

RETURN BIDS TO:
RETOURNER LES SOUMISSIONS À:
T.P.S.G.C./P.W.G.S.C.
Place Bonaventure, portail Sud-Est
800 rue de La Gauchetière Ouest
7^{ème} étage/7th Floor
Montréal
Montréal
(Québec)
H5A 1L6

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

Title - Sujet NPSL-Hab.poisson-eau vive-Vaudreuil	
Solicitation No. - N° de l'invitation EE520-160103/A	Date 2015-06-11
Client Reference No. - N° de référence du client R.071652.970	
GETS Reference No. - N° de référence de SEAG PW-\$MTP-450-13288	
File No. - N° de dossier MTP-5-38020 (450)	CCC No./N° CCC - FMS No./N° VME
Solicitation Closes - L'invitation prend fin at - à 02:00 PM on - le 2015-07-22	
Time Zone Fuseau horaire Heure Avancée de l'Est HAE	
F.O.B. - F.A.B. Plant-Usine: <input type="checkbox"/> Destination: <input checked="" type="checkbox"/> Other-Autre: <input type="checkbox"/>	
Address Enquiries to: - Adresser toutes questions à: Guérinik, Naoual	Buyer Id - Id de l'acheteur mtp450
Telephone No. - N° de téléphone (514) 496-3409 ()	FAX No. - N° de FAX (514) 496-3822
Destination - of Goods, Services, and Construction: Destination - des biens, services et construction: MINISTERE DES TRAVAUX PUBLICS ET SERVICES GOUVERNEMENTAUX CANADA ESC 2 - PARCS CST 2 - PARKS 3, PASSAGE DU CHIEN D'OR QUEBEC Québec G1R3Z8 Canada	

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

Équipe NPSL/NBSL Team
Place Bonaventure, portail Sud-Est
800 rue de La Gauchetière Ouest
7^{ème} étage/7th Floor
Montréal
Montréal
Quebec
H5A 1L6

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

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Services of consultant for compensation of the loss of fish habitat – Rapides de Vaudreuil

Project: R.071652.970

REQUEST FOR PROPOSAL (RFP)

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Declaration/Certifications Form (Appendix B)

Price Proposal Form (Appendix C)

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Non Disclosure Agreement (Annex D)

Fish Habitat Characterization in the Vaudreuil Canal – Downstream end of Taschereau Bridge (Annex E – Published out of sequence as an attachment)

Doing Business with Québec (Annex F - Published out of sequence as an attachment)

Submission Requirements and Evaluation (SRE)

Project Brief / Terms of Reference

Description of Project (PD)

Description of Services - Required Services (RS)

Description of Services - Additional Services (AS)

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SUPPLEMENTARY INSTRUCTIONS TO PROPONENTS (SI)

S11 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 strict time frames to implement this project do not allow sufficient time to conduct the usual two phases selection process.
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.

S12 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 (2015-04-01), General Instructions (GI) – Architectural and/or Engineering Services – Request for Proposal;

Submission Requirements and Evaluation (SRE);

(b) the general terms, conditions and clauses, as amended, identified in the Agreement clause;

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- (c) Project Brief / Terms of Reference;
 - (d) the document entitled "Doing Business with Québec Area";
 - (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.

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SI3 BIDDERS' CONFERENCE

A bidders' conference will be held at Place Bonaventure, 800 rue de la Gauchetière Ouest, Montréal on Tuesday July 7th, 2015. The conference will begin at 1:30 p.m. EDT, in room 7300, South-East Portal. The scope of the requirement outlined in the bid solicitation will be reviewed during the conference and questions will be answered. It is recommended that bidders who intend to submit a bid attend or send a representative.

Bidders are requested to communicate with the Contracting Authority with email address:

QueMontrealNBSL.QueMontrealNPSL@pwgsc-tpsgc.gc.ca

before the conference to confirm attendance. Bidders should provide, in writing, to the Contracting Authority, the name(s) of the person(s) who will be attending and a list of issues they wish to table no later than July 2nd.

Any clarifications or changes to the bid solicitation resulting from the bidders' conference will be included as an amendment to the bid solicitation. Bidders who do not attend will not be precluded from submitting a bid.

SI4 QUESTIONS OR REQUEST FOR CLARIFICATION

Questions or requests for clarification during the solicitation period must be submitted in writing to

QueMontrealNBSL.QueMontrealNPSL@pwgsc-tpsgc.gc.ca

to the Contracting Authority named on the RFP - Page 1 as early as possible. Enquiries should be received no later than 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.

SI5 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). The Agreement on Internal Trade does not apply because engineering services are specifically excluded.

SI6 CERTIFICATIONS

1. Integrity Provisions - Associated Information

By submitting a proposal, the Proponent certifies that the Proponent and its Affiliates are in compliance with the provisions as stated in Section G11 Integrity Provisions - Proposal of R1410T (2015-04-01) General Instructions (GI) – Architectural and/or Engineering Services – Request for Proposal. The

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associated information required within the Integrity Provisions will assist Canada in confirming that the certifications are true.

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) 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.

SI7 - 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)

http://www.labour.gc.ca/eng/standards_equity/eq/emp/fcp/index.shtml

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>

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Code of Conduct for Procurement

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

Consent to a Criminal Record Verification (PWGSC-TPSGC 229 form)

<http://www.tpsgc-pwgsc.gc.ca/app-acq/forms/formulaires-forms-eng.html>

Lobbying Act

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

Contracts Canada

<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>

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 (2015-04-01), General Condition (GC) 1 - General Provisions – Architectural and/or Engineering Services
 - R1215D (2014-06-26), General Condition (GC) 2 - Administration of the Contract
 - R1220D (2015-02-25), General Condition (GC) 3 - Consultant Services
 - R1225D (2015-04-01), General Condition (GC) 4 - Intellectual Property
 - R1230D (2015-02-25), General Condition (GC) 5 - Terms of Payment
 - 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 (2012-07-16), General Condition (GC) 8 - Dispute Resolution
 - R1250D (2015-02-25), General Condition (GC) 9 - Indemnification and Insurance
 - (c) Project Brief / Terms of Reference;
 - (d) the document entitled "Doing Business with Québec Area";
 - (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>

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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 / Terms of Reference;
 - (h) the document entitled "Doing Business with Québec";
 - (i) the proposal.

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SUPPLEMENTARY CONDITIONS (SC)

SC1 SECURITY REQUIREMENT

There is no security requirement applicable to this Agreement.

SC 2 LANGUAGE REQUIREMENTS

Use the following in Agreements where the consultant must be capable to provide services in both official languages.

1. Communication between Canada and the Consultant shall be in the language of choice of the Consultant Team, which shall be deemed to be the language of the Consultant's proposal.
2. The Consultant's services during construction tender call (such as addenda preparation, tenderers' briefing meetings, technical answers to questions by bidders, including translation of bidder's questions) shall be provided expeditiously in both languages, as necessary.
3. The Consultant's services during construction shall be provided in the language of choice of the Contractor. The successful Contractor will be asked to commit to one or other of Canada's official languages upon award of the Construction Contract and, thereafter construction and contract administration services will be conducted in the language chosen by the Contractor.
4. Other required services in both of Canada's official languages (such as construction documentation) are described in detail in the Project Brief.
5. The Consultant Team, including the Prime Consultant, Sub-Consultants and Specialists Consultants shall ensure that the services being provided in either language shall be to a professional standard.

SC 3 AUTHORITIES

3.1 Agreement Authority

The Agreement Authority for the Agreement is:

Mrs Naoual Guérinik
Supply Specialist
Public Works and Government Services Canada
Quebec Region
Place Bonaventure, South-East Portal
800 de La Gauchetière Street West, Suite 7300
Montreal, Quebec H5A 1L6

Telephone: (514) 496-3409

Facsimile: (514) 496-3822

E-mail: QueMontrealNBSL.QueMontrealNPSL@pwgsc-tpsgc.gc.ca

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The Agreement Authority is responsible for the management of the Agreement and any changes to the Agreement must be authorized in writing by the Agreement Authority. The Consultant must not perform work in excess of or outside the scope of the Agreement based on verbal or written requests or instructions from anybody other than the Agreement Authority.

3.2 Project Authority

The Project Authority for the Agreement is:

Name: *(to be completed upon Agreement award)*

Title:

Address:

Telephone :

Facsimile:

E-mail address:

The Project Authority is the representative of the department or agency for whom the Work is being carried out under the Agreement and is responsible for all matters concerning the technical content of the Work under the Agreement. Technical matters may be discussed with the Technical Authority; however, the Technical Authority has no authority to authorize changes to the Term of Reference. Changes to the Terms of Reference can only be made through an agreement amendment issued by the Agreement Authority.

3.3 Consultant's Representative

Name:

Title:

Organization:

Address:

Telephone:

E-mail address:

SC4 NON-DISCLOSURE AGREEMENT

The Consultant must obtain from its employee(s) or subcontractor(s) the completed and signed non-disclosure agreement, attached at Annex C, and provide it to the Project Authority before they are given access to information by or on behalf of Canada in connection with the Work.

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SC 5 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.

SUBMISSION REQUIREMENTS 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 80%	=	Technical Score (Points)
<u>Price Rating x 20%</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 – 216 mm x 279 mm (8.5" x 11")
- Minimum font size – 11 point Times or equal
- Minimum margins – 12 mm right, left, 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 proposal 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 thirty-five (35) pages.

The following are not included in the page limitation mentioned above:

- Covering letter
- Consultant Team Identification (Appendix A)
- Declaration/Certifications Form (Appendix B)
- Code of Conduct Certifications
- 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 exceed 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.

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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 Principal Proponent shall be a firm licensed by an order, corporation or professional association to provide the necessary professional services to the full extent that may be required by provincial or territorial law in the province of Québec.

3.1.2 Consultant Team Identification

For this project, the team must include at least the following experts:

Prime consultant

- Civil engineers or biologists specializing in fish habitat development

Key Sub-consultants

- Engineers specializing in hydrodynamics and hydrologic modelling, hydrometric forecasts, and data analysis
- Civil engineers specializing in creating plans and in construction methods relevant to the project's objectives
- Biologists specializing in fish habitat development and aquatic botany
- Environment expert specializing in applying the Québec *Environment Quality Act*
- Land surveyor specializing in topographic and bathymetric surveys/plans
- Archaeologist specializing in Québécois historical archeology and the paleohistory of Québec

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- All other appropriate specialists for the project

If the Proponent proposes to provide multi-disciplinary services which might otherwise be performed by a sub-consultant, this should be reflected 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, G19 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 – Associated Information

Proponents who are incorporated, including those submitting proposals as a joint venture, must provide a complete list of names of all individuals who are currently directors of the Proponent. Proponents submitting proposals as sole proprietorship, including those submitting proposals as a joint venture, must provide the name of the owner. Proponents submitting proposals as societies, firms, or partnerships do not need to provide lists of names. If the required names 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 provide the names within the time frame specified will render the bid non-responsive. Providing the required names is a mandatory requirement for contract award.

3.2 RATED REQUIREMENTS

3.2.1 Prime Consultant's Experience

Describe the Proponent's accomplishments, achievements and experience as prime consultant on previous projects.

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Select a **maximum** of 2 projects undertaken within the last 8 years. Joint venture submissions are not to exceed the maximum number of projects. Only the first 2 projects listed in sequence will receive consideration and any others will receive none as though not included.

Information that should be supplied:

- Clear indication of how this project is comparable/relevant to the requested project
- Brief project description and intent – narratives should include a discussion of design philosophy / approach used to respect project intent and meet both design challenges and decisions
- Budget control and management – i.e. contract price & final construction cost (explain any discrepancies)
- Project schedule control and management – i.e. initial schedule and revised schedule (explain any discrepancies)
- Client references – name, address, phone and fax of client contact at working level (references may be checked)
- Names of key personnel responsible for project delivery
- Awards received

The Proponent (as defined in R1410T General Instructions to Proponents, GI2 Definitions) must be knowledgeable about the above projects. Past project experience from entities other than the Proponent will not be considered in the evaluation unless these entities form part of a joint venture Proponent.

Please indicate those projects which were carried out in joint venture and the responsibilities of each of the involved entities in each project.

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3.2.2 Achievements of Key Sub-consultants and Specialists on Previous Projects

Describe the accomplishments, achievements and experience either as prime consultant or in a sub-consultant capacity on previous projects. If the Proponent proposes to provide multi-disciplinary services which might otherwise be performed by a sub-consultant, this should be reflected here.

Select a **maximum** of 2 projects undertaken within the last 8 years per key sub-consultant or specialist. Only the first 2 projects listed in sequence (by key sub-consultant or specialist) will receive consideration and any others will receive none as though not included.

Information that should be supplied:

- Clear indication of how this project is relevant to the requested project
- Brief project description and intent – narratives should include a discussion of design philosophy / approach used to respect project intent and meet both design challenges and decisions
- Budget control and management
- Project schedule control and management
- Client references – name, address, phone and fax of client contact at working level (references may be checked)
- Names of key personnel responsible for project delivery
- Awards received

3.2.3 Achievements of Key Personnel on Projects

Describe the experience and performance of key personnel to be assigned to this project regardless of their past association with the current proponent firm. This is an 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:

- Professional accreditation and/or degree(s);
- Accomplishments/achievements/awards;
- Relevant experience, expertise and number of years experience; Role, responsibility and degree of involvement in past projects.

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Key Personnel	Factor
<p>Project Manager</p> <ul style="list-style-type: none"> • Engineer, who is a member of the OIQ, or biologist • Minimum of 15 years of experience coordinating multi-disciplinary teams in the field of environment 	5
<p>Design Supervisor</p> <ul style="list-style-type: none"> • Engineer, who is a member of the OIQ • Minimum of 15 years of relevant experience in preparing construction documents (RS3 and RS4) for environmental project development 	4
<p>Delivery Supervisor</p> <ul style="list-style-type: none"> • Engineer, who is a member of the OIQ • Minimum of 15 years of relevant experience in construction and contracts (RS6) for environmental project development 	4
<p>Senior Biologist</p> <ul style="list-style-type: none"> • Specialist in fish habitat development with a minimum of 15 years of experience in a project related field (lotic water fish habitat) 	4
<p>Engineer or Specialist in Hydrodynamics</p> <ul style="list-style-type: none"> • Minimum of 10 years of experience working on a multi-disciplinary team for similar fish habitat development projects in lotic and lentic waters 	4
<p>Biologist</p> <ul style="list-style-type: none"> • Specialist in botany with 5 years of experience working with aquatic, riparian and wetland plants and having participated in the development of lotic water fish habitat 	3
<p>Civil Engineer</p> <ul style="list-style-type: none"> • Minimum of 10 years of experience supervising worksite access and the development of plans/construction methods 	4
<p>Environmental Expert</p> <ul style="list-style-type: none"> • Minimum of 10 years of experience in applying the Québec <i>Environment Quality Act</i> 	

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(experience in applying the <i>Canadian Environmental Assessment Act</i> is considered to be an asset)	2
GRAND TOTAL FOR SECTION 3.2.2	30 points

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3.2.4 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:

- Functional and technical requirements
- Broader goals (federal image, sustainable development, sensitivities)
- Relationship between this mandate and any earlier studies completed for PWGSC or any other federal departments
- Significant issues, challenges and constraints
- Project schedule and cost (review schedule and cost information and assess risk management elements that may affect the project)
- Client User's philosophies and values

3.2.5 Scope of Services

The proponent should demonstrate capability to perform the services, meet project challenges and provide a plan of action.

Information that should be supplied:

- Scope of services – detailed list of services
- Work Plan – detailed breakdown of work tasks and deliverables
- Project schedule – proposed major milestone schedule for primary services
- Risk management strategy

3.2.6 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; 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:

- Confirmation of the full project team including the names of the consultant, sub-consultants and specialists 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 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)

3.2.7 Design Philosophy / Approach / Methodology

The proponent should elaborate on aspects of the project considered to be a major challenge, which will illustrate design philosophy / approach / methodology. This is an opportunity for the Proponent to state the team's overall design philosophy as well as their approach to resolving design issues and, moreover, to focus on the unique aspects of the current project.

Information that should be supplied:

- Design Philosophy / Approach / Methodology
- Description of major challenges and how your team's approach will be applied to these 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 to establish Technical Ratings by a PWGSC Evaluation Board in accordance with the following:

Section	Criterion	Weight Factor	Rating	Weighted Rating
3.3.1	Achievements of Proponent	2.0	0 - 10	0 - 20
3.3.2	Achievements of Key Sub-consultants / Specialists	1.5	0 - 10	0 - 15
3.3.3	Achievements of Key Personnel	2.0	0 - 10	0 - 20

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3.3.4	Understanding of the Project	1.5	0 - 10	0 - 15
3.3.5	Scope of Services	1.0	0 - 10	0 - 10
3.3.6	Management of Services	1.0	0 - 10	0 - 10
3.3.7	Design Philosophy / Approach / Methodology	1.0	0 - 10	0 - 10
	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 does 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	

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	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 fifty (50) 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 fifty (50) points.

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SRE 4 PRICE OF SERVICES

All price proposal envelopes corresponding to responsive proposals which have achieved the pass mark of fifty (50) 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:

- A. The lowest price proposal receives a Price Rating of 100.
- B. The second, third, fourth and fifth lowest prices receive Price Ratings of 80, 60, 40, and 20, respectively. All other price proposals receive a Price Rating of 0.
- C. On the rare occasions where two (or more) price proposals are identical, the matching price proposals receive the same rating and the corresponding number of following ratings are skipped.

The Price Rating is multiplied by the applicable percentage to establish the Price 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	0 - 100	80	0 - 80
Price Rating	0 - 100	20	0 - 20
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.

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Please follow the detailed instructions in R1410T General Instructions to Proponents, GI16 Submission of Proposal. 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 – Associated Information – list of directors / owners
- Proposal – one (1) original plus five (5) bound copies
- Front page of RFP
- Front page(s) of any solicitation amendment

In a separate envelope:

- Price Proposal form – one (1) completed copy submitted in a separate envelope

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PROJECT BRIEF

The Project Brief is divided into two sections:

- **Description of Project (DP)**
- **Description of Services (DS)**

Project Administration

Required Services

Additional Services

For standards relating to the service provisions herein please refer to the document "Doing Business with SAG." The requirements of the standards that apply to these services must be adhered to.

DESCRIPTION OF PROJECT (DP)

DP 1 PROJECT INFORMATION

Public Works and Government Services Canada (PWGSC) intends to retain a **firm with expertise in engineering or biology specializing in fish habitat**, for the provision of the services required for this project, including, but not limited to, delivery of the drawings and specifications for this construction project.

1.1 PWGSC Project Title:

- Compensation for the Loss of Fish Habitat – Rapides de Vaudreuil

1.2 Location of Project

The project is located to the southwest of Montréal Island in the Rapides de Vaudreuil sector of the Rivière des Outaouais, spanning approximately 1 km between the Autoroute 20 bridge (upstream) and the most downstream part of Île aux Pins (lat. 45°23'10" N, long. 74°0'0" W). While potential zones for developing spawning areas are spread across the project's territory, they are primarily found near:

- Taschereau Bridge – potential spawning sites span a distance of 340 m upstream from the current Taschereau Bridge and across almost the entire width of the river (notably, along the eastern bank), except for the navigable waterway.
- Île Ronde – potential sites surround the island.

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- Île Bray and Île aux Pins – potential sites are found between these islands on each side of the shipping channel.

1.3 PWGSC Project Number:

R.071652.970

1.4 Client / User:

Infrastructure Canada (INFC)

1.5 Departmental Representative:

To be announced after contract adjudication.

1.6 PWGSC Project Manager:

To be announced after contract adjudication.

DP 2 PROJECT IDENTIFICATION

2.1 Overview of Work

The construction of a New Bridge for the St. Lawrence (NBSL) will cause losses in lentic and lotic water fish habit, wetlands and part of a migratory bird sanctuary.

A review of different compensation projects was carried out in order to select ones to offset losses incurred as a result of the project. Infrastructure Canada (INFC), the federal department responsible for this major NBSL project, has selected a total of four compensation projects, including the Rapides de Vaudreuil project to offset fish habitat losses in lotic and lentic waters. Other projects have been selected to compensate for the loss of fish habitat in lentic waters, of wetlands and of part of a migratory bird sanctuary; these projects are part of a mandate other than that which is described in this document.

This project's primary ecological objective is to create habitats that are attractive to ichthyofauna by improving conditions for spawning, rearing and feeding in the Rapides de Vaudreuil between the Taschereau Bridge and Île Bray/Île aux Pins [total potential area of approximately 120,000 m² (90,000 m² in lotic waters and close to 30,000 m² in lentic waters)]. The proposed work seeks primarily to improve yellow walleye, lake sturgeon and smallmouth bass habitat.

For this project, INFC seeks installations that upon completion will be stable over time and not require any maintenance and that will maintain favorable hydraulic conditions for the spawning, rearing and feeding grounds of different lotic and lentic water species during low spring flooding.

2.2 Detailed Description of Work

INFC intends to have zones developed between the Taschereau Bridge and île Bray/Île aux Pins to increase the usable area – spawning, rearing and feeding grounds – for lotic water fish species, including yellow walleye and lake sturgeon. The development of zones for certain lentic water fish species, including smallmouth bass, is also targeted.

The work described here primarily seeks to develop substrate and bathymetric/hydraulic conditions conducive to these functions.

Work required for the project comprises, but is not limited to:

- **Lotic water development:** Addition of a layer of substrate with smaller rocks throughout which larger blocks will be sunk to provide resting areas upstream;
- **Lentic water development:** Installation of sunken islands made of blocks and gravel for bass to build their nests during spawning. These rocky islands will be placed at regular intervals along the targeted zones;
- Installation of access points for work sites and their dismantling (or site restoration) upon project completion [e.g. temporary access road and wharf, if needed, and temporary storage area for materials (approx. 0.9 hectares)];
- Installation of deflectors or sills, if required.

Services required for the project comprise, but are not limited to (see RS and AS):

- Project analysis and understanding;
- Design concepts;
- Drawings and specifications (Preliminary Design and Construction Documents for the tender call);
- Evaluation of construction costs;
- Services during the tendering period;
- Site monitoring (partial monitoring and administrative follow-up);
- Land surveys;
- Additional bathymetric surveys;
- Additional hydraulic study (assessment of the impact of development on hydraulic conditions in the construction zone, assessment of the flood resistance of any installations, effect of ice and substrate embeddedness);
- Archaeological potential study;
- Laboratory services (e.g. sediment characterization required if dredging operations are performed);
- Environmental impact assessment (EIA);
- Application for certificate of authorization (CA).

2.3 Cost

The Class D construction budget for the Vaudreuil spawning ground is an estimated \$3,700,000 (taxes excluded but construction contingencies included).

2.4 Schedule

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The final completion date for delivery of all the professional services described in this request for proposals will be sometime in **December 2017**.

Major project milestones:

Mandate award: September 2015

Completion of drawings and specifications: April 2016

Public call to tender: Summer 2016

Construction contract award: August 2016

Construction period: August to September 2016 and August to September 2017

Provisional acceptance period: December 2016 and September 2017

Final acceptance period: Autumn 2017

Completion of project: December 2017

DP 3 PROJECT BACKGROUND

As part of the NBSL project, INFC has selected certain compensation projects to offset expected losses in lentic and lotic water fish habitats, wetlands and part of a migratory bird sanctuary as a result of the future construction of a new bridge and the Champlain Bridge demolition. The spawning ground project for the Rapides de Vaudreuil aims to offset some of the fish habitat loss in lotic and lentic waters during construction of the NBSL.

A preliminary design for this compensation project was first presented by the firm Dessau/Cima+ (2013) as part of the environmental assessment (EA) for the NBSL project.

Subsequently, the firm CJB Environment, Inc. (2015) analyzed the proposed project design and developed certain design parameters to evaluate the approximate cost.

These studies showed, among other things, that the Rapides de Vaudreuil are an important sector for fish that spawn in lotic waters, notably yellow walleye and lake sturgeon, and for smallmouth bass that spawn in lentic waters.

In their study, CJB Environment Inc. proposed different types of work to create and restore spawning habitat for lotic and lentic water fish. However, they also emphasized that confirming the location of spawning sites is crucial preliminary step and must take into account bathymetry and hydraulicity.

As a result of this recommendation, the firm WSP Canada Inc. was mandated to characterize the aquatic habitat of the Rapides de Vaudreuil sector, near the Taschereau Bridge, and to establish the potential for spawning habitat development for three targeted fish species (yellow walleye, lake sturgeon and smallmouth bass). As part of this mandate, bathymetric surveys were conducted in the sector and the hydrometry was analyzed. The existing substrate was also characterized.

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Following hydrodynamic modelling of the sector, which took into account adding a layer of substrate to the riverbed, and the establishment of habitat development criteria for the targeted fish species, potential spawning sites were identified and analyzed.

Based on this analysis, a little over 90,000 m² could be developed for fish species that spawn in lotic waters (including yellow walleye and lake sturgeon) between April 15th and June 15th. Also, a total of approximately 27,000 m² could be developed for smallmouth bass that spawn in lentic waters between May 1st and July 15th. It should be noted that in order to minimize the impact on these species, work schedules must not interfere with these periods.

Note: The exact size of the required compensation areas have not yet been confirmed. Certain zones identified in the report by WSP might not be chosen for development.

DP 4 EXISTING DOCUMENTATION

4.1 Existing Documentation – available to all proponents

- Vaudreuil channel fish habitat characterization, upstream from the Taschereau Bridge (WSP, January 2015) – Available in French;
- Reference state data presented in the study by WSP, including that from the bathymetric survey, as well as data on substrate and vegetation, hydrodynamic conditions and spawning potential within the area studied – Available in the Appendix of this request for proposals.

4.2 Existing Documentation – provided to the successful Proponent

Upon awarding the mandate, Infrastructure Canada will provide the successful Proponent with the following documents:

- *Un nouveau pont pour le Saint-Laurent / Projets de compensation pour la perte de milieux humides et d'habitats du poisson* – Concepts élaborés: Final report by CJB Environment, Inc. (January 2015) – Summary including information about the Vaudreuil spawning ground project – Available in French;
- Biological characterization will be conducted in the spring and summer of 2015 and will be given to the Consultant upon mandate award. This characterization will include, inter alia, density measurements for *Fontinalis sphagnifolia* moss cover between spring and the start of the spawning period and a use assessment for potential development sites during the spawning period that takes into account existing spawning grounds. Species that risk to be classified as threatened or vulnerable – such as the hornleaf riverweed – will also be located and population densities will be evaluated.

DP 5 PROGRAM

For this project, the Proponent must complete the program that is included in DP2, Project Identification, as well as those found in the sections Required Services (RS) and Additional Services (AD) of the present document.

DP 6 PROJECT OBJECTIVES

The following must be taken into consideration by the Consultant and their sub-consultants at every stage of the project:

- Quality;
- Sustainable development;
- Compliance with applicable statutes, regulations, codes, standards, etc.;
- Risk management;
- Schedule control;
- Cost control;
- Waste management; and
- Health and safety.

6.1 Quality

Design Principles – General

The Department expects the Consultant to maintain high standards of architectural design, based on recognized contemporary design principles. All design elements, planning and execution, without limiting the foregoing, must be fully coordinated and consistently adhere to good design principles. The Consultant is responsible for ensuring this coordination throughout the project.

The project must be carried out in compliance with the environmental standards, laws and guidelines of all levels of government (federal, provincial and municipal).

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The quality of materials and construction methods shall be commensurate with the program objectives and construction budget as determined by Canada. Experimental materials are to be avoided.

The character, overall configuration and size of the project as well as the materials used must be compatible with the surrounding environment.

6.2 Sustainable Development

The Canadian Federal Government has implemented a series of initiatives to ensure that sustainable development principles are built into the policy of all federal organizations. Like all federal departments, PWGSC is required to have a Sustainable Development Strategy (SDS). PWGSC's Real Property Branch has developed a strategy plan that sets out the principles, goals and actions for integrating sustainable development principles into its policies and operations. The Branch has established the following sustainable development goals regarding management, leadership and operation.

6.3 Waste Management

The Construction, Renovation and Demolition (CRD) Non-hazardous Solid Waste Management Protocol to which Real Property Services (RPS) is bound, provides directives on how to manage non-hazardous solid waste. This protocol is designed to meet the requirements of federal and provincial policies and the objectives of the RPS Sustainable Development Strategy as these relate to non-hazardous solid waste generated in CRD projects.

6.4 Code Compliance

All codes, regulations, bylaws and decisions of "authorities having jurisdiction" shall be abided. In cases of overlap, the most stringent regulatory provisions shall apply. The Consultant shall identify any other governing bodies or jurisdictions appropriate to the project.

6.5 Risk Management

A risk management strategy integrating project planning into procurement planning is crucial for PWGSC Project Management. All the stakeholders of a project are involved in the risk management strategy; they form an integrated product team. Specific services required for project execution are outlined in Required Services.

6.6 Health and safety

PWGSC recognizes that it is responsible for the health and safety of all persons on Crown construction projects and that both federal employees and private sector workers are entitled to the full protection afforded to them by occupational health and safety regulations.

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

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DP 7 ISSUES

7.1 Major Cost Issues

Cost Control strategy:

Effective cost estimation and control is of prime importance during planning and design. Class C and B cost estimates must be presented in the form of a cost per item analysis. The accepted standard for presentation is the current edition of the Elemental Cost Analysis published by the Canadian Institute of Quantity Surveyors.

Class A cost estimates shall be submitted in the form of cost breakdown by field/trade. Estimates must include a summary and complete supporting documents indicating work items, quantities, unit prices and amounts.

7.2 Major Time Issues

Time Control Strategy:

Careful control and monitoring of the project schedule is crucial and, therefore, shall be overseen by qualified and experienced project managers. The schedule shall be presented according to a proven method and regularly updated.

DP 8 CONSULTANT SERVICES

The Consultant's team shall be able to provide services in the following fields:

- Biology (ichthyology / aquatic botany);
- Hydraulic engineering (hydrodynamics / hydrology);
- Civil engineering;
- Land surveying;
- Archaeology; and
- All other pertinent fields.

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DESCRIPTION OF SERVICES

PA 1 PROJECT ADMINISTRATION

The following administrative requirements apply to all phases of project delivery.

1.1 PWGSC Project Management

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

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

Public Works and Government Services Canada administers the project and exercises continuing control over the Consultant's work during all phases of development. Unless directed otherwise by the Project Manager, the Consultant shall meet all federal requirements and obtain all approvals necessary for the work.

1.2 General Project Deliverables

Where deliverables and submissions include summaries, reports, drawings, plans or schedules, three (3) hard copies and one (1) copy in electronic format shall be provided, unless otherwise specified.

Native versions of all documents produced for this mandate shall be included in electronic format (i.e. Word versions of deliverables, Excel files, AutoCAD plans, photographs, etc.).

1.3 Lines of Communication

Unless otherwise directed by the Project Manager, the Consultant shall communicate with Project Manager only. There shall be no direct contact between Client Departments or other PWGSC Services and the Consultant.

During the tender call for construction work, the Project Manager shall conduct all correspondence with bidders and make the contract award.

1.4 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.

1.5 Meetings

The Project Manager shall arrange meetings (see Required Services) during project preparation that are to be attended by all members of the Consultant's team and representatives from:

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- Client Department(s);
- Public Works and Government Services Canada;
- Consultants and Sub-Consultants; and
- Expert Departments or the owner (if applicable).

Planning and design meetings shall be held at PWGSC's Place Bonaventure office or elsewhere on Montréal Island. A minimum number of meetings have been scheduled. The Consultant shall ensure that members from the work team for each service attend.

Progress meetings for each service (see Required Services for more information):

RS1	1
RS2	1
RS3	2
RS4	3

The Consultant shall attend all meetings, record the issues and decisions, and prepare and distribute the minutes within seventy-two (72) hours of the meeting.

Meetings required for RS5 and RS6 are indicated in the description of the scope of work.

1.6 Response Time

For this project, the successful Proponent's key personnel and all sub-consultants or specialist firms are required to attend meetings and/or respond to inquiries within three (3) days' notice.

1.7 Submissions, Reviews and Approvals

Work in progress shall be reviewed by the Project Manager, as well as the following:

PWGSC internal services for project management and design review

Design review committee – client

- The different stages and presentation requirements that fall within the Consultant's mandate and which are necessary to fulfill the mandate are shown here.
- The Consultant shall allow for two (2) weeks between each presentation of the most recent drawings and specifications so that PWGSC can review them.
- Number of copies required:

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- RS 1 – one (1) hard copy, PDF copy;
- RS 2 – one (1) hard copy, PDF copy;
- RS 3 – two (2) hard copies, PDF copy;
- RS 4 – three (3) hard copies per stage, PDF copy, Word copy, AutoCAD copy, original unbound copy of the estimate, one (1) reproducible copy on 0.08 mm polyester film, sealed final;
- RS 5 – one (1) PDF copy, addenda (if pertinent);
- RS 6 – ten (10) hard copies issued for construction, PDF copy of all progress-related documents (meeting minutes, shop drawings, etc.).

Chart of Reviews and Approvals	PWGSC		CLIENT		TREASUR Y BOARD			
	R	A	R	A	R	A	R	A
RS1 Analysis of Project Brief								
Project Scope of Services Report	X	X	X	X				
Implementation Schedule	X	X	X	X				
Revised Class D Estimate	X	X	X	X				
RS2 Design Concept								
Design Options	X	X	X	X				
Recommended Design Option	X	X	X	X				
Class C Estimate(s)	X	X	X	X				
RS3 Preliminary Design								
Design Development Documents	X	X	X					
Construction Drawings and Specs (50%)	X	X	X					
Class B Estimate(s)	X	X	X	X				
RS4 Construction Documents / Tender Call								
Construction Drawings and Specs (75%)	X	X	X					
Construction Drawings and Specs (90%)	X	X	X					
Class A Estimate(s)	X	X	X	X				
Final Tender Documents	X	X	X	X				

R = Review A = Approval

1.8 Official Languages

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This project requires services in both official languages. The final tender documents (plans, specifications and tender form) must be bilingual. Estimates must have two separate versions: French and English.

Official language requirements:

- The Consultant shall prepare all construction documents in both of Canada's official languages.
- Both official languages have equality of status and one is not considered a translation of the other.
- The Consultant is responsible for the accuracy and completeness of all texts, as well as the uniformity of all documents.
- According to current practice, only one drawing set – with notes written in French and English – shall be created, while separate documents shall be produced for each language for tender calls, archive drawings and documents on operations and maintenance.

Note: All studies and/or reports to be included in the Appendix of the drawings and specifications must be bilingual.

REQUIRED SERVICES

RS 1 ANALYSIS OF PROJECT REQUIREMENTS

1.1 Intent

To ensure that the Consultant has reviewed and integrated all the project requirements, identified and evaluated potential conflicts or problems, provided alternatives, and prepared and received approval for the description of the work, including the delivery process, schedule and estimates, so as to ensure that project is carried out smoothly. Together these approved documents constitute the Scope of Services which shall be used throughout the project for reference purposes.

1.2 General

Scope and Activities:

- Attend the project launch meeting.
- Visit the site and verify the availability and capacity of the services required for the project.
- Analyze the project program/requirements.
- Review all available existing material related to the project.
- Check and verify the surface area and location of planned spawning grounds to ensure that the Client's compensation targets are met.
- Analyze the proposed construction methods/strategy.
- Make inquiries to obtain missing information or to clarify any ambiguities in the program.
- Review the project schedule and ensure that all the milestones can be met.
- Review the cost plan/budget to verify that costs are realistic and achievable.
- Identify all authorities with jurisdiction over the project.

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- Identify the codes, regulations and standards that apply.
- Establish an environmental impact reduction policy that meets project objectives and economic constraints.
- Identify aspects of the project that risk to either impact the environment or fall under Québec's *Environment Quality Act*.

1.3 Deliverables

Comprehensive summary of the project brief/program demonstrating an understanding of the scope of work which includes the following:

- Written description of the risks, problems, conflicts or other perceived information/clarifying assumptions to be taken into consideration by the Project Manager;
- Written description of any further input, studies or analyses that may be required;
- Confirmed/adjusted project schedule and cost plan;
- Revised Class D estimate of construction costs;
- Partial analysis of applicable laws, regulations, codes and standards in force;
- Outline of options to be considered; and
- Identification of any additional expertise required.
-

RS 2 DESIGN CONCEPT

2.1 Intent

To translate project requirements into spatial parameters. To explore design options and analyze them with regard to the program's priorities and objectives, as previously identified. Out of this process, one option will be recommended to proceed to design development.

2.2 General

Scope and Activities:

- For this project, preliminary designs have already been created (see study by WSP in the Appendix). These designs shall be analyzed, modified as needed and developed in detail according to feedback and the program's objectives and requirements.
- If necessary, review the hydraulic analysis based on existing land/bathymetric survey results and new surveys (see AS 1) for sites where development is planned to ensure that the hydrologic dynamics of the study area are well understood (e.g. determination of flood/low flows), that project objectives are attained and that design parameters are identified. While reusing the maximum amount of information gathered during previous mandates (e.g. study by WSP in 2015), the Consultant shall perform, without being limited to, the following activities:
 - Analyze historical data on water levels and the flow-rate of the Rivière des Outaouais, Lac des Deux Montagnes and Lac Saint-Louis.

-
- Take periodic measurements of flow and speed.
 - Take periodic measurements of water levels and depth.
 - Further develop the models created by WSP (2015) or perform two-dimensional (2D) numerical modelling (hydraulic calibration and development scenario simulation for each of the three different flow rates: 100-year flood, average spring conditions and dry-weather) for each site.
 - Assess the impact of the proposed development (various options analyzed) on the hydraulic conditions in the construction zone.
 - Assess the impact of proposed development (various options analyzed) on flood resistance, substrate embeddedness and the effect of ice.
 - Check and verify the surface area and location of each planned spawning ground to ensure that confirmed compensation targets are met.
 - Present revised design options, as needed, that are both viable and possible.
 - Analyze each solution based on project objectives, including those for project cost and schedule.
 - Recommend one option for further development (must include all supporting documentation and technical justifications).
 - Provide drawings of design concepts.
 - Produce a project schedule.
 - Provide a Class C estimate of construction costs.

Note that during the planning and review of preliminary concepts several parameters must be approved by certain project partners [Fisheries and Oceans Canada (F&O), Environment Canada (EC), Ministère du Développement durable, de l'Environnement et de la Lutte contre les changements climatiques (MDDELCC), INFC and PWGSC]. The Client, INFC, is responsible for coordination with the project's partners and expert departments concerning any scheduling changes that may arise during planning and development phases of the project. The Project Manager shall ensure that the Consultant is aware of all pertinent information resulting from this coordination.

2.3 Details

The following is a non-exhaustive list of of the services to be provided by each area of expertise. Certain activities may require that several professionals work together.

The Consultant is responsible for all aspects of the mandate and shall coordinate work by all sub-consultants/specialists. This includes, but is not limited to:

Biology and/or Engineering Drawings:

- Plan of existing topographic and hydrologic conditions;
- General development plan showing the revised design, its orientation and, more precisely, where localized spawning grounds (e.g. for bass) – as opposed to extensive spawning grounds (e.g. for lake

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sturgeon and yellow walleye) – will be built and set up. Areas for compensation shall be clearly indicated (for fish habitat in lotic and lentic waters);

- Drawings of main alternatives, indicating the relative disposition of primary development zones, etc.;
- Drawings clearly showing the different development features in detail;
- Surface and sectional sketches showing approximately the profiles studied and, if necessary, the volumes to be backfilled or removed.

2.4 Deliverables

Provide the following:

- Drawings of revised design concepts;
- Clear description of construction methods/strategy;
- Description of options with a recommendation for the preferred option;
- Class C estimate;
- Report on any deviations from the work schedule, including recommendations for corrective measures or an updated timeline;
- Figures illustrating numerical modelling for different scenarios and flow rates; and
- Report assessing the impact of the proposed development on the hydraulic conditions in the construction zone, the flood resistance of any installations, the effect of ice and the level of substrate embeddedness.

RS 3 PRELIMINARY DESIGN

3.1 Intent

To further develop one of the options presented during the conceptual design phase. Design Documents consist of drawings and other documents that describe the scope and nature of the entire project with regards to its biological aspects, as well as materials and any other required elements.

3.2 General

Scope and Activities:

- Obtain written approval from the Project Manager for the development of one of the proposed design concepts.
- If changes are required, provide supporting documentation for all changes, analyze the impact of the changes on each component of the project and, if appropriate, present the documents again for approval.
- Define and clarify the intent of the design concept for each area of expertise.
- Present Design Documents to the Client, Design Review Committee or any other applicable committees according to instructions from the Project Manager.
- Present the project to government or local authorities, if applicable.
- Analyze the project's feasibility and advise on the construction process and its duration.
- Based on documents/material available at this stage, prepare a project milestone schedule for consideration (pay extra attention to the impact on the sites' owners and users).
- Continue to review all applicable statutes, regulations, codes and municipal bylaws as they pertain to project design.
- Provide a list and outline specifications for all sections of the National Master Specifications (NMS) that is to be used.
- Provide a Class B estimate of construction costs.

3.3 Details

The following is a non-exhaustive list of of the services to be provided by each area of expertise. Certain activities may require that several or all professionals work together.

The Consultant is responsible for all aspects of the mandate and shall coordinate work by all sub-consultants/specialists. This includes, but is not limited to:

Biology and/or Engineering Drawings:

- Overall plan illustrating all existing elements, site boundaries, the site's potential access road, planned storage area, vegetation to be kept/protected, vegetation to be cut and all other elements needing protection or that must be displaced (archaeological items, current spawning grounds, species at risk,

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etc.);

- Comprehensive plan, overall design, details, sections showing the geometry of the proposed development;
- Plans and drawings required for earthwork and soil management, including existing/proposed elevations and planned slopes or spot grades;
- Layout plan or dimension drawings that show all the dimensions required to understand and locate work/structures – Areas for compensation shall be clearly indicated (for fish habitat in lotic and lentic waters);
- Restoration plan showing all temporary elements to be dismantled (e.g. access road and storage area / dyke and cofferdams, if required) and zones requiring revegetation (e.g. access road, temporary storage areas, riverbanks or any other zones affected by construction work), including choice of plants; and
- Details, sections, elevations or any other other special design features that may require illustration or explanation.

3.4 Deliverables

Provide the following:

- Plans that take into consideration all areas of expertise and that show, in detail, all information required to make design decisions and realistically evaluate project cost;
- Details of biological and engineering elements (clear description of construction methods/strategy);
- Cross-sectional and elevation views;
- Index of preliminary estimate identifying all pertinent sections;
- Class B estimate of construction costs; and
- Schedule of preliminary construction work, including long-term deliverables.

3.5 Progress Review

- PWGSC will conduct a quality-control check when the project is 50% complete. The Consultant will receive feedback on the progress within ten (10) working days following the submission of the Progress Documents.

RS 4 CONSTRUCTION DOCUMENTS

4.1 Intent

To prepare drawings and specifications that describe in detail the requirements for the execution of the work and establish the final estimate of project cost. This stage is comprised of three sub-stages:

- 75% Submission: denotes that the project is rather advanced from a technical point of view – that is to say, specifications, schedules, details/plans concerning biology and engineering are rather complete;
- 99% Submission: denotes that complete working documents for tendering purposes have been presented and submitted to local authorities for review prior to the application for required permits;
- Final (100%) Submission: incorporates all required changes from the review of the 99% submission and aims to provide PWGSC with a complete version of all the working documents for the tender call.

4.2 General

For each of the stages identified above, the activities listed under “Scope and Activities” will be repeated; however, completeness of the project development should reflect the submission stage (75%, 99% and 100%).

Scope and Activities:

- Obtain the Project Manager’s approval of documents presented at every stage of the design development (75%, 99% and final).
- Confirm format for presenting drawings and specifications.
- Identify any specific methods (i.e. phased construction).
- Submit drawings and specifications at each of the required stages (75%, 99% and final).
- Provide a written reply to all review comments and incorporate answers into the Construction Documents as applicable.
- Provide information on the status of cost estimates and present updated cost estimates as the project progresses.
- Update the project schedule.
- Prepare a Class A estimate of construction costs.
- Review the specifications for materials and construction methods and confirm that they meet sustainable development objectives.

4.3 Details

4.3.1 Technical and Production Meetings

- Production of construction documents shall be reviewed during the meetings arranged by the Project Manager and Consultant.

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- Representatives from the Client Department(s) and PWGSC support staff must attend all meetings arranged by the Project Manager.
- The Consultant shall ensure that all members of their staff and sub-consultant representatives attend all technical and production meetings where appropriate.
- The Consultant shall arrange for all necessary data, progress prints, etc.
- The Consultant shall prepare meeting minutes and distribute copies to all participants.

4.3.2 Progress Review

- As work progresses on construction drawings, submit drawings, schedules, details, pertinent design data and updated Cost Plan and Project Schedule as appropriate.
- Submitted calculations will not necessarily be reviewed. They are required for archival purposes and, in some cases, may facilitate understanding and interpretation of studies. Calculations shall be submitted in a format that is legible, neat and easily understandable.
- Specifications and an index of specification sections. Specifications shall consist of typed and edited PWGSC amended NMS sections, PWGSC in-house master specification sections and NMS sections.
- PWGSC will conduct quality-control checks when the project is 75% and 99% complete. The Consultant will receive feedback on the progress within ten (10) working days following the submission of the progress drawings and specifications.

4.4 Deliverables

Deliverables are similar at all three stages (75%, 99% and 100%); however, completeness of the project development should reflect the stage of submission.

4.4.1 75% and 99% Submissions

- Complete specifications and working drawings;
- Preliminary and final versions of all reports prepared for this mandate (RS and AS) and/or any other relevant documents shall be included in the appendix of the drawings and specifications for the tender call;
- One (1) copy of the design requirements, studies, etc. required by PWGSC technical services for final verification and record keeping; and
- One (1) copy of the updated Cost Plan and Project Schedule.

4.4.2 Final Submission (100%)

This submission incorporates all revisions required by the review of the 99% submission. All documents must be signed and sealed. Provide the following:

- Complete set of working drawings;
- Complete set of specifications;
- Class A estimate of construction costs; and
- All studies for additional services whether they are integrated or not into the drawings and specifications.

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As a safeguard against the loss of or damage to the originals, keep a complete set of reproducible drawings and a copy of the specifications.

RS 5 TENDER CALL, BID EVALUATION & CONSTRUCTION CONTRACT AWARD

5.1 Intent

To obtain and evaluate bids from qualified contractors to carry out the project as per the Tender Documents. To award the construction contract according to government regulations, including *Federal Rules for Bid Depositories*.

5.2 General

Scope and Activities:

- Attend tenderers' briefing meetings.
- Prepare addenda based on questions arising in such meetings for issue by the Project Manager.
- Help the Project Manager answer questions from tenderers.
- Provide the Project Manager with all information required by tenderers to fully interpret the Construction Documents. The Project Manager will issue the addenda to all participants.
- Keep full notes of all inquiries during the bidding period and then submit them to the Project Manager for PWGSC records.
- Assist in tender evaluation by providing advice on the following:
 1. Completeness of tender documents in all respects;
 2. Technical aspect of the bid;
 3. Effect of alternatives and qualifications which may have been included in the bid;
 4. Tenderers' capability to undertake the full scope of work; and
 5. Availability of adequate equipment to carry out the work.
- If PWGSC decides to re-tender the project, provide advice and assistance to the Project Manager.
- Once the contract has been awarded, issue documents for construction.

5.3 Deliverables

- Originals of drawings and specifications for tender call;
- Electronic copies of drawings and specifications for tender call;
- Addenda where needed;
- Source data for all materials produced;
- Changes to the documents, if re-tendering is necessary;
- Updated cost estimate and/or project schedule;
- Originals of drawings and specifications for construction; and
- Electronic copies of drawings and specifications for construction.

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RS 6 CONSTRUCTION AND CONTRACT ADMINISTRATION

6.1 Intent

To implement the project in compliance with the Contract Documents and to direct and monitor all necessary or requested changes to the scope of work during construction.

6.2 General

Scope and Activities:

- During the implementation of the project, act on PWGSC's behalf to the extent provided in this document.
- Inspect work in-progress at appropriate intervals to ensure that it is in conformity with the Contract Documents.
- 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.
- Ensure compliance with Commissioning Plan and update plan as necessary.
- Ensure that environmental mitigation measures are properly implemented and that the terms and conditions listed in the CA issued by the MDDELCC or any other authority (e.g. Fisheries and Oceans Canada) are respected.
- Determine amounts owing to the Contractor based on the progress of the work and certify payments to the Contractor.
- Act as interpreter of the requirements of the Contract Documents.
- Provide cost advice during construction.
- Advise the Project Manager of all potential changes to scope of work for the duration of project implementation.
- Review the Contractor's submittals.
- Prepare and justify change orders that will be submitted to the Project Manager for approval.
- Indicate any changes or material/equipment substitutions on Record Documents.
- During the twelve (12) month warranty period, investigate all defects and alleged defects and provide the Contractor with appropriate instructions.
- Conduct a final warranty review.

6.3 Details

Scope and Activities:

This list is not restrictive and does not relieve the Consultant or its sub-consultants of any professional obligations.

6.3.1 Pre-Construction Meetings

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- Immediately after contract award, arrange a briefing meeting with the Contractor and the Departmental Representatives. Prepare meeting minutes and distribute copies to all participants and to other persons agreed upon with the Project Manager.
- Call job meetings as frequently as required, commencing with the construction briefing meeting. The following people should attend all meetings: Job Superintendent, Project Inspector, main sub-subcontractors, affected sub-consultants and Government Services representatives as necessary. Prepare the meeting minutes and distribute copies to all participants. The Project Manager may invite Client Departments to attend any of these meetings.

6.3.2 Project Schedule

- Obtain Project Schedule with detailed commissioning component shown separately, as soon as possible after contract award and ensure proper distribution.
- Monitor the approved construction schedule, take necessary steps to ensure that the schedule is respected and submit a detailed report to the Department concerning any delays.
- Keep accurate records of causes of any delays.
- Make every effort to assist the Contractor in avoiding delays.

6.3.3 Time Extensions

- Only the Department may approve any requests for Time Extensions. Approval will be issued in writing by the Project Manager.

6.3.4 Cost Breakdown

- Obtain from the Contractor a detailed cost breakdown on the standard PWGSC form and submit it to the Department with the first Progress Claim.

6.3.5 Sub-Contractor Changes

- The Contractor is required to use the sub-contracts listed on the Tender Form unless a change is authorized by the Department. Changes are only considered when they do not involve an increase in cost. Review all requests for changes of sub-contractors and submit recommendations to the Project Manager.
- When sub-contractors have not been listed on the Tender Form, obtain the list of sub-contracts from the Contractor no later than ten (10) working days after the date of award.

6.3.6 Labour Requirements

- The Contractor is bound by the Contract to maintain competent and experienced labourers on the project and to comply with the Canada Department of Labour (Labour Conditions). Inform the Department of any labour conditions that appear to require corrective action by the Department.
- The Consultant shall ensure that a copy of the Labour Conditions for the Contract is posted in a conspicuous place on site.

6.3.7 Bylaw Compliance

- Ensure that construction complies with applicable bylaws and regulations.
- Matters pertaining to the Department of Labour shall be referred to the Project Manager.

6.3.8 Construction Safety

- All project sites that are occupied by federal employees during construction are subject to the *Canada Occupational Health and Safety Regulations* as administered by Health Canada.
- In addition, the Contractor must comply with the provincial and municipal safety laws and regulations (e.g. CSST), and with any instructions issued by officers of these authorities with jurisdiction over construction safety.

6.3.9 Site Visits

- Provide non-resident construction inspection services. Ensure compliance with Contract Documents.
- Provide the services of qualified personnel who are fully knowledgeable of the technical and administrative requirements of the project.
- Establish a written understanding with contractors as to what stages or aspects of the work are to be inspected prior to being covered up.
- Assess quality of work and identify in writing to the Contractor and to the Department all defects and deficiencies observed at time of such inspections.
- Inspect materials, prefabricated assemblies and components at their source or assembly plant, as necessary, to ensure that the project progresses.
- Issue in writing to PWGSC any deficiency lists, directions, or clarifications.

6.3.10 Clarifications

- Provide clarifications on Plans and Specifications or site conditions, as required, so that the project not be delayed.

6.3.11 Progress Reports

- Report to the Department regularly on the progress of the work; submit weekly reports.

6.3.12 Work Measurement

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

6.3.13 Detail Drawings

- Drawings with any additional details shall be submitted for the Department's information as and when required to further clarify or assist in interpreting the Contract Documents.

6.3.14 Shop drawings

- On completion of project, forward three (3) copies of reviewed shop drawings to the Department.
- Ensure that the shop drawings contain the project number and that they are recorded in sequence.
- Verify the number of copies of shop drawings required. Consider providing additional copies for Client's departmental review.
- Ensure that all shop drawings are stamped "Checked and Certified Correct for Construction" by the Contractor and stamped "Reviewed" by the Consultant before return to the Contractor.

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- Expedite the processing of Shop Drawings.

6.3.15 Inspection and Testing

- Prior to tendering, provide the Department with a list of recommended tests, including on site and factory testing.
- Ensure that all testing is detailed in the Commissioning Plan.
- When the contract is awarded, assist the Departmental Representative in briefing the testing firm on required services, distribution of reports, lines of communication, etc.
- Review all test reports and take necessary action with the Contractor when work fails to comply with the Contract Documents.
- Immediately notify the Project Manager when tests fail to meet project requirements and when corrective work will affect the schedule.
- Assist Departmental Representative in evaluating the testing firm's invoices for services performed.

6.3.16 Construction Changes

- The Consultant does not have authority to change the work or the price of the Contract.
- Changes which affect cost or design concept must be approved by the Department.
- Upon Departmental approval, obtain a detailed quotation from the Contractor. Review prices for acceptability and immediately submit recommendations to the Department.
- The Department will issue Consultant-prepared Change Orders to the Contractor, with copy to Consultant.
- All changes, including those not affecting the cost of the project, shall be described in the Change Orders.
- The practice of "trade-offs" is not allowed.

6.3.17 Contractor's Progress Claims

- Each month the Contractor shall submit a Progress Claim for work and materials, as required in the Construction Contract.
- Claims are made by completing the following forms, if applicable:
 - Request for Progress Payment;
 - Cost Breakdown for Unit and/or Combined Price Contract;
 - Cost Breakdown for Fixed Price Contract;
 - Statutory Declaration Progress Claim.
- Examine and sign designated forms and promptly forward claims to the Department for processing.
- Submit with each request for progress payment:
 - Updated schedule for the progress of work;
 - Photographs showing the progress of work.

6.3.18 On-Site Materials

- The Contractor may submit a request for payment for on-site materials that have not been used in construction.
- All materials must be stored in a secure place designated by the Department.
- Claims must be accompanied by a detailed list of materials with the supplier's invoice showing the price of each item; the Consultant shall review the list.

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- Items shall be listed separately on the Detail Sheet after the breakdown list and the total.
- As materials are used in construction, the cost of these materials must be added to the appropriate detail item and removed from the material list.

6.3.19 Acceptance Board

- When satisfied that all the work is nearly completed, the Consultant shall inform the Department. The Consultant shall ensure that their representative, the sub-consultants' representative, the Partial Inspection Site Supervisor, the Contractor and all major sub-trade representatives are part of the Project Acceptance Board and that they attend all meetings organized by the Department.

6.3.20 Interim 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 correction of any deficiencies and/or completion of any uncompleted work as listed and assessed.

6.3.21 Interim Certificates

- Payment requires completion and signing, by the parties concerned, of the following documents:
 1. Interim Certificate of Completion;
 2. Cost Breakdown for Fixed Price Contract;
 3. Cost Breakdown for Unit and/or Combined Price Contract;
 4. Inspection and Acceptance;
 5. Statutory Declaration Interim Certificate of Completion; and
 6. Workmen's Compensation Board Certificate.
- Verify that all items are correctly stated and ensure that completed documents and any supporting documents are provided to the Department for processing.

6.3.22 Final Inspection

- The Consultant shall inform the Department when satisfied that all work included in the contract has been completed, including the deficiency items listed on the Inspection and Acceptance form resulting from the Interim Inspection. The Department will then request that the Acceptance Board conduct a final inspection of the project. If everything is satisfactory, the Board makes final acceptance of the completed project from the Contractor.

6.3.23 Final Certificate of Completion

- Final payment requires completion and signing, by the parties concerned, of the following documents:
 1. Final Certificate of Completion;
 2. Cost Breakdown for Fixed Price Contract;
 3. Inspection and Acceptance;
 4. Statutory Declaration Final Certificate of Completion;
 5. Cost Breakdown for Unit and/or Combined Price Contract;
 6. Workmen's Compensation Clearance Certificate; and
 7. Hydro Certificate.
- Verify that all items are correctly stated and ensure that completed documents and any supporting documents are provided to the Department for processing.

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6.3.24 Take-Over

- 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 for Interim Certificate of Completion and Final Certificate of Completion signifies commencement of the twelve-month warranty period for work completed on the date of each certificate in accordance with the General Conditions of the Contract.
- Provide Department with original copies of Contractor's warranties for all materials and work covered by an extended warranty certificate in accordance with the General Conditions of the specifications. Verify the comprehensiveness and scope of the coverage.

6.3.25 As-Built / Record Drawings and As-Built Specifications

- Following project take-over, obtain an as-built, marked-up, hard copy from the Contractor that shows:
 - 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.
- Check and verify all as-built records for completeness and accuracy and submit to PWGSC.
- Produce Record Drawings by incorporating as-built information into project drawings.
- Submit Record Drawings and Specifications in number and format required by the Consultant Agreement within eight (8) weeks of final acceptance.
- Provide a complete set of final shop drawings.

6.4 Deliverables

- Written reports from site visits including persons involved;
- Written reports on the progress of work and cost of the project at the end of each month;
- Additional detail drawings when required to clarify, interpret or supplement the Construction Documents;
- Post contract award drawings;
- Interim or final certificates;
- Report on commissioning activities;
- As-built records;
- Warranty deficiency list; and
- Report on Final Warranty Review.

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ADDITIONAL SERVICES

AS 1 LAND AND BATHYMETRIC SURVEY SERVICES

1.1 Intent

To conduct on-site technical and land surveying (for sectors affected by construction/site access) and plot, as required, the sectors affected by this scope of services.

Moreover, new bathymetric surveys will be carried out, if necessary, to complete or validate existing surveys (see Appendix for study by WSP, 2015). Findings will be used to finalize the riverbed characterization in targeted development zones and to conduct appropriate water analyses in these zones (see RS 2).

1.2 General

Scope and Activities:

- Identify all anthropogenic and natural components.
- Conduct topographic and land surveys.
- Conduct a bathymetric survey of the channel.
- Plot survey findings.
- Place survey monuments.

North American Datum 1983 (NAD 83) shall be used as the geodetic reference system for surveying.

Bathymetric surveying of the riverbeds shall be conducted aboard a boat to measure elevations.

Land and Bathymetric Surveys:

More specifically, the following elements shall be identified by the land and bathymetric surveys:

Anthropogenic Components

In order to evaluate the current state of the site's periphery, all required physical elements shall be included in a ground survey; these elements include different types of surfacing, existing trails/roads, public utility infrastructure (underground and aerial networks), structures (bridges, etc.), buoys and, if pertinent, the built environment.

Natural Components

In riparian zones that may be used to access the river for construction work or to temporarily store materials, trees with a diameter greater than 150 mm DHP shall be surveyed from the foot of the tree.

The limits of the river, as defined on site, shall be identified (using the 2-year/10-year high-water mark). Topographic elevations shall also be measured for the site and wetland.

The following data shall be collected in order to characterize the beds and banks of development areas: flow facies, substrate type (diameter and %), riparian condition (erosion, slope, stability, etc.), flow depth and width.

High-water marks shall also be identified using botanical methods (predominant plant species).

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The general topographic survey may be conducted using LiDAR technology. XYZ precision levels shall be less than 10 cm or as per instructions from the Consultant's design supervisor. However, ensure that depressions, low points, high points, as well as the bottom and tops of embankments are manually surveyed with a total station.

If contour lines are required, they should integrate data gathered from other surveys.

Site survey control points should be placed in suitable locations (to be chosen with the design supervisor).

Survey monuments shall be placed to mark property lines if applicable.

Topographic and bathymetric survey limits shall be defined by the Consultant in charge of project design.

1.3 Deliverables

- Land and bathymetric survey results – hard copy plan, sealed by the land surveyor; and
- Digital file – AutoCAD version to be prepared with Consultant.

1.4 Overview of Work

The services described in this section will be subject to a limitation of expenditure as indicated in the Tender Form. Thus, the Consultant does not need to evaluate the cost or the nature of the needs for these services.

The Consultant shall submit a Financial Proposal to utilize the services found in the limitation of expenditure.

This proposal shall include the following items:

- Description of mandate and deliverables (services and products);
- List of persons providing services, including their role, responsibilities and experience with similar mandates;
- Breakdown of work effort by position / hourly rate;
- List of subcontractors, if applicable; and
- Schedule for fulfilling mandate.

Note: Mandates issued for these services shall not result in any administrative surcharges or profits for the Consultant.

Canada's responsibility to the Consultant is limited to allowance indicated in the Tender Form. Hiring of services must be previously approved by the TPSGC Project Manager.

AS 2 APPLICATION FOR CERTIFICATE OF AUTHORIZATION

2.1 Description of Services

For this project, the Consultant shall prepare a report containing all the necessary information to complete the application for a certificate of authorization from the MDDELCC in accordance with article 22 of the *Environment Quality Act*.

2.2 Scope and Activities

Environmental report in preparation for the certificate of authorisation application:

The Consultant shall write a report on the requirements of an application for a certificate of authorisation. This report shall contain, inter alia, a description of the project, the project site, environmental impact and mitigating measures (i.e. applicable mitigating measures from a technical and economic standpoint).

With regards to the description of the project's environmental impact, this section shall include the impact of any excavation or dredging work, the installation of granular materials and stone blocks in aquatic environments (new spawning substrate), management of excavated earth on land (if necessary), set-up of the storage area and any other pertinent activities. The environmental impact assessment (EIA) shall include, without being limited to:

- Environmental impact, including impact of any accidents or their resulting deficiencies;
- Magnitude of the environmental impact;
- Likely cumulative impact of the project on the environment given other work and/or other projects or activities.

Contents of the Report:

The environmental report in preparation for the certificate of authorisation application must include, without being limited to, the following elements:

- Background;
- Location of project (geographic coordinates, legal land description, owner(s), etc.);
- Project justification (i.e. project objectives);
- Description of planned activities and work, including:
 - Project scope (i.e. description of primary and secondary components);
 - Technical description;
 - Description of work methods;
 - Proposed disposal sites and, where appropriate, the requirements that the developer must meet to dispose of any contaminated earth from excavation (to be provided by the Consultant);
 - Work schedule;
- Description of site where activities/work will be carried out:
 - Description of how site is currently being used;
 - Overview of environmental components – physical environment (water, air, soil and all other pertinent components), biological environment (terrestrial fauna, aquatic fauna, land vegetation, rare and threatened species and all other pertinent components) and human environment (archaeological potential, etc.);

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- Description of impact:
 - Methodology for assessing impact;
 - Assessment of project's adverse effects on the environment's biophysical components and on changes to the environment causing any other effects (if contaminated substances are present, identify each substance, determine their location and provide management strategies);
 - Description of mitigating measures;
 - Description of monitoring program for work, if necessary;
 - Description of follow-up program, if applicable;
 - Economic aspects of the project (project cost, any project funding, etc.);
 - Matrix summarizing the environmental components affected by each activity;
 - Table summarizing the mitigating measures for each adverse effect and whether or not residual effects are present;
 - Environmental Monitoring Form for work describing all mitigating measures to be taken;
 - Location maps, photographs, species distribution maps (if necessary), etc.;
 - Location maps of surveyed areas and sectors where development is planned, etc. in AutoCAD format (DWG);
 - Results of sediment and soil analyses, if required;
 - SIGHAP maps and other reference documents;
 - Correspondence with various authorities (CDPNQ and Environment Canada for species at risk, organizations ensuring federal coordination, municipal/provincial authorities, etc.);
 - Survey report.

The report must include all information required for the CA application. Furthermore, it must be structured like the application form so that information may simply be copied and pasted from the report into the form.

PWGSC shall provide the Consultant with the biological characterization report for the Vaudreuil spawning grounds. This characterization, which will be conducted in the spring and summer of 2015 by a third party, will include, inter alia, density measurements for *Fontinalis sphagnifolia* moss cover (during spring, just before start of the spawning period), an assessment of each species' use of potential development sites during the spawning period (in order to identify existing spawning grounds and optimize design concepts) and localization/abundance estimate for hornleaf riverweed (a species likely to be classified as threatened or vulnerable) and any other species at risk.

2.3 Application for Certificate of Authorization from the MDDELCC

The Consultant shall fill out an application for a CA for this project. The application is available on the MDDELCC's website. The EIA report for this project will act as a source document.

A list of the documents to be included can be found within the application itself. Project drawings and specifications are included in this list. The Consultant is responsible for ensuring that the application is complete, including all required documents, and that it meets MDDELCC requirements. If required, the Consultant shall reply to questions raised by the MDDELCC with regard to the CA application.

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2.4 Deliverables

- Preliminary EIA report in electronic format (Word and PDF). For practical reasons, the Consultant shall submit a report covering the items in Section 2.2.2 and including the same sections as those found in the CA application. This format is user friendly and will make the review process easier for the Client. Once the report has been approved, information found in the report shall be copied and pasted into the application;
- Final EIA report in print and electronic formats;
- Completed CA application for the MDDELCC, ready to be signed by the Client; and
- All necessary documents for the CA application (EIA, soil characterization, survey reports, etc.).

The report must contain all the information described in Section 2.2.2, as well as all maps and photographs required for full understanding of the environmental assessment. The Proponent shall sign the report.

AS 3 ARCHAEOLOGICAL POTENTIAL STUDY

3.1 Intent

To identify sectors that will be affected by work and where archaeological resources may be found in order to take appropriate mitigating measures, where required, before and after work. In addition, an archaeological survey is to be conducted.

3.2 General

Scope and Activities:

Archaeological potential shall be assessed for part of the planned work area and must include:

Island and mainland shores.

The assessment shall include, inter alia, high/low water marks and river levels, presence of anthropogenic structures on the riverbanks and on Île Ronde/Île Bray/Île aux Pins, potential human occupation of riverbanks during prehistory or history periods, construction on these sites (wharfs, utility buildings, access roads, etc.) as well as any other phenomena of interest.

Zones that are likely to contain archaeological resources shall be clearly identified on a plan and described; their value and interest shall also be evaluated. Recommendations shall be made concerning any mitigating measures to be taken before or after work.

The Consultant shall be able to:

- Provide services specializing in Québécois historical archaeology and the paleohistory of Québec;
- Offer the required services for archaeological research and intervention (potential study and field survey);
- Appoint an experienced archaeologist who will be in charge of the archaeological component and who will be on site during each stage of the survey. The archaeologist should have training in historical archaeology or prehistory as well as experience in the types of research and intervention required for the mandate. Moreover, the archaeologist's curriculum vitae should show that he/she has knowledge of Euro-Québécois archaeology and paleohistory in the province of Québec;
- Carry out all work related to the required archaeological research and intervention for the mandate, including historical research, digging test pits and trail trenching, field surveying and photography, georeferenced mapping, preparing and inventorying artefacts, analyzing and interpreting data, and writing reports;
- Provide the resources required to form multidisciplinary teams with the necessary experience and knowledge to carry out the proposed mandate;
- Supply all materials and equipment needed to carry out the proposed mandate and ensure the proper functioning of the equipment. This includes the materials for the long-term storage of any artefacts;
- Fulfil the mandate in accordance with the accepted ethics and standards of Québec's archeological community with regard to methodology, recording/interpreting data and preparing reports. Gather data in accordance with the recording standards applicable in Québec;
- Obtain an archaeological research permit from the ministère de la Culture et des Communications du

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Québec (MCCQ) and meet all requirements under this permit; this is a requirement because the majority of the areas affected by the proposed mandate fall under provincial jurisdiction. **Due to the time required for the MCCQ to issue an archaeological research permit, the permit application must be submitted to the MCCQ as soon as the contract is awarded.**

During project execution, the Consultant shall provide the Project Manager with the following items so that the proposed work team, intervention methods and field/laboratory activities may be reviewed:

- Supervising archeologist's identity and a description of his/her credentials and experience with respect to the proposed project;
- Identity of each member of the team and his/her role;
- Curriculum vitae for each member of the team;
- Research approach for assessing the potential of the riverbanks and islands of the Rapides de Vaudreuil;
- Methodology for analyzing data;
- Schedule for each stage of archaeological research, including preliminary studies/work, field work, data analysis and report writing;
- Budget proposal divided according to the stages and sub-stages outlined in the schedule and including, for each member of the team, the number of hours and days assigned to work, the hourly rate of pay and the total cost of professional fees. Any other costs related to the project, such as specialized analyses, should also be included.

Services shall be organized into three phases:

Field work

- Use georeferencing to identify test pits/trenches and any remains;
- Produce to-scale stratigraphic sketches with soil thickness (optional) / produce to-scale stratigraphic cross-sections (mandatory if remains are found and/or soil is of interest);
- Use the Tikal system to record all data (mandatory);
- Gather all artefacts;
- Collect relevant samples.

Laboratory work

- Process all artefacts;
- Inventory all artefacts;
- Conduct relevant specialty analyses;
- Bag and box artefacts for permanent storage;
- Catalogue artifacts that are considered to be of interest.

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Data analysis

- Data analysis of the Euro-Québécois period shall take into account old maps/plans and dating obtained from artifacts.
- The paleohistorical component should interpret findings with regard to the region's general paleohistorical context.

Note: The cost of the services for all laboratory work and data analysis must be identified and described. Supporting documents attesting to the cost of these services must be also be presented. In the event that the scope of these services is greater than that identified above, additional services will be paid at cost without markup or profit and will be justified by invoices/receipts – see clause R1230D (2012-07-16), CG 5-Terms of Payment CG5.12.

3.3 Deliverables

For this project, the Consultant shall:

- Produce a final technical corpus.
- Prepare a preliminary report of research findings, including recommendations for mitigating measures to be taken, for review and approval.
- Prepare a final report of research findings taking into consideration any comments made on the preliminary report.
- Submit any artefacts, once properly documented and catalogued, for permanent storage.

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AS 4 QUALITY CONTROL OF WORK AND LABORATORY SERVICES

4.1 Description of Services

This section describes the required laboratory services which will help the Consultant during the planning, design and construction phases of the project.

4.2 Scope of Services

The Consultant shall determine what types of laboratory services are required for the project during design development or construction.

These services may include the activities described here.

4.2.1 Quality Control

With regard to quality control, the Consultant, who is responsible for supervising construction, shall partner with the appropriate professional services for the following (examples):

- Inspect and approve materials/products and shop drawing submitted by contractors.
- Conduct laboratory testing of different materials.
- Forward complete site and laboratory analyses.
- Submit any deficiency lists, site instructions or clarifications in writing to the Departmental Representative.

4.2.2 Control over Disposal of Contaminated Soil (if dredging or excavation are required)

With regard to the monitoring of contaminated soil disposal, the Consultant, who is responsible for supervising construction, shall partner with the appropriate services (e.g. laboratory services) for the following:

- Ensuring that contractors pile excavated material in accordance with MDDELLC regulations;
- Ensuring proper storage of soil, according to level of contamination, on sites for piling soil that are made available to the contractor;
- Ensuring, if applicable, that horizons containing more than 50% residual materials are segregated from other soil horizons;
- Taking soil samples from stockpiling and residual material sites, if applicable, in order to determine the level of contamination and appropriate management strategies;
- Preparing documentation needed for the transportation of contaminated soil (transportation manifest) and ensuring that all loads leaving the site have the proper transportation and disposal permits;

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- Sending samples to a laboratory certified by the MDDELCC according to the required retention procedure;
 - Having soil samples analyzed one or more times according to mandatory parameters and disposal of any contaminated soil in accordance with provincial regulations for the disposal of contaminated soil, including:
 - Polycyclic aromatic hydrocarbons (PAH);
 - Metals (13 metals: Ag, As, Ba, Cd, Co, Cr, Cu, Sn, Mn, Mo, Ni, Pb and Zn);
 - HP C₁₀-C₅₀;
 - Other contaminants;
 - Interpreting analyses in accordance with the criteria found in the MDDELLCC and CCMEs policy;
 - Ensuring that borrow material used by contractors respect the MDDELCC's Criterion A.

4.2.3 Additional Sediment Characterizations and Geotechnical Studies Required for Design Development

When preliminary sketches or drawings and specifications are prepared, the Consultant may call upon laboratory services to determine the composition and properties of aquatic substrate (sediment) and rock that will be used or on which structures are to be built. It may also be necessary to take samples of water, soil and sediment and perform chemical and biological analyses.

4.3 Deliverables

Deliverables vary and will be determined by the Consultant in collaboration with PWGSC when requirements are established.

The services described in this section will be subject to a limitation of expenditure as indicated in the Tender Form. Thus, the Consultant does not need to evaluate the cost or the nature of the needs for these services.

The Consultant shall submit a Financial Proposal to utilize the services found in the limitation of expenditure.

This proposal shall include the following items:

- Description of mandate and deliverables (services and products);
- List of persons providing services, including their role, responsibilities and experience with similar mandates;
- Breakdown of work effort by position / hourly rate;
- List of subcontractors, if applicable; and
- Schedule for fulfilling mandate.

Note: Mandates issued for these services shall not result in any administrative surcharges or profits for the Consultant.

Canada's responsibility to the Consultant is limited to allowance indicated in the Tender Form. Hiring of services must be previously approved by the TPSGC Project Manager.

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AS 5 PARTIAL RESIDENT INSPECTION SERVICES

5.1 Description of Services

Partial resident inspection services aim to ensure that the Consultant's Site Representative is on site on a part-time basis for the following purposes: to coordinate inspections and testing with other consultants, to inspect and monitor all aspects of construction work, and to act as a liaison with the contractor, PWGSC and other organizations concerning work. More than one person may need assume this role in order ensure that a representative is on-site during construction hours.

The Consultant's Site Representative shall provide on-site inspection services, including during overtime, for all aspects of the project and shall keep daily records of ongoing construction work. The Site Representative ensures constant communication among the Property Manager, PWGSC, the Project Manager, companies responsible for development, Contractor, Regional Fire Commissioner and the provincial Department of Labour.

The Site Representative reports directly to the Consultant.

The Site Representative shall be entirely familiar with the Contract Documents and knowledgeable of all provincial and municipal standards concerning the health and safety of construction workers.

The Site Representative shall also be entirely familiar with all of the requirements listed in the Consultant's Project Brief and knowledgeable of other stakeholders' responsibilities insofar as they concern construction inspection services.

5.2 Specific Duties and Responsibilities

The Site Representative shall provide part-time inspection, coordination and supervision services during construction work and shall report to the Consultant. Moreover, the Departmental Representative may delegate additional responsibilities to the Site Representative with the Consultant's approval.

The Site Representative shall keep records of assigned construction work and ensure constant communication between the Project Manager, the Prime Consultant and the the Contractor.

In an emergency, the Site Representative has the authority to stop work or give orders to ensure worker safety or to protect the government.

5.3 Inspection and Reporting

The Site Representative is responsible for inspecting all phases of work in progress and for bringing any discrepancies between the work, Contract Documents and accepted construction practices to the Contractor's attention after having checked with the Consultant and PWGSC Construction Supervisor. The Site Representative shall keep a log of these inspections and once a week submit a written report, in the specified format, to the Consultant for distribution. The Site Representative shall prepare any reports or studies as requested by the Project Manager via the Consultant.

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5.4 Interpretation of Contract Documents

The Consultant is responsible for interpreting Contract Documents. However, the Consultant may ask the Site Representative to provide information on working conditions and communicate daily instructions to the Contractor.

The Site Representative has a duty to assist the Consultant and inform the latter of any expected problems that may delay work. The method used to communicate this information shall be chosen by the Consultant.

5.5 Changes to Work

The Site Representative does not have the authority to authorize or order changes to work that will modify the construction design or the contract value, unless this authority has been delegated to the Site Representative by the Departmental Representative.

Given that the Site Representative is familiar with the working conditions, the Consultant may ask the former for help in assessing changes made to work.

5.6 Communication and Liaison

The Site Representative shall:

- Communicate instructions concerning required labour standards to contractors;
- Identify defects or work that does not respect the drawings and specifications, report findings to Consultant and obtain instructions from the former. Then, report findings to the Contractor's Field Superintendent. While informal discussions with subtrade supervisors are generally allowed (with the Contractor's permission), the Site Representative should not directly deal with foremen/tradesmen or influence in any way the progress of work;
- Formally communicate with the Contractor through memos only. The Site Representative shall send copies of these documents to PWGSC and the Consultant;
- Immediately contact the Consultant when it is apparent that information from the Consultant is required or that an action is required on his/her part: general instructions, clarifications, approval of a shop drawing sample, requests, authorisation for proposed change, on-site instruction, details, drawings, etc.;
- Accompany PWGSC representatives during inspections and report requirements, observations and instructions from PWGSC personnel to the Consultant. It should be noted that the Site Representative should encourage these individuals to submit their requirements, observations and instructions in writing;
- Examine and assess any suggestions made by the Contractor or any changes that the Contractor would like to make to the documents and immediately report them to the Consultant (include comments in writing); and
- Ensure that PWGSC and the Consultant are promptly informed when key elements and/or components of materials or equipment are delivered so that these two parties may arrange to have them inspected by the appropriate personnel before installation.

5.7 Monitoring Log

The Site Representative shall keep a log with the following information:

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- Weather conditions, especially those that are unusual relative to construction activities in progress;
- Major material and equipment deliveries;
- Activities and major work done;
- Start, stop or completion of work;
- Presence of personnel from inspection and testing firms, tests performed, results, etc.;
- Unusual site conditions;
- Significant incidents, remarks, etc.;
- Special visitors on site;
- Permission given to the Contractor to undertake certain work or hazardous work;
- Environmental incidents; and
- Reports and instructions on emergency measures taken by competent authorities.

Note: This log is the private property of the Site Representative. Copies of the log must be sent to PWGSC and the Consultant at the end of the project.

The frequency of monitoring will be established at the start of construction.

5.8 Weekly Records

The Site Representative shall prepare weekly reports for the Consultant in the required format and that include:

- Progress relative to schedule;
- Main activities started or finished during the week and those that are in progress;
- Major deliveries of materials and/or equipment;
- Problems which may delay the completion of work;
- Labour and materials needed immediately;
- Cost estimates for completed work and delivered materials (cost and contracts);
- Outstanding information or action required by the Consultant or PWGSC;
- Workforce;
- Weather conditions;
- Remarks;
- Accidents on site; and
- Threats to the safety of persons or building hazards caused by work, the Contractor or his/her agents.

5.9 Site Records

The Site Representative shall keep methodical and up-to-date records concerning the site for his/her own use as well as for the Consultant and PWGSC as follows:

- Contract and Tender Documents;
- Approved Shop Drawings;
- Approved Samples;
- Samples;
- Site Instructions;
- Requested Change Orders;
- Authorized Change orders;
- Memoranda;
- Test and Deficiency Reports;
- Correspondence and Meeting Minutes; and
- Name, address and telephone number of Client representatives, Consultant and all Contractors, sub-trades key personnel associated with the project (including home telephone numbers in case of

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emergency).

In addition, the Site Representative shall keep an up-to-date schedule of the progress of work.

A copy of the original contract drawings shall be stored in a safe place and kept up to date will all addenda, change orders, site instructions, details, final terms, etc. issued after the contract award.

5.10 Inspection of Work

The Site Representative shall perform site observations and spot checks of the work to determine whether the work, materials and equipment are in accordance with the Contract Documents and supplementary conditions. The Consultant's Site Representative shall inform the Contractor of any defects or unauthorized discrepancies via memorandum and immediately report any problems that the Contractor is slow to fix or refuses to the Consultant and PWGSC Construction Supervisor.

The Site Representative shall take the steps necessary to ensure that consultants for services in biology, engineering, etc. may perform periodic inspections required under contract with the Prime Consultant in a timely manner with respect to project progress.

The Site Representative shall also report if any materials or equipment are being incorporated into the project prior to approval of related shop drawings or samples.

The Site Representative shall work with PWGSC and Consultant representatives to draw up preliminary and final deficiency reports. The Site Representative shall also be responsible for ensuring the measurement of all work performed on a unit basis.

5.11 Site Meetings

The Site Representative shall attend all job-site meetings. There will be at least one job-site meeting for every two weeks of construction work.

5.12 Inspection and Testing

The Site Representative must see that the tests and inspections stipulated in the Contract Documents are conducted; he/she should be present during these tests and report the results in the daily log.

The Consultant must be informed if test results do not meet requirements or if the Contractor fails to properly perform the tests.

5.13 Emergencies

In the event of an emergency threatening property or the safety of persons, or should the progress of work be compromised by activities under the Contractor's control, the Site Representative must immediately inform the Contractor in writing of any possible danger in order to safeguard PWGSC interests. Moreover, if necessary, the Site Representative shall stop work or coordinate corrective measures and contact the Consultant to obtain further instructions.

5.14 Restrictions

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The Site Representative shall not:

- Authorize deviations from the Contract Documents;
- Approve shop drawings, samples or tests;
- Advise the Client / User on any aspect of the project without first being instructed by the Consultant to do so;
- Approve work or any part of the site;
- Infringe upon the area of responsibility assigned to the Contractor's Field Superintendent; or
- Stop work, unless convinced that there is an emergency, as described above.

5.15 Hazardous Construction Work

It is the Site Representative's responsibility to review all work methods to be used by the Contractor and site conditions that involve hazardous work.

The Site Representative shall only provide the Contractor with written authorization to carry out hazardous work once he/she is fully convinced that all necessary precautions and measures have been taken by the former to ensure the safety of workers/building occupants and the safeguard of government property. This written authorization must be countersigned by the Contractor, confirming that the Site Representative's instructions and requirements are understood; both parties shall keep copies of the authorization document signed by each party.

The Site Representative shall inspect sectors where hazardous work is carried out to ensure that the Contractor complies with the agreed safety standards. Any violation of these standards may lead the Site Representative to decide to halt construction. The Site Representative shall report, in writing and orally, any violations or work disruptions that he/she has ordered to the Consultant and PWGSC Construction Supervisor.