

RETURN BIDS TO:
RETOURNER LES SOUMISSIONS À:
Bid Receiving - PWGSC / Réception des
soumissions - TPSGC
11 Laurier St. / 11 rue Laurier
Place du Portage, Phase III
Core 0B2 / Noyau 0B2
Gatineau, Québec K1A 0S5
Bid Fax: (819) 997-9776

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 West Memorial Building | |
| Solicitation No. - N° de l'invitation EH900-160145/A | Date 2015-07-30 |
| Client Reference No. - N° de référence du client 20160145 | |
| GETS Reference No. - N° de référence de SEAG PW-\$\$FE-172-67759 | |
| File No. - N° de dossier fe172.EH900-160145 | CCC No./N° CCC - FMS No./N° VME |
| Solicitation Closes - L'invitation prend fin at - à 02:00 PM on - le 2015-09-11 | |
| Time Zone Fuseau horaire Eastern Daylight Saving Time EDT | |
| F.O.B. - F.A.B. Plant-Usine: <input type="checkbox"/> Destination: <input type="checkbox"/> Other-Autre: <input type="checkbox"/> | |
| Address Enquiries to: - Adresser toutes questions à: Boujenoui(fe172), Nabil | Buyer Id - Id de l'acheteur fe172 |
| Telephone No. - N° de téléphone (819) 956-6145 () | FAX No. - N° de FAX () - |
| Destination - of Goods, Services, and Construction: Destination - des biens, services et construction: West Memorial Building 344 Wellington Street Ottawa, Ontario | |

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

Consultant Services Division/Division des services
d'experts-conseils
11 Laurier St./11 Rue Laurier
3C2, Place du Portage
Phase III
Gatineau, Québec K1A 0S5

| | |
|--|--|
| Delivery Required - Livraison exigée See Herein | 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 |

THIS PROCUREMENT CONTAINS A SECURITY REQUIREMENT

REQUEST FOR PROPOSAL (RFP)

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SI1 INTRODUCTION

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

SI2 PROPOSAL DOCUMENTS

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

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

2. The following are the proposal documents:
 - (a) Supplementary Instructions to Proponents (SI);
R1410T (2015-07-03), 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;

- (c) Project Brief / Terms of Reference;
 - (d) the document entitled "Doing Business with National Capital Area";
 - (e) the **Security Requirements Check List (SRCL)**;
 - (f) any amendment to the solicitation document issued prior to the date set for receipt of proposals; and
 - (g) the proposal, Declaration/Certifications Form and Price Proposal Form.
3. Submission of a proposal constitutes acknowledgment that the Proponent has read and agrees to be bound by these documents.

SI3 QUESTIONS OR REQUEST FOR CLARIFICATION

Questions or requests for clarification during the solicitation period must be submitted in writing to the Contracting Authority named on the RFP - Page 1 as early as possible. Enquiries should be received no later than seven (7) working days prior to the closing date identified on the front page of the Request for Proposal. Enquiries received after that date may not be answered prior to the closing date of the solicitation.

SI4 CANADA'S TRADE AGREEMENTS

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

SI5 CERTIFICATIONS

1. Integrity Provisions - Declaration of Convicted Offences

As applicable, pursuant to subsection Declaration of Convicted Offences, of section 01 of the General Instructions, the Proponent must provide with its bid, a completed Declaration Form, to be given further consideration in the procurement process.

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.

SI6 SECURITY REQUIREMENT

1. At the date of bid closing, the following conditions must be met:
 - (a) the Proponent must hold a valid organization security clearance as indicated in Supplementary Conditions SC1.1;
 - (b) the Proponent's proposed individuals requiring access to classified or protected information, assets or sensitive work site(s) must meet the security requirement as indicated in Supplementary Conditions SC1.2;
 - (c) the Proponent must provide the name of all individuals who will require access to classified or protected information, assets or sensitive work sites.;

-
2. For additional information on security requirements, proponents should refer to the Canadian Industrial Security Directorate (CISD), Industrial Security Program of Public Works and Government Services Canada (<http://ssi-iss.tpsgc-pwgsc.gc.ca/index-eng.html>) website

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_equality/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>

Code of Conduct for Procurement

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

Lobbying Act

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

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>

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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 (2015-07-09), 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
 - Supplementary Conditions
 - Agreement Particulars
 - (c) Project Brief / Terms of Reference;
 - (d) the document entitled "Doing Business with National Capital Area";
 - (e) the Security Requirements Check List (SRCL);**
 - (f) any amendment to the solicitation document incorporated in the Agreement before the date of the Agreement;
 - (g) the proposal, the Declaration/Certifications Form and the Price Proposal Form.

2. The documents identified above by title, number and date are hereby incorporated by reference into and form part of this Agreement, as though expressly set out herein, subject to any other express terms and conditions herein contained.

The documents identified above by title, number and date are set out in the Standard Acquisition Clauses and Conditions (SACC) Manual, issued by Public Works and Government Services Canada (PWGSC). The SACC Manual is

available on the PWGSC Web site:

<https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual>

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

SUPPLEMENTARY CONDITIONS (SC)

SC1 SECURITY REQUIREMENT

The following security requirement (SRCL and related clauses) applies and form part of the Agreement.

1. The Consultant must, at all times during the performance of the Contract, hold a valid Designated Organization Screening (DOS), issued by the Canadian Industrial Security Directorate (CISD), Public Works and Government Services Canada (PWGSC).
2. The Consultant personnel requiring access to sensitive work site(s) must EACH hold a valid RELIABILITY STATUS, granted or approved by CISD/PWGSC.
3. Subcontracts which contain security requirements are NOT to be awarded without the prior written permission of CISD/PWGSC.
4. The Consultant must comply with the provisions of the:

-
- (a) Security Requirements Check List and security guide (if applicable),
attached at Appendix E;
(b) Industrial Security Manual (Latest Edition).

SC2 LANGUAGE REQUIREMENTS

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) 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.

SC3 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 HRSDC-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 HRSDC will constitute the Consultant in default as per the terms of the contract.

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AGREEMENT PARTICULARS

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

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APPENDIX A - TEAM IDENTIFICATION FORMAT

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

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

I. Prime Consultant (Proponent – Architect):

Firm or Joint Venture Name:

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.....

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

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II. Key Sub Consultants / Specialists:

Heritage Conservation Architect

Firm Name:

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

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Structural and Seismic Engineer (with heritage building conservation specialty)

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

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Mechanical Engineer

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

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

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Electrical Engineer

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

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Cost Specialist

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

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Time Specialist

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

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APPENDIX B - DECLARATION/CERTIFICATIONS FORM

Project Title:

Name of Proponent:

Street Address:

Mailing Address:

Telephone Number:()

Fax Number: ()

E-Mail:

Procurement Business Number:

| | |
|---|---|
| <p>Type of Organization:</p> <p>_____ Sole Proprietorship</p> <p>_____ Partnership</p> <p>_____ Corporation</p> <p>_____ Joint Venture</p> | <p>Size of Organization:</p> <p>Number of Employees _____</p> <p>Graduate Architects / Professional Engineers _____</p> <p>Other Professionals _____</p> <p>Technical Support _____</p> <p>Other _____</p> |
|---|---|

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

Federal Contractors Program for Employment Equity - Certification

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

For further information on the Federal Contractors Program for Employment Equity visit HRSDC-Labour's website.

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

Complete both A and B.

A. Check only one of the following:

- A1. The Proponent certifies having no work force in Canada.
- A2. The Proponent certifies being a public sector employer.
- A3. The Proponent certifies being a federally regulated employer being subject to the Employment Equity Act.
- A4. The Proponent certifies having a combined work force in Canada of less than 100 employees (combined work force includes: permanent full-time, permanent part-time and temporary employees [temporary employees only includes those who have worked 12 weeks or more during a calendar year and who are not full-time students]).
- A5. The Proponent has a combined work force in Canada of 100 or more employees; and

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

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

OR

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

B. Check only one of the following:

- B1. The Proponent is not a Joint Venture.

OR

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

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

Former Public Servant (FPS) - Certification

Contracts awarded to former public servants (FPS) in receipt of a pension or of a lump sum payment must bear the closest public scrutiny, and reflect fairness in the spending of public funds. In order to comply with Treasury Board policies and directives on contracts with FPS, proponents must provide the information required below before contract award.

Definitions

For the purposes of this clause,

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

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

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

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

Former Public Servant in Receipt of a Pension

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

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YES () NO ()

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

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

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

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

Work Force Adjustment Directive

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

If so, the Proponent must provide the following information:

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

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

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

Name of Proponent:

DECLARATION:

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

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

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

Telephone Number: () _____ Fax Number: () _____

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E-mail: _____

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

Solicitation No. - N° de l'invitation
EH900-160145/A

Amd. No. - N° de la modif.

Buyer ID - Id de l'acheteur
fe172

Client Ref. No. - N° de réf. du client
20160145

File No. - N° du dossier
fe172EH900-160145

CCC No./N° CCC - FMS No/ N° VME

APPENDIX C - PRICE PROPOSAL FORM

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

PROPONENTS SHALL NOT ALTER THIS FORM.

Name of Proponent: _____

The following will form part of the evaluation process:

1. REQUIRED SERVICES – FIXED FEE

(R1230D (2015-02-25), GC5 - Terms of Payment)

Including all related costs, services and deliverables to complete the services as specified in the Project Brief and in the RFP documents.

| ITEM | DESCRIPTION | FIXED FEE |
|------|---|-----------|
| RS 1 | Pre-Design | \$ _____ |
| RS 2 | Schematic Design | \$ _____ |
| RS 3 | Design Development | \$ _____ |
| RS 4 | Construction Documents | \$ _____ |
| RS 5 | Tender Calls, Bid Evaluation & Contract Award | \$ _____ |
| RS 6 | Construction and Contract Administration | \$ _____ |

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| | | |
|--------------------------|---|---------------------|
| RS 7 | Estimating and Cost Planning | \$ _____ |
| RS 8 | Project Time Planning, Scheduling and Control | \$ _____ |
| RS 9 | Risk Management | \$ _____ |
| RS 10 | Bilingual Documents | \$ _____ |
| TOTAL FIXED FEE : | | \$ _____ (1) |

2. OPTIONAL SERVICES – TIME BASED FEE
(R1230D (2015-02-25), GC5 - Terms of Payment)

| | ESTIMATED HOURS Column A | HOURLY RATES** Column B | TIME BASED FEE Columns AxB |
|--|-----------------------------|----------------------------|-------------------------------|
| Update the Heritage Materials Database during the Construction Administration Stage based on 8 hours per week X 52 weeks * | 416 | \$ _____ | \$ _____ |
| MAXIMUM TIME BASED FEES Total: | | | \$ _____ (2) |

*Payment will be based on actual hours spent. Travel time and/or expenses will not be reimbursed separately (Refer to R1230D (2015-02-25), GC 5.12 – Disbursements).

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

Solicitation No. - N° de l'invitation

EH900-160145/A

Amd. No. - N° de la modif.

File No. - N° du dossier

fe172EH900-160145

Buyer ID - Id de l'acheteur

fe172

CCC No./N° CCC - FMS No/ N° VME

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

20160145

APPENDIX C - PRICE PROPOSAL FORM (CONT'D)

TOTAL COST OF SERVICES FOR PROPOSAL EVALUATION PURPOSES

Total Required Services – Fixed Fee (1) \$.....

+

Optional Services – Time Based Fee (2) \$.....

=

Total Fee to be used for evaluation purposes \$.....

Solicitation No. - N° de l'invitation

EH900-160145/A

Amd. No. - N° de la modif.

File No. - N° du dossier

fe172EH900-160145

Buyer ID - Id de l'acheteur

fe172

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

20160145

CCC No./N° CCC - FMS No/ N° VME

APPENDIX C - PRICE PROPOSAL FORM (CONT'D)

The following will NOT form part of the evaluation process

DISBURSEMENTS

At cost without allowance for mark-up or profit, supported by invoices/receipts - see clause R1230D (2015-02-25), GC 5 - Terms of Payment, section GC5.12

Disbursements:

Testing Disbursements: \$30,000

Reproduction and delivery costs of technical documentation in addition to that specified in the Project Brief with the prior approval and authorization of the Departmental Representative: \$ 5,000

Other Disbursements: \$10,000

| | |
|---|------------------|
| MAXIMUM AMOUNT FOR OTHER DISBURSEMENTS | \$ 45,000 |
|---|------------------|

Solicitation No. - N° de l'invitation

EH900-160145/A

Amd. No. - N° de la modif.

File No. - N° du dossier

fe172EH900-160145

Buyer ID - Id de l'acheteur

fe172

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

20160145

CCC No./N° CCC - FMS No/ N° VME

Doing Business with the National Capital Area (Appendix D)



Doing Business with the National Capital Area (NCA)



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| Appendix 'E' | Basic Reference Guide on Converting Construction Drawings into Portable Document Format (PDF), dated May 2005 |

SECTION 1 INTRODUCTION

This document must be used in conjunction with the Terms of Reference (TOR), as the two documents are complimentary. The TOR describes project-specific requirements while this document deals with information common to all projects. In case of a conflict between the two documents, the requirements of the TOR override this document.

SECTION 2 PWGSC NATIONAL CADD STANDARD

Drawings shall be in accordance with PWGSC National CADD Standards and Canadian Standards Association (CSA) B78.3.

Refer to:

<http://www.tpsgc-pwgsc.gc.ca/biens-property/cdao-cadd/index-eng.html>

The above link is subject to change. The Consultant shall check with the Project Manager to ensure that the link and related information are current and relevant with regards to PWGSC National CADD Standards.

SECTION 3 GUIDE TO PREPARATION OF CONSTRUCTION DOCUMENTS FOR PWGSC

1 Purpose

This document provides direction in the preparation of construction contract documents (namely specifications, drawings and addenda) for Public Works and Government Services Canada (PWGSC).

Drawings, specifications and addenda must be complete and clear, so that a contractor can prepare a bid without guesswork. Standard practice for the preparation of construction contract documents requires that:

- drawings are the graphic means of showing work to be done, as they depict shape, dimension, location, quantity of materials and relationship between building components.
- specifications are written descriptions of materials and construction processes in relation to quality, colour, pattern, performance and characteristics of materials, installation and quality of work requirements.
- Addenda are changes to the construction contract documents or tendering procedures, issued during the tendering process.

2 Principles of PWGSC Contract Documents

PWGSC's contract documents are based on common public procurement principles. PWGSC does not use Canadian Construction Document Committee (CCDC) documents.

The terms and conditions are prepared and issued by PWGSC as well as other related bidding and contractual documents. For information, the clauses are available on the following web site: <http://sacc.pwgsc.gc.ca/sacc/query-e.jsp>. Any questions should be directed to the Project Manager.

3 Quality Assurance

Consultants are required to undertake their own quality control process and must review, correct and coordinate (between disciplines) their documents before sending them to PWGSC.

SPECIFICATIONS

1 National Master Specification

The National Master Specification (NMS) is a master construction specification available in both official languages, which is divided into 48 Divisions and used for a wide range of construction and/or renovation projects. In preparing project specifications, the Consultant must use the current edition of the NMS in accordance with the "NMS User's Guide".

The Consultant retains overriding responsibility for content and shall edit, amend and supplement the NMS as deemed necessary to produce an appropriate project specification free from conflict and ambiguity.

2 Specification Organization

Narrowscope sections describing single units of work are preferred for more complex work, however, broadscope sections may be more suitable for less complex work. Use either the NMS 1/3 - 2/3 page format or the Construction Specifications Canada full-page format.

Start each Section on a new page and show Project Number, Section Title, Section Number and Page Number on each page. Specification date, project title, and consultant's name are not to be indicated.

3 Terminology

Use the term "Departmental Representative" instead of Engineer, PWGSC, Owner, Consultant or Architect. "Departmental Representative" means the person designated in the Contract, or by written notice to the Contractor, to act as the Departmental Representative for the purposes of the Contract, and includes a person, designated and authorized in writing by the Departmental Representative to the Contractor.

Notations such as: "verify on site", "as instructed", "to match existing", "example", "equal to" or "equivalent to", "to be determined on site by "Departmental Representative", should not be indicated in the specifications as this promotes inaccurate and inflated bids. Specifications must permit bidders to calculate all quantities and bid accurately. If quantities are impossible to identify (i.e. cracks to be repaired) give an estimated quantity for bid purposes (unit prices). Ensure that the terminology used throughout the specifications is consistent and does not contradict the applicable standard construction contract documents.

4 Dimensions

Dimensions are to be in metric only (no dual dimensioning).

5 Standards

As references in the NMS may not be up to date, it is the responsibility of the consultant to ensure that the project specification uses the latest applicable edition of all references quoted. The following is a list of some of the Internet websites which provide the most current publications of standards for reference in the construction specification document.

- CSA standards: <http://www.csa.ca>
- CGSB standards: <http://www.pwgsc.gc.ca/cgsb>
- ANSI standards: <http://www.ansi.org>
- ASTM Standards: <http://www.astm.org>
- ULC standards: <http://www.ulc.ca>
- General reference of standards: <http://www.cssinfo.com>

The NMS website (<http://www.tpsgc-pwgsc.gc.ca/biens-property/ddn-nms/index-eng.html>) also links to other documents references in the NMS under its "Links" feature.

6 Specifying Materials

The practice of specifying actual brand names, model numbers, etc., is against departmental policy except for special circumstances. The method of specifying materials shall be by using recognized standards such as those produced by Canadian Gas Association (CGA), Canadian General Standards Board (CGSB), Canadian Standards Association (CSA), and Underwriters' Laboratories of Canada (ULC), or by trade associations such as Canadian Roofing Contractors' Association (CRCA) and Terrazzo, Tile, Marble Association of Canada (TTMAC). Canadian standards should be used wherever possible.

If the above method cannot be used and where no standards exist, specify by a non-restrictive, non-trade name "prescription" or "performance" specifications.

In exceptional or justifiable circumstances or if no standards exist and when a suitable non-restrictive, non-trade name "prescription" or "performance" specification cannot be developed, specify by trade name. Include all known materials acceptable for the purpose intended, and in the case of equipment, identify by type and model number.

Acceptable Materials: set up the paragraph format as follows:

Acceptable Materials:

1. ABC Co. Model [_____].
2. DEF Co. Model [_____].
3. GHI Co. Model [_____].

Alternative materials to those specified may be considered during the solicitation period, however, the onus will be on the Consultant to review and evaluate all requests for approval of alternative materials.

The term "Acceptable Manufacturers" should not be used, as this restricts competition and does not ensure the actual material or product will be acceptable. A list of words and phrases that should be avoided is included in the NMS User's Guide.

Sole Sourcing: Sole sourcing for materials and work can be used for proprietary systems (ie. fire alarm systems, EMCS systems). **Substantiation and/or justification will be required.**

Wording for the sole source of work should be in Part 1 as:

Designated Contractor

- .1 Hire the services of [_____] to do the work of this section."

Wording for the sole source of EMCS systems should be in Part 1 as

Designated Contractor

- .1 Hire the services of [_____] or its authorized representative to complete the work of all EMCS sections."

and in Part 2 as Materials

- .1 There is an existing [_____] system presently installed in the building. All materials must be selected to ensure compatibility with the existing [_____] system.

Wording for the sole source of materials (ie. fire alarm systems) should be in Part 2 as:

Acceptable materials

.1 The only acceptable materials are [] .”

Prior to including sole source materials and/or work, the Consultant should contact the Project Manager to obtain the approval for the sole sourcing.

7 Unit Prices

Unit prices are used where the quantity can only be estimated (eg. earth work) and the approval of the Project Manager must be sought in advance of their use.

Use the following wording:

[The work for this section] or [define the specific work if required, e.g. rock excavation] will be paid based on the actual quantities measured on site and the unit prices stated in the Bid and Acceptance Form.

In each applicable NMS section, replace paragraph title "Measurement for Payment" with "Unit Prices".

Sample of Unit Price Table:

The Unit Price Table designates the Work to which a Unit Price Arrangement applies.

- (a) The Price per Unit and the Estimated Total Price must be entered for each Item listed.
- (b) Work included in each item is as described in the referenced specification section.

| Item | Specification Reference | Class of Labour, Plant or Material | Unit of Measurement | Estimated Quantity | Price per Unit GST/HST extra | Estimated Total Price GST / HST extra |
|--|-------------------------|------------------------------------|---------------------|--------------------|------------------------------|---------------------------------------|
| | | | | | | |
| TOTAL ESTIMATED AMOUNT | | | | | | |
| Transfer amount to subparagraph 1)(b) of BA03 | | | | | | |

8 Cash Allowances

Construction contract documents should be complete and contain all of the requirements for the contractual work. Cash allowances are to be used only under exceptional circumstances (ie. utility companies, municipalities), where no other method of specifying is appropriate. Obtain approval from the Project Manager in advance to include cash allowances and then use "Section 01 21 00 - Allowances" of the NMS to specify the criteria.

9 Warranties

It is the practice of PWGSC to have a 12 month warranty and to avoid extending warranties for more than 24 months. When necessary to extend beyond the 12 month warranty period provided for in the General Conditions of the contract, use the following wording in Part 1 of the applicable technical sections, under the heading "Extended Warranty":

- "For the work of this Section [], the 12 month warranty period is extended to 24 months.
- Where the extended warranty is intended to apply to a particular part of a specification section modify the above as follows: "For [] the 12 month ... [] months."

Delete all references to manufacturers' guarantees.

10 Scope of Work

No paragraphs noted as "Scope of Work" are to be included.

11 Summary and Section Includes in Part -1 General of Section

Do not use "Summary" and "Section Includes."

12 Related Sections

In every section of the specification at 1.1 "Related Sections": coordinate the list of related sections and appendices. Ensure co-ordination among the sections of the specification and ensure not to reference any section or appendices which do not exist.

13 Index

List all the plans and specification sections with correct number of pages, section names and correct drawing titles in the format shown in Appendix A.

14 Regional Guide

The Consultant should contact the Project Manager to obtain the region's requirements for Division 01 or other short form specifications as might be appropriate. For example, it is required in the National Capital Region that regional Section 01 00 10 - General Instructions be used on all projects.

15 Health and Safety

It is required that all project specifications include "Section 01 35 29.06 - Health and Safety Requirements." Confirm with the Project Manager to determine if there are any instructions to meet regional requirements.

16 Designated Substances Report

Include "Section 01 14 25 - Designated Substances Report"

17 Subsurface Investigation Reports

Subsurface Investigation Report(s) are to be included after Section 31 and the following paragraph should be added to Section 31:

Subsurface investigation report(s)

.1 Subsurface investigation report(s) are included in the specification following this section.

When the Project Manager determines that it is not practical to include the subsurface investigation report(s), alternate instructions will be provided.

Where tender documents are to be issued in both official languages, the subsurface investigation report(s) shall be issued in both languages.

In addition to the provision of the Subsurface Investigation Report, the foundation information required by the National Building Code of Canada 2005 (Division C, Part 2, 2.2.4.6) shall be included on foundation drawings.

18 Experience and Qualifications

Remove experience and qualification requirements from specification sections.

19 Prequalification and Pre-award submissions

Do not include in the specification any mandatory contractor and/or subcontractor prequalification or pre-award submission requirements that could become a contract award condition. If a prequalification process or a pre-award submission is required, contact the Project Manager.

There should be no references to certificates, transcripts or license numbers of a trade or subcontractor being included with the bid.

20 Contracting Issues

Specifications describe the workmanship and quality of the work. Contracting issues should not appear in the specifications. Division 00 of the NMS is not used for PWGSC projects.

Remove all references within the specifications, to the following:

- General Instructions to Bidders
- General Conditions
- CCDC documents
- Priority of documents
- Security clauses
- Terms of payment or holdback
- Tendering process
- Bonding requirements
- Insurance requirements
- Alternative and separate pricing
- Site visit (Mandatory or Optional)
- Release of Lien and deficiency holdbacks

DRAWINGS

1 Title Blocks

Use PWGSC title block for drawings and sketches (including addenda).

2 Dimensions

Dimensions are to be in metric only (no dual dimensioning).

3 Trade Names

Trade names on drawings are not acceptable. Refer to SECTION 3, SPECIFICATIONS, 6.0 Specifying Materials for specifying materials by trade name.

4 Specification Notes

No specification type notes are to appear on any drawing.

5 Terminology

Use the term "Departmental Representative" instead of Engineer, PWGSC, Owner, Consultant or Architect. "Departmental Representative" means the person designated in the Contract, or by written notice to the Contractor, to act as the Departmental Representative for the purposes of the Contract, and includes a person, designated and authorized in writing by the Departmental Representative to the Contractor.

Notations such as: "verify on site", "as instructed", "to match existing", "example", "equal to" or "equivalent to", "to be determined on site by "Departmental Representative", should not be indicated in the specifications as this promotes inaccurate and inflated bids. Specifications must permit bidders to calculate all quantities and bid accurately. If quantities are impossible to identify (i.e. cracks to be repaired) give an estimated quantity for bid purposes (unit prices). Ensure that the terminology used throughout the specifications is consistent and does not contradict the applicable standard construction contract documents.

6 Information to be included

Drawings should show the quantity and configuration of the project, the dimensions and details of how it is constructed. There should be no references to future work and no any information that will be changed by future addenda. The scope of work should be clearly detailed and elements not in contract should be eliminated or kept to an absolute minimum.

7 Drawing Numbers: Number drawings in sets according to the type of drawing and the discipline involved as follows (The requirements of SECTION 2 PWGSC NATIONAL CADD STANDARD will supercede these requirements, where warranted).

During the Design Phase of the project each submission and review must be noted on the Notes block of the drawing title, but at the time of construction document preparation, all revision notes should be removed.

| Discipline | Drawing |
|-------------------|----------------|
| Demolition | D1, D2, etc. |
| Architectural | A1, A2, etc. |
| Civil | C1, C2, etc. |
| Landscaping | L1, L2, etc. |
| Mechanical | M1, M2, etc. |
| Electrical | E1, E2, etc. |
| Structural | S1, S2, etc. |
| Interior Design | ID1, ID2, etc. |

- 8 Presentation Requirements:** Present drawings in sets comprising the applicable demolition, architectural, structural, mechanical and electrical drawings in that order. All drawings should be of uniform standard size.
- 9 Prints:** Print with black lines on white paper. Blue prints are acceptable for document submissions at 33%, 66% and 99% stages. Confirm with Project Manager the size of prints to be provided for review purposes.
- 10 Binding:** Staple or otherwise bind prints into sets. Where presentations exceed 20 sheets, the drawings for each discipline may be bound separately for convenience and ease of handling.
- 11 Legends:** Provide a legend of symbols, abbreviations, references, etc., on the front sheet of each set of drawings or, in large sets of drawings, immediately after the title sheet and index sheets.
- 12 Schedules:** Where schedules occupy entire sheets, locate them next to the plan sheets or at the back of each set of drawings for convenient reference. *See CGSB 33-GP-7 Architectural Drawing Practices for schedule arrangements.*
- 13 North Points:** On all plans include a north point. Orient all plans in the same direction for easy cross-referencing. Wherever possible, lay out plans so that the north point is at the top of the sheet.
- 14 Drawing Symbols:** Follow generally accepted drawing conventions, understandable by the construction trades, and in accordance with PWGSC publications.

ADDENDA

1 Format

Prepare addenda using the format shown in Appendix B. No signature type information is to appear.

Every page of the addendum (including attachments) must be numbered consecutively. All pages must have the PWGSC project number and the appropriate addendum number. Sketches shall appear in the PWGSC format, stamped and signed.

No Consultant information (name, address, phone #, consultant project # etc.) should appear in the addendum or its attachments (except on sketches).

2 Content

Each item should refer to an existing paragraph of the specification or note/detail on the drawings. The clarification style is not acceptable.

DOCUMENTATION

Translation

When required, all documentation included in the construction contract documents shall be in both official languages.

Ensure that English and French documents are equal in all respects. There can be no statement that one version takes precedence over the other.

Consultant shall provide:

- Per construction document submission, a completed and signed Checklist for the Submission of Construction Documents. See Appendix 'A'.
- Specification: originals printed one side on 216 mm x 280 mm white bond paper.
- Index: as per Appendix 'C'
- Addenda (if required): as per Appendix 'B' (to be issued by PWGSC).
- Drawings: reproducible originals, sealed and signed by the design authority.
- Tender information:
 - Including a description of all units and estimated quantities to be included in unit price table.
 - Including a list of significant trades including costs. PWGSC will then determine which trades, if any, will be tendered through the Bid Depository.
 - Government Electronic Tendering System (MERX): Consultants to provide an electronic true copy of the final documents (specifications and drawings) on one or multiple CD-ROM in Portable Document Format (PDF) without password protection and printing restrictions. The electronic copy of drawings and specifications is for bidding purposes only and do not require to be signed and sealed. See Appendix 'D' and Appendix 'E'.

PWGSC shall provide:

- General and Special Instructions to Bidders
- Bid and Acceptance Form
- Standard Construction Contract Documents



SECTION 4 CLASSES OF CONSTRUCTION COST ESTIMATES USED BY PWGSC

DESCRIPTION OF THE CLASSES OF ESTIMATES USED BY PWGSC FOR CONSTRUCTION COSTING OF BUILDINGS PROJECTS

Class 'D' (Indicative) Estimate:

Based upon a comprehensive statement of requirements, and an outline of potential solutions, this estimate is to provide an indication of the final project cost, and allow for ranking all the options being considered.

Submit Class D cost estimates in elemental cost analysis format latest edition issued by the Canadian Institute of Quantity Surveyors with cost per m² for current industry statistical data for the appropriate building type and location. Include a summary in the cost estimate, plus full back up, showing items of work, quantities, unit prices, allowances and assumptions.

The level of accuracy of a class D cost estimate shall be such that no more than a 20% contingency allowance is required.

Class 'C' Estimate:

Based on a comprehensive list of requirements and assumptions, including a full description of the preferred schematic design option, construction/design experience, and market conditions. This estimate must be sufficient for making the correct investment decision.

Submit Class C cost estimates in elemental cost analysis format latest edition issued by the Canadian Institute of Quantity Surveyors with cost per m² for current industry statistical data for the appropriate building type and location. Include a summary in the cost estimate, plus full back up, showing items of work, quantities, unit prices, allowances and assumptions.

The level of accuracy of a class C cost estimate shall be such that no more than a 15% contingency allowance is required.

Class 'B' (Substantive) Estimate:

Based on design development drawings and outline specifications, which include the design of all major systems and subsystems, as well as the results of all site/installation investigations. This estimate must provide for the establishment of realistic cost objectives and be sufficient to obtain effective project approval.

Submit Class B cost estimates in elemental cost analysis format latest edition issued by the Canadian Institute of Quantity Surveyors. Include a summary in the cost estimate, plus full back up, showing items of work, quantities, unit prices, allowances and assumptions.

The level of accuracy of a class B cost estimate shall be such that no more than a 10% design contingency allowance is required.

Class 'A' (Pre-Tender) Estimate:

Based on completed construction drawings and specifications prepared prior to calling competitive tenders. This estimate must be sufficient to allow a detailed reconciliation/negotiation with any contractor's tender.

Submit Class A cost estimates in both elemental cost analysis format and trade divisional format latest edition issued by the Canadian Institute of Quantity Surveyors. Include a summary in the cost estimate, plus full back up, showing items of work, quantities, unit prices, allowances and assumptions.

The level of accuracy of a class A cost estimate shall be such that no more than a 5% design contingency allowance is required.

SECTION 5 TIME MANAGEMENT

1 Time Management, Planning, and Control

The Time Management, Planning, and Control Specialist (scheduler) shall provide a Project Planning and Control System (Control System) for Planning, Scheduling, Progress Monitoring and Reporting and a Time Management, Planning, and Control Report (Progress Report). It is required that a fully qualified and experienced Scheduler play a major role in providing services in the development and monitoring of the project schedule.

The scheduler will follow good industry practices for schedule development and maintenance as recognized by the Project Management Institute (PMI).

PWGSC presently utilizes the Primavera Suite software and MicroSoft Project for its current Control Systems and any software used by the consultant should be fully integrated with these, using one of the many commercially available software packages.

1.1 Schedule Design

Project Schedules are used as a guide for execution of the project as well as to communicate to the project team when activities are to happen, based on network techniques using Critical Path Method (CPM).

When building a Control System you must consider:

1. The level of detail required for control and reporting;
2. The reporting cycle- monthly and what is identified in the Terms of Reference, but also includes Exception Reports;
3. That the duration must be in days;
4. What is required for reporting in the Project Teams Communications Plan and
5. The nomenclature and coding structure for naming and reporting requirements of activities, schedules and reports.

1.2 Schedule Development

For purposes of monitoring and reporting of project progress and ease of schedule review it is important to maintain a standard for all schedules and reports starting with the Work Breakdown Structure (WBS), identification of Milestones, naming of activities as well as schedule outputs and paper sizing and orientation.

Work Breakdown Structure

When developing the schedule the consultant needs to use PWGSC standards and practices. Two basic requirements are the National Project Management System

(NPMS) and a Work Breakdown Structure (WBS), structured supporting the NPMS (Levels 1-4).

The WBS is as follows:

- Level 1 Project Title (NPMS)
- Level 2 Project Stage (NPMS)
- Level 3 Project Phase (NPMS)
- Level 4 Processes to meet Deliverables/Control Points Milestones (NPMS)
- Level 5 Sub-Processes and Deliverables in support of Level 4
- Level 6 Discrete activities. (Work Package)

Not all the Stages, Phases and Processes in the NPMS will be required on all the projects, however the structure remains the same.

Major and Minor Milestones

The Major Milestones are standard Deliverables and Control Points within NPMS and are required in all schedule development. These Milestones will be used in Management Reporting within PWGSC as well as used for monitoring project progress using Variance Analysis. The Minor milestones are process deliverables (Level 4) or sub-process deliverables (level 5) also used in Variance Analysis.

Each Milestone will also be assigned appropriate coding for Status Reporting and Management Reporting.

Milestones must have zero duration and are used for measuring project progress.

Milestones may also be external constraints such as the completion of an activity, exterior to the project, affecting the project.

Activities

All activities will need to be developed based on Project Objectives, Project Scope , Major and Minor Milestones, meetings with the project team and the scheduler's full understanding of the project and it's processes.

Subdivide the elements down into smaller more manageable pieces that organize and define the total scope of work in Levels 5-6 that can be scheduled, costed, monitored and controlled. This process will develop the Activity List for the project.

Each activity is a discrete element of work and is the responsibility of one person to perform.

Each activity will describe the work to be performed using a verb and noun combination (i.e. Review Design Development Report).

Activities should not have durations longer that 2 update cycles, with exception of activities not yet defined in a "Rolling Wave".

Each activity will be assigned at WBS level 6 and appropriately coded for Status Reporting and Management Reporting.

These elements will become activities, interdependently linked in Project Schedules.

Project Logic

Once the WBS, Milestones and Activity List have been developed the activities and milestones can be linked in a logical manner starting with a Project Start Milestone. Every activity and milestone must be linked in a logical manner using either a Finish to Start (FS), Finish to Finish (FF), Start to Start (SS) or Start to Finish (SF) relationship. There can be no open-ended activities or milestones.

A Finish to Start (FS) is the preferred relationship.

When developing relationships avoid the use of lags and constraints in place of activities and logic.

Activity Duration

The activity duration (in days) is the estimated length of time it will take to accomplish a task.

Consideration needs to be taken in how many resources are needed and are available, to accomplish any activity. (Example: availability of Framers during a “Housing Boom”.) Other factors are the type or skill level of the available resources, available hours of work, weather etc.

There will be several types of lists and schedules produced from this process, which will form part of the Progress Report.

Activity List

An Activity List identifies all activities including milestones required to complete the whole project.

Milestone List

A Milestone List identifies all project Major and Minor milestones.

Master Schedule

A Master Schedule is a schedule used for reporting to management at WBS level 4 and 5 that identifies the major activities and milestones derived from the detailed schedule. Cash Flow projections can be assigned at WBS level 5 for monitoring the Spending Plan.

Detailed Project Schedule

A Detailed Project Schedule is a schedule in reasonable detail (down to WBS Level 6 and 7) for progress monitoring and control, this will ensure that the schedule shall be in sufficient detail to ensure adequate planning and control.

1.3 Schedule Review and Approval

Once the scheduler has identified and properly coded all the activities; put them into a logical order and then determined the appropriate durations. The scheduler can then analyze the schedule to see if the milestone dates meet the contractual requirements and then adjust the schedule accordingly by changing durations, resource leveling or changing logic.

When the schedule has been satisfactorily prepared the scheduler can present the detailed schedule to the Project Team for approval and be Baseline. There may be several iterations before the schedule meets with the Project Teams agreement and the contractual requirements.

The final agreed version must be copied and saved as the Baseline to monitor variances for reporting purposes.

1.4 Schedule Monitoring and Control

Once Baseline the schedule can be better monitored, controlled and reports can be produced.

Monitoring is performed by, comparing the baseline activities % complete and milestone dates to the actual and forecast dates to identify the variance and record any potential delays, outstanding issues and concerns and provide options for dealing with any serious planning and scheduling issues in report form.

Analyze and report from early start sequence on all activities due to start, underway, or finished for the complete project.

There will be several reports generated from the analysis of the baseline schedule and will form part of the Time Management Report in the Required Services Sections (RS)

Progress Reports

A Progress Report reflects the progress of each activity to the date of the report, any logic changes, both historic and planned, projections of progress and completion the actual start and finish dates of all activities being monitored.

The Progress Report includes:

A Narrative Report, detailing the work performed to date, comparing work progress to planned, and presenting current forecasts. This report should summarize the progress to date, explaining current and possible deviations and delays and the required actions to resolve delays and problems with respect to the Detail Schedule, and Critical Paths.

Narrative reporting begins with a statement on the general status of the project followed by a summarization of delays, potential problems and project status criticality, any

potential delays, outstanding issues and concerns and options for dealing with any serious planning and scheduling issues.

A Variance Report, with supporting schedule documentation, detailing the work performed to date, comparing work progress to planned. This report should summarize the progress to date, explaining all causes of deviations and delays and the required actions to resolve delays and problems with respect to the Detail Schedule, and Critical Paths.

A Criticality Report identifying all activities and milestones with negative, zero and up to five days Total Float used as a first sort for ready identification of the critical, or near critical paths through the entire project.

Included in the Progress Report as attachments are: WBS chart, Activity Lists, Milestone Lists, Master Schedules, Detailed Project Schedule

Exception Report

The Scheduler is to provide continuous monitoring and control, timely identification and early warning of all unforeseen or critical issues that affect or potentially affect the project.

If unforeseen or critical issues arise, the Scheduler will advise the Project Manager and submit proposed alternative solutions in the form of an Exception Report.

An Exception Report will include sufficient description and detail to clearly identify:

1. Scope Change: Identifying the nature, reason and total impact of all identified and potential project scope changes affecting the project.
2. Delays and accelerations: Identifying the nature, the reason and the total impact of all identified and potential duration variations.
3. Options Enabling a Return to the project baseline: Identifying the nature and potential effects of all identified options proposed to return the project within baselined duration.

1.5 Standard Submissions

At each submission or deliverable stage provide a complete and updated Progress Report, the contents of each report will vary with requirements and at each project phase. Typically a Progress Report has:

1. Executive Summary;
2. Narrative Report;
3. Variances Report;
4. Criticality Report;
5. Exception Report (as required)
6. Work Breakdown Structure Chart;
7. Activity List;
8. Milestone List;
9. Master Schedule with Cash Flow Projections;
10. Detail Project Schedule (Network Diagram or Bar Charts);

1.6 Schedule Outputs and Reporting Formats

The sheet sizing and orientation is more a suggestion that a role, changes to the paper format may vary to accommodate the information and column information required.

Progress Reports

Paper Size: Letter

Paper Format: Portrait

Title Format: Project Title; Report Type; Print Date; Data Date; Revision Block

Body Text: Narratives for each report to match other reports generated in the D.S.S.

Variance Report Columns: Activity ID, Activity Name, Planned Finish, Revised Finish, Variance, Activity % Complete,

Criticality Report Columns: Activity ID, Activity Name, Duration, Start, Finish, Activity % Complete, Total Float.

Exception Reports

Paper Size: Letter

Paper Format: Portrait

Title Format: Project Title; Report Type; Print Date; Data Date; Revision

Body Text: Narrative to match other reports generated in the D.S.S.

Paper Size: Letter

Paper Format: Landscape

Title Format: Project Title; Report Type; Print Date; Data Date; Revision

Columns: Activity ID, Activity Name, Duration, Remaining Duration, Start, Finish, Total Float.

Work Breakdown Structure (indent tree):

Paper Size: Letter

Paper Format: Portrait

Columns: WBS Code, WBS Name, Duration, Cost estimate, start and finish dates.

Footer Format: Project Title; Report Type; Print Date; Data Date; Revision Block

Activity Lists

Paper Size: Letter

Paper Format: Portrait

Columns: Activity ID, Activity Name, Start, Finish, Predecessor, Successor.

Footer Format: Project Title; Report Type; Print Date; Data Date; Revision Block

Sort with Early Start, then Early Finish, then Activity ID and with the WBS.

Milestone Lists

Paper Size: Letter

Paper Format: Portrait

Footer Format: Project Title; Report Type; Print Date; Data Date; Revision Block
Columns: Activity ID, Activity Name, Start, Finish.

Sort with Early Start, then Early Finish, then Activity ID and without the WBS.

Master Schedule (Bar Chart)

Paper Size: 11X17
Paper Format: Landscape
Footer Format: Project Title; Report Type; Print Date; Data Date; Revision Block
Columns: Activity ID, Activity Name, Duration, Activity % Complete, Start, Finish,
Total Float.

Sort with Early Start, then Early Finish, then Activity ID and with the WBS.

Detailed Project Schedules (Bar Chart)

Paper Size: 11X17
Paper Format: Landscape
Footer Format: Project Title; Report Type; Print Date; Data Date; Revision Block
Columns: Activity ID, Activity Name, Duration, Activity % Complete, Start, Finish,
Total Float.

Sort with Early Start, then Early Finish, then Activity ID and with the WBS.

APPENDIX 'A' - Checklist for the Submission of Construction Documents to PWGSC

Last updated November 21, 2012

| | | |
|---------------------------|-------------------------------|------------|
| Date: | | |
| Project Title: | Project Location: | |
| Project Number: | Contract Number: | |
| Consultant's Name: | PWGSC Project Manager: | |
| Review Stage: | 66% | 99% |
| | 100% | |

| Item | Verified by: | Comments: | Action by: |
|---|--------------|-----------|------------|
| Specifications: | | | |
| 1 National Master Specifications | | | |
| 1a The current edition of the NMS has been used. | | | |
| 1b Sections have been included for all work identified on drawings and sections edited. | | | |
| 2 Specification Organization | | | |
| 2a Either the NMS 1/3 - 2/3 page format or the Construction Specifications Canada full page format is used. | | | |
| 2b Each Section starts on a new page and the Project Number, Section Title, Section Number and Page Number show on each page. | | | |
| 2c Specification date and consultant's name are not indicated. | | | |
| 3 Terminology | | | |
| 3a The term Departmental Representative is used instead of Engineer, PWGSC, Owner, Consultant or Architect. | | | |
| 3b Notations such as: "verify on site", "as instructed", "to match existing", "example", "equal to", "equivalent to" and "to be determined on site by" are not used. | | | |
| 4 Dimensions | | | |
| 4a Dimensions are provided in metric only. | | | |
| 5 Standards | | | |
| 5a The latest edition of all references quoted is used. | | | |

| | | | |
|---|--|--|--|
| 6 Specifications Materials | | | |
| 6a The method of specifying materials uses recognized standards. Actual brand names and model numbers are not specified. | | | |
| 6b Materials are specified using standards and performance criteria (if not, the correct form of acceptable materials has been used). | | | |
| 6c Identify if non-restrictive, non-trade name “prescription” or “performance” specifications are used. | | | |
| 6d Indicate if a list of acceptable materials have been used. | | | |
| 6e The term “Acceptable Manufacturers” is not used. | | | |
| 6f No sole sourcing has been used. | | | |
| 6g If sole sourcing has been used, the correct wording has been used and a justification provided to RPCD for the sole sourced products. | | | |
| 7 Unit Prices | | | |
| 7a Unit prices are used only for work that is difficult to estimate. | | | |
| 8 Cash Allowances | | | |
| 8a Indicate if cash allowances have been used. | | | |
| 9 Warranties | | | |
| 9a Indicate if warranties extend more than a 12 or 24 months period. | | | |
| 9b Manufacturers guarantees are not indicated. | | | |
| 10 Scope of Work | | | |
| 10 No paragraphs noted as “Scope of Work” are included. | | | |
| 11 Summary and Section Includes | | | |
| 11a In part 1 of section, paragraphs “Summary” and “Section Includes” are not used. | | | |
| 12 Related Sections | | | |
| 12a The list of related sections and appendices are coordinated. | | | |
| 13 Index | | | |
| 13a The index shows a complete list of plans and specification sections with the correct number of pages and correct drawing titles and section names. | | | |
| 14 Regional Guide Specifications | | | |
| 14a General Instructions is included (Section 01 00 10 in the NCA). | | | |

| | | | |
|---|--|--|--|
| 15 Health and Safety | | | |
| 15a Section 01 35 29.06 - Health and Safety Requirements is included. | | | |
| 16 Designated Substances Report | | | |
| 16 a Section 01 14 25 - Designated Substances Report is included. | | | |
| 17 Subsurface Investigation Reports | | | |
| 17a Subsurface Investigation Reports are included in Division 31. | | | |
| 18 Experience and qualifications | | | |
| 18a Experience and qualification requirements do not appear in the specification sections | | | |
| 19 Pre-qualifications | | | |
| 19a There are no mandatory contractor and/or subcontractor pre-qualification requirements or references to certificates, transcripts or license numbers of a trade or subcontractor being included in the bid. | | | |
| 20 Contracting Issues | | | |
| 20a Contracting issues do not appear in the specifications. | | | |
| 20b Division 00 of the NMS is not used. | | | |
| 21 Quality Issues | | | |
| 21a There are no specification clauses with square brackets “[]” or lines “_” indicating that the document is incomplete or missing information. | | | |

| Item | Verified by: | Comments: | Action By: |
|---|--------------|-----------|------------|
| Drawings: | | | |
| 1 Title Blocks | | | |
| 1a The PWGSC title block is used. | | | |
| 2 Dimensions | | | |
| 2a Dimensions are provided in metric only. | | | |
| 3 Trade Names | | | |
| 3a Trade names are not used. | | | |
| 4 Specification Notes | | | |
| 4a There is no specification type notes. | | | |
| 5 Terminology | | | |
| 5a The term Departmental Representative is used instead of Engineer, PWGSC, Owner, | | | |

| | | | |
|---|--|--|--|
| Consultant or Architect. | | | |
| 5b Notations such as: “verify on site”, “as instructed”, “to match existing”, “example”, “equal to”, “equivalent to” and “to be determined on site by” are not used. | | | |
| 6 Information to be included | | | |
| 6a Architectural and Engineering Drawings have been stamped and signed by the design authority. | | | |
| 6b The project quantity and configuration, dimensions and construction details are included. | | | |
| 6c References to future work and elements not in contract do not appear or are kept to an absolute minimum and clearly marked. | | | |

I confirm that the plans and specifications have been thoroughly reviewed and that the items listed above have been addressed or incorporated. I acknowledge and accept that by signing, I am certifying that all items noted above have been addressed.

Consultant's Representative: _____

Firm name: _____

Signature: _____ Date: _____

APPENDIX 'B' - Sample of Addendum

Last updated April 22, 2008

ADDENDUM No. _____

Project Number: _____

The following changes in the bid documents are effective immediately. This addendum will form part of the contract documents

DRAWINGS

SPEC NOTE: indicate drawing number and title, then list changes or indicate revision number and date, and re-issue drawing with addendum.

- 1 A1 Architectural
 .1

SPECIFICATIONS

SPEC NOTE: indicate section number and title.

- 1 Section 01 00 10 - General Instructions

SPEC NOTE: list all changes (i.e. delete, add or change) by article or paragraph

- .1 Delete article (xx) entirely.
- .2 Refer to paragraph (xx.x) and change ...
- 2 Section 23 05 00 - Common Work Results - Mechanical
- .1 Add new article (x) as follows:

APPENDIX 'C' - Sample of Index

Last updated April 22, 2008

Project No: _____

Index
Page 1 of ____

DRAWINGS AND SPECIFICATIONS

DRAWINGS:

SPEC NOTE: List all Drawings by number and title.

- C-1 Civil
- L-1 Landscaping
- A-1 Architectural
- S-1 Structural
- M-1 Mechanical
- E-1 Electrical

SPECIFICATIONS:

SPEC NOTE: List all Divisions, Sections (by number and title) and number of pages.

| <u>DIVISION</u> | <u>SECTION</u> | NO. OF PAGES |
|-----------------|---|-------------------------|
| DIVISION 01 | 01 00 10 - General Instructions..... |XX |
| | 01 14 25 - Designated Substances Report..... |XX |
| | 01 35 30 - Health and Safety..... |XX |
| DIVISION 23 | 23 xx xx | |
| DIVISION 26 | 26 xx xx | |

APPENDIX 'D'

USER MANUAL ON DIRECTORY STRUCTURE AND NAMING CONVENTION STANDARDS FOR CONSTRUCTION TENDER DOCUMENTS ON CD ROM

Issued by:

Real Property Contracting Directorate

PWGSC

May 2005

Last Updated: June 3, 2008

Version 1.0

PREFACE

The Government of Canada (GoC) has committed to move towards an electronic environment for the majority of the services it offers. This covers the advertisement and distribution of contract opportunities, including construction solicitations. As a result, it is necessary to obtain a copy of construction drawings and specifications (in PDF format **without** password protection) on one or multiple CD-ROM to facilitate for the GoC the transfer of the construction drawings and specifications electronically to the Government Electronic Tendering System (GETS).

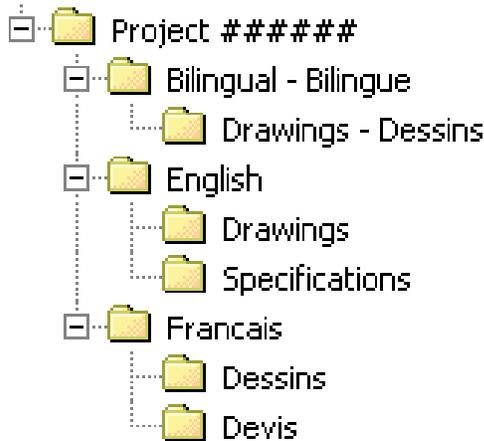
There is therefore a need to adopt a common directory structure and file-naming convention to ensure that the information made available to contractors electronically and in hard (printed) copy is in accordance with the sequence adopted in the real property industries, both for design and construction. This manual defines the standard to be followed by both consultants and print shops at time of formatting and organizing the information, whether drawings and specifications are created by scanning print documents or saved as PDF files from the native software (AutoCAD, NMS Edit, MS-Word, etc...) in which these were created.

It is important to note that the procedure described in this manual is not an indication that consultants are relieved from following the established standards for the production of drawings and specifications. The sole purpose of this manual is to provide a standard for the organization and naming of the electronic files that will be recorded on CD-ROM.

1. DIRECTORY STRUCTURE

1.1 1st, 2nd and 3rd Tier Sub-Folders

Each CD-ROM, whether it is for the original solicitation (tender call) or for an amendment (addendum), must have the applicable elements of the following high-level Directory Structure created:



The following important points are to be noted about the Directory Structure:

- The “*Project #####*” folder is considered the 1st Tier of the Directory Structure where *#####* represents each digit of the Project Number. The Project Number must always be used to name the 1st Tier folder and it is always required. Free text can be added following the Project Number, to include such things as a brief description or the project title;
- The “*Bilingual - Bilingue*”, “*English*” and “*Français*” folders are considered the 2nd Tier of the Directory Structure. The folders of the 2nd Tier **cannot** be given any other names since GETS uses these names for validation purposes. At least one of the “*Bilingual - Bilingue*”, “*English*” and “*Français*” folders is always required, and these must always have one of the applicable sub-folders of the 3rd Tier;
- The “*Drawings - Dessins*”, “*Drawings*”, “*Specifications*”, “*Dessins*” and “*Devis*” folders are considered the 3rd Tier of the Directory Structure. The folders of the 3rd Tier **cannot** be given any other names since GETS also uses these names for validation purposes. There must be always at least one of the applicable 3rd Tier folder in each document.

| |
|---|
| IMPORTANT: The applicable elements of the Directory Structure (1 st , 2 nd and 3 rd Tier folders) are always required and cannot be modified. |
|---|

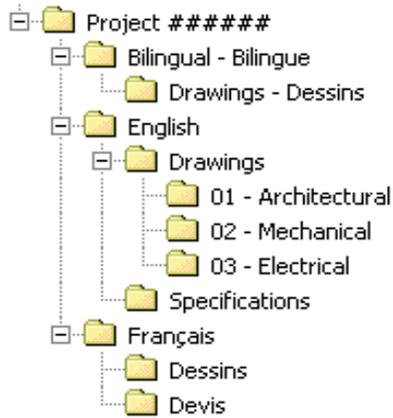
1.2 4th Tier Sub-Folders for Drawings

The “*Drawings – Dessins*”, “*Drawings*” and “*Dessins*” folders must have 4th Tier sub-folders created to reflect the various disciplines of the set of drawings.

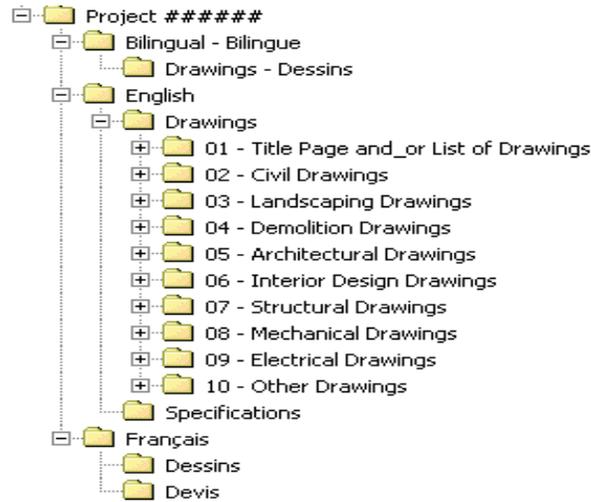
Because the order of appearance of the sub-folders on the screen will also determine the order of printing, it is necessary to start with a number the identification name of the sub-folders in the “Drawings – Dessins”, “Drawings” and “Dessins” folders.

Note: The first sub-folder must be always reserved for the Title Page and/or the List of Drawings unless the first drawing of the set is an actual numbered discipline drawing.

Examples of 4th Tier sub-folders for drawings:



or



1.2.1 Naming Convention

The 4th Tier sub-folders for drawings must adhere to the following standard naming convention.

For the “*Drawings*” and “*Dessins*” folders:

- Y

Where:

= A two digit number ranging from 01 to 99 (leading zeros must be included)

Y = The title of the folder

Example: 03 – Mechanical

For the “*Drawings - Dessins*” folder:

- Y - Z

Where:

= A two digit number ranging from 01 to 99 (leading zeros must be included)

Y = The English title of the folder

Z = The French title of the folder

Example: 04 - Electrical - Électricité

It should be noted that the numbering of the 4th Tier sub-folders is for sorting purposes only and is not tied to a specific discipline. For example, “*Architectural*” could be numbered 05 for a project where there is four other disciplines before “*Architectural*” in the set of drawings or 01 in another project where it’s the first discipline appearing in the set.

It is essential to ensure that the order of the drawings on the CD-ROM be exactly the same as in the hard copy set. GETS will sort each drawing for both screen display and printing as per the following rules:

- The alphanumerical sorting is done on an ascending order;
- The alphanumerical order of the sub-folders determines the order of appearance on the screen as well as the order of printing (as an example: all the drawing PDF files in the 01 sub-folder will be printed in alphanumerical order before the drawings in the 02 sub-folder etc...);
- Each drawing PDF file within each sub-folder will also be sorted alphanumerically. This will determine the order of appearance on the screen as well as the order of printing (i.e. Drawing A001 will be printed before Drawing A002, Drawing M02 before Drawing M03, etc...).

1.3 4th Tier Sub-Folders for Specifications

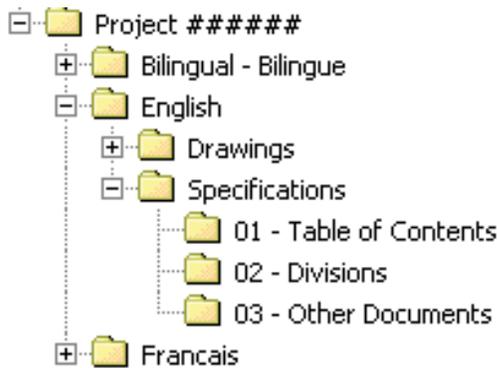
The “*Specifications*” and “*Devis*” folders must have 4th Tier sub-folders created to reflect the various elements of the specifications.

Because the order of appearance of the sub-folders on the screen will also determine the order of printing, it is necessary to start with a number the identification name of the sub-folders in the “Specifications” and “Devis” folders.

Examples of 4th Tier sub-folders for specifications:



or



1.3.1 Naming Convention

The 4th Tier sub-folders for specifications must adhere to the following standard naming convention.

For the “Specifications” and “Devis” folders:

- Y

Where:

= A two digit number ranging from 01 to 99 (leading zeros must be included)

Y = The title of the folder

Example: 02 – Divisions

It should be noted that the numbering of the 4th Tier sub-folders is for sorting purposes only and is not tied to an element of the specifications.

It is essential to ensure that the order of the elements of the specifications on the CD-ROM be exactly the same as in the hard copy. GETS will sort each element of the specifications for both

screen display and printing as per the following rules:

- The alphanumerical sorting is done on an ascending order;
- The alphanumerical order of the sub-folders determines the order of appearance on the screen as well as the order of printing (as an example: all the specifications PDF files in the 01 sub-folder will be printed, in alphanumerical order before the PDF files in the 02 sub-folder, etc...);
- Each specifications PDF file within each sub-folder will also be sorted alphanumerically. This will determine the order of appearance on the screen as well as the order of printing (i.e. Division 01 will be printed before Division 02, 01 - Appendix A before 02 - Appendix B, etc...).

2. NAMING CONVENTION FOR PDF FILES

Each drawing, specifications division or other document that are part of the tender documents must be converted in PDF format (without password protection) in accordance with the following standard naming convention and each PDF file must be located in the appropriate sub-folder of the Directory Structure.

2.1 Drawings

Each drawing must be a **separate single page** PDF file. The naming convention of each drawing must be:

X### - Y

Where:

X = The letter or letters from the drawing title block (“A” for Architectural or “ID” for Interior Design for example) associated with the discipline

= The drawing number from the drawing title block (one to three digits)

Y = **The drawing name from the drawing title block (for bilingual drawings, the name in both English and French is to appear)**

Example: A001 - First Floor Details

Each drawing that will be located in the appropriate discipline 4th Tier sub-folders must be named with the same letter (“A” for Architectural Drawings for example) and be numbered. The drawing number used to name the PDF file must match as much as possible the drawing number of the actual drawing (the exception being when leading zeros are required).

The following important points about drawings are to be noted:

- The drawing PDF files within each sub-folder are sorted alphanumerically for both displaying and printing. If there are more than 9 drawings in a particular discipline the numbering must use at least two numerical digits (i.e. A01 instead of A1) in order to avoid displaying drawing A10 between A1 and A2. The same rule applies when there are more than 99 drawings per discipline i.e. three digits instead of two must be used for the numbering (for example M003 instead of M03);

- If drawing PDF files are included in the “*Bilingual - Bilingue*” folder, these cannot be included as well in the “*English*” and/or “*Français*” folders;
- If drawings not associated with a particular discipline are not numbered (Title Page or List of Drawings for example), these will be sorted alphabetically. While this does not represent a problem if there is only one drawing in the sub-folder, it could disrupt the order when there are two or more drawings. If the alphabetical order of the drawings name does not represent the order on the hard copy set, the drawings are to be named as per the following standard convention when converted in PDF format to ensure proper display and printing order.

- Y

Where:

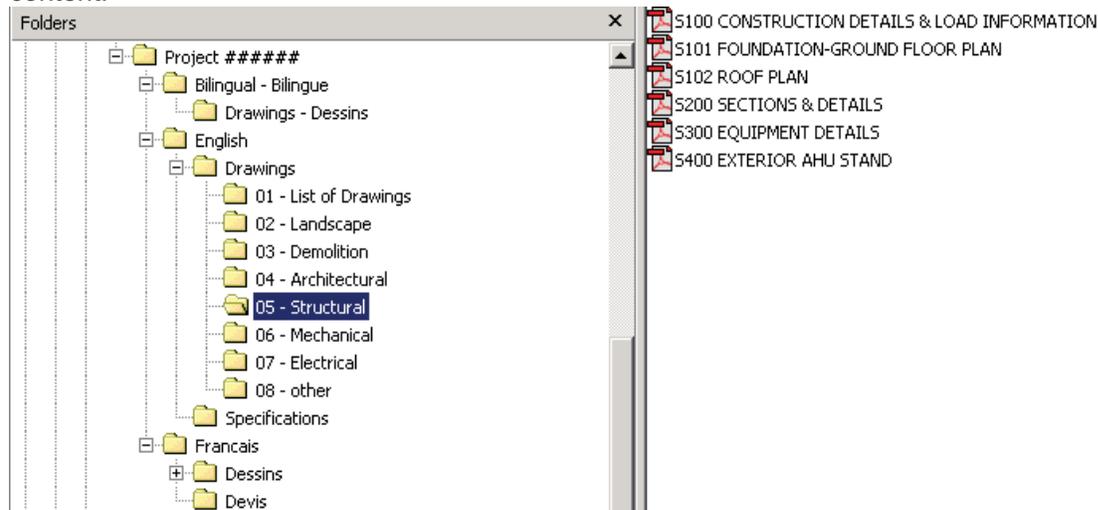
= A two digit number ranging from 01 to 99 (leading zeros must be included)

Y = The name of the drawing

Example: 01 - Title Page
02 - List of Drawings

If numbers are not used in the PDF files name, “*List of Drawings*” will be displayed before “*Title Page*” because “*L*” comes before “*T*” in the alphabet.

Example of a 4th Tier Drawings sub-folder’s content:



2.2. Specifications

Each Specifications Division must be a separate PDF file and all pages contained in each PDF file must have the same physical size (height, width). The Plans and Specifications Index must

also be a separate PDF file. If there are other documents that are part of the Specifications (e.g. Appendix or other) these are to be separate PDF files as well.

2.2.1 Documents other than Specifications Divisions

Because PDF files within the Specifications sub-folders are sorted alphanumerically (in ascending order) for both on screen display and printing order, all files that appear in folders other than the “*Divisions*” sub-folder must be named using a number:

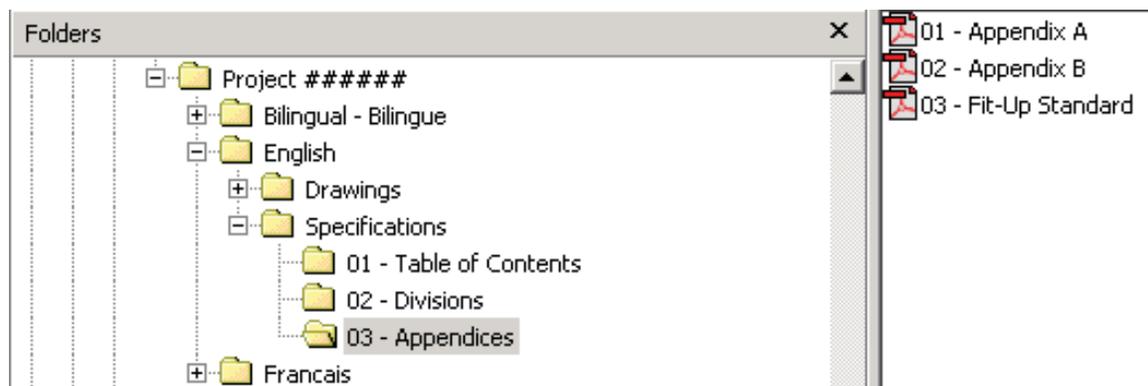
- Y

Where:

= Two digit number ranging from 01 to 99 with leading zeros required
Y = Name of the document

Example: 01 - Plans and Specifications Index

Example of a sub-folder content (sub-folder other than “*Divisions*”):



2.2.2 Specifications Divisions

The Specifications Divisions must be named as follows:

Division ## - Y

Where:

Division ## = The actual word “*Division*” followed by a space and a two digit number ranging from 01 to 99 (with leading zeros required)

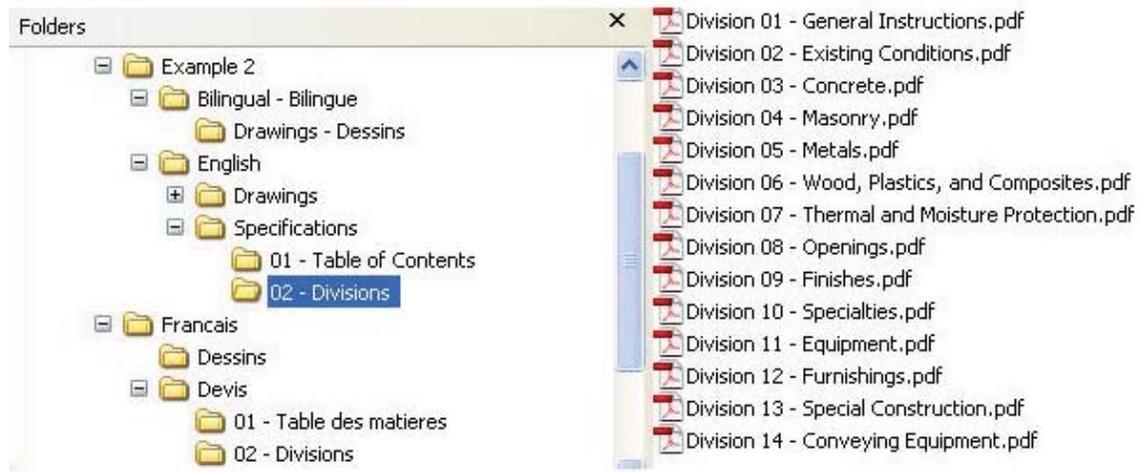
Y = Name of the Specifications Division as per **CSC/CSI MasterFormat™**

Example: Division 05 – Metals

The following important point about specifications is to be noted:

- The Numbering of the Divisions **cannot** be altered from **CSC/CSI MasterFormat™** even if some Divisions are not used in a given project. For example, Division 05 will always remain Division 05 even if Division 04 is not used for a given project.

Example of a “Divisions” sub-folder content:



3. CD-ROM LABEL

Each CD-ROM is to be labeled with the following information:

Project Number / Numéro de projet
Project Title / Titre du projet
Documents for Tender / Documents pour appel d'offres
CD X of/de X

Example:

Project 123456 / Projet 123456
Repair Alexandra Bridge / Réparation du pont Alexandra

Documents for Tender / Documents pour appel d'offres
CD 1 of/de 1

APPENDIX 'E'

BASIC REFERENCE GUIDE ON CONVERTING CONSTRUCTION DRAWINGS INTO PORTABLE DOCUMENT FORMAT (PDF)

Issued by:
Real Property Contracting Directorate
PWGSC

May 2005 Last Updated: May 3, 2005

Version 1.0

PREFACE

Portable Document Format (PDF) is the standard format for documents that are posted on the Government Electronic Tendering System (GETS). There is therefore a need to obtain from architectural and engineering consultants an electronic copy of drawings and specifications in PDF for tendering Government of Canada (GoC) construction projects.

In order to have the highest quality in term of resolution and printing, consultants should to the greatest extent possible have the PDF drawing and specification files derived from the native software in which they were created. Scanning is permissible but only in special circumstances, for example when there is no electronic version of a drawing being included in a construction tender package.

The purpose of this document is to provide basic information on the conversion of Computer Aided Design and Drafting (CADD) drawings in PDF. Creating a PDF file from a CADD drawing is a relatively simple process once all the necessary configurations and settings are in place. It actually should not take any longer than it would take to create a plot file or to send a drawing to a printer. The information in this guide is not intended to cover all technical aspects of the conversion, which can be done using various methods, but rather to highlight important points about the process and file settings. The conversion of specifications is not covered in this basic reference guide since it does not require any special configuration or setting.

The information provided in this basic reference guide is not an indication that consultants are relieved from following the established standards for the production of drawings and specifications. The sole purpose of this guide is to provide basic information on the PDF conversion process bearing in mind that additional detailed technical information is available from the various software manufacturers.

1. PRINTER DRIVERS

Adobe Acrobat provides two different printer drivers that are able to convert CADD drawing into PDF format, Acrobat PDF Writer and Acrobat Distiller. Before creating a PDF file from a CADD drawing, a choice must be made as to which one will be used.

Acrobat PDF Writer is a non-PostScript printer driver that works best with documents that don't contain complex graphics

Acrobat Distiller is a PostScript printer driver that works best with documents that contain PostScript fills, Encapsulated PostScript (EPS) graphics, or other complex elements.

It is recommended that Acrobat Distiller be used to create PDF file of architectural and engineering drawings due to their size and complex graphical nature.

2. PRINTER CONFIGURATION

Before converting a CADD drawing to PDF, an Acrobat printer configuration file for the PDF paper size needs to be created. This function can be done in the CADD software rather than using a custom paper size defined for the Acrobat distiller feature. The recommended method is to add a PostScript Adobe plotter in the CADD software and making the necessary setting in terms of media source and size, scale and orientation. The configuration can then be re-used to simplify the conversion process for future files that use the same page size.

As an alternative, although not recommended, a custom-defined size can be created in Acrobat Distiller in the *properties* menu.

3. CREATING PDF FILES

Once the printer configuration has been done in the CADD software, open up Acrobat Distiller and make the necessary settings in the *preferences* and *job options* sub-menu. Ensure that the page size match the sheet size selected in the CADD software to create the file. Particular settings can be saved under different names for future use.

With the Acrobat Distiller application open, ensure the required sheet size is displayed in the *job options* window. Then it is simply a matter of bringing the CADD file into the Acrobat Distiller creation box.

A progress bar will show during the conversion and the newly converted PDF file should open up and be displayed for verification.

4. PDF FILES SETTINGS

4.1 Security

Adobe Acrobat contains security features that can be used to secure the files by restricting any changes to the files. However, since the files will be posted on GETS and will be used for printing copies, the files **must not** be password protected and **must** allow printing.

4.2 Drawing Orientation

The final PDF drawing files must be displayed on the screen in the same direction that the users are intended to view them. This can be achieved by adjusting the setup of the plotter. If the drawing is not oriented properly after the conversion, it can be rotated manually within Adobe Acrobat.

4.3 Font Type

In order to avoid any problems during the conversion and to minimize the potential for font display errors, the fonts used for the production of construction drawings must be *PostScript* or *True Type fonts*.

4.4 Resolution

Since the PDF files will be used for printing, it is important that a proper resolution be selected. It is recommended to select 600 dots per inch (dpi).

4.5 Scale

When choosing the Plot scale in Adobe, it is important to choose the 1:1 scale to ensure the integrity of the scale from which the drawings were created in the CADD software.

5. SCANNING

Scanning is not recommended and should be done only when the drawing is not available electronically. When scanning a drawing, it is important that it be done in real size (scale 1:1) to ensure that the scale remains intact in subsequent printing. It is recommended that each scanned drawing be opened and verified to ensure that the resolution, scale and border are of an acceptable quality.

6. FINAL CHECKLIST

When the drawing file has gone through the PDF conversion, it is recommended to open it and verify the following:

- That the sheet size displayed is what was intended to be created (the size is viewable in the lower left corner of the drawing).
- That the orientation of the sheet is correct.
- That the line types, line weights and fonts match the CADD drawing.
- That the PDF file is in black and white.
- That each drawing is a single PDF file.
- That the PDF file is not password protected and printable.

If all the items are verified, the PDF file is useable

7. ADDITIONAL INFORMATION

For more information about the creation of PostScript and EPS files please refer to the User's Guide of the CADD software being used to produce the drawings. For more information about creating PDF file please refer to the Acrobat Distiller User's Guide and/or visit the Adobe Web site at www.adobe.com.



Government of Canada

Gouvernement du Canada



Contract Number / Numéro du contrat

EH900-160145

Security Classification / Classification de sécurité
UNCLASSIFIED

SECURITY REQUIREMENTS CHECK LIST (SRCL)

LISTE DE VÉRIFICATION DES EXIGENCES RELATIVES À LA SÉCURITÉ (LVERS)

PART A - CONTRACT INFORMATION / PARTIE A - INFORMATION CONTRACTUELLE

1. Originating Government Department or Organization / Ministère ou organisme gouvernemental d'origine
Public Works and Government Services Canada
2. Branch or Directorate / Direction générale ou Direction
Real Property Branch

3. a) Subcontract Number / Numéro du contrat de sous-traitance
3. b) Name and Address of Subcontractor / Nom et adresse du sous-traitant

4. Brief Description of Work / Brève description du travail
Selection of a Prime Consultant for the Phase 1 - Asset Integrity at the West Memorial Building.

5. a) Will the supplier require access to Controlled Goods? / Le fournisseur aura-t-il accès à des marchandises contrôlées?
 No / Non Yes / Oui

5. b) Will the supplier require access to unclassified military technical data subject to the provisions of the Technical Data Control Regulations? / Le fournisseur aura-t-il accès à des données techniques militaires non classifiées qui sont assujetties aux dispositions du Règlement sur le contrôle des données techniques?
 No / Non Yes / Oui

6. Indicate the type of access required / Indiquer le type d'accès requis

6. a) Will the supplier and its employees require access to PROTECTED and/or CLASSIFIED information or assets? / Le fournisseur ainsi que les employés auront-ils accès à des renseignements ou à des biens PROTÉGÉS et/ou CLASSIFIÉS?
(Specify the level of access using the chart in Question 7. c) / (Préciser le niveau d'accès en utilisant le tableau qui se trouve à la question 7. c)
 No / Non Yes / Oui

6. b) Will the supplier and its employees (e.g. cleaners, maintenance personnel) require access to restricted access areas? No access to PROTECTED and/or CLASSIFIED information or assets is permitted. / Le fournisseur et ses employés (p. ex. nettoyeurs, personnel d'entretien) auront-ils accès à des zones d'accès restreintes? L'accès à des renseignements ou à des biens PROTÉGÉS et/ou CLASSIFIÉS n'est pas autorisé.
 No / Non Yes / Oui

6. c) Is this a commercial courier or delivery requirement with no overnight storage? / S'agit-il d'un contrat de messagerie ou de livraison commerciale sans entreposage de nuit?
 No / Non Yes / Oui

7. a) Indicate the type of information that the supplier will be required to access / Indiquer le type d'information auquel le fournisseur devra avoir accès
Canada NATO / OTAN Foreign / Étranger

7. b) Release restrictions / Restrictions relatives à la diffusion
No release restrictions / Aucune restriction relative à la diffusion
Not releasable / À ne pas diffuser
Restricted to: / Limité à:
Specify country(ies): / Préciser le(s) pays:
All NATO countries / Tous les pays de l'OTAN
Restricted to: / Limité à:
Specify country(ies): / Préciser le(s) pays:
No release restrictions / Aucune restriction relative à la diffusion
Restricted to: / Limité à:
Specify country(ies): / Préciser le(s) pays:

| 7. c) Level of information / Niveau d'information | |
|---|--|
| PROTECTED A / PROTÉGÉ A <input type="checkbox"/> | NATO UNCLASSIFIED / NATO NON CLASSIFIÉ <input type="checkbox"/> |
| PROTECTED B / PROTÉGÉ B <input type="checkbox"/> | NATO RESTRICTED / NATO DIFFUSION RESTREINTE <input type="checkbox"/> |
| PROTECTED C / PROTÉGÉ C <input type="checkbox"/> | NATO CONFIDENTIAL / NATO CONFIDENTIEL <input type="checkbox"/> |
| CONFIDENTIAL / CONFIDENTIEL <input type="checkbox"/> | NATO SECRET / NATO SECRET <input type="checkbox"/> |
| SECRET / SECRET <input type="checkbox"/> | COSMIC TOP SECRET / COSMIC TRÈS SECRET <input type="checkbox"/> |
| TOP SECRET / TRÈS SECRET <input type="checkbox"/> | |
| TOP SECRET (SIGINT) / TRÈS SECRET (SIGINT) <input type="checkbox"/> | |
| | PROTECTED A / PROTÉGÉ A <input type="checkbox"/> |
| | PROTECTED B / PROTÉGÉ B <input type="checkbox"/> |
| | PROTECTED C / PROTÉGÉ C <input type="checkbox"/> |
| | CONFIDENTIAL / CONFIDENTIEL <input type="checkbox"/> |
| | SECRET / SECRET <input type="checkbox"/> |
| | TOP SECRET / TRÈS SECRET <input type="checkbox"/> |
| | TOP SECRET (SIGINT) / TRÈS SECRET (SIGINT) <input type="checkbox"/> |



PART A (continued) / PARTIE A (suite)

8. Will the supplier require access to PROTECTED and/or CLASSIFIED COMSEC information or assets? No Yes
Le fournisseur aura-t-il accès à des renseignements ou à des biens COMSEC désignés PROTÉGÉS et/ou CLASSIFIÉS? Non Oui

If Yes, indicate the level of sensitivity:
Dans l'affirmative, indiquer le niveau de sensibilité :

9. Will the supplier require access to extremely sensitive INFOSEC information or assets? No Yes
Le fournisseur aura-t-il accès à des renseignements ou à des biens INFOSEC de nature extrêmement délicate? Non Oui

Short Title(s) of material / Titre(s) abrégé(s) du matériel :
Document Number / Numéro du document :

PART B - PERSONNEL (SUPPLIER) / PARTIE B - PERSONNEL (FOURNISSEUR)

10. a) Personnel security screening level required / Niveau de contrôle de la sécurité du personnel requis

- | | | | |
|---|---|---|--|
| <input checked="" type="checkbox"/> RELIABILITY STATUS COTE DE FIABILITÉ | <input type="checkbox"/> CONFIDENTIAL CONFIDENTIEL | <input type="checkbox"/> SECRET SECRET | <input type="checkbox"/> TOP SECRET TRÈS SECRET |
| <input type="checkbox"/> TOP SECRET - SIGINT TRÈS SECRET - SIGINT | <input type="checkbox"/> NATO CONFIDENTIAL NATO CONFIDENTIEL | <input type="checkbox"/> NATO SECRET NATO SECRET | <input type="checkbox"/> COSMIC TOP SECRET COSMIC TRÈS SECRET |
| <input type="checkbox"/> SITE ACCESS ACCÈS AUX EMPLACEMENTS | | | |

Only security screened personnel must be utilized.

Special comments:
Commentaires spéciaux :

NOTE: If multiple levels of screening are identified, a Security Classification Guide must be provided.
REMARQUE : Si plusieurs niveaux de contrôle de sécurité sont requis, un guide de classification de la sécurité doit être fourni.

10. b) May unscreened personnel be used for portions of the work? No Yes
Du personnel sans autorisation sécuritaire peut-il se voir confier des parties du travail? Non Oui

If Yes, will unscreened personnel be escorted? No Yes
Dans l'affirmative, le personnel en question sera-t-il escorté? Non Oui

PART C - SAFEGUARDS (SUPPLIER) / PARTIE C - MESURES DE PROTECTION (FOURNISSEUR)

INFORMATION / ASSETS / RENSEIGNEMENTS / BIENS

11. a) Will the supplier be required to receive and store PROTECTED and/or CLASSIFIED information or assets on its site or premises? No Yes
Le fournisseur sera-t-il tenu de recevoir et d'entreposer sur place des renseignements ou des biens PROTÉGÉS et/ou CLASSIFIÉS? Non Oui

11. b) Will the supplier be required to safeguard COMSEC information or assets? No Yes
Le fournisseur sera-t-il tenu de protéger des renseignements ou des biens COMSEC? Non Oui

PRODUCTION

11. c) Will the production (manufacture, and/or repair and/or modification) of PROTECTED and/or CLASSIFIED material or equipment occur at the supplier's site or premises? No Yes
Les installations du fournisseur serviront-elles à la production (fabrication et/ou réparation et/ou modification) de matériel PROTÉGÉ et/ou CLASSIFIÉ? Non Oui

INFORMATION TECHNOLOGY (IT) MEDIA / SUPPORT RELATIF À LA TECHNOLOGIE DE L'INFORMATION (TI)

11. d) Will the supplier be required to use its IT systems to electronically process, produce or store PROTECTED and/or CLASSIFIED information or data? No Yes
Le fournisseur sera-t-il tenu d'utiliser ses propres systèmes informatiques pour traiter, produire ou stocker électroniquement des renseignements ou des données PROTÉGÉS et/ou CLASSIFIÉS? Non Oui

11. e) Will there be an electronic link between the supplier's IT systems and the government department or agency? No Yes
Disposera-t-on d'un lien électronique entre le système informatique du fournisseur et celui du ministère ou de l'agence gouvernementale? Non Oui



PART C - (continued) / PARTIE C - (suite)

For users completing the form **manually** use the summary chart below to indicate the category(ies) and level(s) of safeguarding required at the supplier's site(s) or premises.

Les utilisateurs qui remplissent le formulaire **manuellement** doivent utiliser le tableau récapitulatif ci-dessous pour indiquer, pour chaque catégorie, les niveaux de sauvegarde requis aux installations du fournisseur.

For users completing the form **online** (via the Internet), the summary chart is automatically populated by your responses to previous questions.

Dans le cas des utilisateurs qui remplissent le formulaire **en ligne** (par Internet), les réponses aux questions précédentes sont automatiquement saisies dans le tableau récapitulatif.

SUMMARY CHART / TABLEAU RÉCAPITULATIF

| Category Catégorie | PROTECTED PROTÉGÉ | | | CLASSIFIED CLASSIFIÉ | | NATO | | | | COMSEC | | | | | | |
|--|----------------------|---|---|------------------------------|--------|---------------------------------|---|--|----------------|---|----------------------|---|---|------------------------------|--------|---------------------------------|
| | A | B | C | CONFIDENTIAL CONFIDENTIEL | SECRET | TOP SECRET TRÈS SECRET | NATO RESTRICTED NATO DIFFUSION RESTREINTE | NATO CONFIDENTIAL NATO CONFIDENTIEL | NATO SECRET | COSMIC TOP SECRET COSMIC TRÈS SECRET | PROTECTED PROTÉGÉ | | | CONFIDENTIAL CONFIDENTIEL | SECRET | TOP SECRET TRÈS SECRET |
| | | | | | | | | | | | A | B | C | | | |
| Information / Assets Renseignements / Biens Production | | | | | | | | | | | | | | | | |
| IT Media / Support TI | | | | | | | | | | | | | | | | |
| IT Link / Lien électronique | | | | | | | | | | | | | | | | |

12. a) Is the description of the work contained within this SRCL PROTECTED and/or CLASSIFIED?
La description du travail visé par la présente LVERS est-elle de nature PROTÉGÉE et/ou CLASSIFIÉE? No / Non Yes / Oui

If Yes, classify this form by annotating the top and bottom in the area entitled "Security Classification".
Dans l'affirmative, classifiez le présent formulaire en indiquant le niveau de sécurité dans la case intitulée « Classification de sécurité » au haut et au bas du formulaire.

12. b) Will the documentation attached to this SRCL be PROTECTED and/or CLASSIFIED?
La documentation associée à la présente LVERS sera-t-elle PROTÉGÉE et/ou CLASSIFIÉE? No / Non Yes / Oui

If Yes, classify this form by annotating the top and bottom in the area entitled "Security Classification" and indicate with attachments (e.g. SECRET with Attachments).
Dans l'affirmative, classifiez le présent formulaire en indiquant le niveau de sécurité dans la case intitulée « Classification de sécurité » au haut et au bas du formulaire et indiquez qu'il y a des pièces jointes (p. ex. SECRET avec des pièces jointes).

**APPENDIX F – INFORMATION RELATED TO SECURITY REQUIREMENT
(APPENDIX E SRCL)**

| PROPONENT (Architect) | |
|----------------------------------|--|
| Legal Name of Firm: | |
| Complete Address: | |
| Telephone Number: | |
| CISD File Number: | |
| Organization Security Clearance: | |

SUBMISSION REQUIREMENTS AND EVALUATION

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

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 90% | = | Technical Score (Points) |
| <u>Phase Two Price Rating x 10%</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 three (3) bound copies of the proposal

Paper size should be - 216mm x 279mm (8.5" x 11")

Minimum font size - 11 point Times or equal

Minimum margins - 12 mm left, right, top, and bottom

Double-sided submissions are preferred

One (1) 'page' means one side of a 216mm x 279mm (8.5" x 11") sheet of paper

279mm x 432 mm (11" x 17") fold-out sheets for spreadsheets, organization charts etc.

will be counted as two pages.

The order of the proposals should follow the order established in the Request for Proposal SRE section

2.2 Specific Requirements for Proposal Format

The maximum number of pages (including text and graphics) to be submitted for the Rated Requirements under SRE 3.2 is thirty-five (35) pages.

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

- Covering letter
- Consultant Team Identification (Appendix A)
- Declaration/Certifications Form (Appendix B)
- Price Proposal Form (Appendix C)
- Integrity Provisions – Associated Information
- Front page of the RFP
- Front page of revision(s) to the RFP
- Table of Contents/Index and section dividers not containing technical information

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

SRE 3 SUBMISSION REQUIREMENTS AND EVALUATION

3.1 MANDATORY REQUIREMENTS

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

3.1.1 Licensing, Certification or Authorization

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

The Cost Specialist shall be a Professional Quantity Surveyor.

The Consultant Team must include the following:

a) Proponent (Prime Consultant)

- Architect

b) Key Sub-consultants / Specialists

- Heritage Conservation Architect

-
- Structural and Seismic Engineer (with heritage building conservation specialty)
 - Mechanical Engineer
 - Electrical Engineer
 - Cost Specialist
 - Time Specialist

c) Information required

- Name of firm and key personnel to be assigned to the project
- For the prime consultant indicate current licence 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, GI 9 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 – List of Names

Proponents who are incorporated, including those bidding as a joint venture, must provide a complete list of names of all individuals who are currently directors of the Proponent. Proponents bidding as sole proprietorship, as well as those bidding as a joint venture, must provide the name of the owner(s). Proponents bidding as societies, firms, or partnerships do not need to provide lists of names. If the required list of names has not been received by the time the evaluation of bids 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.

3.1.5 Security Requirement

At the date of bid closing, the following conditions must be met:

- The Proponent (Prime Consultant) must hold a valid facility security clearance as indicated in Supplementary Conditions SC1.1. The Proponent must provide this security information as indicated in Appendix F.

If the required security information is not provided in Appendix F, Canada will inform the Proponent of a time frame within which to provide the information. Failure to comply will render the proposal non-responsive.

3.2 RATED REQUIREMENTS

The following requirements will be evaluated and rated by a PWGSC Evaluation Board.

3.2.1 Achievements of Proponent on Projects

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

Select a **maximum** of three (3) projects for which construction has reached substantial performance or has been completed within the last ten (10) years, including at least one project in a designated heritage building. Joint venture submissions are not to exceed the maximum number of projects. Only the first three (3) projects listed in sequence will receive consideration and any others will receive none as though not included.

The Proponent should clearly demonstrate experience pertinent to:

- Heritage conservation including protecting and managing heritage elements during demolition and construction, and identifying, removal and storage of heritage material
- Selective demolition in a designated heritage building
- Reuse/Replacement and adaptive reuse of mechanical, electrical and life safety systems in heritage buildings

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 to meet the intent, design challenges and resolutions.
- Heritage designation
- Budget control and management - i.e. construction contract price & final construction cost - explain variation
- Project schedule control and management - i.e. initial schedule and revised schedule - explain variation
- Client references - name, address, phone and fax of client contact at working level - references may be checked
- Names of key personnel responsible for project delivery
- Awards received

The Proponent (as defined in R1410T General Instructions to Proponents, GI2 Definitions) must possess the knowledge on 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.

3.2.2 Achievements of Key Sub-consultants and Specialists on Projects

Describe the accomplishments, achievements and experience either as prime consultant or in a sub-consultant capacity on 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 two (2) projects where construction has reached substantial completion or has been completed within the last 10 years per key sub consultant or specialist identified in section 3.1.2. per key sub consultant or specialist, including at least one project in a designated heritage building. Only the first two (2) projects listed in sequence (per key sub-consultant or specialist) will receive consideration and any others will receive none as though not included.

The Proponent should clearly demonstrate experience pertinent to:

- Heritage conservation including protecting and managing heritage elements during demolition and construction, and identifying, removal and storage of heritage material
- Selective demolition in a designated heritage building
- Reuse/Replacement and adaptive reuse of mechanical, electrical and life safety systems in heritage buildings

Information that should be supplied:

- Project title, location, building program, building scale (m2), year started and year completed
- Construction budget and heritage designation.
- Project description and intent. The project narratives should include a discussion of the experience gained that is relevant to this project and also describe the intent of the project;
- Design philosophy / approach to meet the intent; and design challenges and resolutions
- Names of key sub-consultants responsible for project delivery and brief description of their role and responsibility on project
- Budget control and management
- Project schedule control and management

- Client references – name, company name and phone number of client contact at working level (i.e. having a direct knowledge of project) - references may be checked. Refer to SRE 3.1.6
- Awards received

3.2.3 Achievements of Key Personnel on Projects

Describe the roles, experience and performance of key personnel to be assigned to this project regardless of their past association with the current Proponent firm. This is the opportunity to emphasize the strengths of the individuals on the team, to recognize their past responsibilities, commitments and achievements.

- Principal in Charge
- Lead Conservation Architect
- Lead Structural Engineer
- Lead Mechanical Engineer
- Lead Electrical Engineer
- Cost Specialist
- Time Planning Specialist

All above should have at least 10 years experience in their field of expertise.

Information that should be supplied for each key personnel:

- Individuals name, title and name of firm
- Professional accreditation details (province, year, status, etc.)
- A description of expertise and experience (with number of years) relevant to this project
- A demonstration of roles, responsibilities and degree of involvement of individual on past Projects that will corroborate the person's experience and expertise.
- Special accomplishments / achievements / awards

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:

- An interpretation of the project's functional and technical requirements including the interrelation of complementary and / or co-dependent project components.
- A critical assessment of broader goals as they relate to heritage conservation, sustainable development and site sensitivities.

-
- Demonstrate an understanding of project significant issues, challenges and constraints.
 - Demonstrate an understanding of the project schedule and cost and provide a high level risk management strategy for both schedule and cost.
 - Integration Strategy which would discuss the integration of the PWGSC separately contracted consultants.

3.2.5 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; to describe how the team will be managed. The Proponent is also to identify sub-consultant disciplines and specialists required to complete the consultant team.

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

Information that should be supplied:

- Confirm the makeup of the full project team including the names of the consultant sub-consultants and specialists' personnel and their role on the project.
- Organization chart with position titles and names (Consultant team), what back-up will be committed and reporting relationships. Joint Venture business plan, team structure and responsibilities, if applicable
- Profiles of the key positions (specific assignments and responsibilities)
- Approach and methodology
- Outline of an action plan of the services with implementation strategies and sequence of main activities, incorporating a detailed breakdown of work tasks and deliverables including all required reviews and approvals; clear assignment of responsibilities for activities and deliverables to project team personnel with an estimation of levels of effort.
- Communication strategies – lines of communication and reporting structure within Proponent team and with PWGSC.
- Quality Assurance and Control
- Risk management strategy – including risk techniques applied to project budget and schedule
- Project Cost Control – proposed methodology, including an explanation of how cost control will be applied to maintain the project budget
- Project Time Control – proposed methodology, including how the schedule will be managed
- Project Response Time: demonstrate how the response time outlined in PA 1.12 requirements will be met

3.3 EVALUATION AND RATING

3.3.1 Technical Rating

In the first instance, price envelopes will remain sealed and only the technical components of the proposals which are responsive will be reviewed, evaluated, and rated by a PWGSC Evaluation Board in accordance with the following to establish Technical Ratings:

| Criterion | Weight Factor | Rating | Weighted Rating |
|---|---------------|--------|-----------------|
| 3.2.1 Achievements of Proponent on Projects | 2.0 | 0 - 10 | 0 - 20 |
| 3.2.2 Achievements of Key Sub-consultants / Specialists | 1.5 | 0 - 10 | 0 - 15 |
| 3.2.3 Achievements of Key Personnel on Projects | 1.5 | 0 - 10 | 0 - 15 |
| 3.2.4 Understanding of the Project - technical, schedule & cost | 2.0 | 0 - 10 | 0 - 20 |
| 3.2.5 Management of Services | 3.0 | 0 - 10 | 0 - 30 |
| | | | |
| Technical Rating | 10.0 | | 0 - 100 |

Generic Evaluation Table

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

| | INADEQUATE | WEAK | ADEQUATE | FULLY SATISFACTORY | STRONG |
|---|--|--|--|---|--|
| 0 point | 2 points | 4 points | 6 points | 8 points | 10 points |
| Did not submit information which could be evaluated | Lacks complete or almost complete understanding of the requirements. | Has some understanding of the requirements but lacks adequate understanding in some areas of the requirements. | Demonstrates a good understanding of the requirements. | Demonstrates a very good understanding of the requirements. | Demonstrates an excellent understanding of the requirements. |

| | | | | | |
|--|---|--|--|---|---|
| | Weaknesses cannot be corrected | Generally doubtful that weaknesses can be corrected | Weaknesses can be corrected | No significant weaknesses | No apparent weaknesses |
| | Proponent do not possess qualifications and experience | Proponent lacks qualifications and experience | Proponent has an acceptable level of qualifications and experience | Proponent is qualified and experienced | Proponent is highly qualified and experienced |
| | Team proposed is not likely able to meet requirements | Team does not cover all components or overall experience is weak | Team covers most components and will likely meet requirements | Team covers all components - some members have worked successfully together | Strong team - has worked successfully together on comparable projects |
| | Sample projects not related to this requirement | Sample projects generally not related to this requirement | Sample projects generally related to this requirement | Sample projects directly related to this requirement | Leads in sample projects directly related to this requirement |
| | Extremely poor, insufficient to meet performance requirements | Little capability to meet performance requirements | Acceptable capability, should ensure adequate results | Satisfactory capability, should ensure effective results | Superior capability, should ensure very effective results |

3.3.2 Technical Rating

To be considered further, Proponents **must** achieve a minimum Technical Rating of fifty (50) points out of the one hundred (100) points available as specified above.

No further consideration will be given to Proponents not achieving the pass mark of fifty (50) points.

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:

1. The lowest price proposal receives a Price Rating of 100
2. 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.
3. 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 | 90 | 0 - 90 |
| Price Rating | 0 - 100 | 10 | 0 - 10 |
| Total Score | | 100 | 0 - 100 |

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

SRE 6 SUBMISSION REQUIREMENTS - CHECKLIST

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

Please follow detailed instructions in R1410T General Instructions to Proponents, GI16 Submission of Proposal. 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 - list of directors / owners
- € Integrity Provisions - declaration form (as applicable, pursuant to subsection Declaration of Convicted Offences, of section 01 of the General Instructions)
- € Proposal - One (1) original plus three (3) copies
- € Front page of RFP
- € Front page(s) of any solicitation amendment

In a separate envelope:

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

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PB Appendix Three: Conservation Guidelines (Heritage Conservation Directorate, PWGSC) – 2014

PB Appendix Four: Designated Substance Report (DST Consulting Engineers) – 2014

TERMINOLOGY

The following terms are used in this document:

| | |
|--------------------------------|--|
| Consultant Team | The architectural and engineering team, including specialist consultants in contract with PWGSC for services for the project, as outlined in this Request for Proposal. |
| PWGSC Environmental Consultant | The firm separately contracted by PWGSC to provide environmental services |
| DR | Departmental Representative |
| GC | General Contractor for the Project |
| NMS | National Master Specification |
| PMSS | The project management, cost and schedule entities in contract with PWGSC for Project Management Support Services for this project. |
| PM Team | The combined PWGSC Project Management and PMSS Team, responsible for project and program management. |
| Project Team | The combined private sector and government sector team responsible for delivering the project including the PM Team, Consultant, the General Contractor, representatives from PWGSC, and other government organizations. |

DESCRIPTION OF PROJECT

PD 1 PROJECT INFORMATION

Public Works and Government Services Canada (PWGSC) intends to retain an architectural firm in the capacity of Prime Consultant, supported by a multidisciplinary team of Sub-Consultants, in the design and implementation of the West Memorial Building (WMB) Asset Integrity Project. The Prime Consultant will review all of the related documentation; recommend further examination as required; prepare the design and construction tender documents. The Prime Consultant will also provide construction contract administration for this project. Construction shall be implemented by a General Contractor (GC).

The Project Brief is intended to identify the project requirements and provide overall project information. Information concerning PWGSC standards and policies for consultant services is provided in “Doing Business with National Capital Area (NCA)”, and must be adhered to in conjunction with requirements of this Project Brief.

PD 1.1 Project Identification

| | |
|--------------------------|--|
| PWGSC Project Title: | West Memorial Building (WMB) Asset Integrity Project |
| Location of the Project: | 344 Wellington Street, Ottawa, ON, Canada |
| PWGSC Project Number: | TBD |
| Client / User: | N/A |
| Senior Project Leader: | Martin Vanderveen |
| Project Director: | TBD |
| Senior Project Manager: | Elaine DeCoursey |
| Project Officer/Manager: | Alain Vermette |

PD 2 PROJECT IDENTIFICATION/DESCRIPTION

2.1 Overview

The purpose of this project is to remove designated substances and perform selective demolition in order to prepare the building for a future base building renovation and fit-up for use by PWGSC and its client departments. Allowance should be made to maintain the building in a mothballed state until the major construction can commence.

The Asset Integrity Project is to include the following work:

- Preservation of the heritage value of this Classified Heritage Building, through protection or temporary removal of heritage elements
- Coordination of removal of designated substances in building interior with the PWGSC Environmental Consultant
- Modifications of existing HVAC, electrical and life safety systems to maintain system integrity
- Removal of non-functioning or out-dated building systems;

-
- Selective demolition of partitions, floors, ceilings and finishes in the interior of the building;

2.2 Client/User

There is no Client/User for this project. The building will remain unoccupied until a Client/User is identified and it can be fully rehabilitated. Commissionaires will remain on site for security.

2.3 Classified Heritage Building

The West Memorial Building was designated a Classified Heritage Building in 1992. The West Memorial Building is connected by the Memorial Arch to the East Memorial Building. The heritage value of the West and East Memorial Buildings is outlined in the buildings' Heritage Character Statement, but generally resides in their monumental scale and massing, architectural design, materials and craftsmanship, and site relationships.

2.4 Cost

The Project shall respect the approved Class D construction budget of \$14,610,000. The budget is inclusive of design and construction contingencies. The budget does not include HST or professional fees. It is the Consultant's responsibility to define the scope and develop strategies in order to maintain and manage the scope of this mandate to remain within the approved budget.

2.5 Schedule

The following are project milestones and durations. For more information, please see the project schedule in PD4 Existing Documentation.

Current milestone and durations

Following the Consultant Award:

| | |
|---------------------------------|---|
| RS1 Pre-Design | 2 months to start of RS2, plus 1 month overlap with RS2 |
| RS2 Schematic Design | 2 months to start of RS3 plus 1 months overlap with RS3 |
| RS3 Design Development | 4 months |
| RS4 Construction Documents | 4 months |
| Funding Submission and Approval | TBD |
| RS5 Tender Call | 4 months upon receiving Funding Approval |
| RS6 Construction | 12 months |

TOTAL 28 months

Warranty Review: 12 months following Certificate of Substantial Performance.

The above time allocations shall take into effect immediately after the award of a contract to the Consultant. In developing a detailed schedule, the Consultant must ensure that activities are planned concurrently where no interdependencies exist.

Activity durations are preliminary, and the Consultant is responsible for verifying and confirming the feasibility of the above schedule dates as part of its scheduling mandate (see section RS 8 - Project Time Planning, Scheduling and Control for details).

2.6 PWGSC Environmental Consultant (EC)

An Environmental Consultant shall be retained by PWGSC and will report directly to the Departmental Representative (DR). The PWGSC EC will develop the construction documents for abatement, and provide environmental monitoring and field review of abatement during construction, as well as to prepare documentation for the waste management program (including the Waste Audit, Waste Reduction Work Plan, Tracking Forms, and Waste Diversion Report) The combination of the Project with the future major rehabilitation design must meet the environmental performance requirements of at a minimum, Leadership in Energy and Environmental Design (LEED[®]) NC Silver, 3 Green Globes Design for New Buildings and Retrofits (minimum 70% rating), or equivalent standard. The EC will document aspects of the Project that should be evaluated in conjunction with the future major rehabilitation.

The Consultant shall coordinate with the EC to ensure a seamless delivery of the scope of work.

2.7 Implementation Strategy

In this project, West Memorial Building Asset Integrity Project is to be implemented in advance of a future major rehabilitation project.

2.8 Building Envelope Investigations

Separate to this Project, PWGSC may implement environmental monitoring of exterior walls as well as mock-ups for window restoration and masonry repair/repainting.

PD 3 PROJECT BACKGROUND

3.1 Existing Building Information

The following provides a summary profile of the West Memorial Building (WMB).

| | |
|--------------------|--|
| Location: | 344 Wellington Street |
| Number of Stories: | 7 above-grade stories plus basement and sub-basement plus three pedestrian links and a utility |

| | |
|------------------------------|---|
| | tunnel links to the East Memorial Building. One pedestrian link is in the Memorial Colonnade and the other two are at the basement and ground levels. |
| Inside Gross Area: | 34,331 m ² |
| Future Planned Building Use: | Assembly, administration and support services, occupation by staff and the public. |
| Current Occupancy: | N/A |
| Built: | 1954-58 by Government of Canada |
| Architects: | Allward and Gouinlock |
| | No additions to date. |
| Acquired by Crown: | n/a |
| Heritage Designation: | Designated as “Classified” by FHBRO, 1992 |
| Pedestrian Access: | From Wellington, Albert, Lyon and Bay Streets |
| Loading: | Access via Bay Street |
| Parking: | Parking garage in basement provides approximately 70 parking spaces |
| Vertical Transportation: | 9 passenger elevators and 1 freight elevator |
| Construction: | The steel and reinforced concrete structure is clad in smooth-faced Indiana limestone with a plinth of Stanstead granite |
| Façade: | Original |

3.2 Site

The site is one entire city block with Wellington, Sparks, Lyon and Bay Streets at the perimeters. There is hard and soft landscaping between the exterior walls and the public sidewalks on all four sides. The East and the West Memorial buildings as well as the linking Memorial Colonnade form an ensemble that is a memorial to Canada’s veterans of World War II.

The Memorial buildings have a prominent presence in the urban context which is reinforced by its strong visual relationship with their surroundings including the adjacent built environment and the modernist landscape (Garden of the Provinces) to the west.

In addition to the building, this project also includes the above-grade Memorial Colonnade spanning Lyon Street and two below-grade tunnels: one underground utilities tunnel from the WMB to EMB and the second to the Cliff Street Central Heating Plant.

An existing fuel tank has already been removed.

3.3 Building Envelope

The exterior wall is made up of limestone and granite veneers, block back-up, clay tile and plaster – providing very limited insulation value. On the whole the building envelope has performed relatively well to date – due in part to the drying effect created by low levels of interior humidity and constant heat loss through the wall. The exterior windows consist of a steel frame with multiple panes of single glazing set into steel mullions.

There are two types of roofs: standard built-up tar and gravel flat roofs; and sloped copper roofs.

The building is a good example of the Classical-Moderne design as is apparent in the stepped volumes, flattened details, overall austerity, and references to classical decorative elements. Decorative reliefs above the entranceways representing Canadian decorative iconography are also present. The building was designed to be viewed from all four sides. As such all four elevations of the building are character-defining elements.

The exterior of the building remains largely unchanged since its construction.

3.4 Building Interior

Interior finishes, detailing and craftsmanship reflect the hierarchical importance of the various spaces, generally diminishing in richness on upper floors and in less significant spaces. A variety of marbles, often book- and end-matched, clad the floors and dados of the main entrance lobbies, elevator lobbies, and main floor corridors. Significant woodwork elements include the panelling of the former Ministers' suites on the upper floors. Other important interior finishes include bronze doors, sheet and tile linoleum, terrazzo with coved bases, acoustic tiles, plaster moulding, green enamel and brass/bronze finished elevators, bronze door hardware, glazed and quarry tiles. Despite the modifications, the interior remains largely intact and speaks to the good functional design of the building.

The green color scheme, which is a reference to the veterans, manifests itself in the use of green marble wall base, green enamel elevator cabs and doors, and green glazed tiles. Designed to the Beaux-Arts principles, symmetry, axial layout and hierarchy of spaces are explicitly expressed in the location of the entrances at all four corners, circulation along major and minor axes, and the hierarchical use of finishes diminishing from the richness on higher floors to the utilitarian spaces.

Up-to-date functional developments were incorporated in the original building such as the underground garage; semi-movable office partitions and contemporary finishes such as linoleum and acoustic tiles. Though largely removed, the remaining original lighting fixtures provide sufficient examples of the original lighting scheme.

3.5 Structural

The exterior walls of the building are constructed on a concrete clad steel frame with a terra cotta block infill. The structure of the main roof and the corner tower roofs consist of structural steel beams supporting a light-weight precast concrete slab. Typical floors consist of cast-in-place reinforced concrete slabs of varying thicknesses bearing on concrete beams or joists supported on concrete columns. From the basement to the second floor on the north side of the building, there are also some steel beams and some steel columns supporting the concrete slabs.

The WMB contains no “formally designed” lateral load resisting system. Currently, building is stabilized by a combination of reinforced concrete walls around elevator

shafts, unreinforced clay masonry exterior infill walls and walls around stair shafts, and the inherent frame action of the cast-in-place concrete beam and column system. The seismic capacity has been assessed in a separate project.

3.6 Mechanical

The Mechanical systems are original to the West Memorial Building and have long surpassed their normal acceptable life. Some of the systems are already inactive or decommissioned, since the building was vacated approximately seven years ago.

Steam from Cliff Street Central Heating Plant supplies steam to perimeter heating units with self contained thermostats on all floors, 100% outdoor air handling units with steam heating coils, as well as unit heaters for the 7th floor, loading dock, garage and other high heat-loss areas. Existing 100% outdoor air ventilation units supply outdoor air to the 2nd to 7th floors, the ground, basement, and garages – but some or all of these units may have been decommissioned. There is no major humidification or air conditioning equipment in the building.

The building doesn't have a centralized air cooling system but some perimeter areas have small window type air conditioning units. Cooled water from the Central Heating Plant is supplied to the East Memorial Building only, stopping at the east end of the tunnel connecting the two buildings.

The plumbing system is supplied with a 150 mm water main that enters the building through the east mechanical room. Two domestic water booster pumps increase the city water pressure to serve plumbing fixtures on the upper floors.

The control system is an assortment of electric, pneumatic, electronic and self-contained components.

The fire protection system consists of a 200 mm fire line which enters the east mechanical room and splits to serve both the standpipe and the sprinkler systems.

There are no existing mechanical as-found drawings available for the building systems.

3.7 Electrical

The West Memorial Building is fed via a 15KV Hydro Vault located on the ground floor. The H.V. distribution consists of a four cell Load Break Switch which feeds three single phase 333KVA transformers. This provides a total transformation of 1,000KVA. Reducing to 600V, the H.V. transformers feed a 1600A, 600V, 3Ph, 4W Switchboard which was installed in 1994. The 1600A, 600V, 3ph, 4W Switchboard then feeds downstream transformers and panels which in turn feed end of line equipment.

Currently there is no Emergency Power Generator on site. There seems to have been a generator in the past but has since been removed. Current emergency lighting is being supplied by battery packs. That said, it is unclear if the exit signs are fed by these power packs or regular normal power. Also, the existing fire pump is only fed by normal power.

The majority of the interior lighting system is anticipated to be removed minus life safety lighting, but there are some heritage components which will need to be retained. There are also some exterior quartz lights that partially flood the building, which may need to be replaced and supplemented.

Existing connections servicing the fountain in the Garden of Provinces as well as lighting for the Place du portage bridge are to be maintained and kept operational.

The existing fire alarm system is functional and needs to remain so. Evaluation and verification of the system is required.

There are no existing electrical as-found drawings available for the building systems.

3.8 Vertical Transportation

There are nine (9) gearless and one geared overhead traction passenger elevators in the building. Elevators 1-5 and 7-10 are original. They were imported from England and are considered to be character-defining elements. Elevator 6 was installed in 1997. Some modernization has been done to the elevators over the years, nonetheless there are outstanding CSA B44 Safety Code recommendations for all elevators, as well as outstanding maintenance items. At this time, 7 elevators are locked by TSSA and elevators 7 and 8, which are passenger elevators are functioning, as well as elevator 6 which is the freight elevator. These are located at the loading dock on the West (Bay Street) side of the building.

The original elevators are not to be used for construction access and only Elevator 6, the freight elevator, will be available for use.

3.9 Security

The security system consists of two major components: Security Guards control the main egress manually at the front entrance; and intrusion alarms on the exterior doors. The existing system is to be maintained throughout construction.

3.10 Building Components and Connectivity (BCC)

Existing BCC in the WMB includes intrusion alarms on the exterior doors (along with associated connectivity). The existing system is to be maintained throughout construction.

PD 4 EXISTING DOCUMENTATION

4.1 Available to Proponents

- Project Schedule
- Preliminary Conservation Strategy (Heritage Conservation Directorate, PWGSC) – 2014

-
- Conservation Guidelines (Heritage Conservation Directorate, PWGSC) – 2014
 - Designated Substance Report (DST Consulting Engineers) – 2014

4.2 To be made available to Successful Proponent

- CADD Building Cross-Sections (Heritage Conservation Directorate, PWGSC) –2015
- Roof Condition Assessment (Robertson Martins Architects) – 2015
- Seismic and Loading Assessment (Halsall & Associates) – 2015
- Class D Construction Cost Estimate (Turner & Townsend) – 2015
- Infrared Thermography Investigation Report Volumes 1 and 2 (Heritage Conservation Directorate, PWGSC) – 2015
- Supplemental Phase II Environmental Site Assessment (Geofirma Engineering Ltd) – 2015
- CADD As-Found Exterior Building Elevations (Heritage Conservation Directorate, PWGSC) –2014
- Building Envelope Documentation Analysis (Heritage Conservation Directorate, PWGSC) –2014
- Documentation Analysis – FHBRO Reviews (Heritage Conservation Directorate, PWGSC) - 2014
- Heritage Elements Inventory (Heritage Conservation Directorate, PWGSC) – 2015
- Interior Inventory Report (Heritage Conservation Directorate, PWGSC) – 2014
- Heritage Recording Report (Heritage Conservation Directorate, PWGSC) – 2014
- Designated Substances Report for the West Memorial Rehabilitation Project, West Memorial Building, 344 Wellington Street, Ottawa, Ontario”(DST Consulting Engineers) March 2014 and Designated Substance Report Specifications Section 011425 (DST Consulting Engineers) – 2014
- Test Plans (Peter J. Kindree Architect) – 2014
- Heritage Screening Report (Heritage Conservation Directorate, PWGSC) – 2014
- Environmental Compliance Management Program (ECMP) Checklist- 2013 and the Preliminary Identification of Environmental Services Required (PIESR) 2014.
- Building Systems Decommissioning Procedures Manual – PWGSC (CIMA+, 2008)
- CADD As-Found Floor Plans (prepared by PWGSC NCA PTS Geomatics) - 2003
- Fire and Life Safety Report – Building Condition Review (Leber-Rubes Inc) - 2001

-
- Geotechnical Investigation (Jacques Whitford) 1998
 - Heritage Character Statement for East and West Memorial Buildings (Federal Heritage Buildings Review Office) – 1995
 - Original Construction Drawings (as well as original architectural and structural specifications) are available for reference

PD 5 PROGRAM

5.1 Functional Program

As part of the planned work for future construction, the WMB is to be renovated for use as a swing space. Preliminary plans have been developed for this work to test the feasibility, but the Functional Program is yet to be finalized.

5.2 Abatement and Selective Demolition

Hazardous substances in the WMB have been listed in the Designated Substance Report (DST Consulting Engineers, 2014). The Consultant is to coordinate with the Environmental Consultant provided by PWGSC. During construction, the Consultant must provide contract administration for all aspects of the work.

All areas where new and temporary architectural, structural, mechanical, and electrical systems are to be installed must be abated first to allow for construction and connection of temporary and existing systems.

The Environmental Consultant will ensure that all activities are monitored. The Consultant is to ensure that all work is coordinated under the supervision of their structural, mechanical and electrical engineers to ensure that the building integrity is not compromised and that the building remains safe.

Abatement shall be carried out in compliance with O. Reg. 278/05 and Departmental Policy DP-057, Designated Substances O.Reg. 490/09 as amended, federal TDG and provincial waste management and disposal legislation O. Reg. 347/90.

Construction, renovation, and demolition (CRD) waste should not include any hazardous materials (i.e. waste generated from asbestos, mould, lead abatements, PCB ballasts, fuels, other chemicals). A clear distinction is required between CRD waste and hazardous waste.

Demolition and construction will follow a construction, renovation, and demolition (CRD) waste management plan developed by the Environmental Consultant and approved by the DR.

5.3 Heritage Protection

The Consultant shall be responsible for building and heritage protection. The Preliminary Conservation Strategy, Conservation Guidelines, Heritage Elements Inventory, and Interior Inventory Report will provide information with which the

Consultant will develop the Conservation Approach for retaining and protecting the heritage value of the building, including the character-defining elements.

The FHBRO will need to be consulted on any demolition or removal of character-defining elements. Protection of character-defining elements (materials, assemblies, spaces) during construction will require planning, documentation and storage. The Consultant will assess each building element being considered for removal to determine the best approach in terms of storage and disposal in the Heritage Materials Database (HMD).

There will be an interactive process between the PWGSC and the Consultant in determining which heritage elements require protection or removal. Encapsulation of heritage fabric that may contain hazardous materials will be required. Furthermore, some elements could be removed for storage or reuse before or after appropriate abatement of the work area is completed.

5.4 Temporary Works

The Consultant, in consultation with the PWGSC, shall be required to identify, design and implement temporary architectural, structural, mechanical, and communication, electrical and fire protection requirements related to the transitional periods until subsequent construction is implemented. These temporary systems can be a combination of existing and new equipment, including:

- Temporary heat and ventilation of the interior,
- Temporary life safety systems,
- Mechanical portion of temporary fire protection systems,
- Mechanical ancillary systems required to maintain electrical systems and other life safety equipment,
- Temporary security system for intrusion alarms and monitoring,
- Temporary structural supports as required to maintain the structural integrity (including existing level of seismic resistance), and
- Temporary electrical requirements related to the construction site. Temporary partitions and interior work (while existing electrical systems are removed) such as:
 - Power, lighting, security and fire protection, and
 - Emergency power to maintain heat, life safety systems, lighting and fire protection and supply to exterior services.

PD6 PROJECT OBJECTIVES

Several project objectives have been developed by PWGSC in order to ensure overall suitability and success of the project, as follows:

6.1 Objective One: Heritage Conservation

The West Memorial Building has been evaluated by the Federal Heritage Buildings Review Office (FHBRO) and designated as a “Classified Heritage Building.” An

important objective of this project is to preserve the building for future generations to enjoy. The Asset Integrity design will be subjected to review by the FHBRO.

6.2 Objective Two: Cost Management

Cost management and control is a key objective of this project. The Consultant shall explore all possible options for implementation of the work so that the approved budget is respected.

6.3 Objective Three: Schedule

The WMB Asset Integrity project plays a key role in preparing the site for major construction. As such, it is critical that the project be completed on schedule in order to implement subsequent major construction.

6.4 Objective Four: Health and Safety of Construction Site

PWGSC recognizes the responsibility to ensure the health and safety of all persons on Crown construction projects and the entitlement of both federal employees and private sector workers to the full protection afforded them by occupational health and safety regulations. In keeping with the responsibility and in order to enhance health and safety protection for all individuals on federal construction sites, PWGSC will voluntarily comply with the applicable provincial/territorial construction health and safety acts and regulations, in addition to the related Canada Occupational Safety and Health Regulations.

The Consultant shall be responsible to provide all training and protective equipment for its entire team and comply with all applicable safety standards and policies.

6.5 Objective Five: Environmental / Sustainable Development

The Project provides the opportunity to incorporate innovative, sustainable and environmentally responsive design into the project. Sustainable Development objectives of waste management, environmental protection, and energy efficiency must be addressed throughout the project through coordinating with the Environmental Consultant and supporting maintaining records.

PD7 PERFORMANCE CRITERIA

7.1 Doing Business with the National Capital Area

The document “Doing Business with the National Capital Area” provides information on standards for preparation of documents and deliverables that can apply to all project objectives. This document must be used in conjunction with the Project Brief, as the two documents are complementary. The Project Brief describes project-specific requirements while this document deals with information common to all projects. In case of a conflict between the two documents, the requirements of the Project Brief override this document.

7.2 Heritage Conservation

7.2.1 Authorities with Jurisdiction

The WMB was evaluated with significant values by FHBRO in all three major theme areas: historic associations, architecture and environment. The implications of this designation are defined in the *Treasury Board Policy on the Management of Real Property* (<http://www.tbs-sct.gc.ca/rpm-gbi/doc/gmrp-ggbi/gmrp-ggbi06-eng.asp#a6.6.5>), and as such reviews of intervention will need to be requested from FHBRO. For some aspects of the project, formal reviews of intervention will need to be presented to Federal Heritage Buildings Committee (FHBC). The Consultant will be provided with the Preliminary Conservation Strategy for the project to be further developed and finalised in the Conservation Approach. The conservation approach should be developed in accordance with the *Standards and Guidelines for Conservation of Historic Places in Canada*, which will help guide the design process. FHBC bases its reviews of proposed interventions on the conservation approach set out in this document.

The National Capital Act makes the National Capital Commission (NCC) responsible for coordinating and approving projects related to federal lands and buildings in Canada's Capital Region.

The Government of Canada has established a legal and policy framework for the protection of heritage buildings, sites and moveable heritage assets in its care. In addition to the TB Policy on Management of Real Property the following documents affect how salvaged items are to be assessed and managed:

- *Treasury Board Policy on the Management of Materiel* (<http://www.tbs-sct.gc.ca/pol/doc-eng.aspx?section=text&id=12062>)
- *Guide to the Management of Movable Heritage Assets* (<http://www.tbs-sct.gc.ca/pol/doc-eng.aspx?id=13872§ion=text>)
- *Standards and Guidelines for Conservation of Historic Places in Canada* (<http://www.pc.gc.ca/progs/rcpl-crhp/standards.aspx>)

7.2.2 Heritage Character Statement

The Heritage Character Statement is available on the Directory of Federal Heritage Designations website: http://www.pc.gc.ca/apps/dfhd/page_fhbros_eng.aspx?id=3821.

7.2.3 Conservation Guidelines

Heritage Conservation Guidelines have been developed for the WMB. The Conservation Guidelines are to assist PWGSC in stewardship of this Classified building (site, building exterior and building interior). The Guidelines provide an understanding of the character-defining elements of the complex and are to be a guide for the development of future interventions. The guidelines seek to guide and mitigate the impact of potential changes to the building's character-defining architectural elements.

7.2.4 Preliminary Conservation Strategy

The Preliminary Conservation Strategy includes annotated floor plans by floor indicating recommended treatment for different finishes and features. The report also provides general guidelines for retention of heritage elements in situ; dismantling and storage; removal / disposal with in-kind replacement; and removal / disposal with compatible materials. This document has not been reviewed with FHBRO.

7.2.5 Interior Inventory Report

The Interior Inventory report identifies the heritage character-defining features, finishes and materials throughout the building. The report includes an overview of the interior design intent as well as a summary of materials, finishes and features specified in the original construction documents.

7.2.6 Heritage Elements Inventory

The Heritage Elements Inventory spreadsheets expand upon the Interior Inventory Report and identify potential character-defining elements and summarize them by location, quantity and the heritage value. The work also includes research into historical interior photos and paint analysis to determine the original colour palette of the building interiors.

7.3 Cost

The definitions of Classes of Construction Estimates used by PWGSC are incorporated into the document, “Doing Business with the National Capital Area (NCA).” In addition, the costing activities and deliverables are described throughout the Required Services section.

The cost control objective will be achieved through the following:

- A rigorous cost management system in place to both monitor and report on cost,
- Formal costing submissions for the design and construction documents, in accordance with all Required Services sections and at all stages of Contract Document production,
- Redesign work to be undertaken to maintain the construction cost budget when required,
- Determination of appropriate contingencies,
- Iterative and continuous design analysis and adaptation to maintain cost objective in collaboration with the PWGSC’s Cost Consultant,
- Strong and disciplined change control system,
- Strong communications,
- Authorities in place for approvals, and
- Management of risk fund.

7.4 Schedule

Time management activities are described in the document, “Doing Business with the National Capital Area (NCA).” In addition, the Time management activities and deliverables are described throughout the Required Services section.

7.5 Environmental Control

Minimum temperatures are to be maintained in order to protect the heritage fabric. The following guidelines are to be followed:

- .1 Ensure that temperature and humidity in sensitive heritage spaces are controlled to minimize fluctuations.
- .2 Ensure that air temperature and relative humidity requirements below are met throughout work:
 - At Inner face of building envelope:
 - Minimum temperature: 15°C. Maximum temperature: 20°C
 - The building doesn't have a humidification system, and the building envelope was not designed for humidification, however ideally a minimum relative humidity in winter conditions should be 20% RH and a maximum in the summer should be 60% RH.
- .3 Install digital thermometers/hygrometers in sensitive heritage spaces and on the inner face of the building envelope

7.6 Health & Safety of Construction Site

In general, the health and safety of the construction site is governed by:

- Canada Labour Code (<http://www.labour.gc.ca/eng/resources/laws/index.shtml>)
- Ontario Occupational Health & Safety Act (<http://www.labour.gov.on.ca/english/hs/>)

Fire protection during construction shall be governed by:

Treasury Board Fire Protection Standard (<http://www.tbs-sct.gc.ca/pol/doc-eng.aspx?id=17316§ion=text>)

HRSDC FC 301: Standard for Construction Operations

(http://www.hrsdc.gc.ca/eng/labour/fire_protection/policies_standards/commissioner/301/page00.shtml),

HRSDC FC 302: Standard for Welding and Cutting

(http://www.hrsdc.gc.ca/eng/labour/fire_protection/policies_standards/commissioner/302/page00.shtml), and

National Fire Code and other applicable standards, regulations and Acts.

Fully coordinated and continuous follow-up for implementation compliance and further site issues of this particular aspect of temporary work cannot be understated. The provision of this work will be critical to the successful completion of the project. The Consultant must take a leading and proactive role in this matter throughout the project.

7.7 Environmental / Sustainable Development

7.7.1 LEED/Green Globes

The Project provides the opportunity to incorporate innovative, sustainable and environmentally responsive design into the rehabilitation. PWGSC policy requires that rehabilitation projects of Crown-owned buildings meet, at a minimum, Leadership in Energy and Environmental Design (LEED[®]) NC Silver, 3 Green Globes Design for New Buildings and Retrofits (minimum 70% rating), or equivalent standard.

Sustainable Development is defined in broad terms as a strategy that routinely and consistently includes the consideration of the environmental, economic and societal impact of every decision made for the project. The general areas of focus include but are not limited to:

- Energy efficiency and conservation,
- Greenhouse gas emissions reduction,
- Water management and conservation,
- Pollution prevention,
- Site conservation (protection and preservation of valued natural site features), and
- Environmental Impact,
- Waste Management,

As well as the *Treasury Board Policy on Management of Real Property* other guidance documentation outlining sustainable design principles to be included for federal real property projects include:

- *Environmentally Responsible Construction and Demolition Handbook* (<http://www.tpsgc-pwgsc.gc.ca/biens-property/gd-env-cnstrctn/index-eng.html>) and
- *Green Office at a Glance Handbook* (<http://www.tpsgc-pwgsc.gc.ca/biens-property/env/page-1-eng.html>)

7.7.2 Solid Waste Management

This project requires a non-hazardous solid waste management program which must be implemented for construction and renovation. Creating the program will be the responsibility of the PWGSC Environmental Consultant (EC). The Consultant must coordinate all requirements and the scope of the demolition program with the PWGSC EC, who will prepare the Waste Audit and Waste Reduction Work plan, which are elements of the non-hazardous solid waste management program. The Consultant shall review a draft of the Waste Audit and Waste Reduction Work plan prior to being finalized and confirm in writing that scope of the Waste Audit is reflective of the planned construction work.

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

CRD waste should not include any hazardous materials (i.e. waste generated from asbestos, mould, lead abatements, PCB ballasts, fuels, other chemicals). Therefore a clear distinction is required between CRD waste and hazardous waste.

PD 8 CONSULTANT SERVICES

Members of the Consultant team may have the necessary qualifications and expertise to provide services in more than one discipline or specialty.

The consultant team for this project must be capable of providing the following integrated services:

8.1 Architecture, Interior Design and Specialty Services:

- General Architecture

8.2 Heritage Building Services:

- Heritage Conservation Architecture

8.3 Engineering and Specialty Services:

- Structural and Seismic (with heritage building conservation specialty)
- Municipal and Civil Engineering
- Mechanical (including HVAC, plumbing, controls, and fire protection)
- Electrical (including expertise electrical distribution, lighting, fire alarm, communications, multimedia and security systems)

8.4 Regulatory Analysis, Planning and Development Services

- Building code and life safety

8.5 Project Control Services:

- Cost Planning, Estimating and Control (PQS)
- Time Planning, Scheduling and Control (recognized specialists)

DESCRIPTION OF SERVICES

PA 1 PROJECT ADMINISTRATION

INTENT

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

1.1 Departmental Representative (DR)

The PWGSC Senior Project Manager is directly concerned with the project, and is responsible for its progress and is the liaison between the Consultant, other sectors of PWGSC and the Client / Users. PWGSC administers the project and exercises continuing control over the Consultant's work during all phases of the project. Unless directed otherwise by the PWGSC DR, the Consultant is to obtain, or cause to be obtained, all federal, municipal and other governmental or regulatory requirements and approvals necessary for the project.

1.2 Lines of Communication

All correspondence from the Consultant shall be distributed as directed by the PWGSC DR. The Consultant shall develop a correspondence protocol to be approved by the PWGSC DR and incorporated into the project.

All communications must carry the contract name/number, PWGSC project title and PWGSC Consultant contract project number and a date in a non-ambiguous format (i.e. 01/09/02 is ambiguous and is not acceptable). Automatic date fields shall not be used except when preceded by the text "Printed on."

1.3 Media

The Consultant shall not respond to any requests for project related information or questions from the media. Such inquiries must be directed to the PWGSC DR.

The Consultant shall ensure that no staff of the Consultant (including sub-consultants or specialist) grants interviews with the media unless requested to do so by the PWGSC DR. All contacts by reporters or others, requesting information about the project, shall be referred to the PWGSC DR immediately, without response to those requesting the information.

1.4 Confidentiality of Information

The Consultant and any person contracted or employed by the Consultant shall not discuss issues relating to the project specifically including, but not limited to building layout, design, security provisions, except as they relate to the direct provision of services related to this contract.

1.5 General Project Deliverables

Where deliverables and submissions include summaries, reports, drawings, plans, specifications and schedules, three (3) hard copies shall be provided along with three (3) soft copies in native electronic format and PDF format, unless otherwise specified.

Electronic format shall mean:

| | |
|-------------------------------------|---|
| Deliverable | Acceptable PWGSC Format |
| Written reports and studies: | MS Word |
| Spreadsheets and budgets: | MS Excel |
| Presentations: | MS PowerPoint and/or MS Visio |
| Schedules: | Microsoft Project/ Primavera |
| Change management, daily logs, etc. | TBD |
| Drawings: | AutoCAD |
| Specifications: | NMS, in MS Word format |
| Web (Internet) | Adobe PDF, HTML, Macromedia Flash, etc. |

Note: All drawings shall be generated and distributed in the format using layering and file transfer protocols as prescribed in ‘Doing Business with NCA and PWGSC National CADD Standard (<http://www.tpsgc-pwgsc.gc.ca/biens-property/cdao-cadd/index-eng.html>). The electronic deliverables shall be provided according to standards listed in “Doing Business with NCA.”

1.6 Acceptance of Consultant Deliverables

Acceptances indicate that, based on a general review of material for specific issues, the material is considered to comply with governmental and departmental objectives and practices, and that overall project objectives should be satisfied. The PWGSC DR, PWGSC Heritage Conservation Directorate (HCD) and other Quality Assurance team members, as well as Authorities Having Jurisdiction, will review the Consultant’s work product and will provide review comments. The Consultant shall respond formally in writing to all comments until all points are resolved.

PWGSC reserves the right to reject undesirable or unsatisfactory work; the Consultant must obtain the PWGSC DR’s acceptance during each of the project stages before proceeding to the next stage.

No acceptance or approval by PWGSC, whether expressed or implied shall be deemed to relieve the Consultant of professional or technical responsibility. Neither does acceptance of an estimate by PWGSC in any way abrogate the Consultant's responsibility to not exceed the approved construction budget throughout the life of the project, or the requirement to redesign should the lowest acceptable bid differ significantly from the approved construction budget.

1.7 Coordination by the Consultant

The Consultant shall:

- a) Ensure fully coordinated submissions – The importance of this cannot be

-
- understated: PWGSC will reject submissions which fail to be fully coordinated,
- b) Ensure clear, accurate and ongoing communication of design, construction budget, and scheduling issues (including changes) as they relate to the responsibilities of Consultant from initial base building reviews to post construction reports,
 - c) Provide input for the PWGSC DR's risk management plan,
 - d) Co-ordinate quality assurance process ensuring submissions are complete and signed-off by the designated senior reviewer, and
 - e) Ensure adequate and timely Site inspection Services and related reporting and
 - f) Attend all required meetings.

1.8 Meetings

As a minimum, the Consultant shall arrange meetings at a frequency of once every week with the Departmental Representative throughout the entire project development period. All key members of the Consultant Team are to be available to participate in these meetings on a monthly basis, on average. As required, other PWGSC staff and PWGSC Consultants may be asked to attend. Meetings shall be held in the National Capital Area, generally in the offices of PWGSC.

The meetings will be chaired by the PWGSC DR or nominated delegate. The Consultant shall record all issues and decisions and prepare and distribute minutes of all issues and decisions within 48 hours of the meeting. The format of the meeting minutes shall be approved by the DR prior to the issuance. The Consultant shall create and maintain a list of outstanding action items and outstanding issues, and include these lists in the distribution of the meeting minutes.

During these meetings, working sessions will be required in the process of delivering the Required Services such as sessions between the Consultant and PWGSC Technical Resources, the PMSS PM, or authorities having jurisdiction. Decisions taken at these working sessions must be ratified at the next Project Team meeting.

1.9 Project Response Time

It is a requirement of this project that the key personnel of the Consultant, sub consultant and specialist firms be personally available to attend meeting or respond to inquiries within ½ day.

1.10 Submissions, Reviews and Approvals

1.10.1 Authorities Having Jurisdiction

This is a high profile project of national significance requiring a significant investment of public funds. A facility with extensive interventions to a structure of high architectural, historical and national significance is required. Project reviews will be rigorous at the federal level.

The PWGSC DR as well as the authorities identified below will review work in progress on a continuing basis. Formal presentations are required for design and project approvals

in accordance with the project delivery phases outlined in Required Services (RS). Ad hoc presentations will be required to various committees and senior officials.

Below is a list of federal authorities that will require presentations and/or submissions for approval. The frequency of meetings indicated is an estimate only. It will be affected by the project phase, issues and requirements for decisions and approvals. The Consultant shall attend all other meetings as needed and to make presentations to satisfy Authorities as identified.

The following are authorities having federal government jurisdiction over the project:

| <u>Authority</u> | <u>Federal Government Jurisdiction</u> |
|---|---|
| Treasury Board of Canada | Project and contract approvals; |
| Public Works and Government Services Canada | Contracting authority and project delivery; Environmental Determination in accordance with the Canadian Environmental Assessment Act, 2012 (CEAA 2012); |
| National Capital Commission (NCC) | Federal Design and Land Use Approval for site, landscape, hoarding, building design; and |
| Federal Heritage Building Review Office (FHBRO) | Reviews design requirements to ensure preservation of building and site heritage character. |

The basic technical standards and requirements for all Public Works and Government Services Canada (PWGSC) projects are the National Building Code, the National Fire Code and the Treasury Board Secretariat, Fire Protection Standard for Design and Construction. Note that Human Resources and Skills Development Canada (HRSDC) is no longer providing project reviews after April 1, 2014. PWGSC Departmental Fire Protection Coordinator (DFPC) and Director in the Occupational Health & Safety Directorate, is the AHJ for complex issues regarding fire protection requiring a decision, in all assets and facilities for which PWGSC is the custodian

1.10.2 Other Authorities Having Jurisdiction

Although the federal government does not formally recognize jurisdiction at other levels of government, voluntary compliance with the requirement of these other Authorities is required unless otherwise directed by the PWGSC DR. In areas of conflict concerning provincial requirements, federal authority prevails. Codes, regulations, by laws and decisions of authorities having jurisdiction shall be observed. In cases of overlap the most stringent will apply, as determined with the DR.

PWGSC will voluntarily comply with the applicable Ontario Construction Health and Safety Acts and regulations, in addition to the related Canada Occupational Safety and Health Regulations.

| Authority | Jurisdiction |
|--|---|
| Ontario Ministry of Labour | Employment Standards Construction Safety Designated Substance Management Workers Compensation |
| Ontario Ministry of the Environment | Environmental Protection Act: 3R Regulations Building Discharges into the air, water and ground Disposal of Designated Substances including Asbestos |
| Ontario Ministry of Consumer and Commercial Relations – TSSA | Construction Hoists, Elevators, Escalators and Dumb, Waiters, Pressure vessels |
| City of Ottawa | Planning and Design Submissions for Information Building, Demolition and Plumbing Permits and Inspection Fire Safety, Equipment and access for fire-fighting equipment Ottawa Built Heritage Advisory Committee, Planning Committee and City Council Occupancy Permit |
| Electrical Safety Authority (ESA) | Electrical Permits and Inspection |

The Consultant will, with the assistance of the PWGSC DR, identify any other Authorities Having Jurisdiction and endeavor to ensure that all design work meets or exceeds all codes, regulations and standards of these other Authorities Having Jurisdiction.

1.10.3 Municipal Building Permit and Other Permits

On behalf of PWGSC, the Consultant will apply for building permits from the City of Ottawa, by supplying the supporting documentation for permit application. Payment of the permit shall be the responsibility of the General Contractor. The Consultant shall participate in any negotiations and assist in resolving related issues prior to tender. Submissions will begin at the end of Design Development and will be followed by a final submission at 99% tender documents. Additional submissions/presentations may be required if requested by the City.

If required, the General Contractor will apply for interim and final Occupancy Permits and coordinate the resolution of all outstanding issues relating to obtaining the permit. Municipal authorities will have access to the site as required and will provide reporting of their findings. The Consultant shall address and respond to all issues raised by Municipal officers.

1.10.4 Presentations and Submissions

1.10.4.1 Senior Management - PWGSC

Purpose of Review and Approval: Final decision authority for all options;

Submission Format: oral presentations including presentation decks/boards,

Number of Submissions: One (1) mandatory during the Design Development Stage

1.10.4.2 Project Team – PWGSC (including HCD/Quality Assurance Team)

Purpose of Review and Approval: Program, Design and Technical Quality Assurance and constructability reviews;

Submission Format: reports, drawings and specifications, oral and audio-visual presentations;

Submission Schedule: Submissions are reviewed at the Schematic Design Stage, Design Development, and Construction Documents phase (66% and 99% completion), when completed work has been forwarded to the PWGSC DR;

Expected Turnaround Time: 2-3 weeks for each submission;

Number of Submissions: Schematic Design: One (1); Design Development: One (1); and Construction documents: Two (2) for 66 % and 99 %; Tender Documents: One (1); plus any follow-up reviews at each stage. Submissions are outlined above and supplement Senior Management presentations noted in PA 1.10.4.1.

1.10.4.3 Federal Heritage Buildings Review Office (FHBRO)

Note: Refer to the Guide to Working with the FHBRO for further detail.

www.pc.gc.ca/progs/beefp-fhbro/ManRefrnce.aspx

Purpose of Review: Impact on Heritage Character, Heritage and Conservation Quality Assurance;

Submission Format: report, drawings and specifications, oral and audio-visual presentations;

Submission Schedule: Submissions are reviewed at Schematic Design, Design Development and during the Construction Documents Stage; however, since recommendations may necessitate design changes, it is recommended to liaise periodically throughout the planning and design process with the FHBRO office to obtain consensus in the process. These reviews should be scheduled after FHBRO concerns have been addressed.

Expected Turnaround Time: the committee will provide comment and feedback at the presentation followed by a Federal Heritage Building Committee's review letter, usually in 2-4 weeks;

Number of Submissions: Three (3) mandatory plus any follow-up reviews.

1.10.4.4 National Capital Commission (NCC)

Purpose of Review and Approval: Planning, Site and Building Design; Federal Design and Land Use Approval (FLUDA);

Submission Format: report, drawings and specifications, oral presentations;

Submission Schedule: Submission will be reviewed at the Design Development (DD) stage for Federal Approval (FLUDA – Level 3) at a stage decided by the DR and NCC staff. One supplemental submission during the construction documents phase are may be required.

The NCC role includes reviewing all proposals for work or alterations to federal heritage buildings and sites through the federal land use, transaction and design approvals process (FLUDA). This project will be a Level 3 (a major project having a high symbolic value for the Capital). Level 3 projects require a detailed internal review by a team of NCC professional staff and are presented to the Advisory Committee on Planning, Design and Realty (ACPDR) prior to being submitted to the NCC Board of Directors for approval. Abatement & selective demolition construction will not proceed until the FLUDA is obtained.

Expected Turnaround Time: the committee will provide comment and feedback at the presentation followed by minutes in three (3) weeks, formal approval usually follows in six (6) weeks;

Number of Submissions: One (1) mandatory plus any follow-up reviews.

1.10.4.5 City of Ottawa

Purpose of Review and Approval: To obtain building permit

Submission Format: drawings and specifications

Submission Schedule: submissions are reviewed when completed work has been forwarded to the PWGSC DR for site plan and building permit approvals, Design Development, and Construction Documents

Expected Turnaround Time: Dependent on type of submission, usually four (4) weeks to three (3) months;

Number of Submissions: until permit/approval has been received.

1.11 Project Approvals

The project has funding to proceed with project planning and design for the Consultant services. After the Design Development Stage is complete, the Consultant will proceed with preparation of construction documents and PWGSC will request separate funding to proceed with construction prior to completing construction documents and calling for tenders.

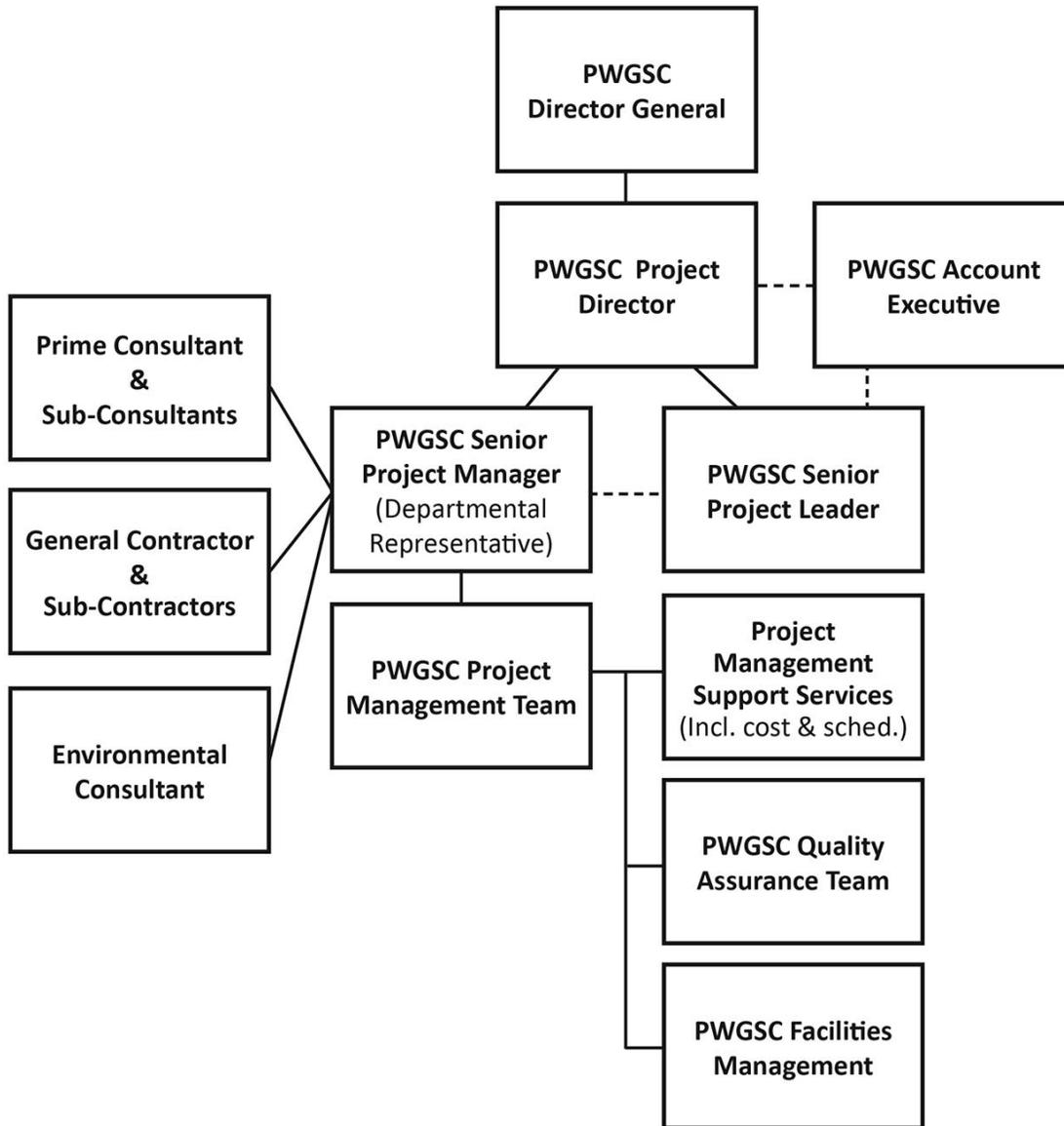
1.12 Official Languages

This project requires some services in both official languages. The Consultant must be able to provide bilingual (English and French) services orally and in writing, as and when required. These services must include, but not be limited to presentations, interviews, and meetings. Refer to the section RS 10 Bilingual Documents of this Request for Proposal document for additional details related to bilingual deliverables.

PA 2 Project Team Organization

This project is to be managed and implemented in a collaborative manner. All members of the Project Team are required to work cooperatively at every stage of the design and construction process in order to assure the creation of a successful and meaningful end result. Under the leadership of the PWGSC DR, all team members are responsible for establishing and maintaining a professional and cordial relationship.

The Project Team refers to the key representatives, involved in coordinating and delivering this project. The PWGSC Departmental Representative leads the Project Team, with membership representing those responsible for project implementation. The following chart identifies the organizational relationships. Authorities Having Jurisdiction are not indicated. Solid lines indicate functional reporting relationships. Dotted lines indicate project communication relationships.



2.1 Roles of the PWGSC Project Team

2.1.1 PWGSC Director General

The Director General holds overall accountability for the project and reports to upper management within PWGSC.

2.1.2 PWGSC Project Director

The Project Director is accountable for the expenditure of public funds and the delivery of the project in accordance with terms accepted by the Treasury Board. The Project Director reports to the PWGSC Director General.

2.1.3 PWGSC Senior Project Leader

The Senior Project Leader is responsible for the funding and financial aspects of the project. The Senior Project Leader reports to the Project Director.

2.1.4 PWGSC Senior Project Manager

The PWGSC Senior Project Manager is the Departmental Representative (DR). The Senior Project Manager and PM Team are accountable to the Project Director for management of the project implementation. The Consultant reports to the PWGSC DR.

2.1.5 Project Management Support Services (PMSS)

PWGSC may engage external Project Management Support Services (PMSS) to provide project management, schedule, costing, construction advice and project management administration support for the PWGSC Project Manager. PMSS reports to the PWGSC DR and will assist in the day-to-day management of the project. PMSS will operate on this project as an extension of and part of the PWGSC Project Manager's and Project Officer's responsibilities.

These firms will provide independent third- party review of design and construction documents, cost estimates and schedules as well as any other documents produced by the Consultant.

2.1.6 PWGSC Senior Communications Advisor

The Senior Communications Advisor is the PWGSC representative responsible for all communications requirements and activities including contact with the media and the public.

2.1.7 PWGSC Technical Resources and the Quality Assurance Team

The PWGSC Technical Resources and Quality Assurance Team provide technical advice and quality assurance to PWGSC for key architectural, heritage conservation, sustainability, and engineering professional disciplines including design reviews to ensure technical requirements are suitably defined and incorporated through all phases of research, planning, design and implementation. PWGSC Technical Resources and the Quality assurance Team will participate regularly in design phases and will review consultant deliverables. During construction, the technical resources may attend construction meetings and field review on an *ad hoc* basis to advise the DR. As of April 1, 2014, the PWGSC Technical Resources and Quality Assurance Team have been increased to include fire protection engineering.

REQUIRED SERVICES

General Requirements

The Consultant shall deliver integrated and coordinated professional services in accordance with the requirements set forth in this Request for Proposals. All services must be provided in accordance with the requirements and standards identified in *Doing Business with NCA*.

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RS 1 PRE-DESIGN STAGE

1.1 Intent

To assess existing conditions and background information, including identifying any gaps in information.

Coordinate with the PWGSC Environmental Consultant.

1.2 Activities

Scope and Activities:

- Attend project meetings; record and distribute minutes
- Analyze the project requirements/program
- Review all available existing reports and investigations related to the project
- Review the gap analysis of the seismic and load assessment (prepared by others)
- Assess the existing mechanical, electrical and fire protection systems
- Visit the building and site to verify all documentation, including the availability and capacity of services needed for the project
- Identify and verify all authorities having jurisdiction over the project
- Identify the codes, regulations and standards that apply
- Prepare as-found structural, mechanical, and electrical drawings in sufficient detail to be used as base drawings for construction documents
- Verify the cost plan/budget to confirm that the costs are realistic and achievable
- Verify the proposed project schedule to confirm that all milestone dates are achievable
- Outline quality management process for the consultant team to ensure comprehensive coordinated consultant services;

1.3 Deliverables

Provide a Pre-Design Report, including the following:

- Executive Summary (to provide a précis of the Pre-Design Report, including written identification of the problems, conflicts or other perceived information/clarifying assumptions for the acknowledgment of the Departmental Representative and outline any recommendations requiring PWGSC approval)
- Any gaps in documentation and site information
- Assessment of structural systems
- Assessment of mechanical and electrical systems
- As-found structural, mechanical and electrical base drawings

1.3.1 Architectural

- Review and verify existing architectural base drawings
- Prepare site plan for use as base drawing

1.3.2 Assessment of Structural Systems

- Review seismic and loading assessment report, as well as information gathered from exploratory openings.
- Prepare structural base drawings, using the existing information available from test openings as well as the original construction documents and information gathered on site.

1.3.3 Assessment of Mechanical and Electrical Systems

- Most of the mechanical and electrical systems will probably need replacement due to poor condition and long life. However, there might be mechanical or electrical elements that could be reused based on equipment condition, age, operational efficiency, obsolescence, maintenance costs. As an example, some plumbing drainage piping is still in good condition. The existing perimeter steam heating may be reused for building heating. The garage air ductwork systems might also be reused depending on the results of the evaluation and needs of ventilation. The objective of this investigation is to identify those elements that could be re-used and also provide a strategy for replacement and timing during the Asset Integrity or the major Rehabilitation construction for replacement in order to optimize construction schedule, minimize the life cycle costs of the M&E systems and minimize building shutdowns. The life expectancy of existing systems utilised for temporary services is up to 10 years after completion of Asset Integrity construction. The life expectancy of systems to remain in the rehabilitated construction is 30 years subsequent to completion of the Asset Integrity Project.
- The Consultant is to visit the site, conduct visual inspections of the building electrical and mechanical systems, and gather information to assess condition of the systems. The Consultant is to discuss with the authorized Building Operator the mechanical and electrical problem areas, issues, modes of operation, condition of equipment, equipment efficiencies.
- The Consultant is to review existing drawings (architectural, mechanical, electrical, structural).
- In situations where the Consultant deems it is necessary to perform testing (example TAB, ultrasound of piping systems, etc) to evaluate the conditions of

the systems and equipment the Consultant is to advise the Departmental Representative to obtain approvals for the tests

- The Consultant is to review related existing mechanical and electrical documents (BCRs, investigation and reports, designated substances report, drawings). However, there are no as-built drawings known to be available.
- The Consultant is to perform an assessment of the mechanical and electrical systems and equipment related to fire protection, fuel systems, plumbing, storm and sanitary systems, controls, HVAC, heat transfer station or interface to the cliff plant heating and cooling services, steam systems, High Voltage and Low Voltage electrical distribution, emergency power distribution, lighting, fire alarm and all other mechanical and electrical equipment in order to make recommendations of those systems that could remain in operation during the selective demolition process to take place during the Asset Integrity Project. The assessment will also include those systems to remain in place until the subsequent major rehabilitation construction.
- There is asbestos in numerous heating pipes that are feeding the steam perimeter heaters. The steam perimeter heating will likely remain and be used until the major renovation, however the Consultant is to evaluate if the radiators pipe insulation could be removed as part of this project.
- Even though it appears the existing air ventilation units have been shut down/disconnected, the Consultant is to assess if minimum air ventilation and air movement is required in order to preserve the structural and architectural components and prevent mould formation. In case that it is decided minimum air ventilation is required the consultant is to assess if the existing ventilation units can be used for such a purpose.
- The Consultant is to assess code compliance of mechanical and electrical systems with applicable current standards.

1.3.4 Mechanical and Electrical As-Found Base Drawings

Existing as-found drawings are limited to architectural only. Consultant is to utilize existing construction drawings as well as information obtained on-site to prepare as-found drawings for mechanical and electrical systems as follows:

- The Consultant is required to collect information of mechanical and electrical systems on site and use existing and original drawing as a guideline in order to produce “as-found drawings\” of the site conditions. All mechanical and electrical systems must be represented in a clear and complete manner. These as-found drawings will be used as base drawings for the demolition work and for the new

work in subsequent phases of design

- The “as-found drawings” will be used as base drawings to produce mechanical and electrical construction drawings to show the elements to be demolished for the Contractor’s work. These contract demolition drawings must allow the contractors to bid on an equal basis and to do the demolition work.\
- Level of Detail: The “as-found” drawings and demolition drawings must not be limited to the mechanical and electrical rooms since there is demolition work and new work to be done outside the mechanical and electrical, for example, air handling units located in different floors/areas, ductwork and piping, cables, and electrical panels. The level of detail in drawings required is the level of any other tender package for similar demolition and new work to allow any contractor to bid on an equal basis. All elements to be demolished should be shown in the drawings.

1.3.5 Time Cost and Risk Analysis

Analysis is to include:

- Confirmed or adjusted project cost and time plans
- Review of milestone dates, critical path and project schedule logic
- Milestone dates and project schedule logic, including verification that all milestone dates are achievable and logic is practical
- Detailed WBS for all aspects of the project pertaining to the Consultant activities and deliverables,
- Project Risks including the identification of the problems, conflicts or absence of information; probability of occurrence and impact as well as recommended mitigation measures

1.3.6 Rebuttal to PWGSC Quality Assurance Report

Rebuttal to PWGSC Quality Assurance Report, aspects to be included, at a minimum:

- Review and analysis of comments provided by the PWGSC Departmental Representative, and
- Written response to all comments provided by the above until the comments are resolved. Provide a response document with the previous submission comments at each submission and a final copy of response document.

RS 2 SCHEMATIC DESIGN

2.1 Intent

To translate the project requirements into space parameters. To develop implementation strategies and analyze them against priorities and program objectives previously identified. Out of this process, a complete implementation strategy is to be recommended

to proceed to Design Development. This deliverable will become the Project Scope of Services and will be utilized throughout the project to guide the delivery.

Coordinate with the PWGSC Environmental Consultant.

2.2 Activities

Scope and Activities:

- Attend project meetings; record and distribute minutes
- Develop the concept design for the demolition work in close coordination with the PWGSC Environmental Consultant (EC)
- Develop the initial implementation strategies for selective demolition, including heritage protection as well as any temporary building systems required for the building
- Develop the initial Conservation Approach and review with FHBRO staff
- Prepare the Heritage Materials Database (HMD) and Heritage Material Management Protocols (HMMP)
- Coordinate directly with the PWGSC Environmental Consultant for the waste management program and the abatement work with the demolition scope.
- Analyze the work described in the concept design with regard to the project goals including risk, cost and schedule
- Develop a draft risk plan and participate in a workshop to identify and mitigate risks, including identifying project risks and recommend mitigation measures
- Present and review the initial implementation strategies, initial conservation approach and draft concept design for feedback and identification of preferred approach
- Finalize the initial implementation strategies, initial conservation approach and concept design for further development with all supporting background and technical justifications

2.3 Deliverables

Provide the Schematic Design Report, including the following:

- Executive Summary (to provide a précis of the Schematic Design Report, including written identification of the problems, conflicts or other perceived information/clarifying assumptions for the acknowledgment of the Departmental Representative and outline any recommendations requiring PWGSC approval)
- Initial Implementation Strategy
- Initial Conservation Approach
- Heritage Materials Database (HMD)
- Heritage Materials Management Protocols (HMMP)
- Structural Analysis to include review of the seismic and load assessment and development of the implementation strategy
- Concept Drawings, including abatement, selective demolition, heritage protection, temporary structural, mechanical, electrical, security and BCC

-
- Time, Cost and Risk Analysis, including the Project Schedule and Class C cost estimate
 - Quality management process
 - Design Meetings Minutes

2.4 Details

2.4.1 Initial Implementation Strategy

The Initial Implementation Strategy is to include consideration for all building systems and scope of work, including the following:

- Temporary structural, mechanical, electrical, security and controls systems required to protect the asset integrity during construction as well as the subsequent years until the major rehabilitation construction starts
- Demolition selected to clean as much of the site as possible, while at the same time ensuring that sufficient original building fabric remain in order to avoid limiting design decisions for the future major rehabilitation project
- Identify extent of abatement locations as well as of any hazardous materials that will remain as required by the Initial Conservation Approach

2.4.2 Heritage Conservation

2.4.2.1 Initial Conservation Approach

The Initial Conservation Approach is to be developed, taking into consideration of the Conservation Guidelines and Preliminary Conservation Strategy, with the objective of protecting the heritage value and character-defining elements of the building.

2.4.2.2 Heritage Material Database (HMD)

The Consultant shall prepare the Heritage Material Database for the architectural components of this classified federal heritage building, further developing the spreadsheets in the Heritage Elements Inventory. This database identifies: the item description, location and quantity; assessment of heritage value; material value; and links to photographs from heritage recording report prepared by others..

The Heritage Material Database will be further developed for the architectural components of this classified federal heritage building. This database identifies; the item description, location and quantity; heritage value; material value; and heritage recording. The Consultant shall recommend the salvage/disposal/protect/reinstate requirements for each component based on the project, architectural design, and the conservation approach. Further detail shall be provided if the item is selected for salvage including; who will remove it, storage requirements for long term or short term, outdoor or indoor storage.

The recommendation provided by the Consultant will be reviewed by PWGSC and one

(1) workshop will be required. This database shall be continually updated and maintained during the design and construction phases of the project by the Consultant with monthly update reports to PWGSC. The completed Heritage Materials Database is to be used by the General Contractor to track conservation treatments, crating, relocation and removals of building elements

2.4.2.3 Heritage Material Management Protocols

The Consultant will also prepare Heritage Material Management Protocols document. It will describe the protocols associated with handling heritage materials on the project. It is to be read in conjunction with the contract documents to be prepared for the project.

The HMMP is a document which is an appendix to the construction specification sections containing the heritage protective measures. This document details the protocol for the General Contractor to and shall detail as a minimum:

- the initial material actions,
- the various steps and types of cataloguing: the purpose of this is to provide guidance to the GC for the appropriate cataloguing of heritage materials that are disassembled from their current location, including those that will be reinstalled or permanently stored.
- the material handling during removal: the purpose is to provide guidance for the appropriate handling of all heritage material during the removal from their location.
- the protection, including protection in-situ, protection removal to undertake work, crating protection
- transportation procedures
- temporary storage
- permanent storage
- unanticipated heritage element discovery protocols
- unanticipated damage to heritage elements during construction protocols
- sample heritage material condition report
- sample crating tag and heritage material I.D. tag

2.4.3 Architectural Drawings

- To include as a minimum: Demolition floor plans, indicating walls and doors to be removed as well as retained in place
- Analysis of demolition scope with heritage zoning described in the heritage documents
- Heritage protection

2.4.4 Structural Analysis

The Consultant is to review the structural impacts of all proposed demolition/removal work. The structural methodology for this project is to perform all required work while maintaining the Building's current level of structural performance to ensure the structural integrity is not reduced or compromised. Temporary or permanent compensating construction may be required.

2.4.6 Mechanical:

Submit and Investigation and Report to include as a minimum:

- Testing of existing systems where required
- Identify the volume of outdoor air to be supplied.
- Identify the delivery rate of supply air.
- Identify whether full time operating staff will be needed for operating any of the mechanical equipment. Differentiate between staff that is needed by code requirements versus that staff which is needed because of the nature and size of the facility.
- Identify location of entry point into the building of all mechanical services into the building.
- Identify the mechanical rooms to remain in use. Identify locations of mechanical spaces and shafts to be used in the building.
- Analysis of alternative mechanical schemes at the conceptual design stage shall be selected based on energy consumption of building systems, operating and maintenance costs for a time span of one year. Accordingly the estimated energy, operating and maintenance costs shall be used in life cycle cost analyses in order to determine the most beneficial mechanical systems alternative. Life cycle cost analyses shall be based on a projected building life of 10 years.
- Summary (of findings)
- Description of existing M&E systems. Provide M&E Schematics and floor plans
- Evaluation of M&E equipment and systems condition and age
- Identification of M&E systems to remain and those to be demolished. Provide a description in written form and also prepare M&E floor plans. Indicate reasons for recommending equipment and systems to remain based on costs and savings over the life of the equipment. In case of alternatives, provide options with advantages and disadvantages and costs.
- Identification of risks associated with the operation of reusing some of the existing systems
- Results of any tests
- Establish an energy budget for the building and compare it to energy consumption of other similar buildings. Total energy consumed in the building shall be expressed in kWh/sq m.
- Submit a complete energy analysis as described in this section in the paragraphs under the heading Building Loads and Energy Analysis.
- PWGSC policy for buildings connected to the Cliff plant heating is to design heating systems of low temperature water as per Design Guideline prepared by ESAP. For buildings not connected to the Cliff Plant the heating system is also of

low temperature hot water that will allow generation of heat by high efficiency condensing boilers

- Building to comply with National Energy Code of Canada for Buildings 2011 and all applicable and latest versions of ASHRAE standards including 62.1 latest version
- List of non-Canadian products and materials proposed for the project with written justification

2.4.7 Electrical:

To include as a minimum:

- Propose basic electrical systems of significance to the early design.
- Site plan showing location of service entrances.
- Distribution diagram showing single line diagrams to distribution centres.
- Floor plans complete with locations of major electrical equipment and distribution centres.
- Lighting layouts.
- Power outlets.
- Ceiling distribution systems for lighting, power and telecommunications.
- List of standard PWGSC details to be utilized.
- Provide an electrical design synopsis, describing the electrical work in sufficient detail for assessment and acceptance by the DR.
- Temporary power and lighting
- Demolition and shutdown sequences
- List of non-Canadian products and materials proposed for the project with written justification.

2.4.8 Security

The Consultant shall review and analyze all available project information, consult with PWGSC and develop a conceptual approach to maintaining security for the building up to the start of the major rehabilitation project.

2.4.9 Sustainable Development:

Coordinate directly with the PWGSC Environmental Consultant for the waste management program as well as the abatement and demolition.

2.4.10 Time, Cost and Risk Analysis

Analysis is to include:

- Confirmed or adjusted project cost and time plans
- Class “C” cost estimate
- Review of milestone dates, critical path and project schedule logic
- Milestone dates and project schedule logic, including verification that all milestone dates are achievable and logic is practical
- Detailed WBS for all aspects of the project pertaining to the Consultant activities and deliverables,

-
- Project Risks including the identification of the problems, Conflicts or absence of information; probability of occurrence and impact as well as recommend mitigation measures

2.5 Rebuttal to PWGSC Quality Assurance Report

Rebuttal to PWGSC Quality Assurance Report, aspects to be included, at a minimum:

- Review and analysis of comments provided by the PWGSC Departmental Representative, and
- Written response to all comments provided by the above until the comments are resolved. Provide a response document with the previous submission comments at each submission and a final copy of response document.

RS3 DESIGN DEVELOPMENT

3.1 Intent

The Consultant must obtain written authorization from the PWGSC DR before proceeding with Design Development. The Design Development documents produced at this stage will be used to obtain funding approval from Treasury Board. The Design Development documents consist of drawings and other documents to describe the scope (including the full resolution of all major components), quality and cost of the project in sufficient detail to facilitate a high quality Class B/substantive, design approvals, confirmation of code compliance, detailed planning of construction and project approval. Developed designs are to be computer drawn.

While the design development is progressing, the Consultant shall coordinate the abatement and demolition work with the PWGSC Environmental Consultant

3.2 Activities

- Attend project meetings, record and distribute meeting minutes,
- Establish and maintain a change control procedure relating to scope change from the approved Schematic Design;
- Finalize the Conservation Approach and further develop the Heritage Materials Database
- Review site access and interior circulation to occur during construction
- Confirm existing seismic performance level will be maintained after the project construction is completed
- Finalize implementation strategies for all disciplines, including heritage conservation, structural, mechanical, electrical, life safety, and control systems
- Develop drawings in sufficient detail for all disciplines and coordinate demolition with the scope of abatement by the PWGSC Environmental Consultant (EC)
- Coordinate the development of the waste management program with the EC
- Develop operations requirements for the building after the project is completed
- Develop outline specifications
- Provide time, cost and risk analysis, including cost estimate and updated schedule
- Monitor quality management process

3.3 Deliverables

Prepare and submit an integrated Design Development drawings package and Report for review and approval by the PWGSC DR. Revise as required by the PWGSC DR. Resubmit for acceptance. The report will further develop the Schematic Design, consolidate the Scope and Activities identified above, and will be utilized as the benchmark project control document to monitor progress of the project.

The Design Development Reports shall include all services associated with the project in written narrative, drawings, sketches, graphic, and model (traditional and / or computer generated) form. Drawings and other media are to be used to communicate the entire site

and building project for all disciplines showing all elements and services to a level of detail necessary to make all design decisions and to substantively estimate the cost of the project. Aspects to be included, at a minimum, are:

- Executive Summary(The executive summary is intended to provide a précis of the Design Development Report and outline any recommendations requiring PWGSC approval)
- Outcomes from meetings with Authorities Having Jurisdiction.
- Updated Heritage Materials Database (HMD)
- Final Conservation Approach and Methodology
- Final Implementation Strategy for all disciplines
- Drawings for selective demolition and heritage protection, including coordination of abatement work with PWGSC Environmental Consultant
- Structural confirmation regarding structural and seismic systems
- Outline Specification
- Drawings for temporary building systems
- Preliminary signage design for way finding
- Monthly and Quarterly Schedule Reports
- Design Meetings Minutes
- Time, Cost and Risk Analysis, including Class “B” Cost estimate and the identification of the problems, conflicts or absence of information
- Updated quality management process

Provide all deliverables in both official languages, so they can be used for engaging the Prime Consultant for the future major rehabilitation.

3.4 Details

2.4.1 Final Implementation Strategy

Detailed implementation strategy to include as a minimum:

- Temporary structural, mechanical, electrical, security and controls systems required to protect the asset integrity during construction as well as the subsequent years until the major rehabilitation construction starts
- Demolition selected to clean as much of the site as possible, while at the same time ensuring that sufficient original building fabric remains in order to avoid limiting design decisions for the future major rehabilitation project
- Extent of abatement and identification of all heritage protection and hazardous materials that will remain as coordinated with the Final Conservation Approach

3.4.1.2 Structural Implementation Strategy

The Consultant is to review the scope of the demolition to determine if each building element that is to be demolished/removed poses an adverse (negative) effect on the existing building’s performance level (including lateral performance).

3.4.1.3 Mechanical and Electrical Implementation Strategy

Indicate building areas to include equipment and systems installed in all floors, basements, garage, tunnels and roof: fire protection, plumbing, storm and sanitary systems, controls, HVAC, steam systems, Normal/Emergency electrical distribution, lighting, fire alarm and all other mechanical and electrical equipment

Submit an Investigation and Report to include as a minimum:

- Summary (of findings)
- Description of existing M&E systems. Provide M&E Schematics and floor plans
- Evaluation of M&E equipment and systems condition and age
- Identification of M&E systems to remain. Provide both a description in writing form and indicate them in M&E floor plans. Indicate reasons for recommending equipment and systems to remain based on maintaining the building in a mothballed state. Costs and savings over the life of the equipment. In case of alternative ways to process provide options with advantages and disadvantages and costs.
- Results of any tests
- Description of commissioning and adjusting the remaining systems

Provide a written description of the sequence of work and strategy for demolition where re-using existing systems and replacing equipment (if absolutely necessary).

3.4.2 Heritage Conservation

3.4.2.1 Final Conservation Approach

The Initial Conservation Approach is to be further developed and a presentation prepared with the objective of protecting the heritage value and character-defining elements of the building.

3.4.2.2 Heritage Material Database (HMD)

Finalize and fully detail the Heritage Material Database.

3.4.3 Architectural

To include as a minimum:

- Site plan, including indication of contractor access, lane closures, and locations of underground services/tunnels.
- Demolition floor plans and reflected ceiling plans of each floor showing all elements that are to be removed temporarily or permanently as well as those that are to remain in place with associated heritage protection, including all walls, doors, ceilings, necessary circulation areas, stairs, elevators, etc., and ancillary spaces anticipated for service use. Indicate building grids, modules, etc., and key dimensions. Include roof plans;
- As-Found elevations of all exterior building facades showing all doors and windows accurately sized and projected from the floor plans and sections. Indicate clear floor and ceiling levels and any concealed roof levels;
- Cross-sections through the building(s) to show floor levels, room heights, and

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- inner corridor elevations.;
- Detailed services locations / layouts including elevators, plumbing, HVAC, fire protection, electrical, telecommunications, security, and building automation.;
 - Provide a complete listing and draft specification sections of all National Master Specification (NMS) sections to be used. Submit outline specifications for all systems and principle components and equipment. Particular attention is to be placed on the advancement of all 'front-end' (Division 1) specifications and include all work restrictions;
 - Lighting strategy and layout;
 - Provide room numbering system to be used by all disciplines for all project documentation. PWGSC to be involved in development of same.

3.4.4 Civil/Municipal:

To include as a minimum:

- Site services and building service connections referenced to proposed building outlines, site access roads, sidewalks, and underground services/tunnels including existing and proposed grades and drainage improvements.
- Locations of manholes (complete with invert elevations), valves, and fire hydrant locations. In addition, identify proposed pipe sizes and slopes, where applicable, and include pipe invert elevations at building foundation;
- Site plan indicating construction access, lane closures and extent of construction work

3.4.5 Structural/Seismic:

To include as a minimum:

- Review scope of demolition to confirm that the structural and seismic integrity of the building is not reduced or compromised
- Structural drawings indicating modifications or new structural systems, structural materials, cladding details, , fireproofing methods and other significant or unusual details;

3.4.6 Mechanical:

To include as a minimum:

- Site Plan showing service entrances for steam supply, domestic water supply, sanitary and storm drains and connections to utility services, including all key invert elevations;
- Brief narrative describing components to remain
- Drawings showing sizing of remaining and temporary ventilation, cooling, ~~and~~ heating systems, plumbing, and fire protection systems showing locations, and all major equipment layouts in mechanical rooms;
- Drawings showing mechanical equipment and systems to be demolished and method of removal showing locations, and all major equipment layouts in mechanical rooms. Coordination with other disciplines is essential in the demolition phase of the project.
- Where new equipment for temporary services is required provide:

-
- Drawings of plumbing and piping systems, showing routing and sizing of major lines and location of pumping and other equipment where required;
 - Drawings of the fire protection systems showing major components;
 - Analysis of selected equipment and plant with schematics and calculations sufficient to justify the economy of the selected systems;
 - Describe the mechanical systems to be provided and the components of each system including mechanical ancillary devices needed to support emergency power systems;
 - Describe the building systems control architecture. Provide preliminary EMCS network architecture, mechanical control schematics, and sequence of operation of each building system;
 - Provide separate single line diagram for each mechanical and fire protection system (Steam, hydronic, chilled water, and ducts). Show at a minimum sizing, valves, equipment and interconnectivity between systems.

3.4.7 Electrical:

To include as a minimum:

- Provide a short narrative description of all systems and major components remaining;
- Provide data on the total connected load, the maximum demand and diversity factors, and the sizing of the emergency load;
- Identify Hydro Ottawa requirements, including metering and sub-metering, and indicate short circuit information at point of entry;
- Elaborate on proposed emergency power scheme remaining;;
- Indicate metering locations on distribution diagram;
- Provide typical lighting, power and telecommunication system details ;
- Include lighting design and control schemes for typical lighting arrangements. Restate lighting level objectives to meet the needs. Include lighting system description and control strategy;
- Visually describe risers for: normal power, emergency power, telecom, security;
- Provide reflected ceiling plans.
- Provide drawings for existing security remaining;
- Provide separate diagrams and floor plans for remaining fire alarm and IT risers.
- Provide separate demolition plans and riser diagrams
- Provide power and lighting plans

3.4.8 Sustainable Design:

To include as a minimum:

- Energy analysis and energy budget established for all systems.
- Information on all internal and external energy loads in sufficient detail to determine the compatibility of the proposal with existing services, approved concept and energy budget; and

3.4.9 Security:

The design will serve as a final representation of the anticipated security infrastructure which is to remain and will also serve to confirm among the stakeholders the security approach and serve as the design sign-off prior to moving to construction documentation.

3.4.10 Time, Cost and Risk Analysis:

The Consultant shall provide, at a minimum:

- Preliminary construction schedule including long-term delivery items,
- Updated detailed, critical path and milestone schedules,
- Class 'B'/Substantive Estimate,
- Data requirements to support submissions for funding approval.
- Update risk Assessment,

3.5 Rebuttal to PWGSC Quality Assurance Report:

Aspects to be included, at a minimum, are:

- Review and analysis of comments provided by the Project Team, including the COE technical resource.
- Prepare and submit a written response to all comments provided by the above.

RS 4 CONSTRUCTION DOCUMENTS

The Consultant shall obtain written authorization from the Departmental Representative before proceeding with the services related to Construction Documents. PWGSC has obtained approval for proceeding with Construction Documents while funding approval for construction is obtained, but there may still be a time period before this approval is granted.

The Consultant shall continue to coordinate the abatement and demolition work with the Environmental Consultant.

4.1 Intent

The objective of this stage is to further develop the documents to prepare coordinated drawings and specifications setting forth, in detail, the requirements for the tender, construction and pre-tender cost estimate of the project.

The construction documents shall be tendered by PWGSC to general contractor Proponents.

4.2 General

It is expected to make construction documents for quality assurance reviews by PWGSC: 66 % submission, 99 % submission and pre-tender submission, as follows:

- Updated detailed Division One specification with all implementation constraints included,
- 66% indicates substantial technical development of the project - well advanced architectural and engineering plans, elevations, sections, details, schedules and specifications, possible submission to local authorities for pre-permit review; Include updated cost estimate,
- 99% is the submission of complete Construction Documents for submission to local authorities for permit purposes; Include updated cost estimate, and
- Pre-tender submission is the 100% complete construction documents sets, ready for tender call, addressing all issues identified in the PWGSC reviews.

Prepare in consultation with relevant authorities: final code analysis and statement, final fire separations and life safety plans and sign and seal one set of 100 % complete construction documents for building permit application

Services provided must be in accordance with the requirements identified in *Doing Business with NCA*. Prepare Construction Documents in accordance with the specification brief.

4.3 Activities

4.3.1 General

- Obtain written approval from PWGSC DR to proceed to Construction Document Stage;

-
- Confirm format of drawings and specifications in accordance with PWGSC standards.
 - Attend weekly meetings, record and distribute meeting minutes.
 - Ensure coordination and integration of all submissions between all disciplines prior to submission and submit letter confirming the co-ordination procedure used and testify that a detailed co-ordination of documents has been completed.
 - Provide written response to all review comments, and coordinate with completion of Construction Documents.
 - Submit and obtain approval on plans and specifications required by Authorities Having Jurisdiction before tender call.
 - Participate in a risk management workshop
 - Incorporate abatement engineer stamped CAD drawings according to PWGSC format as well as hazardous material abatement specifications, waste diversion plan and waste inventory produced by PWGSC Environmental Consultant and coordinate with construction documents for the project
 - Provide time, cost and risk analysis, including cost estimate and updated schedule
 - Update quality management process for the Consultant Team

4.3.2 Technical and Production Meetings

- Attend Technical and Production Meetings, prepare and issue meeting minutes.
- Construction Document submissions shall be presented by the Consultant technical and project meetings for review and discussion with the PWGSC Project Team.
- Representatives from PWGSC Operations staff will be present as arranged by the Departmental Representative.
- Consultant must ensure that members of its specialist sub-consultant disciplines attend technical and project meetings as required or relevant to the agenda.
- The Consultant shall arrange for all necessary data, progress prints, etc., as well as a meeting agenda, to be available to all attendees a minimum of two working days prior to the meetings.
- Consultant shall prepare minutes of the meetings and distribute copies to all participants.

4.3.3 Conservation:

In collaboration with all relevant disciplines,

- Apply the conservation approach to specific spaces and elements
- Illustrate/detail the repair, refinishing, or replacement of components and materials as required addressing architectural and structural conservation objectives.
- Review and approve materials and construction processes specification to meet heritage requirements.

4.3.4 Regulatory:

In collaboration and coordination with all relevant disciplines prepare:

-
- Final building code data summary for NBC and OBC, including table of equivalents;
 - Final fire separations, life safety and accessibility plans, smoke control;; and
 - Regulatory section for Construction Document Report.

4.3.5 Site Design:

- Coordinate with all relevant disciplines and prepare complete discipline specific site plans including:
 - Site plan, including indication of contractor access, lane closures, and locations of underground services/tunnels.
 - Municipal infrastructure, subsurface and above grade services, including capacities and limitations, i.e. storm water drainage, fire protection, telecommunications, domestic water, power, etc. Include both building services and flow through services,

4.3.6 Building Design:

- Coordinate the relevant disciplines to prepare complete discipline specific plans, elevations, sections, details and schedules to describe the project for tender and permit processes Development of the project must include, but not limited to the following:
 - Structural interventions: Drawings for construction are to indicate all structural interventions and design loads,;
 - Interior including interior construction, stairs
 - Heritage protection & demolition. (Incorporate abatement drawings produced by PWGSC Environmental Consultant).
 - Temporary utilities and fire protection.
 - Final heritage salvage inventory list and completed Heritage Materials Database
 - Services including plumbing, HVAC, fire protection, electrical, and controls
- Update the building load calculation, energy analysis and energy budget at 66% and 99%;
- Submit at 99% submission all calculations for structural, civil, municipal, mechanical, and electrical, design and equipment selection. These calculations shall be bound (3-ring binder) and indexed. Calculations submitted will not necessarily be reviewed. They are required for record purposes and in certain instances to assist in the understanding and interpretation of designs;
- Demolition plans for the demolition work, including for repairs to affected character-defining materials and assemblies, temporary removals and salvaging. Coordinate with Environmental Consultant;
- Optimize sustainable design opportunities, strategies;
- Update facility utility budgets at 66% and 99% submission; and
- The specifications shall be project specific and including sustainable procurement strategies.

4.3.7 Security

- Security Detailed Design: This work will include, but not be limited to, locating existing devices on the tender documents, describing the expected functionality of the device and the relationships and functionality between security devices and associated equipment such as door operators and life safety systems.

4.3.8 Commissioning:

Prepare Systems Operations Manual (SOM), to include the following at a minimum:

- All design and operational intent, sequence of operation, etc., for the SOM.
- Emergency start-up/operations/shut-down procedures.
- Single Line Diagrams of all remaining systems.
- PMSS/MMS inventory lists and Valve Schedules (if applicable)
- Service Contract lists (if applicable)
- Shop Drawing lists (if applicable)

4.3.9 Time, Cost and Risk Analysis:

In collaboration with the entire Project Team, prepare updated Construction Cost Plan, schedules and outline risk implications and mitigation strategies:

- Submit updated cost estimates and updated Construction Cost Plan with each Construction Document submission;
- Prepare a final Class 'A' estimate, in pure elemental and in trade formats. Resolve all outstanding cost issues. Reissue the revised/updated estimate to the PWGSC DR in both elemental and trade formats;

Update the following elements of the Planning Report including:

- Detailed, critical path and milestone project schedules; and
- Project Activity Listing.
- Risk implications and mitigation strategies;

Establish quality control process to be implemented as part of Construction and Contract Administration stage; and

Prepare Time, Cost and Risk Analysis section of the Construction Documents Report.

4.4 Deliverables

4.4.1 Interim Submissions (66%, 99%):

Deliverables are similar at both the 66% and 99% stages, therefore only those from the final submission stage are shown. Completeness of the project development must reflect the stage of a submission.

- Complete set of fully coordinated specifications and working drawings.
- One copy of support data, studies, calculations, etc., required by PWGSC disciplines for final checking and record.
- One copy of updated Cost Plan and Project Schedule, including updated Class B cost estimates.
- One copy of updated construction risk assessment.
- Drawings should clearly distinguish existing elements to be removed, and new or added elements.
- Overarching plan for heritage protection is required at all times, to ensure repairs to affected character-defining elements are incorporated throughout.
- Time, cost and risk analysis
- Updated Quality Management Process

4.4.2 Final Submission (100%):

This submission incorporates all revisions required by the review of the 99% submission. Provide the following:

- Complete set of originals of the working drawings professionally stamped, signed, and sealed.
- Complete set of original specifications.
- Class “A” estimate. The Class “A” cost estimate shall be submitted in elemental and trade cost breakdown format. Cost estimates shall have summary plus full back-up showing items of work, quantities, unit prices, and amounts.
- Coordinate with the waste management audit and waste reduction work plan to be prepared by the PWGSC Environmental Consultant.
- Written confirmation that the structural and seismic integrity of the building will not be compromised by abatement and demolition
- As a safeguard against loss or damage to the originals, retain a complete set of drawings in reproducible form and one copy of specification.
- Electronic true copy of the final submission drawings and specifications on one or multiple CD-ROM in accordance with section PA 1.5 - General Project Deliverables.
- Completed Heritage Materials Database and Heritage Materials Management Protocols (to be used by the General Contractor to track conservation treatments, crating, relocation and removals of building elements)
- Systems Operations Manual
- Electronic version of addenda, where needed.
- Time, cost and risk analysis

4.4.3 Inspection Authorities Submission

Submit and obtain approval on plans and specifications required by Inspection Authorities before proceeding with the activities described in section RS 4 - Tender Call, Bid Evaluation, and Construction Contract Award.

RS 5 TENDER CALL, BID EVALUATION & CONSTRUCTION CONTRACT AWARD

5.1 Intent

The object of this stage is to solicit and evaluate bids from qualified construction trade contractors / equipment suppliers, and to award the contracts according to the requirements as outlined in the GC's contract.

5.2 Scope and Activities

5.2.1 Construction Tendering

The Consultant is required to provide support and advice to the Departmental Representative during construction tender stage activities to procure a General Contractor. The Consultant may be asked to review and advise on some procurement issues.

The Consultant is required to participate in pre-qualification activities as may be required, including preparing criteria for specialized trade contractors, if required.

For the tendering period, the Consultant is required to:

- Attend tender briefing meeting.
- Provide the Departmental Representative with written information and clarifications in response to questions from construction bidders, and as required for bidders to fully interpret the Construction Documents.
- Prepare tender addenda as required, either based on questions arising from bidders briefing meetings, for issue to all bidders following review and approval by the Departmental Representative.
- Assist the Departmental Representative in evaluating pre-qualification submissions from specialized construction sub-trades, if required.
- Examine and report on any project impacts which may arise due to the issue of tender addenda with respect to construction cost estimates, risk allowances, and to construction schedule.
- Incorporate all addenda for each tender issuance into a consolidated construction document labeled "Issued for construction".

5.3 Deliverables

The Consultant shall provide:

- Originals of drawings and specifications, or Statements of Work, as well as electronic copies of drawings and specifications signed and stamped with professional seal.
- Addenda as required.
- Changes to the tender documents, if re-tendering is necessary.
- Minutes of the "bidders briefing meeting".

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- Summary of information required by Bidders to fully interpret the tender documents.
 - Summary of addenda based on questions arising out of the Bidders Briefing Meeting and requests for clarification.
 - Summary of cost and schedule impact created by issue of tender documents and addenda.
 - Updated construction cost plan in both elemental and trade format.
 - Updated detailed, critical path and milestone project schedules.
 - Revised Construction Documents to bring the cost within the stipulated limits and/or for re-tendering purposes.
 - Report upon risk implications and mitigation strategies.
 - “Issued for construction” construction documents for each tender issuance.

RS 6 CONSTRUCTION AND CONTRACT ADMINISTRATION

The object of this stage is to implement the project in accordance with the Contract Documents and to direct and monitor all necessary or requested changes to the scope of work during construction, commissioning and closeout. The Consultant shall work in the spirit of information sharing with PWGSC. All material specifications, mixes and test results shall be turned over to PWGSC for future maintenance purposes.

6.1 Scope and Activities

The Consultant shall obtain the timing of partnering/team building session from the Departmental Representative.

The Consultant scope and activities shall be in collaboration with its relevant specialized sub-consultant disciplines and shall, as a minimum, include the following:

6.1.1 General

- Coordinate all services of specialists and sub-consultants disciplines as applicable, and advise and consult with the Departmental Representative.
- Prepare a communications protocol in consultation with the Departmental Representative. Issue to Project Team.
- Update detailed, critical path and milestone project schedules.
- Update sustainability documentation to reflect changes which occur during construction.

6.1.2 Site Visits

- The architect of record and sub consultants and specialists disciplines as applicable shall conduct weekly construction inspection services. Ensure compliance with contract documents.
- Establish a written understanding with contractor as to what stages or aspect of the work are to be inspected prior to being covered up.
- Assess quality of work and identify in writing to the Departmental Representative all defects and deficiencies observed at time of such inspections.
- Inspect materials and prefabricated assemblies and components at their source or assembly plant, as necessary for the progress of the project.
- Any directions, clarifications or deficiency list shall be issued in writing to PWGSC.

6.1.3 Construction Meetings

- Immediately after award, arrange and participate in a construction briefing meeting with the successful General Contractor and the Departmental Representative. Ensure participation from all pertinent specialist sub-consultant disciplines.
- The General Contractor will prepare minutes of construction briefing meetings and distribute copies to all participants and to other persons agreed upon with the Departmental Representative.
- Participate in weekly construction progress meetings, commencing with the construction briefing meeting. The meetings will be chaired by the General

Contractor, and will typically include the main sub-contractors, the Consultant and its specialist sub-consultant disciplines, the Departmental Representative, and various other PWGSC representatives. The Departmental Representative may invite other project Stakeholders to attend any of these meetings as necessary. Minutes of these meetings will be prepared and distributed by the General Contractor.

6.1.4 On-Site Interference Meetings and Heritage Protection

- The Consultant, including the lead Architect, lead mechanical designer, lead electrical designer and other sub-consultants as and when required, shall participate in weekly on-site meetings with the GC and key sub-trades, at or near the commencement of construction, to resolve construction interference problems. The Consultant team shall issue Site Instructions and, if required Contemplated Change Notices, to the DR to immediately resolve interference issues and facilitate the construction process.
- Assume four (4) on-site meetings for each named discipline, above and beyond normal weekly site visits for inspection and reporting upon construction progress

6.1.5 Project Schedule

- Monitor the GC's construction schedule, take necessary steps to ensure the schedule is maintained, and submit a detailed report to the Departmental Representative concerning activities that are at risk of being delayed. Submit correspondence to the Departmental Representative demonstrating that a detailed review of the schedule has been completed.
- Keep accurate records of causes of construction delays on site, as well as the actual amount of construction personnel and equipment down time resulting from delays, and submit to Departmental Representative as they occur.
- Make every effort to assist the GC in avoiding delays.

6.1.6 Contract Documents

- Carry out the review of the work at intervals appropriate to determine if the work is in conformity with the Contract Documents. Submit deficiency reports on a bi-weekly basis.
- Interpret the requirements of the Contract Documents and make findings as to the performance by the sub-contractors.
- Meet with the GC and construction sub-trades as required to clarify potential ambiguities in the Construction Documents. RFI's identified as critical to the project schedule shall be responded to promptly and with priority.
- Render interpretation in writing and graphic form as may be required with reasonable promptness on the written request of either the Departmental Representative. A maximum of five (5) working days will be tolerated for Consultant response to GC Request for Information.
- Render written findings within a reasonable time on all claims, disputes and other matters in question between PWGSC and the GC relating to the execution or performance of the work or the interpretation of the Contract Documents.

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- Render interpretation and findings consistent with the intent of and reasonably inferable from the Contract Documents
 - Provide two (2) updates to the construction document issuance “Issued for construction (plans and specifications)” incorporate all change orders in outline. Timing of each update shall be determined in coordination with DR and GC.

6.1.7 Inspection

- Reject work which does not conform to the Contract Documents and whenever in the Consultant’s opinion, it is necessary or advisable for the implementation of the intent of the Contract Documents, require special inspection or testing of work, whether or not such work has been fabricated installed or completed.
- Order minor adjustments in the construction work which are consistent with the intent of the Contract Documents, when these do not involve an adjustment in the construction contract prices and or an extension of the construction contract durations.

6.1.8 Supplemental Instructions

- Furnish supplemental instructions to the sub-contractors with reasonable promptness or in accordance with a schedule for such instructions agreed to by the Departmental Representative and GC.
- Keep the Departmental Representative 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.
- Determine the amounts owing to the GC based on the progress of the work and certify payments to the GC.

6.1.9 Change Control

- The Consultant does not have authority to change the work or the price of any Contract(s).
- Changes which affect cost or design concept must be approved by the Departmental Representative.
- Upon the Departmental Representative’s approval, obtain quotations from the GC in detail. Review prices and promptly forward recommendations to the Departmental Representative.
- All changes, including those not affecting the cost of the project, must be covered by Change Orders.
- Utilize an existing PWGSC change control process and software for scope change, site condition change, client driven change and errors/omissions. Identify and track type of change as one of: Site Condition, Client requested, Design Condition on each submitted CCN. Departmental Representative may disagree with the chosen type of change and has the option to advise that a change may be a different type than that chosen by the Consultant.
- Advise the Departmental Representative of all potential changes to scope for the duration of the implementation.
- Provide project delay analysis where appropriate.

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- Utilizing the established change control process and software, prepare Contemplated Change Notices (CCN) and Change Orders (CO), verify quantities, and provide justification for approval and signature by the Departmental Representative in accordance with the Contract Documents. An estimate for each submitted CCN shall be provided by the Consultant
 - Review the Contractor's submittals within five (5) working days; prioritize review and processing to ensure the project schedule is maintained.
 - Provide cost planning and estimating advice during construction.
 - Assess/analyze time impact of all proposed changes, advise the Departmental Representative of impact analysis.
 - Indicate any changes or material/equipment substitutions on Record Documents.
 - When CCN is to be issued based on unit prices, keep accurate account of the work, recording dimensions and quantities.

6.1.10 Project Close Out

- Prepare Certificates of Substantial Performance and Certificates of Completion.
- Collect the written warranties and related documents from the General Contractor and forward to Departmental Representative for review.
- During the twelve (12) month warranty period, investigate all defects and alleged defects and issue instructions to the DR. Participate in two (2) formal building walkthroughs and provide reports for each visit.
- Conduct a final warranty review with all applicable Consultant members, PWGSC representatives and sub-contractors. Issue instructions to the sub-contractors as may be required. Follow up as required. Complete a narrative report and submit to the Departmental Representative.

6.1.11 Shop Drawings

- Review and take other appropriate action with reasonable promptness upon such sub-contractor submittals as shop drawings, product data, and samples, for conformance with the general design concept of the work as provided in the Contract Documents. Prioritize reviews of submission to expedite construction.
- Verify that shop drawings include the project number and are recorded in sequence.
- Establish and implement a shop drawing handling/distribution protocol acceptable to the Project Team. Verify the number of copies of shop drawings required. Consider additional copies for review by DR and PWGSC Environmental Consultant.
- Shop drawings shall be stamped: "Checked and Certified Correct for Construction" by the sub-contractors and stamped: "reviewed" by the Consultant before return to the sub-contractors.
- Process Shop Drawings, within five (5) working days.
- All equipment must be CSA approved, or CSA equivalent. In the case of equivalency, provide letters of approval for use in Canada.

6.1.12 General Contractor's Progress Claims

- Each month the General Contractor submits a progress claim (request for progress payment) for work and materials as per the requirements of the Construction

Documents. Review progress claim request in detail. Submit to General Contractor, copying Departmental Representative, all concerns with the claimed levels of completion. Discuss with GC and come to agreement on any items of disagreement.

- Verify at each progress payment that sub-contractors have accurately recorded information on the site as-built set of Contract Documents.
- The claims are made by completing the following forms where applicable:
 - Request for Progress Payment – PWGSC Form 1792.
 - Cost Breakdown
 - Statutory Declaration Progress Claim – PWGSC Form 2835.
- Review and sign designated forms and promptly forward claims to the Departmental Representative for processing.
- Submit with each progress claim:
 - Updated schedule of the progress of the work.
 - Detailed photographs of the progress of the work.

6.1.13 Materials On Site

- The GC and its sub-contractors may claim for payment of material on site but not yet incorporated in work.
- Material must be stored in a secure place designated by the Departmental Representative.
- The Consultant shall check and verify a detailed list of materials with supplier's invoice showing price of each item which must accompany claim.
- Items shall be listed separately on progress payment forms after the break-down list and total.
- As material is incorporated in the work, the cost of this material must be added to the appropriate breakdown list and removed from the material list.

6.1.14 Acceptance Board

- Inform the Departmental Representative once satisfied that the project is substantially completed. The Consultant, General Contractor, and major sub-trades representatives shall form part of the Project Acceptance Board and attend all meetings as organized by the Departmental Representative.

6.1.15 Interim Inspection

- The Acceptance Board shall inspect the work and list all unacceptable and incomplete work on a designated form. The Board shall accept work from the sub-contractors subject to the deficiencies and uncompleted work listed and priced.
- The sub-contractors shall provide a work plan of actions and schedule to correct all deficiencies.
- The Consultant shall coordinate with the Departmental Representative to monitor, inspect and report on the progress of deficiencies corrections.

6.1.16 Substantial Completion

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- The Departmental Representative will formally issue the official Certificate of Substantial Performance forms (formerly called Interim Certificate of Completion) to the General Contractor.
 - Prior to the issuance of the Certificate of Substantial Performance, obtain as-built marked-up drawings from the GC, that will include all remaining walls, temporary systems, and locations of all hazardous substances that have not been abated. Provide a copy to the Departmental Representative.
 - Payment requires completion and signing, by the parties concerned, of the following documents:
 - Certificate of Substantial Performance – PWGSC form 1796.
 - Statutory Declaration – PWGSC form 2835.
 - Other submittals required to support the progress claim are:
 - Workman’s Compensation Clearance Certificate.
 - Contractor’s Invoice.
 - Cost Breakdown
 - Certificates or written approval from AHJs such as HRSDC, City of Ottawa, Electrical Safety Authority, TSSA, etc.
 - Verify that all items are correctly stated and ensure that completed documents and any supporting documents are furnished to the Departmental Representative for processing.

6.1.17 Building Occupation

- PWGSC may occupy the building after the date of acceptance of the building by the Acceptance Board. The acceptance date is normally that of the Certificate of Substantial Performance issued to the sub-contractors. As of the acceptance date, the sub-contractors may cancel the Contract Insurance, and PWGSC assumes responsibility for:
 - Security of the work(s).
 - Fuel and utility charges.
 - Proper operation and use of equipment installed in the project.
 - General maintenance and cleaning of the work(s).
 - Maintenance of the site (except any landscaping maintenance covered by the contract).

6.1.18 Take-over

- The official take-over of the project or parts of the project, from the GC is established by the PWGSC Project Team. The date of the Certificate of Substantial Performance 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 to the Departmental Representative with original copy of sub-contractor warranties for all materials and work covered by an extended warranty or guarantee, according to the conditions of the specifications. Verify their completeness and extent of coverage.

6.1.19 Statement of Operations Manual

- Statement of Operations Manual: Finalize and prepare four (4) copies to be submitted to Departmental Representative prior to interim acceptance.

6.1.20 Keys

- Ensure that all keys and safe combinations are delivered to the Departmental Representative.

6.1.21 Final Inspection

- Inform the Departmental Representative when satisfied that all work under the contract has been completed, including the deficiency items at all agreed completion points.
- PWGSC reconvenes the Acceptance Board which makes a final inspection of the project. If everything is satisfactory the Board issues interim and final acceptance of the project to the sub-contractors.

6.1.22 Final Completion

- The official take-over of the project is established by the official Certificate of Completion forms (formerly called Final Certificate of Completion). The Departmental Representative will formally issue these forms to the General Contractor.
- The final payment requires completion and signing, by the parties concerned, of the following documents:
 - Certificate of Completion (Final) – PWGSC form 1797.
 - Statutory Declaration - PWGSC form 2835.
 - Submission of all project submittals including but not limited to reports and as-built drawings

Other submittals required to support the progress claim are:

- Contractor's Invoice
- Cost Breakdown
- Workmen's Compensation Clearance Certificate
- ESA Certificate
- TSSA Certificates
- Hydro Certificate(s).
- Any other applicable certificates (i.e. Building Permits, Occupancy Permits, Notice of Project Closure, etc.)
- Verify that all items are correctly stated and ensure that completed documents and any supporting documents are furnished to the Departmental Representative for processing.

6.1.3 As-Built and Record Drawings and Specifications

- Drawings are to include all remaining mechanical and electrical equipment as well as all remaining building elements and remaining locations of hazardous substances that were not abated
- Check and verify sub-contractor as-built records for completeness and accuracy.

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- Obtain from the sub-contractors all modification/updates to as-built records from Substantial Completion to Final Completion.
 - Show deviations in construction from the original Contract Documents including changes resulting from Change Orders or from Site Instructions.
 - Indicate MMS numbers for each piece of mechanical and electrical equipment on each drawing.
 - Indicate all locations of remaining hazardous materials
 - Produce CADD Record Drawings and electronic specifications, incorporating final as-built information.
 - Provide a complete set of final shop drawings in hard copy and electronic format.
 - Submit a comprehensive consolidated final package of Record Drawings and As-Built Specifications within twelve (12) weeks of issuance of the Certificate of Completion.

6.2 Deliverables

The Consultant shall prepare and consolidate the following information:

- Written reports from site visits including persons involved.
- Monthly written reports on the progress of the work and cost of construction, including updated as-built records.
- Provide cost and scheduling reports with updates at the end of each month.
- Provide additional detail drawings when required to clarify, interpret or supplement the Construction Documents.
- Written Site Instructions.
- Copies of reviewed shop drawings and of reviewed drawings from furniture/equipment suppliers.
- Update the “Issued for Construction” plans and specifications with change orders
- Certificates of Substantial Performance and Certificates of Completion including respective reviews and acceptances.
- Updated Heritage Materials Database (HMD) that includes all elements with indication of current location (on-site, stored off-site, or disposed of)
- Record drawings and Record specifications based on the As-Built marked-up drawings obtained from sub-contractors.
- Other Management Manuals as required.
- Waste Diversion Report (as prepared by the PWGSC Environmental Consultant) indicating the destination (reuse, recycling or landfill) and quantity (by weight or volume) of all waste materials removed from site
- Documentation and certification confirming environmental performance (Green Globes, LEED®, or equivalent).
- Warranty deficiency list.
- Final Warranty Review and Report.
- Post-Construction Evaluation.

RS 7 Estimating and Cost Planning

Cost estimates are required as prescribed in *Doing Business with NCA*. Delivering this project on time and within the approved construction budget is a high priority. The purpose of cost planning and cost control is to assist in the accomplishment of project cost objectives. It is a continuous and interactive process involving planning, action, measurement, evaluation and revision.

A fully qualified cost estimating, cost planning and cost control team, referred to herein as the Cost Specialist, with a demonstrated record of successful cost management on large construction projects, with a strong heritage component, is required. At least one member of the cost consultant team must be a Professional Quantity Surveyor. This Cost Specialist shall be conversant with all aspects of construction cost estimating during the design stages, including the use of Elemental Cost Analysis, Risk Analysis, Life Cycle Costing and Value Engineering / Management techniques.

The Consultant shall maintain the project designs within the approved construction budget, including any necessary re-design, at no additional cost to PWGSC. The Cost Specialist and the entire Consultant shall co-operate and coordinate all cost information with the DR and respond to questions with written responses.

7.1 Scope of Services

The Cost Specialist shall provide an interactive and continuous cost consulting service including advising, monitoring and reporting, from the commencement of project through to construction completion, including the preparation of complete estimates and cash flows for all construction trades, escalation, inflation and contingency costs. Cost estimates shall have a summary plus full elemental backup showing item of work, quantities, unit prices and amounts. Cost estimates shall also include life cycle cost and life cycle analysis to ensure sustainable design objectives are met.

The Cost Specialist shall attend project meetings throughout the project and be prepared to present and defend the estimates directly to the PWGSC DR. Participation in working sessions with PWGSC DR to reconcile elemental cost differences within each estimate will be required.

7.2 Services – Basic Activities

The Cost Specialist shall work with and advise the Consultant and PWGSC of the costs of individual building components and costs of various design systems. Estimates will be prepared in detail and summarized using an Elemental Analysis format as issued by the Canadian Institute of Quantity Surveyors, differentiating base building, fit up and BCC costs as directed by PWGSC.

7.2.1 Progress Monitoring and Reporting

Progress monitoring and reporting is to include the required Elemental Summaries, supported by all backup work sheets clearly detailing the process used in preparing the estimate. The detailed work sheets shall be the prime basis on which estimates shall be reviewed by PWGSC. Cost comparisons and cost reports identifying and explaining the

differences between each succeeding cost estimate and their cost effect are also required. In addition, the Cost Specialist shall fully coordinate all estimates with schedules, providing detailed cash flows, inclusive of construction, BCC and Consultant fees as separate broken down categories.

A typical Milestone Cost Estimate Report will contain:

- Project Estimate Summary,
- Elemental Estimate,
- Estimate Backup Detail
- Basis for escalation, inflation and contingency calculations,
- Detailed measurement and pricing,
- Narrative:
 - Outline description of estimate basis,
 - Description of information obtained and used in the estimate including the date received,
 - Listing of notable inclusions,
 - Listing of notable exclusions; listing of items / issues carrying significant risk,
 - Listing of assumptions,
 - Notes on past and forecast Cost Specialist activity,
- Estimate Reconciliation:
 - With last submission,
 - Variance to approved project budget, and
 - Any other relevant information.

Exception Reporting

The Cost Specialist is to provide continuous cost monitoring, timely identification and early warning of all changes that affect or potentially affect the estimated construction costs of the project. Reports shall be submitted to PWGSC DR in the event of identified exceptions that could have significant impact on the project budget.

Time Lag

Recognizing that estimates must follow the design decisions they represent, such estimates may lag. The Milestone Cost Estimate Reports may follow the milestone, by no more than two (2) weeks unless otherwise determined by the PWGSC DR.

Use of all available information

The Cost Specialist is responsible for providing a complete cost estimate even though the information provided during the concept, design development and early working drawing stages is incomplete. Where requirements are not firmly defined, the Cost Specialist shall make assumptions, confirm them with the Consultant and the Consultant and either lists them as assumptions, or have them incorporated in outline specifications.

7.2.2 Techniques

The Cost Specialist is required to be familiar with and make use of a broad range of cost techniques, especially the following.

Risk Analysis: All construction estimates (except the final pre-tender estimate) shall include and identify design, estimating, inflation escalation and currency exchange allowances as are deemed necessary in light of the current information available. The Cost Specialist shall provide a satisfactory explanation of the level and / or amount of all such sums included within any estimate.

Scheduling: The Cost Specialist shall assist the Time Specialist by providing building quantities, building systems information and other quantifiable parameters deemed appropriate to the calculation of a reasoned project time schedule. The Time Specialist shall assist the Cost Specialist by maintaining an up-to-date schedule of all design activities along with an agreed bidding and construction schedule that will be incorporated by the Cost Specialist within the estimates on a timely basis.

Life Cycle Costing: In advising the Consultant of the cost information for alternative materials, methods and systems, it is necessary that the Cost Specialist uses all available information to ensure that a complete cost picture is made available, upon which design and construction decisions will be made. It is expected that lifecycle costing shall be required on key building components such as major mechanical, roofing, windows, etc.

Continuing Estimate Process: A process of continual adjustment of previous estimates may be used in place of total re measurement at each milestone reporting point. This is acceptable, provided that, at each monthly reporting point, a full and up-to-date Elemental Cost Summary is provided, and that at each milestone reporting point this Elemental Cost Summary is supported by complete, detailed, stand alone back-up/support documentation, as previously described.

Project Research: The Cost Specialist shall visit the proposed construction site to become familiar with site conditions, site access, etc., analyze local labour and material supply conditions, local bidding practices and competition to establish pricing levels. A written report detailing each reconnaissance activity is required.

Value Engineering / Management PWGSC will have a Value Engineering Study to be undertaken at identified stages of the project design that will be lead by PMSS. The Consultant shall answer questions and provide information called for by the Value Management Team. The Cost Specialist shall assist the Value Management Team by providing copies of the latest cost estimate and any additional cost information that may be required.

7.3 Services - Project Stages and Specific Activities

- **Schematic Design**
Review, confirm understanding, report on, and update the approved construction budget (existing Class 'C' estimate). Do not proceed until the PWGSC DR has accepted the revised Class 'C' estimates. The revised Class "C" estimate shall become the Construction Cost Plan.
- **Design Development**
Milestone reports to be issued, to ensure the project is maintaining the budget requirements. Upon completion of design development, prepare a Class 'B' estimate representing the increased level of design detail available. The reports

shall be prepared using detailed (elemental) costs i.e. measured quantities with minimal allowances or lump sums. Upon final acceptance, the Class 'B' estimate shall become the Construction Cost Plan.

- **Construction Documents**

During the production of the Construction Documents, a process of continuous cost control that is progressively more detailed is required. With each submission of Construction Documents (66%, 99% and 100%), Updated Class B as well as Class A cost estimates shall demonstrate compliance with the construction cost plan. Non-compliance with the construction cost plan will require revisions to the Construction Documents at no cost to PWGSC.

- **Pre-Tender**

Upon completion of the Construction Documents, a pre-tender Class 'A' cost estimate shall be prepared using 100% measured quantities. Provide a trade breakdown of the pre-tender estimate for construction for use in reviewing the submitted bids and the General Contractor's estimate breakdown.

- **Tender Stage**

Tender Award During the tender period, examine and report on any cost impact created by the issue of Tender Documents/addenda. Incorporate the results of such addenda review into the final pre-tender estimate (both elemental and trade formats) after the close of addenda but prior to receipt of bids.

Bid Review and Analysis Assist the PWGSC DR, as required, by analyzing and reconciling any differences between the pre-tender estimates and the submitted bids.

Negotiation Should it be necessary to negotiate with any bidder prior to awarding a construction contract, the Cost Specialist shall provide cost information as needed and participate in the negotiations if requested.

Reconciliation After contract award of trade contracts, the Cost Specialist, if necessary, will reconcile both the elemental and trade estimates, in detail, with the agreed contract sum. The Consultant will use these reconciled estimates during the construction phase of the project.

- **Construction Stage**

During construction, the Cost Specialist shall provide the DR with cost advice in relation to the following:

- Evaluation of change orders.
- Evaluation of claims.
- Evaluation of work completed.
- Evaluation of cash flow.

- **Post-Construction Stage**

Provide a debriefing report on all cost related matters, including from a cost perspective, lessons learned.

7.4 Responsibilities to PWGSC

The Departmental Representative will review all aspects of the Cost Specialist's work on a continuing basis to determine the validity and completeness of the information provided. In the event the Departmental Representative may identify areas of concern including errors and omissions as well as areas of inadequate detail or areas that require further explanation, the Cost Specialist shall re-examine the estimates provided and make such revisions as are subsequently agreed to be necessary and/or provide ample acceptable evidence that such corrections or amendments are unnecessary.

No Action Abrogates Consultant's Responsibilities

No acceptance or approval by the Departmental Representative, whether expressed or implied shall be deemed to relieve the Cost Specialist, or the Consultant, of professional or technical responsibility for the estimates and cost reports.

Neither does acceptance of an estimate by the Departmental Representative in any way abrogate the Consultant's responsibility to maintain the agreed Construction Cost Plan throughout the life of the project, or the requirement to redesign should the lowest acceptable bid differ significantly from the agreed Construction Cost Plan, unless and until the Departmental Representative indicates otherwise in writing.

RS 8 Project Time Planning, Scheduling and Control

8.1 Planning/Scheduling

Planning and Scheduling are high priorities with all federal government projects. The concept of planning and scheduling is to facilitate the accomplishment of objectives, and should be thought of as a continuous interactive process involving planning, action, measurement, evaluations and revision.

The Time Specialist shall play a major role in the development and monitoring of the project schedule and provide scheduling services from commencement of the award of the Consultant contract, through to construction completion, including the warranty period. The Time Specialist will also advise and cooperate in the preparation and maintenance of the construction cost plan. Coordination, consultation, review, approval of all processes related to Consultant's deliverables with and by PWGSC is to be integrated throughout all aspects of the planning and scheduling.

The Time Specialist and the Consultant shall co-operate and coordinate all planning and scheduling information with the DR and respond to questions in writing with written responses.

The Time Specialist shall provide a schedule limited to the Consultant activities and reviews and approvals.

8.2 Scope of Work

8.2.1 General

The Time Specialist shall be responsible for preparing, monitoring and maintaining the schedule until all construction documents are completed. The Time Specialist will be conversant with project site conditions at all times. The Time Specialist shall attend project meetings up to the Tender Call to present and defend the schedules directly to the PWGSC DR

The services are limited to the Consultant's own activities, milestones and deliverables including all the review durations and submissions. PWGSC will have the role to include this schedule into an overall project schedule that include tender, construction and other related activities.

The general scope of work for planning and scheduling services include the following activities:

- Develop a schedule with key milestones for the required work and activities associated with the Consultant's services,
- Identify Major Elements / Phases of Work of the project,
- Develop, monitor & maintain detail schedules, bar charts, and milestone listings,
- Attend meetings,

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- Prepare monthly Progress Reports and highlight in summary format all areas of concern or where potential or real risk may impact the project delivery.

8.2.2 Planning

Project Work Breakdown Structure

Prepare a Work Breakdown Structure (WBS) for the design work on the project. This WBS should be developed through at least five levels: project, stage, element, sub-element and work package.

Cash Flow Projection

The Time Specialist will provide scheduling data to the Consultant and Cost Specialist to support the development and maintenance of the cash flow for the project.

8.2.3 Scheduling

Detailed Schedules

The Time Specialist shall prepare and maintain a detailed schedule. The schedule shall be prepared and maintained, monthly, in consultation with all members of the Consultant and PWGSC project teams. Activities must also be shown for all design and construction documents phases of the project and inclusive of all submissions, reviews and approvals.

In order to provide a reasonable basis for progress monitoring and control, the schedule shall be in sufficient detail to ensure adequate planning and control. In no case will any activity duration exceed one month. The detail activities must relate at all times to the milestones developed and approved in the master program schedule maintained by PWGSC

The activities with no total float (early finish and late finish on the same date), which form the critical path, must be calculated and clearly indicated on the logical network. No more than ten (10) percent of the activities shall be critical, or near critical.

The Consultant and Time Specialist shall, at PWGSC's request and without additional charges, provide all additional information required by the PWGSC to validate the practicality of the project schedule.

Compliance with the Detailed Schedule

The Consultant must comply with the approved detail schedule, planning, coordinating and implementing their work with respect to the schedule.

Progress Monitoring and Reporting

On a monthly basis, in accordance with 8.3, with status dated on the last working day of the month, the Time Specialist working with the Project Team shall perform a detailed schedule update as part of the monthly progress report. The detailed schedule shall reflect the following:

- Progress of each activity to the date of the report,

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- Any logic changes, both historic and planned,
 - Projections of progress and completion,
 - The actual start and finish dates of all activities being monitored,
 - A Gantt chart listing of all project activities including milestones in all networks (and sub-networks) from project start to project end. Group activities by similar work packages and sort by early start dates. List early and late start and finish dates together with durations, codes and float,
 - A criticality report listing all activities and milestones with negative, zero and up to five (5) days total float used as a first sort for ready identification of the critical, or near critical paths through the entire project. List early and late start and finish dates, together with durations, codes and float for the critical activities printed,
 - A written monthly Progress (narrative) Report, by the Time Specialist, based on the detailed schedule, detailing the work performed to date, comparing work progress to planned, and presenting current forecasts. This report is to summarize the progress to date, explaining current and possible deviations and delays with respect to the detailed schedule and critical path. The report shall assess progress against project objectives, contract documents and the master program schedule.

Construction and Implementation

- During construction, the Consultant and Time Specialist will:
- Participate in working sessions with PWGSC, the General Contractor (GC) and its sub-contractors,
- Assist the GC as needed to develop their construction schedule,
- Assist in the development of the GC's warranty inspection schedules,
- Advise and prepare variance analysis reports as required, and
- Upon receipt of the GC's current monthly status report, progress claim and project schedule, the Consultant and Time Specialist will review the information by:
 - Evaluating, on a general basis, actual progress achieved to date, and
 - Comparing the current status of detailed schedule and cash flow status with previously submitted detailed schedules and cash flows.

8.3 Project Reporting

Monthly (Technical Focus)

The Consultant, in consultation with the Cost and Time Specialists, will prepare and submit monthly technical Progress Reports throughout the project, in a format agreed to with the PWGSC DR. The purpose of the report will be to review and monitor progress of the services by the Consultant and work by the GC. The report shall identify the progress of all deliverables, identify all instances where the schedule or cost plan are not being met, outline remedial measures being taken and identify any anticipated or potential problems to be addressed. This report is to be issued to the PWGSC DR.

Quarterly (Management Focus)

Quarterly, the Consultant, in consultation with the Cost and Time Specialists, shall submit a high level management report summarizing the project status including progress and issues internal to the design team. During construction, the reports reviewing the General Contractor's performance and BCC implementation relative to cost, cash flow, schedule and quality are required. Non-conformance issues (pre and post construction) are to be highlighted in this report. This report is to be issued to the PWGSC DR.

8.4 Responsibilities to PWGSC

The Departmental Representative will review all aspects of the Time Specialist's work on a continuing basis to determine the validity and completeness of the information provided. In the event the Departmental Representative may identify areas of concern including errors and omissions as well as areas of inadequate detail or areas that require further explanation, the Time Specialist shall re-examine the schedules provided and make such revisions as are subsequently agreed to be necessary and/or provide ample acceptable evidence that such corrections or amendments are unnecessary.

No Action Abrogates Consultant's Responsibilities

No acceptance or approval by the Departmental Representative, whether expressed or implied shall be deemed to relieve the Time Specialist, or the Consultant, of professional or technical responsibility for the schedules and schedule reports.

RS9 RISK MANAGEMENT

The consultant is to provide support to the Departmental Representative in identifying risks throughout the project life cycle.

See “Doing Business with the National Capital Area” for Risk Management “Definitions” and “Checklist”.

9.1 Risk Management Process:

- Identify risk events based on past experience and using proposed checklist or other available lists;
- Qualify/quantify probability of risk event (Low, Medium, High) and their impact (Low, Medium, High);
- Prioritize risk events (i.e. concentrate efforts on risk events with High probability and Medium to High impact);
- Develop risk response (i.e. evaluate alternatives for mitigation. This is the real added-value of risk management); and implement risk mitigation.

RS 10 BILINGUAL DOCUMENTS

10.1 Scope of Services

10.1.1 Design Deliverables

Produce Design Deliverables in accordance with the following language requirements:

- Prepare oral and audio-visual presentations to Authorities Having jurisdiction (as described in PA1.10 Submissions, Reviews and Approvals) in Canada's two official languages. Provide all Design Development Stage deliverables in Canada's two official languages

10.1.2 Construction Documents and Construction Tender Call

Produce the Construction documents under the Terms of this Contract in Canada's two official languages. Also, prepare bilingual addenda and written responses to tender questions.

10.1.3 Commissioning-related Documents

Produce the following commissioning-related document in Canada's two official languages:

- Final Systems Operational Manual

10.2 Quality Standards

Ensure that the services and deliverables provided are of a professional standard in both languages when required. Assume professional responsibility for completeness and consistency of translation. Both languages are considered equal in status – neither is considered to be of lesser standing because it is a translation of the other.