as amended, identified in the Agreement clause;
  - (c) Project Brief;
  - (d) the document entitled "Schedule"
  - (e) any amendment to the solicitation document issued prior to the date set for receipt of proposals; and
  - (f) the proposal, Declaration/Certifications Form and Price Proposal Form.
3. Submission of a proposal constitutes acknowledgment that the Proponent has read and agrees to be bound by these documents.

### **SI3 QUESTIONS OR REQUEST FOR CLARIFICATION**

Questions or requests for clarification during the solicitation period must be submitted in writing to the Contracting Authority named on the RFP - Page 1 as early as possible. Enquiries should be received no later than ten (10) working days prior to the closing date identified on the front page of the Request for Proposal. Enquiries received after that date may not be answered prior to the closing date of the solicitation.

### **SI4 CANADA'S TRADE AGREEMENTS**

This procurement is subject to the provisions of the North American Free Trade Agreement (NAFTA), the World Trade Organization - Agreement on Government Procurement (WTO-AGP), and the Canadian Free Trade Agreement (CFTA).

### **SI5 CERTIFICATIONS**

#### **1. Integrity Provisions – Declaration of Convicted Offences**

In accordance with the Ineligibility and Suspension Policy (<http://www.tpsgc-pwgsc.gc.ca/ci-if/politique-policy-eng.html>), the Proponent must **provide with its bid, as applicable**, to be given further consideration in the procurement process, the required documentation as per R1410T (2017-08-17), General instructions 1 (GI1), Integrity Provisions – Proposal, **section 3b**.

#### **2. Federal Contractors Program for Employment Equity - Proposal Certification**

By submitting a proposal, the Proponent certifies that the Proponent, and any of the Proponent's members if the Proponent is a Joint Venture, is not named on the Federal Contractors Program (FCP) for employment equity "FCP Limited Eligibility to Bid" list ([http://www.labour.gc.ca/eng/standards\\_equity/eq/emp/fcp/list/inelig.shtml](http://www.labour.gc.ca/eng/standards_equity/eq/emp/fcp/list/inelig.shtml)) available from Employment and Social Development Canada (ESDC) - Labour's website.

Canada will have the right to declare a proposal non-responsive if the Proponent, or any member of the Proponent if the Proponent is a Joint Venture, appears on the "FCP Limited Eligibility to Bid" list at the time of contract award.

Canada will also have the right to terminate the Agreement for default if a Consultant, or any member of the Consultant if the Consultant is a Joint Venture, appears on the "FCP Limited Eligibility to Bid" list during the period of the Agreement.

The Proponent must provide the Contracting Authority with a completed Federal Contractors Program for Employment Equity - Certification (see Appendix B - Declaration/Certifications Form), before contract award. If the Proponent is a Joint Venture, the Proponent must provide the Contracting Authority with a completed Federal Contractors Program for Employment Equity - Certification, for each member of the Joint Venture.

## **S16 - WEBSITES**

The connection to some of the Web sites in the RFP is established by the use of hyperlinks. The following is a list of the addresses of the Web sites:

Employment Equity Act

<http://laws-lois.justice.gc.ca/eng/acts/E-5.401/index.html>

Federal Contractors Program (FCP)

<https://www.canada.ca/en/employment-social-development/programs/employment-equity/federal-contractor-program.html>

Certificate of Commitment to Implement Employment Equity form LAB 1168

<http://www.servicecanada.gc.ca/cgi-bin/search/eforms/index.cgi?app=profile&form=lab1168&dept=sc&lang=e>

Ineligibility and Suspension Policy

<http://www.tpsgc-pwgsc.gc.ca/ci-if/politique-policy-eng.html>

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#### Code of Conduct for Procurement

<http://www.tpsgc-pwgsc.gc.ca/app-acq/cndt-cndct/contexte-context-eng.html>

#### Lobbying Act

<http://laws-lois.justice.gc.ca/eng/acts/L-12.4/?noCookie>

#### Buy and Sell

<https://buyandsell.gc.ca/>

#### Supplier Registration Information

<https://srisupplier.contractscanada.gc.ca>

#### Consultant Performance Evaluation Report Form

<http://www.tpsgc-pwgsc.gc.ca/app-acq/forms/documents/2913-1.pdf>

#### Canadian economic sanctions

<http://www.international.gc.ca/sanctions/index.aspx?lang=eng>

#### National Joint Council (NJC) Travel Directive

<http://www.njc-cnm.gc.ca/directive/travel-voyage/index-eng.php>

### **S17 CHANGES TO CLAUSE R1410T (2017-08-17) GENERAL INSTRUCTIONS TO PROPONENTS**

'R1410T G13 (2017-08-17) Overview of Selection Procedure, article 3.2.5 Proposal Evaluation and Rating' is deleted and replaced with the following:

#### **G13 3.2 Proposal Evaluation and Rating**

5. The remaining price proposals are rated as follows:

- a. The lowest price proposal receives a Price Rating/maximum Score of 40;
- b. Other price proposals will receive a Score based on the following formula:

$$\frac{\text{Lowest Price Proposal}}{\text{Proponent Price Proposal}} \times 40 \text{ points} = \text{Price Rating/Score}$$

## TERMS, CONDITIONS AND CLAUSES

### AGREEMENT

1. The Consultant understands and agrees that upon acceptance of the offer by Canada, a binding Agreement shall be formed between Canada and the Consultant and the documents forming the Agreement shall be the following:
  - (a) the Front Page and this Agreement clause;
  - (b) the General Terms, Conditions and Clauses, as amended, identified as:
    - R1210D (2017-08-17), General Condition (GC) 1 - General Provisions – Architectural and/or Engineering Services
    - R1215D (2016-01-28), General Condition (GC) 2 - Administration of the Contract – Architectural and/or Engineering Services
    - R1220D (2015-02-25), General Condition (GC) 3 - Consultant Services
    - R1225D (2015-04-01), General Condition (GC) 4 - Intellectual Property
    - R1230D (2016-01-28), General Condition (GC) 5 - Terms of Payment – Architectural and/or Engineering Services
    - R1235D (2011-05-16), General Condition (GC) 6 - Changes
    - R1240D (2011-05-16), General Condition (GC) 7 - Taking the Services Out of the Consultant's Hands, Suspension or Termination
    - R1245D (2016-01-28), General Condition (GC) 8 - Dispute Resolution – Architectural and/or Engineering Services
    - R1250D (2015-07-03) R1650D (2015-07-03), General Condition (GC) 9 - Indemnification and InsuranceSupplementary Conditions  
Agreement Particulars
  - (c) Project Brief;
  - (d) the document entitled "Schedule";
  - (e) any amendment to the solicitation document incorporated in the Agreement before the date of the Agreement;
  - (f) the proposal, the Declaration/Certifications Form and the Price Proposal Form.
  
2. The documents identified above by title, number and date are hereby incorporated by reference into and form part of this Agreement, as though expressly set out herein, subject to any other express terms and conditions herein contained.

The documents identified above by title, number and date are set out in the Standard Acquisition Clauses and Conditions (SACC) Manual, issued by Public Works and Government Services Canada (PWGSC). The SACC Manual is available on the PWGSC Web site: <https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual>

3. If there is a discrepancy between the wording of any documents that appear on the following list, the wording of the document that first appears on the list has priority over the wording of any document that subsequently appears on the list.
- (a) any amendment or variation in the Agreement that is made in accordance with the terms and conditions of the Agreement;
  - (b) any amendment to the solicitation document incorporated in the Agreement before the date of the Agreement;
  - (c) this Agreement clause;
  - (d) Supplementary Conditions;
  - (e) General Terms, Conditions and Clauses;
  - (f) Agreement Particulars;
  - (g) Project Brief;
  - (h) the document entitled "Schedule";
  - (i) the proposal.

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## **SUPPLEMENTARY CONDITIONS (SC)**

### **SC1 SECURITY REQUIREMENT**

There is no security requirement applicable to this Agreement.

### **SC2 FEDERAL CONTRACTORS PROGRAM FOR EMPLOYMENT EQUITY - DEFAULT BY THE CONSULTANT**

The Consultant understands and agrees that, when an Agreement to Implement Employment Equity (AIEE) exists between the Consultant and Employment and Social Development Canada (ESDC)-Labour, the AIEE must remain valid during the entire period of the contract. If the AIEE becomes invalid, the name of the Consultant will be added to the "FCP Limited Eligibility to Bid" list. The imposition of such a sanction by ESDC will constitute the Consultant in default as per the terms of the contract.

### **AGREEMENT PARTICULARS**

The Agreement Particulars will be issued at time of award of contract and will identify the fee to be paid to the Consultant for the services determined in the Price Proposal Form.

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## **PROJECT BRIEF**

### **Description of Project (PD)**

- PD 1 Project Information
- PD 2 Project Identification
- PD 3 Project Background
- PD 4 Existing Documentation
- PD 5 Project Objectives
- PD 6 Issues
- PD 7 Consultant Services

### **Description of Services (PA)**

- PA 1 Project Administration

### **Required Services (RS)**

- RS 1 Analysis of Project Requirements
- RS 2 Construction and Contract Administration
- RS 3 Resident Site Services During Construction
- RS 3A Consultant Site Office / Trailer(s) and Boat(s)

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## **PROJECT BRIEF**

This Project Brief is divided into two (2) sections:

- Description of Project (PD)
- Description of Services: Project Administration (PA)  
Required Services (RS)

## DESCRIPTION OF PROJECT (PD)

### PD 1 PROJECT INFORMATION

Public Works and Government Services Canada (PWGSC) intends to retain a civil engineering consulting firm for the provision of the services required for this project.

- 1.1 PWGSC Project Title:** Randle Reef Sediment Remediation Project  
Stage 2 - Construction Engineering Services
- 1.2 Location of the Project:** Hamilton Harbour, Hamilton, Ontario, Canada
- 1.3 PWGSC Project Number:** R.050927.204
- 1.4 Client/User:** Environment and Climate Change Canada  
Great Lakes Division  
Great Lakes Areas of Concern Section  
Sediment Remediation Unit
- 1.5 PWGSC Project Manager:** David Lawrence

### PD 2 PROJECT IDENTIFICATION

#### 2.1 Description

Randle Reef is an area of highly contaminated sediment located on the south shore of Hamilton Harbour, in the western end of Lake Ontario. Sediment remediation is required to reduce the environmental impacts of contaminants including polycyclic aromatic hydrocarbons (PAHs) and heavy metals located at this site, which will lead to the restoration and eventual delisting of the Hamilton Harbour as an Area of Concern. The funding for this project relates to a Cabinet submission for the cleanup of contaminated sediment in designated Areas of Concern of the Great Lakes.

Environment and Climate Change Canada (ECCC) is the lead agency for a group of funding partners involved in the project. The funding partners include the Ontario Ministry of the Environment and Climate Change, Hamilton Port Authority, Stelco (formerly U.S. Steel Canada), City of Hamilton, City of Burlington and Region of Halton. ECCC have contracted PWGSC to carry out the procurement and project management for the remediation.

Randle Reef Sediment Remediation Project is a project to manage 695,000 m<sup>3</sup> of contaminated sediment in the Hamilton Harbour Area of Concern. The site represents the largest area of contaminated sediment on the Canadian side of the Great Lakes. In Canada, it is the largest known sediment site contaminated by PAHs. The project

proposes to contain the most severely contaminated sediment in place through constructing an engineered containment facility of approximately 6.2 hectares. Surrounding contaminated sediment will be dredged and placed in the containment facility and capped. The after use of the site will include port facilities on two thirds of the site and light industrial use and/or naturalization of the remaining one third of the structure.

The Engineered Confinement Facility (ECF) isolation structure will be constructed with double steel sheet pile walls. The outer wall will be used to satisfy structural requirements while the inner wall will provide environmental isolation of the sediments as well as anchorage for the outer wall. The contaminated sediment deposited within the ECF will be de-watered and the decant water produced by this process will be treated by an on-site water treatment system to meet project specific discharge criteria related to Ontario Ministry of the Environment and Climate Change (MOECC) water quality requirements before being discharged back into Hamilton Harbour. Once dewatering is completed, the contained sediment will be covered by a multi-layer environmental cap. Following project completion, the Hamilton Port Authority (HPA) will assume ownership of the facility and will be responsible for ongoing monitoring and maintenance.

The project will be completed in three distinct stages:

Stage 1 - Construction of a marine double wall ECF enclosure. This includes dredging of contaminated sediments from between the walls and backfilling with clean rock fill. Stage 1 is currently under construction with a scheduled completion date of December 2017.

Stage 2 - Dredging of contaminated sediments and depositing them within the ECF up to water level. Other remediation areas will be capped using both thin layer capping and isolation capping techniques. The Stage 2 Dredging construction contract was awarded on June 30, 2017, and site work is scheduled to begin in February 2018. The completion date for the Stage 2 Dredging contract is January 2020.

Stage 3 - ECF sediment dewatering, capping above water level and consolidating of contaminated sediments within the ECF structure with engineered materials (stone, sand, geotextiles, geomembranes, pipes, asphalt etc).

Following the completion of the project, two-thirds of the site will be developed into a marine terminal which will be suitable for ships of Great Lakes Seaway draught, providing access to berths along Pier 15, northwest of Sherman Inlet. The remaining one-third of the site will either be maintained as vegetated green space or surfaced with a suitable aggregate material and used as light industrial space.

## 2.2 Scope of Services

The scope of services include Civil Engineering consulting services required during **STAGE 2 DREDGING ONLY** of this project.

### 2.3 Cost

The Stage 2 Dredging contract was awarded on June 30, 2017, at a value of approximately \$32.9 million excluding HST.

### 2.4 Schedule

A preliminary schedule is enclosed in Appendix E. The anticipated start date for Stage 2 Dredging site work is February 2018 and is scheduled to be completed by January 2020.

## **PD 3 PROJECT BACKGROUND**

### 3.1 Project Background

The Government of Canada and the United States have recognized that contaminated sediments pose significant environmental risks to the Great Lakes ecosystem. In 1985, these two countries identified 43 Areas of Concern (AOCs) where impaired water quality prevented full beneficial use of rivers, bays, harbours, and ports. Under the Canada-United States Great Lakes Water Quality Agreement, the Government of Canada has committed to remediating the 14 remaining Canadian AOCs, including Hamilton Harbour where Randle Reef is located.

Hamilton Harbour is a 2,150 ha embayment located at the western end of Lake Ontario and connected to the lake by a single ship canal across the sandbar that forms the bay. The conditions in the Harbour reflect natural inputs, human activities, land uses and drainage from a watershed of 49,400 ha. The Harbour accommodates a commercial port and is considered to be a major shipping centre. The south shore of the Harbour supports the highest concentration of heavy metal industry (primarily iron and steel) in Canada.

The contaminated sediment targeted for remediation is located at Randle Reef along the south shore of Hamilton Harbour in the vicinity of Piers 14, 15 and 16. The ECF will be connected to Pier 15, owned by the Hamilton Port Authority, located south of the property occupied by Stelco.

With the remediation of the Sydney Tar Ponds completed, Randle Reef is now the largest PAH contaminated sediment site in Canada. Owing to the long history of contamination (more than 150 years), from multiple sources, it is not possible to apply the polluter pay principle. Instead, a shared responsibility model has been adopted with the Government of Canada, Government of Ontario and local community participating

equally in the design and implementation of a solution. This legacy site is a priority for remediation in the Hamilton Harbour Remedial Action Plan (RAP) and under the Canada-Ontario Agreement Respecting the Great Lakes Basin Ecosystem (COA).

Randle Reef sediments contain PAHs in very high concentrations as well as heavy metals. The contamination is often described as "a spill in slow motion" due to the continuing slow spread of contaminants across the harbour floor and uptake into the food chain. The uptake of PAHs from sediment into the food chain affects local fish and wildlife populations both directly and indirectly. The Randle Reef Sediment Remediation Project will isolate these contaminants from the ecosystem, thereby eliminating direct pathways of exposure to PAHs by ecological receptors. Remediation of Randle Reef will improve water quality and reduce contaminant levels in biota. It will also remove current restrictions on navigation and generate economic returns through the creation of valuable port lands.

The Government of Canada is committed to the delisting of the Hamilton Harbour AOC targeting 2020 under the RAP. The remediation of contaminated sediments at Randle Reef is critical to achieving RAP delisting criteria concerning degradation of benthos, fish tumors and other deformities, degradation of phytoplankton and zooplankton populations and loss of fish and wildlife habitat.

### 3.2 Project Considerations

Work Site Area - The land where the ECF is being constructed is owned by the Hamilton Port Authority (HPA), who are one of the funding partners. PWGSC has unrestricted use of one staging area; 4.2 acres located on the eastern portion of Pier 15 adjacent to the ECF footprint. Shipping in the harbour will be ongoing throughout the construction period. Navigation takes precedence over construction activity. Stelco operates intake and outfall structures and the structures are located adjacent to the east side of the ECF wall in the Stelco Channel. The HPA operates a boat storage facility including a travelift crane adjacent to the ECF and staging area and within the dredging area. Heddle Marine Services operate a shipyard within the dredging area as well.

## **PD 4 EXISTING DOCUMENTATION**

### 4.1 Existing Documentation - Available for all Proponents

1. Stage 1 – ECF Construction design drawings and specifications (version 0)
2. Stage 2 – Dredging design drawings and specifications (version 0)
3. Randle Reef Sediment Remediation Project Comprehensive Study Report, October 30 2012 (CSR)

## **PD 5 PROJECT OBJECTIVES**

### **5.1 Quality**

Construction and environmental remediation quality is to meet standards related to the remediation of contaminated sites. Refer to PD 4.1 Existing Documentation - Available for all Proponents, 2. Stage 2 - Dredging design drawings and specifications (version 0).

### **5.2 Sustainable Development**

The Canadian Federal Government has begun a series of initiatives to ensure that sustainable development principles are built into the policy of all federal organizations. PWGSC like all federal departments requires having a Sustainable Development Strategy (SDS). Real Property Services Branch of PWGSC has developed their Strategy Plan that sets out principles, goals and actions for integrating sustainable development principles into its policies and operations.

Sustainable Development is defined in broad terms as a strategy that routinely and consistently includes the consideration of the environmental, economic and societal impact of every decision made for the project. The general areas of focus include:

1. Energy efficiency and conservation,
2. Greenhouse gas emissions reduction,
3. Water management and conservation,
4. Pollution prevention,
5. Product selection and resource conservation,
6. Site conservation (protection and preservation of valued natural site features),
7. Environmentally friendly maintenance procedures and products.

### **5.3 Waste Management**

The Construction, Renovation, and Demolition (CRD) Non-hazardous Solid Waste Management Protocol to which Real Property Services (RPS) is bound, provides directions on the undertaking of non-hazardous solid waste management actions for CRD projects. The protocol is designed to meet the requirements of federal and provincial policies and the objectives of the RPS SDS as these relate to non-hazardous solid waste generated in CRD projects.

### **5.4 Code Compliance**

Codes, regulations, by laws and decisions of "authorities having jurisdiction" will be observed. In cases of overlap, the most stringent will apply. The Consultant shall identify other jurisdictions appropriate to the project.

## 5.5 Risk Management

A risk management strategy is crucial for PWGSC and integrates project planning into procurement planning. All the stakeholders of a project will be an integral part of the risk management strategy, culminating in an integrated product team. Specific services required for project delivery are outlined in Required Services.

## 5.6 Health and Safety

PWGSC recognizes the responsibility to ensure the health and safety of all persons on Crown construction projects and the entitlement of both federal employees and private sector workers to the full protection afforded them by occupational health and safety regulations.

In keeping with the responsibility and in order to enhance health and safety protection for all individuals on federal construction sites, PWGSC will voluntarily comply with the applicable provincial/territorial construction health and safety acts and regulations, in addition to the related Canada Occupational Safety and Health Regulations.

## **PD 6 CONSULTANT SERVICES**

- 6.1 The prime Consultant shall be responsible to co-ordinate and direct all Consultant team activities.
- 6.2 The Consultant Team shall be comprised of qualified professional and technical expertise with extensive relevant experience, and shall be capable of providing the services identified in the Required Services (RS) of this Project Brief.
- 6.3 The following RS are the overall Consultant Services required to deliver this project:

### **REQUIRED SERVICES (RS)**

- RS 1 - Analysis of Project Requirements
- RS 2 - Construction and Contract Administration
- RS 3 - Resident Site Services during Construction
- RS 3A – Consultant Site Office / Trailer and Boat(s)

Despite any other condition of the Contract, the Consultant is only authorized to perform the Work identified as Required Services of the Contract.

6.4 The Consultant Team for this project must be capable of providing the following services:

- Marine engineering
- Civil engineering
- Environmental engineering
- Air Quality engineering
- Bathymetric Surveying expertise
- Construction Techniques expertise
- Field Personnel for monitoring
- Records and reporting with computing software
- Computing drafting with CADD
- Underwater inspection, video and report
- Air quality monitoring
- Odour monitoring
- Turbidity monitoring
- Site data processing
- Project management
- Time Control
- Cost Control
- Risk management
- Waste management
- Sustainable development
- Sediment remediation
- Contract management
- Resident inspections
- Construction supervision
- Communications
- H&S management

## **DESCRIPTION OF SERVICES**

### **PROJECT ADMINISTRATION (PA)**

#### **PA 1 PROJECT ADMINISTRATION (PA)**

##### **1.1 PWGSC Project Management**

The Project Manager assigned to the project is the Departmental Representative.

The Project Manager is the Departmental officer directly concerned with the project and responsible for its progress. The Project Manager is the liaison between the Consultant, Public Works and Government Services Canada and the Client Department.

Public Works and Government Services Canada administers the project and exercises continuing control over the Consultant's work during all phases of development. Authorization has already been obtained from the Department of Fisheries and Oceans and Transport Canada under the Fisheries Act and Navigable Waters Protection Act, respectively.

Unless directed otherwise by the Project Manager, the Consultant obtains any additional federal, provincial, and municipal requirements and approvals necessary for the work.

##### **1.2 Lines of Communication**

Unless otherwise arranged with the Project Manager, the Consultant shall communicate with the Project Manager only. There shall be no direct official contact between the Client Department and the Consultant, unless approved in writing by the Project Manager.

During construction tender call, Public Works and Government Services Canada conducts all correspondence with bidders and makes the contract award.

##### **1.3 Media**

The Consultant shall not respond to requests for project related information or questions from the media. Such inquiries are to be directed to the Project Manager.

##### **1.4 Meetings**

Attend meetings as outlined in document under PD 4.1 Existing Documentation - Available for all Proponents, 2. Stage 2 - Dredging design drawings and specifications (version 0).

Solicitation No. - N° de l'invitation  
EQ447-181122/A

Amd. No. - N° de la modif.

Buyer ID - Id de l'acheteur  
pw1023

Client Ref. No. - N° de réf. du client  
R.050927.204

File No. - N° du dossier  
PWL-7-40058

CCC No./N° CCC - FMS No./N° VME

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## 1.5 Project Response Time

It is a requirement of this project that the key personnel of the Consultant and sub consultant or specialist firms be personally available to attend meetings or respond to inquiries in a manner that does not delay the construction project.

## **REQUIRED SERVICES (RS)**

### **RS 1 ANALYSIS OF PROJECT REQUIREMENTS**

#### **1.1 INTENT**

The purpose of this stage is to ensure the Consultant has reviewed and integrated all the project requirements, identified and evaluated conflicts or problems, provided alternative strategies, presented and received approval on a Project scope, delivery process, schedule and estimate required to deliver a cohesive quality project. This approved deliverable will become the Project Scope of Services and will be utilized throughout the project to guide the delivery.

#### **1.2 GENERAL**

##### **Scope and Activities:**

1. Visit the site and verify the availability and capacity of services needed for the project
2. Attend project start up meeting
3. Analyze the project requirements/program
4. Review all available existing material related to the project
5. Review the proposed project schedule for verification that all milestone dates are achievable
6. Review the cost plan/budget for verification that the costs are realistic and achievable
7. Identify and verify all authorities having jurisdiction over the project
8. Identify the codes, regulations and standards that apply
9. Establish a policy for project to minimize environmental impacts consistent with the project objectives and economic constraints
10. Review potential for environmental impacts and application of the Comprehensive Study Report (CSR).

#### **1.3 DELIVERABLES:**

1. Comprehensive summary of the project requirements/program demonstrating understanding of the scope of work including:
  - Report on existing information and identify any missing information
  - Confirmed or adjusted project cost and time plans
  - Written identification of the problems, conflicts or other perceived information/clarifying assumptions for the acknowledgment of the Project Manager

## **RS 2 CONSTRUCTION AND CONTRACT ADMINISTRATION**

### **2.1 INTENT**

To implement the project in compliance with the Contract Documents (Stage 2 - Dredging design drawings and specifications (version 0)) and to direct and monitor all necessary or requested changes to the scope of work during construction.

### **2.2 GENERAL**

Scope and Activities:

1. During the implementation of the project, act on PWGSC's behalf to the extent provided in this document
2. Perform updates and changes to the contract as required by the Retained Engineer (design engineer who completed contract documents). Retained Engineer will be retained by PWGSC under a separate contract.
3. Carry out the review of the work at intervals appropriate to determine if the work is in conformity with the Contract Documents
4. Keep PWGSC informed of the progress and quality of the work and report any defects or deficiencies in the work observed during the course of the site review
5. Determine the amounts owing to the Contractor based on the progress of the work and certify payments to the Contractor
6. Act as interpreter of the requirements of the Contract Documents
7. Provide cost advice during construction
8. Advise the Project Manager of all potential changes to scope for the duration of the implementation
9. Review the Contractor's submittals
10. Prepare and justify change orders for issue by the Departmental Representative
11. Indicate any changes or material/equipment/personnel substitutions on Record Documents
12. During the twelve (12) month warranty period investigate all defects and alleged defects and issue any corrective instructions to the Contractor
13. Conduct a final warranty review
14. The Consultant is to provide support to the Project Manager in identifying risks throughout the project life cycle.

## 2.3 DETAILS

### Scope and Activities:

#### 2.3.1 Construction Meetings

1. Immediately after contract award arrange a briefing meeting with the Contractor and the Departmental Representative. Prepare minutes of the meeting and distribute copies to all participants and to other persons agreed upon with the Project Manager.
2. Call job meetings as frequently as required, commencing with the construction briefing meeting. The meetings should include the job superintendent, main subcontractors, affected sub-consultants and PWGSC representatives as necessary. Prepare minutes of the meeting and distribute copies to all participants. The Project Manager may invite representative(s) from the Client Department to attend any of these meetings. Allow for on-site meeting with Project Manager on a weekly basis.

#### 2.3.2 Project Schedule

1. Obtain Project Schedule with detailed components shown separately, as soon as possible after contract award and ensure proper distribution.
2. Monitor the approved construction schedule, take necessary steps to ensure that the schedule is maintained and submit a detailed report to the Departmental Representative concerning any delays.
3. Keep accurate records of causes of delays.
4. Make every effort to assist the Contractor to avoid delays.

#### 2.3.3 Time Extensions

Only the Departmental Representative may approve any request for Time Extensions. Approval will be issued in writing by the PWGSC Departmental Representative.

#### 2.3.4 Cost Breakdown

Obtain from the Contractor detail cost breakdown on standard PWGSC form and submit to the Departmental Representative with the first Progress Claim.

#### 2.3.5 Sub-Contractor Changes

1. The Contractor is required to use the sub-Contractors listed on the tender form unless a change is authorized by the Departmental Representative. Changes are only considered when they involve no increase in cost. Review all requests for

changes of sub-Contractors, and submit recommendations to the Departmental Representative.

2. When sub-Contractors have not been listed on the Tender Form, obtain the list from Contractor not later than 10 working days after date of award.

### 2.3.6 Labour Requirements

1. The Contractor is bound by the Contract to maintain competent and suitable workmen on the project and to comply with the Canada Department of Labour - Labour Conditions. Inform the Departmental Representative of any labour situations that appear to require corrective action by the Departmental Representative.
2. The Consultant shall ensure that a copy of the Labour Conditions for the Contract is posted in a conspicuous place on site.

### 2.3.7 Regulatory Compliance

1. Ensure that construction complies with applicable acts, regulations, codes and municipal bylaws.
2. Matters pertaining to the Federal Occupational Health and Safety legislation shall be referred to the Departmental Representative.

### 2.3.8 Construction Safety

1. All construction projects that are occupied by federal employees during construction are subject to the Canada Occupational Safety and Health Act and Regulations as administered by Health and Welfare Canada.
2. Fire safety provisions during construction must comply with FCC Standards 301 and 302, administered by the Fire Commissioner Canada.
3. In addition to the above, the Contractor must comply with the provincial and municipal safety laws and regulations, and with any instructions issued by the officers of these authorities having jurisdiction relating to construction safety.

### 2.3.9 Construction Supervision

1. Ensure compliance with contract documents.
2. Provide services of qualified personnel who are fully knowledgeable with technical and administrative requirements of project.
3. Establish a written understanding with Contractors as to what stages or aspect of the work are to be inspected prior to being covered up.
4. Assess quality of work and identify in writing to the Contractor and to the Departmental Representative all defects and deficiencies observed at time of such inspections.
5. Inspect materials and prefabricated assemblies and components at their source or assembly plant, as necessary for the progress of the project.

6. Any directions, clarifications or deficiency list shall be issued in writing to PWGSC.

#### 2.3.10 Clarifications

Provide clarifications on Plans and Specifications or site conditions, as required in order that project not be delayed.

#### 2.3.11 Progress Reports

Report to the Departmental Representative regularly on the progress of the work. Submit weekly reports. Using tables, graphs, maps and other appropriate means show weekly and cumulative progress in a form that can be easily interpreted. Prior to first report, provide sample of weekly report format for review and approval by Departmental Representative.

#### 2.3.12 Work Measurement

1. If work is based on unit prices, measure and record the quantities for verification of monthly progress claims and the Final Certificate of Measurement.
2. When Contemplated Change Notice is to be issued based on Unit Prices, keep accurate account of the work. Record dimensions and quantities.

#### 2.3.13 Detail Drawings

Provide for the Departmental Representative's information any additional detail drawings as and when required to properly clarify or interpret the contract documents.

#### 2.3.14 Shop Drawings

1. Verify the number of copies of shop drawings required. Consider additional copies for Client Departmental review.
2. Shop drawings shall be stamped: "Checked and Certified Correct for Construction" by the Contractor and stamped: "reviewed" by the Consultant before return to the Contractor.
3. Expedite the processing of Shop Drawings.
4. On completion of the project, forward three copies of reviewed shop drawings to the Departmental Representative. Ensure that shop drawings include the project number and are recorded in sequence.

### 2.3.15 Inspection and Testing

1. Prior to commencement of on-site work and as early as schedule permits, provide the Departmental Representative with recommended list of tests to be undertaken, including on site and laboratory testing.
2. When contract is awarded, assist the Departmental Representative in briefing testing firm on required services, distribution of reports, communication lines, etc.
3. Review all test reports and take necessary action with Contractor when work fails to comply with contract.
4. Immediately notify the Departmental Representative when tests fail to meet project requirements and when corrective work will affect schedule.
5. Assist the Departmental Representative in the setting up of post monitoring program.
6. Assist the Departmental Representative in evaluating testing firm's invoices for services performed.

### 2.3.16 Environmental Testing and Monitoring

In-water work will generally consist of hydraulic dredging, associated debris removal, placement of dredged sediment in the ECF, de-watering, water treatment, thin layer capping of undredged areas, thin layer backfilling of dredged areas to manage residuals and isolation capping of sediments in the Stelco Channel.

Within three weeks after award of this Construction Engineering Services contract, the Consultant shall provide the Departmental Representative with an Environmental Quality Monitoring Plan for review and approval, which will include, as a minimum, details on water quality and air quality monitoring and details on confirmatory sediment sampling. The plan must:

1. Demonstrate how the proposed monitoring plan will conform to the construction specifications and adjustments as required. Outline details of monitoring activities including, but not limited to, timing and frequency.
2. Allow for on-site meetings with Departmental representative and Client at the beginning and during the construction contract to review and refine the plan.
3. Adjust monitoring plan to suit findings as directed by the Departmental Representative.

#### 2.3.16.1 Water Quality Monitoring:

##### Supplied Data:

The Departmental Representative will supply a site-specific laboratory-generated Turbidity to Total Suspended Solids (TSS) relationship along with a supporting report developed by Environment and Climate Change Canada for use during water quality monitoring. This relationship between real time Nephelometric Turbidity Unit (NTU) measurements in the field and corresponding TSS units (mg/L) is required as it is the water quality monitoring criteria the Contractor must abide by. The Consultant will utilize this relationship and any updated correlation provided by the Departmental Representative during the project.

The Departmental Representative may supply a site specific relationship between the prevailing winds and the subsequent currents generated in the project area to help guide the placement of turbidity monitors. In the absence of this supplied relationship the Consultant will develop their own plan for turbidity monitor placement.

### Requirements:

The comprehensive water quality monitoring program shall incorporate:

#### 1. Turbidity Monitoring

- a. Background conditions: Provide plans and details of three fixed monitoring stations to establish daily background conditions as well as protocol as to how this will be established. Monitoring stations for background shall be within 500 and 1,000 m of the in-water work area. Assume 1 sampling event per station per day at the beginning of work. If, in the course of a workday, significant changes occur that warrant a reassessment of background conditions, the Consultant will be required to conduct background monitoring on a more frequent basis.
- b. Provide the protocol for supplying the Contractor with a daily in-water work criterion (in NTUs). This will include using floating background data and the specified turbidity criteria (Performance Criteria: 15 NTUs above a floating background value 50 m from the in-water work, and Compliance Criteria: 12.5 NTUs above background at 100 m from the work).
- c. Provide plans and details of in-water turbidity monitoring including, but not limited to, proposed equipment, sampling frequency, number of monitoring points, positioning of monitors, sampling methodology, analytical QA/QC, calibration practices, field procedures and reporting details and protocols.
- d. Turbidity measurements will be taken at a minimum of two locations: Performance Criteria will be measured at 50m from the work and Compliance Criteria will be measured at 100m from the work. At each location, readings shall be taken at 1 m below water surface and 1 m above lakebed. Four (4) measures will be made at each elevation in a five

(5) minute period. The average of eight (8) measures will be compared with background values. Average values that exceed the allowable increase above background values will be deemed noncompliant.

- e. Assume Compliance and Performance point measurements in the down current direction taken every hour during the work period. This frequency may be reduced at the discretion of the Departmental Representative once confidence in the equipment and contractors is established. Methods such as a 4 hour rolling average can be used to measure against compliance.

## 2. Surface Water Monitoring

- a. In conjunction with turbidity monitoring, surface water sample collection will be triggered when the NTU value that corresponds to 15 mg/L TSS above background is measured at the compliance point.
- b. The frequency of sampling shall be assumed to be up to a maximum of 8 times per month for chemistry and 16 times per month for TSS. Surface water samples will be analyzed for PAHs, TSS and metals. The samples will be submitted for analysis of total PAHs as identified in the 2008 Ministry of Environment *Guidelines for Identifying, Assessing and Managing Contaminated Sediments in Ontario: An Integrated Approach*. The analytical laboratory shall use EPA 8270 method for analysis. Metals should consist of a general scan that, at minimum, includes As, Cd, Cr, Cu, Fe, Pb, Mn, Ni and Zn. The analytical laboratory shall use ICP-MS and EPA method SW-846 3050B & 6020A.
- c. Laboratory analysis shall be at detection limits capable of meeting the Provincial Water Quality Objectives (PWQOs).
- d. This program can be altered at the discretion of the Departmental Representative pending the results found.
- e. This data will be provided to Departmental Representative, for assessing the accuracy of previously derived in-water work guidelines.

**Table 1: Comprehensive Water Quality Monitoring Program**

Type of Sampling	Parameter	Location	Frequency
Background Turbidity Monitoring	NTUs	Minimum of 3 locations between 500 and 1,000 m of the in-water work area.	1 sampling event per station per day at the beginning of work.
In-water turbidity monitoring	NTUs	Minimum of 2 locations at the performance and compliance points (50m and 100m) at 1 m below water surface and 1 m above lakebed.	Measurements will be taken every hour during the work period. Four (4) measures will be made at each elevation in a five (5) minute period.
Surface Water Monitoring	TSS	At the compliance point.	A minimum of 20 samples would be required for the entire duration of Stage 2 in addition to sampling triggered by turbidity monitoring. The frequency of sampling shall be assumed to be up to a maximum of 16 times per month.
Surface Water Monitoring	PAHs	At the compliance point.	A minimum of 20 samples would be required for the entire duration of Stage 2 in addition to sampling triggered by turbidity monitoring. The frequency of sampling shall be assumed to be up to a maximum of 8 times per month.

### 2.3.16.2 Water Treatment Discharge Sampling

#### Supplied Data:

No supplied data.

#### Requirements:

The water treatment discharge sampling program will incorporate:

1. The Consultant shall collect samples of the water treatment plant effluent 2 times per week from the discharge point into the harbour during production. Assume 160 samples will be required over the duration of the project.
2. During start-up the Consultant shall collect samples of the water treatment plant effluent daily from the discharge point into the harbour. The Consultant shall continue daily sampling for 2 backwash cycles run at production capacity. Assume 45 daily samples will be required.
3. All samples must be 8 hour composites and must follow the sampling procedures outlined in the *MOECC Protocol for the Sampling and Analysis of Industrial/Municipal Wastewater Version: 2.0, January 1, 2016*.
4. Results of the effluent samples will be compared to the established discharge criteria noted for the project:
  - a. pH discharge limit: 6.0 to 9.0
  - b. Total suspended solids (TSS) discharge limit: 15 mg/L
  - c. Polycyclic aromatic hydrocarbons (PAHs) discharge limits:
    - 1-Methylnaphthalene: 2 µg/L.
    - 2-Methylnaphthalene: 2 µg/L.
    - Acenaphthene: 5.8 µg/L.
    - Anthracene: 0.05 µg/L.
    - Benzo(a)anthracene: 0.05 µg/L.
    - Benzo(a)pyrene: 0.015 µg/L.
    - Benzo(ghi)perylene: 0.05 µg/L.
    - Benzo(k)fluoranthene: 0.05 µg/L.
    - Chrysene: 0.05 µg/L.
    - Dibenzo(a,h)anthracene: 0.05 µg/L.
    - Fluoranthene: 0.05 µg/L.
    - Fluorene: 0.2 µg/L.
    - Naphthalene: 7 µg/L.
    - Perylene: 0.05 µg/L.
    - Phenanthrene: 0.03 µg/L.
    - Pyrene: 0.05 µg/L.
  - a) Total metals discharge limits:
    - Aluminum: 75 µg/L.
    - Arsenic: 100 µg/L.
    - Beryllium: 1,100 µg/L.

- Boron: 200 µg/L.
- Cadmium: 0.3 µg/L.
- Chromium: 8.9 µg/L.
- Cobalt: 0.9 µg/L.
- Copper: 5 µg/L.
- Iron: 300 µg/L.
- Lead: 25 µg/L.
- Molybdenum: 40 µg/L.
- Nickel: 25 µg/L.
- Silver: 0.1 µg/L.
- Vanadium: 6 µg/L.
- Zinc: 30 µg/L.

### 2.3.16.3 Sediment Verification Sampling

#### Supplied Data:

Decision flow charts will be provided after contract award that describe the process of determining if a dredge verification zone is complete.

#### Requirements:

Once the required dredging depth has been reached, the Consultant shall collect core samples according to the decision flow charts. The samples will be submitted for analysis of total PAHs as identified in the 2008 Ministry of Environment *Guidelines for Identifying, Assessing and Managing Contaminated Sediments in Ontario: An Integrated Approach*. The analytical laboratory should use EPA 8270 method for analysis. Assume 415 samples for PAHs across all Verification Zones (VZ), and 12 samples for a metals scan in Verification Zone 12 (only) for first pass dredging. Metals should consist of a general scan that, at minimum, includes As, Cd, Cr, Cu, Fe, Pb, Mn, Ni and Zn. The analytical laboratory should use ICP-MS and EPA method SW-846 3050B & 6020A.

### 2.3.16.4 Stelco Channel Isolation Cap Monitoring

#### Supplied Data:

No supplied data.

#### Requirements:

The consultant shall review the contractors' plan for the isolation capping placement as described in the project specifications. After placement of Sand Cap mixture, the area will be divided into 6 equal areas in which the consultant shall take 5 core samples from each area and submit these for analysis of total organic carbon (TOC). Core samples must be representative of the entire depth of the cap layer (i.e. by homogenizing the entire cap layer and subsampling the mixture). The average of the 5 cores in each area must be at least 3% TOC by weight. The analysis method for TOC must be a combustion method and not a titration type of approach.

#### 2.3.16.5 Thin Layer Capping & Thin Layer Backfill Verification Sampling

##### Supplied Data:

No supplied data.

##### Requirements:

The Consultant shall determine the thickness of the thin layer cap and/or thin layer backfill by taking 5 core samples per hectare of cap and physically measuring the cap thickness in the recovered cores. Assume 120 cores will be taken for this purpose. Each hectare of cap will be considered acceptable and complete when the measured cap thickness of all core samples within each hectare meet the requirements for minimum cap thickness and average cap thickness.

#### 2.3.16.6 Air Monitoring:

##### Supplied Data and Equipment:

The Departmental Representative will supply to the Consultant the Hamilton Harbour area background air quality information along with a supporting report developed by the Ontario Ministry of the Environment and Climate Change and the Summary Reports from Stage 1 for use during air quality monitoring.

Also refer to the air quality section of the Randle Reef Sediment Remediation Project Comprehensive Study Report, October 30 2012 (CSR) in PD 4.1 Existing Documentation, which includes a summary of air modeling establishing naphthalene as the primary contaminant of concern related to air emissions from the project. The Departmental Representative will supply the air monitoring plan developed for Stage 1 as an example.

The Departmental Representative will supply a portable GCMS HAPSITE® ER unit and associated components and apparatus (GCMS unit). The Consultant will retain this equipment on-site in a securely locked trailer supplied by the Consultant and of adequate size to perform the appropriate testing for the duration of the contract. The

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Consultant will supply all disposables for use with the equipment. At the completion of work the Consultant will overhaul the equipment to the original condition and return the equipment to the Departmental Representative.

The Departmental Representative will supply a meteorological weather station for data collection at the site.

### Requirements:

Provide a detailed plan for a comprehensive air monitoring program to ensure that emissions from the project site are in compliance with the applicable criteria (provincial ambient air quality criteria (AAQC), upper Risk Thresholds (URT) as per Ontario Regulation 419: Air Pollution – Local Air Quality). The monitoring plan should also incorporate the application of assessment values and meet the requirements of the Randle Reef Sediment Remediation Project Comprehensive Study Report, October 30, 2012.

As part of the detailed plan for the comprehensive air monitoring program a real time monitoring target (total VOCs or approved alternative) must be established which correlates to a protective value intended to prevent an exceedance of the 24 hour naphthalene AAQC criteria of 22.5 ug/m<sup>3</sup>. This real time monitoring target will be established in order to determine the need for the collection of verification air samples (24 hour) for analysis via a GCMS unit and to provide direction to the construction Contractor on any required work alterations or work suspension. The methodology may vary, but the objective is to develop a management tool by way of an action level for the purposes of alerting to potentially developing air quality issues. The method must be easy and cost effective to implement and monitor in real-time.

The comprehensive air monitoring program shall incorporate:

1. Real time monitoring (total VOCs or approved alternative) at five or more points along the Site boundary as indicated on the contract drawing MA 1.1, and downwind of project activities for the duration of in the Stage 2 in water work which disturbs the sediment.
  - a. Verification air sample collection (24 hour), for VOC analysis via laboratory or on-site GCMS unit, triggered by the exceedance of the real time monitoring criteria during the real time monitoring
  - b. Weekly air sample collection (24 hour) once a week during, for VOC analysis via laboratory or on site GCMS unit
  - c. The collection of meteorological data from a weather station, adjacent to or at the work area, in order to verify construction monitoring locations are appropriate based upon daily wind direction and wind speed; and
  - d. A QA/QC program.
2. All sampling, monitoring and analysis are to be completed in accordance with the Ontario Ministry of Environment guidance, including:

- a. Operations Manual for Air Quality Monitoring in Ontario, Ministry of the Environment, Operations Division, Technical Support Section, March 2008, or as amended from time to time
3. All sampling, monitoring and analysis should meet the regulatory requirements for air emissions under the Environmental Protection Act (EPA), and any applicable standards set out in Ontario Regulation 419/05- The Air Pollution- Local Air Quality Regulation for emissions from the work site. This includes the assessment of compliance with the standards, guidelines and upper risk thresholds that are outlined in SUMMARY of STANDARDS and GUIDELINES to support Ontario Regulation 419/05 - Air Pollution - Local Air Quality (including Schedule 6 of O. Reg. 419/05 on UPPER RISK THRESHOLDS).
4. The equipment and installation of on-site or adjacent meteorological equipment should conform to accepted practices as outlined in the Ministry document Operations Manual for Air Quality Monitoring in Ontario, 2008. The installation should include the capability to log data (wind speed, wind direction) with a time resolution of at least 5 minutes.
5. The expected sampling frequency and monitoring locations for the comprehensive air monitoring program are illustrated in Table 2 below. This program can be altered at the discretion of the Departmental Representative.

**Table 2: Comprehensive Air Monitoring Program Sampling**

Type of Sampling	Parameter	Location	Frequency
Real time monitoring	Readings for total VOCs or approved alternative	Minimum of 5 monitoring stations located along the site boundary and determined by project activity and weather conditions	Once per hour, using telemetry display available at site trailer
Verification sampling, 24 hour	VOCs*	At real time monitoring stations where verification is triggered, and simultaneously at an upwind location.	On an as needed basis triggered by real time exceedance of the real time monitoring criteria.
Weekly Sampling, 24 hour	VOCs*	At a location on site and downwind of project activities**	Once per week
Meteorological data	Wind Speed, Wind Direction	A weather station, adjacent to or at the work area.	Daily (log data with a time resolution of at least 5 minutes)

\*expected VOC parameters to be defined by the air monitoring program and to include naphthalene

\*\*Based upon daily meteorological data and weather forecast.

Note: For lower risk activities (i.e. capping) sampling frequencies may be reduced if the sampling program shows no air quality issues manifest during this time.

6. Conduct regular air quality monitoring throughout the duration of the project as determined by the development of the Comprehensive Air Monitoring Program.
7. Provide a qualified and experienced technician to operate, maintain and calibrate the real time air monitors, on-site project GCMS unit and associated equipment through the duration of the contract.
8. Compare analytical air sample results to the applicable AAQC, provide direction to the construction Contractor accordingly and advise the Departmental Representative of any apparent issues.
9. Monitor and direct the activities of the construction Contractor in order to minimize impacts on air quality. Alter or potentially suspend any project activities based on real time air monitoring target exceedances (established to prevent an exceedance of a criteria, where naphthalene has been noted as the parameter of

the highest concern based on likely exceedance) and protective of health and safety concerns at the site boundary.

10. Provide assistance to the Departmental Representative with respect to any Quality Assurance/Quality Control audit monitoring required by the Departmental Representative and make any required changes based upon the results of the QA/QC audit monitoring.

11. Provide reporting of air quality measurements with the following frequency;

- a. Immediate upload and display of real time monitoring available at the construction engineer trailer;
- b. Immediate notification to the Departmental Representative of the collection of verification sampling triggered by an exceedance of the real time monitoring criteria;
- c. Weekly summary of the air quality monitoring results across that timeframe including the analytical results of VOC sampling and interpretation of the analytical results and their correlation to the continuous naphthalene monitoring;
- d. A semi-annual summary of all air monitoring activities and results;
- e. A year end summary of all air monitoring activities and results;
- f. Final report summarizing the air quality monitoring conducted related to Stage 2 (Dredging) of the project.

12. Allow for on-site meetings at the beginning of the construction contract, and if necessary during the contract, with Departmental Representative and Client to review and refine monitoring plan. Adjust monitoring program to suit findings.

#### 2.3.16.6 Odour Monitoring

##### Supplied Data:

The Departmental Representative will supply the odour monitoring plan developed for Stage 1 as an example.

**Requirements:**

Develop an Odour Monitoring Program intended to address any odour issues should they arise.

The odour monitoring program shall incorporate:

1. Initial monitoring to establish baseline quantification of odour at an on-site location utilizing an odour quantifying technique such as an odour panel, olfactometer or equivalent;
2. The establishment, with input and acceptance from the MOECC, of an acceptable odour unit measurement to determine when odour issues have been resolved.
3. On an as needed basis, determined by complaint, conduct monitoring to quantify odour (odour panel, olfactometer or equivalent) and collect a 30 minute air sample for VOC analysis at the location of the receptor, an on-site location upwind from the receptor and downwind from the project activities, and a location upwind of project activities;
4. The following is an example of the suggested sampling frequency and monitoring locations for the comprehensive air monitoring program:

**Table 3: Odour Monitoring Program Sampling**

Type of Sampling	Parameter	Location	Frequency
Baseline odour monitoring	Quantification of odour (olfactometer, odour panel or equivalent)	At a location on site and downwind of project activities	Three times a week for the first week of any new in water project activity.
Receptor odour monitoring	Quantification of odour (olfactometer, odour panel or equivalent)	At the receptor site where the complaint was registered	One time sample collected on an as needed basis
Receptor 30 minute air sampling	VOCs*	At the receptor site where the complaint was registered	One time sample collected on an as needed basis

On-site odour monitoring	Quantification of odour (olfactometer, odour panel or equivalent)	At a location on site downwind of project activities and up wind from the receptor site where the complaint was registered	One time sample collected on an as needed basis and collected in conjunction with receptor odour monitoring
On-site 30 minute air sampling	VOCs*	At a location on site downwind of project activities and up wind from the receptor site where the complaint was registered	One time sample collected on an as needed basis and collected in conjunction with receptor 30 minute air sampling

\*expected VOC parameters to be defined by the air monitoring program and to include naphthalene

5. Conduct regular odour monitoring throughout the duration of the project as determined by the development of the Odour Monitoring Program.
6. Monitor the activities of the construction Contractor in order to minimize impacts on air quality. Provide advice to the Departmental Representative related to the consideration of altering or suspending work related to odour issues. Noting that under the EPA, odour is considered to be a contaminant that may cause an adverse effect and will need to be addressed as applicable.
7. Provide reporting of odour monitoring activities with the following frequency;
  - a. A summary of odour monitoring results on an event by event basis including the analytical results of VOC sampling and interpretation of the analytical results;
  - b. A semi-annual summary of all odour monitoring activities and results;
  - c. A year summary of all odour monitoring activities and results;

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d. Final report summarizing the odour quality monitoring conducted related to Stage 2 (Dredging) of the project.

8. Allow for on-site meetings at the beginning of the construction contract, and if necessary during the contract, with Departmental Representative and Client to review and refine monitoring plan.
9. Adjust monitoring program to suit findings.

#### 2.3.17 Construction Changes

1. The Consultant does not have authority to change the work or the price of the Contract.
2. Changes which affect cost or design concept must be approved by the Departmental Representative.
3. Upon Departmental Representative approval, obtain quotations from the Contractor in detail. Review prices and forward promptly recommendations to the Departmental Representative.
4. The Departmental Representative will issue Consultant-prepared Change Orders to the Contractor, with copy to Consultant.
5. All changes, including those not affecting the cost of the project, will be covered by Change Orders.
6. The practice of "trade-offs" is not allowed.

#### 2.3.18 Contractor's Progress Claims

1. Each month or at intervals agreed with the Contractor, the Contractor submits a progress claim for work and materials as required in the Construction Contract.
2. The claims are made by completing the following forms where applicable:
  - Request for Construction Payment
  - Cost Breakdown for Unit and/or combined Price Contract
  - Cost Breakdown for Fixed Price Contract
  - Statutory Declaration Progress Claim
3. Review and sign designated forms and promptly forward claims to the Departmental Representative for processing.
4. Submit with each progress claim:
  - Updated schedule of the progress of the work.
  - Photographs of the progress of the work.

#### 2.3.19 Materials on Site

1. The Contractor may claim for payment of material on site but not incorporated in work.
2. Material must be stored in a secure place designated by the Departmental Representative.

3. Detailed list of materials with supplier's invoice showing price of each item must accompany claim; Consultant shall check and verify the list.
4. Items shall be listed separately on the Detail Sheet after the break-down list and total.
5. As material is incorporated in the work the cost must be added to the appropriate Detail item and removed from the material list.

#### 2.3.20 Acceptance Board

Inform the Departmental Representative when satisfied that the project is substantially completed. The Consultant shall ensure that his representative, his sub-Consultant representative, Resident On-Site Reviewer, Contractor and major sub-trades representatives shall form part of the Project Acceptance Board and attend all meetings as organized by the Departmental Representative.

#### 2.3.21 Substantial Performance Inspection

The Acceptance Board shall inspect the work and list all unacceptable and incomplete work on a designated form. The Board shall accept the project from the Contractor subject to the deficiencies and uncompleted work listed and priced.

#### 2.3.22 Certificates of Substantial Performance

1. Payment requires completion and signing, by the parties concerned, of the following documents:
  - a. Certificate of Substantial Performance
  - b. Cost Breakdown for Combined Price Contract
  - c. Inspection and Acceptance
  - d. Statutory Declaration Certificate of Substantial Performance
  - e. Workmen's Compensation Board Certificate.
2. Verify that all items are correctly stated and ensure that completed documents and any supporting documents are furnished to the Departmental Representative for processing.

#### 2.3.23 Structure Occupation

1. The Departmental Representative or Client Department may occupy the structure after the date of acceptance of the structure by the Acceptance Board. The acceptance date is normally that of the Substantial Performance Certificate issued to the Contractor. As of the acceptance date, the Contractor may cancel the Contract Insurance, and the Departmental Representative or Client Department (as the case may be) assumes responsibility for:
  - a. Security of the works.
  - b. General maintenance and cleaning of the works.

### c. Maintenance of the site.

#### 2.3.24 Final Inspection

Inform the Departmental Representative when satisfied that all work under the contract has been completed, including the deficiency items contained in the Inspection and Acceptance as a result of the Certificate of Substantial Performance. The Departmental Representative reconvenes the Acceptance Board which makes a final inspection of the project. If everything is satisfactory the Board makes final acceptance of the project from the Contractor.

#### 2.3.25 Final Certificate

1. The final payment requires completion and signing, by the parties concerned, of the following documents:
  - a. Final Certificate of Completion
  - b. Inspection and Acceptance
  - c. Statutory Declaration Final Certificate of Completion
  - d. Cost Breakdown for Combined Price Contract
  - e. Workmen's Compensation Clearance Certificate
2. Verify that all items are correctly stated and ensure that completed documents and any supporting documents are furnished to the Departmental Representative for processing.

#### 2.3.26 Take-over

1. The official take-over of the project or parts of the project, from the Contractor is established by the PWGSC Project Team which includes the Consultant and the Client Department. The date of Certificate of Substantial Performance and the Final Certificate of Completion signifies commencement of the 12 month warranty period for work completed on the date of each certificate in accordance with the General Conditions of the Contract.
2. Provide Departmental Representative with original copy of Contractor's warranties for all materials and work covered by an extended warranty or guarantee, according to the conditions of the specifications. Verify their completeness and extent of coverage.

#### 2.3.27 As-Built and Record Drawings and Specifications

1. Following the take-over, obtain as-built marked-up hard copy from the Contractor.

2. Show significant deviations in construction from the original Contract drawings, including changes shown on Post-Contract Drawings, changes resulting from Change Orders or from On Site Instructions.
3. Check and verify all as-built records for completeness and accuracy and submit to PWGSC.
4. Produce Record Drawings by incorporating As-Built information into project drawings.
5. Submit Record Drawings and Specifications in number and format required by the Consultant Agreement within 8 weeks of final acceptance.
6. Provide a complete set of final shop drawings.
7. Close Out Report

#### 2.4 DELIVERABLES:

1. Written reports from site visits including persons involved
2. Written reports on the progress of the work and the cost of the project at the end of each month
3. Review the updated project schedule to ensure that it reflects activity changes and completions, as well as activities in progress.
4. At each progress payment provide a narrative report identifying work status to date, comparing current progress to baseline, presenting current forecasts, defining problem areas, anticipated delays and impact with possible mitigation.
5. The format of the report will be by approval of the Departmental Representative.
6. Additional detail drawings when required to clarify, interpret or supplement the Construction Documents
7. Post contract drawing
8. Interim or Final certificates
9. As built records
10. Warranty deficiency list
11. Report on Final Warranty Review
12. Close Out Report. The content includes:

#### **CONTENTS OF CLOSE OUT REPORT (as a minimum)**

- Executive Summary
- 1 Introduction (including the purpose and Objective of Project)
- 2 Project Background
  - 2.1 Site Description and History
    - 2.1.1 Site Description
    - 2.1.2 Site History
  - 2.2 Physical Characteristics of Randle Reef
    - 2.2.1 Bathymetry and Geophysical Information
    - 2.2.2 Meteorology

- 2.2.3 Hydrology
- 2.3 Overview of the Hamilton Harbour AOC (including RAP/COA Objectives)
- 2.4 Sediment Characterization
  - 2.4.1 Physical
  - 2.4.2 Chemical
- 3 Project Implementation
  - 3.1 Construction Design
  - 3.2 Environmental Assessment
  - 3.3 Tendering /Competitive Process
  - 3.4 Construction Work plan / Program (as planned at the onset of the project)
    - 3.4.1 Contract Schedule
    - 3.4.2 Chronology of Events
      - Pre-Construction Activities
        - 3.4.2.1 Preconstruction Meeting
        - 3.4.2.2 Kick off Meeting
        - 3.4.2.3 Site Preparation
        - 3.4.2.4 Pre-Construction Inspections
      - 3.4.3 Construction Phase
        - 3.4.3.1 Dredging
        - 3.4.3.2 Thin Layer Backfill
        - 3.4.3.3 Thin Layer Capping
        - 3.4.3.4 Stelco Channel Isolation Cap
        - 3.4.3.5 Water Treatment
      - 3.4.4 Pre-Final and Final Construction Inspections
      - 3.4.5 Demobilization and Site Clean Up
      - 3.4.6 Long Term Monitoring and Maintenance
    - 3.5 Summary of Construction Monitoring
      - 3.5.1 Construction Tracking
      - 3.5.2 Dredge Monitoring including ECF water level control
    - 3.6 Environmental Monitoring (Including Mitigation Measures used)
      - 3.6.1 Baseline Monitoring
        - 3.6.1.1 Description of Monitoring Equipment & Methods
        - 3.6.1.2 Baseline Monitoring Sampling and Analysis
      - 3.6.2 Construction Monitoring
        - 3.6.2.1 Turbidity Monitoring
        - 3.6.2.2 Air Monitoring
        - 3.6.2.3 Odour Monitoring
        - 3.6.2.4 Water Quality Sampling
        - 3.6.2.5 Data Interpretation, Analysis &Conclusions
    - 3.7 Permit and Authorization Conditions
    - 3.8 Safety

	3.8.1	Site Specific Health and Safety plan
	3.8.2	Daily Safety Meetings
	3.8.3	Reportable Incidents and Near Misses
3.9		QA/QC of Construction
	3.9.1	Materials Supply
		3.9.1.1 Source Vérification (Pre-Construction)
		3.9.1.2 Construction QA/QC
	3.9.2	Construction
		3.9.2.1 Dredging
		3.9.2.2 Thin Layer Backfill
		3.9.2.3 Thin Layer Capping
		3.9.2.4 Stelco Channel Isolation Cap
		3.9.2.5 Water Treatment
	3.10	Design Adjustments
	3.11	Changes to Contract
4		Lessons Learned
5		Cost Summary
6		Conclusions and Recommendations
7		References
		Figures
		<b>Tables</b>
		Appendices
	Appendix A	Final Progress Billing and Quantities
	Appendix B	As-Built Drawings
	Appendix C	Daily Reports
	Appendix D	Imported Material Sources and Supporting Test Data
	Appendix E	General Construction Photo Log
	Appendix F	Water Quality Field and Analytical Data
	Appendix G	Off-site Disposal Data
	Appendix H	Change Order Request Documentation
	Appendix I	Pre-Final and Final Construction Inspections and Reports

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## **RS 3 RESIDENT SITE SERVICES DURING CONSTRUCTION**

### **3.1 Description of Services**

The purpose of the Resident Site services is to ensure the presence of the Consultant's full-time representative on site to inspect, co-ordinate and monitor all aspects of the work during the construction of the facility, and liaise with the Contractor, Public Works and Government Services Canada and other agencies as appropriate to the work. More than one person may be required to suit the hours of construction.

The Consultant Resident Site representative is responsible for providing full time (including overtime) resident inspection for all aspects of the project, maintaining daily records of all construction work placed and reporting.

The Resident Site representative shall:

1. be directly responsible to the Consultant.
2. become thoroughly familiar with the Contract documents ( Stage 2 Dredging - Design Drawings and Specifications (version 0) ) , the National Building code and all Fire Commissioner of Canada Standards for Construction operations (incl. FCC No. 301 dated June 1982 and the Standard for Welding and Cutting FCC No. 302 dated June 1982). He shall also be aware of all Provincial and Municipal standards for the health and safety of construction workers.
3. become thoroughly familiar with the requirements of the Consultant Scope of Work and project responsibilities of others which relate to his services.

### **3.2 Specific Duties and Responsibilities**

Provide full time resident inspection, co-ordination, monitoring and reporting during the construction work. In addition, the Departmental Representative may delegate additional responsibilities subject to Consultant's agreement.

Maintain daily records of all construction work and ensure constant communication amongst PWGSC Project Manager, the Contractor, and Consultants.

In case of emergencies, the Resident Site representative is empowered to stop the work, or give orders to protect the safety of the workers or Crown property.

### **3.3 Inspection and Reporting**

The Resident Site representative shall:

1. Inspect all phases of the work in progress, for the purpose of bringing to the attention of the Contractor any discrepancies between the work, the contract documents and accepted construction procedures,
2. Maintain a daily log of such inspections and shall issue a weekly written report to the Consultant, both for distribution, in the form directed,
3. Prepare any other reports or surveys as may be requested by the Departmental Representative through the Consultant,
4. Verify the quantities of materials received and record work progress.

### 3.4 Interpretation of the Contract Documents

Interpretation of the contract documents shall be the responsibility of the Consultant. The Consultant may, however, have the Resident Site representative provide him with information regarding job conditions and may require him to relay day-to-day instructions to the Contractor.

It shall be the duty of the Resident Site representative to assist and further inform the Departmental Representative of any anticipated problems which may delay the progress of the work. The method of relaying such information shall be determined by the Consultant.

### 3.5 Changes in the Work

The Resident Site representative shall not authorize or order any change in the work which will constitute a change in design or in the value of the contract except as delegated by the Departmental Representative.

The Consultant may call upon the Resident Site representative to assist in the evaluation of changes in the work, where knowledge of job conditions is required.

### 3.6 Communication & Liaison

The Resident Site representative shall:

1. Convey the Consultant's instructions regarding the required standards of workmanship to the Contractor(s);
2. Refer to specifications, confer and obtain guidance on these findings with the Consultant. The matter is then to be brought to the attention of the Contractor's Superintendent. Although informal discussions with Sub-trade Superintendents are usually permissible, (but only with the agreement of the Contractor), the Resident Site representative should not deal directly with foreman or tradesmen, or interfere with the progress of the work.

3. Communicate formally with the Contractor via memorandum form only. When this form is issued the Resident Site representative must immediately file copies with PWGSC and the Consultant.
4. Contact the Consultant immediately when it is apparent that information or action is required of the Consultant, e.g. general instructions, clarifications, sample of shop drawing approvals, requisitions, contemplated change orders, site instructions, details, drawings, etc.
5. Accompany PWGSC representatives on inspections and report to the Consultant requirements, comments or instructions of the PWGSC's forces. Note that the Resident Site representative should encourage such requirements, comments or instructions to be provided to him in writing.
6. Consider and evaluate any suggestions or modifications to the documents advanced by the Contractor and immediately report these to the Consultant with comments.
7. Ensure that PWGSC and the Consultant are notified promptly when key pieces and/or components of materials and equipment are delivered, so that these parties can arrange for the appropriate personnel to have an opportunity to inspect same prior to installation.

### 3.7 Daily Log

The Resident Site representative shall keep a daily log recording:

1. weather conditions, particularly unusual weather relative to construction activities in progress;
2. major material and equipment deliveries;
3. daily activities and major work done;
4. start, stop or completion of activities;
5. presence of inspection and testing firms, tests taken, results, etc;
6. unusual site conditions experienced;
7. significant developments, remarks, etc;
8. special visitors on site;
9. authorities given to Contractor to undertake certain or hazardous works
10. environmental incident;
11. reports, instructions from appropriate authorities response actions.

Note: The log is the personal property of the Resident Site representative. Copies of the log book, certified as copies, are to be provided to PWGSC and Consultant at the end of the project.

### 3.8 Weekly Records

The Resident Site representative shall prepare weekly reports for the Consultant in the form directed:

1. progress relative to schedule;

2. major activities commencing or completed during the week; main activities now in progress;
3. major deliveries of materials and/or equipment;
4. difficulties which may cause delays in completion;
5. materials and labour needed immediately;
6. cost estimates of work completed and materials delivered (if cost plus work is authorized);
7. outstanding information or action required by Consultant or PWGSC;
8. work force;
9. weather;
10. remarks;
11. accidents on site;
12. life safety or building hazards caused by the work, the Contractor or his agents.

### 3.9 Site Records

The Resident Site representative shall maintain orderly and updated files at the site for the use of PWGSC, the Consultant and himself as follows:

1. Contract and Tender Documents.
2. Approved Shop Drawings.
3. Approved Samples.
4. Samples.
5. Site Instructions.
6. Contemplated Change Orders.
7. Change Orders.
8. Memoranda.
9. Test and Deficiency Reports.
10. Correspondence and Minutes of Meeting.
11. Names, addresses, telephone numbers of Client representatives, Consultant and all Contractors, sub-trades key personnel associated with the contract; including home telephone numbers in case of emergencies.
12. updated progress schedule.
13. A reproduction of the original contract drawings shall be carefully preserved and shall be kept marked up to date with all addenda, change orders, site instructions, details, as-built conditions, etc., issued subsequent to the award of the contract.

### 3.10 Inspection of the Work

The Resident Site representative shall make on site observations and spot checks of the work to determine whether the work, materials and equipment conform to the contract documents and supplementary conditions. The Site Consultant's representative shall advise the Contractor of any deficiencies or unapproved deviations via

memorandum and report immediately to the Consultant and PWGSC Construction Representative any of these on which the Contractor is tardy or refuses to correct.

The Resident Site representative shall arrange for the Consultants to make the periodic inspections required by the Construction Specifications and Consultant's Contract, and for these inspections to be made timely with respect to the progress of the work.

The Resident Site representative shall also report if materials and equipment are being incorporated into the project, prior to approval of relative shop drawings or samples.

The Resident Site representative shall assist in the preparation of all deficiency reports, interim, preliminary, and final, in collaboration with PWGSC and the Consultant's representatives.

The Resident Site representative shall be responsible for the measurement of all work to be done on a unit-cost basis.

### 3.11 Site Meetings

The Resident Site representative shall attend all job-site meetings.

### 3.12 Inspections and Testing

The Resident Site representative must see that the tests and inspections required by the contract documents are conducted, and should observe these tests and report the results in the daily log.

The Consultant should be notified if the test results do not meet the specified requirements, or if the Contractor does not have tests undertaken as required.

### 3.13 Emergencies

In the case of emergency where safety of persons or property is concerned, or work is endangered by the actions of the Contractor, to safeguard the interests of PWGSC, the Resident Site representative shall give immediate written notice to the Contractor of the possible hazard. They shall further, if necessary, stop the work or give orders for remedial work, and contact the Consultant immediately for further instruction.

### 3.14 Limitations

The Resident Site representative shall not:

1. Authorize deviations from the contract documents.
2. Conduct tests.
3. Approve shop drawings or samples.

4. Advise the user-client in any matter without obtaining guidance from the Consultant.
5. Accept any work or portions of it.
6. Enter into the area of responsibility of the Contractor's Field Superintendent.
7. Stop the work unless convinced that an emergency exists as noted above.

### 3.15 Hazardous Construction Operations

It is the duty of the Resident Site representative to examine all site conditions and methods to be used by the Contractor undertaking hazardous operations.

Give written authority to undertake hazardous operations to the Contractor, when fully satisfied that all necessary precautions and acts have been taken by the Contractor to safeguard the life safety of the workers and building occupants and Crown property. Written authority shall be countersigned by the Contractor to acknowledge that the latter is aware of the Resident Site representative's instructions and requirements and both parties will retain copies of the authority document signed mutually by them.

The Resident Site representative shall inspect the areas where hazardous work is under way to ensure that the Contractor is maintaining the agreed safety standards. Any infractions may result in the Resident Site representative stopping the work. All infractions, or work stoppages ordered shall be reported in writing and verbally to the Consultant and PWGSC Construction Supervisor.

### 3.16 Site Security

Special precautions must be taken at all times to prevent unauthorized entry on to the site. The Resident Site representative will liaise closely with the Consultant and PWGSC Departmental Representative on all security and/or safety problems that may arise due to the Contractor's operations. Furthermore, all personnel working on the site are to obtain a Port Security Access Card from the Hamilton Port Authority (HPA) 's Port Security Centre.

### **RS 3A CONSULTANT SITE OFFICE/ TRAILER(S) AND BOATS**

1. Contractor will provide areas which have to be gravelled to prevent tracking of mud for site office / trailer(s) and 5 parking spaces, and berthing areas for Consultant's boat(s).
2. Consultant shall provide site office / trailer(s) for all site personnel and equipment during construction stage.
3. Consultant shall make arrangements for the supply of water, electrical power, sanitary facilities, heat and any other temporary services required during construction and for the lifetime of any temporary facility.
4. Consultant shall provide and properly maintain sanitary facilities in convenient and clean condition for the Consultant's personnel as required by the Construction Safety Act and in accordance with Ministry of Labour, local health authorities, the Ontario Ministry of Environment (MOE) and Departmental Representative
5. Consultant shall remove from site the site office / trailer(s) and all such work after use.
6. Consultant shall provide boat(s) for inspections, sediment samples and bathymetry survey during construction stage.
7. Boat operator(s) and gas shall be included in the weekly rate.
8. Consultant shall remove boat(s) and all such work after use.

Solicitation No. - N° de l'invitation  
EQ447-181122/A

Amd. No. - N° de la modif.

Buyer ID - Id de l'acheteur  
pwl023

Client Ref. No. - N° de réf. du client  
R.050927.204

File No. - N° du dossier  
PWL-7-40058

CCC No./N° CCC - FMS No./N° VME

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## **SUBMISSION REQUIREMENTS AND EVALUATION**

- SRE 1 General Information
- SRE 2 Proposal Requirements
- SRE 3 Submission Requirements and Evaluation
- SRE 4 Price of Services
- SRE 5 Total Score
- SRE 6 Submission Requirements - Checklist

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## **SUBMISSION REQUIREMENT AND EVALUATION**

### **SRE 1 GENERAL INFORMATION**

#### **1.1 Reference to the Selection Procedure**

An 'Overview of the Selection Procedure' can be found in R1410T General Instructions to Proponents (GI3).

#### **1.2 Calculation of Total Score**

For this project the Total Score will be established as follows:

Technical Rating x 60%	=	Technical Score (Points)
<u>Price Rating x 40%</u>	=	<u>Price Score (Points)</u>
Total Score	=	Max. 100 Points

### **SRE 2 PROPOSAL REQUIREMENTS**

#### **2.1 Requirement for Proposal Format**

The following proposal format information should be implemented when preparing the proposal.

- Submit one (1) bound original plus five (5) bound copies of the proposal
- Paper size should be - 216 mm x 279 mm (8.5" x 11")
- Minimum font size - 11 point Times or equal
- Minimum margins - 12 mm left, right, top, and bottom
- Double-sided submissions are preferred
- One (1) 'page' means one side of a 216 mm x 279 mm (8.5" x 11") sheet of paper
- 279 mm x 432 mm (11" x 17") fold-out sheets for spreadsheets, organization charts etc. will be counted as two pages.
- The order of the proposals should follow the order established in the Request for Proposal SRE section

#### **2.2 Specific Requirements for Proposal Format**

The maximum number of pages (including text and graphics) to be submitted for the Rated Requirements under SRE 3.2 is fifty (50) pages.

The following are not part of the page limitation mentioned above;

- Covering letter

- Table of Contents
- Tabs / Page Dividers (provided they are free of text and/or graphics)
- Consultant Team Identification (Appendix A)
- Declaration/Certifications Form (Appendix B)
- Integrity Provisions– Required Documentation
- Front page of the RFP
- Front page of revision(s) to the RFP
- Price Proposal Form (Appendix C)

***Consequence of non-compliance: any pages which extend beyond the above page limitation and any other attachments will be extracted from the proposal and will not be forwarded to the PWGSC Evaluation Board members for evaluation.***

### **SRE 3 SUBMISSION REQUIREMENTS AND EVALUATION**

#### **3.1 MANDATORY REQUIREMENTS**

Failure to meet the mandatory requirements will render the proposal as non-responsive and no further evaluation will be carried out.

##### **3.1.1 Licensing, Certification or Authorization**

The Proponent shall be a civil engineering firm licensed, or eligible to be licensed, certified or otherwise authorized to provide the necessary professional services to the full extent that may be required by provincial or territorial law in the province of Ontario.

##### **3.1.2 Consultant Team Identification**

The Consultant team to be identified must include the following:

Proponent (prime Consultant) –	Marine Engineer
Key Sub-Consultants / Specialists –	Civil Engineer
	Environmental Engineer/Specialist
	Air Quality Engineer / Specialist
	Bathymetric Surveying Expert
	Construction Techniques Expert
	Field Personnel for Monitoring/Testing
	Monitoring Technician
	Resident Inspector(s)

If the proponent proposes to provide multidisciplinary services that might normally be provided by a sub-consultant, this should be indicated here.

Information required - name of firm, key personnel to be assigned to the project. For the prime consultant indicate current license and/or how you intend to meet the provincial or territorial licensing requirements. In the case of a joint venture identify the existing or proposed legal form of the joint venture (refer to R1410T General instructions to Proponents, GI9 Limitation of submissions).

An example of an acceptable format (typical) for submission of the team identification information is provided in Appendix A.

### 3.1.3 Declaration/Certifications Form

Proponents must complete, sign and submit the following:

- Appendix B, Declaration/Certifications Form as required.

### 3.1.4 Integrity Provisions – Required documentation

In accordance with the Ineligibility and Suspension Policy (<http://www.tpsgc-pwgsc.gc.ca/ci-if/politique-policy-eng.html>), the Proponent must provide, **as applicable**, to be given further consideration in the procurement process, the required documentation as per R1410T (2017-08-17), General instructions 1 (GI1), Integrity Provisions – Proposal, **section 3a**.

## 3.2 RATED REQUIREMENTS

### 3.2.1 Achievements of Proponent, Sub-Consultants and Specialists on Projects

Describe the Proponent's, Sub-Consultants' and Specialists' accomplishments, achievements and experience as prime Consultant on projects.

Select a **maximum** of six (6) projects (minimum of two (2) projects from the Proponent) undertaken within the last 6 years. The total aggregate number of projects submitted by the Proponent, Joint Venture and sub-Consultants is not to exceed 6 projects. Only the first 6 projects listed in sequence will receive consideration and any others will receive none as though not included.

#### Information that should be supplied:

- Clearly indicate how this project is comparable / relevant to the requested project.
- Brief project description and intent. Narratives should include a discussion of contract supervision including evaluations of Contractor methodology, environmental plan and site safety plan.
- Supervision approach for ensuring that the delivery of the project is in compliance with the contract documents, including site supervision, environmental monitoring, reporting and close out reports.

- Budget control and management - i.e. contract price & final construction cost - explain variation
- Project schedule control and management - i.e. initial schedule and revised schedule - explain variation
- Client references - name, address, phone and fax of client contact at working level - references may be checked
- Awards received

### **3.2.2 Achievements of Key Personnel on Projects**

Describe the experience and performance of key personnel, as identified in SRE 3.1.2 Consultant Team Identification, to be assigned to this project regardless of their past association with the current Proponent firm. This is the opportunity to emphasize the strengths of the individuals on the team, to recognize their past responsibilities, commitments and achievements.

Information that should be supplied for each key personnel:

- Names of key personnel, as identified in SRE 3.1.2 Consultant Team Identification, responsible for project delivery and Curriculum Vitae (CV)
- Professional accreditation
- Accomplishments/achievements/awards
- Relevant experience, expertise, number of years experience
- Role, responsibility and degree of involvement of individual in past projects

### **3.2.3 Understanding of the Project:**

The Proponent should demonstrate understanding of the goals of the project, the functional/technical requirements, the constraints and the issues that will shape the end product.

Information that should be supplied:

- The functional and technical requirements
- Broader goals (federal image, sustainable development, sensitivities)
- The relationship between this commission and any earlier work completed for PWGSC
- Significant issues, challenges and constraints
- Project schedule and cost. Review schedule and cost information and assess risk management elements that may affect the project

### **3.2.4 Management of Services:**

The Proponent should describe how he /she proposes to perform the services and meet the constraints; how the services will be managed to ensure continuing and consistent control as well as production and communication efficiency; how the team will be organized and how it will fit in the existing structure of the firms; and how the team will be managed. The Proponent is also to identify sub-Consultant disciplines and specialists required to complete the Consultant team.

If the Proponent proposes to provide multi-disciplinary services which might otherwise be performed by a sub-Consultant, this should be reflected here.

Information that should be supplied:

- Confirm the makeup of the full project team including the names of the Consultant sub-Consultants and specialist's personnel and their role on the project.
- Organization chart with position titles and names (Consultant team). Joint Venture business plan, team structure and responsibilities, if applicable
- What back-up personnel will be committed
- Profiles of the key positions (specific assignments and responsibilities)
- Outline of an action plan of the services with implementation strategies and sequence of main activities
- Reporting relationships
- Communication strategies
- Response time: demonstrate how the response time requirements will be met

### **3.2.5 Construction Supervision Philosophy / Approach / Methodology**

The Proponent should elaborate on aspects of the project considered to be a major challenge which will illustrate philosophy / approach / methodology. This is the opportunity for the Proponent to state the overall philosophy of the team as well as their approach of resolving construction issues and in particular to focus on the unique aspects of the current project.

Information that should be supplied:

- Construction Supervision Philosophy / Approach / Methodology
- Describe the major challenges and how your team approach will be applied to those particular challenges.

### **3.3 EVALUATION AND RATING**

In the first instance, price envelopes will remain sealed and only the technical components of the proposals which are responsive will be reviewed, evaluated and

rated by a PWGSC Evaluation Board in accordance with the following to establish Technical Ratings:

Criterion	Weight Factor	Rating	Weighted Rating
Achievements of Proponent, Sub-Consultants and Specialists on Projects	3.0	0 - 10	0 - 30
Achievements of Key Personnel on Projects	3.0	0 - 10	0 - 30
Understanding of the Project	0.5	0 - 10	0 - 5
Management of Services	0.5	0 - 10	0 - 5
Construction Supervision Philosophy / Approach / Methodology	3.0	0 - 10	0 - 30
Technical Rating	10.0		0 - 100

**Generic Evaluation Table**

PWGSC Evaluation Board members will evaluate the strengths and weaknesses of the Proponent's response to the evaluation criteria and will rate each criterion with even numbers (0, 2, 4, 6, 8 or 10) using the generic evaluation table below:

	INADEQUATE	WEAK	ADEQUATE	FULLY SATISFACTORY	STRONG
0 point	2 points	4 points	6 points	8 points	10 points
Did not submit information which could be evaluated	Lacks complete or almost complete understanding of the requirements.	Has some understanding of the requirements but lacks adequate understanding in some areas of the requirements.	Demonstrates a good understanding of the requirements.	Demonstrates a very good understanding of the requirements.	Demonstrates an excellent understanding of the requirements.
	Weaknesses cannot be corrected	Generally doubtful that weaknesses can be corrected	Weaknesses can be corrected	No significant weaknesses	No apparent weaknesses
	Proponent do not possess qualifications and experience	Proponent lacks qualifications and experience	Proponent has an acceptable level of qualifications and experience	Proponent is qualified and experienced	Proponent is highly qualified and experienced

	Team proposed is not likely able to meet requirements	Team does not cover all components or overall experience is weak	Team covers most components and will likely meet requirements	Team covers all components - some members have worked successfully together	Strong team - has worked successfully together on comparable projects
	Sample projects not related to this requirement	Sample projects generally not related to this requirement	Sample projects generally related to this requirement	Sample projects directly related to this requirement	Leads in sample projects directly related to this requirement
	Extremely poor, insufficient to meet performance requirements	Little capability to meet performance requirements	Acceptable capability, should ensure adequate results	Satisfactory capability, should ensure effective results	Superior capability, should ensure very effective results

To be considered further, Proponents **must** achieve a minimum Technical Rating of seventy (70) points out of the hundred (100) points available as specified above.

**No further consideration will be given to Proponents not achieving the pass mark of seventy (70) points.**

#### **SRE 4 PRICE OF SERVICES**

All price proposal envelopes corresponding to responsive proposals which have achieved the pass mark of seventy (70) points will be opened upon completion of the technical evaluation. An average price is determined by adding all the price proposals together and dividing the total by the number of price proposals being opened.

All price proposals which are greater than twenty-five percent (25%) above the average price will be set aside and receive no further consideration.

The remaining price proposals are rated as follows:

1. The lowest price proposal receives a Price Rating/maximum Score of 40;
2. Other price proposals will receive a Score based on the following formula:

$$\frac{\text{Lowest Price Proposal}}{\text{Proponent Price Proposal}} \times 40 \text{ points} = \text{Price Rating/Score}$$

## SRE 5 TOTAL SCORE

Total Scores will be established in accordance with the following:

Rating	Possible Range	% of Total Score	Score (Points)
Technical Rating	70 - 100	60	42 - 60
Price Rating	0 - 100	40	0 - 40
Total Score		100	0 - 100

The Proponent receiving the highest Total Score is the first entity that the Evaluation Board will recommend for the provision of the required services. In the case of a tie, the Proponent submitting the lower price for the services will be selected.

## SRE 6 SUBMISSION REQUIREMENTS - CHECKLIST

The following list of documents and forms is provided with the intention of assisting the Proponent in ensuring a complete submission. The Proponent is responsible for meeting all submission requirements.

Please follow detailed instructions in R1410T General instructions to Proponents, GI16 Submission of proposal, as amended in SI2 Proposal documents. Proponents may choose to introduce their submissions with a cover letter.

- Team Identification - see typical format in Appendix A
- Declaration/Certifications Form - completed and signed - form provided in Appendix B
- Integrity Provisions – Required documentation – **as applicable** in accordance with the Ineligibility and Suspension Policy (<http://www.tpsgc-pwgsc.gc.ca/ci-if/politique-policy-eng.html>) and as per R1410T (2017-08-17), General instructions 1 (GI1), Integrity Provisions – Proposal, **section 3a**.
- Integrity Provisions - Declaration of Convicted Offences – **with its bid, as applicable** in accordance with the Ineligibility and Suspension Policy (<http://www.tpsgc-pwgsc.gc.ca/ci-if/politique-policy-eng.html>) and as per R1410T (2017-08-17), General instructions 1 (GI1), Integrity Provisions – Proposal, **section 3b**.
- Proposal - one (1) signed original plus five (5) bound copies
- Front page of RFP - completed and signed
- Front page(s) of any solicitation amendment – completed and signed

In a separate envelope:

- Price Proposal Form - one (1) completed and submitted in a separate envelope

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# **APPENDIX A**

## **TEAM IDENTIFICATION FORMAT**

**APPENDIX A - TEAM IDENTIFICATION FORMAT**

For details on this format, please see SRE in the Request For Proposal.

The prime Consultant and other members of the Consultant Team shall be, or eligible to be, licensed, certified or otherwise authorized to provide the necessary professional services to the full extent that may be required by provincial or territorial law.

**I. Prime Consultant (Proponent – Marine Engineer):**

Firm or Joint Venture Name: .....  
.....  
.....

Key Individuals and provincial professional licensing status and/or professional accreditation:

.....  
.....  
.....  
.....  
.....

**II. A. Key Sub Consultants / Specialists: Civil Engineer**

Firm Name: .....  
.....  
.....

Key Individuals and provincial professional licensing status and/or professional accreditation:

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.....  
.....  
.....  
.....

**B. Key Sub Consultants / Specialists: Environmental Engineer/Specialist**

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Firm Name: .....  
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.....

Key Individuals and provincial professional licensing status and/or professional accreditation:

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**C. Key Sub Consultants / Specialists: Air Quality Engineer/Specialist**

Firm Name: .....  
.....  
.....

Key Individuals and provincial professional licensing status and/or professional accreditation:

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.....  
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.....

**D. Key Sub Consultants / Specialists: Bathymetric Surveying Expert**

Firm Name: .....  
.....  
.....

Key Individuals and provincial professional licensing status and/or professional accreditation:

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**E. Key Sub Consultants / Specialists: Construction Techniques Expert**

Firm Name: .....  
.....  
.....

Key Individuals and provincial professional licensing status and/or professional accreditation:

.....  
.....  
.....  
.....  
.....

**F. Key Sub Consultants / Specialists: Field Personnel for Monitoring/Testing and Monitoring Technician**

Firm Name: .....  
.....  
.....

Key Individuals and provincial professional licensing status and/or professional accreditation:

.....  
.....  
.....  
.....  
.....

**G. Key Sub Consultants / Specialists: Resident Inspector(s)**

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Firm Name: .....  
.....  
.....

Key Individuals and provincial professional licensing status and/or professional accreditation:

.....  
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.....

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## **APPENDIX B**

# **DECLARATION/CERTIFICATIONS FORM**

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## APPENDIX B - DECLARATION/CERTIFICATIONS FORM

**Project Title:**

**Name of Proponent:**

**Street Address:**

**Mailing Address:**

**Telephone Number: (    )**

**Fax Number: (    )**

**E-Mail:**

**Procurement Business Number:**

<b>Type of Organization:</b>  _____ Sole Proprietorship  _____ Partnership  _____ Corporation  _____ Joint Venture	<b>Size of Organization:</b>  Number of Employees _____  Graduate Architects / Professional Engineers _____  Other Professionals _____  Technical Support _____  Other _____
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## APPENDIX B - DECLARATION/CERTIFICATIONS FORM (CONT'D)

### Federal Contractors Program for Employment Equity - Certification

I, the Proponent, by submitting the present information to the Contracting Authority, certify that the information provided is true as of the date indicated below. The certifications provided to Canada are subject to verification at all times. I understand that Canada will declare a proposal non-responsive, or will declare a Consultant in default, if a certification is found to be untrue, whether during the proposal evaluation period or during the contract period. Canada will have the right to ask for additional information to verify the Proponent's certifications. Failure to comply with any request or requirement imposed by Canada may render the proposal non-responsive or constitute a default under the contract.

For further information on the Federal Contractors Program for Employment Equity visit Employment and Social Development Canada (ESDC)-Labour's website.

Date: \_\_\_\_\_ (YY/MM/DD) (If left blank, the date will be deemed to be the bid closing date.)

Complete both A and B.

A. Check only one of the following:

- A1. The Proponent certifies having no work force in Canada.
- A2. The Proponent certifies being a public sector employer.
- A3. The Proponent certifies being a federally regulated employer being subject to the *Employment Equity Act*.
- A4. The Proponent certifies having a combined work force in Canada of less than 100 employees (combined work force includes: permanent full-time, permanent part-time and temporary employees [temporary employees only includes those who have worked 12 weeks or more during a calendar year and who are not full-time students]).

A5. The Proponent has a combined work force in Canada of 100 or more employees; and

## **APPENDIX B - DECLARATION/CERTIFICATIONS FORM (CONT'D)**

- A5.1. The Proponent certifies already having a valid and current Agreement to Implement Employment Equity (AIEE) in place with ESDC-Labour.

**OR**

- A5.2. The Proponent certifies having submitted the Agreement to Implement Employment Equity (LAB1168) to ESDC-Labour. As this is a condition to contract award, proceed to completing the form Agreement to Implement Employment Equity (LAB1168), duly signing it, and transmit it to ESDC-Labour.

B. Check only one of the following:

- B1. The Proponent is not a Joint Venture.

**OR**

- B2. The Proponent is a Joint Venture and each member of the Joint Venture must provide the Contracting Authority with a completed Federal Contractors Program for Employment Equity - Certification. (Refer to the Joint Venture section of the General Instructions)

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## APPENDIX B - DECLARATION/CERTIFICATIONS FORM (CONT'D)

### Former Public Servant (FPS) - Certification

Contracts awarded to former public servants (FPS) in receipt of a pension or of a lump sum payment must bear the closest public scrutiny, and reflect fairness in the spending of public funds. In order to comply with Treasury Board policies and directives on contracts awarded to FPS, Proponents must provide the information required below before contract award. If the answer to the questions and, as applicable the information required have not been received by the time the evaluation of proposals is completed, Canada will inform the Proponent of a time frame within which to provide the information. Failure to comply with Canada's request and meet the requirement within the prescribed time frame will render the proposal non-responsive.

### Definitions

For the purposes of this clause,

"former public servant" is any former member of a department as defined in the *Financial Administration Act*, R.S., 1985, c. F-11, a former member of the Canadian Armed Forces or a former member of the Royal Canadian Mounted Police. A former public servant may be:

- (a) an individual;
- (b) an individual who has incorporated;
- (c) a partnership made of former public servants; or
- (d) a sole proprietorship or entity where the affected individual has a controlling or major interest in the entity.

"lump sum payment period" means the period measured in weeks of salary, for which payment has been made to facilitate the transition to retirement or to other employment as a result of the implementation of various programs to reduce the size of the Public Service. The lump sum payment period does not include the period of severance pay, which is measured in a like manner.

"pension" means a pension or annual allowance paid under the *Public Service Superannuation Act* (PSSA), R.S., 1985, c.P-36, and any increases paid pursuant to the *Supplementary Retirement Benefits Act*, R.S., 1985, c.S-24 as it affects the PSSA. It does not include pensions payable pursuant to the *Canadian Forces Superannuation Act*, R.S., 1985, c.C-17, the *Defence Services Pension Continuation Act*, 1970, c.D-3, the *Royal Canadian Mounted Police Pension Continuation Act*, 1970, c.R-10, and the *Royal Canadian Mounted Police Superannuation Act*, R.S., 1985, c.R-11, the *Members of Parliament Retiring Allowances Act*, R.S., 1985, c.M-5, and that portion of pension payable to the *Canada Pension Plan Act*, R.S., 1985, c.C-8.

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## **APPENDIX B - DECLARATION/CERTIFICATIONS FORM (CONT'D)**

### **Former Public Servant in Receipt of a Pension**

As per the above definitions, is the Proponent a FPS in receipt of a pension?

YES ( ) NO ( )

If so, the Proponent must provide the following information, for all FPS in receipt of a pension, as applicable:

- (a) name of former public servant;
- (b) date of termination of employment or retirement from the Public Service.

By providing this information, Proponents agree that the successful Proponent's status, with respect to being a former public servant in receipt of a pension, will be reported on departmental websites as part of the published proactive disclosure reports in accordance with Contracting Policy Notice: 2012-2 and the Guidelines on the Proactive Disclosure of Contracts.

### **Work Force Adjustment Directive**

Is the Proponent a FPS who received a lump sum payment pursuant to the terms of a work force reduction program? YES ( ) NO ( )

If so, the Proponent must provide the following information:

- (a) name of former public servant;
- (b) conditions of the lump sum payment incentive;
- (c) date of termination of employment;
- (d) amount of lump sum payment;
- (e) rate of pay on which lump sum payment is based;
- (f) period of lump sum payment including start date, end date and number of weeks;
- (g) number and amount (professional fees) of other contracts subject to the restrictions of a work force adjustment program.

For all contracts awarded during the lump sum payment period, the total amount of fees that may be paid to a FPS who received a lump sum payment is \$5,000, including Applicable Taxes.

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## APPENDIX B - DECLARATION/CERTIFICATIONS FORM (CONT'D)

### Name of Proponent:

#### DECLARATION:

I, the undersigned, being a principal of the Proponent, hereby certify that the information given on this form and in the attached proposal is accurate to the best of my knowledge. If any proposal is submitted by a partnership or joint venture, then the following is required from each component entity.

..... name	..... signature
..... title	
I have authority to bind the Corporation / Partnership / Sole Proprietorship / Joint Venture	
..... name	..... signature
..... title	
I have authority to bind the Corporation / Partnership / Sole Proprietorship / Joint Venture	
..... name	..... signature
..... title	
I have authority to bind the Corporation / Partnership / Sole Proprietorship / Joint Venture	

During proposal evaluation period, PWGSC contact will be with the following person: \_\_\_\_\_.

Telephone Number: (    ) \_\_\_\_\_ Fax Number: (    ) \_\_\_\_\_

E-mail: \_\_\_\_\_

This Appendix "B" should be completed and submitted with the proposal, but may be submitted afterwards as follows: if Appendix "B" is not completed and submitted with the proposal, the Contracting Authority will inform the Proponent of a time frame within which to provide the information. Failure to comply with the request of the Contracting Authority and to provide the certifications within the time frame provided will render the proposal non-responsive.

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## **APPENDIX C**

# **PRICE PROPOSAL FORM**

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## APPENDIX C - PRICE PROPOSAL FORM

INSTRUCTIONS: Complete this Price Proposal Form and submit in a **separate sealed envelope** with the Name of Proponent, Name of Project, PWGSC Solicitation Number, and the words "PRICE PROPOSAL FORM" typed on the outside of the envelope. Price Proposals are not to include Applicable Taxes.

PROponents SHALL NOT ALTER THIS FORM

**Project Title:**            **Randle Reef Sediment Remediation Project  
Stage 2 – Construction Engineering Services**

**Name of Proponent:**

---

**The following will form part of the evaluation process:**

---

### REQUIRED SERVICES

**A. Fixed Fee** (R1230D (2016-01-28), GC 5 - Terms of Payment – Architectural and/or Engineering Services)

SERVICES

FIXED FEE

RS 1 Analysis of Project Requirements

\$.....

<b>RS 3A Consultant Site Office / Trailer(s) and Boat(s)</b>				
<b>Item</b>	<b>Description</b>	<b>Monthly Rate</b>	<b>Estimated Months</b>	<b>Total Amount \$ (Estimated)</b>
Consultant Site Office / Trailer			27	
Boat(s)			20	
<b>RS 3A TOTAL</b>				

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**APPENDIX C - PRICE PROPOSAL FORM (CONT'D)**

SERVICES	FIXED FEE
RS 1 Analysis of Project Requirements	\$.....
RS 3A Consultant Site Office / Trailer(s) and Boats(s)	\$.....
MAXIMUM FIXED FEES \$.....	

**B. Time Based Fees (R1230D (2016-01-28), GC 5 - Terms of Payment—  
Architectural and/or Engineering Services)**

<b>RS 2 Construction and Contract Administration*</b>			
<b>Position</b>	<b>ESTIMATED HOURS Column A</b>	<b>HOURLY RATES** Column B</b>	<b>TIME BASED FEE Columns AxB</b>
Principle Marine Engineer	350		
Civil/Marine Engineer	4,000		
Environmental Engineer/Specialist	500		
Air Quality Engineer/Specialist	300		
Bathymetric Surveying Expert	200		
Construction Techniques Expert	100		
Records, CADD and Reporting Technician	400		
Administration Support Clerk	400		
<b>RS 2 TOTAL TIME BASED FEES</b>			

\*Payment will be based on actual hours spent. Travel time and/or expenses will not be reimbursed separately (Refer to R1230D (2016-01-28), GC 5.12 – Disbursements).

\*\* All inclusive hourly rate is applicable to both normal working hours and any other shift work as required.

**APPENDIX C - PRICE PROPOSAL FORM (CONT'D)**

RS 3 Resident Site Services During Construction*			
Position	ESTIMATED HOURS Column A	HOURLY RATES** Column B	TIME BASED FEE Columns AxB
Resident Inspector(s)	7,800		
Field Personnel for Monitoring/ Testing and Monitoring Technician	400		
Site Data Processing Technician	400		
<b>RS 3 TOTAL TIME BASED FEES</b>			

\*Payment will be based on actual hours spent. Travel time and/or expenses will not be reimbursed separately (Refer to R1230D (2016-01-28), GC 5.12 – Disbursements).

\*\* All inclusive hourly rate is applicable to both normal working hours and any other shift work as required.

SERVICES

TIME BASED FEE

RS 2 Construction and Contract Administration \$.....  
 RS 3 Resident Site Services During Construction \$.....

**MAXIMUM TIME BASED FEES** \$.....

**TOTAL COST OF SERVICES FOR PROPOSAL EVALUATION PURPOSES**

Maximum Fixed Fee for Required Services \$.....  
 Maximum Time Based Fee for Required Services \$.....  
 Total Evaluated Fee \$.....

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## APPENDIX C - PRICE PROPOSAL FORM (CONT'D)

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### The following will NOT form part of the evaluation process

---

Canada may accept or reject any of the following fees, disbursements and/or hourly rates. Canada reserves the right to negotiate on these fees, disbursements and/or hourly rates.

#### C. DISBURSEMENTS

**At cost without allowance for mark-up or profit, supported by invoices/receipts - see clause R1230D (2016-01-28), GC 5 - Terms of Payment– Architectural and/or Engineering Services, section GC5.12 Disbursements:**

- Laboratory Testing and Materials Testing,
- Site Testing Equipment not supplied by PWGSC,
- Lab Testing
- Site Testing
- Consumables and Storage Facilities.
- Two (2) underwater inspections by divers.
- All Equipment purchased by Consultant is to be handed over to PWGSC after completion of contract

**MAXIMUM ALLOWABLE DISBURSEMENTS**

**\$150,000.00**

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**END OF PRICE PROPOSAL FORM**

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## **APPENDIX D**

### **EXISTING DOCUMENTATION**

1. Stage 1 – ECF Construction design drawings and specifications (version 0)
2. Stage 2 – Dredging design drawings and specifications (version 0)
3. Randle Reef Sediment Remediation Project Comprehensive Study Report, October 30 2012 (CSR)

**(see attached)**

## **APPENDIX E**

### **SCHEDULE**

#### **RANDLE REEF - STAGE 2 CONSTRUCTION SCHEDULE**

Schedule is approximate and may vary

Stage 2 Dredging - Construction Contract Award - June 30, 2017

Stage 2 Construction Engineering Services - Contract Award – Fall 2017

Stage 1 ECF Construction – Contract Completion – December 2017

Stage 2 Dredging – On-site Mobilization – February 2018

Stage 2 Dredging – Start of Dredging – April 2018

Stage 2 Dredging – Contract Completion – January 2020